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House Prices: Is Québec in a Bubble?

Pierre Emmanuel Paradis, Economist and President, and Julien Mc Donald-Guimond, Economist
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For the past few weeks, real estate prices have been on everyone's lips, and for good reason. On April 10, the prestigious magazine The Economist published an article titled "House prices are going ballistic", citing an average real growth rate (i.e., excluding inflation) of 5% in prices across 27 countries, the highest recorded in over a decade. Of these countries, Canada has witnessed the highest rise since 2000, increasing 2.7 times over the period.[1] In Montréal, annual price increases ranging from 11% to 17% were recorded in the last four quarters of 2020 (versus 2019), followed by a 19% jump in the first quarter of 2021 (compared to the same quarter in 2020). Purchases are now being made following a 15-minute walk-through without even having the premises inspected by a recognized professional.[2] What is driving this dynamic, and should we be concerned?

Several factors are responsible for this trend. First, health restrictions put in place to counter the spread of COVID-19 have limited our ability to participate in social activities, thereby minimizing related expenses. As a result, our homes have taken on a greater role, serving as a safe, uncontaminated haven, a place to work or go to school, the only dining and entertainment option, and even a vacation destination. These same obligatory changes to our lifestyles and consumption patterns have also led to an increase in savings, allowing us to repay debts and put money aside. Many households then sought to improve their housing situation to reflect these new realities, some of which may remain even after the pandemic has been contained.

In addition, other economic realities present before the pandemic, such as low interest rates, low unemployment, and the pre-pandemic emergence of telework, were already contributing to a rapid growth in house prices.

In this context, this analysis presents our thoughts on two main questions:

1. Have Quebecers lost their minds? Are they buying homes at unreasonably high prices, potentially compromising their financial flexibility or their ability to save?

2. Will prices continue to rise or fall sharply in the coming months?

[1] *Global house prices. Our interactive guide to housing data across the world.* Economist.com
[2] F. Vailles, "Quand l'État doit-il agir?" *La Presse*, April 24, 2021.

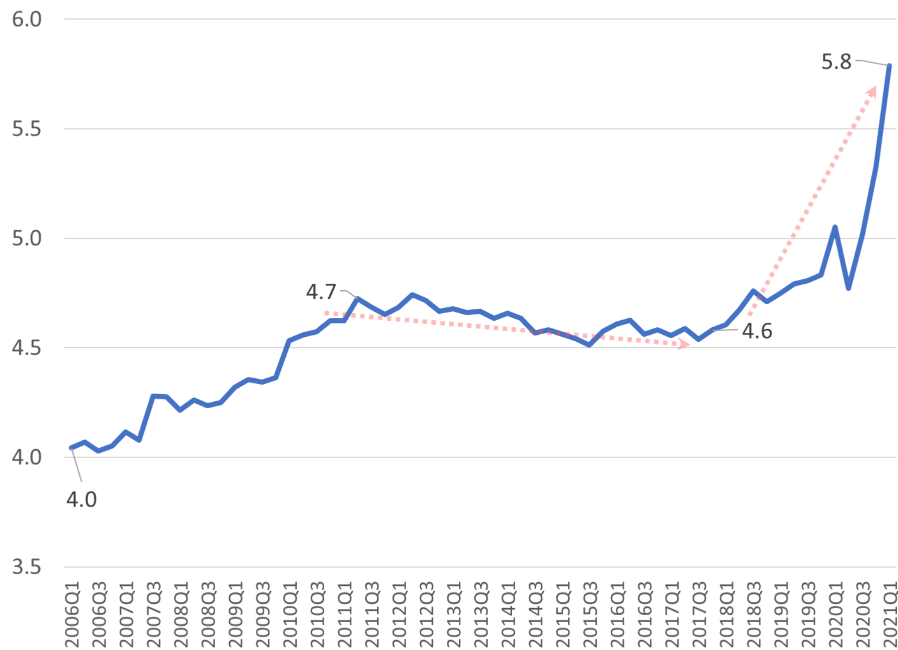
Question 1: Have Quebecers lost their minds?

Answer: At the end of the first quarter of 2021, Quebecers had not lost their minds … yet!

