

rates by 0.125% each time for four times from June 2010, inducing lending rates to move upward, the debt repayment pressures of highly leveraged households might increase and thus warrants close attention.

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

At the end of 2010, the NPL ratio of household borrowing from banks was down from 1.41% a year earlier to 0.77%, the lowest level in ten years (Chart 3.13). The main reason behind this was that NPLs for real estate purchases, the largest share of household borrowing, contracted due to the real estate market rebound in 2010.

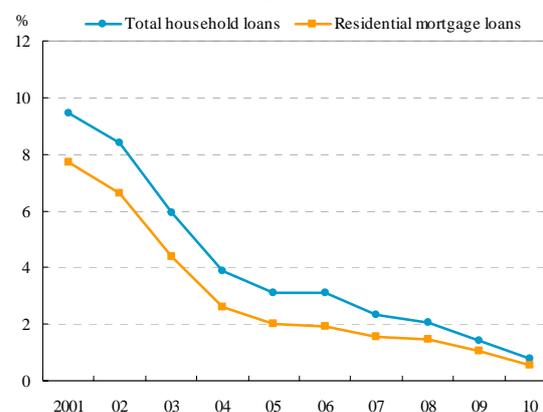
## 3.3 Real estate market

The real estate market continued to warm up in 2010, while house prices in specific areas surged and mortgage burdens elevated. Outstanding real estate-related loans continued to increase, albeit at a decreasing growth rate, as mortgage interest rates slowly rose. In response to surging house prices in specific areas and the concentration of banks' credit in the real estate market, the government implemented a series of measures and the housing market began showing signs of cooling starting February 2011. Its potential impact on the real estate-related business and asset quality of financial institutions is worth closer monitoring.

### Real estate market rebounded

Taiwan's real estate cycle indicators<sup>47</sup> jumped to a 10-year high of 16 points in 2010 Q4, a yellow/red light indicating a

Chart 3.13 NPL ratio of household borrowing



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

Chart 3.14 Real estate cycle indicators



Sources: "Quarterly Report of Taiwan Real Estate Cycle Indicators," Architecture and Building Research Institute, Ministry of the Interior (MOI); Taiwan Real Estate Research Center.

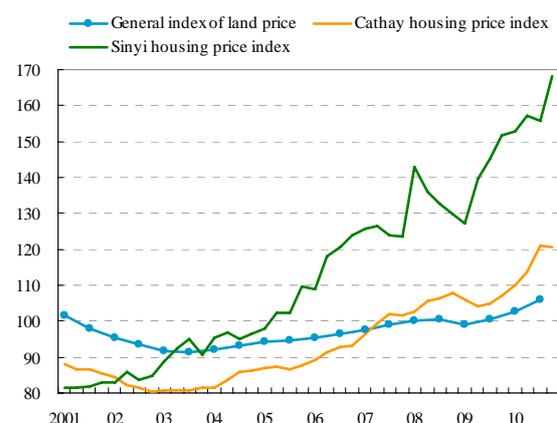
<sup>47</sup> The real estate cycle indicators show five types of market outlooks with different colored lights. A red light indicates a "heated market," a yellow/red light indicates a "moderately heated market," a green light indicates a "stable market," a yellow/blue light indicates a "moderately declining market," and a blue light indicates a "sluggish market."

moderately heated market, compared to 6 points of blue light indicating a sluggish market in 2009 Q1 (Chart 3.14). The composite indices of leading indicators<sup>48</sup> and coincident indicators<sup>49</sup> also displayed upward trends, revealing that the real estate market was apparently warming up. However, the recent survey showed that sentiment of real estate firms regarding the property market in the first two quarters of 2011 turned weak as a result of the proposed implementation of the Specifically Selected Goods and Services Tax.

### **House prices rose as the property market warmed up but turned cautious in February 2011**

Inspired by an influx of short-term international capital, the signing of the ECFA and the upgrading of five cities, real estate prices continued to climb and indices repeatedly struck new highs in 2010. The Taiwan area land price index hit 105.93 in September 2010, dramatically rising by 5.53% year on year. In addition, the Sinyi housing price index (for existing buildings) reached 168.25 in the fourth quarter of 2010, up 10.91% year on year, with the sharpest increase coming in Taipei City and New Taipei City, while the Cathy housing price index (for new construction) also climbed to 120.77, up 12.95% year on year (Chart 3.15), with housing prices in several regions hitting new highs time and again. Starting from February 2011, however, as the CBC and the FSC implemented measures to strengthen the banks' risk management on real estate-related loans, and the MOF proposed to implement the Specifically Selected Goods and Services Tax, the house buyer bargaining power increased in the areas where construction projects has risen notably.

