

III. Non-financial sectors

The corporate sector, household sector, and real estate market constitute the main sources of risk for credit exposure of Taiwan's financial institutions. The degree of indebtedness and solvency in the corporate sector and household sector, as well as the real estate cycle, have far-reaching impacts upon the asset quality and profitability of financial institutions.

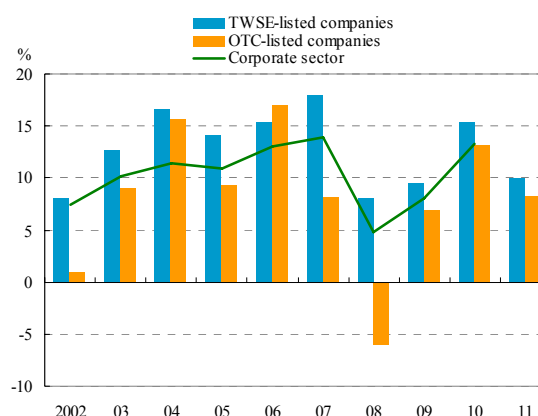
3.1 Corporate sector

Amid weak global economic growth and the European sovereign debt crisis, the profitability of listed companies weakened during the second half of 2011, while corporate leverage ratios showed mixed movements. Short-term debt servicing capacity was still at an acceptable level, though impaired by a deterioration in profitability. The credit quality of corporate loans remained sound as NPL ratios continuously decreased, but some industries began to show signs of increasing credit risk as their operating performance deteriorated in the face of diminishing market demand and global competition. In addition, rising international oil prices, eurozone economic recession, slow recovery of the US economy and China's lowered GDP target may affect future performance of the corporate sector and, therefore, warrant close attention.

Profitability of listed companies weakened in 2011

In the second half of 2011, weak global economic growth and the European sovereign debt crisis not only hit Taiwan's industrial production and exports but also hampered private consumption due to a contraction in wealth. Under these circumstances, the profitability of TWSE-listed and OTC-listed companies in 2011 weakened compared to the

Chart 3.1 Return on equity in corporate sector



Notes: 1. Return on equity = net income before interest and tax / average equity.
2. Latest data for the corporate sector is as of 2010, while those for TWSE-listed and OTC-listed companies are as of 2011.

Sources: JCIC and TEJ.

previous year as their returns on equity (ROEs) decreased to 10.07% and 8.32%,⁴⁷ respectively (Chart 3.1).

All major industries for TWSE-listed companies reported plummeting profitability in 2011, especially the shipping and transportation industry with an ROE that was down to almost zero. For OTC-listed companies, except for the trading & consumers' goods and the iron & steel industries that steadily increased profitability, all other industries experienced deteriorating performance (Chart 3.2). In addition, TWSE-listed and OTC-listed optoelectronics companies reported increasing losses of NT\$152.9 billion and NT\$2.9 billion, respectively, in 2011.

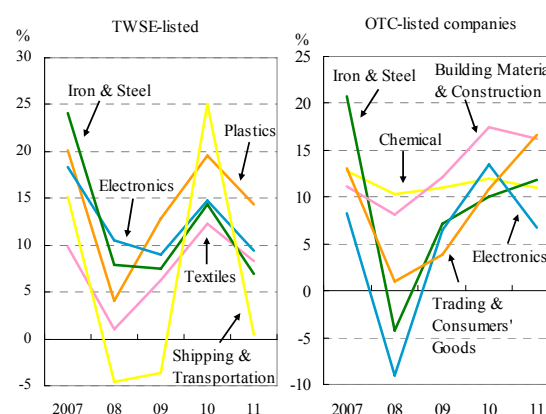
Leverage ratio rose slightly for TWSE-listed companies but fell for OTC-listed companies

At the end of 2011, as some large companies issued bonds to raise long-term funds, the average leverage ratio for TWSE-listed companies slightly rose to 73.53% from 68.45% at the end of the previous year. However, the average leverage ratio for OTC-listed companies fell to 66.25% as a result of decreasing liabilities (Chart 3.3).

