

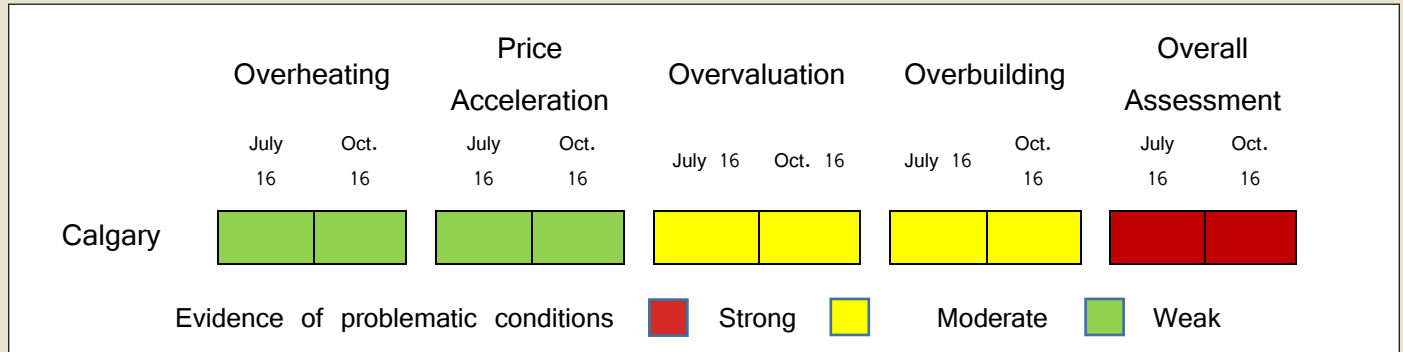
HOUSING MARKET ASSESSMENT Calgary CMA

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Highlights



- Due to a combination of moderate evidence of overvaluation and overbuilding, CMHC's HMA framework detected strong evidence of problematic conditions in Calgary¹.
- Moderate evidence of overvaluation was detected due to weaker labour market conditions and slower population growth.
- The vacancy rate in October 2015 rose above the problematic threshold, leading to moderate evidence of overbuilding.
- The assessment for overheating and price acceleration continued to show weak evidence of problematic conditions.
- The Housing Market Assessment (HMA) analytical framework considers four factors to assess the evidence of problematic housing market conditions: overheating; acceleration in the growth of house prices; overvaluation; and, overbuilding. A brief summary of the framework is presented on page "6" of this report.

HMA Overview²

As Canada's authority on housing, CMHC contributes to market stability by providing information on potential imbalances that could affect housing markets. With the Housing Market Assessment (HMA), CMHC offers information and analysis that can help Canadians make more informed decisions.

The HMA combines the results from a technical framework with insights gained through CMHC's Market Analysts' knowledge of local market conditions. These insights position

CMHC to provide additional context and interpretation to the results of the HMA framework.

The HMA framework detects problematic market conditions in local housing markets by identifying imbalances. An example would be the detection of overbuilding, a situation in which the inventory of unsold new homes accumulates due to supply outpacing demand. Such an imbalance could be resolved by an adjustment in house prices. As an example, lower prices would help resolving an excess supply imbalance by supporting stronger demand and/or reducing

supply. However, other unexpected developments that do not originate from the housing market could accentuate or reduce an imbalance.

Colour codes indicate the level of evidence of problematic conditions. The HMA is a comprehensive framework that considers the intensity of signals of imbalances (that is, how far the indicator is

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¹ Results are based on data as of the end of June 2016 and local market intelligence up to end of September 2016. CMHC continuously monitors market developments and will issue HMA updates on a quarterly basis.

² A detailed description of the framework is available in the appendix of the [National edition](#).

from its historical average), and the persistence over time. Generally, low intensity and persistence are associated with potentially weaker evidence of problematic conditions. As the number of intense and persistent signals increases, the associated evidence of problematic conditions becomes stronger.

