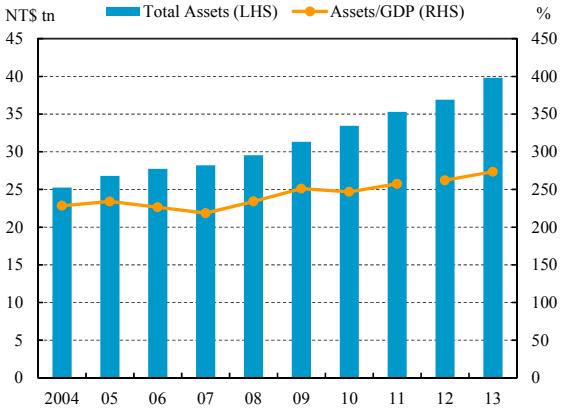
3.2 Financial institutions

3.2.1 Domestic banks

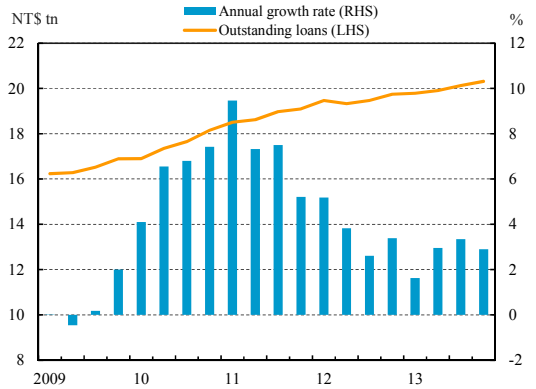
In 2013, the total assets of domestic banks accumulated at a faster pace mainly because of the increase in loans. Asset quality improved and the credit concentration of corporate loans declined continuously; nevertheless, credit exposure to real estate remained high. The estimated Value at Risk (VaR) for all market risk exposures of domestic banks rose but had limited influence on their capital adequacy. Moreover, liquidity risk was moderate due to ample funds in the banking system. The profitability of domestic banks reached a record high in 2013, while the average ratio of capital adequacy was higher than the requested level of Basel III. This revealed that the capacity of domestic banks to bear losses was satisfactory.

Chart 3.16 Total assets of domestic banks



Note: Figures for total assets from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis
Sources: DGBAS and CBC.

Chart 3.17 Outstanding loans and annual loan growth rate in domestic banks



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

Total assets increased continually and the growth rate expanded

The total assets of domestic banks kept growing and reached NT$39.83 trillion at the end of 2013, equivalent to 273.54% of annual GDP (Chart 3.16). The annual growth rate of total assets also increased to 7.95% from 4.53% a year earlier, mainly driven by a dramatic increase in the loans granted by offshore banking units (OBUs) and overseas branches.

Credit risk

Customer loan growth slowed

In 2013, customer loans were the major source of credit risk for domestic banks. Outstanding loans of the local business units

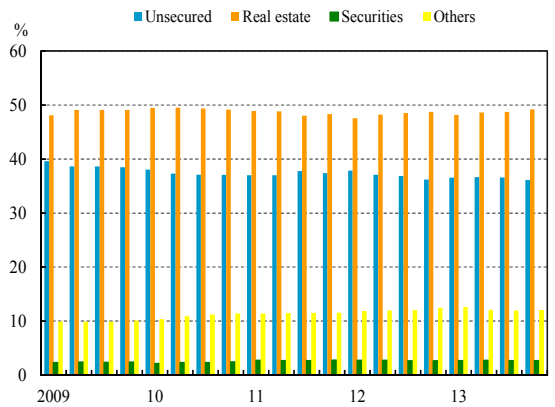
of domestic banks[48] at the end of 2013 stood at NT$20.32 trillion, accounting for 51.01% of total assets, with the annual growth rate at the end of 2013 reducing to 2.90% from 3.39% a year earlier (Chart 3.17).

In 2013, outstanding loans of the local business units of domestic banks accumulated at a slower pace. The growth rate of loans to government agencies notably declined to -10.57% at the end of 2013 from 5.00% a year earlier, because an increase in the outstandings of government bond issuance and the government's collection of a total franchise fee of NT$118.65 billion for 4th generation broadband wireless (4G) licenses in Q4 caused a decrease in demand for bank borrowing. Meanwhile, the annual growth rate of corporate loans descended slightly to 2.51% from 3.18% a year earlier, and the annual growth rate of individual loans ascended from 4.07% to 5.93%, higher than a year earlier, due to stable growth in individual demand for buying houses.

Concentration of credit exposure in real estate loans descended slightly, but the ratio of real estate-secured credit ascended

Outstanding real estate loans[49] granted by the local business units of domestic banks amounted to NT$7.43 trillion, accounting for 36.57% of total loans as of the end of 2013.The ratio continuously declined over the past two years and dropped by 0.07 percentage points over the previous year. This reflected that under the CBC's and the FSC's measures to strengthen risk management regarding the real estate loans of banks, the concentration of credit exposure in real estate loans improved gradually throughout 2013. However, the ratio of real estate-secured credit granted by domestic banks was still high, reaching 49.20% of total credit[50] at the end of 2013 and increasing by 0.48 percentage points over the previous year (Chart 3.18). Meanwhile, outstanding real estate-secured credit, which stood at NT$12.32 trillion as of the end of

Chart 3.18 Credit by type of collateral in domestic banks



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

[48] 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-accrual loans and interbank loans.
[49] The term "real estate loans" herein refers to house-purchase loans, house-refurbishment loans and construction loans.
[50] The term "credit" herein includes loans, guarantee payments receivable and acceptances receivable.

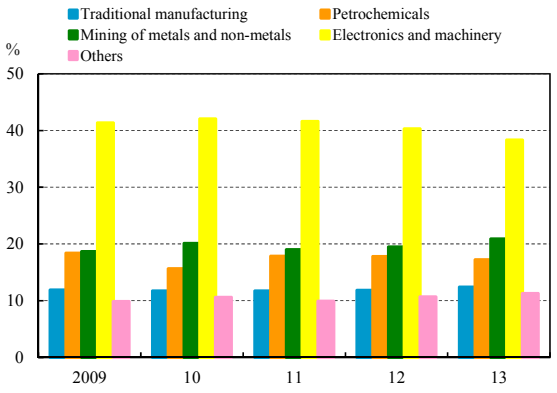
2013, also climbed byan annual growth rate of 6.71%, higher than 4.95% a year earlier.

Although the trading volume of the real estate market recovered steadily, and the housing price stood at a high level in the second half of 2013, potential house buyers gradually opted for a wait-and-see approach. Furthermore, with the Fed reducing the size of bond purchases, the interest rate on loans may rebound in the future and the burdens of home buyers will increase. In order to assess the vulnerability of domestic banks when such shocks are encountered, the FSC required domestic banks in April 2014 to undertake stress tests with respect to housing loans and construction credit, based on the scenarios of housing price declines and interest rate rises. Although the expected losses of banks were within a bearable sphere under the stress scenarios, banks should closely monitor the influence of downward adjustments on housing prices as well as rising interest rates, which both may pose credit risks to housing loans, and develop appropriate strategies to cope with such impacts.

Credit concentration of corporate loans gradually declined

Outstanding corporate loans of the local business units of domestic banks stood at NT$9.07 trillion at the end of 2013, while loans to the manufacturing sector registered NT$3.92 trillion and accounted for the largest share of 43.18% of the total.Within the manufacturing sector,[51] the largest proportion of loans was for the electronics industry, which stood at NT$1.50 trillion and accounted for 38.30% of the total loans to the whole manufacturing sector. The ratio was lower than 40.29% a year earlier and has continuously declined over the past three years (Chart 3.19).

Chart 3.19 Exposure to the manufacturing sector by domestic banks

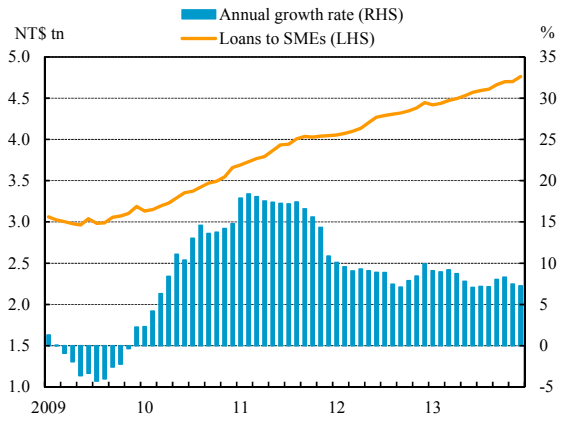


Notes: 1. End-of-period figures.
2. Exposure to each sector = loans to each sector / loans to the whole manufacturing sector.
Source: CBC.

[51] Loans to the manufacturing sector are divided into five categories by industry, including: (1) electronics, (2) mining of metals and non-metals, (3) petrochemicals and (4) traditional manufacturing, and (5) others.

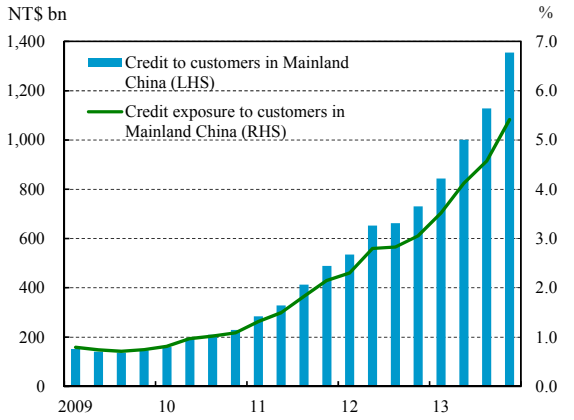
Outstanding corporate loans to SMEs by domestic banks steadily expanded to NT$4.78 trillion at the end of 2013, increasing by NT$322.6 billion or 7.23% over the previous year (Chart 3.20). The ratio of these loans to outstanding corporate loans also ascended gradually and reached a ten-year high of 52.72%, in line with the Program to Encourage Lending by Domestic Banks to Small and Medium Enterprises launched by the FSC. Following the pace of SME loan growth, the outstanding amount of loan guarantees applied for by SMEs through the Small and Medium Enterprise Credit Guarantee Fund of Taiwan (SMEG) also kept rising and increased 11.14% from year-end 2012 to reach NT$832.2 billion at the end of 2013, and the guarantee coverage percentage also increased to 79.94%. These statistics all point to the favorable conditions for SMEs to acquire necessary funds.

