# DESJARDINS AFFORDABILITY INDEX

## An Index to Track Home Prices and Assess the Risk of a Housing Market Correction

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The Desjardins Affordability Index (DAI) represents the combined effect of fluctuations in home prices, mortgage rates, other ownership costs (property taxes and utilities) and disposable income levels on the ability of households to purchase a home and cover the related costs. It can be used to assess risks to the housing market and track big swings in home prices. It's calculated on a quarterly basis for Canada, Quebec, Ontario and all census metropolitan areas of these two provinces, as well as Calgary, Edmonton, Vancouver and Winnipeg.

### The rationale for an affordability index

Residential construction directly accounts for nearly 9% of Canada's economy. The state of the housing market also has a major impact on the rest of the economy, particularly consumer spending. Since housing accounts for a large proportion of household wealth, substantial price fluctuations can have an impact on standard of living and spending habits. Buying a home also goes hand in hand with other big purchases (furniture, appliances, etc.). A real estate market correction could also have serious consequences for financial institutions. As the leading mortgage lender in Quebec, Desjardins has a natural interest in tracking housing affordability—thus the reason for creating the DAI. It can provide a better assessment of households' ability to participate in the housing market based on home prices. By helping to determine whether housing remains affordable, the DAI can provide a better assessment of risks to the housing market and track big price swings.

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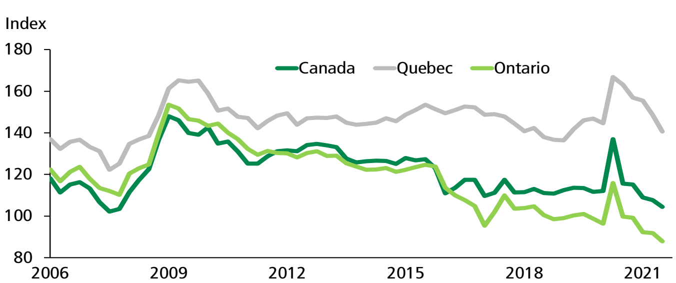
**The index fell sharply at the onset of the pandemic in 2020**




Sources: Bank of Canada, Statiscs Canada, JLR Land Title Solutions, Equifax Company, Canadian Real Estate Association, Conference Board of Canada and Desjardins Economic Studies

### How it's calculated

To construct the DAI, first we calculate the annual payments on a typical mortgage for an average-priced home. The average price is based on existing home sale prices, as published by JLR Land Title Solutions, an Equifax Company, for Quebec and its six census metropolitan areas (CMAs) and by the Canadian Real Estate Association (CREA) for Canada, Ontario and the other CMAs.[1] It's not a perfect measurement, but we believe it's the best indicator of home prices in Canada. Mortgage payments are calculated based on a 25-year amortization period and a down payment of 10% of the property value. To reflect the two main options for mortgage terms, we use the average of the one-year rate and the five-year rate. Since these rates are the same across all Canadian provinces and cities, they don't affect differences in affordability between different markets. We also use effective mortgage rates rather than advertised rates.

[1] The two data sources are not directly comparable: the JLR data is recorded on the date the sale is finalized with the notary, and the CREA data is recorded on the date the sales agreement is signed with the realtor. That means there's a three- to six-month lag between the JLR and CREA data.

While mortgage payments are the biggest expense associated with homeownership, there are a number of other costs involved, too. Our index incorporates property taxes and utility rates, mainly electricity and heating, to get a better estimate of the overall cost of ownership.

After estimating the ownership costs for an average-priced home, we then calculate the qualifying income. That's the level of income a buyer needs to have for a financial institution to approve a mortgage on an average-priced home. For a home with annual ownership costs of $30,000, a lender whose bar is for these costs not to exceed 32% of household income would require the borrowing household to have a gross annual income of at least $93,750 ($30,000 / 0.32) to qualify for a mortgage. To more accurately reflect the real purchasing power of households, the DAI is based on personal disposable income, i.e., after taxes and social security contributions. That changes the qualifying income calculation somewhat.

To get the DAI, we then calculate the ratio between the average disposable personal income of households and the qualifying income. A reading of 140 means the average income exceeds the income needed to get a mortgage on an average-priced home by 40%. A rise in the DAI means the housing market is becoming more affordable, and a fall indicates that it's becoming harder for households to buy a home. The DAI serves as an indicator of the combined effect of changes in house prices, mortgage rates, other ownership costs and disposable income levels on the ability of households to buy and maintain a home.

The format and methodology behind the DAI are modelled after the Housing Affordability Index (calculated by the US National Association of Realtors), the leading benchmark in the US, with similar indicators calculated in some states and in Australia. The DAI covers all households and homes, which means it paints a complete picture of the market. In our opinion, this is a better way to assess the risks of a nationwide housing correction. There's another family of indexes that measure how accessible housing is for first-time home buyers. While appealing in theory, it's actually quite difficult to single out the homes that are bought by first-time home buyers and the households that are potential first-time home buyers. That's why we've opted for a more general index that requires fewer assumptions and approximations.

One thing to avoid is directly comparing DAI readings from different markets. Housing perceptions vary from region to region, which can make for very different affordability levels. For example, even after taking income disparities into account, Quebec residents are used to much lower home prices than Ontarians. That means Quebec has a higher affordability index. So while a DAI reading of 130 is normal for Ontario, it would indicate a relatively unaffordable market in Quebec. That doesn't mean the Quebec market is immune from difficulties if the DAI goes down. At both the provincial and city levels, it's primarily the trend of the DAI and where it's sitting compared to its own average that indicate how affordable homeownership is.

DAI results are updated twice a year, for the first and third quarters. You can find the analysis on our website.