

IV. 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.

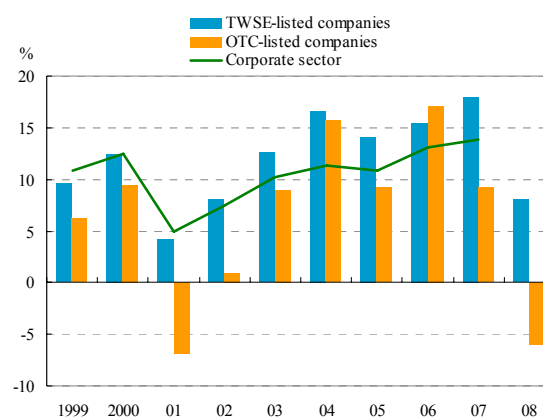
4.1 Corporate sector

After the burst of the IT bubble in 2001, the corporate sector's²³ profitability strengthened while its financial structure and debt servicing capacity continued to improve. However, inflicted by the sharp slowdown in the global economy, the profitability of both TWSE-listed and OTC-listed companies²⁴ declined dramatically in 2008, and their financial structures and short-term solvency also deteriorated. In addition, the default risk in the corporate sector rose as it faced moderately increasing non-performing loan ratios and greater difficulties in refinancing due to a contraction in the credit market.

Profitability decreased dramatically in 2008

The corporate sector's profitability was enhanced by steady economic growth after 2001. In 2008, however, the return on equity (ROE) for TWSE-listed and OTC-listed companies declined to 8.08% and -5.97%, respectively, much lower than the 18.03% and 9.20% reported in 2007 (Chart 4.1). The reasons behind this were skyrocketing international commodity prices, increasing

Chart 4.1 Return on equity in corporate sector



Notes: 1. Return on equity = net income before interest and tax / average equity.

2. Latest data for corporate sector were as of the end of 2007, while that for TWSE-listed and OTC-listed companies were as of the end of 2008.

Sources: JCIC and TEJ.

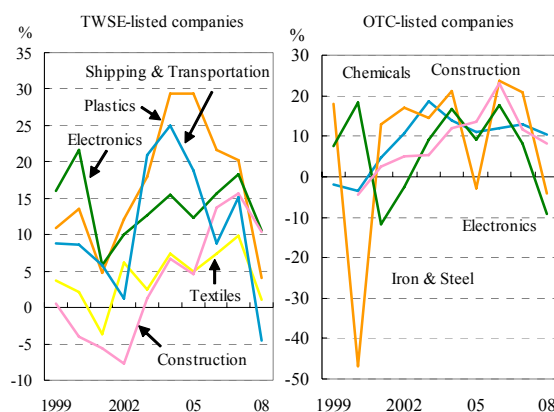
²³ Data for the corporate sector are from the corporate financial report database operated by the Joint Credit Information Center, excluding that for financial and insurance companies, public administration and defense, and compulsory social security companies.

²⁴ The data for TWSE-listed and OTC-listed companies are from the Taiwan Economic Journal Co., excluding that for financial and insurance companies and emerging stock-listed companies. The data in 2008 and 2009 Q1 are preliminary.

operational costs in China and sluggish consumer demand brought about by inflation in the first half of 2008, followed by declines in exports, private consumption and investment in the second half of 2008 triggered by the sharp global economic slowdown. To break this down by sector, for TWSE-listed companies, ROE for the shipping and transportation industry declined most and became negative, followed by the plastics industry in which ROE remained positive. For OTC-listed companies, the iron and steel industry's ROE was impacted most, followed by the electronics industry. Notably, the electronics industry, which accounted for three quarters of the total assets of OTC-listed companies, saw a drop in ROE to -9.08% in 2008, down from 8.25% in 2007 (Chart 4.2). In 2009 Q1, profitability for both TWSE-listed and OTC-listed companies continued to fall significantly, compared to the same period of 2008, but with a slower pace of contraction compared to the previous quarter.

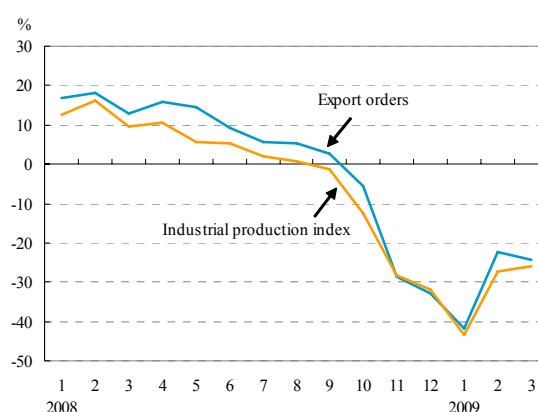
Taiwan's export industry was impacted seriously owing to a dramatic shrinkage in external demand inflicted by the global economic downturn. The industrial production index and export orders recorded negative growth from September and October of 2008, respectively, and further decreased by 43.31% and 41.70% year on year in January 2009. Nevertheless, after hitting bottom in January, the situation improved due to a sudden massive increase in export orders and inventory restocking (Chart 4.3). In view of continued weakness in export orders and industrial production, and few signs of a robust recovery in the global economy, profitability for the corporate sector is likely to remain weak.

