

# HOUSING MARKET ASSESSMENT

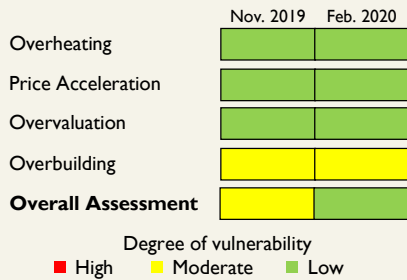
Calgary CMA

Date Released: First Quarter 2020



## Highlights

### Results Overview Calgary CMA



- Overall, a low degree of vulnerability was detected in Calgary's housing market in the third quarter of 2019, lowered from the previous assessment<sup>1</sup>.
- Moderate evidence of overbuilding continued to be signaled as new home inventories remained elevated.
- Buyers' market conditions have kept downwards pressure on home prices, resulting in low evidence of overheating and price acceleration.
- Low evidence of overvaluation remained as home prices are in line with current market fundamentals.

## HMA Overview<sup>2</sup>

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 housing market fundamentals<sup>3</sup>. 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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<sup>1</sup> Results are based on data as of the end of September 2019 (the annual rental apartment vacancy rates are from October 2019) and local market intelligence up to the end of December 2019.

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

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

## In Detail

### Overheating

The HMA framework continued to detect low evidence of overheating in Calgary as the seasonally adjusted sales-to-new listings (SNL) ratio remained below the 85% threshold for overheating. Adjusting for seasonality, resale transactions increased 3.8% in the third quarter of 2019 compared to the previous quarter while new listings rose at a slightly slower pace (3.1%). This caused the seasonally adjusted SNL ratio to edge higher to 55.4%. While the resale market has been operating below historical levels of activity, market conditions are now firmer than in previous quarters, setting a path towards a more balanced state.

### Price Acceleration

Persistent buyer's market conditions have limited the growth in average MLS® prices, leading to low evidence of price acceleration in the Calgary CMA. In the third quarter of 2019, the average MLS® price was \$440,659, a 4.3% decrease from the same quarter in 2018.



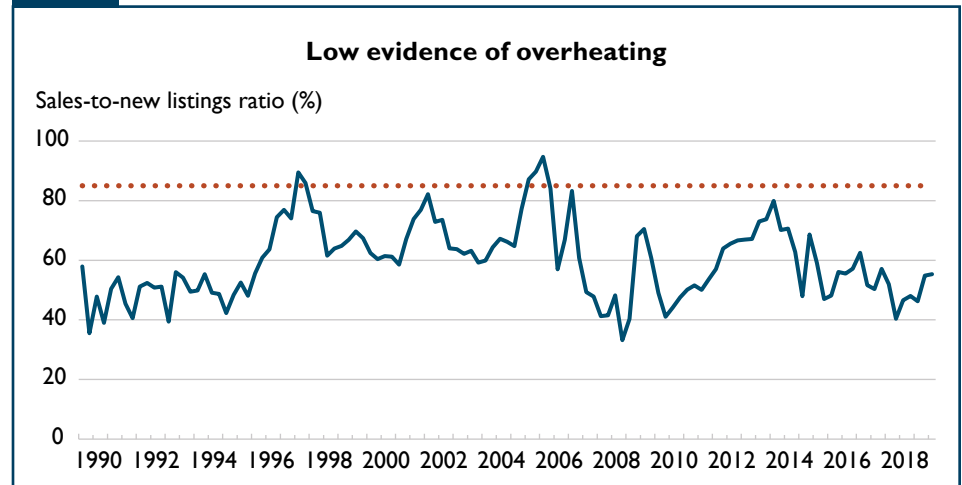
**Eric Bond**  
Senior Specialist  
Market Analysis

*"The Calgary market is now assessed as having a low degree of overall vulnerability; however, moderate evidence of overbuilding continued to be signaled due to elevated inventories of new homes."*

Compositionally, all housing types have felt downwards pressure in average prices. The CREA Benchmark Price for single-family homes decreased 2.7% in the third quarter of 2019