To analyze this, we extracted historical data on house prices from 2006 to 2021 (first quarter) and other macroeconomic variables, including mortgage interest rates and household disposable income. Using this data, we examined the evolution of house prices before calculating how much buyers could afford given the current economic environment.

First, house prices rose sharply over the course of 2020 and in early 2021, well beyond the growth rate of disposable income. While house prices in the Montréal metropolitan area represented about 4.6 times the disposable income of an average Québec household between 2010 and 2017, this ratio jumped to 5.8 in the first quarter of 2021 (Figure 1). Although this increase began around 2018, before the start of the pandemic, it has been much more substantial in the past year and more volatile.

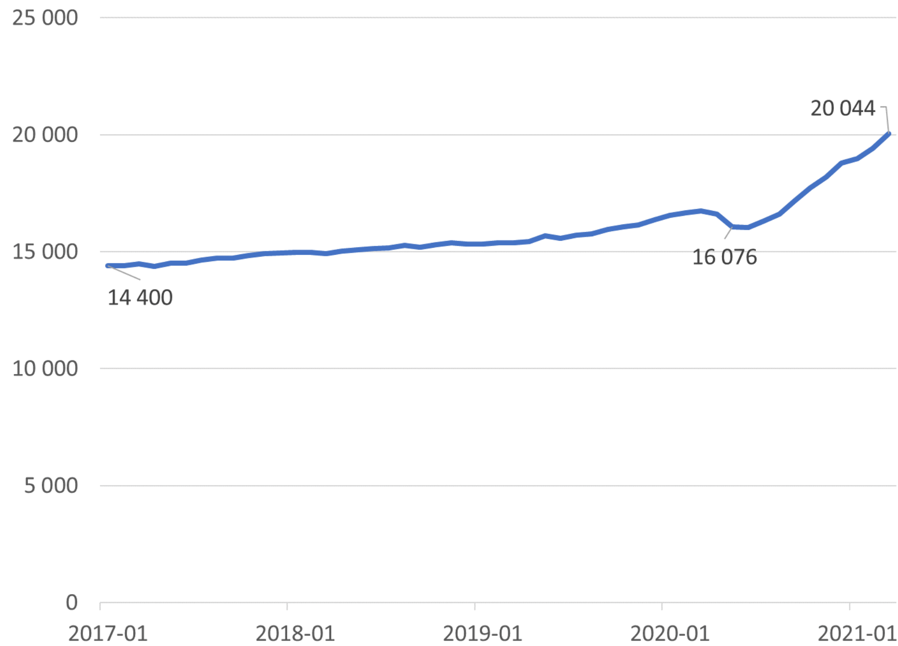
Figure 1. Ration of the average house price for the Montréal area to the average disposable household income in Québec, Q1 2006 to Q1 2021



Sources: Canadian Real Estate Association (real estate prices), *Institut de la statistique du Québec* (disposable income) and Statistics Canada (average weekly earnings, population aged 15 to 54 and number of households).

The number of real estate sales has also increased in recent months (Figure 2). After declining in early 2020 while everyone did their best to adjust to the shock of the pandemic, sales have gone up at a much faster rate, going from 16,076 sales per month in May (12-month backward moving average) to more than 20,000 in March 2021 (+25%).

Figure 2. Number of real estate sales per month in Québec, 12-month backward moving average, January 2017 to March 2021



Source: Land Register of Québec. The 12-month moving average reduces the strong seasonal house sales in Québec, which emphasizes the average trend of the previous year.

