

ECONOMIC VIEWPOINT



Several Indebted Households in Quebec Are Vulnerable to an Interest Rate Hike

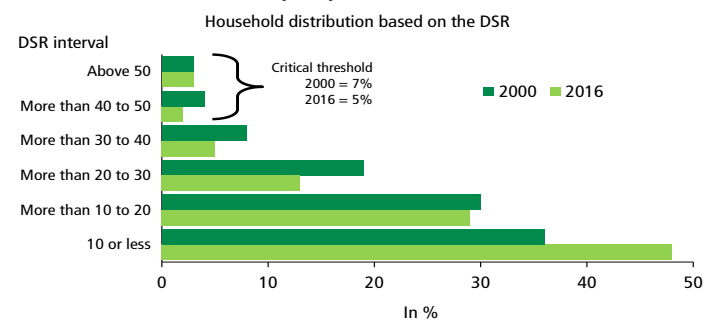
Like elsewhere in Canada, Quebecers' debt has risen much faster than income in the last few years. Low interest rates have kept the weight of monthly household payments at a reasonable level, however. That said, an increase in interest rates could compromise the capacity of some households to honour their financial obligations. Last year, about 5% of households reached a critical debt threshold that can make it difficult for them to repay their debts. The simulations presented in this *Economic Viewpoint* confirm that the financial position of many households would suffer significantly if interest rates were to rise more than expected. A gradual interest rate hike would have an immediate impact on those who hold variable-rate loans or personal lines of credit. The impact on fixed-rate loans would be felt at renewal time, when higher interest rates would apply. The number of vulnerable Quebecers would rise within just a few years. The ability to keep making monthly payments could event be compromised for certain households.

Ability to Repay: Low Risk Level Right Now

The debt service ratio (DSR) assesses an individual's financial obligations to repay debt based on gross income. This indicator accurately¹ determines a household's capacity to pay its debts by taking the value of loans, interest rates and household income into account. The average DSR for all Quebec households has been about 16% for the past 15 years or so; such stability throughout this period shows that the risk of having serious difficulty making monthly payments has not risen in Quebec households as a whole.

According to the Bank of Canada (BoC), households with a DSR that exceeds the critical threshold of 40% are considered vulnerable; in other words, they may have trouble making their payments. The distribution of households based on their DSR has stayed roughly the same for the past 15 years or so (graph 1). While households with a DSR in excess of 40% appear more vulnerable, those with a ratio between 30% and 40% also present a potential risk. One can quickly get into a tight spot if an unforeseen event arises. In fact, the greater a household's debt load, the more sensitive that household is to certain events, such as a separation, critical illness, job loss or sudden rise in borrowing costs.

GRAPH 1
Distribution of Quebec households based on the debt service ratio (DSR)



Sources: Ipsos Reid and Desjardins, Economic Studies

Impact of Climbing Interest Rates

In the last few years, the drop in interest rates has helped contain the weight of loan repayments. The situation is still worrisome however, as the key rate hike, that began last July, would gradually erode the financial position of many indebted households (box 1 on page 2).

Despite the key interest rate uptrend in the United States that began at the end of 2016, and recently in Canada, retail interest rates remain at very low levels. We do, however, have to expect a widespread hike in retail rates if the economic expansion in North America continues. While a spectacular rise in rates seems

¹ *The Financial Position of Quebec Households*, Desjardins, Economic Studies, *Economic Viewpoint*, August 28, 2017, 6 p.

François Dupuis, Vice-President and Chief Economist • Hélène Bégin, Senior Economist • Danny Bélanger, Senior Economist

Desjardins, Economic Studies: 418-835-2450 or 1 866-835-8444, ext. 5562450 • desjardins.economics@desjardins.com • desjardins.com/economics

NOTE TO READERS: The letters k, M and B are used in texts and tables to refer to thousands, millions and billions respectively.

IMPORTANT: This document is based on public information and may under no circumstances be used or construed as a commitment by Desjardins Group. While the information provided has been determined on the basis of data obtained from sources that are deemed to be reliable, Desjardins Group in no way warrants that the information is accurate or complete. The document is provided solely for information purposes and does not constitute an offer or solicitation for purchase or sale. Desjardins Group takes no responsibility for the consequences of any decision whatsoever made on the basis of the data contained herein and does not hereby undertake to provide any advice, notably in the area of investment services. The data on prices or margins are provided for information purposes and may be modified at any time, based on such factors as market conditions. The past performances and projections expressed herein are no guarantee of future performance. The opinions and forecasts contained herein are, unless otherwise indicated, those of the document's authors and do not represent the opinions of any other person or the official position of Desjardins Group. Copyright © 2017, Desjardins Group. All rights reserved.