Chart 4.2 Return on equity of TWSE-listed and OTC-listed companies by major industries



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

Chart 4.3 Annual growth rate of export orders and industrial production index



Note: Industrial production index in 2006 was 100.
Source: MOEA.

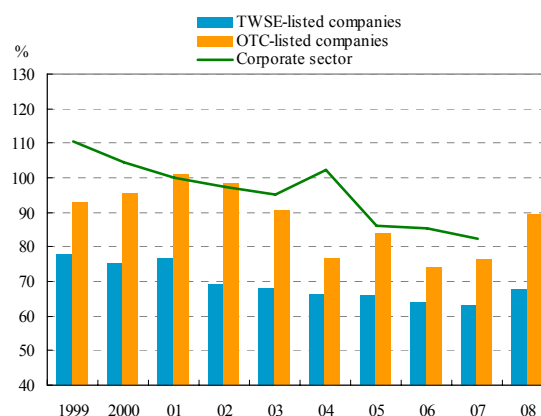
Financial structure worsened in 2008 before improving in 2009 Q1

After several years of improvement in the financial structure of the corporate sector, the average leverage ratio declined to 82.20% as of the end of 2007. However, financial structures for TWSE-listed and OTC-listed companies worsened in 2008, with average leverage ratios climbing to 67.59% and 89.44%, respectively, at the end of the year (Chart 4.4). In 2009 Q1, as a consequence of a contraction in liabilities, the average leverage ratios of TWSE-listed and OTC-listed companies improved and returned to levels similar to those reported at the end of 2007.

Short-term debt servicing capacity eroded

Short-term debt servicing capacity for the corporate sector as a whole has improved since 2001 as the current ratio and interest coverage ratio, supported by enhanced financial structures as well as profitability, have increased steadily. However, short-term debt servicing capacity for TWSE-listed and OTC-listed companies weakened in 2008 due to declines in both profitability and current assets. As of the end of 2008, the current ratios for TWSE-listed and OTC-listed companies dropped to 141.02% and 117.90%, respectively. This was accompanied by a significant drop in the interest coverage ratio to 8.26 for TWSE-listed companies, and an inability by OTC-listed companies to support their debt servicing capacity due to annual losses (Chart 4.5, 4.6). Underpinned by declining short-term debt levels, current ratios for TWSE-listed and OTC-listed companies rose slightly in 2009 Q1. Nevertheless, the interest coverage ratio for TWSE-listed companies kept declining to 1.02 owing to contracted profitability in Q1, while OTC-listed companies remained unable to service their debt repayments because of losses.

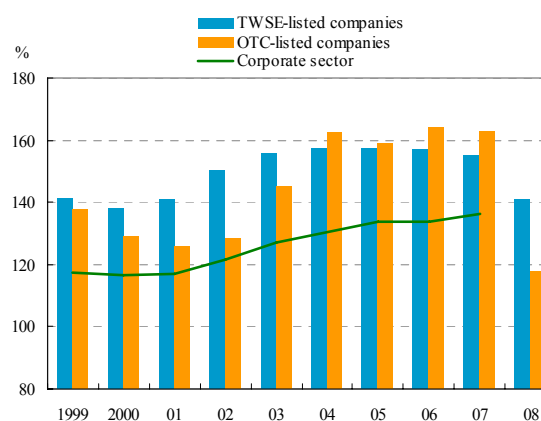
Chart 4.4 Leverage ratio in corporate sector



Note: Leverage ratio = total liabilities / equity.

Sources: JCIC and TEJ.

Chart 4.5 Current ratio in corporate sector



Note: Current ratio = current assets / current liabilities.

Sources: JCIC and TEJ.