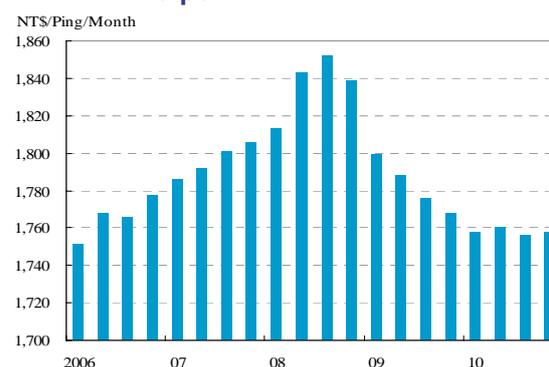
**Chart 3.15 Land and house price indices**



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 3.16 Average office rental rate in Taipei**



Source: Colliers International "Taipei Office Market Overview."

<sup>48</sup> The composite index of leading indicators is made up of the following five components: GDP, monetary aggregate M2, construction sector's stock price index, changes of outstanding construction loans, and consumer price index.

<sup>49</sup> The composite index of coincident indicators is made up of the following six components: undeveloped land transaction index, base lending rate, construction permit floor space, standard unit price for new construction projects, new loans for property purchases, and housing occupancy rate.

Despite surging house prices in Taipei in 2010, the momentum of rising office rentals weakened due to the release of new offices and declining office demand as financial firms' offices integrated and corporations moved out. The average office rental rate was NT\$1,758 per ping (approximately 3.3 square meters) per month in 2010 Q4, a slight year-on-year decrease of 0.57% (Chart 3.16).

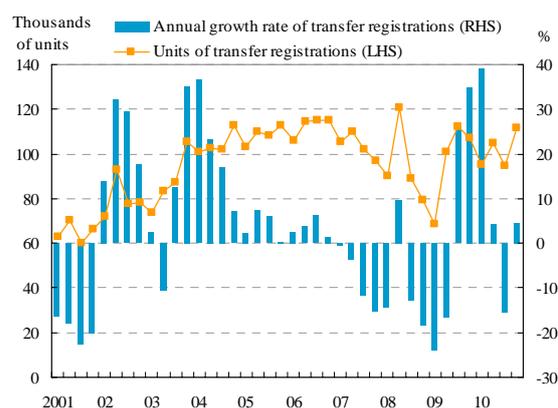
As for transactions in the housing market, market conditions were prosperous in the first half of 2010, but cooled down in Q3 as a result of measures that aimed to strengthen the risk management on real estate-related loans of banks, and then rebounded in Q4 as the market expected an upward movement of house prices. The number of building ownership transfers registered 407 thousand units for the whole year of 2010, up 4.74% year on year (Chart 3.17). The housing market continued to warm up in the first two months of 2011, as the number of building ownership transfers for those two months increased by 7.84% year on year. However, the market sentiment became cautious in March as a result of the proposed promulgation of the Specifically Selected Goods and Services Tax.

**The supply outlook for new properties is expanding and residential property vacancies remain high**

Affected by a decrease of new construction projects over the past few years, the total floor space of usage permits dropped by 9.5% in 2010 (Chart 3.18). Those for commercial and residential property both showed declines, with a higher decrease of 52.73% for commercial property.

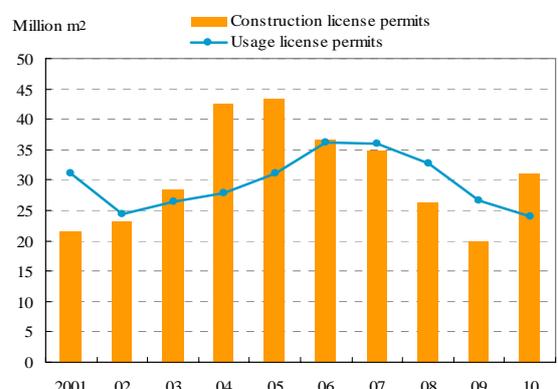
In 2010, inspired by the buoyant housing market, the real estate industry acted more aggressively with regard to introducing new construction projects. Total floor space of construction license permits substantially increased by 56.53% year on year, with the largest increase of 65.92% for residential

**Chart 3.17 Building ownership registrations**



Source: Monthly Bulletin of Interior Statistics, MOI.

