#### HOUSING MARKET INFORMATION

# HOUSING MARKET ASSESSMENT

Vancouver CMA

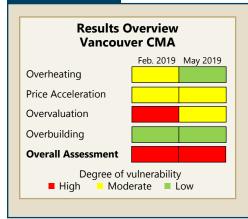
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# **Highlights**



- CMHC's Housing Market Assessment (HMA) framework detects a high degree of vulnerability<sup>I</sup> for the Vancouver Census Metropolitan Area (CMA) housing market.
- CMHC's analytical framework now indicates an easing of overheating and overvaluation conditions in the Vancouver CMA, while the ratings for price acceleration and overbuilding are maintained. The slower pace of activity on the resale market has resulted in overheating no longer being signaled, while strengthening fundamentals combined with lower home prices have eased the overvaluation indicator from high to moderate.
- As both unsold inventories of homes and 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 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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<sup>&</sup>lt;sup>1</sup> Results are based on data as of the end of December 2018 (the annual rental apartment vacancy rates are from October 2018) and local market intelligence up to the end of March 2019.

<sup>&</sup>lt;sup>2</sup> A detailed description of the framework is available in the appendix of the National edition.

<sup>&</sup>lt;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

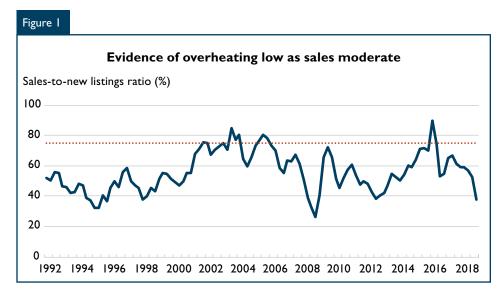
The Vancouver CMA housing market's overheating indicator moved to low in the most recent quarter, as slowing sales and a rising number of homes for sale softened market conditions. In the fourth quarter of 2018, the overall sales-to-new-listings ratio (SNLR, a measure of balance between demand and supply) was below the 75% threshold designated for overheating (Figure 1).

Although the overall SNLR moved lower, conditions continue to vary by market location and type. Table I shows the sales-to-available ratio4 for single-detached homes and condominiums (both townhouses and apartments) across different municipalities in the Vancouver CMA at the end of the first quarters of 2019 and 2018. The market slowed significantly over the past four quarters, with many segments that saw strong sellers' conditions a year ago, particularly for apartments and townhomes, now seeing balanced or buyers' market conditions.



Eric Bond Senior Specialist Market Analysis

"Metro Vancouver's housing market remains highly vulnerable. While home price growth over the past few years significantly outpaced local income growth, strengthening fundamentals combined with lower home prices eased CMHC's overvaluation indicator from high to moderate in the most recent quarter."



Sources: CREA and calculations (threshold) by CMHC

Table I: Sales-to-Available Ratio				
	Single-Detached		Condo (Attached + Apartment)	
	End Q1 2019	End Q1 2018	End Q1 2019	End QI 2018
Burnaby	8%	11%	15%	42%
Coquitlam	9%	18%	18%	48%
Delta	14%	18%	13%	29%
New Westminster	9%	23%	18%	54%
North Vancouver	16%	18%	17%	46%
Port Coquitlam	10%	28%	18%	58%
Port Moody	7%	8%	24%	56%
Richmond	6%	10%	10%	28%
M Ridge P Meadows	13%	32%	22%	42%
Vancouver DT	-	_	12%	31%
Vancouver East	8%	11%	18%	43%
Vancouver West	9%	7%	15%	15%
West Vancouver	5%	5%	6%	16%
Langley	15%	28%	24%	48%
Surrey	16%	24%	20%	43%
S. Surrey / White Rock	9%	13%	17%	30%
Vancouver CMA	11%	16%	16%	36%

Sources: 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%.

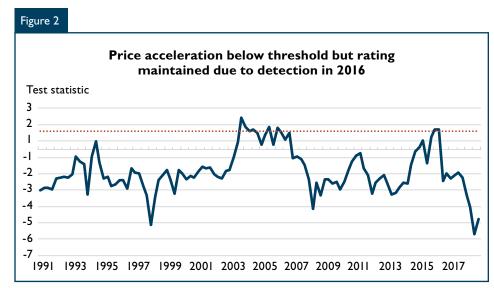
<sup>&</sup>lt;sup>4</sup> The Sales-to-Available ratio is another measure of market balance and can be thought of as a scaled version of the Sales-to-Active Listings ratio. It is calculated as: Sales/(Active Listings + Sales). The Sales-to-Available ratio is the percentage of homes offered for sale 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%.