Short-term debt servicing capacity for listed companies remained acceptable though weakened

At the end of 2011, short-term debt servicing capacity of TWSE-listed companies weakened with both the current ratio and the interest coverage ratio decreasing to 133.23%

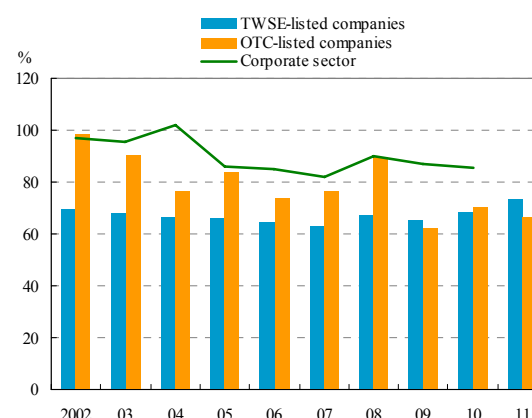
Chart 3.2 Return on equity of TWSE-listed and OTC-listed companies by major industries



Notes: Return on equity = net income before interest and tax / average equity.

Source: TEJ.

Chart 3.3 Leverage ratio in corporate sector



Notes: 1. Leverage ratio = total liabilities / equity.

2. Latest figure for the corporate sector is as of the end of 2010, while those for TWSE-listed and OTC-listed companies are as of the end of 2011.

Sources: JCIC and TEJ.

⁴⁷ The financial data for listed companies came from the Taiwan Economic Journal (TEJ) database, which excluded the data for Nanya Technology Corporation and Powerchip Technology Corporation as both were in the full cash delivery stock category as of the end of 2011. The losses for Nanya and Powerchip were NT\$39.9 and NT\$22.1 billion, respectively, in 2011. Including these two companies would cause the ROEs of TWSE-listed and OTC-listed companies to decrease to 9.67% and 5.97%, respectively.

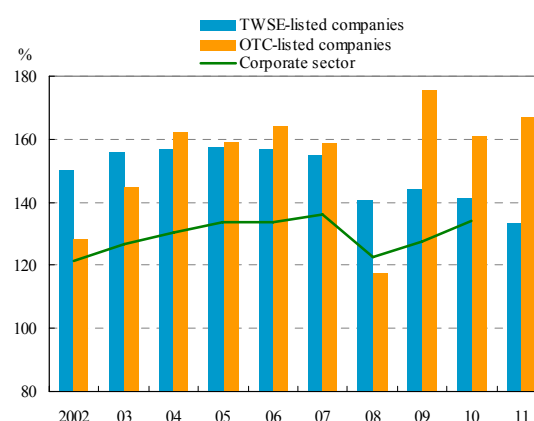
and 18.89, respectively, due to increases in current liabilities and deteriorations in profitability. The current ratio for OTC-listed companies rose to 166.73% as a result of decreased current liabilities, while their interest coverage ratio decreased to 14.82 owing to deteriorations in profitability (Chart 3.4 and 3.5). Overall short-term debt servicing capacity for listed companies remained acceptable though weakened.

Credit quality of corporate loans remained sound, but credit risk for certain industries increased

At the end of 2011, the NPL ratio for corporate loans granted by financial institutions continued to decline to 0.60% from 0.87% at the end of the previous year, reflecting sound credit quality for the corporate sector as a whole (Chart 3.6). However, due to diminishing market demand and global competition, some industries, especially dynamic random access memory (DRAM) and thin film transistor-liquid crystal display (TFT-LCD) manufacturers, saw weakened operating performances that may undermine their debt servicing capacity and negatively impact the loan quality of their creditor banks.

Meanwhile, in response to the global economic slowdown that adversely affected Taiwan's exports and investments during the second half of 2011, the Executive Yuan set up an "Economic Strategic Panel" on 3 November 2011 and put forth countermeasures to provide necessary assistance to industries in need. Starting 2012, global economic conditions began to show signs of stabilization and the DGBAS forecasted that the GDP growth rate of Taiwan would gradually pick up quarter by quarter. In addition, local market liquidity is

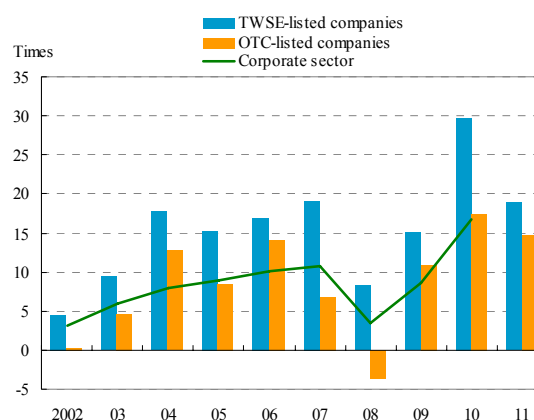
Chart 3.4 Current ratio in corporate sector



Notes: 1. Current ratio = current assets / current liabilities.
2. Latest figure for the corporate sector is as of the end of 2010, while those for TWSE-listed and OTC-listed companies are as of the end of 2011.