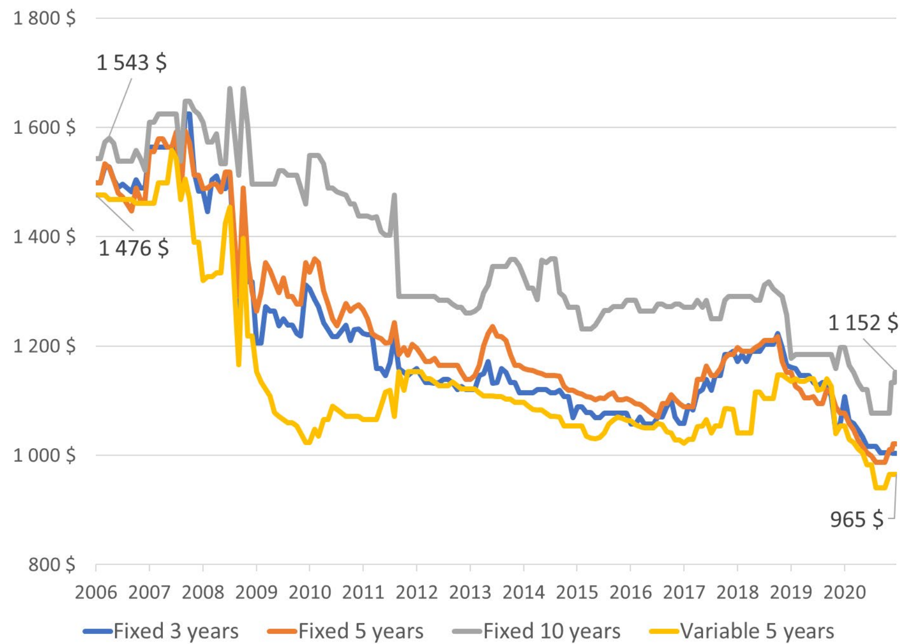
The strong simultaneous increases in prices and in the number of transactions signal a sharp increase in demand. However, it is important to consider the favourable factors and conditions that may explain this recent enthusiasm for the real estate market before pointing to a housing bubble.[3]

First, mortgage interest rates play a key role in determining a household's purchasing power when buying a house because lower interest rates imply lower monthly payments.

Figure 3 illustrates the effect of the downward trend in mortgage rates on the purchasing power of households between 2006 and 2021. Specifically, it shows the evolution of the monthly cost of a $250,000 mortgage with a 25-year term according to the various types of rates offered by financial institutions.

[3] R. Dufour, "Les bulles les plus destructrices sont celles en immobilier résidentiel," *La Presse*, April 24, 2021.

Figure 3. Evolution of monthly payments for a $250,000 mortgage with a 25-year term, May 2006 to April 2021



Source: ratehub.ca. Calculations by the authors.

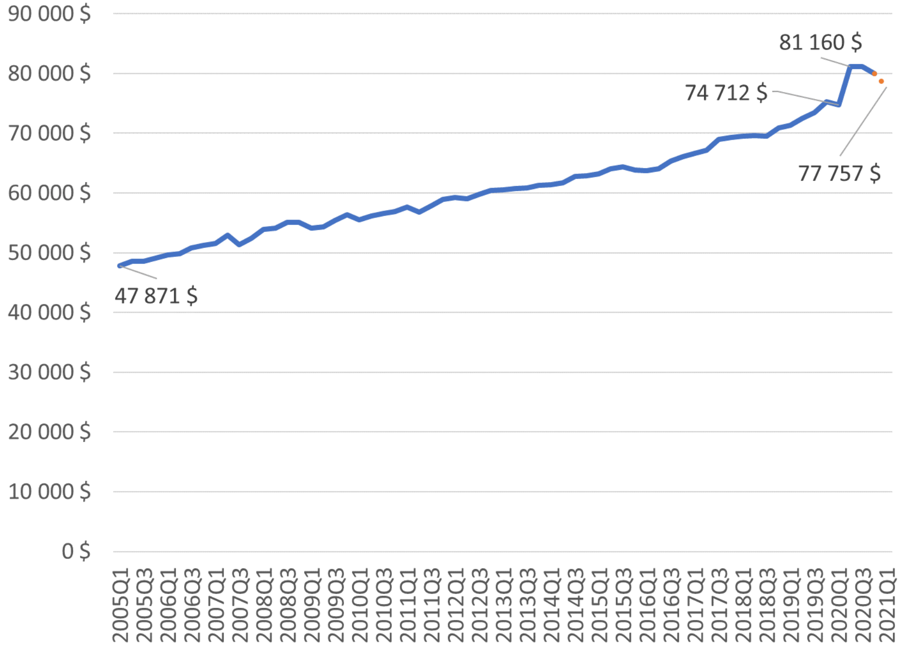
Interest rate levels greatly influence the monthly cost of mortgage payments. A household borrowing $250,000 in 2006 had to pay between $1,476 and $1,543 per month, whereas today, it would only require about $965 to $1,152 per month to support the same mortgage.[4] These important monthly savings of $400 to $500, which varies according to the type of rate chosen, is considerable for most Québec households.

