

## 2.3 Non-financial sectors

### 2.3.1 Corporate sector

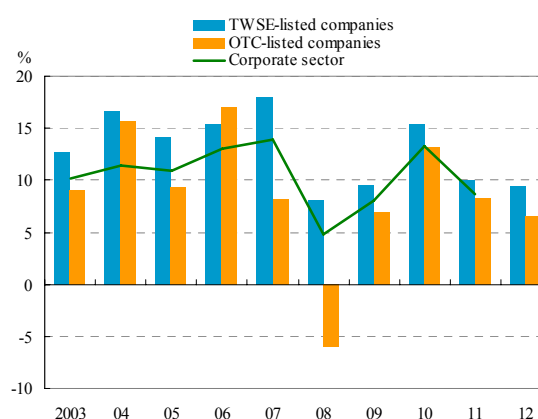
The profitability of listed companies weakened in 2012 due to a considerable slowdown in the domestic and global economies. Corporate leverage ratios rose slightly, while short-term debt servicing capacity weakened as a result of a slide in profitability but still remained at acceptable levels. The credit quality of corporate loans remained sound, as NPL ratios fell back by the end of 2012 after increasing earlier in the year. However, some TFT-LCD panel and DRAM manufacturers reported operating losses again in 2012 which might negatively impact the asset quality of their creditor banks.

#### Profitability of listed companies was disappointing in 2012

In 2012, decelerating global growth weakened exports and industrial production. This, together with weak private consumption hampered the profitability of TWSE-listed and OTC-listed companies, as their ROEs fell to 9.39% and 6.60%, respectively (Chart 2.24).

Except for the electronics and the shipping and transportation industries, all major industries for TWSE-listed companies reported decreasing ROEs, especially the plastics and the iron and steel industries. For OTC-listed companies, except for increased profitability in the building material and construction industry, all other industries experienced deteriorating performance (Chart 2.25).

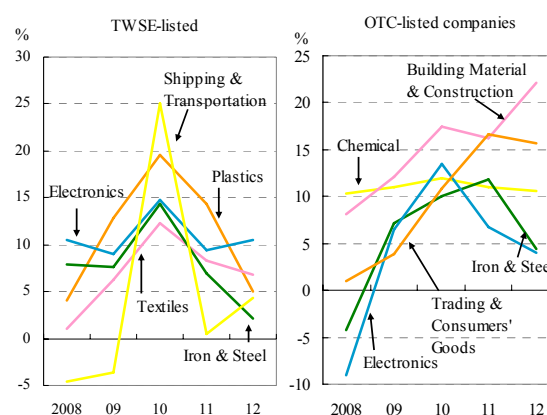
Chart 2.24 ROE in corporate sector



Notes: 1. ROE = net income before interest and tax / average equity.  
2. Latest data for the corporate sector is as of 2011, while those for TWSE-listed and OTC-listed companies are as of 2012.

Sources: JCIC and TEJ.

Chart 2.25 ROE of TWSE-listed and OTC-listed companies by major industries



Note: ROE = net income before interest and tax / average equity.  
Source: TEJ.

### Leverage ratio rose slightly for listed companies

At the end of 2012, the average leverage ratio for TWSE-listed companies rose to 76.72% from 73.53% at the end of the previous year. In addition, the average leverage ratio for OTC-listed companies increased to 67.75% from 66.25% a year earlier (Chart 2.26). The main reason for the rise in the leverage ratio was that the gradual recovery of the domestic economy in the second half of 2012 encouraged the listed companies to increase their borrowings to meet their investment and operation demands.

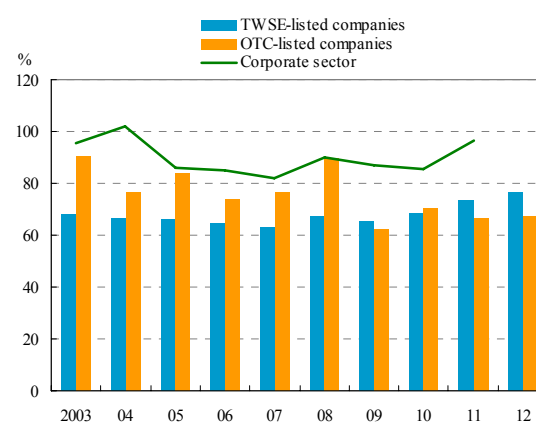
### Short-term debt servicing capacity for listed companies remained acceptable though weakened

The current ratio for TWSE-listed companies decreased to 132.70% at the end of 2012 due to increases in current liabilities, while their interest coverage ratio fell to 16.16 as a result of deteriorating profitability. The current ratio for OTC-listed companies also declined and registered 165.19%, while their interest coverage ratio fell to 11.23 (Chart 2.27 and 2.28). Nevertheless, short-term debt servicing capacity for listed companies as a whole remained acceptable though weakened.