Sources: JCIC and TEJ.

Chart 3.5 Interest coverage ratio in corporate sector



Notes: 1. Interest coverage ratio = income before interest and tax / interest expenses.
2. Latest figure for the corporate sector is as of 2010, while those for TWSE-listed and OTC-listed companies are as of 2011.

Sources: JCIC and TEJ.

abundant and interest rates remain at low levels. All these will help to improve the operating environment and financial soundness of the corporate sector. However, rising international oil prices, economic recession in the eurozone, slow recovery of the US economy and China's lessened GDP growth target may affect future performance of the corporate sector and, therefore, warrant close attention.

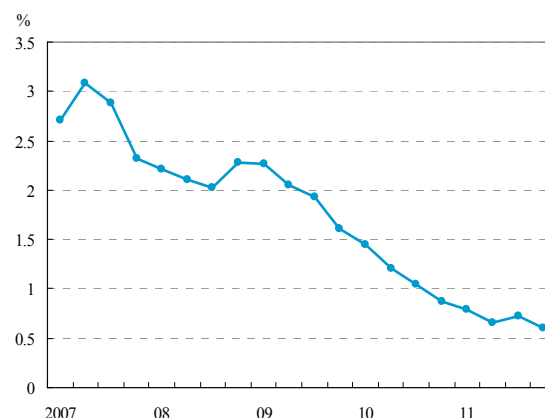
3.2 Household sector

As the growth of total household borrowing slowed and disposable income expanded faster than borrowing, the household debt burden slightly eased. Overall credit quality of household borrowing also remained satisfactory. Moreover, the gradual easing of the unemployment rate and the continuous growth of regular earnings may help to enhance the debt servicing capacity of households.

Growth of household borrowing slowed

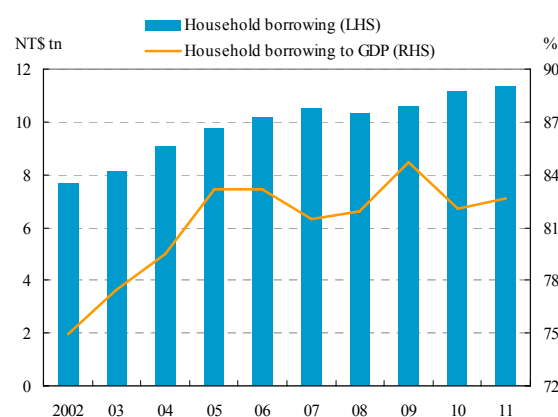
Total household borrowing⁴⁸ at the end of 2011 reached NT\$11.36 trillion, equivalent to 82.65% of annual GDP (Chart 3.7). The year-on-year growth rate of household borrowing for 2011 declined from 5.61% at the end of the previous year to 1.71%, mainly attributable to decreased growth of residential mortgage loans. The largest share of household borrowing went for the purchase of real estate (72.24%), with a decreased annual growth rate of 2.53%,

Chart 3.6 NPL ratio of corporate loans



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

Chart 3.7 Household borrowing to GDP



Sources: CBC, JCIC and DGBAS.

⁴⁸ The term "household borrowing" as used in this section refers to outstanding loans and revolving credit card balances taken out by households from the following financial institutions:

- (1) Depository institutions: domestic banks (including medium business banks), local branches of foreign banks, credit cooperatives, credit departments of farmers' associations, credit departments of fishermen's associations, and the Remittances & Savings Department of Chunghwa Post Co.
- (2) Other financial institutions: trust and investment companies, life insurance companies, securities finance companies, and securities firms.

followed by working capital loans⁴⁹ (22.22%), with an increased annual growth rate of 5.87%. Business investment loans, mainly for margin purchases, and revolving balances on credit cards took only minor percentages (Chart 3.8); however, they experienced large falls of 28.00% and 21.78%, respectively, following weakened stock market and local economic conditions in the second half of 2011.