**Chart 3.18 Floor space of construction license permits and usage license permits**



Source: Monthly Bulletin of Interior Statistics, MOI.

property. If analyzed by cities, Taichung City and New Taipei City saw the highest growth. Considering that the real estate industry competes to build new construction, new house supplies will increase in the future.

As estimated by the number of units consuming less electricity than the minimum service charge from the Taiwan Power Company, the average number of vacant residential properties in 2010 decreased 0.86% year on year, but still stood at the high level of 1.445 million units (Chart 3.19).

### **Mortgage burden kept increasing**

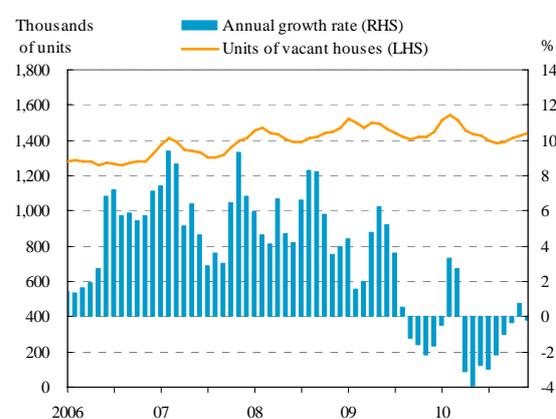
Following climbing housing prices, the mortgage burden continuously increased for house buyers. The average house price to income ratio for the six metropolitan areas reached 8.9 in 2010 Q4 as the average mortgage burden ratio registered 36.0%, both reaching new highs. Among the metropolitan areas, the mortgage burden was heaviest in Taipei City as the housing price to income ratio and mortgage burden ratio reached 14.3 and 56.2%, respectively (Chart 3.20).

### **Real estate-related loans continued to grow but at a slower pace, while mortgage interest rates gradually increased**

Outstanding loans for house purchases and house refurbishments granted by banks<sup>50</sup> continued to grow and reached a historical high of NT\$5.83 trillion at the end of 2010. Although the annual growth rate of such loans continued to increase in the first two quarters of 2010, it turned to be more temperate in Q3

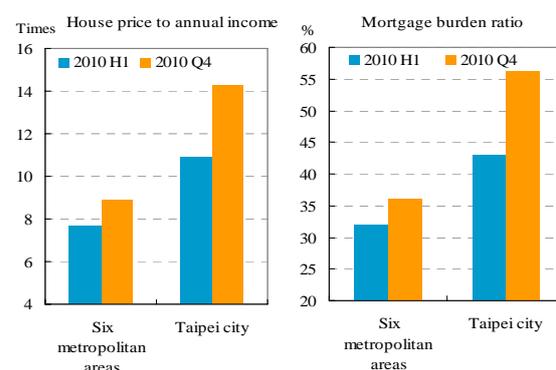
<sup>50</sup> Refers to domestic banks and the local branches of foreign banks.

**Chart 3.19 Estimated units of vacant houses**



Source: Taiwan Power Company.

**Chart 3.20 House price to income ratio and mortgage burden ratio**



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

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

and slid to 2.53% in December 2010 due to the effect of the CBC’s measures to strengthen the risk management on real estate-related loans of banks. Construction loans steadily climbed and reached NT\$1.29 trillion in December 2010 with the annual growth rate bouncing to 23.2% from -2.77% a year earlier. In 2011 Q1, the growth of loans for house purchases and house refurbishments continued to slow with an annual growth rate of 2.30% in March. Total outstanding construction loans repeatedly reached new highs, though the annual growth rate slightly moderated to 22.68% in March 2011 (Chart 3.21).