Chart 3.20 Loans to SMEs by domestic banks



Sources: FSC and CBC.

Chart 3.21 Credit to customers in Mainland China by domestic banks



Source: FSC.

Credit to customers in Mainland China increased rapidly

As the offshore banking units of domestic banks continuously expanded credit to customers in Mainland China, outstanding credit to such customers dramatically increased by NT$624.1 billion or 85.36% year on year and reached NT$136 trillion at the end of 2013.

According to Article 12-1 of the *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 a domestic bank to customers in Mainland China should not exceed 100% of the bank's net worth at the end of the preceding fiscal year. As of the end of 2013, the aggregate amount of such exposures of all domestic banks as a percentage of their total net worth at the previous year-end was 58%, still within the statutory limit. No domestic bank exceeded the limit.

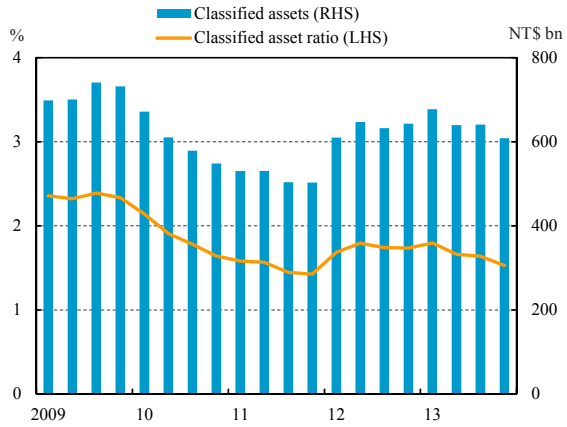
Outstanding credit to customers in Mainland China by domestic banks accounted for 5.41% of total credit at the end of 2013, higher than that of the previous year (Chart 3.21). However, the non-performing credit ratio of such credit was lower than 0.01%, representing satisfactory asset quality. In recent years, domestic banks have actively developed business in Mainland China. While such action offered them more business opportunities, it also gave rise to greater risk (Box 4), especially recently as Mainland China has faced a slowdown in economic growth and elevated financial risk. Accordingly, domestic banks should cautiously monitor economic and financial conditions in Mainland China as well as prudently control their exposures to customers in Mainland China.

Asset quality improved continuously

Outstanding classified assets [52] and the average classified asset ratio of domestic banks stood at NT$608.4 billion and 1.53% at the end of 2013, decreasing by 5.40% and 0.21 percentage points, respectively, over the previous year (Chart 3.22). Meanwhile, expected losses of classified assets [53] also decreased by NT$3.5 billion or 4.15% year on year to NT$80.3 billion,while the ratio of expected losses to loan loss provisions was only 24.60%, indicating sufficient provisions to cover expected losses.

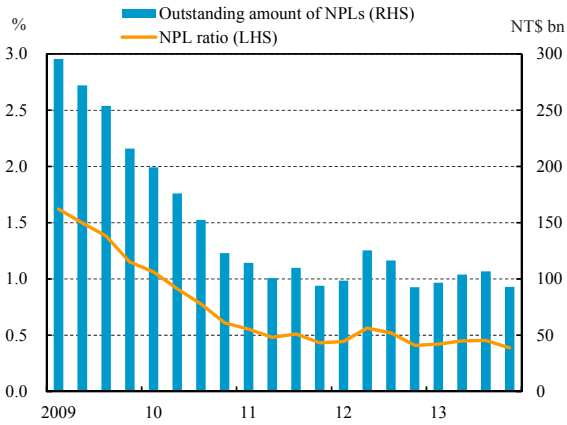
Although the outstanding NPLs of domestic banks slightly increased by 0.16% year on year and registered NT$93.0 billion at the end of 2013, the average NPL ratio fell to a record low of 0.39% owing to a greater increase in loan balances (Chart 3.23). With the increase in provisions, the NPL coverage ratio and the loan coverage ratioat the end of 2013 rose to

Chart 3.22 Classified assets of domestic banks



Note: Classified asset ratio = classified assets / total assets.
Source: CBC.

Chart 3.23 NPL ratio of domestic banks



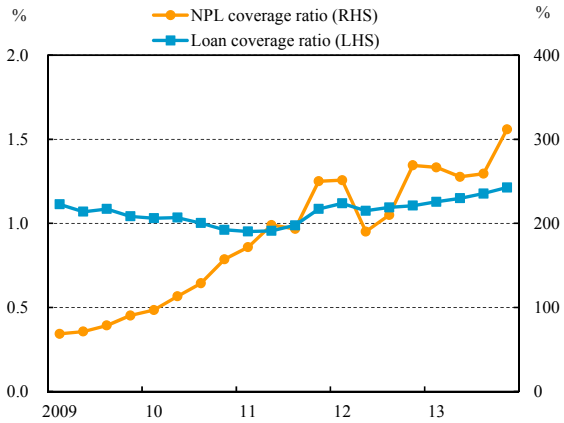
Note: Excludes interbank loans.
Source: CBC.

[52] 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.

[53] Loss herein refers to the losses from loans, acceptances, guarantees, credit cards, and factoring without recourse.

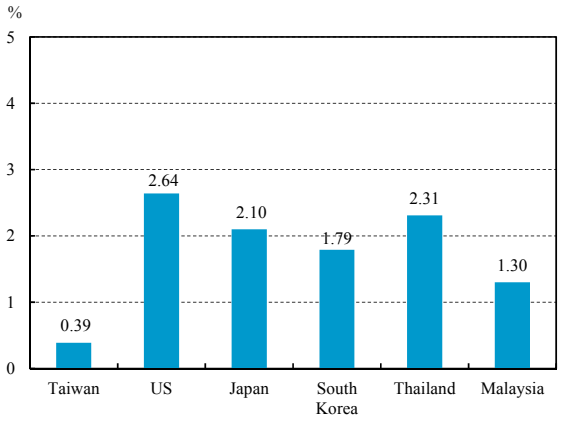
311.65% and 1.21%, respectively (Chart 3.24). Among 40 domestic banks, all had NPL ratios of less than 1%, except for two with ratios between 1% and 1.5% at the end of 2013. Compared to the US and neighboring Asian countries, the average NPL ratio of domestic banks in Taiwan was much lower (Chart 3.25).

Chart 3.24 NPL coverage ratio and loan coverage ratio of domestic banks



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

Chart 3.25 NPL ratios of banks in selected countries



Note: Figures for Japan and South Korea are end-September 2013 data, while the others are end-December 2013.
Sources: CBC, FDIC, FSA, FSS, BOTand BNM.

Market risk

Estimated Value-at-Risk for market risk exposures rose

The net position of debt securities accounted for the largest share of total market risk exposures of domestic banks, followed by the net positions of equity securities and of foreign exchange at the end of 2013. Using market data as of February 2014, the estimated total VaR calculated by the CBC's market risk model[54] for foreign exchange, interest rate and equity exposures of domestic banks at the end of 2013 stood at NT$249.8 billion, significantly ascending by NT$130.2 billion or 108.86% compared to the figure a year earlier. Among market risks, interest rate VaR showed a significant rise of 109.91% as the yield of Taiwan government bonds trended upward in response to a rise in US government bond yields owing to the anticipated scaling back in Fed asset purchases. Equity and foreign exchange VaRs diminished owing to a reduction in the volatility of the stock market and NTD/USD exchange rate, respectively (Table 3.1).

[54] 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 modelconstructs 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 (Data as of 21 February 2014).

Table 3.1 Market risks of domestic banks

Unit: NT$ bn

Types of risk	Items	End-Dec. 2012	End-Dec. 2013	Changes	
				Amount	%
Foreign exchange	Net position	71.0	79.9	8.9	12.54
	VaR	1.8	1.6	-0.2	-11.11
	VaR / net position (%)	2.54	2.00		-0.54
Interest rate	Net position	6,314.6	6,723.7	409.1	6.48
	VaR	113.0	237.2	124.2	109.91
	VaR / net position (%)	1.79	3.53		1.74
Equities	Net position	539.3	597.4	58.1	10.77
	VaR	31.1	24.9	-6.2	-19.94
	VaR / net position (%)	5.77	4.17		-1.60
Total VaR		119.6	249.8	130.2	108.86

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

The effects of market risk on capital adequacy ratios reached about 1 percentage point

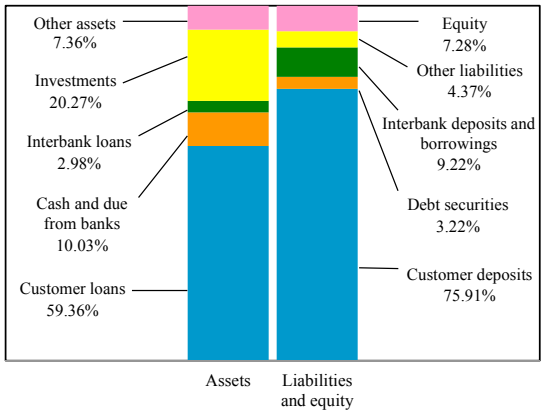
According to the estimated results mentioned above, the total VaR would cause a decrease of 1.05 percentage points in the average capital adequacy ratio of domestic banks and induce the ratio to drop from the current 11.83% to 10.78%. Nevertheless, it would still be higher than the statutory minimum of 8%.

Liquidity risk

Liquidity in the banking system remained ample

The structure of assets and liabilities for domestic banks roughly remained unchanged in 2013. As for the sources of funds, relatively stable customer deposits still accounted for the largest share of 75.91% of the total, followed by interbank deposits and borrowings at 9.22%, while debt securities

Chart 3.26 Asset/liability structure of domestic banks

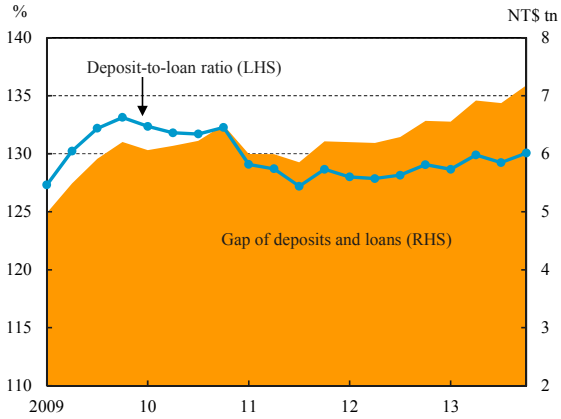


Notes: 1. Figures are as of end-December 2013.
2. Equity includes loss provisions. Interbank deposits include deposits with the CBC.
Source: CBC.

issues contributed a mere 3.22%. Regarding the uses of funds, customer loans accounted for the biggest share of 59.36%, followed by securities investments at 20.27%, while cash and due from banks accounted for 10.03% (Chart 3.26).

