

HOUSING MARKET ASSESSMENT

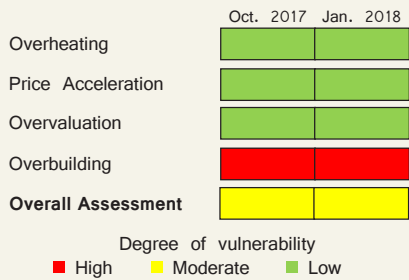
Calgary CMA

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Highlights

Results Overview Calgary CMA



- CMHC's HMA Framework detected a moderate degree of vulnerability in the overall assessment for Calgary¹.
- The evidence for overbuilding continues to remain high as the rental apartment vacancy rate and the number of completed and unsold units have surpassed their respective critical thresholds.
- There was low evidence of overheating, price acceleration and overvaluation.

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 degrees of vulnerabilities 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 resolve 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 degrees of market vulnerability. The HMA is a comprehensive framework that considers the intensity of signals of imbalances (that is, how far the indicator is from its historical average), and the persistence over time. Generally, low intensity and persistence are associated with potentially low degree of vulnerability. As the number of intense and persistent signals increases, the associated degree of vulnerability increases.

In Detail

Overheating

The evidence of overheating continued to remain low in Calgary. The seasonally adjusted sales-to-new listings ratio was 50.4% in the third quarter compared to 51.6% in the second quarter. This was well below the critical threshold for overheating. While housing demand has improved from a year earlier, there has also been an ample supply of housing. In some areas, supply has even moved well past demand, such as in the apartment segment. The sales-to-new listings ratio for apartments in the City of Calgary was 37.7% in the third quarter compared to 55.7% for single-detached units, 53.2% for semi-detached units, and 47.1% for row units. Prospective apartment buyers have had a wide selection of units to

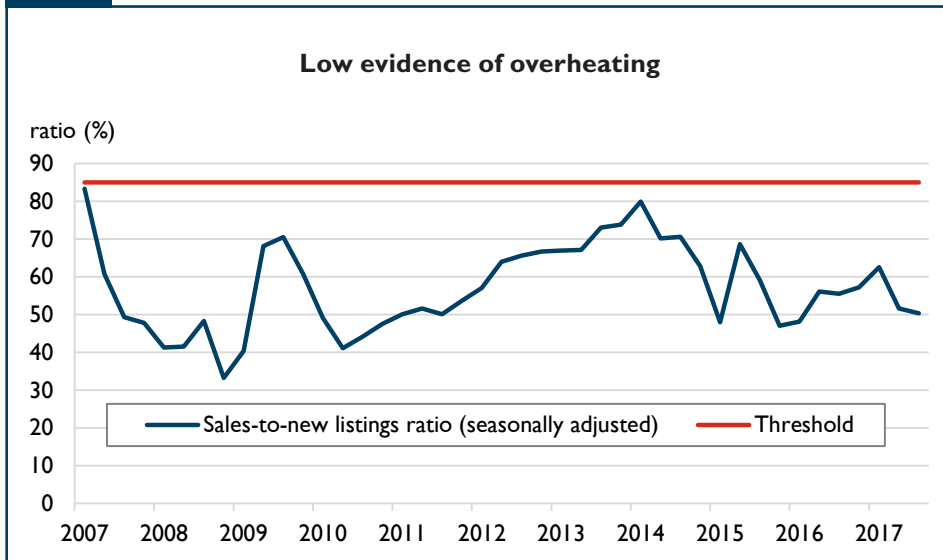
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¹ Results are based on data as of the end of September 2017 and local market intelligence up to end of December 2017. CMHC continuously monitors market developments and will issue HMA updates on a quarterly basis.

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

Figure 1



Source: CREA, calculations (threshold) by CMHC
Last data point: 2017Q3

choose from, and are not under a lot of pressure to make a quick purchase decision.

