

# HOUSING MARKET INSIGHT

## Kitchener-Cambridge-Waterloo CMA



CANADA MORTGAGE AND HOUSING CORPORATION

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*"Our evidence indicates that increasing single-family home prices in the GTA are motivating buyers to purchase more affordable homes in nearby centres like Hamilton, Barrie and Guelph. In turn, this purchasing behaviour is driving up house prices in these markets."*



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Principal, Market Analysis

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## GTA House Price Spillovers to Surrounding Centres

### Highlights

- Recent GTA house prices have increased disproportionately compared to other CMAs.
- Increasing single-family home prices in the GTA are motivating buyers to purchase more affordable homes in nearby CMAs, driving up prices in those centres.
- In particular, historical house price spillovers from the GTA were prevalent in Hamilton, Barrie, and Guelph.
- Recent house price spillovers appear to have been occurring a bit farther out, especially in St. Catharines-Niagara, driven by GTA low-rise home prices.

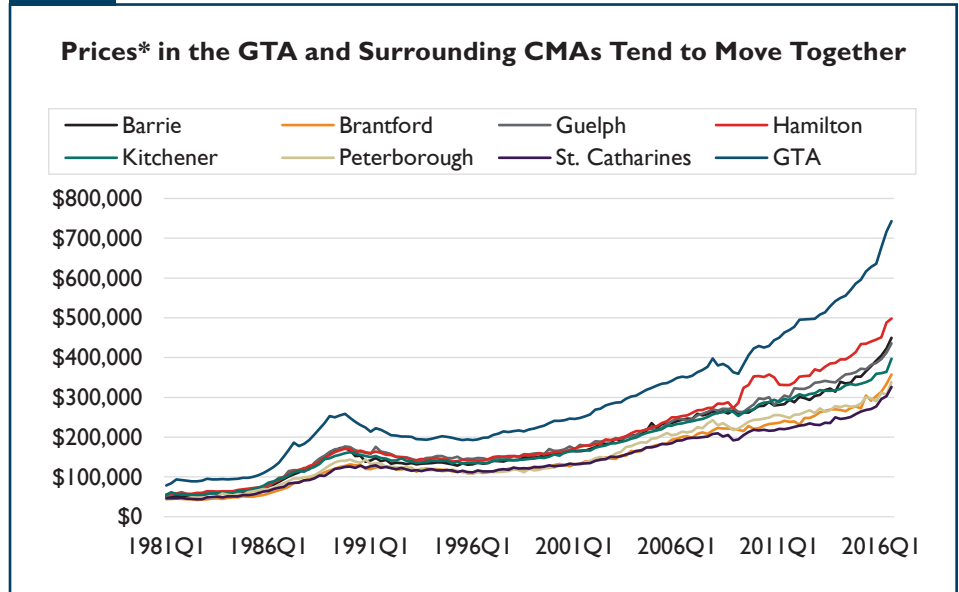
The Greater Toronto Area (GTA) MLS<sup>®</sup> average price in the third quarter of 2016 increased by 18 per cent compared to the same quarter in 2015. Market participants suggest that recent price increases are causing buyers to purchase more affordable properties in nearby Census Metropolitan Areas (CMAs), and that prices in these nearby CMAs would be pressured up as a result. This report examines whether increases in GTA house prices have historically spilled over into Ontario's other CMAs, especially those surrounding the GTA. We also provide the impact that a shock to GTA house prices might have on surrounding CMA house prices, in light of house price overvaluation in the GTA and house price spillovers from the GTA to surrounding CMAs.

## Recent GTA House Prices Have Increased Disproportionately Compared to other CMAs

Except for the clear but short decline in many centres in 2008, house prices have steadily increased in most Ontario CMAs over the past twenty years, with even higher growth rates in the last five years. Overall, this substantial increase was due mainly to favourable economic conditions, population growth and relatively low mortgage rates, which increased demand for housing and drove up prices. However more recently, moderate or elevated evidence of overvaluation was detected in Hamilton and the GTA by CMHC’s Housing Market Assessment framework, indicating that some of the price appreciation was not driven by fundamental factors.