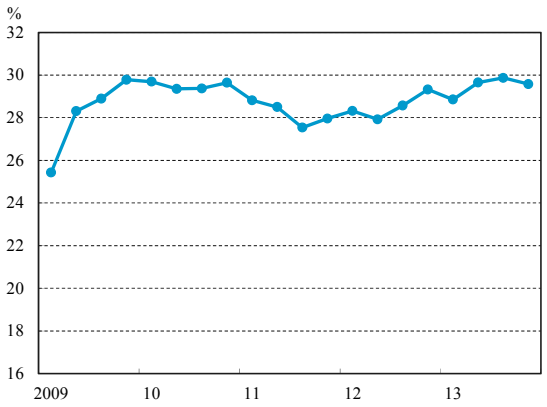
Given that the increase in deposits slightly exceeded that in loans in 2013, the average deposit-to-loan ratio of domestic banks rose to 130.06% at the end of December. The funding surplus (i.e., deposits exceeding loans) also expanded to NT$7.18 trillion, indicating that the overall liquidity in domestic banks remained abundant (Chart 3.27).

Chart 3.27 Deposit-to-loan ratio of domestic banks



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

Chart 3.28 Liquid reserve ratio of domestic banks



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

Overall liquidity risk was moderate

The average NT dollar liquid reserve ratio of domestic banks was well above the statutory minimum of 10% in each month of 2013 and stood at 29.58% in December, an increase of 0.25 percentage points year on year (Chart 3.28), while the ratio of each domestic bank was higher than 15%. Looking at the components of liquid reserves in December 2013, Tier 1 liquid reserves, mainly consisting of certificates of deposit issued by the CBC, accounted for 88.30% of total, while Tier 2 and other reserves accounted for a total of 11.70%. This revealed that the quality of liquid assets held by domestic banks remained satisfactory and overall liquidity risk was moderate.

Profitability

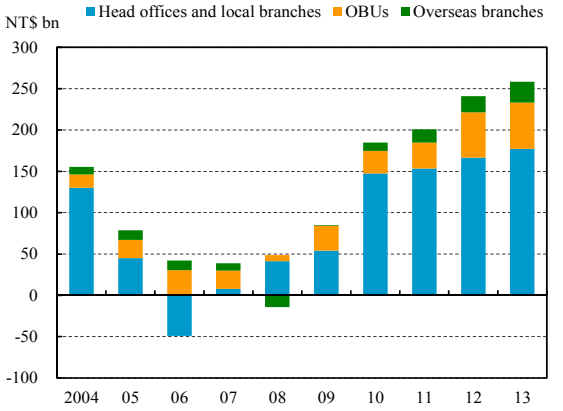
Profits recorded a historical high, of which more than 30% was contributed to by OBUs and overseas branches

The aggregate net income before tax of domestic banksreached NT$258.2 billion in 2013, increasing by NT$17.8 billion or 7.41% year on year (Chart 3.29). The amount recorded a historical high for the fourth consecutive year, mainly due to a rise in net fee income and gains on financial instruments. Since the opening up of the RMB business to OBUs and overseas branches, as well as the continual setting up of more branches in Mainland China and Southeast Asiaby domestic banks, OBUs and overseas branches have contributed to more than 30% of total profits in the recent two years, and the proportion has increased each year.

Although the profitability of domestic banks grew significantly, the average ROE decreased from 10.44% a year earlier to 10.24% due to a substantial increase of equity as a result of injections of capital and earnings, while the average ROA remained at 0.67% (Chart 3.30). Compared to selected Asia-Pacific neighboring economies, the ROAs of domestic banks still lagged behind other economies (Chart 3.31).

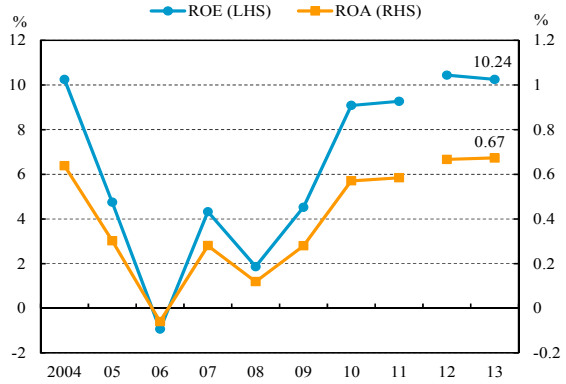
In 2013, four domestic banks achieved profitable ROEs of 15% or more, decreasing from eight banks in 2012, but fifteen banks reported better performance than the previous

Chart 3.29 Net income before tax of domestic banks



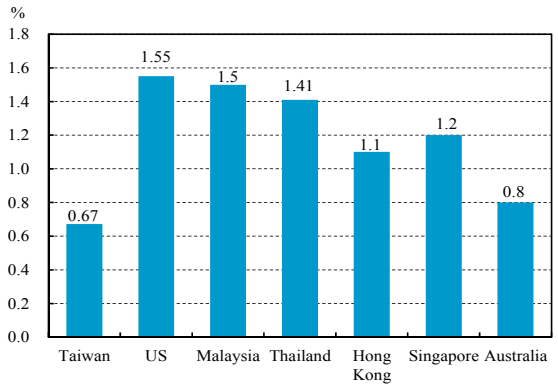
Notes: 1. Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
2. Overseas branches include branches in Mainland China.
Source: CBC.

Chart 3.30 ROE & ROA of domestic banks



Notes: 1. Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
2. ROE = net income before tax / average equity.
3. ROA = net income before tax / average total assets.
Source: CBC.

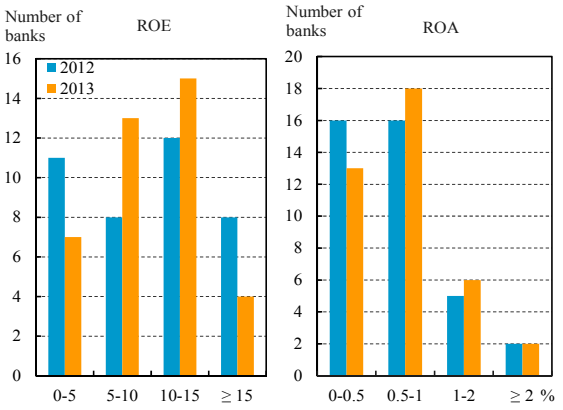
Chart 3.31 Comparison of ROAs of banks in selected economies



Note: Figures are as of 2013.
Sources: CBC, FDIC, BNM, BOT, HKMA,MAS andAPRA.

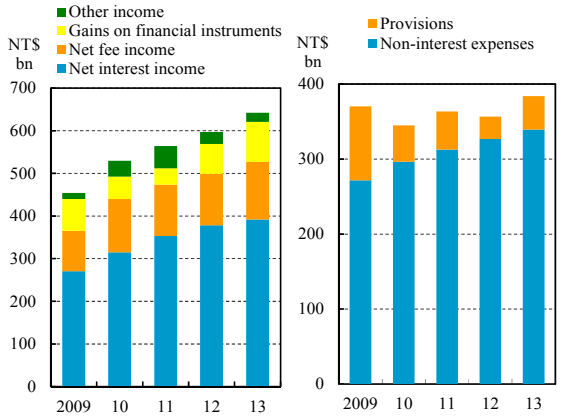
year. In addition, the number of domestic banks whose ROAs reached the international standard of 1% increased to eight (Chart 3.32), and the ROAs of 23 banks increased compared to those in 2012.

Chart 3.32 Distribution of ROEs and ROAs of domestic banks



Note: Figures for 2012 and 2013 are on the TIFRSs basis.
Source: CBC.

Chart 3.33 Composition of incomes and costs of domestic banks



Note: Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
Source: CBC.

Net operating income grew steadily

Total net operating income of domestic banks registered NT$642.3 billion in 2013, increasing by NT$45.2 billion or 7.57% year on year, mainly due to growth in non-interest income, such as net fee income and gains on financial instruments. Analyzed by income component, net interest income rose, albeit at a slower pace, by NT$13.2 billion or 3.49% and accounting for a slightly decreasing share of 61% of the total compared to the previous year, because of the growth in loans. Net fee income also increased by NT$15.2 billion or 12.63% year on year and accounted for an increasing share of 21% of the total, benefiting from the notable growth of the asset management business. Moreover, net gains on financial instruments markedly increased by NT$23.9 billion or 34.02%, driven by an increase in valuation or disposal gains resulting from a substantial growth of the financial instruments marketing business, and pushed up their share of total net operating income to 15% (Chart 3.33).

Operating costs increased remarkably due to a rise in loan loss provisions

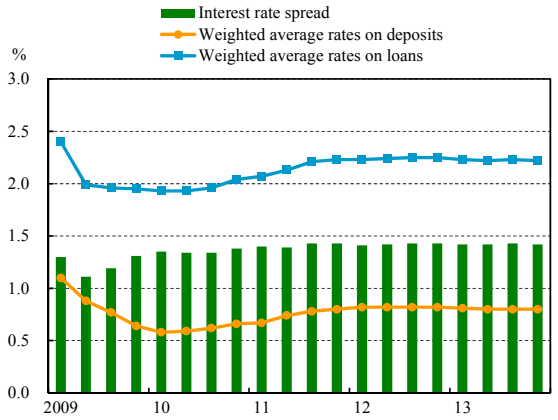
The operating costs of domestic banks registered NT$384.1 billion in 2013, rising by NT27.4 billion or 7.68% compared to the previous year. Non-interest expenses[55] increased by NT$12.5 billion or 3.82% and accounted for a decreasing share of 88% of total operating

[55] Non-interest expenses include employee benefits expenses, depreciation and amortization expenses, and other operating and management expenses.

costs. Meanwhile, provisions for bad debt expenses and guarantee reserves rose significantly by NT$14.9 billion or 49.66% year on year, with their share of total operating costs increasing to 12% (Chart 3.33).

