ECONOMIC VIEWPOINT

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#1 BEST OVERALL FORECASTER - CANADA

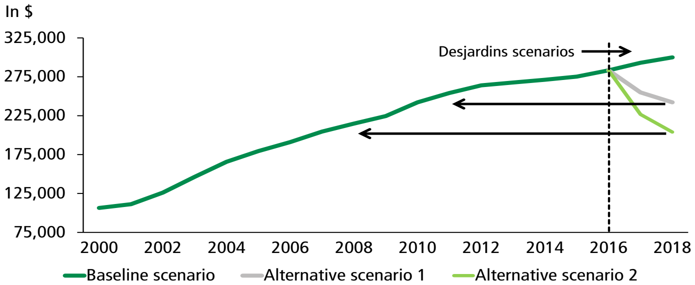
Impact of Falling Residential Market Prices on Quebec's Household Financial Situation

Although a correction by Quebec home prices seems unlikely in the near future, the consequences of such a shock for households' financial situation merit examination. We tested two fictional hypotheses using simulations: a 15% decline in the average home price, and a 30% decline, both over two years. About 15% to 20% of homeowners would find themselves in a discomfort zone, or even in a critical zone that could bring on financial difficulties. Of these, only households that would be forced to sell their homes during the downturn period would be affected. The situation would be more problematic if the home sold for less than the balance on the mortgage. Thankfully, there is no decrease on the horizon: Quebec's residential real estate market is strengthening after a lull, there is little risk of overvaluation, and the economic situation remains good. Also, the restrictive measures instituted to curb speculation in Vancouver and Toronto are not needed in Quebec. Price growth remains moderate and the market is not overheating. Although unlikely, what would happen if prices collapsed? This is a risk to consider.

Who Would a Price Decrease Affect?

The depreciation in the value of real estate assets would affect borrowers' balance sheets (box 1 on page 2). What would happen if home prices fell 15% or 30% within the next two years? Fact: not all owners would necessarily see the value of their home drop below the purchase price. Many have benefited substantially from the spectacular rise by prices in the 2000s; even with a decrease of that size, their home's market value would still be higher than the price paid to buy it. A 15% decrease would take the average price down to where it was in 2010 (graph 1). A 30% decrease would take it back to the average value seen in 2007. Therefore, households that purchased property prior to that period would still make a capital gain, although it would be smaller given the substantial drop in prices. However, households that bought a home more recently, after prices accelerated, could have to sell the home for less than they paid for it. Those who took advantage of higher values to take on more debt would find themselves in a delicate position.

GRAPH 1
If home prices dropped 15% or 30% in Quebec, they would return to 2010 and 2007 levels respectively



Sources: Ipsos Reid, Québec Federation of Real Estate Boards, via Centris® and Desjardins, Economic Studies

For most owners, the depreciation would be on paper only; it would materialize only if they had to sell. As with stock market investments when share prices go down, a capital loss is incurred only when the securities are sold. Homeowners who kept their homes during the downturn would not be hurt, and could even capitalize on the next wave of rising prices. Conversely, those who had to sell for unforeseen reasons, such as a separation, job loss, or move, would be hit hard. For some, the sale price could be less than the purchase price. If the sale price was not enough to pay off the mortgage outstanding at the time, the borrower could end up in financial difficulties. Those that already have a lot of other kinds of debt could even go under. Households that were relying on rising home values to get more leeway when refinancing their homes could also end up in a challenging position.

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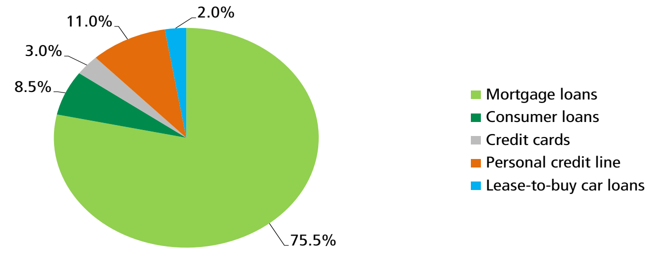
BOX 1
Make-Up of Debts and Assets

A mortgage is a household's largest loan (graph 2). After that, in order of importance, come personal lines of credit and consumer loans (including conventional car loans), then credit card balances and car loans in the form of leases. Assets include financial assets (savings accounts and various types of investments[1]) and non-financial assets like homes and motor vehicles. For many homeowning households, real estate is frequently the biggest non-financial asset (graph 3). The value of indebted households' assets has increased in the last 15 or so years, as has their debt. Rising home prices have played an important role in both cases: mortgage debt has gone up, as has the value of real estate assets. As a result, the debt-to-asset ratio has remained reasonable for borrowers overall, confirming that their financial situation has not worsened over the years.[2] According to the Ipsos Reid survey, about 30% of Quebec households have no debt. In general, these are people who are at a later stage in their lives. Many homeowners have paid off their mortgages. This analysis focuses exclusively on indebted households.