NPL ratio of corporate loans climbed slightly

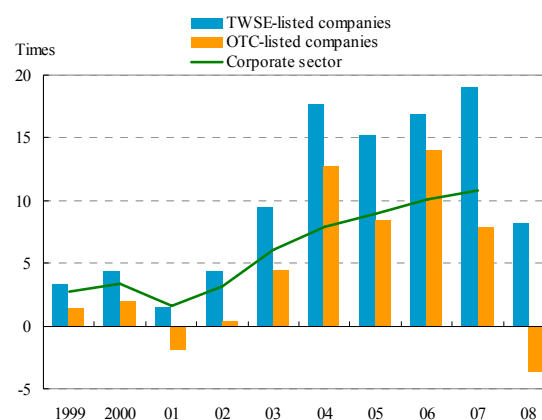
The NPL ratio for corporate loans rose to 2.28% as of the end of 2008, 0.17 percentage points higher than that of the end of June 2008, and remained at the same level as of the end of March 2009 (Chart 4.7). However, it could possibly trend upward in the future as increasing numbers of companies have sought debt renegotiations recently. Additionally, the profitability and debt servicing capacity in the corporate sector may continue to be undermined by the severe global economic downturn.

Financing and funding pressures intensified

The credit market seemed to tighten slightly as financial institutions tightened their loan underwriting standards under the consideration of rising default risks in the corporate sector resulting from the domestic economic downturn. Corporations, especially small and medium enterprises (SMEs), faced more difficulties in obtaining finance from financial institutions. Moreover, by the end of 2009, a large amount of corporate bonds will fall due and convertible bonds will be redeemed early because of a higher conversion price than market price (Chart 4.8). Accompanied by falling operating revenues, some listed companies thus face increasing refinancing pressure.

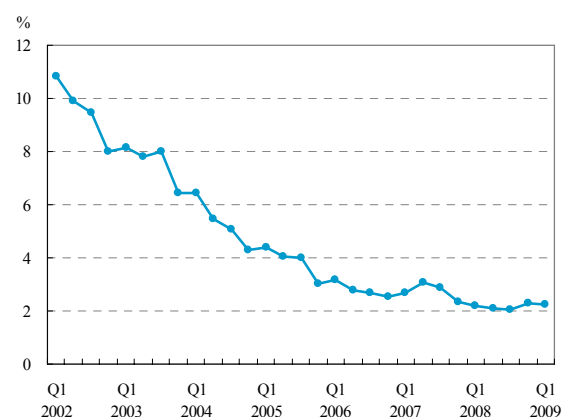
Besides, caused by a sluggish domestic stock market and ascending credit risk for corporations, domestic and overseas securities issuances initiated by public-issuing companies in 2008 contracted dramatically in terms of the number of issuances and the

Chart 4.6 Interest coverage ratio in corporate sector



Note: Interest coverage ratio = income before interest and tax / interest expenses.
Sources: JCIC and TEJ.

Chart 4.7 NPL ratio of corporate loans



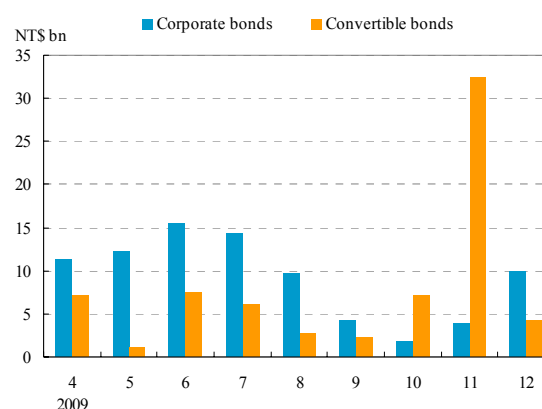
Note: End-of-period figures.
Source: JCIC.

notional amount²⁵. There were only 50 new issuances, or NT\$37.9 billion of convertible bonds issued in 2008, much less than the 113 new issuances, or NT\$101.5 billion reported in 2007, representing the difficulties that many corporations faced in raising funds from the capital market. Moreover, credit spreads²⁶ expanded significantly over the second half of 2008 when the market became more sensitive to risk. Notably, the average credit spread between twBBB corporate bonds and government bonds expanded dramatically to 158 basis points in late January 2009 and remained at around 150 basis points in April (Chart 4.9), reflecting the rising funding costs of new corporate bond issuances as investors required higher risk premiums.

4.2 Household sector

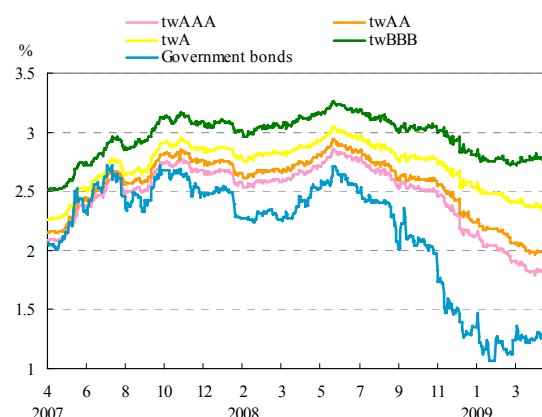
The debt burden of the household sector remained heavy even as household borrowing contracted. Households' short-term debt servicing capacity strengthened and the credit quality of household borrowing remained satisfactory. Nevertheless, in the future, the debt servicing capacity of the household sector may be undermined by the sluggish domestic economy, declining real incomes and a rising unemployment rate. The credit risk of household borrowing may thus increase.