BOX 1
Not All Households Fall Into the Debt Trap

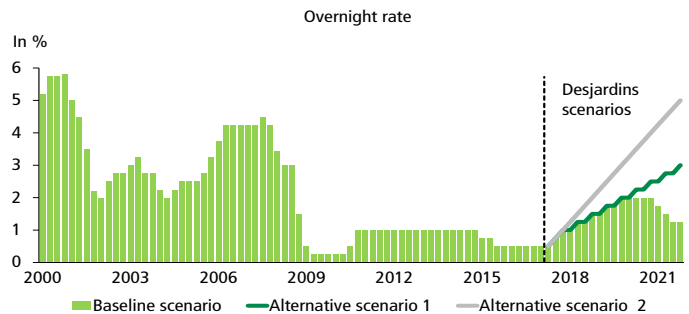
According to the Ipsos Reid Canadian Financial Monitor survey, about 30% of Quebec households have zero debt. This group includes households with no credit products, or households that use credit products but systematically pay off their monthly balances (this essentially applies to those with credit cards or personal lines of credit). In principle, households that do not borrow or do so in a much more disciplined way are not financially vulnerable. Generally speaking, these are people who are at a later stage in their lives, nearing their sixties. Many homeowners have at that point paid off their mortgages, giving them considerable financial leeway. An eventual increase in borrowing costs would have no impact on 30% of Quebec's households because they carry no debt. This should not however minimize the potential impact of an interest rate increase, as 70%—more than two million households—would be affected to some degree. The simulations presented in this *Economic Viewpoint* focus solely on the Quebec households that are carrying debt.

highly unlikely, borrowers should make sure they can face an average increase of approximately 2% in mortgage rates over the medium term.² While this is not our baseline scenario, borrowers have to nevertheless be prepared to face different outcomes.

We made three simulations to assess the impact of an interest rate increase. The first shows the changes to the DSR based on our current interest rate forecast scenario. In this baseline scenario, the overnight rate would rise up to 2.0% in the next two years but would decrease to 1.25% within five years, while this rate is currently 0.75%. The second and third simulations take larger-than-expected interest rate increases into account (graph 2). By the end of 2021, the overnight rate in both alternative scenarios would reach 3.0% and 5.0% respectively, pushing rates closer to the BoC estimated neutral nominal interest rate of about 3.0%. While this level may appear high, keep in mind that the overnight rate was 5.75% at the end of 2000.

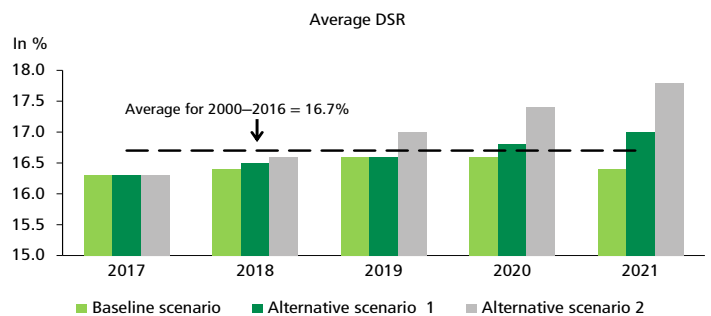
If borrowing costs were to spike, the share of a household's gross income allocated to debt repayment would rise. The average DSR would be fairly stable in the baseline scenario but would increase in both alternative scenarios. The financial burden would be tougher to support for all households that have loans, even if a consistent debt level is assumed. In both alternative scenarios, the average DSR would be above the average of the past 15 years

² [Canadian Mortgage Interest Rates Could Rise a Few Percentage Points in the Coming Years](#), Desjardins, Economic Studies, *Economic Viewpoint*, May 4, 2017, 4 p.

GRAPH 2
Interest rate scenarios for simulation purposes


Sources: Statistics Canada and Desjardins, Economic Studies

(graph 3). This increase shows that a faster-than-anticipated rise in Canadian interest rates would gradually erode the financial position of Quebecers.

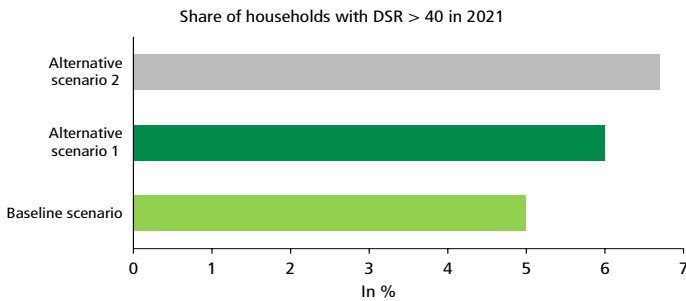
GRAPH 3
Simulation results: debt service ratio (DSR) of Quebec's indebted households