[1] Bonds and other kinds of guaranteed investments, guaranteed investment certificates, mutual funds and shares. Assets held in pension funds were not considered as this type of asset is not liquid, i.e. it cannot be used to pay off debts during an employee's working life.

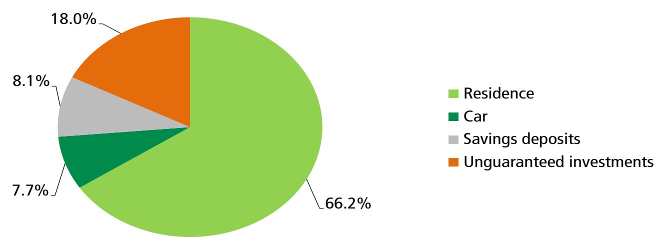
[2] *The Financial Position of Quebec Households*, Desjardins, Economic Studies, *Economic Viewpoint,* August 28, 2017, 6 p.

GRAPH 2
Make-up of Quebecers' debt in 2016



Sources: Ipsos Reid and Desjardins, Economic Studies

GRAPH 3
Make-up of indebted Quebecers' assets in 2016



Sources: Ipsos Reid and Desjardins, Economic Studies

Summary – Homeowners at Risk

- Decrease in value in relation to the purchase price

And:

- Sale of the property while its value is down
- Sale price < purchase price
- Mortgage > sale price
- Heavy consumer debt load

Capacity to Repay Remains the Same

A drop in home prices does not a priori affect households' ability to pay their mortgages. That ability is based on earned income and the change in interest rates. Regardless of price fluctuations, monthly payments are established based on the initial mortgage, the amortization period selected, and the payments made after that. Unlike a major deterioration by the job market or abrupt rise by interest rates that can directly affect households' financial capacity to repay their loans,[3] a drop in home prices only affects the value of the assets: the mortgage amount does not change. The usual indicators that assess whether households can make their monthly payments, such as the debt service ratio (DSR),[4] would not be affected by housing market depreciation. However, it would be different if a jobless rate or an interest rate increase occured at the same time.

However, it would hurt the debt-to-asset ratio (DAR). This establishes the degree to which household assets (financial, real estate, etc.) can cover their loans. When a household's DAR is less than 0.8, the household is in the comfort zone, as its debt represents less than 80% of its total assets. Conversely, a ratio above 0.8 is considered high, describing households that are in a discomfort zone financially. In that case, if assets had to be liquidated, for example a home, the proceeds might not be enough to pay off the debts. While these households don't all run into trouble, those who become insolvent usually have debts that are double their assets, according to the Office of the

[3] *Several Indebted Households in Quebec Are Vulnerable to an Interest Rate Hike*, Desjardins, Economic Studies, *Economic Viewpoint*, September 5, 2017, 4 p.

[4] Size of monthly payments on all types of debt (principal and interest) in relation to gross income.

Superintendent of Bankruptcy. According to Ipsos Reid numbers, 87% of indebted Quebecers were financially secure in 2016 (DAR < 0.8%), compared with 13% who were in a potentially shaky situation. Despite the increases in home prices that boosted mortgage debt, the proportion of households that could run into financial trouble has been almost the same for 15 years.

Simulation Results

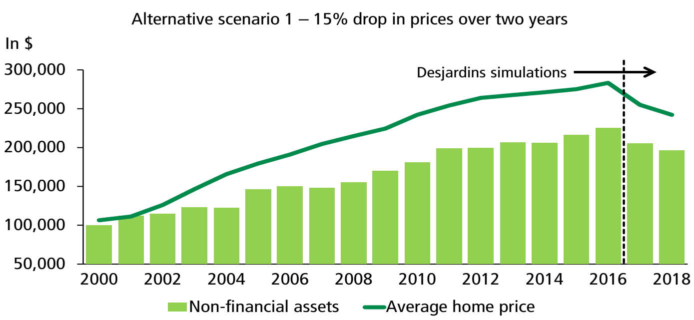
If prices in the housing market were to drop, what impact would it have on the value of Quebec households' assets? What proportion would end up in an uncomfortable situation? To shed some light on these questions, we did simulations using the Ipsos Reid data. Note that prices are unlikely to drop in the near future. They are expected to go up 3% and 5% this year and next, which is in line with our core scenario. That would increase the value of households' assets, putting fewer households in the discomfort zone. The changes would be minor compared with the situation at the start of 2016.