### Credit quality of corporate loans remained sound

In the first half of 2012, the NPL ratio for corporate loans granted by financial institutions increased significantly, owing to the reclassification of impaired loans of large corporations, such as ProMOS Technologies, as NPLs. However, the ratio declined to 0.64% at the end of

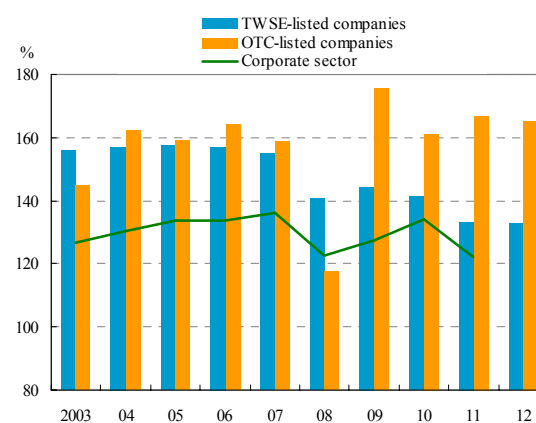
Chart 2.26 Leverage ratio in corporate sector



Notes: 1. Leverage ratio = total liabilities / equity.  
2. Latest figure for the corporate sector is as of the end of 2011, while those for TWSE-listed and OTC-listed companies are as of the end of 2012.

Sources: JCIC and TEJ.

Chart 2.27 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 2011, while those for TWSE-listed and OTC-listed companies are as of the end of 2012.

Sources: JCIC and TEJ.

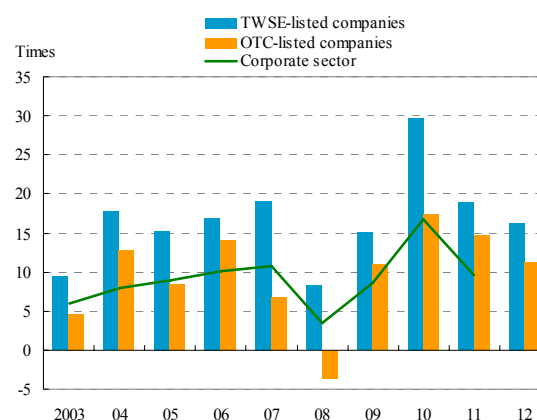
the year, higher than the ratio of 0.60% posted the year before. Nevertheless, it remained at a low level and reflected sound credit quality for the corporate sector (Chart 2.29).

Though listed companies showed weakened operating performances, the pickup in domestic economic growth in the fourth quarter of 2012, along with low interest rates and plentiful liquidity, helped to improve the operating performance and financial conditions of the corporate sector. However, some TFT-LCD panel and DRAM manufacturers suffered large losses in 2012 despite the improvements compared to the previous year. The development of these industries and the impact on the loan quality of their creditor banks, therefore, warrant close attention.

### 2.3.2 Household sector

As the balance of total household borrowing increased and expanded faster than disposable income, the household debt burden rose. Short-term debt servicing capacity of the household sector slightly deteriorated; however, the overall credit quality of household borrowing remained satisfactory. Moreover, the gradual easing of the unemployment rate and the continuous growth of regular earnings should help to enhance the debt servicing capacity of households.

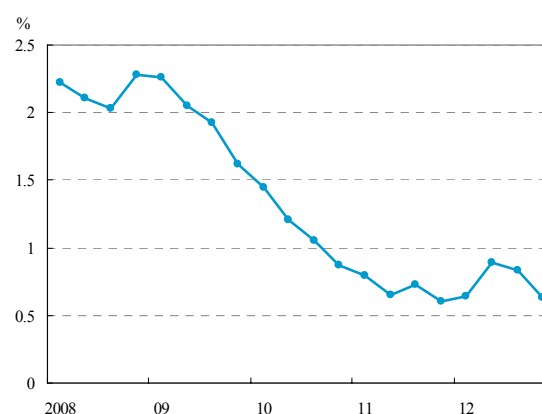
**Chart 2.28 Interest coverage ratio in corporate sector**



Notes: 1. Interest coverage ratio = income before interest and tax / interest expenses.  
 2. Latest figure for the corporate sector is as of 2011, while those for TWSE-listed and OTC-listed companies are as of 2012.