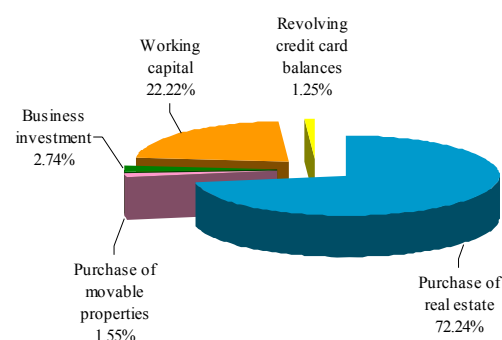
Compared to other selected countries, the growth of total household borrowing in Taiwan remained positive but was lower than that in Australia and South Korea. As a percentage of GDP, the household borrowing in Taiwan was lower than that in Australia, approximating that in the US and South Korea, but higher than that in Japan (Chart 3.9).

Household debt burden eased slightly

In 2011, as total household borrowing grew at a slower pace than disposable income, the ratio of household borrowing to gross disposable income⁵⁰ eased back to 1.16, reflecting a slightly reduced debt burden.

The debt servicing ratio rose from 36.07% a year earlier to 36.40% in 2011 due to the increase in working capital loans, showing that household short-term debt servicing pressure slightly increased (Chart 3.10). However, the fact that the domestic unemployment rate decreased gradually and regular earnings grew continuously may help to improve the debt servicing capacity of the household sector (Chart 3.11).

Chart 3.8 Household borrowing by purpose



Note: Figures are as of the end of 2011.
Sources: CBC and JCIC.

Chart 3.9 Household indebtedness in selected countries



Note: Figures for Taiwan and the US are as of the end of 2011.
The others are as of the end-September 2011.
Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, CBC and JCIC.

⁴⁹ The term "working capital loans" includes outstanding cash card loans.

⁵⁰ Gross disposable income = disposable income + rental expenses + interest expenses.

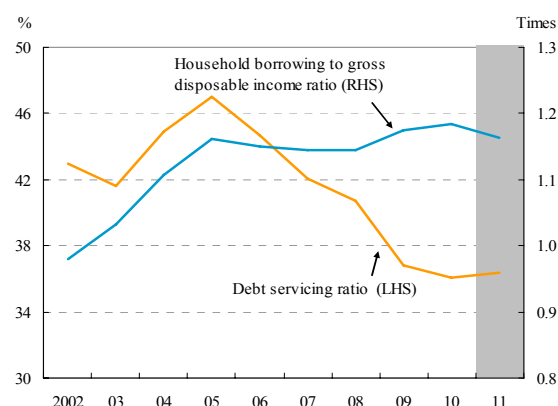
NPL ratio of household borrowing dropped to a record low

The NPL ratio of household borrowing declined from 0.77% a year earlier to 0.51 % at the end of 2011, the lowest level in ten years (Chart 3.12). The main reason behind this was that NPLs for real estate purchases, the largest share of household borrowing, contracted. Household credit quality remained satisfactory.

3.3 Real estate market

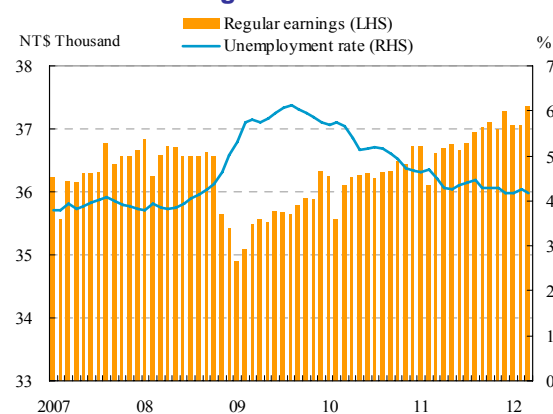
During the first half of 2011, real estate prices continuously climbed and indices repeatedly struck new highs. However, due to factors including the Ministry of Finance (MOF) imposing the Specifically Selected Goods and Services Tax, house prices gradually decreased and trading volume significantly contracted in the second half of 2011. The increase of outstanding real estate-related loans slowed down as mortgage interest rates slowly rebounded. As trading volume in the housing market contracted and massive construction projects introduced over the last few years were continuously completed, areas with high volumes of construction projects faced increasing downward pressure on housing prices.

