

HOUSING MARKET ASSESSMENT

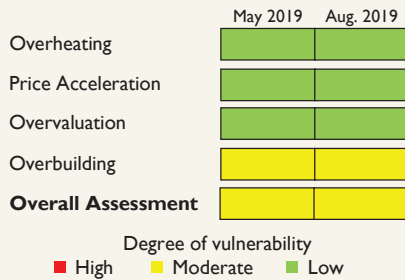
Calgary CMA

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Highlights

Results Overview Calgary CMA



- CMHC's Housing Market Assessment Framework detected a moderate degree of vulnerability in the overall assessment for Calgary¹.
- Evidence of overbuilding remained moderate, however inventory in the new home market is moving lower.
- As the economic recovery in Calgary remains in progress, the decline in house prices have kept valuations in line with economic fundamentals.

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 and contribute to an orderly adjustment of housing market imbalances.

The HMA is an analytical framework that provides a comprehensive view of housing market vulnerabilities. It should be noted that it intends to identify imbalances in the housing market; it is not aimed at being a framework to identify long-term fundamental affordability challenges.

It considers four main factors: overheating, price acceleration, overvaluation and overbuilding. Overheating is detected when sales greatly outpace new listings in the market for existing homes. Price acceleration is signaled when the growth rate of house prices increases rapidly. Overvaluation indicates that house prices are elevated compared to price levels supported by personal disposable income, population, interest rates, and other fundamentals³. Overbuilding is flagged when the rental apartment vacancy rate and/or inventory of newly built and unsold housing units are significantly above normal levels.

The HMA combines the results from a technical framework with insights gained through CMHC's market

analysts' knowledge of local market conditions. These insights allow CMHC to provide additional context and interpretation to the results of the HMA framework.

Colour codes indicate the degree of market vulnerability. The HMA is a comprehensive framework that considers both the intensity (magnitude) and the persistence of signals of imbalances. Generally, low intensity and persistence are associated with low evidence of vulnerability. As the number of intense and persistent signals increases, the associated degree of vulnerability becomes higher.

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¹ Results are based on data as of the end of March 2019 (the annual rental apartment vacancy rates are from October 2018) and market intelligence up to the end of June 2019.

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

³ Other fundamental factors include mortgage-borrowing capacity of households, required minimum down payment, and labor productivity.

In Detail

Low Evidence of Overheating

CMHC's HMA framework continued to detect low evidence of overheating in Calgary in the first quarter of 2019. While supply levels have moved lower, as reflected by unsold inventory in both the new and resale markets, housing demand remains below historical levels. This has kept the sales-to-new listings ratio (SNLR) at levels below the critical threshold of overheating. Data for the second quarter of 2019 from the Calgary Real Estate Board indicates stronger sales and lower new and active listings compared to the second quarter of 2018 due to lower house prices and improvement in some economic fundamentals. This has pushed the

SNLR ratio higher in the second quarter but still below the threshold of overheating.

Low Evidence of Price Acceleration

A persistently low SNLR has led to buyers' market conditions whereby house prices are moving lower, yielding low evidence of price acceleration. On a year-over-year basis, the real Teranet® house price index decreased by 4.00% and the real MLS® average price decreased by 5.45%. The real new housing price index decreased by 2.01%. Data for the second quarter of 2019 from the Calgary Real Estate Board indicates that price acceleration is unlikely to be present in the second quarter of 2019 as prices continue to adjust downward and the market seeks a balanced state.

Low Evidence of Overvaluation

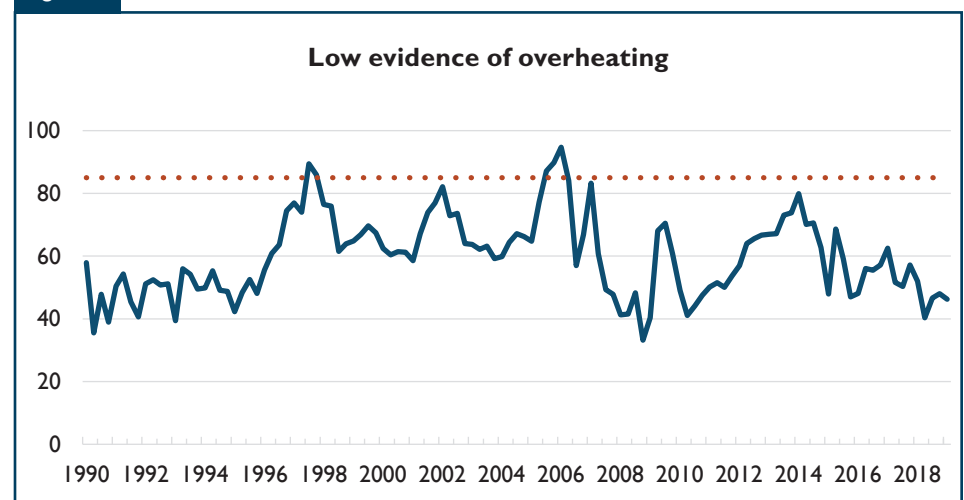
There continued to be low evidence of overvaluation in Calgary in the first quarter of 2019. Declining house prices has led to valuations that are largely in line with predicted levels. Calgary's labour market has improved via population and employment growth and a higher participation rate; however, the unemployment rate remains elevated and real personal disposable income growth has been flat or negative over the last year. While these economic fundamentals have kept housing demand below historical norms, the downward adjustments in house prices are yielding low evidence of overvaluation in Calgary.