Price Acceleration

The evidence of price acceleration in the third quarter of 2017 continued to remain low. The seasonally adjusted Teranet-National Bank House Price Index™ in the third quarter increased slightly from the previous quarter and was up 2.3% from the same period a year earlier. The year-over-year gain was also

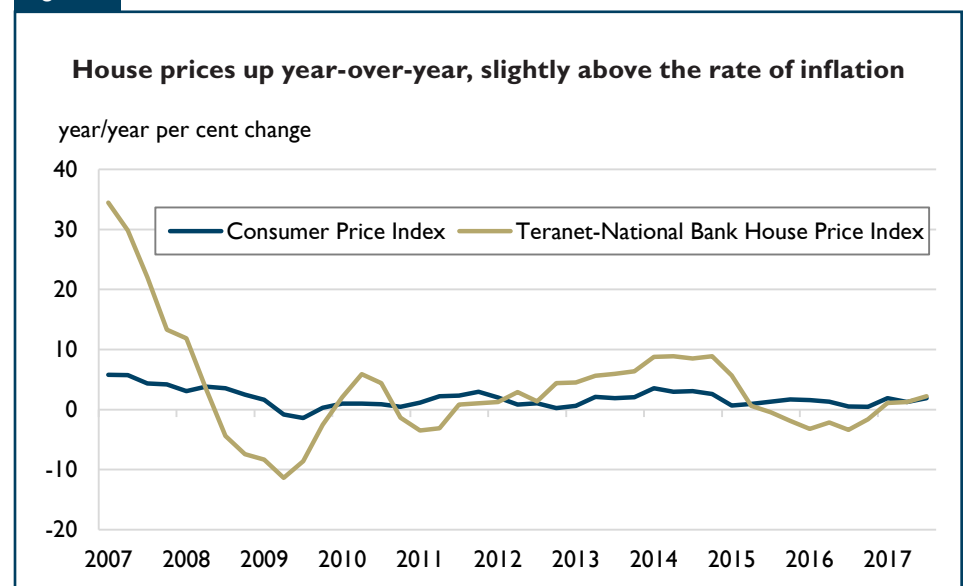
slightly above the rate of inflation. House prices in Calgary have started to stabilize and have posted modest gains throughout 2017, however some segments of the market have been stronger compared to others. In the third quarter, the MLS® Home Price Index Benchmark Price for single-family units was \$488,400, up 1.4% from the same quarter a year earlier.

On the other hand, the Benchmark Price for apartment units in the third quarter was \$263,200, down 2.8% year-over-year. The apartment segment has been weaker than the single-detached segment of the market, partly due to the elevated supply of new apartment units on the market.

Overvaluation

CMHC's HMA Framework detected low evidence of overvaluation in Calgary's housing market in the third quarter of 2017 as economic and demographic fundamentals have been closely in line with house prices. Nearly 30,000 jobs were added in the first nine-months of 2017, representing a rise of 3.7% in employment from the corresponding period a year earlier. Growth in employment has helped improve labour market conditions. The seasonally adjusted unemployment rate declined, reaching 8.5% in the third quarter of 2017 compared to 8.9% in the previous quarter and 9.3% in the first quarter of 2017. Another factor that has contributed to housing demand

Figure 2



Source: Teranet and National Bank, Statistics Canada, CMHC calculations
Last data point: 2017Q3



Richard Cho
Principal, Market
Analysis (Calgary)

"House prices in the third quarter of 2017 were relatively stable compared to the previous quarter, with year-over-year gains slightly above the rate of inflation. Growth in employment and in the young adult population have helped support housing demand and price levels in Calgary."

has been growth in the young adult population. In the third quarter, the population aged between 25 and 34 increased 1.2% from the same period a year earlier. While the year-over-year gains in this cohort have been modest over the last several quarters, this age group continued to be an important source of new household formation.

Overbuilding

CMHC's HMA Framework detected high evidence of overbuilding in Calgary. The rental apartment vacancy rate and the number of completed and unsold units in inventory have remained above their respective critical thresholds. In October, the rental apartment vacancy rate declined to 6.3% in 2017 from 7.0% in 2016 as rental demand in Calgary grew and outpaced the rise in supply. Yet despite the resulting decline in the October 2017 vacancy rate, this rate still remained above its critical threshold of 5.4%.

The number of completed and unsold units in inventory reached 1,782 in September 2017, up 39.7% from the same month a year earlier and above the 2007-2016 monthly average of 831 units. The imbalances were largely felt in the multiple segment of the market, where a majority of the new home inventory is found. The number of completed and unsold single-detached units were closer in line with historical averages.