Chart 3.10 Household debt servicing ratio



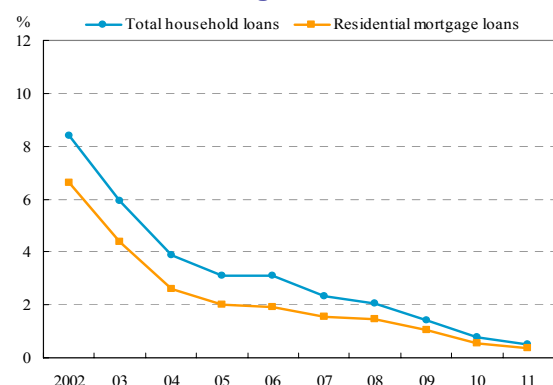
Notes: 1. Gross disposable income in shadow area is CBC estimate.
 2. Debt servicing ratio = borrowing service and principal payment / gross disposable income.
 Sources: CBC, JCIC and DGBAS.

Chart 3.11 Unemployment rate and regular earnings



Source: DGBAS.

Chart 3.12 NPL ratio of household borrowing



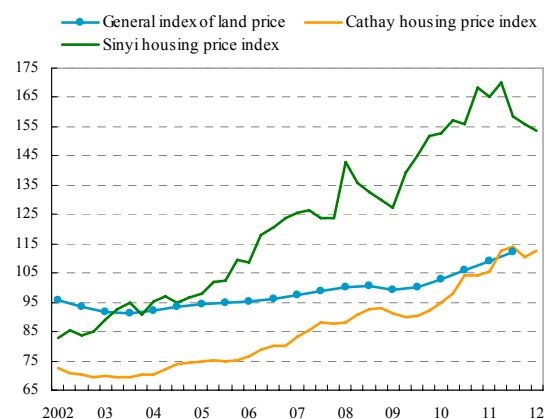
Source: JCIC.

Real estate prices gradually slid after hitting a peak

During the first half of 2011, real estate prices continuously climbed and indices repeatedly struck new highs. However, house prices started to slide in June due to the implementation of the Specifically Selected Goods and Services Tax, the slowdown in the economy and the drop in stock market indices. Among the relevant indices, the Taiwan area land price index hit a historical high of 112.05 in September 2011, though with a smaller growth rate of 5.78% year on year. The Cathay housing price index (for new construction) climbed to 114.6 in 2011 Q3, with house prices in several regions repeatedly hitting new highs. However, the index dropped back to 110.24 in Q4 with an annual growth rate of 5.85%, representing a significant decrease from its peak of 15.43% in 2010 Q3. In 2012 Q1, as the real estate industry focused on introducing high-priced houses, the Cathay housing price index rebounded, but house buyer bargaining power kept increasing. The Sinyi housing price index (for existing buildings) turned to decline in 2011 Q3 after reaching a historical high of 170.13 in Q2. In 2012 Q1, it continued decreasing to 153.47, with the growth rate falling to -7.07% (Chart 3.13). However, house prices in Taipei City and New Taipei City were still high, though downward pressure on housing prices remained in New Taipei City and Taichung City due to the high volume of construction projects.

In 2011, the annual growth rate of the housing component of the CPI was 0.86%, with residential rent growing at a moderate rate of 0.37% year on year. However, as the number of tourists visiting Taiwan increased, shop rentals in certain commercial districts in Taipei City surged significantly. Even so, on the whole, office rentals remained stable with the average rental rate slightly decreasing by 0.17% year on year to NT\$1,755 per ping (approximately

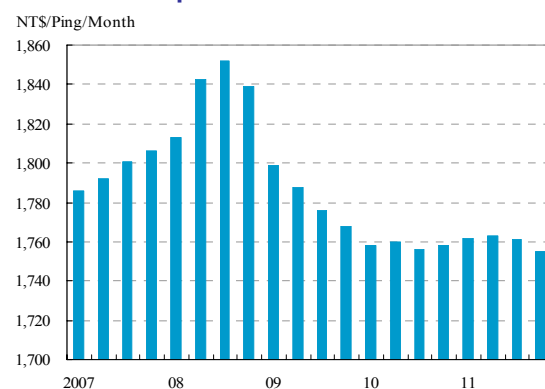
Chart 3.13 Land and house price indices



Note: General index of land price is released semiannually (i.e. in March and September).

Sources: MOI, Cathay Real Estate and Sinyi Real Estate Inc.

Chart 3.14 Average office rental rate in Taipei



Source: Colliers International "Taipei Office Market Overview."

