

# HOUSING MARKET ASSESSMENT

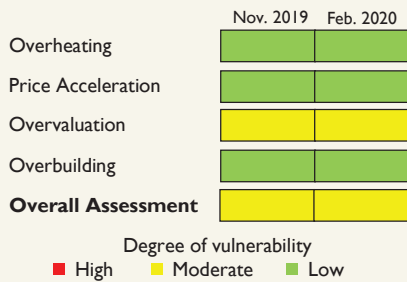
Vancouver CMA

Date Released: First Quarter 2020



## Highlights

### Results Overview Vancouver CMA



- CMHC's Housing Market Assessment (HMA) framework detects a moderate degree of vulnerability<sup>1</sup> for the Vancouver Census Metropolitan Area (CMA) housing market.
- CMHC's analytical framework maintained its ratings for overheating, price acceleration, overvaluation, and overbuilding from the previous quarter.
- The fundamental house price declined on reduced buying power for consumers, and this was reflected in the observed average house price data. As such, the overvaluation gap was small and below the threshold in the third quarter of 2019.
- Inventories of homes have risen recently, but remain below threshold. Similarly, as apartment vacancy rates remain low, there continues to be low evidence of overbuilding.

## 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

### Low Evidence of Overheating

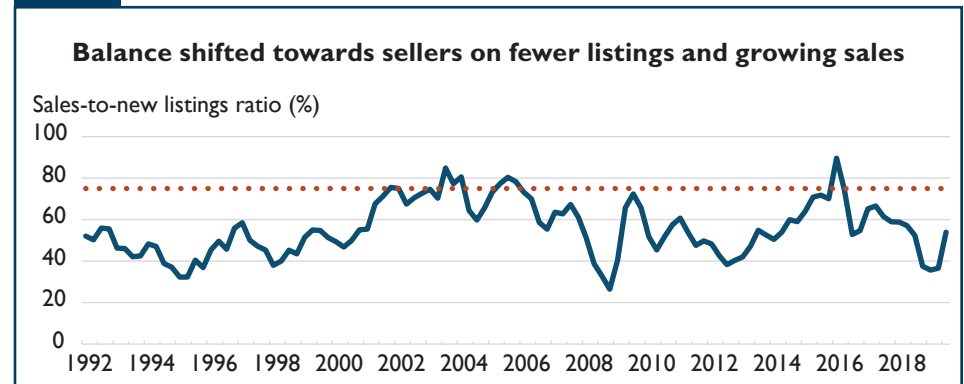
The HMA framework indicated low evidence of overheating for the Vancouver CMA in the third quarter of 2019. New listings tapered down throughout 2019 while sales rebounded from a recent low in the early stages of 2019, meaning fewer units were available for a growing number of buyers. As a result, sales-to-new-listings ratio (SNLR, a measure of balance between demand and supply) trended upward, but remained below the 75% threshold from overheating (Figure 1).

Table 1 shows the sales-to-available ratio<sup>4</sup> for single-detached homes and condominiums (both townhouses and apartments) across different municipalities in the Vancouver CMA at the end of the fourth quarters of 2019 and 2018. Across the board, market balance shifted to sellers since the fourth quarter of 2018. A smaller

share of properties turned over in more expensive submarkets (i.e. West Vancouver single-detached), while

more affordable markets such as the Port Moody condo market saw 1 in 3 units sold, making it a sellers market.

Figure 1



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

Table 1: Sales-to-Available Ratio

	Single-Detached		Condo (Attached + Apartment)	
	End Q4 2019	End Q4 2018	End Q4 2019	End Q4 2018
Burnaby	19%	8%	26%	14%
Coquitlam	20%	9%	30%	16%
Delta	19%	12%	18%	15%
New Westminster	19%	12%	29%	17%
North Vancouver	23%	12%	29%	19%
Port Coquitlam	23%	13%	33%	23%
Port Moody	14%	11%	34%	20%
Richmond	11%	6%	18%	13%
M Ridge P Meadows	22%	16%	24%	19%
Vancouver DT	-	-	22%	13%
Vancouver East	18%	9%	30%	20%
Vancouver West	10%	8%	20%	16%
West Vancouver	9%	5%	11%	9%
Langley	24%	14%	27%	21%
Surrey	20%	12%	26%	17%
S. Surrey / White Rock	13%	9%	20%	14%
Vancouver CMA	17%	10%	24%	16%

Source: SnapStats (Based on Real Estate Board of Greater Vancouver and Fraser Valley Real Estate Board data), CMHC calculations  
A balanced market is between 10 and 18%.