We then tested two alternate scenarios. The first scenario assumes an average price decrease of 15% over 2017 and 2018; the second scenario assumes an average price decrease of 30% over the same period. A price correction would have a big impact on the value of households' non-financial assets (graphs 4 and 5). Given the weight of residences in total assets, a depreciation like that would affect households' balance sheets. However, the value of loans would not change, as mortgage debt taken on when a property is purchased remains the same, regardless of subsequent price fluctuations. The borrower must repay the amount initially established with the financial institution, based on the amortization period and interest rate. In the event of a drop in prices, household debt levels would be stable, while the value of assets would decline, at least in principle. In reality, actual value would be lost only if the home was sold while prices were down. However, the simulation measures the potential impact for all homeowners, as if they had to sell their homes. We have therefore projected the debt-to-asset ratio for each based on the parameters of the two alternate price correction scenarios. This sorts indebted households according to their financial vulnerability zone, and evaluates how many could end up in difficulties.

More households in the financial discomfort zone

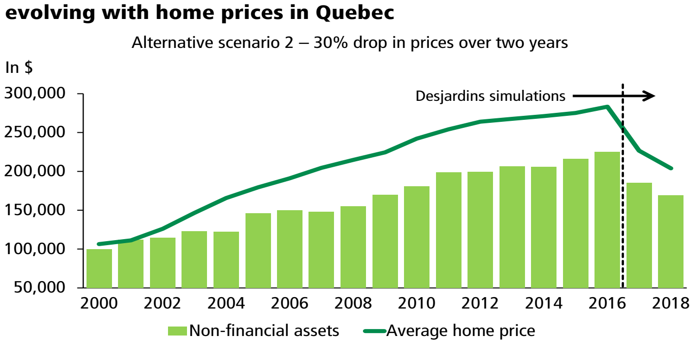
According to the Ipsos Reid survey data, about 87% of households were in the comfort zone in 2016. This figure would drop to 83% if the average home price fell 15% over two years (graph 6). If prices fell 30%, fewer than 80% would be in the comfort zone financially (graph 7).

GRAPH 4
Simulation results: Indebted households' non-financial assets are evolving with home prices in Quebec



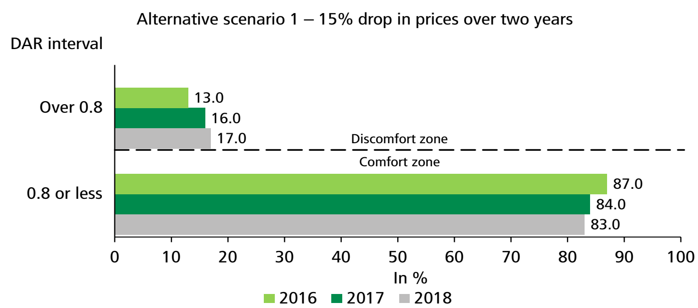
Sources: Ipsos Reid, Québec Federation of Real Estate Boards, via Centris® and Desjardins, Economic Studies

GRAPH 5
Simulation results: Indebted households' non-financial assets are evolving with home prices in Quebec



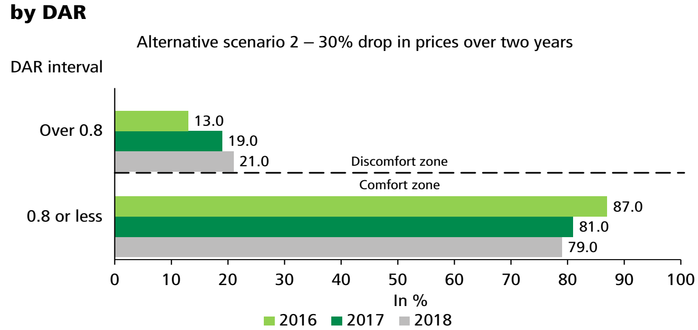
Sources: Ipsos Reid, Québec Federation of Real Estate Boards, via Centris® and Desjardins, Economic Studies