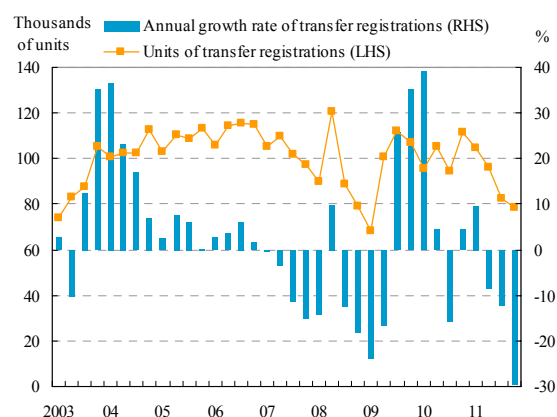
3.3 square meters) in Q4 (Chart 3.14).

Trading volume contracted significantly, while residential property vacancies remained high

Starting 2011, trading volume in the housing market contracted significantly due to the slowdown in the economy, the drops in stock market indices and the implementation of the Specifically Selected Goods and Services Tax. The annual growth rate for the number of building ownership transfers for transaction entered negative territory in Q2 and reached a 10-year low of -29.79% in Q4. The total number of building ownership transfers for transaction in 2011 decreased by 11.09% year on year to 360 thousand units, the lowest since 2004 (Chart 3.15). Compared to other metropolitan areas, the number of building ownership transfers for transaction in Taipei City, New Taipei City and Taichung City registered greater year-on-year decreases of 43.54%, 38.74% and 35.86%, respectively, in 2011 Q4. Furthermore, the total number of building ownership transfers for transaction in 2012 Q1 continued to decrease, falling by 38.86% year on year.

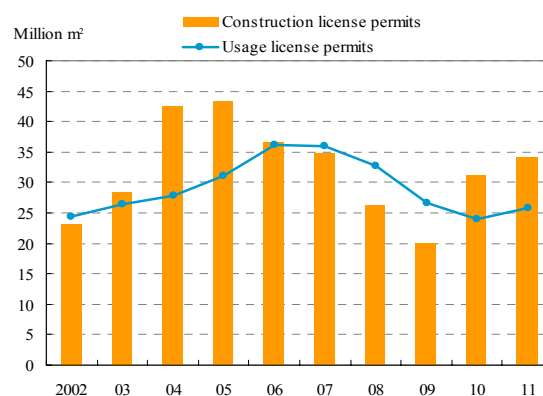
Due to increasing construction projects, the total floor space of construction license permits continued to increase in 2011, growing by 9.54% year on year, with residential real estate reaching year-on-year growth of 18.22% in 2011 and 3.76% in 2012 Q1. Meanwhile, in 2011, as construction projects introduced over the past few years

Chart 3.15 Building ownership registrations for transaction



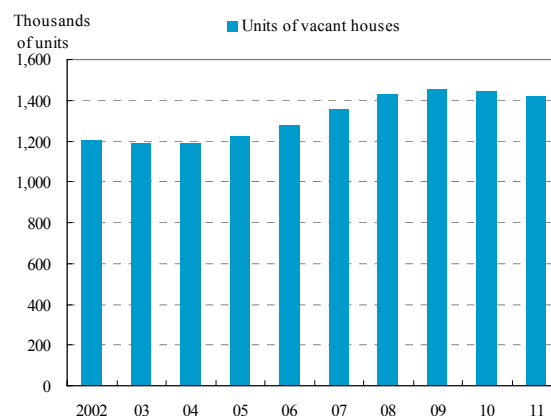
Source: Monthly Bulletin of Interior Statistics, MOI.

Chart 3.16 Floor space of construction license permits and usage license permits



Source: Monthly Bulletin of Interior Statistics, MOI.

Chart 3.17 Estimated units of vacant houses



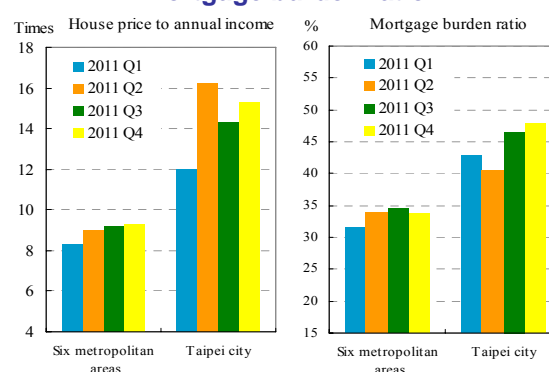
Source: Taiwan Power Company.

were continuously completed and released for sale, the supply of new properties in the market increased. Total floor space of usage permits increased by 7.79% year on year, with commercial properties posting the highest growth of 52.60% and residential properties slightly decreasing by 0.46%. Moreover, the average number of vacant residential properties in 2011, estimated by the number of units consuming less electricity than the minimum service charge from the Taiwan Power Company, decreased by 27 thousand units, or 1.85% year on year, but still stood at a high level of 1.419 million units (Chart 3.17). The movements in housing inventory levels in areas with high vacancy rates and numerous construction projects are worth close monitoring.

