

# DESJARDINS Affordability Index



Desjardins  
Economic Studies

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November 8, 2006

## A NEW TOOL FOR ANTICIPATING VARIATIONS IN HOUSING PRICES AND EVALUATING RISKS OF A CORRECTION IN THE HOUSING MARKET

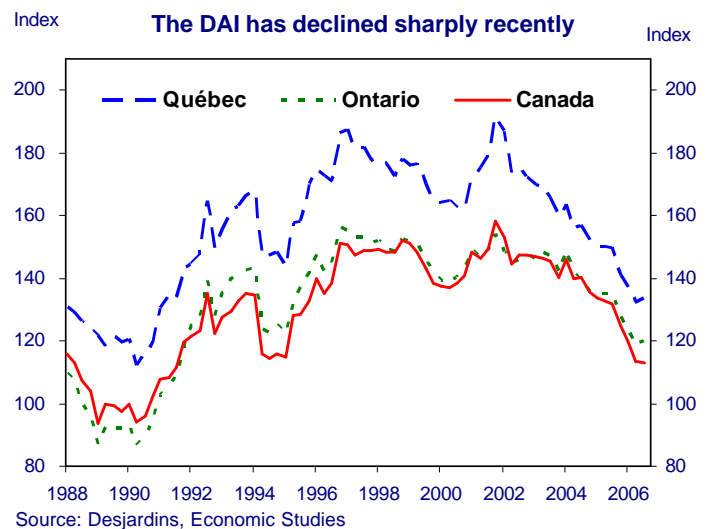
### Summary

The new Desjardins Affordability Index (DAI) reflects the combined effect of variations in housing prices, mortgage rates, other ownership costs and disposable income on the ability of households to acquire a property and bear the associated costs. It can be used to evaluate the risks that exist in the housing market and to anticipate major variations in housing prices. This quarterly index is calculated for Canada, Québec, Ontario and for all the census metropolitan areas in these two provinces. The DAI is also available for the cities of Calgary and Vancouver.

The past few years have been extremely busy for the housing market, both in Canada as a whole and in the provinces. New construction has been firing on all cylinders, while the resale market for existing houses has shown record energy. All this activity has been reflected in housing prices, which have increased sharply of late.

This sudden rise in prices is raising some concerns. Is the housing market now overvalued? Disproportionate price growth could put the purchase of a home out of reach of many potential buyers. Demand for properties would then be reduced, which could lead to a significant slowdown in the housing market. Some people go so far as to talk about a real estate bubble, which could result in a major housing price correction when it eventually bursts. Are these fears well founded?

This question is of capital importance. Home building accounts directly for nearly 6% of the Canadian economy. The health of the housing market also has a strong influence on the rest of the economy, especially on consumer spending. Since homes represent a major component of household wealth, pronounced price fluctuations could influence consumers' standard of living and their desire to spend. Furthermore, buying a home also entails other major purchases (furniture, household appliances, etc.). A correction in the housing market could also have significant consequences for financial institutions. It therefore comes as no surprise that the Desjardins Group, the number one mortgage lender in Québec, takes a close interest in the issue of housing affordability.



We have therefore developed a new tool, the Desjardins Affordability Index (DAI), to better evaluate the ability of households to support the housing market, given property prices. By helping us to determine whether housing is still affordable, the DAI will enable us to better evaluate the risks affecting the housing market and to anticipate major price variations.

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## How is the Desjardins Affordability Index calculated?

The form and the methodology of the Desjardins Affordability Index are inspired by those of the Housing Affordability Index calculated by the National Association of Realtors in the United States<sup>1</sup>. This index is the benchmark in the U.S., and similar indicators are calculated in some U.S. states as well as in Australia. The DAI covers all households and dwellings, so it provides a comprehensive picture of the market. We consider this the best way of assessing the risk of a generalized correction in the residential sector. Another family of indicators endeavours to measure the accessibility of housing for first-time buyers. In theory, such indicators are highly interesting but, in practice, it is very difficult to isolate homes purchased by first-time buyers and households that represent potential first-time buyers<sup>2</sup>. We therefore chose a more general indicator which requires fewer assumptions and approximations.