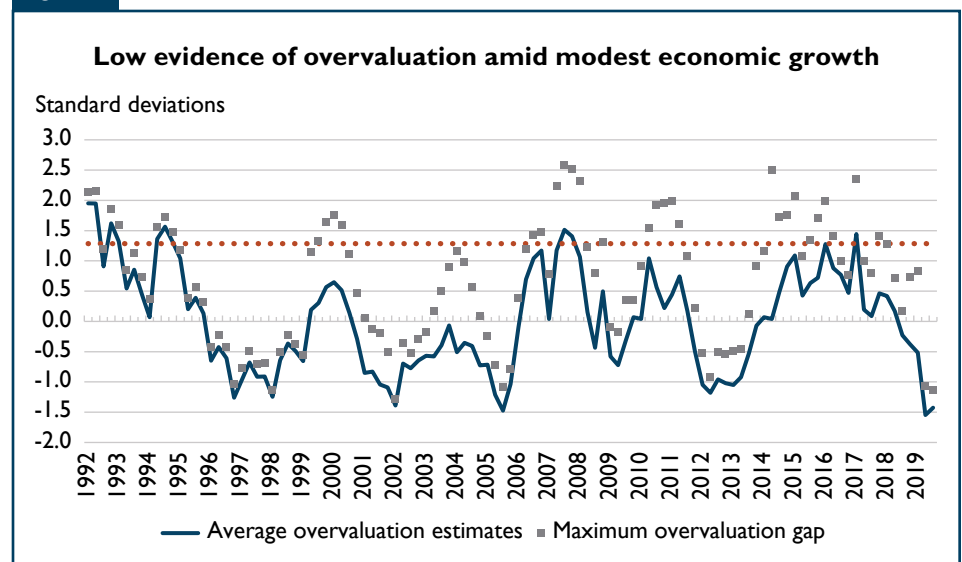
compared to the same quarter a year earlier. Over the same time period, benchmark prices for row and apartment units decreased 3.8% and 3.0% respectively.

Figure 1



Sources: CREA and calculations (threshold) by CMHC  
Last data point: 2019Q3

Figure 2



Sources: CREA, Statistics Canada, Teranet and National Bank of Canada, and calculations by CMHC  
Note: The average estimate of overvaluation is the average gap between actual house prices and their fundamental level estimated from a group of selected models. These include demand, supply, hybrid, and affordability models. There are five models in total, each of which is estimated using four measures of house prices to generate twenty unique estimates of overvaluation. The selection of models is conducted with a set of cointegration tests, and the selected models are estimated with Dynamic Seemingly Unrelated Regression (DSUR). 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 1.285 for a confidence level of 90%. Overvaluation is signaled when overvaluation estimates lie above the threshold.

## Overvaluation

There continued to be low evidence of overvaluation in Calgary in the third quarter of 2019 as economic fundamentals are in line with current house prices. In the labour market, while the unemployment rate continued moving lower to 7.1% in the third quarter of 2019, real personal disposable income gave up some of the gains from earlier in the year and slid 3.0% between the second and third quarters of 2019. Additionally, slow population growth among first time homebuyers, or individuals aged 25 to 34, continued to limit housing demand. This cohort has had declining growth year-over-year since the third quarter of 2017, which has contributed to some of the softening in housing demand.

## Overbuilding

Moderate evidence of overbuilding continued to be detected as the inventory of completed and unsold units per 10,000 population moved higher. Total inventories, at 2,077 units, were essentially unchanged in the third quarter of 2019 from the same quarter last year. Increases in both the number of absorbed units and the number of newly completed units contributed to keeping inventories steady.