Sources: JCIC and TEJ.

**Chart 2.29 NPL ratio of corporate loans**



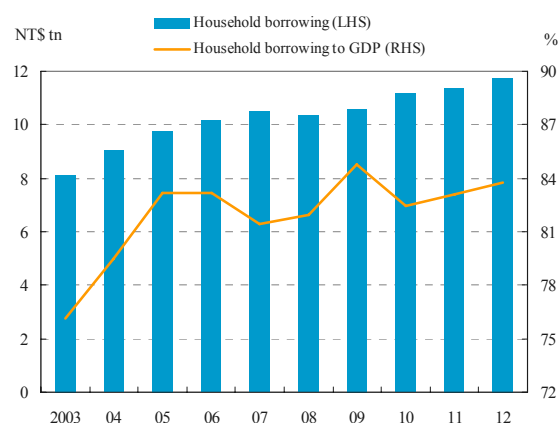
Note: End-of-period figures.  
 Source: JCIC.

## Household borrowing increased continuously

Total household borrowing<sup>39</sup> increased continuously in 2012 and reached NT\$11.76 trillion at the end of the year, equivalent to 83.77% of annual GDP (Chart 2.30). The year-on-year growth rate of household borrowing, which was mainly contributed to by an increase in working capital loans, rose to 3.54% at the end of 2012 from 1.71% a year earlier. The largest share of household borrowing went for the purchase of real estate (71.05%), with an annual growth rate of 1.84%, followed by working capital loans<sup>40</sup> (23.80%), with a significantly increased annual growth rate of 10.89%. Business investment loans, mainly for margin purchases of securities, and revolving balances on credit cards took only minor percentages (Chart 2.31), and experienced negative annual growth rates of 7.6% and 6.84%, respectively, owing to weakened stock market and domestic economic conditions.

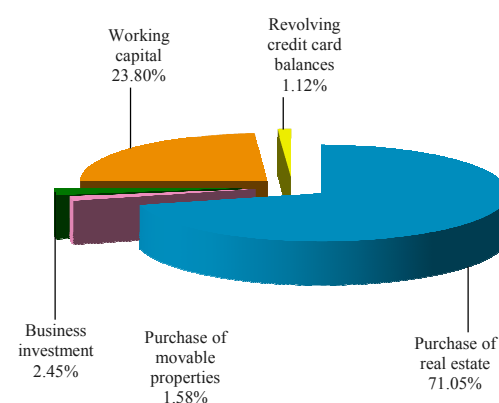
Compared to other selected countries, the growth of total household borrowing in Taiwan remained positive but was lower than that in Australia and South Korea. As a percentage of GDP, the household borrowing in Taiwan was lower than that in Australia, approximating that in South Korea, but higher than that in the US and Japan (Chart 2.32).

Chart 2.30 Household borrowing to GDP



Sources: CBC, JCIC and DGBAS.

Chart 2.31 Household borrowing by purpose



Note: Figures are as of the end of 2012.  
Sources: CBC and JCIC.

<sup>39</sup> 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.

<sup>40</sup> The term “working capital loans” includes outstanding cash card loans.

### Household debt burden rose

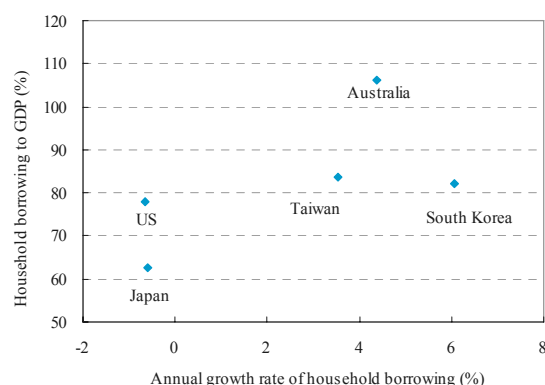
As total household borrowing grew at a faster pace than disposable income in 2012, the ratio of household borrowing to gross disposable income<sup>41</sup> increased to 1.22 at the end of the year, reflecting a heavier debt burden.