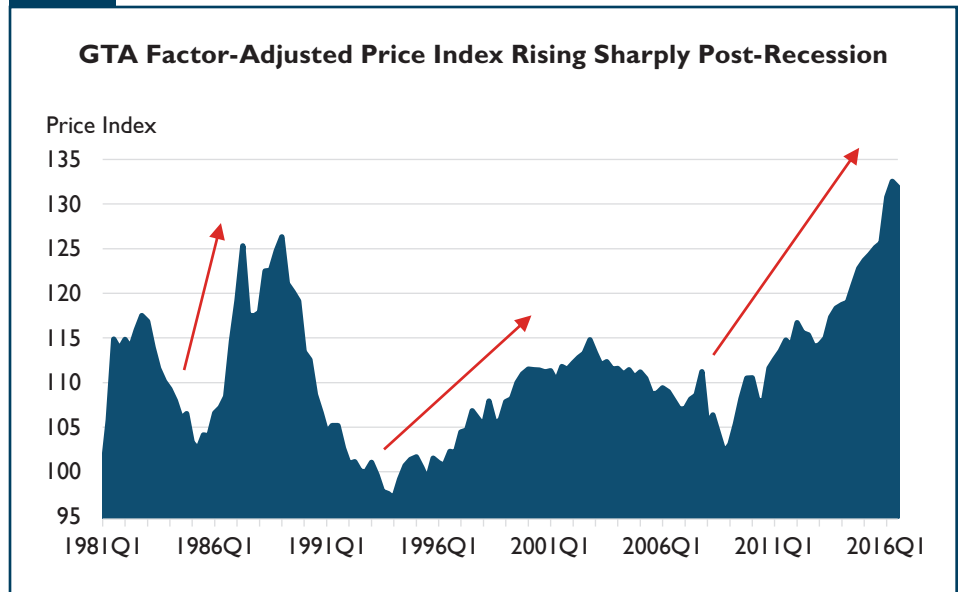
Indeed since the 2008-9 recession, the average GTA house price has been increasing at a faster rate and has also been increasing disproportionately compared to other Ontario CMAs. This trend is reflected in figure 2, which shows the ratio of the GTA average price to the GTA expected price based on the average price across Ontario CMAs. Since 2016-Q1, the GTA average price increase has exceeded by about 30 per cent the GTA expected price increase. The previous historical peak was 26 per cent in 1989-Q1. Recent house price growth in the GTA has therefore been at its highest level relative to Ontario CMAs.

Figure 1



Source: CMHC, based on CREA  
 \* Seasonally Adjusted Prices  
 Last data point 2016-Q3

Figure 2



Source: CMHC, based on CREA and Statistics Canada  
 Last data point 2016-Q3

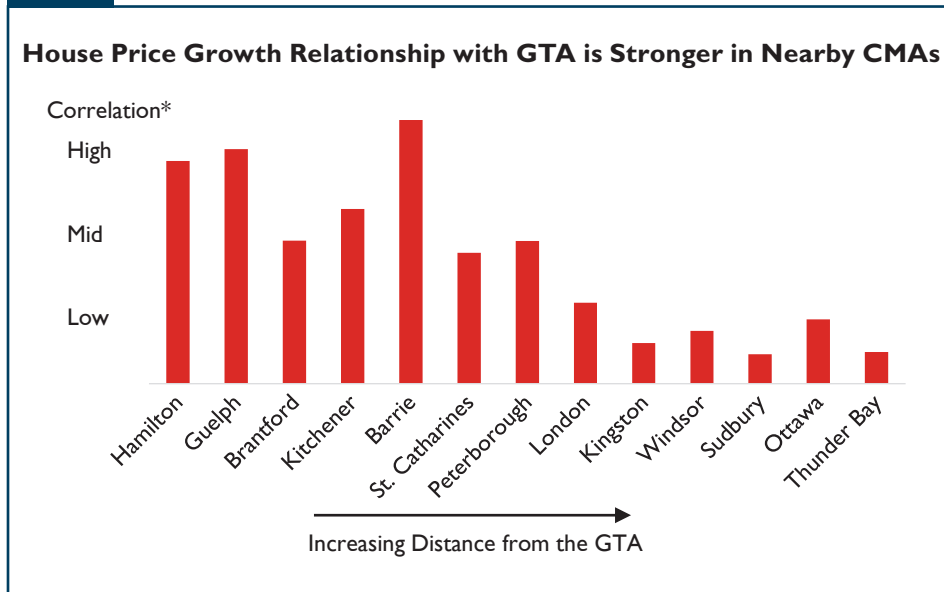
## Relationship with GTA House Price Changes Tighter for Hamilton, Guelph and Barrie