Chart 4.8 Amount of corporate bonds due by the end of 2009



Notes: 1. Data are as of end-February 2009.
2. Excludes corporate bonds issued by finance and insurance companies.
Sources: GTSM and Market Observation Post System.

Chart 4.9 Yields on corporate and government bonds



Note: Figures refer to yields on 5-year corporate and government bonds.
Source: Bloomberg.

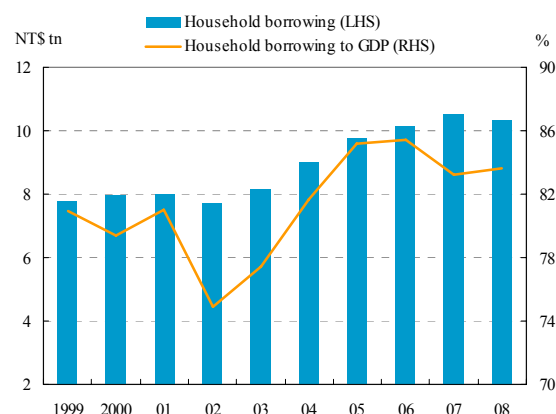
²⁵ According to the FSC, the number of securities issuances domestically and overseas by publicly-traded companies registered 211 or NT\$470.6 billion in 2008, declining by 42.82% in the number of issuances but increasing by 12.02% in the notional amount year on year. While data for financial and insurance companies and Taiwan Power Company are excluded, the number and notional amount in 2008 significantly dropped by 68.17% and 17.63% year on year, respectively.

²⁶ Yield spreads between 5-year corporate and government bonds.

Household borrowing dropped

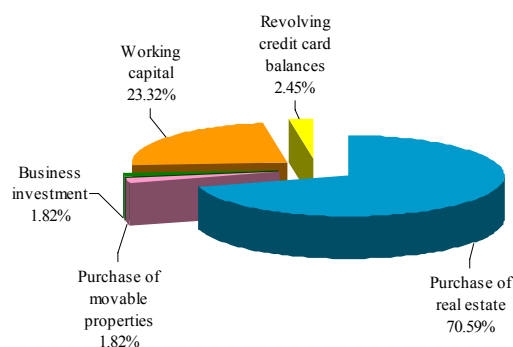
In the second half of 2008, impacted by the domestic economic downturn, household borrowing²⁷ began declining as banks became more conservative in their credit policies and individual borrowers were more cautious in borrowing. As of the end of 2008, total household borrowing stood at NT\$10.34 trillion, a contraction of 1.73% year on year (Chart 4.10). The single largest share of household borrowing went for the purchase of real estate (70.59%), followed by working capital loans²⁸ (23.32%), whereas revolving credit card balances accounted for only 2.45% (Chart 4.11). Only the loans for purchasing real estate kept rising, while the loans for other purposes all posted negative annual growth rates in 2008.

Chart 4.10 Household borrowing to GDP



Note: Household borrowing data are end-of-period figures.
Sources: CBC, JCIC, and DGBAS.

Chart 4.11 Household borrowing by purpose



Note: Figures are as of the end of 2008.
Sources: CBC and JCIC.

²⁷ 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.

²⁸ The term “working capital loans” includes outstanding cash card loans.

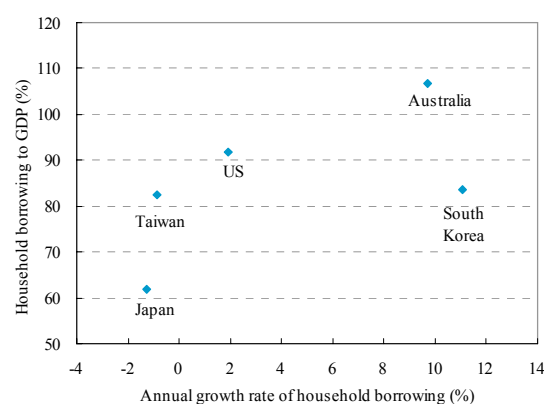
The ratio of household borrowing to GDP increased slightly to 83.60% as of the end of 2008, mainly due to higher GDP contraction (Chart 4.10). Examining total household borrowing across countries, it fell in Taiwan and Japan, maintained moderate growth in the US, and continued to grow at a faster rate in Australia and South Korea. As a percentage of GDP, household borrowing in Taiwan was lower than that in the US and Australia, approximate to that in South Korea, but higher than that in Japan (Chart 4.12).