In 2013, provisions for bad debt expenses and guarantee reserves of domestic banks reached NT$74.4 billion. To cope with an increase in non-performing loans and reach the statutory target of provisions for normal credit assets of 1% or higher,[56] domestic banks set aside more than NT$55 billion of provisions. However, its impact on profits was mitigated by the NT$29.5 billion gains on reversal of bad debt and impaired loans expenses.

Chart 3.34 Interest rate spread between deposits and loans



Notes: 1. Interest rate spread = weighted average interest rates on loans - weighted average interest rates ondeposits.
2. The weighted average interest rates on deposits and loans exclude preferred deposits of retired government employees and central government loans.

Source: CBC.

Factors that might affect future profitability

The interest rate spread between deposits and loans remained little changed at 1.42 percentage points during 2013 (Chart 3.34). However, the annual growth rate of deposits has outpaced that of loans for six consecutive quarters, and the RMB time deposits that banks took at high interest rates had limited opportunities for funds being used for investments or lending. Their impacts on the growth of net interest income are worth paying attention to.

As of the end of 2013,the average ratio of provisions for normal credit assets of domestic banks was 1.05%. However, some banks with ratios lower than 1% will need to increase provisions by a combined total of NT$10.3 billion. Although the increase in provisionsis viewed to have a limited impact on overall net income, it may adversely affect the 2014 profits of the banks requiring higher provisions. In addition, according to Article 11 of the *Value-added and Non-value-added Business Tax Act*, amended by the Legislative Yuan on 16 May 2014, the business tax rate on authorized business for banking and insurance industries shall resume its former rate of 5%, from 2%. Nevertheless, it is estimated to have a limited impact on overall profits.

[56] The FSC amended the *Regulations Governing the Procedures for Banking Institutions to Evaluate Assets and Deal with Non-performing/Non-accrual Loans* on 28 January 2014, raising the minimum ratio of provisions for normal credit assets from 0.5% to 1% of their outstanding balance. The amendment came into force from 1January 2014.

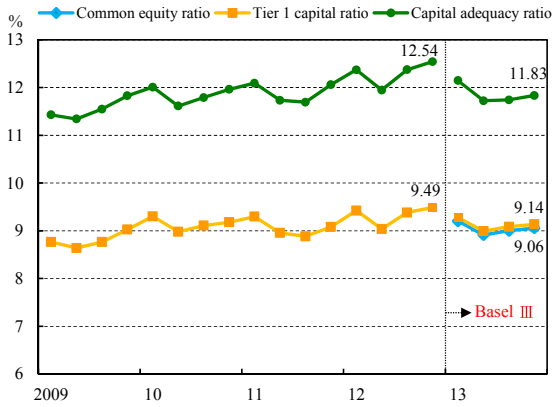
Capital adequacy

Average capital ratios met Basel Ⅲ standards

In the first half of 2013, average capital ratios of domestic banks turned to a descend as they adopted TIFRSs and Basel III[57] for the first time, standards that resulted in changes in regulatory capital components and risk-weighted assets calculations. However, in the second half of the year, as a result of capital injection and accumulated earnings as well as the issuance of Basel III-compliant long-term subordinated debt, the average common equity ratio, Tier 1 capital ratio and capital adequacy ratio reversed and rose to 9.06%, 9.14% and 11.83%, respectively. All of which met the statutory minimum standards set for 2019 (Chart 3.35). Compared to some neighboring Asia-Pacific economies, domestic banks in Taiwan had lower capital ratios and their relatively low profitability could constrain future increases of Tier 1 capital (Chart 3.36).

Further broken down by the component of regulatory capital, common equity Tier 1 capital, which features the best loss-bearing capacity, accounted for 76.54% of eligible

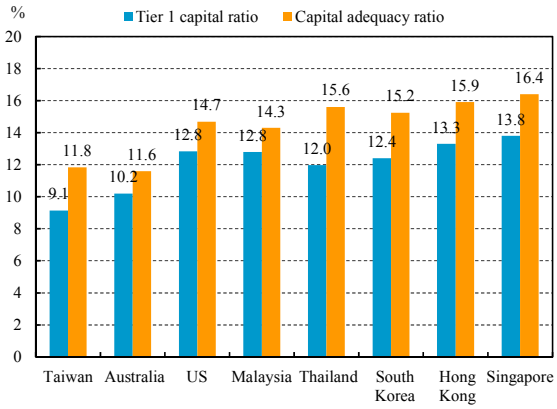
Chart 3.35 Capital ratio of domestic banks



Notes: 1. Figures from 2013 are on a Basel Ⅲ and TIFRSs basis, while prior years are on a Basel Ⅱ and ROC GAAP basis.
2. Common equity capital ratio = common equity Tier 1 capital / risk-weighted assets.
3. Tier 1capital ratio = Tier 1capital / risk-weighted assets.
4. Capital adequacy ratio = eligible capital / risk-weighted assets.

Source: CBC.

Chart 3.36 Comparison of capital ratios in selected economies



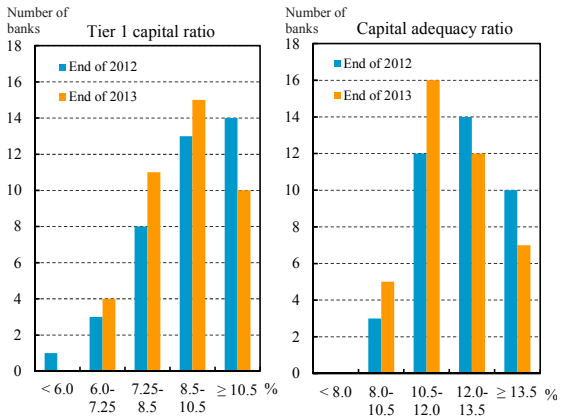
Note: Figures are as of the end of 2013.
Sources: CBC, APRA, FDIC, BNM, BOT, FSS, HKMA, and MAS.

[57] For implementation of Basel Ⅲ in Taiwan, see CBC (2013), *Financial Stability Report, May*. The minimum capital requirements in the transition period are as follows:

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

capital, while non-common equity Tier 1 capital and Tier 2 capital registered only 0.67% and 22.79%, respectively, at the end of 2013. It showed that thecapital quality of domestic banks was adequate.

Chart 3.37 Number of domestic banks classified by capital ratios

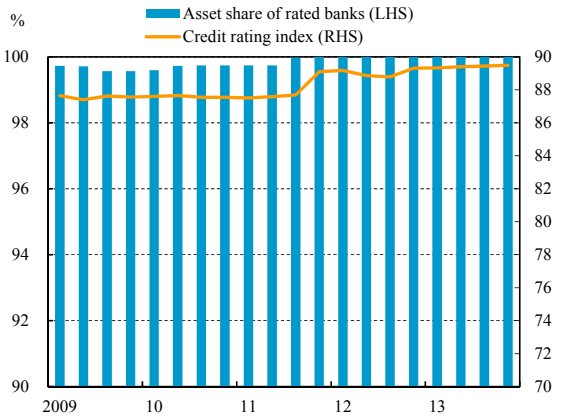


Source: CBC.

The capital levels of all domestic banks were higher than the2013 statutory minimum

At the end of 2013, the common equity ratios, Tier 1 capital ratios and capital adequacy ratios for all domestic banks remained above the statutory minimum requirementsfor 2013 (3.5%, 4.5% and 8.0%) and thosefor 2015 (4.5%, 6.0% and 8.0%). Compared to the previous year's capital ratios calculated in accordance with Basel Ⅱ, the number of banks with high capital ratios significantly decreased, indicating capital ratio drops for most banks (Chart 3.37).

Chart 3.38 Credit rating indices of rated domestic banks



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

Some banks faced pressure to raise their capital levels

Even though the capital ratios of all banks met current minimum standards for 2013, some banks, particularly state-owned banks and small private banks,might not fulfill all minimum capital requirements set for the transition period. Such banks should actively reinforcetheir capital adequacy by seasoned equity offerings, accumulating earnings, reducing cash dividends and adjusting loan structures to raise their capital ratios gradually.

Credit ratings

Average credit rating level remained stable

According to the rating results[58] released by credit rating agencies, the credit rating index[59] of domestic banks lifted slightly in 2013 (Chart 3.38), owing to one bank,which was set up during the year, receiving the highest rating of twAAA. It reflected an improvement of the overall credit rating level.

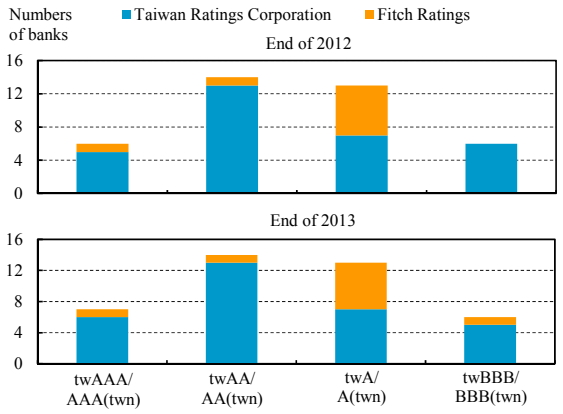
As for the overall risk assessments of Taiwan's banking system made by credit rating agencies, Standard & Poor's Banking Industry Country Risk Assessment (BICRA)[60] maintained Taiwan's BICRA unchanged at Group 4. Compared to other Asian economies, the risk of Taiwan's banking industry washigher than those of Hong Kong, Singapore, Japan, and South Korea, and about the same as that of Malaysia, but much lower than those of Mainland China, Thailand, Indonesia and the Philippines. The assessments of Taiwan's banking system evaluated by Fitch Ratings' Banking System Indicator/ Macro-Prudential Indicator (BSI/MPI) [61] also remained unchanged at

Table 3.2 Systemic risk indicators for the banking system

Banking System	Standard and Poor's		Fitch	
	BICRA		BSI/MPI	
	2013/2	2014/2	2013/2	2014/2
Hong Kong	2	2	a/3	a/3
Singapore	2	2	aa/2	aa/2
Japan	2	2	bbb/1	a/1
South Korea	3	3	bbb/1	bbb/1
Taiwan	**4**	**4**	**bbb/1**	**bbb/1**
Malaysia	4	4	bbb/1	bbb/1
Mainland China	5	5	bb/3	bb/3
Thailand	5	6	bbb/1	bbb/1
Indonesia	7	7	bb/3	bb/3
Philippines	7	7	bb/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.