Over the past 35 years, house price growth in the GTA was tightly linked with house price growth in Hamilton, Guelph, Barrie and Kitchener-Waterloo-Cambridge (Kitchener). However, these relationships are not constant over time. In particular, while there have been stronger relationships between the GTA and Hamilton, Barrie, Guelph and Kitchener prior to the 2008-9 recession, all of these CMAs have weakened in the post-recession period (2010-16).

St. Catharines-Niagara (St. Catharines) has had a strong price growth relationship with the GTA in the post-recession period, even though it had not experienced it before. In general, GTA house price growth was more highly related to the price growth in CMAs that were within commuting distance of the GTA.<sup>2</sup>

Noteworthy is the moderate relationship between house price growth in the GTA and Brantford, which has a similar commute to the GTA compared to Barrie or Guelph. While this relationship was much weaker following the 2008-9 recession, it has strengthened considerably since 2015-Q1, and is making its way back to pre-recession highs as of 2016-Q3. Nevertheless, the weaker than expected link may be because Brantford is farther away not only from Toronto City, but also from other adjacent job centres in Newmarket and Waterloo, compared to Barrie and Guelph.

Figure 3



Source: CMHC, based on CREA and Statistics Canada

\* Factor and Seasonally Adjusted Year-over-Year Real Price Growth Correlation  
Last data point 2016-Q3

## Relationships with GTA House Price Changes are Driven by GTA Low-Rise Home Prices

We use the MLS® Home Price Index Benchmark price in the GTA to determine whether the price growth of a particular housing type in the GTA is correlated to the price growth of CMAs during the 2010-16 post-recession period. Overall, our evidence indicates that increasing single-family home prices in the GTA are motivating buyers to purchase more affordable homes in nearby CMAs, driving up prices in those centres, for the following reasons:

- Since the 2008-9 recession, stronger house price growth relationships with the GTA have been occurring farther out geographically, with larger effects in Barrie and St. Catharines than in Hamilton, Guelph or Kitchener.

- Low-rise home prices are driving these correlations, especially single-family home prices, which include single and semi-detached units.
- These results suggest that some potential buyers are unable or unwilling to purchase an apartment in the GTA, and are instead choosing to purchase a property in a nearby CMA when GTA low-rise home prices rise.
- Sudbury and Ottawa prices appear to be affected by GTA apartment prices, possibly because these two CMAs are relatively affordable and yet still offer high wage jobs.<sup>3</sup>