Household debt burden remained heavy but short-term debt servicing capacity improved gradually

As of the end of 2008, the ratio of household borrowing to gross disposable income²⁹ stood at 1.18, the same as at the end of 2007 due to identical decreases of both household borrowing and disposable income. This reveals that the household debt burden remained heavy. However, a continuous decline in short-term borrowing contributed to the debt servicing ratio declining over the past three years to 41.82% in 2008. This showed that the pressures from principal and interest payments on the household sector alleviated and short-term debt servicing capacity improved gradually (Chart 4.13).

The household NPL ratio registered 2.04% as of the end of 2008, down from 2.18% as of the end of June 2008, primarily because of the decline in the NPL ratio for residential mortgage loans which accounted for the largest share of household borrowing. By the end of March 2009, the credit quality of household borrowing remained satisfactory, although both NPL

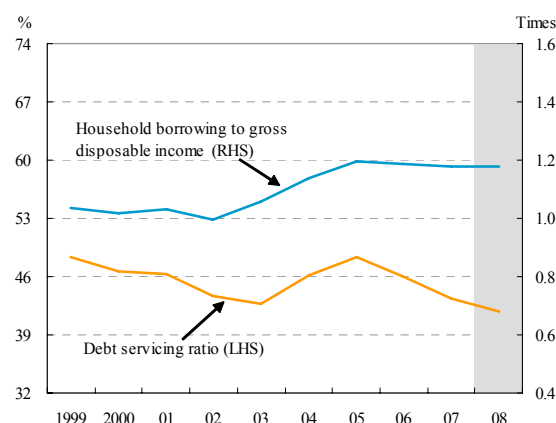
Chart 4.12 Household indebtedness in selected countries



Note: Figures for Taiwan are as of the end of 2008. The others are as of end-September 2008.

Sources: Fed, BOJ, BOK, ABS, IMF, DGBAS, CBC, and JCIC.

Chart 4.13 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.

²⁹ Gross disposable income = disposable income + rental expenses + interest expenses.

ratios for total household borrowing and for residential mortgage loans increased slightly (Chart 4.14). Nevertheless, the sluggish domestic economy, declining real incomes and an increasing unemployment rate may have adverse impacts on household debt servicing capacity and thus increase the credit risk faced by banks.

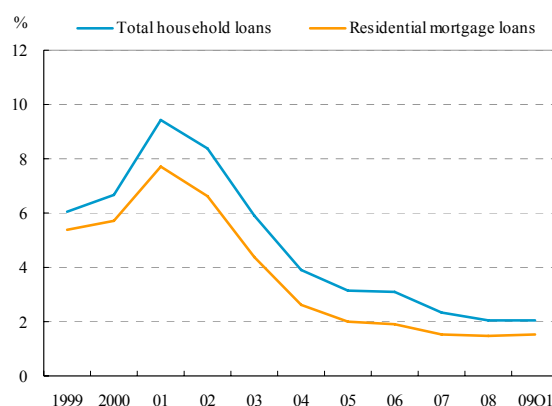
4.3 Real estate market

The real estate market cooled off as transaction volumes plunged dramatically. Amid signs that prices would decline, housing prices remained resilient due to historically low interest rates and a series of stimulus measures adopted by the government to underpin the real estate market. These stimulus measures included extending the expiration of construction license permits, offering additional preferential mortgage loans for homebuyers as well as opening the local real estate market to investors from China. Nevertheless, under the consideration of the rising unemployment rate and shrinking household wealth caused by the economic slump, together with expanding supply in the housing market, downward pressure still existed. Banks should pay attention to the credit risk of real estate-related loans.

Real estate market cooled off as downward pressure on housing prices remained

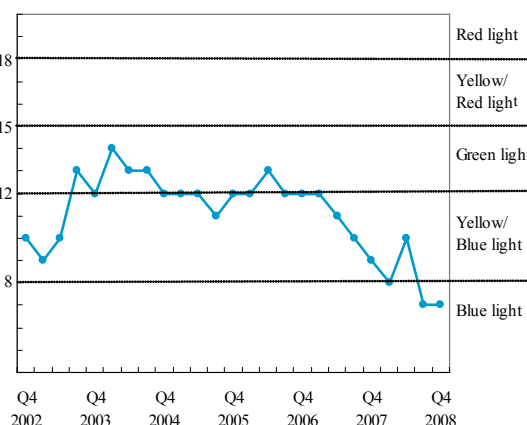
Taiwan’s real estate cycle indicators³⁰ remained under a blue light in 2008 Q4, the same as

Chart 4.14 NPL ratio of household borrowing



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

Chart 4.15 Real estate cycle indicators



Source: “Quarterly Report of Taiwan Real Estate Cycle Indicators,” Architecture and Building Research Institute, MOI.