Mortgage burden remained heavy

Following climbing housing prices, the average house price to income ratio for the six metropolitan areas increased quarter by quarter to 9.3 in 2011 Q4. As the average mortgage burden ratio also elevated and reached 33.8% in Q4, the mortgage burden remained heavy. Among the metropolitan areas, the mortgage burden was the heaviest in Taipei City as its house price to income ratio and mortgage burden ratio reached 15.3 and 47.8%, respectively (Chart 3.18).

Chart 3.18 House price to income ratio and mortgage burden ratio



Notes: 1. Mortgage burden ratio = monthly mortgage expenditure / household monthly income.

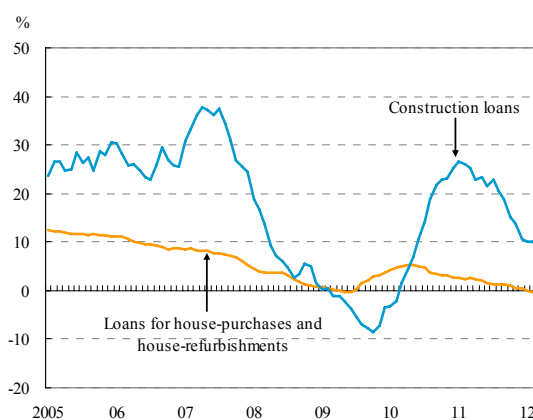
2. Six metropolitan areas refer to Taipei City, New Taipei City, Taoyuan and Hsinchu City and County, Taichung City, Tainan City, and Kaohsiung City.

Source: "Taiwan Housing Demand Survey Report," MOI.

Real estate-related loans grew at a slower pace, while mortgage interest rates gradually increased

Due to the effect of the CBC and the FSC's measures to strengthen risk management regarding the real estate-related loans of banks, the annual growth rate of loans for house purchases and house refurbishments granted by banks⁵¹ slid steadily to 0.6% at the end of 2011 and fell into negative territory

Chart 3.19 Annual growth rate of real estate-related loans



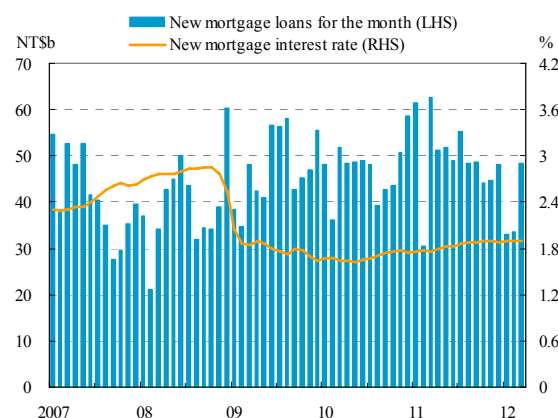
Source: CBC.

⁵¹ Refers to domestic banks and the local branches of foreign banks.

in early 2012, reaching -0.65% in March, though the outstanding balance for such loans continued to grow and amounted to NT\$5.76 trillion at the end of 2011. Outstanding construction loans continued to climb in 2011, albeit at a much slower pace of 10.48% year on year, and reached NT\$1.41 trillion at the end of 2011. The annual growth rate continued to decrease to 8.68% in March 2012 (Chart 3.19).

Starting 2011 Q2, new loans for house purchases granted by the five largest banks slid significantly and dropped by 17.73% year on year to NT\$48.2 billion in December. In 2012 Q1, such new loans continued to contract and decreased by 34.69% year on year. With respect to financing costs, following the CBC's policy rate hikes, the interest rate for new mortgages rebounded after decreasing to a record low of 1.62% in May 2010. It climbed to 1.88% in December 2011 and reached 1.89% in March 2012 (Chart 3.20).

Chart 3.20 New mortgages – amount and interest rate



Source: CBC.

Targeted prudential measures introduced by the CBC were effective

Considering that surging house prices in specific areas increased the mortgage burden and bank lending remained excessively concentrated on real estate-related loans, not only did the CBC adopt a series of targeted prudential measures focused on land collateralized loans and housing loans in specific areas from October 2009, but the FSC also introduced several measures to supervise the real estate lending risks of banks. Those measures proved to be effective, as the concentration of real estate-related loans gradually decreased and loan-to-value ratios also fell significantly (Box 2).