## GTA House Prices Have the Largest Spillover Effect on Hamilton

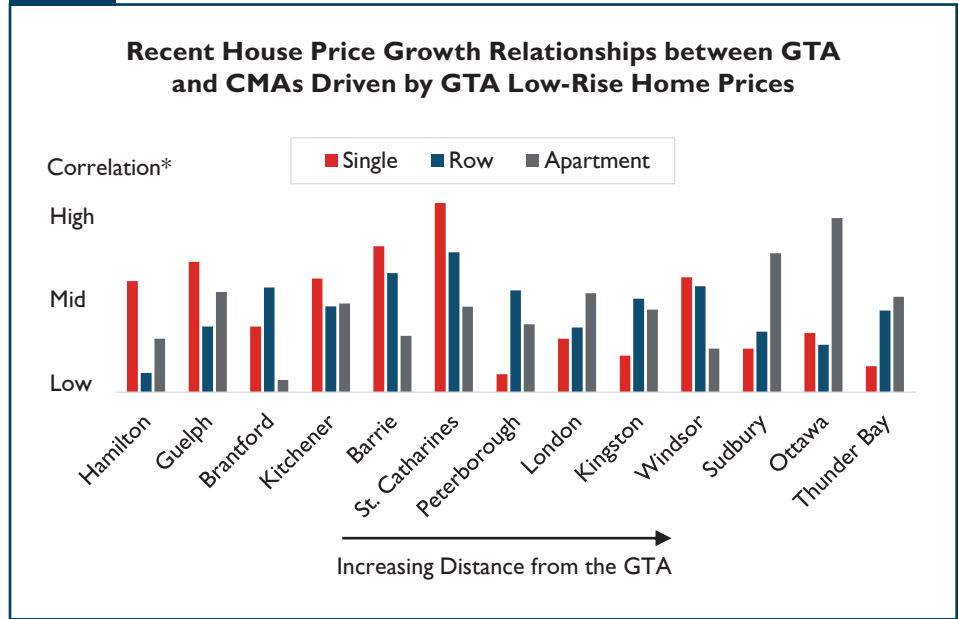
CMHC's Housing Market Assessment analytical framework detected strong evidence of overvaluation in the GTA in 2016-Q3, as the

growth in house prices persistently outpaced economic and demographic fundamentals. This imbalance can be eliminated through stronger fundamentals or weaker prices. It is therefore important to examine the impact that a shock in GTA prices might have on surrounding CMAs in light of the spillover effects documented in this report.

Our results show that house price spillovers are greatest for CMAs that are closer to the GTA. In particular, a one per cent house price shock in the GTA leads to a 1.4 per cent price change in Hamilton within one year. For example, if GTA house prices rise unexpectedly by 10 per cent in a particular quarter, then Hamilton house prices could rise by 14 per cent in response within one year. Conversely, an unexpected 10 per cent contraction in GTA prices could lead Hamilton prices to decline by 14 per cent within one year. After three years, the total impact of a one per cent house price shock in the GTA on Hamilton prices is 2.0 per cent. Guelph, Brantford, Kitchener, Barrie, and Peterborough all have impacts in the range of 1.7 to 1.9 per cent after three years, while St. Catharines has a slightly lower impact at 1.5 per cent. The remainder of the CMAs all have impacts that are lower. It is worth noting that the GTA experiences the strongest impact from a one per cent shock, at 2.3 per cent after three years, as prices spillover even within the GTA from more central to surrounding areas.