In Detail

Overheating

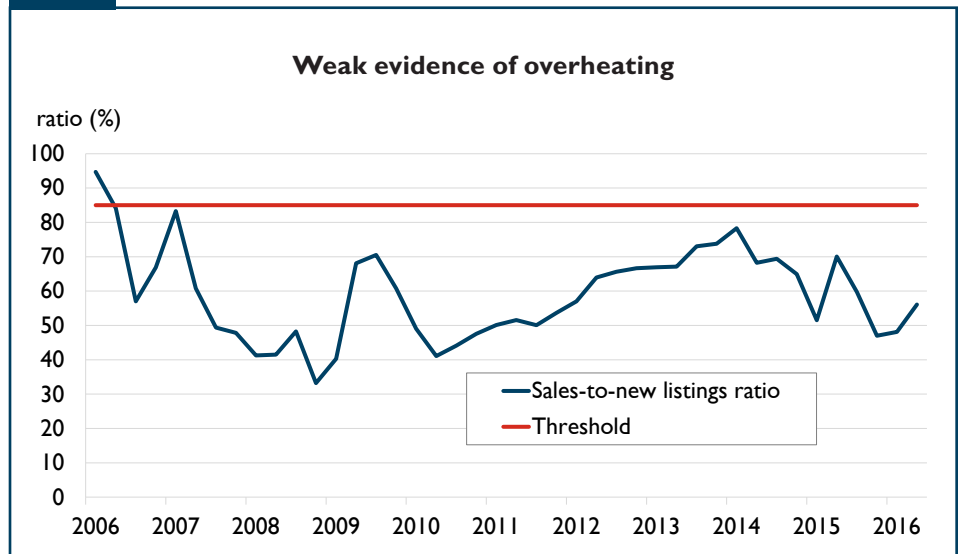
CMHC's HMA framework continues to detect weak evidence of overheating in Calgary as the sales-to-new listings ratio has been below the threshold of 85 per cent. The seasonally adjusted sales-to-new listings ratio was 56 per cent in the second quarter. While the ratio has been below the threshold for overheating conditions, it has increased from the previous quarter. On a seasonally

"Moderate evidence of overvaluation and overbuilding were detected in Calgary due to weaker economic conditions. Reduced investments in the energy industry have contributed to job losses across the region, especially in the oil and gas sectors, and high unemployment rates have slowed migration and income growth."



Richard Cho
Principal, Market Analysis (Calgary)

Figure 1

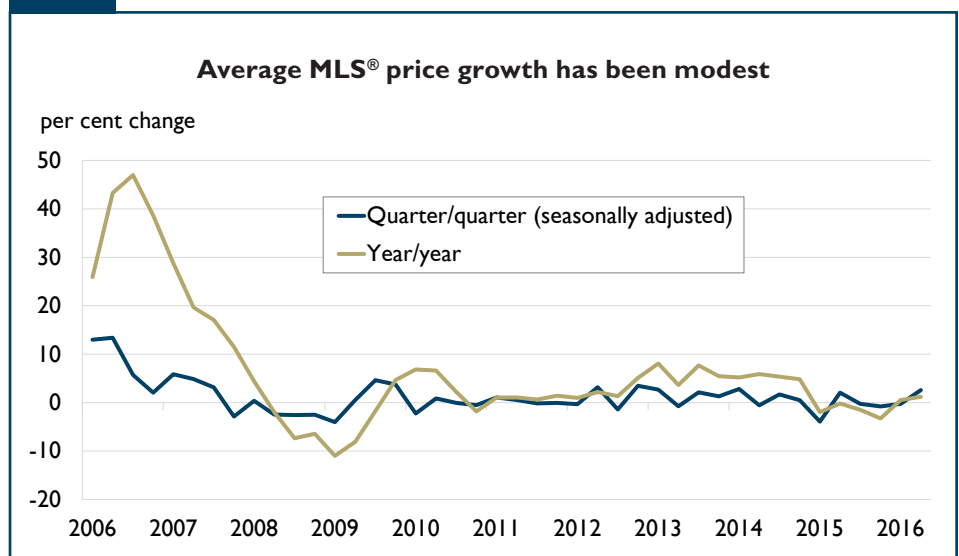


Source: CREA, calculations (threshold) by CMHC
Last data point: 2016Q2

adjusted basis, sales rose nine per cent from the first to the second quarter of 2016 while new listings declined six per cent. Sales in the second quarter were still below historical averages, and down from the same period in 2015, despite the rise from a quarter earlier. Weaker labour market conditions and a decline in migration have affected housing demand.

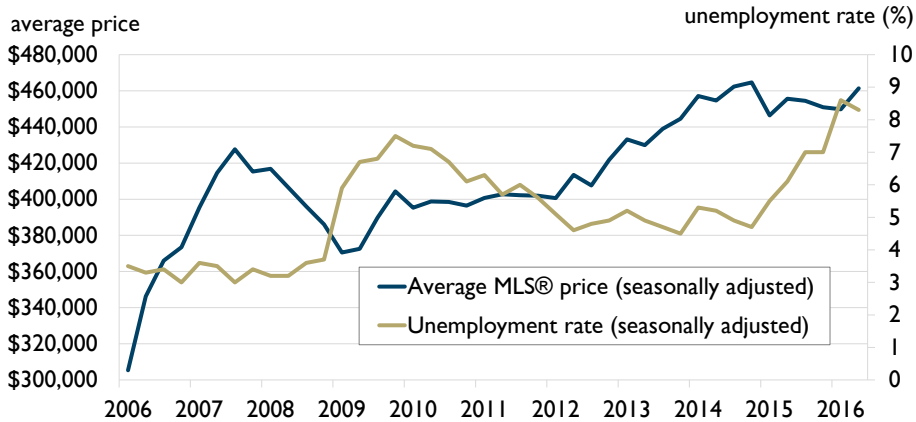
For the City of Calgary, the sales-to-new listings ratio was 59 per cent in the second quarter of the year, down from 68 per cent during same period in 2015. Apartment units had the lowest sales-to-new listings compared single-detached, semi-detached, and row units.