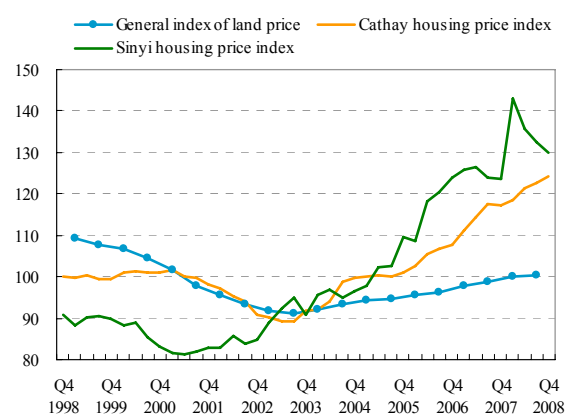
³⁰ The real estate cycle indicators show five outlooks with different colored lights. A red light indicates a “heated market,” a yellow/red light indicates a “moderately heated market,” a green light indicates a “stable market,” a yellow/blue light indicates a “moderately declining market,” and a blue light indicates a “sluggish market.”

the previous quarter (Chart 4.15). The composite index of leading indicators³¹ in Q4 also dropped dramatically by 1.96% quarter on quarter. This indicated that Taiwan's real estate market appeared to be cooling and that the downward pressure on housing prices still existed.

Real estate prices remained high but signs of softness emerged as transaction volumes contracted

In general, real estate prices remained high in 2008 Q4, but a declining trend emerged in some areas. Taiwan's land prices remained stable as the general index of land price reached 100.51 in September 2008, increasing by 1.61% year on year, and registered a historical high since 2001. The Cathay housing price index (for new housing construction) stood at 124.24 in 2008 Q4, though with a smaller growth rate of 6.10% year on year. The Sinyi housing price index (for existing building sales) continued falling after 2008 Q1 but still registered a high of 129.87 in Q4 with an annual growth rate of 5.05%, showing that prices for existing buildings remained high (Chart 4.16). Average office rental rates in Taipei saw a slight slowdown and registered NT\$1,839 per ping (3.3 square meters) per month in 2008 Q4, dropping by 0.7% from the previous quarter, but still increased by 1.83% year on year (Chart 4.17). In 2009 Q1, the Cathay housing price index decreased by 1.65% quarter on quarter, and the Sinyi housing price index kept declining to 127.25 as the office rental rate in Taipei fell to NT\$1,799 per ping per month. These falling indices reflected signs of a decline in real estate prices.

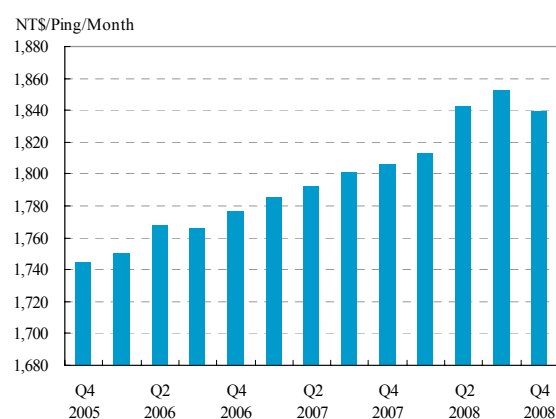
Chart 4.16 Land and house price indices



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

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

Chart 4.17 Average office rental rate in Taipei

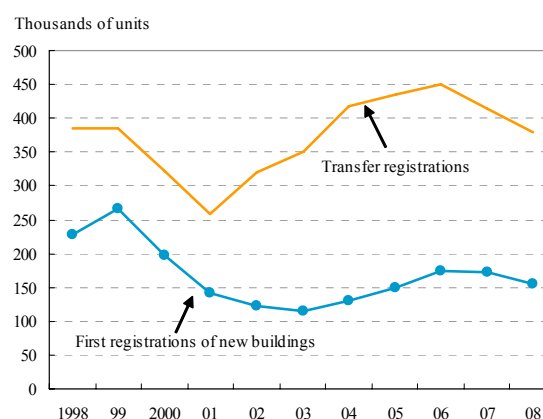


Source: Colliers International "Taipei Office Market Overview."

³¹ The composite index of leading indicators is made up of the following five components: GDP, money supply, construction sector stock price index, volatility in outstanding construction loans, and consumer price index.