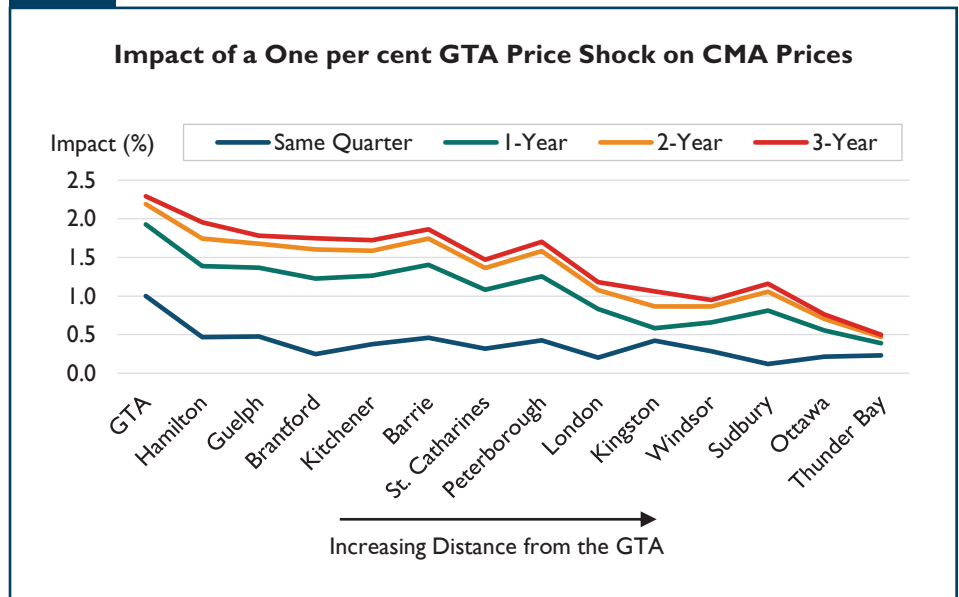
In the long-run (i.e. ten or more years), only Hamilton's house price increases have kept up with GTA price increases, such that the price of a home in Hamilton relative to the price of a home in GTA has remained fairly constant over time. For other CMAs, however, house price increases have not kept up with those in the GTA on average. Therefore,

Figure 4



Source: CMHC, based on CREA and Statistics Canada  
\* Factor and Seasonally Adjusted Year-over-Year Real Price Growth Correlation  
Last data point 2016-Q3

Figure 5



Source: CMHC, based on CREA and Statistics Canada  
Last data point 2016-Q3

the gaps between house prices in these CMAs and house prices in the GTA have been growing. It is important to note that this growing gap in prices was in the context of increasing GTA prices. If GTA prices

were to contract, price spillovers would lead to price contractions in nearby CMAs, such that the gaps between house prices in these CMAs and house prices in the GTA would shrink.

## ENDNOTES

- <sup>1</sup> MLS® is a registered trademark of the Canadian Real Estate Association.
- <sup>2</sup> According to the 2011 census, the CMAs with the largest proportion of their working population commuting to the GTA for work are Barrie (29 per cent), Hamilton (21 per cent), Guelph (12 per cent), Brantford (6 per cent), Kitchener (5 per cent) and St. Catharines (3 per cent).
- <sup>3</sup> On average between 1997 and 2016, average weekly earnings for all industries was \$886 in Ottawa, followed by \$798 in Toronto, \$782 in Guelph and Hamilton, and \$761 in Sudbury. This number was lower for the other 9 CMAs. The combination of high wage employment and affordable housing may be encouraging first-time homebuyers to relocate to these CMAs when apartment prices rise in the GTA.

## METHODOLOGY

### Real Price

The real price is the average MLS® price divided by the consumer price index for Canada from Statistics Canada (v41690973), using 2016 as the base year.

### Seasonal Adjustment

The seasonal variation in real prices is removed using the Eviews X12 procedure, which is publicly provided by the U.S. Census Bureau.

### Factor Adjustment

Prices in the various CMAs across the Ontario region are sometimes affected by the same underlying factors, such as interest rates, exchange rates, etc. The Bailey, Holly, Pesaran (2016) methodology is used to remove the macroeconomic effects that are common to price movements across CMAs in Ontario.

### Correlation

The correlation is the relationship between the price growths in two markets. This correlation is measured using the Pearson correlation coefficient. The correlation coefficient ranges from -100 per cent (perfect negative correlation) and +100 per cent (perfect correlation). Specifically, the quarterly year-over-year seasonal and factor adjusted real price growth of two markets are correlated.

### Impulse Response

An impulse response function traces the effect of a generalised one-time shock to the GTA average price on future values of the GTA and CMA average price. The Holly, Pesaran, and Yamagata (2011) methodology is followed for the analysis of the spatial and temporal diffusion of shocks in a dynamic system.

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