Figure 2



Source: CREA
Last data point: 2016Q2

Figure 3

Housing demand has moderated due to weaker economic fundamentals

Source: CREA, Statistics Canada
Last data point: 2016Q2

Price Acceleration

There was weak evidence of price acceleration in Calgary. Growth in house prices has been modest thus far in 2016. In the second quarter, the average MLS® price rose 1.2 per cent year-over-year to \$468,116, following an increase of only 0.5 per cent in the first quarter. Demand for housing has slowed down as low oil prices impacted employment in various sectors. Population and income growth have also moderated. In addition to weaker demand, supply of housing in the resale and new home markets were up from the previous year, keeping prices from making strong gains.

To the end June, the total average house price in the City of Calgary was up slightly from the previous year, due to detached units. While the average price for a detached unit had increased one per cent compared to the same period in 2015, attached and apartment prices had declined. For attached and apartment units, the sales-to-new listings ratio was weaker compared to single-detached units.

Overvaluation

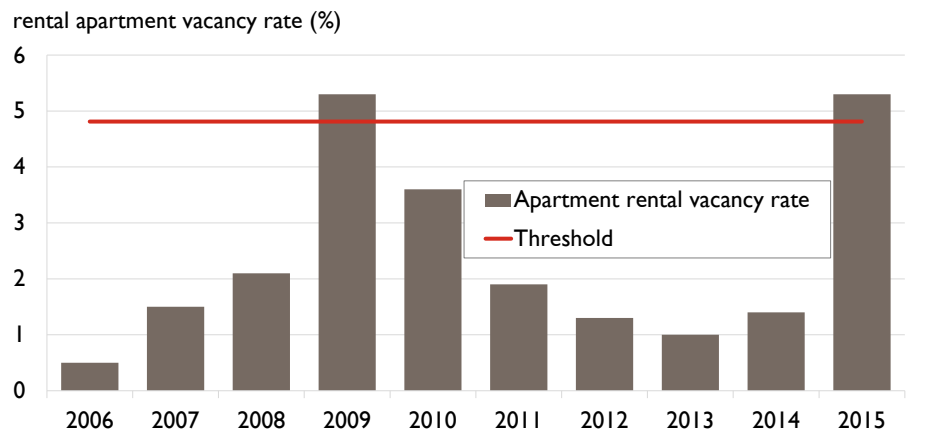
The HMA detected moderate evidence of overvaluation in Calgary as economic and demographic fundamentals have weakened. Labour market conditions have been weak and the seasonally adjusted unemployment rate averaged 8.3 per cent, up considerably from

the preceding 10-year monthly average of five per cent. Several sectors of the economy have been impacted by low oil prices and reduced demand for labour. At mid-year, total employment was down over 24,000 jobs from the corresponding period in 2015, with all of the jobs losses in full-time positions. This along with slower growth in population and income has moderated demand for housing.

Overbuilding

The assessment for overbuilding examines both the apartment vacancy rate and the number of units in ownership inventory. CMHC's HMA framework detected moderate evidence of overbuilding due to a rise in the apartment vacancy rate. In October 2015, the apartment vacancy rate increased to 5.3 per cent, up from 1.4 per cent in October 2014. A combination of weaker rental demand and an increase in supply pushed up the vacancy rate. Calgary's labour market has deteriorated following the decline in oil prices. The unemployment rate in Calgary has not only increased to elevated

Figure 4

Apartment vacancy rate surpassed the problematic threshold

Source: CMHC, calculations (threshold) by CMHC
Last data point: October 2015

levels but has also surpassed the national average. A decline in migration and employment has contributed to less demand for rental units. Landlords are also facing competition from the completion of new rental projects, and the secondary rental market.

Inventories on a per capita basis have risen, but are still below the problematic threshold in the HMA framework. Total inventories in Calgary intended for ownership tenure increased to 1,092 units in June, nearly doubling the tally in the same month a year earlier. The rise in total inventories was due to an increase in multiple units, while single-detached inventories were still relatively low. With the decline in housing demand, the per cent of multiple units absorbed at completion has moderated, contributing to the upward pressure on inventories.