[58] As of the end of 2013, 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)).

[59] 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.

[60] 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.

[61] 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 represents banking system strength on a scale from aa (very strong) to ccc/cc/c (very weak).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.

level bbb/1 (Table 3.2).

Rating outlooks remained stable

All domestic banks were rated by credit rating agencies for 2013. Most of them maintained credit ratings of twAA/twA (Taiwan Ratings) or AA(twn)/A(twn) (Fitch Ratings) at the end of 2013, and none had credit ratings lower than twBB/BB(twn) (Chart 3.39). The results were similar to those received the previous year. Regarding rating outlooks or CreditWatch, while six banks turned negative in 2013,[62] 34 banks remained stable or positive.

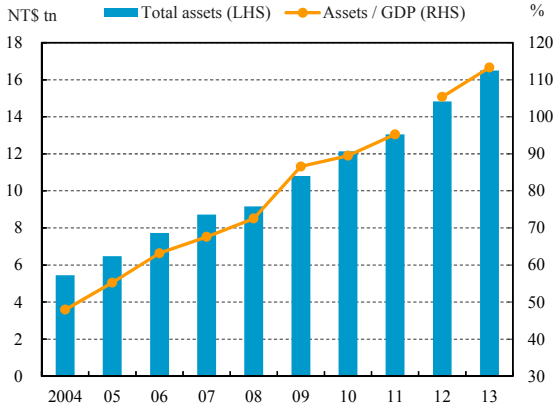
3.2.2 Life insurance companies

In 2013, the total assets of life insurance companies grew at a speedy pace, and their profitability recorded a six-year high, showing an improvement in operating performance. The average RBC ratio of life insurance companies at the end of 2013 was higher than that of a year earlier. However, the financial strength of a few companies needs to be bolstered as soon as possible.

Assets grew at a considerable pace

The total assets of life insurance companies grew continually and reached NT$16.50 trillion at the end of 2013, equivalent to 113.33% of annual GDP (Chart 3.40). However, the annual growth rate of total assets declined to a still considerable pace of 11.24% at the end of 2013, from 12.56% a year earlier.

Chart 3.40 Total assets of life insurance companies



Note: Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
Sources: FSC and DGBAS.

At the end of 2013, 23 domestic life insurance companies[63] held a 98.40% market share by assets, five of which were foreign affiliates holding a 3.26% market share, while five foreign life insurance companies held the

[62] The reasons for six banks receiving negative rating outlooks or CreditWatch were excessive growth in loans affecting capital levels, decreasing capital levels affecting the ability to absorb losses, deteriorating capital and earnings, a rating downgrade of the bank's parent company, or increasing capital pressure after M&A activity.
[63] Foreign affiliates included.

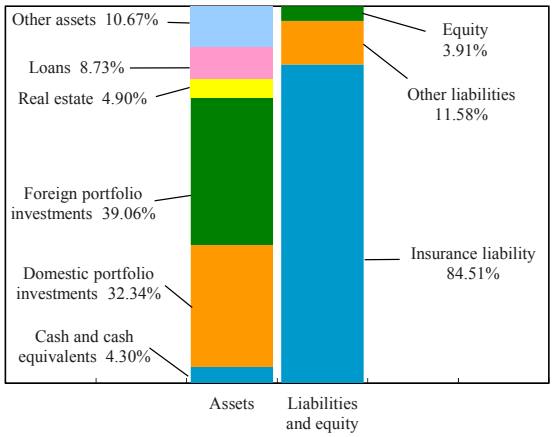
remaining 1.60% of total assets. The top three companies in terms of assets held a combined market share of 53.97%, revealing a slight decrease of 0.28 percentage points year on year. The market structure of the life insurance industry roughly remained unchanged in 2013.

Foreign securities investments had the highest growth rate

The funds of life insurance companies at the end of 2013 were chiefly invested in foreignand domestic securities which accounted for 39.06% and 32.34% of total assets, respectively. Loans only accounted for 8.73% of total assets, with real estate accounting for 4.90% and cash and cash equivalents for 4.30%. As for the sources of funds, insurance liability accounted for the largest share of 84.51%, while equity dipped to a share of 3.91% due to the huge contraction of unrealized gains on available-for-sale financial assets, reflecting the high financial leverage of life insurance companies (Chart 3.41).

In 2013, foreign securities investments by life insurance companies had the highest growth rate, increasing by 22.27% year on year. However, the growth rate of real estate investment dropped drastically to 6.60% from 15.57% a year earlier owing to the impact stemming from stricter regulations. Loans increased by 15.80% from the previous year's 4.05% as insurance companies tended to provide more real estate-secured loans.

Chart 3.41 Asset/liability structure of life insurance companies

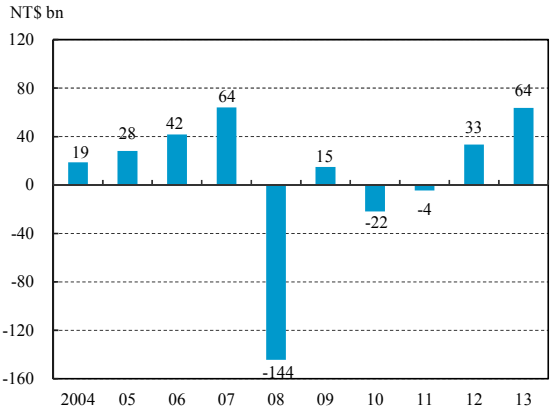


Note: Figures are end-December 2013 data.
Source: FSC.

Net income recorded a six-year high

Life insurance companies reported a six-year high net income before tax of NT$64 billion in 2013, a year-on-year increase of NT$31 billion or 91.02% (Chart 3.42). This was mainly driven by huge profits on foreign exchange gains derived from investment portfolios, as well as an interest income

Chart 3.42 Net income before tax of life insurance companies

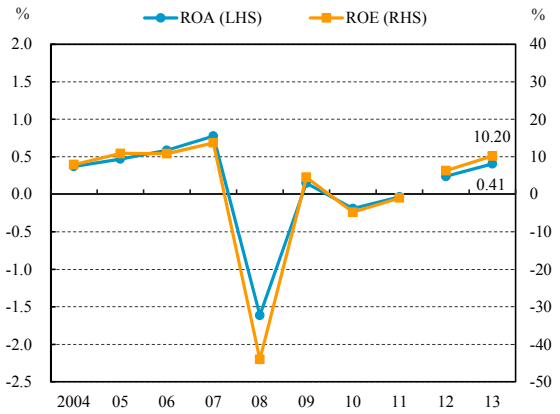


Note: Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
Source: FSC.

increase and a recovery of special reserves on unrealized property gains.

During the same period, average ROE and ROA were 10.20% and 0.41%, respectively, much higher than 6.31% and 0.24% in 2012 (Chart 3.43). Among all 28 insurance companies, six companies posted better profits and achieved ROEs of 10% or more, equivalent to the number of a year earlier. However, there were eleven companies who still suffered losses, two more than that of the previous year.

Chart 3.43 ROE & ROA of life insurance companies



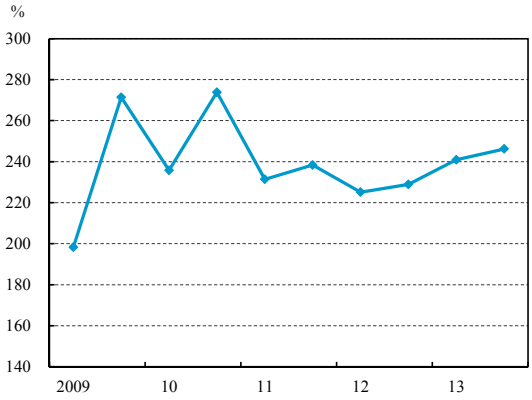
Notes: 1. Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
2. ROE = net income before tax / average equity.
3. ROA = net income before tax / average assets.

Source: FSC.

Average RBC ratio was above the statutory minimum

Owing to greater domestic and foreign securities investments, as well as the FSC's measure to raise the coefficient for RBC, the total amount of RBC increased during 2013. Nevertheless, the industry turned healthy profits and more unrealized gains on investment property were allowed to be included in regulatory capital, along with ongoing capital-raising by several insurance companies, resulting in the increment of the regulatory capital exceeding that of RBC. Consequently, the average RBC ratio rose to 246.22% at year-end 2013 (Chart 3.44) from 228.95% at the end of the previous year (excluding Kuo Hua Life Insurance Company), above the statutory minimum of 200%.

Chart 3.44 RBC ratio of life insurance companies



Notes: 1. RBC ratio = regulatory capital / risk-based capital.
2. Kuo Hua Life Insurance Company, which was taken into receivership by the Insurance Stabilization Fund in August 2009 and merged into TransGlobe Life Insurance Company in March 2013, is excluded from 2009 onwards.

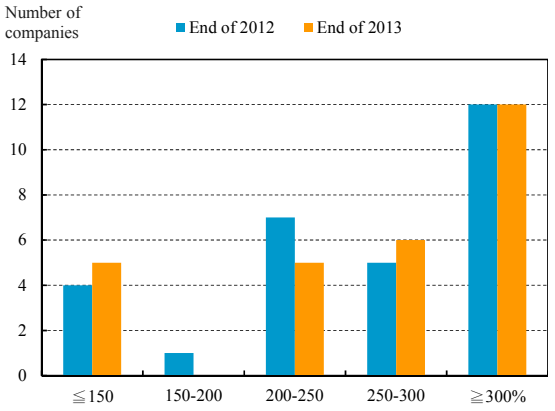
Source: FSC.

By individual company, there were twelve companies with RBC ratios over 300%. However, five companies had ratios below 200% (Chart 3.45), whose combined assets accounted for 2.42% of the total. Although the share is not particularly high, the financial structure of those companies needs to be improved as soon as possible.

Overall credit ratings improved slightly, with most obtaining positive or stable credit outlooks[64]

Overall, the credit rating level of eleven life insurance companies rated by Taiwan Ratings or Fitch Ratings improved slightly in 2013. The main reason behind this was that Standard & Poor's revised its rating criteria for insurance companies, resulting in the rating upgrade of China Life Insurance Company to twAA from twAA-, while others didn't receive credit rating adjustments. As of the end of 2013, all rated insurance companies maintained credit ratings above twA or its equivalent, while most companies except one received positive or stable credit outlooks. The three biggest insurance companies by assets were all rated twAA+, showing strong capability to fulfill all financial commitments.