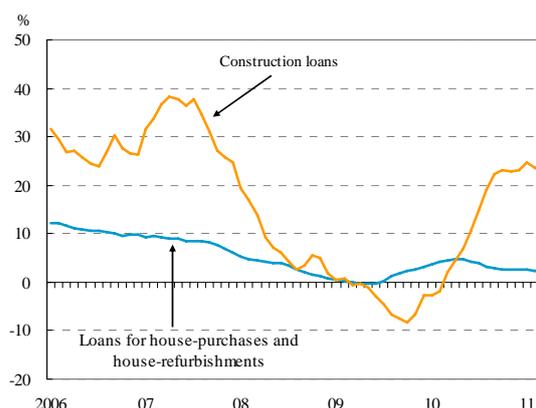
New loans for house purchases granted by the five largest banks remained at high levels in the first half of 2010. Due to the CBC’s measures to strengthen mortgage risk management, new loans for house purchases contracted in the third quarter but resumed their climb in October and reached a new high of NT\$62.6 billion in March 2011 as the property market warmed up. With respect to financing costs, the interest rate for new mortgages decreased to 1.62% in May 2010 and gradually rebounded to 1.77% in March 2011, following the CBC’s policy rate hikes (Chart 3.22).

**Government adopted a series of measures in response to surging house prices**

In response to surging house prices in specific areas and banks’ excessive concentration of credit in real estate related loans, the CBC, the Ministry of Finance, and the FSC have adopted the following measures to enhance the soundness of the housing market and financial stability:

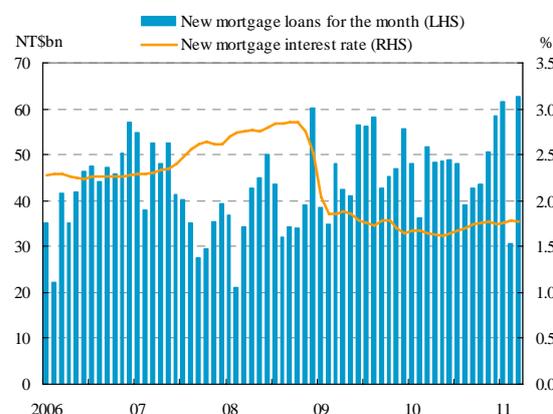
1.The CBC has adopted a series of targeted prudential measures since October 2009, including moral suasion and the promulgation of the Regulations Governing the Extension of Land Collateralized Loans and Housing Loans in Specific Areas by Financial Institutions (Box 4) with the aim of discouraging property and land

**Chart 3.21 Annual growth rate of real estate-related loans**



Source: CBC.

**Chart 3.22 New mortgages – amount and interest rate**



Source: CBC.

speculation fueled by bank credit and urging financial institutions to enhance risk management associated with credit extension so as to protect depositors' rights and promote financial stability.

2. The MOF reinforced tax audits on speculative real estate transactions and proposed the Specifically Selected Goods and Services Tax, which imposes a tax of 10%~15% on the sale price of non-self-use residences and city land with building permits (land for construction in urban planning areas) that were bought less than two years ago, while not applicable to reasonable, ordinary or involuntary transfers of properties. The aforementioned statute was promulgated by the President on 4 May 2011 and took effect from 1 June 2011.
3. On 21 March 2011, the FSC announced three measures to supervise the real estate lending risks of banks, including: (1) clearly defining self-use residence loans and raising capital charges for non-self-use residence loans;<sup>51</sup> (2) requesting banks to strengthen concentration risk management of real estate lending, ascertain the purpose of loans and cautiously determine real estate values; (3) including the extension of real estate lending into one of the key items subject to financial examination.

In summary, the overall asset quality of real estate-related loans remained satisfactory, with the average NPL ratio staying low for the time being. However, as the property market has begun to show signs of cooling, it may undermine the real estate related credit extension business and asset quality of financial institutions and thus warrants close attention.

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<sup>51</sup> The FSC issued a directive on 21 April 2011, allowing the use of either a 45% risk weight or 35%/75% risk weight under the LTV method for new self-use residence loans granted by banks, while non-self-use residence loans were assigned a risk weight of 100%. Self-use residence loans refer to loans applied for by nationals without domestic residence for the purpose of purchasing residences for self-use.

#### Box 4

### The CBC's targeted prudential measures to stabilize the property market

In view of a surge in housing prices in specific areas and excessive concentration of the loan portfolios of banks, the CBC successively launched a range of targeted prudential measures to safeguard the financial system and the development of the property market from October 2009. The measures included: (1) moral suasion to financial institutions; (2) improvement in the collection and analysis of statistics; and (3) regulations to govern real-estate loans in specific areas granted by financial institutions. With the aforesaid measures, the CBC aimed at urging banks to strengthen their risk management of real estate loans and promoting sound development of the property market.