To construct the DAI, we start by calculating the annual payments on a typical mortgage on an average-priced home. The average price is based on the selling prices of existing homes, published by the Canadian Real Estate Association. Although imperfect, this measurement represents, in our view, the best indication of housing price trends in Canada. The mortgage payments are calculated using an amortization period of 25 years and a downpayment equivalent to 10% of the property value. To reflect the two main mortgage term options, an average of the one-year and the five-year rates is used to calculate the mortgage payments. Since these rates are the same in all provinces and municipalities in Canada, they have no bearing on variations in affordability from one market to another.

Mortgage payments are the primary expense associated with the purchase of a home, but occupying the home also generates many other costs. Our index includes property taxes and utility costs, mainly electricity and heat, to obtain a better estimate of ownership costs as a whole.

After estimating the cost of owning an average-priced home, we then calculate the qualifying income. This is the income that is required in order for a financial institution to agree to issue a mortgage to finance the purchase of the home. For example, if the annual ownership costs are \$30,000, lenders, who consider that such costs should not exceed 32% of household income, require that a household have an annual gross income of at least \$93,750 ( $30000/0.32$ ) in order to qualify. To reflect the real buying power of households more accurately, the DAI is based on personal disposable income, i.e. income after taxes and social insurance contributions. This approach changes the calculation of qualifying income slightly.

The final step in calculating the Desjardins Affordability Index is to determine the ratio between the average personal disposable income per household and the qualifying income. A result of 140 means that the average income is 40% greater than the income needed to obtain a mortgage for an average-priced home. An increase in the DAI indicates that the housing market is becoming more affordable. Conversely, a decrease means that it is becoming more difficult for households to purchase a property. Thus the DAI shows the combined effect of housing price, mortgage rates, other ownership costs and disposable income on the ability of households to buy a home and bear the associated costs.

## What is the purpose of an affordability index?

To appreciate the usefulness of an affordability index, it is worthwhile to review historical trends in the housing market. The last sustained increase in housing prices dates back to the end of the 1980s. After modest activity in the first half of that decade, the housing market took off in Canada and prices of homes skyrocketed by more than 80% between 1985 and 1989. The explosion in prices was especially strong in Ontario (+110%), more modest in Québec (+50%). However, this increase was not sustainable; the housing market came close to a standstill at the beginning of the 1990s, and a period of sluggishness ensued across the country. House prices stagnated and even declined. High interest rates and an economic recession exacerbated the difficulties of the housing market during that period.

Today, that period of lethargy seems far behind us. The housing market gradually regained strength starting in the mid-1990s and has been experiencing good times since the turn of the century. Between 2000 and 2005, house prices rose by 52% in Canada. This time, the increase was more marked in Québec (+66%), and somewhat less spectacular in Ontario (+43%).

How can we tell whether the recent price increases constitute a normal catching up or whether, as was the case at the end of the 1980s, the market is overheating and is likely to experience a significant correction? An affordability index is one of the best tools for answering that question, since it enables us to determine whether housing prices are sustainable by comparing property costs with household incomes.

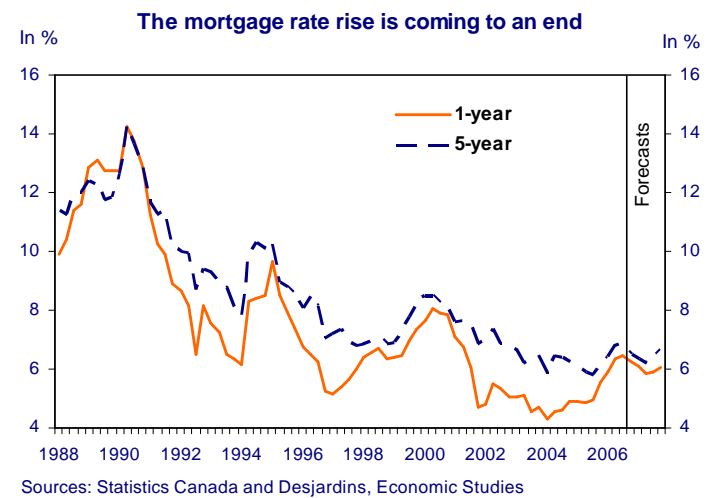
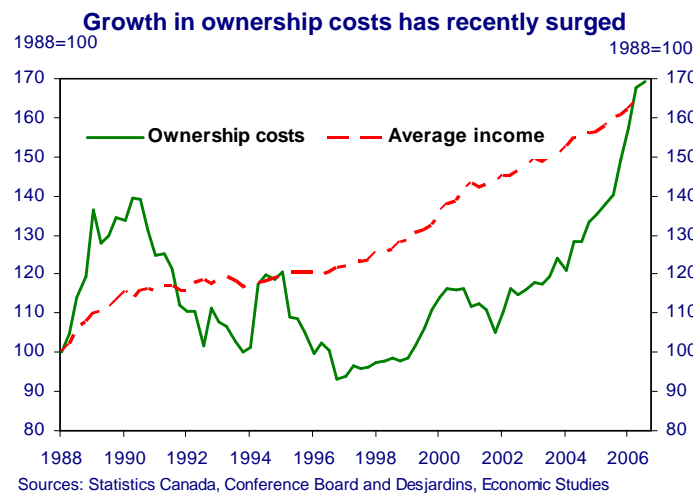
## What does the DAI tell us?