Household disposable income is another major factor that influences real estate demand. Although the COVID-19 pandemic and related health measures caused employment to plummet in several sectors, some have been able to resume their activities as a large part of the economy was able to recover quickly. Moreover, disposable income is not just made up of employment income: net investment income, inheritances, loans from relatives and, particularly in the last year, government transfers all contribute to a family's final disposable income.

A quick look at household disposable income in Québec indicates that it has not only remained stable but has even risen sharply since the beginning of the pandemic (Figure 4). While several factors contributed to this increase, one of the main ones can undoubtedly be attributed to the unprecedented 49% increase in government transfers received by households in the second quarter of 2020, a number that reflects the considerable scale of government assistance measures introduced to mitigate the negative economic consequences of the pandemic.

[4] Mortgage cost calculations are based on the following hypothesis: $250,000 loan, 25-year amortization and monthly compounded interests.

Figure 4. Household disposable income in Québec, Q1 2005 to Q1 2021

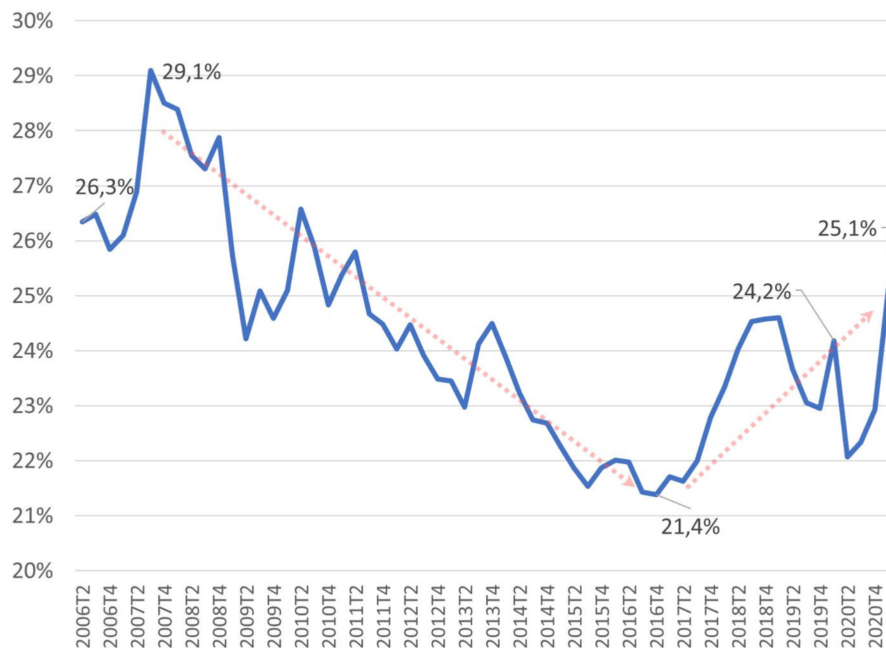


Sources: Institut de la statistique du Québec (disposable income) and Statistics Canada (average weekly earnings, population aged 15 to 64 and number of households). The data for the first quarter of 2021 is a projection based on the evolution of average weekly earnings during that quarter.

Is the recent increase in activity supported by logical and sensical factors or is it the first sign of a looming bubble? The most intuitive way to synthesize these different phenomena is to calculate the average ratio between the cost of a mortgage and the disposable income of Québec households. Ultimately, this indicator determines the true mortgage burden faced by new buyers.

Figure 5 shows the evolution of this ratio since the second quarter of 2006 for a 25-year mortgage representing 90% of the average price of a house in the Montréal area at a 5-year fixed interest rate. Since peaking in 2007–2008, the average mortgage burden had followed a long downward trend until 2017, falling from about 29% to just under 22%. The ratio then climbed back up to around 24% in 2018–2019, as the Québec economy was doing well and both house prices and mortgage rates were rising. The mortgage burden then fell to 22% in mid-2020 but has since risen sharply to around 25% in the first quarter of 2021—its highest level in a decade.

Figure 5. Ratio of average mortgage cost to disposable household income, Q2 2006 to Q1 2021



Sources: Canadian Real Estate Association (real estate prices), *Institut de la statistique du Québec* (disposable income), Statistics Canada (average weekly earnings, population aged 15 to 64 years and number of households), ratehub.ca (mortgage rates). Calculations by the authors.