Sources: Ipsos Reid and Desjardins, Economic Studies

If interest rates were to rise, what proportion of households would be vulnerable? The share of households with a DSR in excess of 40% would barely budge if interest rates increased in line with our baseline scenario. About 5% of them would still be considered vulnerable. Households thus seem to be able to weather limited increases in borrowing costs without too much hardship. In the other two scenarios—based on much bigger interest rate hikes—between 6.0% and 6.7% of households would go over the critical debt load threshold in 2021 (graph 4 on page 3), meaning that 20,000 to 40,000 additional households could tip into this payment default risk zone within a 5-year span. Not all households would be insolvent, but the likelihood would be on the rise. A slow, unexpected increase in the BoC overnight rate, to 3.0% or even 5.0%, would have a substantial negative impact, and many households would have trouble dealing with very heavy debt repayments.

Lastly, the share of total debt burden in households with a DSR above 40 would reach more than 10%, based on the first

GRAPH 4
Simulation results: Quebec households poised to reach a critical debt service ratio (DSR) in the next five years



Sources: Ipsos Reid and Desjardins, Economic Studies

alternative interest rate scenario and reach 12.6% in the second scenario (table 1). Their financial burden would be much heavier, and this would drive up the risks for financial institutions as vulnerable households would be shouldering heavier debt loads.

One thing is clear: households with an already high DSR could have more trouble honouring their financial obligations than others. Even if households with a DSR above 40% seem to be more vulnerable, those with a ratio between 30% and 40% also present a potential risk since they could quickly find themselves in a precarious position if an unforeseen event were to occur. In fact, the higher a household's debt load, the more sensitive that household is to an interest rate hike or to any other life event that can affect a person's income for a certain period of time.

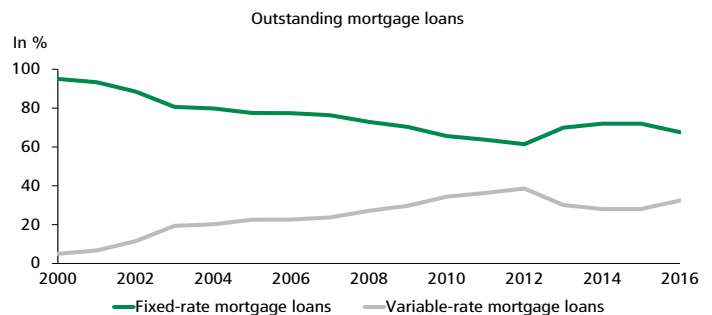
Households More Vulnerable than Before

The impact of rising borrowing costs would vary depending on the credit product involved. For most mortgage loans and conventional consumer loans, the impact would only be felt at renewal time, unlike variable-rate mortgage loans or personal lines of credit as they are directly tied to a financial institution's prime rate. And since they are quite stable over time, monthly credit card payments would barely be affected by interest rate

changes. To factor in these variables in the simulations, different types of loan features were taken into account. This approach is fairly realistic in that interest rate changes do not necessarily affect all monthly payments immediately. The impact is felt as loans are renewed, especially for mortgage loans since the terms are chosen at the outset.

While the distribution of mortgage and consumer credit has not changed much since the early 2000s, the types of products have certainly evolved. For example, loans with fixed interest rates are not nearly as popular as they were. Variable-rate mortgage loans have gained traction; they now account for almost a third of the market (graph 5), while about 40% of consumer credit involves variable-rate loans (graph 6 on page 4). Variable-rate loans now account for more than 30% of all personal loans (mortgage and consumer loans) compared with 15% 15 years ago (graph 7 on page 4).

GRAPH 5
Variable-rate mortgage loans have grown in the last 15 years



Sources: Ipsos Reid and Desjardins, Economic Studies

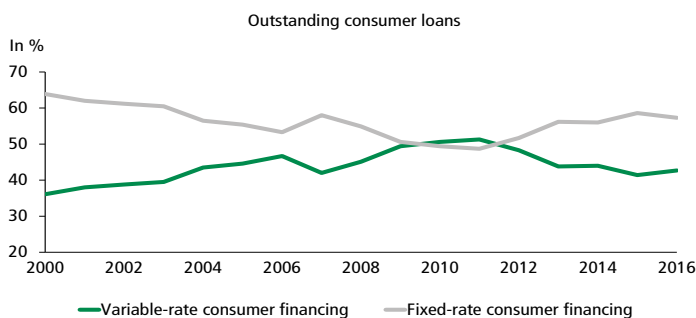
These changes mean that households are now more sensitive to changing interest rates. The appeal of personal lines of credit and variable-rate loans which are directly tied to the Bank of Canada key rates means that any increase is immediately passed

