QFREB
Québec Federation of Real Estate Boards

A WORD FROM THE ECONOMIST

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WHICH HAS A GREATER IMPACT ON MORTGAGES IN ARREARS: EMPLOYMENT, PROPERTY PRICES OR INTEREST RATES?

The proportion of mortgage loans in arrears in Québec and Canada is currently at a historically low level. But in a context of high household indebtedness[1] and the start of rising interest rates, several political and economic stakeholders will have their eyes glued to this indicator in the coming quarters.

From the point of view of real estate market performance, because the number of mortgage loans in arrears is a precursor to the number of foreclosures[2], a significant increase in the mortgage delinquency rate and foreclosures would directly result in an increase in the number of properties put up for sale, which would in turn weaken market conditions and price growth.

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The QFREB is therefore interested in examining the factors that could affect the mortgage delinquency rate, namely employment, property prices and interest rates. The period studied in this analysis spans from 1990 to 2017. According to our estimates, employment and property prices have a significant impact on the proportion of mortgages in arrears. However, our estimates did not allow us to confirm a statistically significant effect for interest rates on the mortgage delinquency rate.

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Profile of mortgage loans in arrears in Québec and Canada

A mortgage is defined as being in arrears after a three-month period of non-payment. This currently affects about 1 in 300 mortgage loans in Québec and 1 in 400 loans in Canada, according to data published by the Canadian Bankers Association[3].

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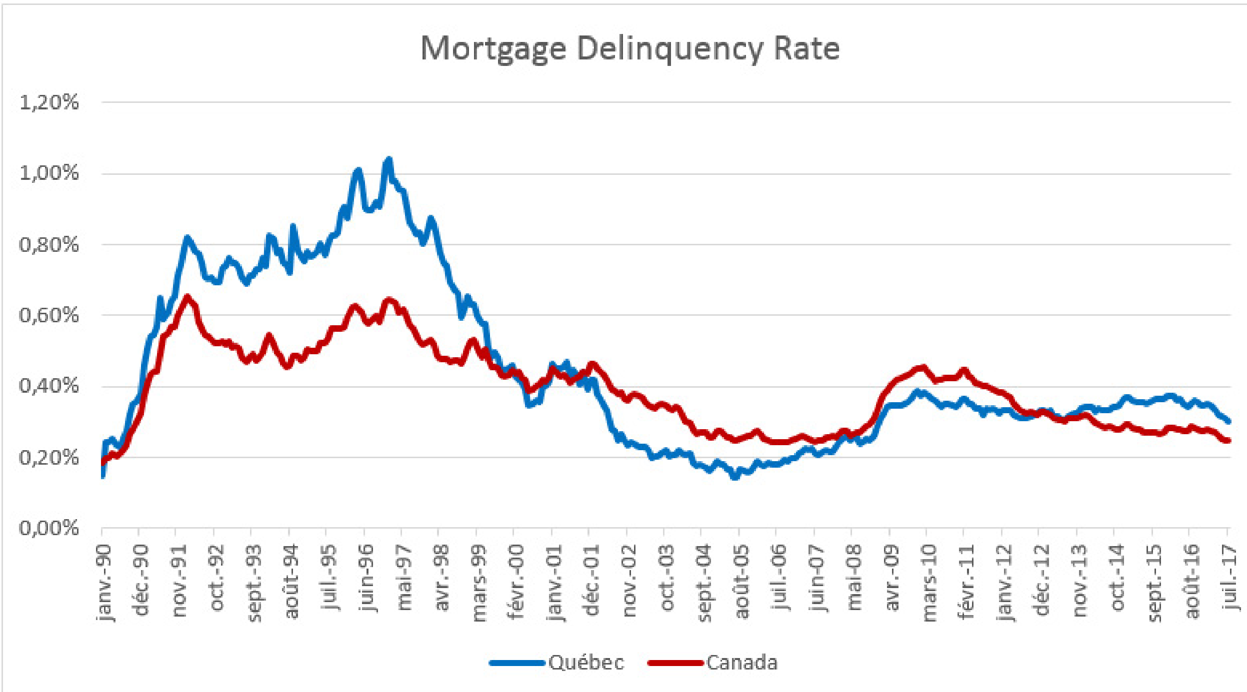
1 The available debt-to-income ratio approached 170 per cent in Canada and 158 per cent in Québec in 2017.

2 A foreclosure arises when the holder of a mortgage loan must abandon ownership of the property to which the mortgage is attached. The foreclosure may be voluntary or may result from seizure of the property. The right of ownership is then normally transferred to the creditor.

3 It should be noted that data from the Canadian Bankers Association does not include data from Desjardins.

Cases of mortgages in arrears primarily affect consumers: loss of their home, negative impact on their credit rating, difficulty qualifying for loans at a later date, as well as the resulting social and psychological suffering. But lenders, mortgage insurers and investors are also directly affected. In macroeconomic terms, the proportion of mortgages in arrears is also detrimental to the stability of the Canadian financial system.



Source: Mortgage Bankers Association

The graph above shows the evolution of the mortgage delinquency rate since 1990 in Canada and Québec. We see that before the 2000s, the Québec curve was consistently above the Canadian curve. However, for the last fifteen years, Quebecers' behavior in terms of mortgage arrears has been similar to that of Canadians', as the two curves follow each other very closely. In comparison, the proportion of mortgages in arrears in the United States was, on average, more than three times higher than in Québec and Canada during the period under review[4].