The fact that this ratio did not increase much in the first half of 2020, but rather fell slightly, means that, together, the rise in disposable income and the fall in interest rates have more than offset the significant growth in real estate prices up to that point. Consequently, the interest in the real estate market at the time would not be illogical, considering that where we live is more important than it used to be, there are a lot of savings built up in the economy, and mortgages have become relatively more affordable.

That said, as we begin May 2021, so almost a year later, the situation has changed significantly. The mortgage burden now stands at 25%, its highest level since 2011, and house prices have continued their steep rise. In addition to the 19% increase in the average price of a Montréal home in the first quarter of 2021 compared to the previous year, there is mounting evidence that buyers are rushing to bid on available properties, often without conducting the full range of due diligence required for a purchase. All of this is exacerbated by the fact that the number of new houses for sale remains too low to meet demand.[5]

On the other hand, disposable household income may suffer from the anticipated end of government support related to the pandemic. In addition, even if the Bank of Canada seems unwilling to raise interest rates soon, any subsequent increase, no matter how small, could significantly affect the ability to pay for many households.

[5] In the first quarter of 2021, the ratio of sales to new listings was still above the threshold deemed problematic by the Canada Mortgage and Housing Corporation (CMHC).

As a result, many economic agents have justifiably expressed concerns about the recent housing market upturn and the potential consequences should it persist and worsen in the coming months. The following section discusses the latest market price forecasts for 2021.

Question 2: Will prices continue to rise or fall sharply in the coming months?

> ***Answer: Although anything is possible, the most realistic scenario is for prices to continue to increase until 2023, albeit at a much more moderate pace.***

The Economist has recently published an international forecast analysis covering the years 2021 to 2023 that dissects the influence of key factors on house prices variations in 27 countries.[6] In Canada, an average annual increase of 3.5% in real terms is expected over two years (2021–2023), so about 5.5% in nominal terms with a larger increase in the first year. The confidence interval surrounding the forecast indicates, however, that the increase could be higher or, on the contrary, that a (real) decline in prices could be observed, especially in 2023.

The same analysis also singles out five factors that may influence future house prices along with the magnitude and direction of that influence during the two-year forecast period (Table 1).

Table 1. Effect of different factors on future real house prices, percentage points

	Year 1	Year 2
Household Income	+0.84	+0.50
Unemployment	-0.35	-0.82
Interest Rates	-0.51	-0.50
Affordability	0	0.32
Housebuilding	-0.03	+0.01

Source: The Economist, international house price growth forecast results for 16 "rich countries," April 10, 2021. These results show the impact on future real house prices of a one-standard-deviation increase in different drivers. Affordability is defined as home costs relative to incomes and rents.

In the short term, the most influential variable is household income, followed by interest rates and the unemployment rate. Over two years, unemployment becomes the most important variable, followed equally by income and interest rates (although their influences are opposite one another) and, to a lesser extent, housing affordability.

When applying these results to Québec, certain effects may be expected. First, according to recent data from Royal LePage, Québec is the main region in Canada where prices are overheating.[7] In addition, interest rates are not expected to change significantly in the short term, while

[6] "Our house-price forecast expects the global rally to lose steam," April 10, 2021. Economist.com.

[7] Royal LePage, "*Tendances du marché immobilier canadien 2021.*" *Royal LePage forecasts*.

affordability and housing starts are expected to remain the same over the next year.[8] It is therefore important to monitor the province's household income and unemployment rates in the coming months. As of today, the end of income support is expected to limit its growth in 2021, while the unemployment rate (8.9% in 2020) is expected to decline gradually before reaching its pre-pandemic level (5.1% in 2019).

Other forecasters have also addressed the issue of real estate prices for the Canadian market in 2021. Royal LePage is quite optimistic, anticipating a nominal increase of 13.5% (16.0% for Montréal). Desjardins is even more bullish, projecting a 19.4% price increase for the Québec resale market in 2021. On the other hand, the Québec Professional Association of Real Estate Brokers anticipates a more modest increase of 5% for median prices in 2021.