TABLE 1
Simulations of interest rate increases on household debt

	AVERAGE DSR ¹			SHARE OF HOUSEHOLDS WITH A DSR ¹ > 40%			SHARE OF HOUSEHOLD DEBT WITH A DSR ¹ > 40 %			
	Baseline	Alternative 1	Alternative 2	Baseline	Alternative 1	Alternative 2	Baseline	Alternative 1	Alternative 2	
Average 2000-2016				16.7%			5.5%			10.3%
2016				16.2%			5.1%			8.9%
	SCENARIOS			SCENARIOS			SCENARIOS			
	Baseline	Alternative 1	Alternative 2	Baseline	Alternative 1	Alternative 2	Baseline	Alternative 1	Alternative 2	
2021	16.4	17.0	17.8	5.0	6.0	6.7	9.2	11.4	12.6	

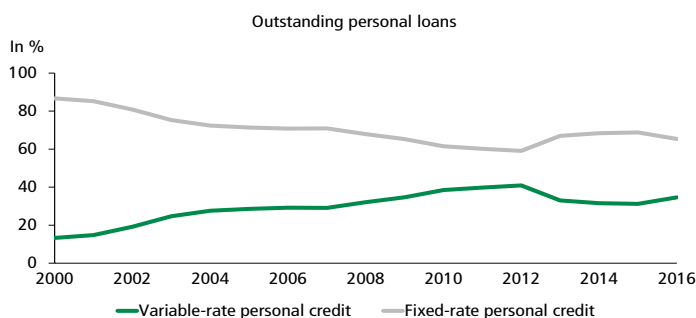
¹ Debt service ratio (DSR): Monthly household payments (mortgage and consumer debt) relative to gross income. Sources: Ipsos Reid and Desjardins, Economic Studies

GRAPH 6
Variable-rate consumer financing has been steady



Sources: Ipsos Reid and Desjardins, Economic Studies

GRAPH 7
Variable-rate personal financing has grown since 2000



Sources: Ipsos Reid and Desjardins, Economic Studies

on to borrowers. Conventional consumer loans, which have lost their appeal in recent years, have fixed rates for the length of the term (three to five years in most cases); this protects monthly payments from sudden fluctuations. Low interest rates have made lines of credit highly attractive, but this leaves households more exposed to rate increases.

Trouble for Several Households

While the financial position of Quebecers appears to be under control right now, a significant interest rate increase would have major repercussions. More households would have trouble repaying their loans. If the BoC's overnight rate were to unexpectedly make a gradual climb to 3.0%, or even 5.0%, the negative impact would be significant. Between 6.0% and 6.7% of households would surpass the critical debt load threshold in 2021 (box 2). This represents between 20,000 and 40,000 additional households that would move into this zone in the space of five years.

Those with variable-rate loans or access to a personal line of credit would feel the direct hit of each key rate increase ordered by the BoC. For fixed-rate loans, the impact is felt on the loan's renewal date since a higher rate will be charged at renewal. Because one-third of outstanding loans are variable-rate loans,

BOX 2
Summary: Impact of Rising Interest Rates

Summary of simulations:

- Direct effects calculated on indebted households' monthly payments as part of their income (debt service ratio or DSR).
- The overnight rate would increase to 1.25% within five years in the base scenario, to 3.0% in alternative scenario 1 and to 5.0% in alternative scenario 2.
- The portion of indebted households where the DSR is more than 40% of critical threshold would hold steady at around 5% until 2021 in the base scenario.
- In alternative scenarios 1 and 2, between 6.0% and 6.7% of households would surpass the critical debt load threshold, adding between 20,000 and 40,000 households.
- This is not a dynamic shock, which considers several variables at once. Rather, this is a static shock, which quantifies the impact of a rate increase on a single variable: DSR. Larger indirect effects (other than that on the DSR) are not evaluated.

Source: Desjardins, Economic Studies

households have become increasingly vulnerable to rising interest rates in the last 15 years or so.

The BoC believes that high household debt levels present a considerable risk in the medium term. The capacity of households to resist the rising cost of money is raising serious concerns. Even if the debt-to-income ratio is lower in Quebec, and interest rate payments are less than in Ontario and nationwide, the issue is just as important. Nothing points to a rebound in Canadian interest rates to the levels seen in the early 2000s or, even worse, in the early 1980s. Borrowers nevertheless have to prepare to deal with some interest rate increases in the coming years. This is especially true for households with mortgage loans to be renewed several times over the amortization period.

Indebted households still have some time to clean up their balance sheets. If the most fragile households take full advantage of this grace period to reduce their debt load, this would lessen the risk of climbing interest rates. But since debt levels are outstripping income, this could be a tough combination for some borrowers. The impact of rising interest rates will be fully tangible in a few years, with current loans being renewed at higher rates. This represents a medium-term issue for Quebec households' financial position. Declining residential real estate prices represent another risk whose effect will be analyzed in the next *Economic Viewpoint*.

Hélène Bégin, Senior Economist