Accordingly, the debt servicing ratio rose to 37.98% in 2012 from the previous year's 36.93% (Chart 2.33), due to the increase in working capital loans, showing that household short-term debt servicing pressure slightly increased. However, the fact that the domestic unemployment rate decreased gradually and regular earnings grew continuously (Chart 2.34) should help to improve the debt servicing capacity of the household sector.

### NPL ratio of household borrowing dropped to a record low

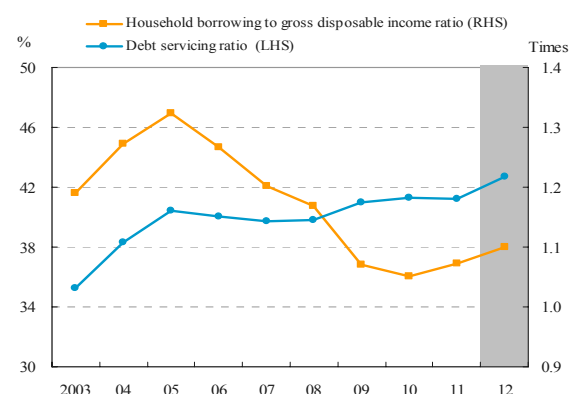
The NPL ratio of household borrowing declined continuously to 0.40 % at the end of 2012, the lowest level in fifteen years (Chart 2.35). The main reason behind this was that NPLs for real estate purchases and working capital loans, the largest shares of household borrowing, contracted during the year. This indicated that household credit quality remained satisfactory.

Chart 2.32 Household indebtedness in selected countries



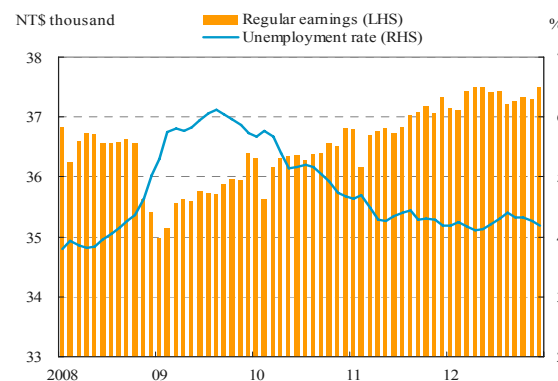
Note: Figures for Taiwan and the US are as of the end of 2012. The others are as of the end-September 2012.  
Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, CBC and JCIC.

Chart 2.33 Household debt servicing ratio



Note: Gross disposable income in shaded area is CBC estimate.  
Sources: CBC, JCIC and DGBAS.

Chart 2.34 Unemployment rate and regular earnings



Source: DGBAS.

<sup>41</sup> Gross disposable income = disposable income + rental expenses + interest expenses.

### 2.3.3 Real estate market

In 2012, trading volume in the real estate market contracted, while housing prices remained high. Real estate-related loans grew at a slower pace as mortgage interest rates gradually rebounded. As massive construction projects introduced over the last few years were continuously completed, some areas with high volumes of construction projects continued to face increasing downward pressure on housing prices.

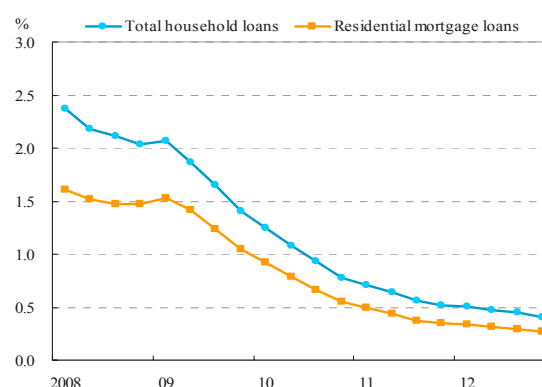
#### Trading volume in the housing market was volatile

Starting 2012, trading volume in the housing market contracted continuously due to economic slowdown and the implementation of the Specifically Selected Goods and Services Tax. In Q3, the total number of building ownership transfers for transaction further decreased by 11.92% quarter on quarter owing to the launch of a property transaction price registration system in August. However, in Q4, as quantitative easing measures in Japan and the US boosted market expectations, trading volume in the housing market rebounded (Chart 2.36). The number of building ownership transfers for transaction in 2012 reached a ten-year low of 330 thousand units, with an annual growth rate of -8.84%. Analyzed by metropolitan areas, Taipei City and New Taipei City registered the greatest year-on-year decreases of 22.73% and 17.65%, respectively, while Taichung City as well as Tainan City saw slower decreases, and Taoyuan County and Kaohsiung City returned to positive growth rates.