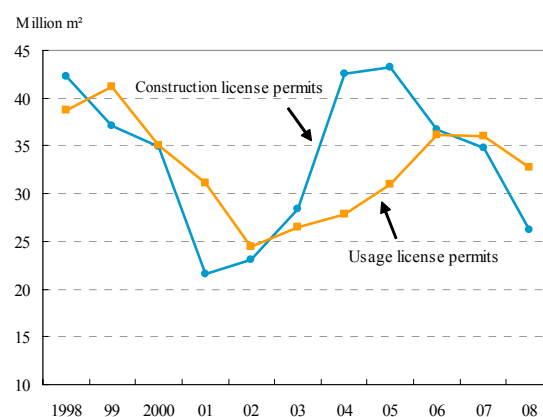
As for transactions in the real estate market, influenced by domestic economic sluggishness and stricter lending standards for housing loans, investors tended to be more conservative, causing real estate transaction volume to contract significantly in the second half of 2008. The number of building ownership transfers descended by 8.52% year on year and registered 379 thousand units in 2008, the lowest figure since 2004. Similarly, the number of first-time ownership registrations decreased by 10.55% year on year and reported 154 thousand units in 2008, indicating that real estate transactions contracted significantly (Chart 4.18). After March 2009, supported by low interest rates, falling housing prices, a bullish domestic stock market, additional preferential mortgage loans for homebuyers and opening of the local real estate market to investors from China, the market for existing buildings warmed up. Nevertheless, the transaction volume was much lower than that of the same period in the previous year.

Chart 4.18 Building ownership registrations



Source: Monthly Bulletin of Interior Statistics, MOI.

Chart 4.19 Floor space of construction license permits and usage license permits



Source: Monthly Bulletin of Interior Statistics, MOI.

New construction shrank greatly but the supply of new residential property remained abundant

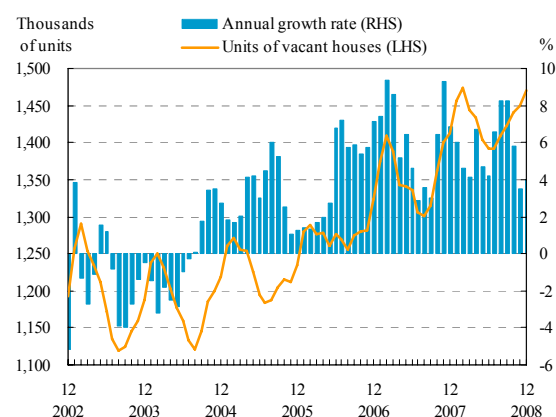
Owing to the sluggish domestic economy and weakening demand in the real estate market, construction companies became more conservative regarding new construction investments. The total floor space of construction license permits in 2008 descended by 24.7% year on year. The substantial shrinkage appeared both in residential and commercial construction. As for the supply of new properties, total floor space of usage permits in 2008 contracted by 9.20% year on year (Chart 4.19), mainly resulting from a decline of 14.70% in new residential properties. However, the supply of new residential properties remained ample and registered 111 thousand units in 2008, despite a 14.86% year on year decline. In addition, the

average number of vacant residential properties was about 1,432 thousand units, increasing by 5.52% year on year (Chart 4.20). From January to March 2009, the average number of vacant residential properties climbed further by 4.50% compared to 2008 and registered a historical high.

Mortgage burden alleviated slightly but public confidence in housing prices fell significantly

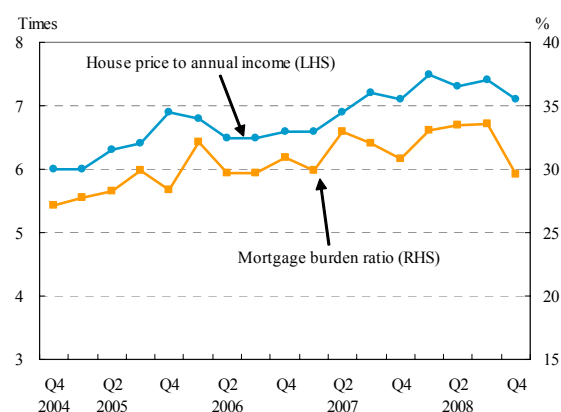
The cost burden for homebuyers alleviated slightly as the average mortgage burden ratio dropped to 29.6% in 2008 Q4, lower than the figures in the previous quarter and in 2007 Q4. However, the house price to income ratio remained high and reached 7.1 in 2008 Q4, the same as that in 2007 Q4, though lower than that in the previous quarter (Chart 4.21). Regarding public confidence in house prices, the composite score dropped significantly from 2008 Q2 and reported a score of 50 points³² in Q4 (Chart 4.22). This reflected homebuyers' pessimism about future house price movements.

Chart 4.20 Estimated units of vacant houses



Source: Taiwan Power Company.