James Cuddy
Senior Analyst
Economics

"While the number of completed and unsold units in the new home market remained elevated, inventory levels are moving towards levels that are more balanced. Housing demand is showing some early signs of recovery particularly in more affordable segments of the market, and new supply coming onto the market is slowing down."

Figure 1

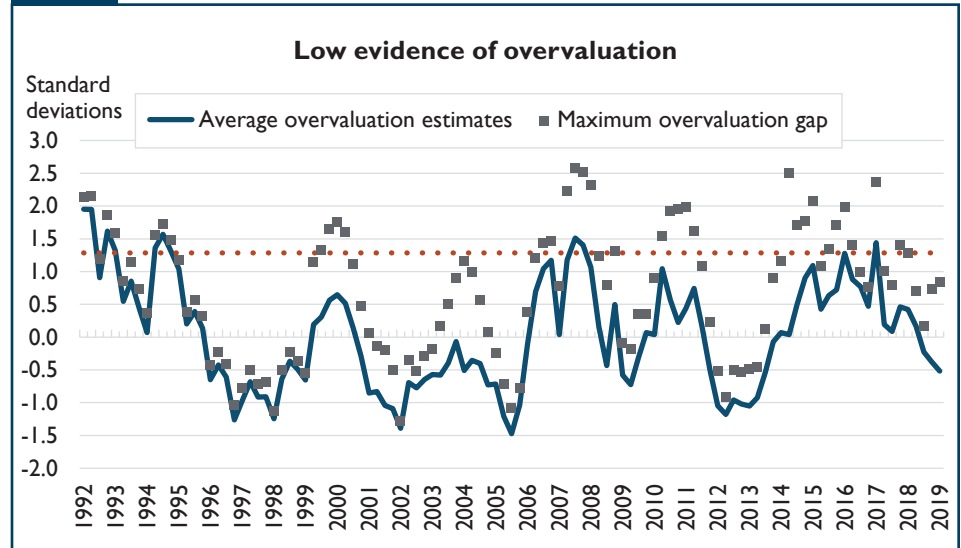


Sources: CREA and calculations (threshold) by CMHC

Moderate Evidence of Overbuilding

Moderate evidence of overbuilding continued to persist in the first quarter of 2019, however inventories in the new home market are moving towards more balanced levels. The number of completed and unsold units per 10,000 population moved lower for the second consecutive quarter, largely due to declining apartment inventory. More recent monthly data has shown that inventory in other segments of the market have been moving lower as well. Meanwhile, the pace of absorptions continues to face headwinds as the economy across Alberta recovers slowly and builders have primarily focused on adjusting their production in order to manage inventory levels.