#### Real estate prices stayed high

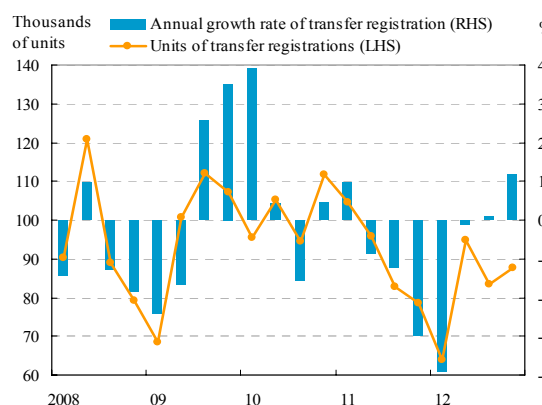
In line with a cooling real estate market, real estate prices declined slightly in 2012 Q3. However, due to economic recovery, a stock market rally and housing demand increase, real

Chart 2.35 NPL ratio of household borrowing



Note: Figures are as of the end of each quarter.  
Source: JCIC.

Chart 2.36 Building ownership registrations for transaction



Source: Monthly Bulletin of Interior Statistics, MOI.

estate prices rebounded in Q4. The Taiwan area land price index stood at 118.78 in September 2012, recording an annual growth rate of 6.01% (Chart 2.37).

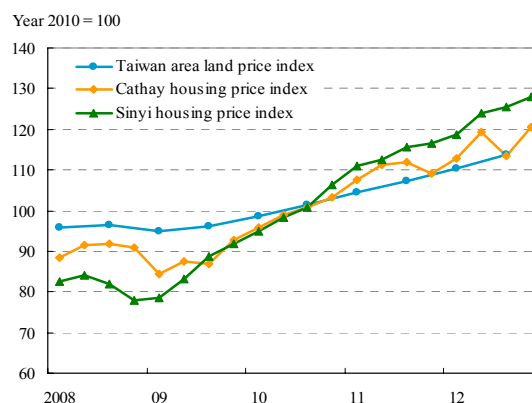
In 2012, the Cathay housing price index (for new construction) experienced fluctuating movements. It registered a year-on-year increase of 10.39% in Q4 owing to rising house prices in the Taoyuan and Hsinchu areas as well as the central and southern parts of Taiwan, while house price growth in Taipei City slowed. The annual growth rate of the Cathay housing price index for the whole of 2012 was 7.48%, decreasing by 2.64 percentage points compared to 10.12% a year earlier.

The Sinyi housing price index (for existing buildings) increased gradually and registered an annual growth rate of 9.7% in Q4 2012. The average growth rate of the index was 8.89% in 2012, decreasing by 5.08 percentage points compared to 13.97% a year earlier. House prices in Taoyuan County, Taichung City and Kaohsiung City saw significant growth, while those in Taipei City and New Taipei City reported slower growth rates but remained at high levels.

### **Mortgage burden remained heavy**

Following climbing housing prices, the average house price to income ratio for the six metropolitan areas increased and reached 8.3<sup>42</sup> in 2012 Q4. The average mortgage burden

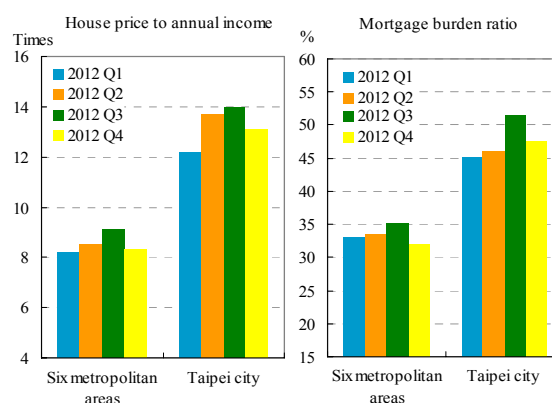
**Chart 2.37 Land and house price indices**



- Notes: 1. Taiwan area land price index is released semiannually (i.e. in March and September).  
2. The sample and compilation methods employed to generate the Cathay housing price index were changed in 2012 Q4 and applied retroactively to historical data.  
3. For comparison purposes, all the three indices use the same base year of 2010.