GRAPH 6
Simulation results: Breakdown of indebted Quebec households by DAR



DAR: Debt/asset ratio
Sources: Ipsos Reid and Desjardins, Economic Studies

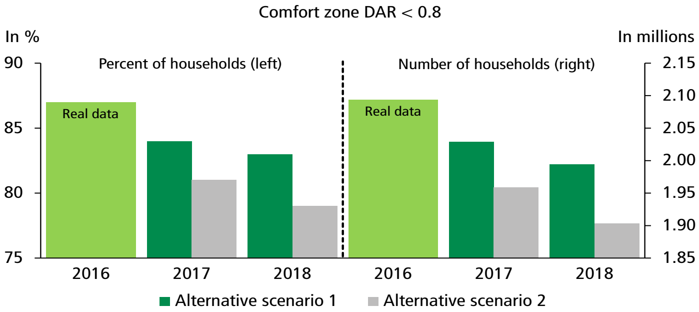
GRAPH 7
Simulation results: Breakdown of indebted Quebec households by DAR



DAR: Debt/asset ratio
Sources: Ipsos Reid and Desjardins, Economic Studies

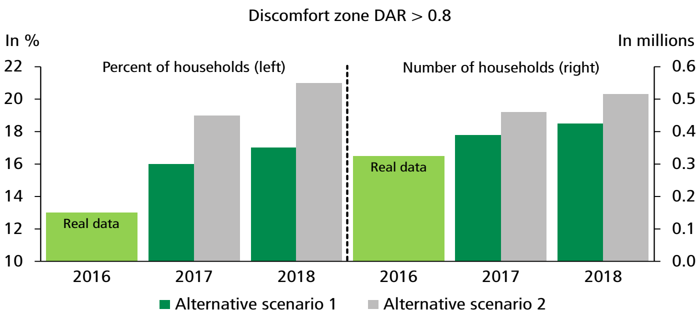
Although the percent change seems small, the results are very different when we look at the number of households. The two alternate scenarios would take about 100,000 to 120,000 Quebec households out of the secure zone, putting them in the discomfort zone (graphs 8 and 9). They would not all necessarily run into financial difficulties: only those who sold their home during this period would incur a capital loss, depending on when they purchased. The simulations make it possible to estimate how many households are potentially at risk based on the DAR. In reality, the negative impacts of real estate asset depreciation on household balance sheets would not affect all homeowners. Although the debt-to-asset ratio simulation is a good barometer, only a decision to sell and, if applicable, a loss in value would have a concrete effect on a household's financial situation.

GRAPH 8
Simulation results: Proportion of households in the comfort zone if home prices fell 15% or 30% in Quebec



DAR: Debt/asset ratio
Sources: Ipsos Reid and Desjardins, Economic Studies

GRAPH 9
Simulation results: Proportion of households in the discomfort zone if Quebec home prices fell 15% or 30%



DAR: Debt/asset ratio
Sources: Ipsos Reid and Desjardins, Economic Studies

Conclusion

Despite the low probability of a generalized drop by Quebec home prices, this shock alone would not be enough to trigger a widespread erosion of households' financial situation (box 2). In the past, defaults on mortgage payments or even personal bankruptcies increased following an abrupt rise by interest rates or massive job losses during recessions. Unlike a depreciation in the value of assets, these two factors directly impact households' financial capacity to repay their loans.

BOX 2
Summary: Impact of falling residential real estate prices

Summary of simulations:

- Direct effects calculated on the DAR of indebted households.
- Assumptions tested: 15% decrease in average home prices in the span of two years based on alternative scenario 1 and a 30% decrease based on alternative scenario 2.
- The value of assets would fall, but contracted debts would stay the same.
- With alternative scenarios 1 and 2, between 17% and 21% of households would be in a discomfort zone financially in 2018. That would be around 100,000 to 120,000 more households than in 2016.
- This is not a dynamic shock, which considers several variables at once. Rather, it is a static shock, which evaluates the impact of a real estate price correction on a single variable: the DAR. Larger indirect effects (other than that on the DAR) are not evaluated.

DAR: Debt/asset ratio
Source: Desjardins, Economic Studies

In the event of a drop in prices, household debt levels would be stable, while the value of assets would decline, at least in principle. In fact, depreciation by real estate assets would not impact all households' balance sheets. Only households that sold the home for less than they paid for it could end up in difficulties. If the mortgage outstanding was larger than the sale price, the risk of insolvency would increase. The consequences would not be disastrous for all Quebec households, but some could end up in a troublesome position.

However, we must not overlook the indirect effects a tumble by home prices could have on consumer spending. Whether or not they sold, the confidence of all homeowners would be shaken, making them cautious about purchases. Although debt-to-asset ratio simulations cannot take this factor into account, the repercussions would certainly be bigger and affect all consumers. The feeling of loss of wealth would affect spending by all households, and curb Quebec's economic growth.

Prices will probably not fall without a reason. An increase in the unemployment rate or climbing interest rates could result in prices falling. The situation of households could therefore deteriorate further. Quebec's economy could also find itself in a recession.

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