Overview of the Housing Market Assessment analytical framework

To obtain an accurate picture of the overall state of the housing market, it is important to consider multiple data points and lines of evidence rather than relying on just one measure or indicator.

The Housing Market Assessment (HMA) analytical framework provides a comprehensive and integrated view that relies on a combination of signals from several indicators to assess housing market conditions.

Specifically, the framework considers four main factors that may provide an early indication of potentially problematic housing market conditions: (1) overheating when demand outpaces supply; (2) sustained acceleration in house prices; (3) overvaluation of house prices in comparison to levels that can be supported by housing market fundamentals (listed below);

and, (4) overbuilding when the inventory of available housing units is elevated.

For each factor, the framework tests for: (1) the presence or incidence of signals of potentially problematic conditions, but also considers; (2) the intensity of the signals, i.e. how their magnitude compares with their historical average or how consistent they are with known or suspected house price bubbles, such as for Toronto in the late 1980s and early 1990s; and, (3) the persistence of signals over time.

Generally, a situation in which we detect few signals with low intensity or lack of persistence is associated with weak evidence of problematic conditions. Conversely, as the intensity, number, and/or persistence of the signals increases, the likelihood of a factor becoming problematic increases.

The framework takes into account demographic, economic, and financial determinants of the housing market such as population, personal disposable income, and interest rates to detect potentially problematic housing market conditions. The framework also takes into account developments in both resale and residential construction markets.

The framework was developed on the basis of its ability to detect problematic housing market conditions in historical data, such as the house price bubble Toronto experienced in the late 1980s and early 1990s. The ability of the HMA to detect current problematic conditions relies on the assumption that historical relationships between prices and fundamental drivers of housing markets have not changed.

Housing Market Assessment Factors

Overheating

Overheating is caused by demand significantly and persistently outpacing the supply of housing. The sales-to-new listings ratio is used as an indicator to assess possible overheating conditions in the existing home market. To identify problematic overheating conditions, the framework compares the sales-to-new listings ratio to thresholds. When demand is strong relative to supply, house prices typically grow at a faster rate. Sustained overheating conditions on the existing home market may lead to acceleration in house prices for existing and new homes. However, as supply and demand begin to balance out, indicators of overheating (and acceleration) would begin to soften and house prices would gradually moderate.

Acceleration in House Prices

Under balanced market conditions, house prices are expected to increase over time, in line with increases in households' cost of

living. House price acceleration occurs when the growth in house prices strengthens over time on a persistent basis. Acceleration in house prices over an extended period can cause their pace of increase to depart from the overall price inflation and eventually lead to overvaluation.

To assess acceleration in house prices, the HMA framework uses a statistical test* that was developed to identify periods of accelerating asset prices.

Overvaluation

Overvaluation is detected when house prices remain significantly above the levels warranted by fundamental drivers of housing markets such as income, population, and actual and expected financing costs.

The HMA framework uses combinations of different house price measures and models to estimate house price levels warranted by fundamental drivers.

The difference between observed house prices and their estimated levels consistent with housing market fundamentals allows for an estimation of the degree of over- and undervaluation. The use of different price measures and models improves the reliability of results.

Overbuilding

Overbuilding is detected when the supply of readily available housing units significantly exceeds demand. In such a context, downward pressure on house prices would occur until the excess supply is eventually absorbed.

To assess overbuilding conditions in the housing market, the HMA framework uses two indicators that relate to the supply of readily available housing units: the rental vacancy rate, and the inventory of completed and unsold housing units per 10,000 population. The HMA framework compares the current level and recent trends in these indicators with thresholds.

Note 1: Colour codes indicate the level of evidence of problematic conditions. The HMA reflects a comprehensive framework that not only tests for the presence or incidence of signals of potentially problematic conditions, but also considers the intensity of signals (that is, how far the indicator is from its historical average) and the persistence of signals over time. Generally, low intensity and persistence are associated with a lower potential of upcoming problematic conditions. As the number of persistent signals increases, the evidence of a problematic condition developing increases.

Note 2: Results at the CMA level are not segmented by housing type or neighbourhood. They represent an assessment of the entire CMA. However, specific CMA reports provide further detailed analysis of these markets.

Note 3: The colour scale extends to red only for those factors that have multiple indicators signaling significant incidence, intensity and persistence of potentially problematic conditions. As a result, only overvaluation and overbuilding can receive a red rating, since they are assessed using more than one indicator.

Note 4: To ensure the framework is as current as possible, on a regular basis, we undertake a model selection process whereby our house price models for overvaluation are tested for statistical significance at the national and CMA level. The result of this process may change the number of indicators of a problematic condition from the previous assessment.

* See Phillips, Wu and Yu (2008) "Explosive Behaviour in the 1990s NASDAQ When Did Exuberance Escalate Asset Values?" for further details on the methodology.

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