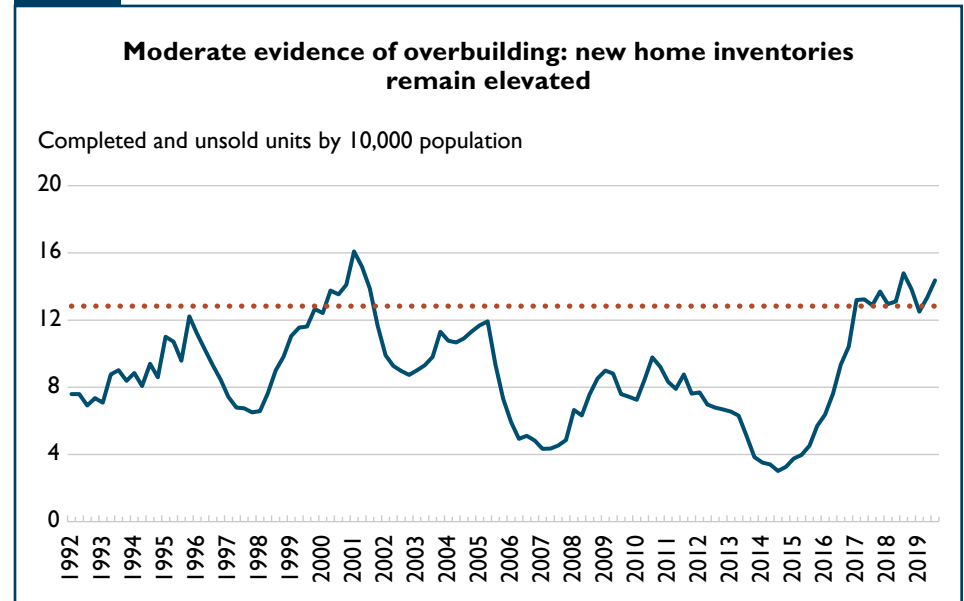
At 738 units in the third quarter of 2019, the number of condominium apartment units in inventory, which has been slowly increasing over the course of 2019, remained 300 units below the level in the same period in 2018. Meanwhile, inventories of more expensive home types, such as single-detached, semi-detached, and row houses, now make up a greater share (65%) of the total. New homes could face additional absorption challenges

going forwards due to increased competition from homes with lower average prices in the resale market.

In the rental market, the vacancy rate, at 3.9% in October 2019, was both unchanged compared with a

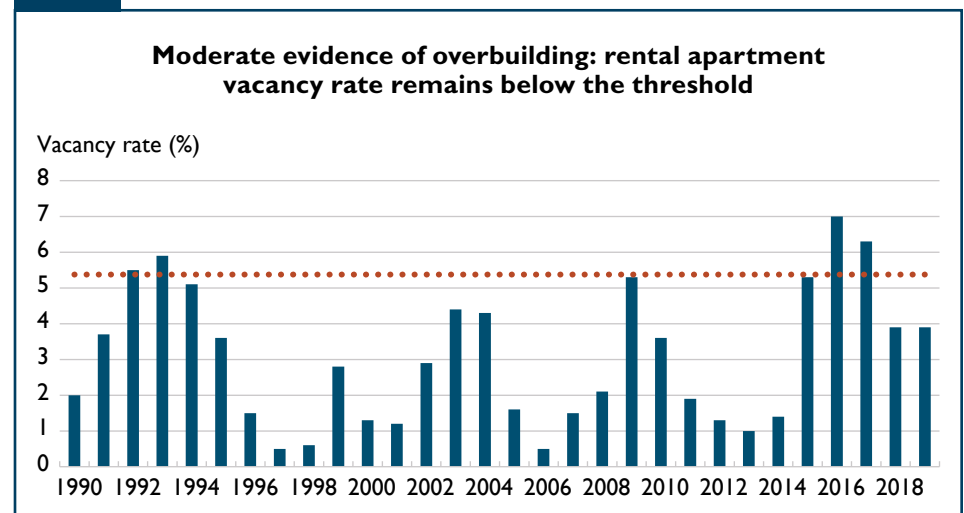
year earlier and below the threshold for overbuilding. This stability has supported an increase in new rental construction, with 2,215 purpose-built rental apartments under construction as of the third quarter of 2019.

Figure 3



Sources: Statistics Canada and CMHC  
Last data point: 2019Q3

Figure 4



Source: CMHC  
Last data point: 2019

## 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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