**Braden T. Batch**  
Senior Analyst  
Market Analysis

*"Vancouver's housing market is assessed as being moderately vulnerable. Overvaluation was detected in recent quarters and we remain cautious of imbalances in the market. The most recently assessed data shows that fundamental house prices declined on weaker consumer purchasing power, and indeed inflation adjusted house prices reflected the fundamental changes in the market, indicating that imbalances have diminished."*

<sup>4</sup> The Sales-to-Available ratio is another measure of market balance and can be thought of as a scaled version of the Sales-to-Active Listings ratio. It is calculated as: Sales/(Active Listings + Sales). The Sales-to-Available ratio is the percentage of homes offered for sale in a given month that were sold (e.g. A 50% Sales-to-Available ratio means half of the homes offered for sale in a given month were sold in that month). The Sales-to-Available ratio, unlike the Sales-to-Active Listings ratio, is bounded between 0 and 100%.

## Low Evidence of Price Acceleration

Price acceleration was not detected in the most recent quarter. The MLS® HPI composite benchmark price (for all home types combined) in areas under the Fraser Valley Real Estate Board (FVREB) decreased 3% year-over-year, while the Real Estate Board of Greater Vancouver (REBGV) area saw the benchmark price decline 5% year-over-year in the 4<sup>th</sup> quarter of 2019. The composite index for single detached and apartment prices for both board areas have trended downward since the second quarter of 2018.

## Moderate Evidence of Overvaluation

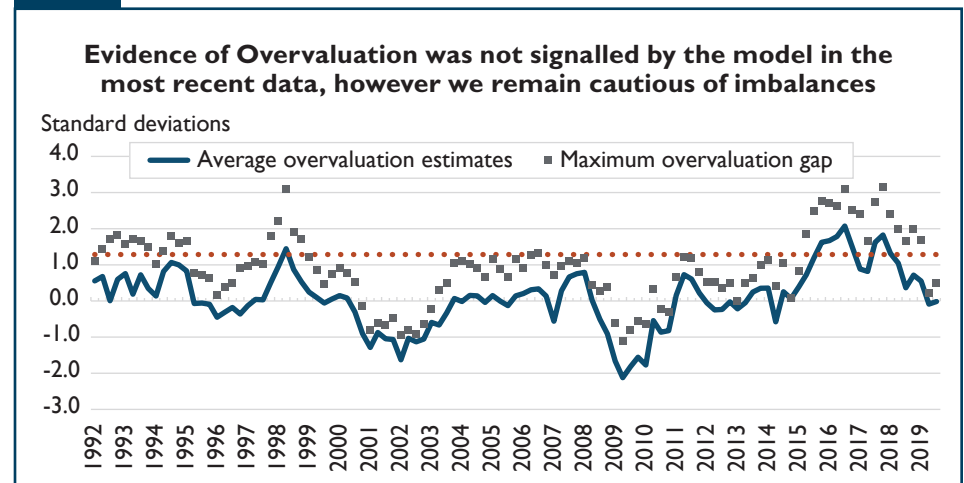
The HMA framework maintained an overall evaluation of a moderate vulnerability for the Vancouver CMA. Consumers faced reduced buying power in the third quarter via a drop in disposable incomes and higher interest rates in real terms. As such, Metro Vancouver home prices declined in real terms. There was a small gap between fundamentals and prices, but it was well below the threshold for overvaluation. A rating of moderate evidence was maintained since the threshold was breached at least twice in the year preceding the third quarter of 2019.