Chart 3.45 Number of life insurance companies classified by RBC ratios



Note: Figure for end-2012 is exclusive of Kuo Hua Life Insurance Company.
Source: FSC.

The challenges faced by life insurance companies

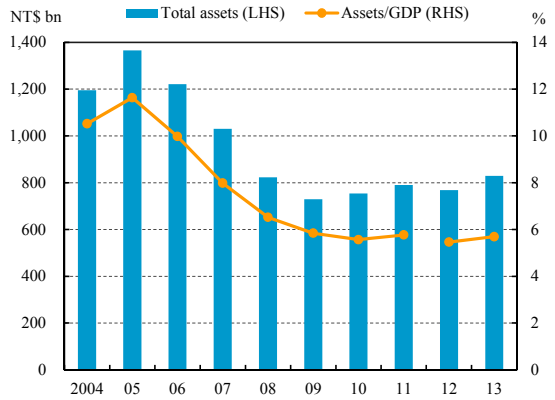
Although the overall profitability of life insurance companies improved in 2013, fast growth of total assets and limited increase in capital level propelled a soaring leverage ratio. Furthermore, the interest rate spread losses from maturity mismatches in the global climate of prolonged low interest rates remained unresolved. They both require insurance companies' close attention. Besides these, the problem of capital inadequacy faced by a few insurance companies showed that, apart from capital injection and stricter supervision of those companies, it is indeed an urgent matter to address the question of how to strengthen the resolution mechanism for the insurance industry, which could thus protect the rights of the assured and promote the sound development of the insurance industry (Box 5).

[64] As most life insurance companies were rated by Taiwan Ratings, the analysis in this section focused primarily on the opinions of Taiwan Ratings. Other rating agencies' opinions are also taken into consideration, though.

3.2.3 Bills finance companies

The total assets of bills finance companies increased slightly in 2013. Operating profitability remained stable and the quality of credit assets remained sound, yet the liquidity risk stayed high. The average capital adequacy ratio of bills finance companies as a whole was maintained at a similar level to the previous year, while the ratio of each company stayed well above the statutory minimum.

Chart 3.46 Total assets of bills finance companies

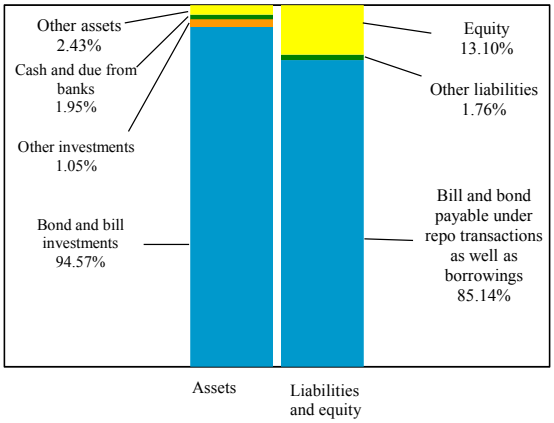


Note: Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
Sources: CBC and DGBAS.

Total assets increased slightly

The total assets of bills finance companies rebounded slightly in 2013, though still lingering at a level near their ten-year low. The total assets stood at NT$829.1 billion at the end of 2013, increasing by 7.90% year on year and equivalent to 5.69% of annual GDP (Chart 3.46).

Chart 3.47 Asset/liability structure of bills finance companies



Note: Figures are end-December 2013 data.
Sources: CBC and FSC.

In terms of the assets and liabilities structure of bills finance companies at the end of 2013, bond and bill investments constituted 94.57% of total assets, a decrease of 0.8 percentage points year on year. On the liability side, it was mainly composed of short-term repo transactions and borrowings which accounted for 85.14% of total assets, while equity only accounted for 13.10% of total assets (Chart 3.47).

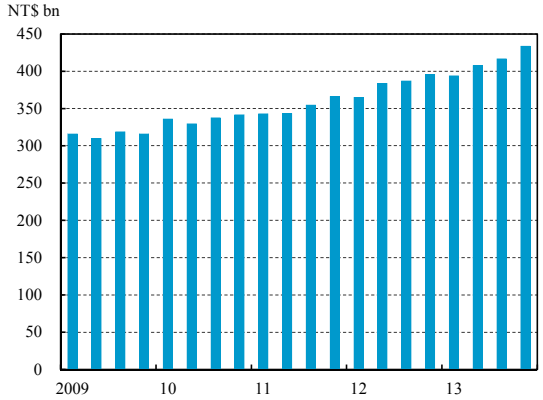
Credit risks

Outstanding balance of guarantees and real estate-secured credit increased gradually

Benefiting from the increased issuance of commercial paper by private corporations for short-term funding while the interest rate in the bill market remained low, the outstanding

guarantees business undertaken by bills finance companies registered NT$433.7 billion at the end of 2013,an increase of NT$38 billion or 9.59% year on year (Chart 3.48). As a result, the average multiple of guarantees outstanding to equity of bills finance companies rose to 4.38 times at the end of 2013, compared to 4.08 times a year before. However, each bills finance company still conformed to the regulatory ceiling of five times.[65]

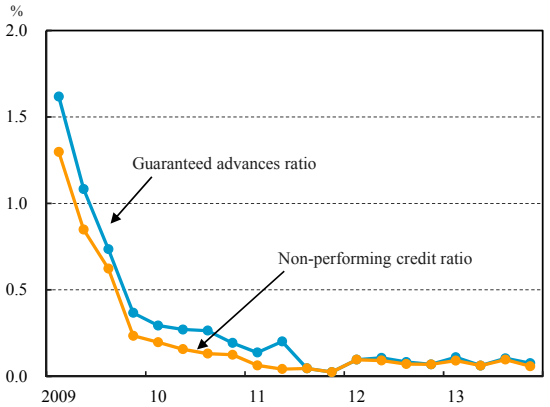
Chart 3.48 Outstanding commercial paper guarantees of bills finance companies



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

Guarantees granted to the real estate and construction industry and the credit secured by real estate accounted for 25.22% and 28.54%, respectively, of total credits of bills finance companies,with an upward trend. It is advisable for bills finance companies to closely monitor such credit risks while the domestic housing market might face downturn pressure in the future.

Chart 3.49 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.

Credit quality remained sound

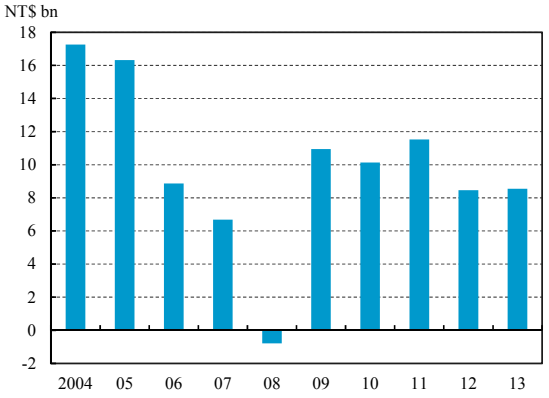
At the end of 2013, the average guaranteed advances ratio and the non-performing credit ratio of bills finance companies stayed at 0.08% and 0.06%, respectively, reflecting sound credit quality (Chart 3.49). At the same time, the ratios of credit loss reserves to non-performing credits as well as those to guaranteed advances registered 2,472.42% and 3,224.90%, respectively, indicating that the reserves set aside were significantly sufficient to cover potential credit losses.

[65] According to the *Directions for Outstanding Amount of Guarantees and Endorsements of Short-term Bills by Bills Houses*, the ratio of outstanding commercial paper guaranteed to net worth for a bills finance company should not exceed one, three, four and five times, respectively, depending on the level of its capital adequacy ratio of below 10%, above 10% but below 11%, above 11% but below 12%, or above 12%. As of the end of 2013, the capital adequacy ratio of each bills finance company was above 12%, so the ceiling of five times was set for them each accordingly.

Liquidity risk remained high

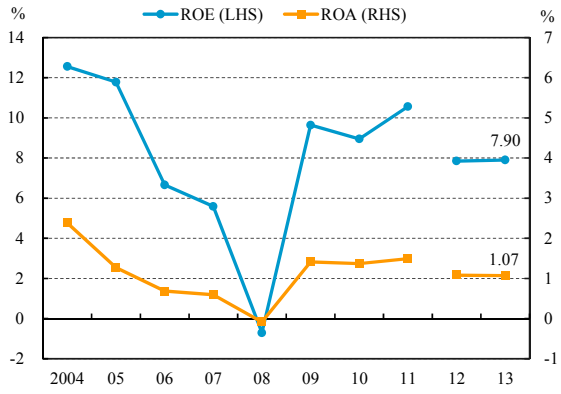
In 2013, bills finance companies still heavily relied on short-term interbank call loans and repo transactions as funding sources, while over 40% of funds went to long-term bond investments. The significant maturity mismatch between assets and liabilities showed bills finance companies still faced high liquidity risk. In order to lessen liquidity risk, the FSC set a ceiling ratio of major liabilities to equity for bills finance companies. The average multiple of major liabilities to equity at the end of 2013 rose to 7.13 times, compared to 6.68 times a year before, owing to the 8.93% increase of major liabilities in 2013. However, none of the bills finance companies exceeded the regulatory ceilings of tenor twelve times.[66]

Chart 3.50 Net income before tax of bills finance companies



Note: Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
Source: CBC.

Chart 3.51 ROE & ROA of bills finance companies



Notes: 1. Figures from 2012 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
2. ROE = net income before tax / average equity.
3. ROA = net income before tax / average assets.
Source: CBC.