Figure 3

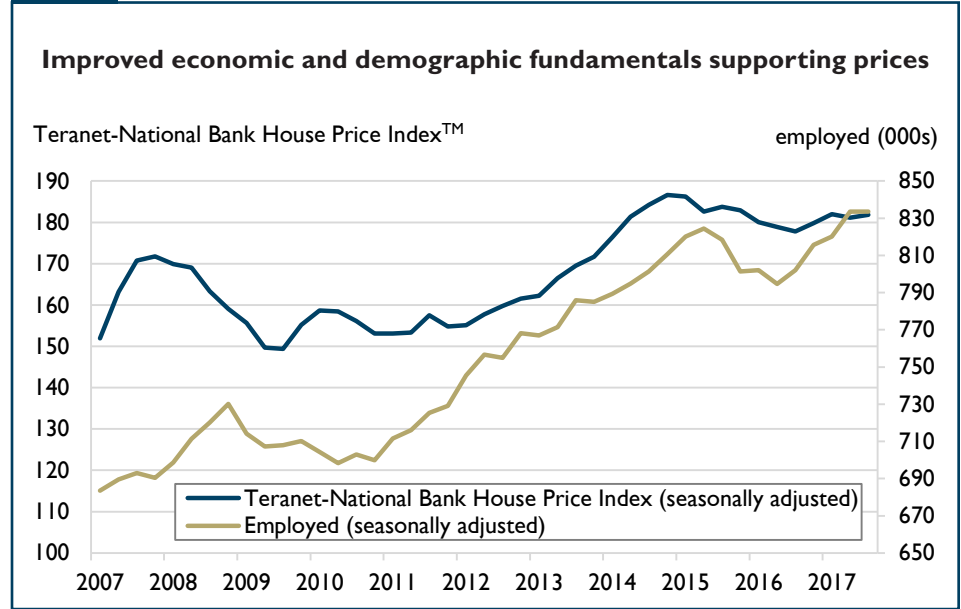
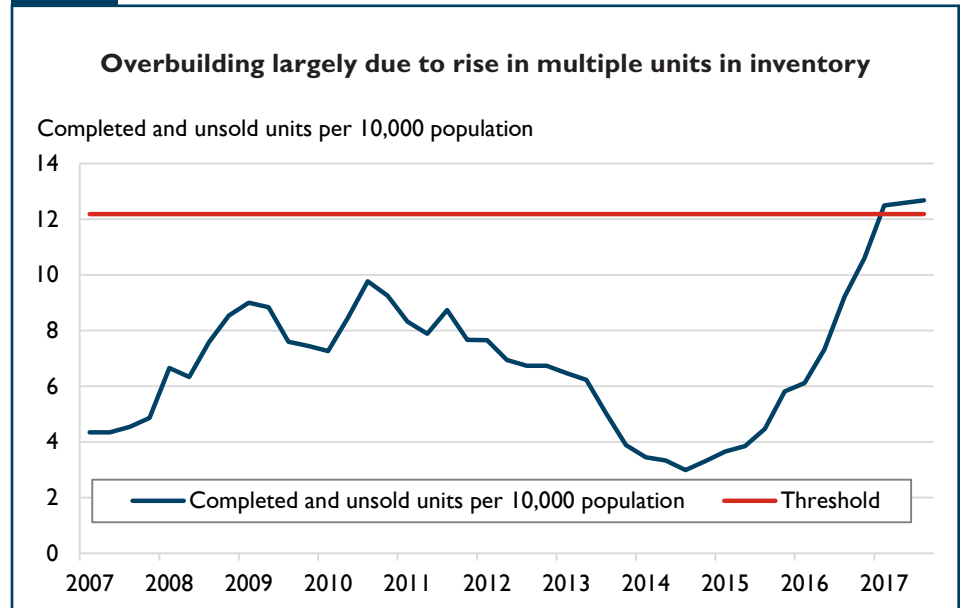


Figure 4



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 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); (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 incidence of signs of vulnerability, 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 a low degree of vulnerability. Conversely, as the intensity, number, 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 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. The sales-to-new listings ratio is used as an indicator to assess possible overheating conditions in the existing home market. 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. 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 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 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 degree of market vulnerability. The HMA reflects a comprehensive framework that not only tests for the presence or incidence of signals of imbalances (that is, how far the indicator is from its historical average), but also considers the intensity and the persistence of these signals over time. Generally, low intensity and persistence are associated with a lower vulnerability. As the number of persistent signals increases, the evidence of an imbalance 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 that can identify imbalances. 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 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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