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

**Chart 2.38 House price to income ratios and mortgage burden ratios**



- 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.

<sup>42</sup> Housing prices increased in 2012 Q4 but the average house price to income ratio in Q4 was lower than that in Q3. The main reason was that the average house price to income ratio released in *Taiwan Housing Demand Survey Report* was estimated according to the total house price paid and total household annual income of a sample of house buyers. In Q4, due to increasing purchases of low-priced houses, the total house price paid decreased, resulting in the drop of the average house price to income ratio.

ratio during the same period was 32.0%, demonstrating that the mortgage burden remained heavy. Among the metropolitan areas, the house price to income and mortgage burden ratios in Taipei City were the heaviest, reaching 13.1 and 47.6%, respectively (Chart 2.38).

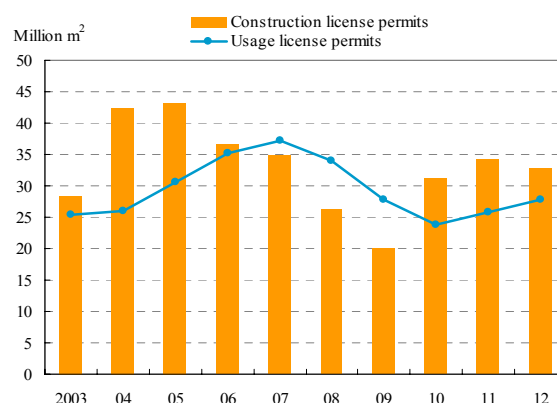
### **Newly introduced construction projects contracted, while residential property vacancies remained high**

Due to decreasing construction projects introduced to the market, the total floor space of construction license permits decreased 3.71% year on year in 2012. Total floor space of usage permits increased by 7.25% year on year, with commercial properties posting the highest growth of 45.31% and residential properties increasing by 18.79% (Chart 2.39). Moreover, the average number of vacant residential properties in 2012, estimated by the number of units consuming less electricity than the minimum service charge from the Taiwan Power Company, still stood at a high level of 1.426 million units, increasing by 16 thousand units or 1.13 % year on year (Chart 2.40). The movements in housing inventory levels in areas with high vacancy rates and numerous construction projects are worth close monitoring.

### **Real estate-related loans grew at a slower pace as mortgage interest rates gradually increased**

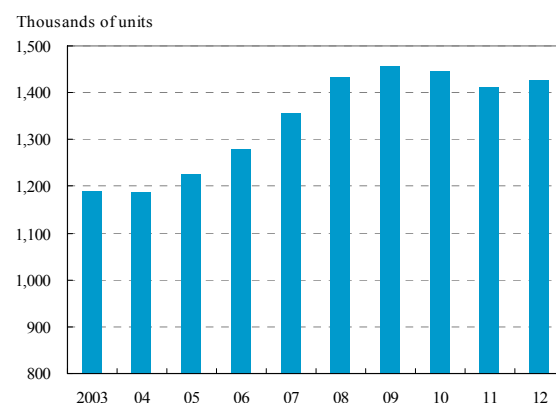
Due to the effect of the CBC and the FSC's measures to strengthen risk management regarding the real estate-related loans of banks, the outstanding balance for house purchases and house refurbishments granted by banks<sup>43</sup> rose at a decelerating annual growth rate of

**Chart 2.39 Floor space of construction license permits and usage license permits**



Source: Monthly Bulletin of Interior Statistics, MOI.

**Chart 2.40 Estimated units of vacant houses**



Source: Taiwan Power Company.

<sup>43</sup> Refers to domestic banks and the local branches of foreign banks.



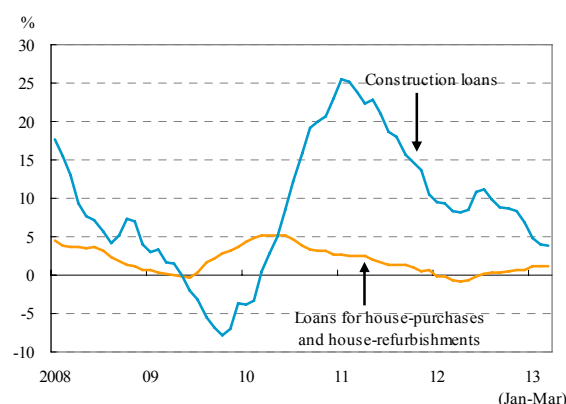
0.76% to NT\$5.80 trillion at the end of 2012. Outstanding construction loans continued to climb in 2012, albeit at a much slower pace of 7.33% year on year, and reached NT\$1.47 trillion at the end of 2012 (Chart 2.41).