#### *1. Moral suasion to financial institutions and improvement in the collection and analysis of housing loan data from October 2009*

Initially, the CBC adopted the following measures:

- Urged banks to rein in risks related to mortgage loans (October 2009);
- Addressed asset market problems in the Board meeting and reached a decision under which the Board will take asset prices into account in its monetary policy setting (December 2009);
- Requested the Bankers Association of the Republic of China to remind borrowers of preferential loans regarding the risk of increasing repayment and rising effective interest rates as soon as grace periods expire (January 2010);
- Used moral suasion to encourage 15 domestic banks with regard their investment-oriented borrowers to: (1) lower the loan to value (LTV) ratio (ceiling of 70%); (2) raise the interest rate higher than that of general housing loans; and (3) remove the grace period (March 2010); and
- Required banks to submit call reports regarding the extension of newly approved mortgage loans to general borrowers and investment-oriented borrowers by region every 15 days. Target examinations will be undertaken where necessary, so as to ensure banks' compliance with the aforementioned policies (April 2010).

#### *2. Regulations to govern the extension of housing loans in specific areas by financial institutions in June 2010*

Most banks adjusted their mortgage loan policies in the face of a range of moral suasions

by the CBC. Nevertheless, concerns about the excessive concentration on real estate loans of banks lingered, and the house-purchase burden faced by homebuyers grew heavier on the back of the notable rise in housing prices in specific areas. Meanwhile, there was an increasing need for a uniform lending standard for housing loans among financial institutions. Against this backdrop, the CBC Board approved the promulgation of the Regulations Governing the Extension of Housing Loans in Specific Areas in June 2010. The key points of the Regulations included: (1) capping the LTV ratio on second (or more) housing loans for home purchases in specific areas at 70%; and (2) removing the grace period for such loans (Table B4.1).

**Table B4.1 Regulations Governing the Extension of Housing Loans in Specific Areas by Financial Institutions**

<b>Scope</b>	<ol style="list-style-type: none"> <li>1. Financial Institutions referred to in the Regulations include domestic banks, local branches of foreign banks, credit cooperatives, Agricultural Bank of Taiwan, credit departments of farmers' and fishermen's associations, Chunghwa Post Co., and insurance companies.</li> <li>2. The scope of "Specific Areas" prescribed in the Regulations includes Taipei City and ten districts in New Taipei City.</li> <li>3. The "new housing loans" granted by financial institutions in the aforementioned areas.</li> </ol>
<b>New housing loans</b>	<p>Financial institutions shall, before extending new housing loans to individual borrowers against collateral located in specific areas, verify the borrowers' credit history related to housing loans with the Joint Credit Information Center. With regard to housing loans newly extended to borrowers who have other outstanding housing loans, financial institutions shall:</p> <ol style="list-style-type: none"> <li>1. Limit new housing loans to no more than 70% of the appraisal value of the collateral;</li> <li>2. Remove grace periods; and</li> <li>3. Grant no additional loans against the same collateral for home refurbishments, as working capital, or for other purposes.</li> </ol>
<b>Effective date</b>	The Regulations shall enter into force on 25 June 2010. Loans already approved by financial institutions on or before the cutoff date, may be disbursed in accordance with the original terms and conditions granted when the loans were approved.

Source: CBC.

### ***3. Ongoing moral suasion and improvement in the collection of information regarding land collateralized loans in the second half of 2010***

In addition to ongoing moral suasion, the CBC further enhanced the collection and analysis of land collateralized loans following the promulgation of the aforementioned regulations governing housing loans in specific areas. These measures included:

- Reminding financial institutions to be alert to activities stemming from massive purchases of existing houses by speculators who may take advantage of fake

applicants to apply for housing loans, while urging financial institutions to curb such new loans in the hope of promoting effective risk management (July 2010);

- Using moral suasion to encourage banks to draw up appropriate criteria for land collateralized loans aimed at reinforcing risk management associated with land acquisition financing, whereby banks shall: (1) require borrowers to offer elaborate and concrete plans of construction projects; (2) set up reasonable LTV ratios and interest rates; and (3) adopt a package of measures (for example, withdrawal of loans or raising interest rates) to discipline borrowers who fail to commence construction on schedule (September 2010).
- Requiring banks to submit monthly call reports regarding the extension of newly approved land collateralized loans, so as to monitor the relevant credit extension of individual banks (October 2010).