Let's look back at the end of the 1980s. A sustained rise in prices and an increase in mortgage rates pushed affordability down to very low levels. Not surprisingly, a correction ensued and housing prices fell significantly, in real terms. After that, the housing market gradually became very affordable again during the 1990s, since prices levelled off and mortgage rates declined significantly. Consequently, affordability indicators reached very high levels at the end of that decade and at the beginning of the millennium. At that time, the market clearly seemed to be undervalued. This foretold good times for the housing market and an acceleration in price growth.

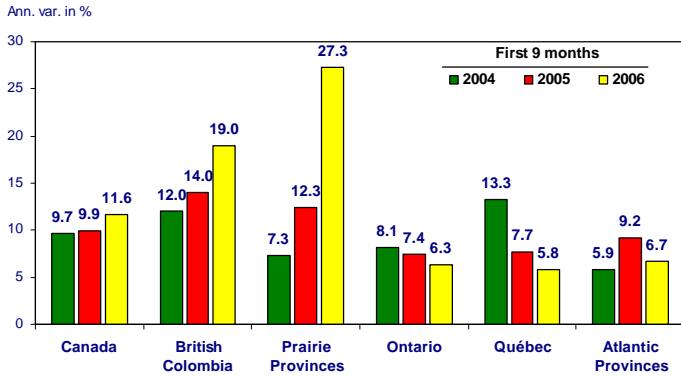
This is indeed what happened. The Canadian housing market gradually started moving again beginning in the mid-1990s, but the real acceleration got underway in 2002. That year, housing starts jumped by 26% in Canada, surpassing 200,000 units; the increase in Québec was 53%. Housing prices quickly posted sharp increases, but new declines in mortgage rates kept the DAI very high until the beginning of 2005. However, the Bank of Canada has raised its key rates by 1.75% since August 2005, which has helped to push mortgage rates up, especially short-term ones. Moreover, an economic recovery and fears of inflation have pushed medium- and long-term rates up as well. From a historical perspective, mortgage rates are still low, but their increase has put pressure on affordability. Thus, ownership costs have risen sharply in recent quarters. One positive factor is that growth in household disposable income has accelerated somewhat recently, reaching an annual rate of over 5% in the first three quarters of 2006. This increase in households' financial capacity is slowing the decline in affordability but it is not enough to offset the rise in ownership costs. As a result, the DAI dropped sharply in the last few years.

The recent drop in the DAI gives cause for some concern, but it is important to understand how to interpret this index. Most importantly, we must refrain from directly comparing DAI levels in different markets. Housing is perceived differently in different regions, which results in very different levels of affordability. For example, even if we take variations in income into account, Québecers are used to dealing with much lower housing prices than those of Ontario. This means a higher affordability index in Québec. Thus a DAI of 130 reflects a normal situation in Ontario but a relatively unaffordable market in Québec. This does not prevent the Québec housing market from experiencing difficult times when the DAI falls. For individual provinces or municipalities, it is primarily the trends in the DAI and its level in relation to its own average that enables us to conclude whether purchasing a home is affordable.

