Canadian Home Builders' Association

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Assessing the Impacts of Changed Criteria for Mortgage Qualification

A report prepared by
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Canadian Home Builders' Association

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Background

On October 3rd, 2016 the Federal Minister of Finance announced new mortgage rules that include that for all new mortgages that require mortgage insurance, the borrower's ability to afford the payments must be assessed using the "posted rate" for five-year, fixed rate mortgages (as estimated by the Bank of Canada, based on a survey of the major banks). The intent is to reduce the risk that higher interest rates in future will cause these borrowers to be unable to afford their payments.

Current actual market interest rates for five-year, fixed rate mortgages are in the range of 2.5%. The testing will use a benchmark rate that is currently 4.64%, which in many cases is more than two percentage points higher than the borrowers' actual contracted interest rates.

Data from a consumer survey that was conducted in the fall 2015 (by Mortgage Professionals Canada and analyzed by this researcher) indicates that:

- Among Canadians who purchased homes during 2011 to 2015 and obtained a mortgage, 65% chose a five-year, fixed rate mortgage. If they had to obtain mortgage insurance, their ability to make the payments would have been tested using their actual mortgage interest rates. Under this new policy, they would have been tested using the much-higher posted rate.
- For the high-ratio mortgage subset of these buyers (who had down payments of less than 20% of the purchase price, and therefore should obtain mortgage insurance), 70% chose a five-year, fixed rate mortgage and 30% chose some other combination of mortgage type and term-to-renewal. Therefore, within this subset of buyers, 30% would previously have been tested using the posted rate, but 70% would have been tested using their actual market-determined interest rates. In future, all of these would use the much-higher posted rate. Among this 70% of mortgage borrowers, some would have been unable to qualify for their mortgages if tested using the posted rate, and therefore they might not have been able to complete their home purchase.

In addition, some lenders "securitize" their mortgages: the mortgages are "bundled" and sold to investors. Previously, if the home buyers had a low-ratio mortgage (i.e. with a down payments of 20% or more), these mortgages could be tested using the contracted interest rates. The October 3rd announcement requires that they be tested using the *five-year posted rates*, and some of these mortgages would not have been approvable if that test had been used.

In addition, these mortgages could previously have amortization periods exceeding 25 years. They must now be tested assuming an amortization period of 25 years. Adding this layer of test would increase the number of mortgages that would not have been approvable. Publicly-available data does not allow us to gauge the dimensions of the impact. That said, CMHC data shows that NHA mortgage-backed securities have a current outstanding balance of $442 billion: given the magnitude of securitization activity, we should assume that the number of mortgages subject to revised testing will not be trivial.

This review draws conclusions on the impacts of the new policy on housing markets in Canada and the potential impacts on the broader economy.

Key Findings

- For buyers who would previously have been qualified using their actual mortgage interest rates, the new requirement to use the posted rate will typically cause their calculated GDS and TDS ratios to be increased by 5 to 7 percentage points.
- While we don't have enough data to draw firm conclusions on the impact, the opinion estimate presented here is that housing market activity could be reduced by 6-10% as the result of the policy change.
- This would be the direct impact. Second round effects (reduction in move-up and move-down buying activity) have the potential to double the impact.
- This effect will occur in all regions of the country. The majority of market areas in Canada will move from balance to weakness; the really hot markets (now Toronto and environs, but formerly also Vancouver) will move from "extremely hot" to "hot".
- There will be negative economic impacts, as shown by comparing these measures to the measures in 2012 to limit amortization periods to 25 years. For the past three years, Canada has seen weak job creation, with the result that the share of Canadians who are employed has fallen.
- Increased stress testing for securitized mortgages will reduce access to mortgage funding and competition within the mortgage market, bringing some increase to market interest rates. The higher interest rates will affect home buyers as well as people renewing mortgages. Each year, over 1 million Canadians renew a mortgage, and they will be impacted as an indirect consequence of the policy.
- Posted mortgage interest rates have an artificial existence. They are not determined by market forces and they provide no guidance as to future interest rates. Their primary purpose is to be used in the calculation of penalties when someone repays their mortgage before the end of the contracted term.
- The use of posted rates that are more than two points above actual market rates is appears very cautious. This review concludes adverse impacts on the market and the economy will likely exceed the low-probability risk that rates will rise by more than two points.
- Using the posted rate today to assess a renewal in 5 years may also significantly over-estimate the impacts on costs and on GDS/TDS ratios (and is being applied in the unlikely event that rates will rise to that level).

- One possible outcome is that the major banks could reduce their posted mortgage interest rates, thereby reducing the negative effects of the policy. While this is possible, it seems unlikely to occur.

Individual Borrower Impact Scenarios

A current typical rate for a 5-year fixed rate mortgage would be 2.5%. Under the policy change, for many borrowers, their qualification would be tested using the posted rate of 4.64%.

The table below shows several scenarios, in which mortgage amounts are various multiples of the borrower's income.