Figure 2 shows the standard deviation of price gaps that exist between our framework's estimated price levels and the actual values of an array of price measures. If the average standard deviation of models is above the threshold of 1.285, then there is strong evidence of overvaluation.

## Low Evidence of Overbuilding

The HMA framework continued to detect low evidence of overbuilding in Metro Vancouver's housing market. The inventory of multi unit dwellings is rising in the Vancouver CMA.

Figure 2

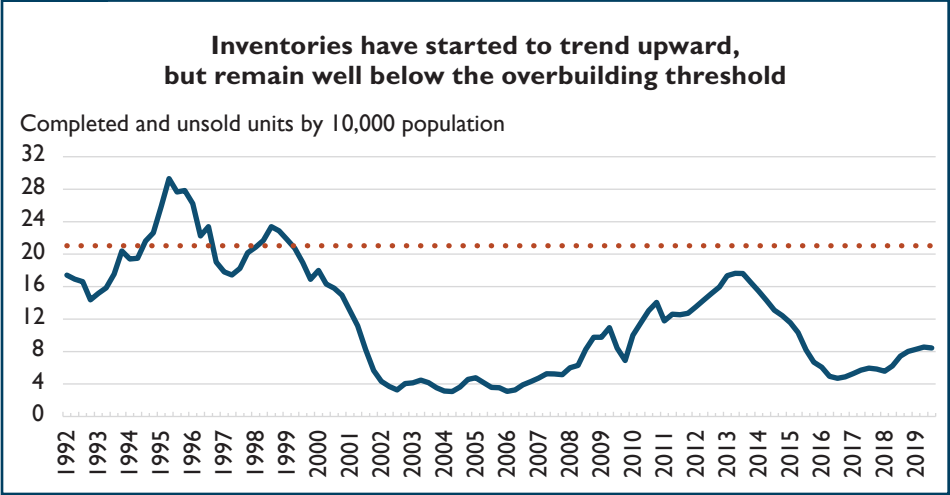


Sources: CREA, Statistics Canada, Teranet and National Bank of Canada, and calculations by CMHC

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 signalled when overvaluation estimates lie above the threshold.

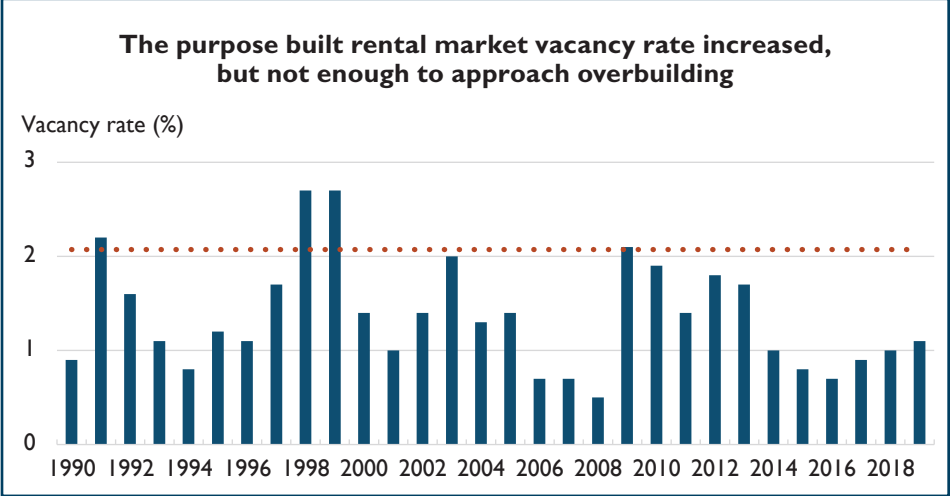
After hovering around 400 units between mid-2016 and mid-2018, completed but unsold multi-family dwellings were over 1,000 units by the end of 2019. Single and semi-detached units, however, trended downward to the end of 2019, and were likewise around 1,000 units. Overall, the completed and unsold stock is low relative to the local population in the Vancouver CMA (Figure 3). The purpose-built rental apartment vacancy rate remains well below the threshold for the detection of overbuilding (Figure 4).

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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