In line with property market trends, new loans for house purchases granted by the five large banks<sup>44</sup> decreased by 5.74% year on year to NT\$ 45.4 billion in December 2012. The accumulated amount of such new loans for the whole of 2012 also registered a 9.49% year-on-year decrease. The interest rate for new mortgages rose to 1.948% in March 2013 and slightly decreased to 1.946% in April.

### Concentration of real estate-related loans decreased after the CBC and the FSC undertook targeted prudential measures

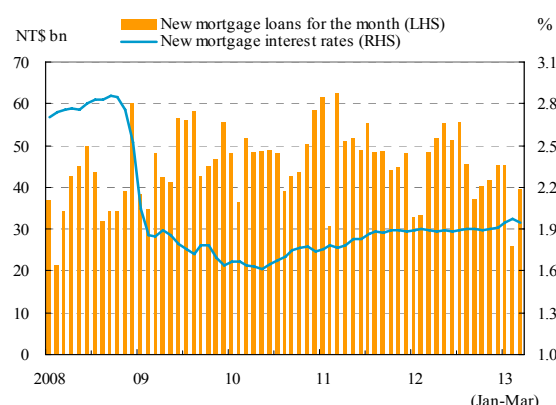
The CBC continuously deployed measures to supervise the credit risk of land collateralized loans and housing loans in specific areas in 2012 and introduced regulations governing high-value housing loans in June. Meanwhile, the FSC strengthened supervision on banks with high concentrations of real estate-related loans and raised risk weights of non-self-use residential mortgage loans. Those measures proved to be effective, as the concentration of real estate-related loans continuously decreased and loan-to-value ratios also fell significantly. Such measures, together with the implementation of the Specifically Selected Goods and Services Tax and the property transaction price registration system, helped promote sound development of the real estate market (Box 3).

**Chart 2.41 Annual growth rates of real estate-related loans**



Source: CBC.

**Chart 2.42 New mortgages – amounts and interest rates**



Source: CBC.

<sup>44</sup> The five large banks refer to Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, and Chang Hwa Commercial Bank before October 2008. Starting November 2008, they refer to Bank of Taiwan, Taiwan Cooperative Bank, First Commercial Bank, Hua Nan Commercial Bank, and Land Bank of Taiwan.

**Box 3****Plan to enhance the soundness of the housing market: progress and effectiveness**

The housing market plays an important role in a country's economic development, since it possesses industrial relevance and has a locomotive effect on the economy. In order to ensure the soundness of the housing market and maintain justice and fairness within society, the government formulated the Plan to Enhance the Soundness of the Housing Market in April 2010, in accordance with the four principles of "tailoring measures to the needs of localities and populations," "acting moderately but effectively," "stressing soundness and stability," and "pursuing social equity." Targeting the six issues of "balancing the supply and demand of housing in the Taipei metropolitan region," "helping low- and mid-income earners and salaried employees increase their ability to purchase (or rent) a house," "improving housing information transparency," "enhancing risk management for real estate loans," "enhancing social fairness," and "taking relevant complementary measures," the government has offered 21 principles for dealing with the problems encompassed, and suggested other practical measures for relevant authorities and local governments to actively implement.

**1. Progress of the Plan**

The plan has now been implemented for 3 years, and part of the mechanisms prescribed have been implemented or promoted, thus leading to a gradual stabilization of the housing market. Below is a table succinctly describing the methods outlined in the plan and the progress made (Table B3.1).