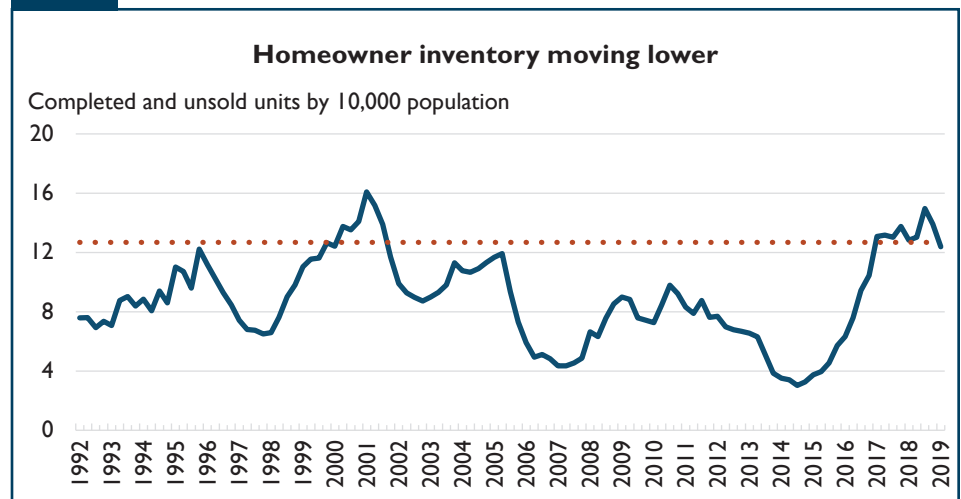
Figure 2



Sources: CREA, Statistics Canada and calculations by CMHC

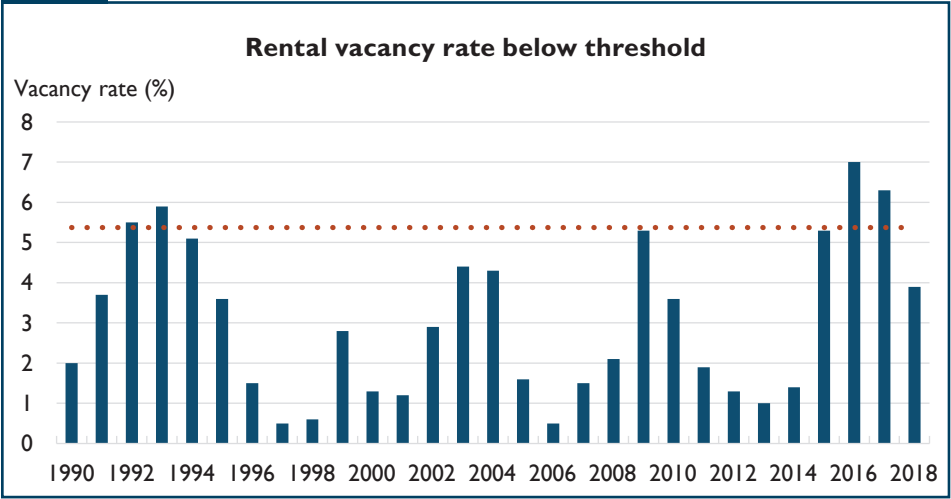
Note: The average estimate of overvaluation is the average gap between actual house prices and price levels estimated from a group of selected models. Baseline models include demand, supply, hybrid, and affordability models, each of which is estimated using four measures of house prices to generate sixteen unique estimates of overvaluation. The selection of models is conducted with a set of cointegration tests, and the selected models are estimated with Dynamic Ordinary Least Squares (DOLS). The maximum overvaluation gap is obtained from the model that has the largest gap between the actual price and the estimated price. The threshold is fixed at a critical value of 1.29 for a confidence level of 80%. Overvaluation is signaled when overvaluation estimates lie above the threshold.

Figure 3



Sources: Statistics Canada and CMHC

Figure 4



Source: CMHC

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. The Housing Market Assessment (HMA) analytical framework provides a comprehensive and integrated view that relies on a combination of signals from several indicators to detect imbalances in housing markets.

Specifically, the framework considers four main factors that may provide an early indication of vulnerability in the housing market: (1) overheating when demand outpaces supply in the existing home market; (2) sustained acceleration in house prices meaning that the rate of increase in prices is itself increasing; (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 the intensity (magnitude) and the persistence of signals. Generally, a situation in which we detect few signals with low intensity or lack of persistence is associated with a low degree of vulnerability. Conversely, as the number, intensity, and/or persistence of the signals increases, so does the evidence of imbalances in the housing market.

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 vulnerability. The framework also takes into account recent developments in both resale and residential construction markets.

The framework was developed on the basis of its ability to detect vulnerable 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 vulnerabilities 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 in the resale market. The sales-to-new listings ratio is used as an indicator to assess possible overheating conditions. To identify signs of overheating, 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 on the existing home market may lead to acceleration in house prices for existing and new homes.

Acceleration in House Prices

House price acceleration occurs when the growth rate in house prices continuously increases. Acceleration in house prices over an extended period would

lead prices to unsustainable levels, hence increasing housing market vulnerability. To assess acceleration in house prices, the HMA framework uses a statistical test* that was developed to identify periods of accelerating growth in 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—based on economic theory—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 signs of overbuilding in the housing market, the HMA framework uses two indicators that relate to the supply of readily available housing units: the rental apartment vacancy rate, and the inventory of completed and unsold housing units per 10,000 population. The HMA framework compares the current levels and recent trends in these indicators with thresholds.

Note 1: Colour codes indicate the degree of market vulnerability. Overheating and price acceleration are each assessed with a single indicator. Colour scales for these factors vary between green and yellow only. Overvaluation and overbuilding are assessed with multiple indicators. Their colour scales, as well as the colour scale for the overall assessment, change among green, yellow and red to reflect different degrees of imbalances.

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: 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 showing vulnerability 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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