Chart 4.21 House price to income ratio & mortgage burden ratio



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

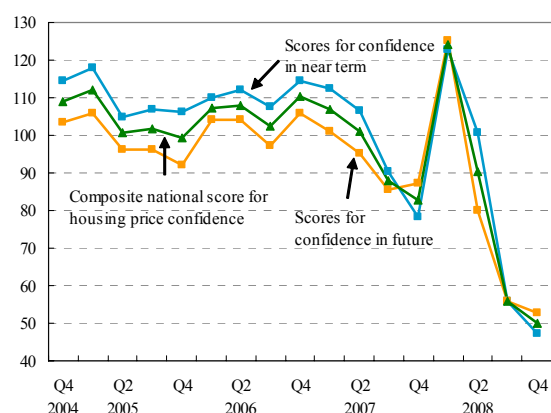
Source: "Taiwan Housing Demand Survey Report," MOI.

³² The house price confidence scores released by the Council for Economic Planning and Development range from 0 to 200. A score of 100 indicates that the number of people expecting prices to rise is equal to the number of those expecting the opposite, while a score above 100 indicates that more people expect prices to rise, and vice-versa. Scores for confidence in near-term and future prices refer to expectations for prices within the next three months and one year in the future, respectively.

Real estate-related loans grew slowly while mortgage interest rates declined

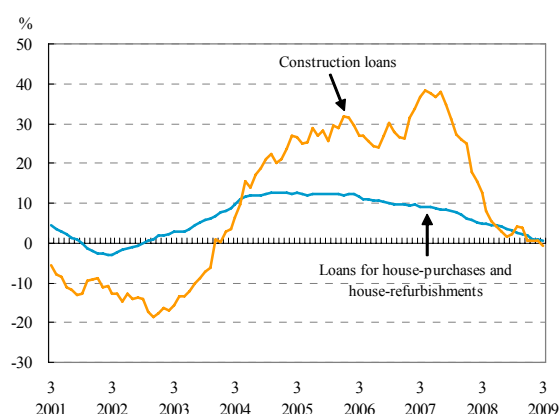
Real estate-related loans granted by banks³³ grew at a slower pace in the second half of 2008 owing to declining demand for house-purchases and house-refurbishments, as well as conservative mortgage practices in the banking industry. The annual growth rate of loans for house-purchases and house-refurbishments dropped to 1.47% in December 2008 and further declined to 0.99% in March 2009, while the annual growth rate of construction loans plunged more dramatically to 0.67% in December 2008 and -0.64% in March 2009 (Chart 4.23). Growth in new mortgage loans granted per month by the five largest banks turned negative from July 2008 but rebounded significantly in December, stimulated by an additional NT\$ 200 billion-worth of preferential mortgage loans provided by the government, before declining moderately in March 2009. The mortgage interest rate rose gradually from 2008 Q1 and reached a peak of 2.859% in September. However, it dropped back to 2.523% in December and further declined to 1.850% in March 2009 as banks lowered the mortgage interest rate in line with a succession of the CBC's rate cuts, displaying the effectiveness of the CBC's monetary easing in affecting banks' mortgage rates (Chart 4.24).

Chart 4.22 Scores for house price confidence



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

Chart 4.23 Annual growth rate of real estate-related loans

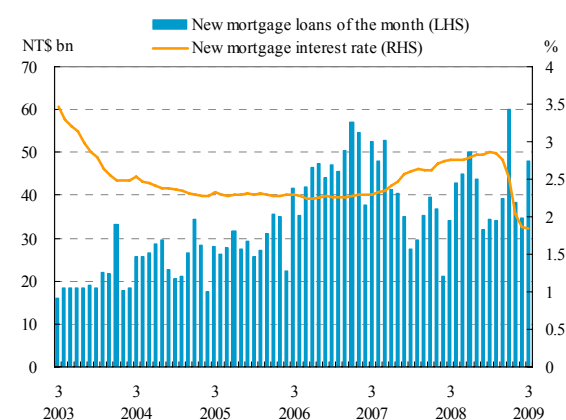


Source: CBC.

³³ The term "bank" here refers to domestic banks and the local branches of foreign banks.

Although the NPL ratio of loans for real estate purchases registered 1.44% in 2008 Q4 and further increased to 1.51% in 2009 Q1, the asset quality of those loans remained satisfactory. This increasing trend warrants closer attention, however, as the ratio has been increasing for five consecutive months. The housing market was expected to be underpinned by historically low mortgage interest rates and a series of measures adopted by the government, including implementing the economic stimulus package, extending the expiration of construction license permits, offering additional preferential mortgage loans for homebuyers as well as opening the local real estate market to investors from China. Nevertheless, given the rising unemployment rate and shrinking household wealth caused by the economic slump, together with expanding supply in the real estate market, downward pressure still existed. Banks should pay attention to the credit risk of real estate-related loans.

Chart 4.24 New mortgage loans – amount & interest rate



Source: CBC.