The DAI has now fallen below its historical average in Canada, in Québec and in Ontario. The housing market can therefore no longer be considered affordable and is unlikely to sustain drastic new price increases. Nevertheless, it is encouraging to note that affordability remains significantly higher than the lows reached just before the correction that took place at the beginning of the 90s. The housing market is certainly not as attractive as it was at the beginning of this decade but, so far, price increases do not appear to be exaggerated and a correction does not seem imminent<sup>3</sup>. On average, homeowners still seem to be able to bear the cost of owning a home.

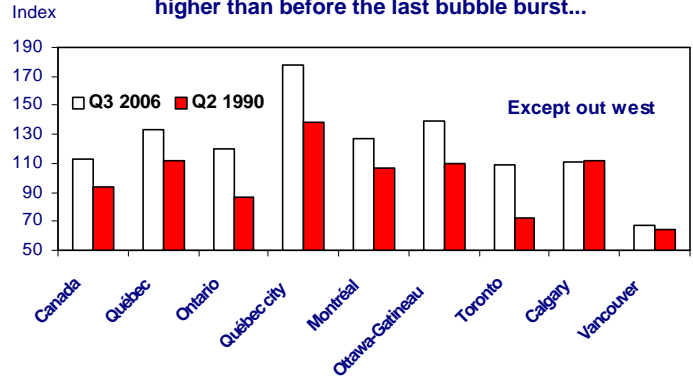


Price increases are accelerating out west but are moderating in the rest of the country



Source: Canadian Real Estate Association (CREA)

The Desjardins Affordability Index is definitely still higher than before the last bubble burst...



Source: Desjardins, Economic Studies

What lies ahead?

We are compelled to wonder whether the decline in affordability will continue over the next few quarters. If so, the situation could become much more worrisome. In the short term, what happens to affordability will depend primarily on mortgage rates and housing prices.

Prospects for mortgage rates are encouraging. The Bank of Canada seems to have ended its money tightening, and all signs point towards key rates remaining unchanged for some time to come. This factor means that mortgage rates will stop climbing. Moreover, worsening economic prospects in North America could bring all interest rates down by mid-2007, especially those for longer terms. We therefore believe that mortgage rates will diminish slightly over the next few quarters. This will put a damper on growth in home ownership costs.

In Québec and Ontario, the housing market began a gradual slowdown last year, and growth in house prices moderated to a significant degree. If this trend continues as expected, the increase in housing costs should moderate considerably, coming closer to the pace of growth in household income. As a result, the DAI could stabilize. The most likely scenario for both provinces would seem to be a gentle slowdown in the housing market, without a widespread decline in prices. The slight rise by the DAI in Québec and Ontario in the third quarter supports this fairly optimistic scenario.

The situation gives cause for more concern out west, where the strength of the economy has led to an overheating of the real estate market. In Vancouver, the metropolitan area where property is the least affordable, the affordability index is getting dangerously close to its historical low, while the average price of homes now exceeds \$500,000! Until recently, the situation seemed less problematic in Calgary. However, prices there have exploded since the beginning of 2006. Compared to the same period last year, cumulative growth is approaching 40% after 9 months, resulting in a spectacular drop in affordability. These two markets are showing little sign of losing steam for the time being, so pressure on prices may continue. Contrary to what we observe in the rest of the country, the risk of a significant overheating in the housing market, and even of a real estate bubble, seems only too real out west.

The changes that have occurred in the housing market in recent years would seem to indicate that the DAI is fulfilling its role in predicting major variations in home prices. We will need to continue to closely monitor developments in the Desjardins Affordability Index over the next few quarters to quickly detect any risks and opportunities that may arise in the housing market. A bulletin presenting DAI results will be made available every quarter. The bulletin for the third quarter of 2006 is now available on our Web site at:

<http://www.desjardins.com/economics>

1 <http://www.realtor.org/Research.nsf/Pages/HousingInx>.

2 See: CMHC, Canadian Housing Markets, Q3 1998.

3 Despite its qualities, the DAI is only one of many tools available for analyzing the housing market. A comprehensive analysis of the market requires other indicators, for example the ratio of sales to new listings. On this point, we recently published two economic viewpoints: “The evolution of house prices in Canada reflects the improvement in market fundamentals” and “Although there is no real estate bubble in Canada, regional disparities are generating some concerns”. Both studies are available on our Web site at: <http://www.desjardins.com/economics>