Over the past two years, differences in market conditions between property types and locations have been primarily determined by price point, with lower priced properties, particularly multi-unit options, seeing tighter market conditions.5 However, resale market conditions softened throughout 2018 and into 2019 as home buyers adjusted their expectations in light of evolving financing conditions and housing policies from all levels of government; moreover, the moderation of market conditions has been broad-based and extends across all price ranges. While lower-priced segments continue to see firmer market conditions, a much greater availability of homes is observed at all price points compared with the first half of 2018.

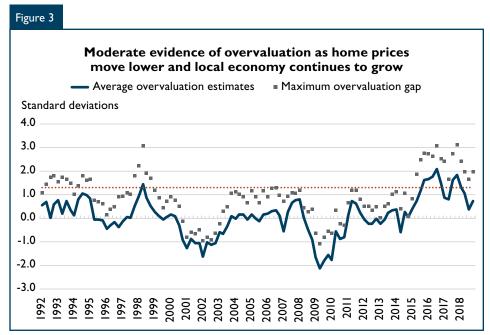
# Rating for Price Acceleration Maintained

The HMA framework's rating for price acceleration was maintained in the most recent quarter. Evidence of price acceleration was originally detected in the second quarter of 2016. The framework indicates price acceleration is present if a significant price increase occurs in at least one quarter in the previous three years (Figure 2). Rapid short-term price gains can attract investors and promote speculative activity that pushes prices further upwards.

Vancouver CMA home prices have declined in most areas and market segments since the market high of June 2018. The MLS® HPI composite benchmark price (for all home types combined) in areas under the Fraser Valley Real Estate Board (FVREB) decreased 7.2% between June 2018 and February 2019, while the Real Estate Board of Greater Vancouver (REBGV) area saw the



Sources: CREA and calculations by CMHC



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.

<sup>&</sup>lt;sup>5</sup> See discussion in the Q3 2018 edition of the Housing Market Assessment – Vancouver CMA report.

benchmark price decline 8.0% during the same period. Declining prices for detached properties in particular are due to high inventories that have accumulated due to sustained declining sales volumes.

### **Moderate Evidence** of Overvaluation

The HMA framework detected moderate evidence of overvaluation in Metro Vancouver's housing market in the fourth quarter of 2018. While current price levels are higher than the estimated values from price models based on demand and supply fundamental factors such as population, income, and financing costs, the degree of these imbalances has narrowed compared with previous quarters. Lower home prices and consistently strong local economic conditions contributed to the evidence of overvaluation changing from high to moderate in the current assessment.

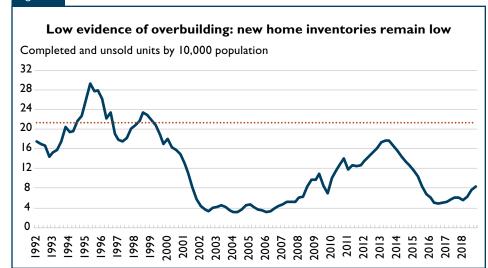
Figure 3 shows the standard deviation of price gaps that exist between our framework's estimated price levels and the actual values of an array of price measures. If the average standard deviation of models is above the threshold of 1.29, then there is strong evidence of overvaluation. In Q4 2018, moderate evidence of overvaluation was signalled due to the standard deviation of at least one model (maximum overvaluation gap) being above the threshold, while the average deviation for the models has been below the threshold for at least four quarters (Figure 3).

# Low Evidence of Overbuilding

The HMA framework continued to detect low evidence of overbuilding in Metro Vancouver's housing market. Despite record-breaking new home construction over the past three years, new home inventories remain low; however, after hovering around 400 units for the past two years, inventories for multi-family dwellings increased to 1,129 units in

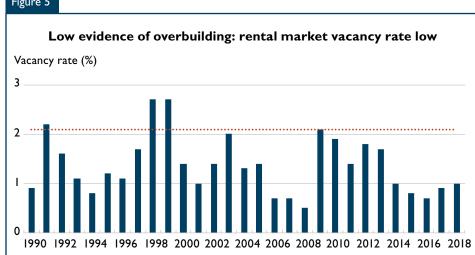
February 2019 as the softening resale market impacted sales of new units as well. In the single-detached segment, unsold inventory levels have trended up slightly over the past year to sit at 1,080 homes at the end of February 2019. Overall, the completed and unsold stock is low relative to the local population in the Vancouver CMA (Figure 4), while the purpose-built rental apartment vacancy rate remains well below the threshold for the detection of overbuilding (Figure 5).

Figure 4



Sources: Statistics Canada and CMHC Last data point: 2018Q4.

Figure 5



Source: CMHC Last data point: 2018.

#### 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 salesto-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 I:** 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.

<sup>\*</sup> 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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