#### ***4. The amendment of regulations to govern real estate loans granted by financial institutions (December 2010)***

The CBC's policy measures to govern housing loans in specific areas showed promising results during the third quarter of 2010. Nonetheless, buoyant property transactions since October of that year have led to concerns about the increasing credit extension of banks' housing loans in other unregulated regions neighboring the specific areas. With regard to the enhancement of risk management for land collateralized loans granted by banks, there were mounting problems that mortgage risk management would be inconsistent between public banks and private banks in terms of various loan standards. As a result, the CBC Board approved the amendment of the Regulations Governing the Extension of Land Collateralized Loans and Housing Loans in Specific Areas in December 2010 (Table B4.2). This measure aimed primarily at dampening speculative activities in the property market fueled by bank credit, while urging financial institutions to reinforce their credit risk management so as to protect the interests of depositors and promote financial stability. The key points of the amendment are shown as follows:

- For housing loans in specific areas, the efforts included: (1) extending the coverage of specific areas; (2) lowering the maximum LTV ratio for second (or more) housing loans by individuals to 60%; and (3) encompassing housing loans by companies in specific areas to be subject to the applicable regulations.
- As for land collateralized loans, it tightened underwriting standards for real estate loans collateralized by residential or commercial land plots located in urban planning

districts. Financial institutions shall: (1) require borrowers to present concrete plans of construction projects; and (2) cap the LTV ratio at 65%, where 10% of the approved loan amount shall not be disbursed until the construction commences.

Moreover, in order to help financial institutions and the public understand more details about the foregoing regulations, further explanations and Q & A were provided on the CBC's website in January 2011.

**Table B4.2 Regulations Governing the Extension of Land Collateralized Loans and Housing Loans in Specific Areas by Financial Institutions**

<b>Scope</b>	<ol style="list-style-type: none"> <li>1. Financial Institutions referred to in the Regulations include domestic banks, local branches of foreign banks, credit cooperatives, Agricultural Bank of Taiwan, credit departments of farmers' and fishermen's associations, Chunghwa Post Co., and insurance companies.</li> <li>2. In addition to Taipei City and ten districts in New Taipei City, the scope of "Specific Areas" prescribed in the Regulations is amended to also include three other New Taipei City districts.</li> <li>3. Pursuant to these amendments, land collateralized loans shall be governed by the Regulations.</li> </ol>
<b>Housing loans in Specific Areas</b>	<ol style="list-style-type: none"> <li>1. The loan-to-value ratio will be capped at 60%, down from 70%, for home purchases in specific areas by individuals who have taken out other outstanding real estate loans. Financial institutions shall, before extending new housing loans to individual borrowers against collateral located in specific areas, verify the borrowers' credit history related to housing loans with the Joint Credit Information Center.  With regard to housing loans newly extended to borrowers who have other outstanding loans for real estate purchases, financial institutions shall:               <ol style="list-style-type: none"> <li>(1) Limit new housing loans to no more than 60% of the appraisal value of the collateral;</li> <li>(2) Remove grace periods; and</li> <li>(3) Grant no additional loans against the same collateral for home refurbishments, as working capital, or for other purposes.</li> </ol> </li> <li>2. Housing loans extended to companies shall be governed by the Regulations and shall conform to relevant rules in the sub-paragraphs (1) to (3) prescribed above.</li> </ol>
<b>Land collateralized loans</b>	<p>When extending collateralized loans against collateral of residential or commercial land plots located in urban planning districts (including but not limited to aforementioned specific areas), financial institutions shall:</p> <ol style="list-style-type: none"> <li>1. Require borrowers to present concrete plans of construction projects;</li> <li>2. Apply a maximum LTV ratio of 65% of the acquisition cost or the valuation price of the collateral, whichever is lower, where 10% of the approved loan amount shall not be disbursed until the construction commences; extend no additional credit for working capital or other purposes; and</li> <li>3. Bills finance companies shall comply with the rules in the above two paragraphs when providing guarantees to bill issuance against collateralized residential or commercial land plots located in urban planning districts.</li> </ol>
<b>Effective date</b>	<p>The Regulations shall enter into force on 31 December 2010. Loans already approved by financial institutions before the cutoff date may be disbursed in accordance with the original terms and conditions granted when the loans were approved.</p>

Source: CBC.

***5. Ongoing target examinations to ensure the compliance of policies by financial institutions***

To carry out the targeted macroprudential measures and contain the concentration of credit risks in financial institutions, the CBC will continuously analyze financial institutions' regular call reports and conduct target examinations for certain financial institutions where necessary.