Operating profitability held steady

Bills finance companies posted a net income before tax of NT$8.55 billion in 2013 (Chart 3.50), with a year-on-year increase of 1.03%. Over the same period, average ROE and ROA registered at 7.9% and 1.07%, respectively, a slight change from 7.85% and 1.08% in 2012 (Chart 3.51). Looking forward, stable growth of the commercial paper guarantees business as well as the underwriting business could be conducive to future profitability of bills finance companies. However, the long-term interest rate might trend up owing to the gradual exit of quantitative easing in the US. This could result in a negative effect on their future

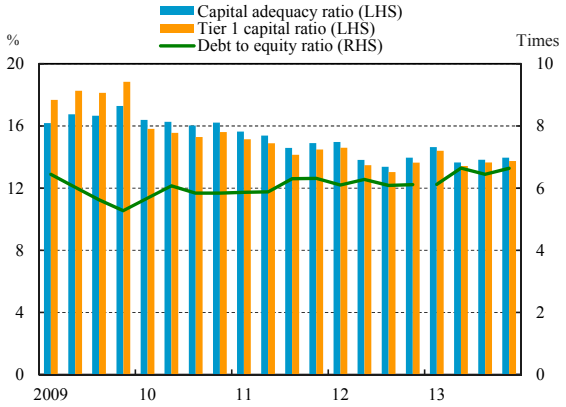
[66] In order to reduce the operating and liquidity risks of bills finance companies, the FSC amended the *Directions for Ceilings on the Total Amounts of the Major Liabilities and Reverse Repo Transactions Conducted by Bills Houses* on 9 April 2010, aimed at contracting the major liabilities of bills 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 2013, the capital adequacy ratio of each bills finance company was above 12%, so the ceilings were ten times or twelve times for each one.

performance.

Average capital adequacy ratio almost unchanged

The average capital adequacy ratio of bills finance companies registered 13.95% at the end of 2013, the same as the previous year. At the same time, the Tier 1 capital ratio slightly rose to 13.75%, from 13.64% a year before. The capital adequacy ratio for each bills finance company was above 13%, well above the statutory minimum of 8%. Nevertheless, the average multiple of debt to equity of bills finance companies climbed to 6.64 times, from 6.11 times a year earlier (Chart 3.52), reflecting a certain degree of increase in the financial leverage of bills finance companies.

Chart 3.52 Capital adequacy and leverage of bills finance companies



Note: Figures from 2013 are on the TIFRSs basis, while prior years are on the ROC GAAP basis.
Source: CBC.

Box 4
Opportunities and risks for domestic banks to develop Mainland China market

In the early 1990s, financial supervisors began to gradually liberalize banking policy so that domestic banks could establish representative offices and expand their financial business in Mainland China. After the signing of the *Economic Cooperation Framework Agreement* (ECFA) by cross-strait authorities on 29 June 2010, which put financial service industries on the early harvest list, cross-strait financial interactions entered into a new stage of establishing branches or subsidiaries of financial institutions in the respective areas. Taiwan's banks also enjoyed favorable terms compared with banks from other countries, expediting the approval processes of setting up branches or subsidiaries and conducting RMB business. Given its huge market and rapid economic growth, Mainland China is a place full of business opportunities for domestic banks, but one that also comes with a certain level of risk.

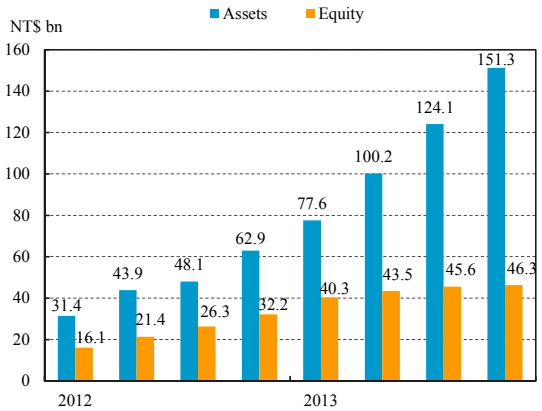
1. Current developments of Mainland Chinese branches of domestic banks

At the end of 2013, domestic banks had eleven branches with three sub-branches in Mainland China. Among them, six branches were allowed to engage in all RMB businesses. Moreover, several domestic banks were in the process of applying for greater presences in Mainland China.

1.1 Rapid growth in assets

Along with banks' increasing numbers of Mainland Chinese branches, their assets and equity increased dramatically. As of the end of 2013, total assets and equity of Mainland Chinese branches amounted to NT$151.3 billion and NT$46.3 billion with annual growth rates of 141% and 44%, respectively (Chart B4.1). However, the average NPL ratio of Mainland Chinese branches reported merely 0.08%, representing satisfactory asset quality.

Chart B4.1 Total assets and equity of Mainland Chinese branches of domestic banks

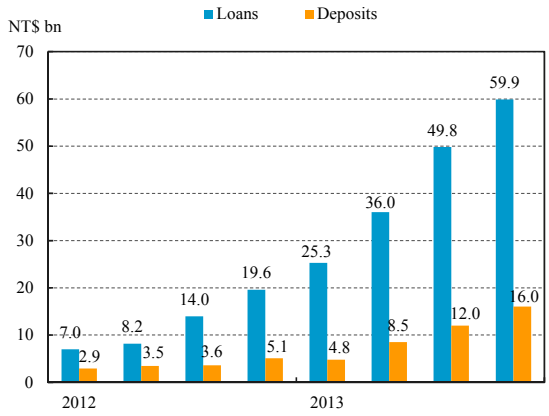


Note: Data includes branches and sub-branches.
Source: CBC.

1.2 Concentration of sources and uses of funds

The funds of Mainland Chinese branches mainly came from equity capital provided by their headquarters and due to affiliates, which accounted for 86.16% of total assets, while deposits accounted for only 10.58% of total assets at the end of 2013. As for the uses of funds, due from banks accounted for the largest share of 57.7% of the total, followed by customer loans at 39.19%.

Chart B4.2 Total deposits and loans of Mainland Chinese branches of domestic banks



Source: CBC.

In the most recent two years, Mainland Chinese branches actively engaged in the local syndicated loan market. It resulted in a dramatic increase in loans outstanding to NT$59.9 billion at the end of 2013, with an annual growth rate of 206%. At the same time, total deposits registered only NT$16 billion, much lower than total loans because of constraints of local deposit regulations; nevertheless, their annual growth rate reached 214% (Chart B4.2).

1.3 Net income rose substantially

In 2013, net income before tax of all Mainland Chinese branches reported NT$1.65 billion, dramatically increasing by 87.5% year on year. It was mainly contributed to by an increase ininterest income arising from due from banksand customer loans.

2. Opportunities and risks in the Mainland China market

As business opportunities in the Mainland China market come with risks, domestic banks should take preventive actions in a prudent manner to mitigate such risks.

2.1 Opportunities

2.1.1 Expanding presence in Mainland China by setting up subsidiaries

Since setting up subsidiaries, rather than branches, would allow banks to enjoy a greater presence, business scope and customer pool, domestic banks were more inclined to set up subsidiaries or transferring their branches into subsidiaries to facilitate their business expansion.

2.1.2 Taking advantage of fast track program to expand business in the central and western regions of Mainland China

The government of Mainland China, under the policy of encouraging foreign banks to expand their presence in the central, western and northeastern regions, provided a fast track program for Taiwan's banks to set up branches in those regions. Domestic banks may take advantage of this to expand their business in Mainland China.

2.1.3 Better grasping the operations of Taiwanese enterprises and establishing a centralized financial service platform

Domestic banks could better grasp the cash flows and business activities of their customers, mainly Taiwanese enterprises and their subsidiaries in Mainland China, so as to mitigate credit risk and improve their customer relationships. Furthermore, domestic banks could establish their own centralized financial service platforms which linked financial services provided in Taiwan, Hong Kong and Mainland China together to meet the financial needs of Taiwanese enterprises operating in these regions.

2.1.4 Expanding SME financing in Mainland China

As Mainland China's government has been promoting SME financing in recent years, domestic banks could take this opportunity to expand SME financing in Mainland China based on their profound experiences. However, given the deficient financial transparency of Mainland China's SMEs, domestic banks should also take measures to mitigate potential risks**.**

2.2 Risks and limitations faced by domestic banks in the Mainland China market

2.2.1 Increasing credit risk

Credit risk in Mainland China might increase due to slowing economic growth, decreasing profits for enterprises, potential losses for the solar panel industry caused by oversupply, as well as a possible downturn in its real estate market.

2.2.2 Potentially rising interest rate risk

After the launching of a market-oriented reform of interest rates policy by the People's Bank of China, the interest rate floors for consumer loans were removed in July 2013. In the future, when the ceilings of deposit interest rates are also lifted, banks might face higher interest rate risk as interest rate spreads contract under severe competition**.**

2.2.3 Constrained business activities

The funding sources of Mainland Chinese branches were limited as they were only allowed to accept time deposits over RMB1 billion and borrow overseas on an approval basis, restraining their capability to extend RMB loans. In addition, local regulations stipulate that either interbank lending or borrowing of Mainland Chinese branches cannot exceed 200% of their RMB working capital, thus limiting the flexibility of their funding management.

3. The FSC's supervision of Mainland Chinese branches

The FSC has established a comprehensive mechanism including authorization previews, risk controls and follow-ups to enhance the supervision of Mainland Chinese branches of domestic banks.

3.1 Setting up risk limitations

According to the *Regulations Governing the Banking Activity and the Establishment and the Investment by Financial Institution Between the Taiwan Area and the Mainland Area*, domestic banks shall comply with the following risk limitations:

- **Total investment limit:** the total of cumulative allocated working capital and equity investments for a bank's branches and subsidiaries in Mainland China cannot exceed 15% of the bank's net worth.

- **Total risk exposure limit:** the aggregate amount of credit, investment as well as interbank loans and deposits in Mainland China may not exceed 100% of the bank's net worth as of the end of the preceding fiscal year. At the end of 2013, the average ratio of risk exposure to net worth of domestic banks was 58%, still an acceptable level; however, some banks were close to the regulatory ceiling of their risk limits.

- **The limit of total credit extended by third-area branches and OBUs**: the total credit granted by third-area branches and OBUs to borrowers in Mainland China may not exceed 30% of their combined net total assets.

3.2 Closely monitoring Mainland Chinese operations of domestic banks

Besides the risk limitations, domestic banks are urged to strengthen their risk management. In addition, the FSC closely monitors the conditions and operations of Mainland Chinese bank branches via cross-strait supervisory cooperation and on-site

examination based upon the Cross-strait Banking Supervisory Platform, which was established by the FSC and Mainland China's banking supervisors.