Box 2

Effectiveness of the CBC's measures to strengthen risk management on real estate-related loans of banks

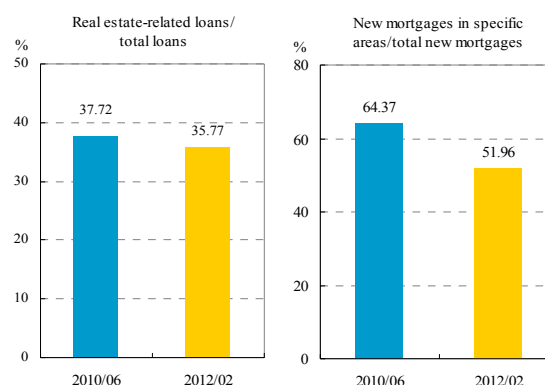
In response to surging house prices in specific areas in Taiwan and excessive concentration in real estate-related loans in the banking sector, the CBC has adopted a series of targeted prudential measures since October 2009. In addition to moral suasions and improvements in the data collection and analysis of real estate-related loans, the CBC promulgated the Regulations Governing the Extension of Housing Loans in Specific Areas by Financial Institutions in June 2010, which capped the loan-to-value (LTV) ratio on second (or more) housing loans for home purchases in Taipei City and ten districts within New Taipei City and removed the grace period for such loans. Furthermore, the CBC amended the above regulations in December 2010 to extend the coverage of specific areas and lower the maximum LTV ratio, as well as tighten underwriting standards for real estate loans collateralized by residential or commercial land plots located at urban planning districts.

Ever since the CBC launched the above-mentioned regulations to govern housing loans in specific areas and land collateralized loans, in conjunction with several measures adopted by the Financial Supervisory Commission (FSC) to supervise the real estate credit risks of banks and the Specifically Selected Goods and Services Tax promulgated by the Ministry of Finance (MOF) on 1 June 2011,¹ the policy measures to tighten risk management on the real estate-related loans of banks have shown promising results.

1. The concentration of real estate-related loans by financial institutions improved

- The concentration of real estate-related loans² by financial institutions decreased from 37.72% in June 2010, before the promulgation of the new regulations, to 35.77% in February 2012.
- The concentration of new real estate-related loans in specific areas (including Taipei City and thirteen districts within New Taipei City) by

Chart A2.1 Improvements in the concentration of real estate-related loans



Notes: 1. Real estate-related loans included residential mortgages, house repairs and improvements and loans for construction. Loans of OBUs and overseas branches were excluded.
2. Based on data from domestic banks and local branches of foreign banks.

Source: CBC.

financial institutions also decreased from 64.37% in June 2010, before the promulgation of the new regulations, to 51.96% in February 2012 (Chart A2.1).

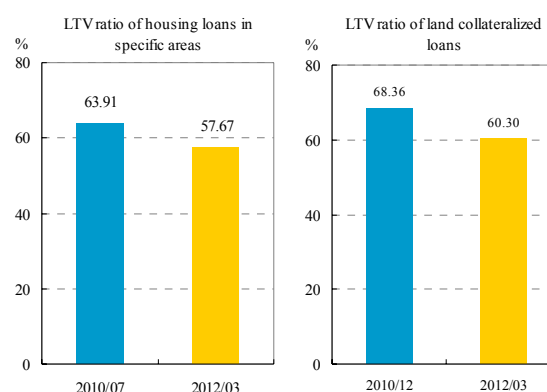
2. The LTV ratio of real estate-related loans slid significantly

- The average LTV ratio for housing loans in specific areas fell from 63.91% in July 2010, the early stage of the promulgation of the new regulations, to 57.67% in March 2012.
- The average LTV ratio for land collateralized loans slid to 60.30% in March 2012 from 68.36% in December 2010 after the promulgation of the amendments (Chart A2.2).

Notes: 1. For detailed regulations and measures taken by the CBC, the FSC and the MOF, please see page 57 and Box 4 of the Financial Stability Report No. 5.

2. Real estate-related loans included residential mortgages, loans for house repairs and improvements, and loans for construction granted by local branches of domestic banks and foreign banks.

Chart A2.2 Changes in the loan-to-value ratio of real estate-related loans



Note: Based on data from domestic banks and local branches of foreign banks.

Source: CBC.