**Table B3.1: Progress of the Plan to Enhance the Soundness of the Housing Market**

<b>Issues</b>	<b>Contents and progress of implementation</b>
Balancing the supply and demand of housing in the Taipei metropolitan area	<ol style="list-style-type: none"> <li>1. Planning the development of affordable houses in the areas of Airport Linkou A7 Station and Banqiao, where 3,960 and 4,455 housing units, respectively, will be constructed.</li> <li>2. Selecting 5 bases around metropolitan areas including Wanhua and Songshan Districts in Taipei City, Sanchong and Zhonghe in New Taipei City, etc., and constructing 1,661 units of social housing.</li> </ol>
Helping low- and mid-income earners and salaried employees increase their ability to purchase (or rent) a home	<ol style="list-style-type: none"> <li>1. Implementing the "Plan for the Consolidation of Resources for Housing Subsidy" for mid- and low-income households. From its initiation in 2007 to the end of 2012, a total of 226,000 households received rental subsidies, house purchase assistance and mortgage interest subsidies for the purpose of home refurbishment.</li> <li>2. Implementing the "Plan for Government Housing Subsidies for the Youth." From its initiation in 2009 to 22 February 2013, rental subsidies were offered to around 33,000 households, and interest subsidies were allocated to around 67,000 households, in total aiding 100,000 households.</li> </ol>

Improving housing information transparency	<ol style="list-style-type: none"> <li>1. Setting up the Real Estate Information Platform to collect and consolidate real estate information for the public.</li> <li>2. Requiring the Joint Credit Information Center to provide seasonal reports including information such as contract value of house transactions, etc. for the Ministry of the Interior to make public on its housing Net website.</li> <li>3. Modifying the law to set up a property transaction price registration system and establishing a data warehouse that allows the public to inquire about the related information via the Internet.</li> <li>4. Releasing different templates of real estate contracts for public reference, and announcing the application of standard form contracts for pre-sale real estate transactions.</li> </ol>
Enhancing risk management for real estate loans	<ol style="list-style-type: none"> <li>1. From June 2010 onwards, the CBC has gradually taken targeted macroprudential measures on land collateralized loans and housing loans in specific areas and high-value housing loans.</li> <li>2. The FSC introduced several measures to supervise the real estate lending risks of banks, including raising the risk weight from 45% to 100% for new loans collateralized by non-owner-occupied houses.</li> <li>3. The two authorities reinforced the inspection of real estate-related loans in accordance with the above mechanisms.</li> </ol>
Enhancing social fairness	<ol style="list-style-type: none"> <li>1. Reviewing the suitability of house taxes and land taxes, such as verifying the current value of the house, limiting the applicability of land value tax exemption, and abolishing the regulation of temporary exemption for vacant lot tax.</li> <li>2. Implementing the Specifically Selected Goods and Services Tax from 1 June 2011 onwards to cool down the overheating housing market.</li> </ol>
Taking relevant complementary measures	<ol style="list-style-type: none"> <li>1. Stipulating the regulations regarding superficies on state-owned and non-public-use land to strengthen the development of the land.</li> <li>2. Temporarily ceasing the auction of state-owned land in prime areas of Taipei City.</li> <li>3. Enacting the Housing Act, which was implemented from 30 December 2012.</li> <li>4. Raising the incentive for private investment to promote the private sector to participate in the construction of public infrastructure, the six emerging industries and budding ICT industries. This would not only help improve industrial development and provide job opportunities in areas surrounding these industrial hubs, but could also galvanize the soundness of the housing market in neighboring districts.</li> </ol>

Sources: Council for Economic Planning and Development and Control Yuan.

## ***2. Effects of Implementation***

Since the enactment of the Plan to Enhance the Soundness of the Housing Market, part of the mechanisms have already shown promising results, for example:

- (1) Since the CBC and the FSC undertook the measures to control the risk of real estate loans, the ratio of new loans, with collateral located in specific areas (Taipei City and 13 districts in New Taipei City), to total new loans has dropped from 64.37% pre-regulation in June 2010 to 48.02% in March 2013. The loan-to-value (LTV) ratio also dropped from 63.97% pre-regulation in July 2010 to 56.82% in April 2013.

- (2) After the Ministry of Finance implemented the Specifically Selected Goods and Services Tax from June 2011, the number of building ownership transfers for transaction during June 2011 to May 2012 dropped 22.12% relative to the previous counterpart period (from June 2010 to May 2011). Of them, the number of transfers in Taipei City and New Taipei City significantly dropped 33.34% and 34.96%, respectively. It illustrated that the policy has effectively tempered speculation in the housing market.
- (3) From October 2012 onwards, transaction prices of real estate should be registered in a data warehouse run by the government and disclosed to the public. This has increased the transparency of real estate transaction information, thus decreasing the differentiation of anticipated prices between buyers and sellers and, in turn, increased the effectiveness of the real estate market.