4. Conclusion

- In view of the significant gap with regard to financial market openness and structure between Taiwan and Mainland China, negotiations on the issues of cross-strait financial services should be undertaken on a gradual basis.
- Given that the risk exposures of some domestic banks to Mainland China are close to the regulatory ceilings, the competent authority will continue to implement the aforementioned risk control measures in a prudent manner and urge the banks to abide by the risk exposure limitations so as to avoid further risk concentration in Mainland China.
- When promoting business in Mainland China, domestic banks should ensure related regulation compliance, internal controls and internal audits, and put risk management as the first priority.

Reference: Wen-Chieh Wang (2014), *Cross-strait Banking Interaction and Development in the Post-ECFA Era- Review on Legal Framework*, Section 50 II, Taiwan Economic Financial Monthly Journal, Bank of Taiwan.

Box 5
Enhancing the resolution regime for problem insurers in Taiwan

Since the opening up of Taiwan's insurance market in the 1990s, several insurance companies have gone into insolvency due to inadequate management and have been liquidated or taken over by the supervisory authority. Among them, Kuo Hua Life Insurance Company had a negative net worth since 2000 and was not taken over by the Taiwan Insurance Guaranty Fund (TIGF) until August 2009. Eventually, it was sold to Trans Globe Life Insurance Company and exited from the market in March 2013, with the cost of NT$88.37 billion paid by the TIGF. This indicated that the current resolution regime for problem insurers needs to be improved. Given that a few life insurance companies still face problems of insufficient capital, it is urgent for the supervisory authority to establish a more comprehensive and efficient resolution regime so as to maintain the soundness of the insurance industry.

1. Current resolution regime for problem insurers in Taiwan

The current resolution regime for problem insurers is stipulated mainly by three pieces of regulations as shown below. These regulations authorize the competent authority to adopt different supervisory measures (including resolution and exit from the market) depending on the severity of the insurer's problems. Additionally, the TIGF plays an important role in the resolution regime, such as extending loans or advancing funds to problem insurers, assuming their insurance contracts, or taking them into receivership, resolution or liquidation.

1.1 Paragraph 4, Article 149 of the Insurance Act

The main regulations on resolution procedures for problem insurers is stipulated in Paragraph 4, Article 149 of the *Insurance Act*. It states that if an insurance company experiences significant deterioration of business or financial conditions and is unable to pay its debts or perform contractual obligations, or might damage the rights and interests of insured parties, the competent authority "may" place the company under conservatorship or receivership, order it to suspend business and undergo rehabilitation, or take other resolution measures depending on the severity of the circumstances.

1.2 Regulations Governing Capital Adequacy of Insurance Companies

The *Regulations* are formulated in accordance with the provisions of Paragraph 3, Article 143-4 of the *Insurance Act*. It stipulates that if the risk-based capital (RBC) ratio of an

insurance company falls below 200%, the competent authority "may" adopt restrictive or resolution measures, such as (1) requiring it to increase capital or improve operation within the specified period; (2) restricting the scope of its business or trading; (3) dismissing its directors or supervisors; or (4) assigning personnel to supervise the company.

1.3 Guidelines for Dealing with Business Crises of Financial Institutions

According to the *Guideline*, when an insurance company encounters situations of abnormal policy surrenders, significant cash outflow or severe illiquidity and may go into insolvency, the FSC should set up a crisis management task force and coordinate with the CBC, the TIGF and other relevant authorities when necessary, in order to take responsive actions to deal with the crisis. If the company is assessed to be solvent, it could apply to other financial institutions and the TIGF for funding. If insolvent, the FSC will take resolution measures such as taking it into receivership, suspending its business or others.

1.4 Roles and functions of the TIGF

The TIGF was set up in accordance with Article 143-1 of the *Insurance Act*, for the purpose of protecting policyholders' interests and maintaining financial stability. According to Article 143-3 of the *Insurance Act*, the TIGF has several functions, for example, extending loans, providing low-interest loans or subsidies, advancing funds on behalf of the insurer to settle claims, acting as receiver, rehabilitator or liquidator, assuming insurance policies of the insolvent insurer, etc.

The funds of the TIGF are pre-contributed by all insurers, with the contribution rates of 1‰ and 2‰ of gross premium income for life and non-life insurers, respectively. If the accumulated funds of the TIGF are insufficient to safeguard the interests of insured parties to the extent that it might seriously threaten financial stability, the TIGF may borrow from financial institutions after getting approval from the competent authority. At the end of 2013, the TIGF suffered a huge financial gap with an adjusted net worth of negative NT$45 billion and a borrowing balance from financial institutions of NT$48.4 billion, owing to the payout of NT$88.37 billion for resolving Kuo Hua Life Insurance Company.

2. Problems of the current resolution regime in Taiwan

2.1 Too much regulatory discretion might delay the resolution process

Authorized by the aforementioned regulations, the competent authority has the

discretionary power to determine the time and measures for dealing with problem insurers. It is different from the prompt corrective actions (PCAs) stipulated in Article 44-2 of the *Banking Act* for the banking sector.[1] Although regulatory discretion grants the competent authority more flexibility in crisis management, they may result in delaying resolutions and exacerbating the crises.

2.2 Adopting a flat contribution rate for the TIGF and lacking limited coverage might give rise to moral risk

Currently, the TIGF adopts a flat contribution rate which disregards the risk level of individual insurers, lacking incentives to urge them to adequately manage risks. Moreover, contrary to the limited deposit insurance coverage system for the banking sector,[2] the coverage limit for insurance policies is not stated in the regulations but subject to the discretion of the competent authority, which could lead to higher moral risk of insurers and undermine the financial soundness of the TIGF.

2.3 The enormous financial gap of the TIGF might undermine its ability to resolve other problem insurers

The TIGF faced an enormous financial gap with an adjusted net worth of negative NT$45 billion after paying out for Kuo Hua Life. While there are still three insurance companies with negative net worth, the TIGF has little capacity for their resolution without obtaining more financial resources.

3. Recommendations for strengthening the resolution regime for problem insurers

To strengthen the resolution regime, while referring to *Key Attributes of Effective Resolution Regimes for Financial Institutions* released by the Financial Stability Board in October 2011 and considering the current status of Taiwan's insurance industry, several recommendations are provided as follows. Some of them have been included in the *Insurance Act* amendments in May 2014 and will be implemented immediately. Others may be difficult to carry out in the near future; however, they can be incorporated as part of long-term reforms.

3.1 Strengthening the supervisor's early intervention power over problem insurers

By referring to the PCAs in the *Banking Act*, PCAs for the insurance industry based on regulatory capital[3] should be established. Moreover, the early intervention power of the competent authority needs to be strengthened and regulatory discretion should be adequately constrained so as to diminish resolving costs.

3.2 Adopting a limited coverage scheme

By referring to the practices of the insurance industries in Singapore, South Korea and Malaysia, and of the banking industry in Taiwan, the coverage amount for insurance policies should be subject to a specific limit in order to eliminate moral hazard and lessen financial pressure on the TIGF.

3.3 Setting up a bridge insurer system

In view of the bridge bank scheme in the *Deposit Insurance Act*, a bridge insurer system to deal with problem insurers[4] should be taken into consideration. The bridge insurer can help problem insurers to temporarily continue the operations without paying out immediately, while maintaining the value of problem insurers and minimizing resolution costs.

3.4 Requiring insurers to prepare recovery and resolution plans

Requiring insurers to set up recovery and resolution plans in advance will help the supervisory authority to deal with crises in an orderly manner when they occur and, in turn, prevent them from causing financial instability and social disturbance. The plans should be regularly reviewed and be realistically exercised by insurers so as to strengthen their crisis management capabilities.

3.5 Accelerating the accumulation of the TIGF's funds and controlling insurance risk

3.5.1 Moderately increasing the contribution rate of the funds and implementing a risk-based contribution scheme

Currently, the TIGF's funds are contributed to at a flat rate with the annual accumulated amount equaling approximately several NT$ billion, significantly less than the amount paid out for the resolution of Kuo Hua Life Insurance Company, indicating notable insufficiency of the annual contribution to the funds. The competent authority should moderately increase the contribution rate and implement a risk-based contribution scheme[5] based on the risk level of individual insurers, similar to the system of deposit insurance.

3.5.2 Calculating the contribution of insurers based on their insurance liability reserves

Currently, the calculation of insurers' contributions is based on their gross premium income, which only considers the income scale of the insurer and has no relationship

with the accumulated insurance liabilities of the insurer. Calculating insurers' contributions based on their insurance liability reserves will more adequately connect the contribution with the potential responsibilities and risk imposed on the TIGF when resolving problem insurers.[6]

3.5.3 Establishing a special contribution mechanism

Referring to the special insurance premium of the deposit insurance system, the TIGF could also establish a mechanism of charging insurers a special contribution in the case of insufficient funds to payout, so as to complement the funds as soon as possible.

3.5.4 Promoting a risk control system designed by the TIGF

In order to control the insurance risk, the TIGF should be empowered to establish an early warning system and conduct inspection, as well as issuing warnings to insurers or requiring them to take corrective actions within a specified period.[7]

Notes:
1. According to PCAs of Article 44-2 of the *Banking Act*, when the capital adequacy ratio of a bank is lower than the statutory minimum, the competent authority "shall" undertake different enforcement actions to intervene at an early stage, depending on severity of insufficient capital.
2. According Article 13 of the *Deposit Insurance Act*, the maximum deposit insurance coverage limit for each depositor of any insured institution is NT$3 million.
3. The FSC held three meetings to collect opinions from the industry and experts regarding the implementation of PCAs in the insurance industry. However, after prudent evaluation, the FSC decided to postpone its implementation and put it into the next schedule of revising the *Insurance Act*.
4. The bridge insurer system was introduced in the newly revised *Insurance Act*, which was passed by the Legislature on 20 May 2014.
5. The FSC amended regulations on 2 April 2014 to raise the contribution rate of life insurance companies from 1‰ to 2‰ of gross premium income, and implement a risk-based contribution scheme based on RBC and management performance of individual insurers. The new regulations will be effective from July 2014.
6. The FSC has received comments on the issue of using insurance liability reserves instead of gross premium income as the calculation basis of contributions by insurers to the TIGF's fund. After deliberation, the FSC decided to keep the current rule unchanged, with potential adjustment in the future depending on the progress of implementation.
7. According to the newly revised *Insurance Act*, the TIGF can require insurers to provide necessary electronic data files, conduct inspection and undertake enforcement action.