Key assumptions include:

- 25 year amortization period
- $75,000 income
- Realty tax rate of 1.0% of the mortgage amount (actual rates will vary, of course)
- Monthly heating cost of $150 (also will vary).

The scenarios suggest that at a 2.5% interest rate, the current maximum loan amount would be equal to roughly 5.5 times the borrower's income (the GDS ratio would be in the range of 37.5%).

In the scenarios, using a 4.64% qualifying rate, the maximum approvable loan amount would be in the range of 4.5 times income (the maximum loan amount would be reduced by about one year's income (or about $75,000 in this instance).

A buyer whose mortgage requirement was 4.5 times their income (or less) would likely be unaffected by use of the 4.64% qualifying rate (as the calculated GDS would be about 37% or less), and therefore the buyer should be able to complete the purchase. For mortgage requirements above 4.5 times the borrower's income, the test using the 4.64% rate may prevent the buyer from obtaining the financing and therefore it might be not be possible to complete that purchase.

Table 1
Scenarios for Impact of Stress Test Based on Posted Rate
(Based on $75,000 Income)

Mortgage Principal =	Mortgage Interest Rate	Mortgage Amount	Monthly Payment	Payment as % of Income	Addition to GDS for Taxes+Heat	Approx. GDS	Change in GDS Ratio (pct points)
4 times income	2.500%	$300,000	$1,343.90	21.50%	6.40%	27.9%	5.44%
	4.640%	$300,000	$1,683.85	26.94%	6.40%	33.3%	
4.5 times income	2.500%	$337,500	$1,511.89	24.19%	6.90%	31.1%	6.12%
	4.640%	$337,500	$1,894.33	30.31%	6.90%	37.2%	
5 times income	2.500%	$375,000	$1,679.87	26.88%	7.40%	34.3%	6.80%
	4.640%	$375,000	$2,104.81	33.68%	7.40%	41.1%	
5.5 times income	2.500%	$412,500	$1,847.86	29.57%	7.90%	37.5%	7.48%
	4.640%	$412,500	$2,315.29	37.04%	7.90%	44.9%	
6 times income	2.500%	$450,000	$2,015.85	32.25%	8.40%	40.7%	8.16%
	4.640%	$450,000	$2,525.77	40.41%	8.40%	48.8%	

Source: Assumptions and calculations by Will Dunning

The Population Affected

The spring 2015 report by Mortgage Professionals Canada found that on average home buyers borrow 76% of their approved mortgage amounts. For first-time buyers the figure is 81%. The next table is from that report. These results indicate that with the maximum approvable mortgage loan now equal to about 5.5 times income, the average borrower would obtain a mortgage at 4.5 times their income. Therefore, with a test at the 4.64% posted interest rate, an average buyer might still be able to obtain their desired amount of financing and complete their desired purchase.

However, of course, actual mortgage amounts will vary. The table indicates that among first-time buyers, about 40% borrow less than 80% of their approved amounts (i.e. they borrow 4.5 times their income or less) and 60% of the first-time buyers borrow 80% or more of their approved amounts. For this 60% of first-time buyers, the new qualification criteria would often have negated their ability to complete the purchase that they actually made. Some might have been able to increase their down payments, so that they could complete that purchase. Others might have been willing and able to purchase a less expensive property, such as a smaller home or a less expensive location. But, if more people are chasing lower priced homes, more of them will be unable to find something that meets their needs and for which they can get financing. Undoubtedly, some of these buyers would not be able to make sufficient adjustments and they would not make any purchase.

Table 2
Percentages of Approved Amounts Borrowed

% Borrowed	*1st Time Buyer*	*2nd Time Buyer*	*Subsequent Purchases*	*All Buyers*
< 50%	7%	13%	24%	14%
50%-74.9%	25%	29%	30%	27%
75%-79.9%	8%	10%	7%	8%
80%-84.9%	8%	8%	7%	8%
85%-89-9%	9%	4%	6%	7%
90%-94.9%	12%	13%	6%	10%
95-99.9%	12%	4%	6%	8%
100%	12%	11%	12%	12%
> 100%	6%	8%	4%	6%
Total	100%	100%	100%	100%
Average	81%	76%	69%	76%

Source: Table 4-8 (page 19) of the Spring 2015 report by Mortgage Professionals Canada (formerly the Canadian Association of Accredited Mortgage Professionals) “A Profile of Home-Buying in Canada”

To estimate the numbers of buyers that would be affected, we need two factors for which unfortunately, good data is not publicly available:

- How many mortgage applicants who were previously not tested against the posted rate, would have been under the changed policy?
- Of these, what share will become unable to buy?

The greatest impacts will be for buyers who require mortgage insurance as they have less than a 20% down payment (“high-ratio” mortgages).

However, there will also be impacts on some buyers who have down payments of 20% or more ("low-ratio" mortgages). If the lender plans to securitize mortgages (or wants to retain an option to do so in future) then the mortgages must be tested again the posted rate. Moreover, some of those mortgages are now being approved at 30 year amortization periods, but they would have to be tested at a 25 year amortization. Under the required testing, some share of these mortgages (an unknown and unknowable share) would no longer be approvable.