The effect of the labour market

Intuitively, the link between the effects of the job market on the likelihood of households to default on their mortgage debt seems obvious. A marked slowdown in the labour market leads to job losses that have an undeniable impact on the ability of affected borrowers to honour their mortgage payments. Of all the indicators examined in this study, employment, in addition to being statistically significant, appears to be the most important determinant of mortgages in arrears. Unlike property prices, the effect of which is discussed below, the effect of increases or decreases in employment would be twice as large for Canada as a whole than for Québec. According to our estimates, a 1 per cent decrease in the employment rate in Québec, which corresponds to a loss of 40,000 jobs, would accelerate the growth of the mortgage delinquency rate by 2 per cent. For Canada as a whole, a 1 per cent decrease in employment, or about 185,000 jobs, would accelerate the growth of the mortgage delinquency rate by about 5 per cent.

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4 National Delinquency Survey, Mortgage Bankers Association.

The effect of property prices

In an economic context where the value of a property is constant or increases over time, each payment increases the owner's net worth, which is an additional incentive[5] for owners to make their payments regularly. In contrast, in an economic environment where property prices tend to decrease, homeowners in difficulty are more likely to default on their mortgage if the value of the loan capital exceeds the value of the property. In this context, it also becomes more difficult to quickly sell a property in order to cover the balance of the mortgage loan and any penalties that may be added if the sale does not coincide with the term of the loan, which further increases the borrower's risk of default.

It is estimated that, for Québec, a 10 per cent increase in residential property prices would slow the growth of mortgages in arrears by about 5 per cent, more than double the estimated impact in Canada.

According to our estimates, changes in average property prices is indeed a statistically significant variable, both in Canada and in Québec, in explaining variations in the mortgage delinquency rate. It is estimated that, for Canada as a whole, a 10 per cent increase in the average residential property price would slow the growth of mortgages in arrears by about 2 per cent. For Québec, a 10 per cent increase in residential property prices would slow the growth of mortgages in arrears by about 5 per cent, more than double the estimated impact in Canada.

The effect of mortgage interest rates

Mortgage rates have a significant effect on the amount borrowers must pay every month to repay their mortgage. An interest rate hike eventually increases mortgage payments, which can affect borrowers' ability to repay their loans.

However, according to our estimates, no statistically significant link could be established between a rise in interest rates and a rise in the mortgage delinquency rate. Other studies that we consulted on this subject do not enable us to reach a consensus on the issue: some conclude that rising interest rates lead to an increase in mortgages in arrears, while others do not achieve a statistically significant effect.

Despite this, it's important to consider that historically low interest rates in recent years have allowed Quebecers to significantly increase their debt ratio. As a result, they may now be more vulnerable to potential interest rate hikes.

Currently, mortgage debt[6] accounts for about three quarters of Quebecers' debt. In addition, variable rate mortgages have gained in popularity over the past fifteen years and now account for nearly one-third of mortgages granted in Québec[7]. This suggests that an interest rate hike would now have a ripple effect on the rate of mortgages in arrears. Over the last ten years, financial authorities have also imposed a series of new mortgage rules to reduce this risk. These include the stress tests introduced in 2016 that assess a borrower's ability to absorb an increase in interest rates.

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5 The first incentive, of course, is the use of the property.

6 Including home equity lines of credit (source: Desjardins, Economic Studies).

7 Source: Desjardins, Economic Studies.

In conclusion…

In summary, our results suggest that the job market has a larger effect than real estate prices or interest rates on the growth of the mortgage delinquency rate. In addition, a decrease in the number of jobs would have an impact that is twice as large in Canada than in Québec on the growth of mortgages in arrears. As for real estate prices, our results show that a 10 per cent increase in residential prices in Québec could slow the growth of the mortgage delinquency rate by about 5 per cent, double what it would be in Canada. However, our model did not show a significant effect of interest rate changes on the mortgage delinquency rate during the period examined. Although this last observation may seem surprising, it is clear from our model that, in a context of rising interest rates, there is probably more to fear from the effects of a possible decline in the number of jobs than an increase in monthly mortgage payments for borrowers.

Our results suggest that the job market has a larger effect than real estate prices or interest rates on the growth of the mortgage delinquency rate.

Methodology in brief

The statistical relationship between the mortgage delinquency rate and its determinants was estimated from a linear regression model by the ordinary least squares method. As part of our approach, the stationarity of the series has been verified and corrected. The transformations carried out on the series to ensure stationarity led us to interpret the effects of the determinants of delinquent mortgages in the form of growth rate.

The time series used for delinquent mortgages comes from the Canadian Bankers Association. Employment data are from Statistics Canada. The interest rates used come from the Bank of Canada and are those of ordinary five-year mortgages. Finally, Canadian average residential prices come from CREA (1990 to 1999) and the QFREB (2000 to 2017) through the Centris® database. All time series used are on a monthly basis and cover the period from 1990 to 2017.

It should be noted that the impacts identified in this *Word From the Economist* are not an exhaustive list of all the determinants of mortgage delinquency rates. Several tests were carried out on several potential determinants in order to obtain the most conclusive list possible. That being said, our statistical model only explains a portion of the fluctuations in mortgage delinquency rates. The selection of macroeconomic variables, as suggested by our approach, to explain a phenomenon closely related to household behaviour, is a choice justified by the availability of data.

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