As for the sustainability of such price and sales volume increases, the past behaviour of the real estate market demonstrates that it is possible to anticipate expected home resale volumes based on fundamentals such as employment and mortgage burden. When the number of sales significantly exceeds the predicted trend, a negative adjustment is to be expected[9]; however, the precise timing of this reversal is virtually unpredictable.

Differences between sales volumes and their projection based on fundamentals are also a predictor of price growth. Thus, price growth tends to accelerate when the number of observed sales exceeds the level suggested by these fundamentals. Since the housing supply cannot be easily adjusted in the short term (construction delays, limits on available space), any increase in demand is almost entirely reflected in house prices. Conversely, if sales revert to their projected trend, prices growth will abate, potentially even causing a drop in prices in extreme cases. Economic theory provides a good explanation for the recent increases in house prices and sales. It also predicts that sales will eventually return to the level consistent with fundamentals albeit at a time that is difficult to predict.

Conclusion and Additional Thoughts

In the context of a speculative bubble, households anticipating large and imminent price increases rush to complete transactions, sometimes under suboptimal conditions and at prices that are already high. This prompts other households to do the same because they wish to "profit" from the inflated prices, which in turn motivates others to do the same with similar hopes, and so on. At its worst, this dynamic leads to excessively high prices and therefore out of line from current economic realities. In such a case, after a certain period, the overvaluation becomes obvious, the bubble "bursts" and many households find themselves with an asset that they paid too much for and that they cannot afford to repay or resell without losing money.

[8] "Bank of Canada will hold current level of policy rate until inflation objective is sustainably achieved, adjusts quantitative easing program," Bank of Canada, April 21, 2021, https://www.bankofcanada.ca/2021/04/fad-press-release-2021-04-21/.

[9] Taylor Webley, "Fundamental Drivers of Existing Home Sales in Canada," Bank of Canada, Staff Discussion Paper 2018-16. https://www.bankofcanada.ca/2018/12/staff-discussion-paper-2018-16/.

In this case, house prices and the number of transactions are rising at a much faster pace than they had in the past, which is akin to a price bubble—especially given the data for the first quarter of 2021.[10] However, several exceptional cyclical factors contribute to this dynamic such as unusually low interest rates and a pandemic that has seen households benefit from both generous government transfers and a sharply rising savings rate. As a result, as we enter 2021, the mortgage burden, which was hovering around 22% in mid-2020, has risen by 3 percentage points in just three quarters and now stands at 25%, higher than its 15-year average of 24.3%. This means that, as of March 2021, households still had the ability to pay for homes at these high prices, but the situation is close to reaching a critical point.

That said, we are now at the beginning of May and high property prices cannot continue to rise at such a rapid pace. In this context, the relevance of a possible government intervention to stabilize the market seems increasingly obvious.

In our view, it appears that the recent surges are largely due to the interest caused by this growth and the contextual factors mentioned above rather than lax or inadequate regulations. Among other things, Canadian mortgage regulations have been tightened several times in recent years (e.g., maximum debt-to-equity ratio, minimum down payment, solvency ratio based on the highest mortgage rate plus 2%), thereby reducing the risk of insolvent mortgages. In contrast, the 2008–2009 US crisis was fuelled by subprime mortgages covering 100% of property values and amalgamated into financial instruments (the notorious mortgage-backed securities) exacerbating the interest rate risk, causing the real estate bubble to inflate, and ultimately burst.

Nevertheless, to avoid excesses and possible market abuse in such a volatile context, governments, professional associations and regulatory bodies could consider various measures aimed at increasing information transparency and curbing speculation, including a mandatory professional inspection prior to purchase, the introduction of regulations discouraging successive resales of the same property within a short period of time, and even greater transparency concerning offers received and final sales price.

In any event, the above-mentioned macroeconomic realities are worrisome and should be considered when analyzing the situation and possible interventions. Also, before introducing any regulatory or legislative changes, we must ensure that they are necessary, that their target or targets are accurate, and that they prevent observed abuses not sanctioned by current regulations or laws. In addition, on-the-ground realities and the opinion of real estate market specialists should also be considered to anticipate the benefits and costs of any proposed intervention.

[10] The ratio of housing units listed for sale to the amount at which those same units can be rented would be another key indicator to assess the risk of a housing bubble. However, such analysis would require historical data on listed rents, which do not appear to exist at this time.