Looking at the two factors noted above:

- From the Mortgage Professionals Canada survey (spring 2015) we can infer that up to 60% of first-time buyers will be unable to complete the purchase for which they would previously have been qualified. Some of these will make adjustments and still be able to buy; some will be removed from the market.
- Some low-ratio buyers will be removed from the market.
- An opinion estimate is that one-quarter to one-third of home buyers will have previously been tested on their actual rate but will now be tested on the posted rate.
- A further opinion estimate is that among this group, one-quarter to one-third will be removed from the market.
- Combining those two factors, the expectation is a 6-10% reduction in housing activity.

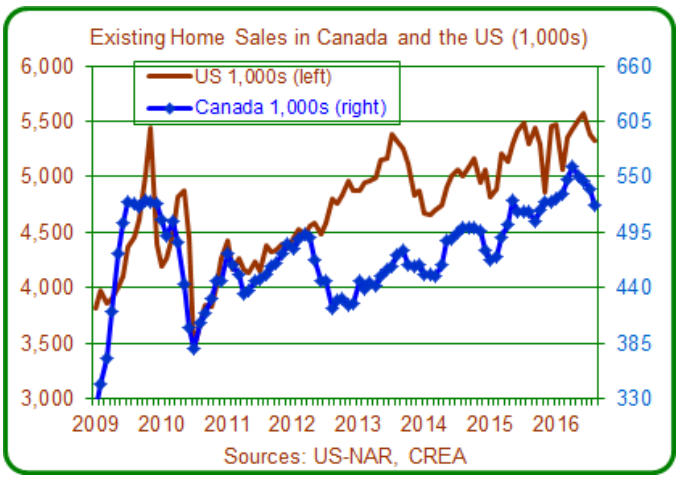
That is a "first round" effect. As the number of sales are reduced in the lower reaches in the housing market, potential move-up buyers will find it more difficult to sell their homes, and therefore there will be "second round" effects of reduced move-up (and move-down) buying. With this, the initial effect of a 6-10% reduction could be doubled to a 12-20% impact. There will, of course, be local variations in the strength of the first round and second round effects.

Wider Market Impacts

With many sets of changes having been made to mortgage insurance criteria during the past decade, experience shows varying impacts. Most of the policy changes had minimal impacts. To date, one set had a demonstrably major negative effect: the July 2012 change that eliminated mortgage insurance for amortization periods longer than 25 years.

The impact of a policy change is not "what happened in the market?" Rather, it is "what happened in the market compared to what would have happened otherwise?" This of course is impossible to answer with certainty. But, we can look for evidence.

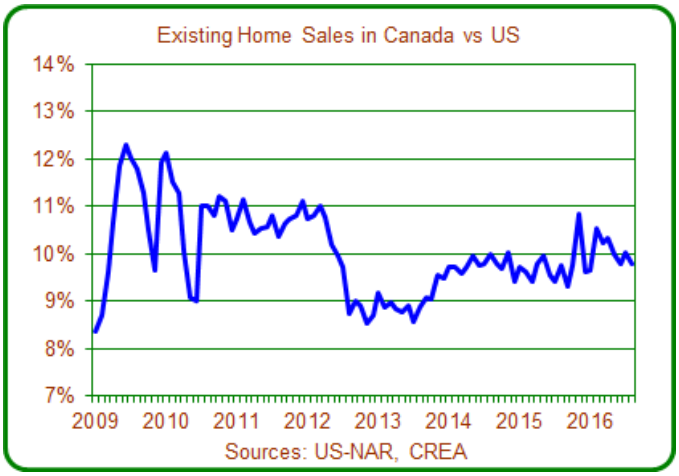
In the case of the July 2012 change, the evidence includes comparing market trends in Canada versus the United States. That comparison is shown in two charts. Canada's population is roughly 11% of the US figure. Therefore, the first chart shows sales figures, with the Canadian figures scaled at 11% of the US figures.



The second chart (on the next page) shows Canadian sales as a percentage of the US figures. Both charts show that during the early part of the recovery from the recession, Canadian and US sales

behaved very similarly (very close to the 11% ratio). However, there was a sudden divergence, which corresponds exactly to the policy change of July 2012. At that time, economic conditions were very similar in the two countries (as will be shown in the next section), and trends were similar for mortgage interest rates (sales in the US were boosted at that time by a reduction in rates; the same rate drop in Canada did not produce the same positive effect as in the US).

This evidence suggests very strongly that the policy change of July 2012 caused resale activity in Canada to fall by as much as 20%. The charts indicate that even today, the Canadian resale market continues to materially under-perform. By now, of course, there are significant economic differences that contribute to this (notably the plunge in oil prices that started two years ago, and better job growth in the US than in Canada, which is providing more support to housing activity in the US). But, the July 2012 policy change may still be constraining the Canadian housing market.

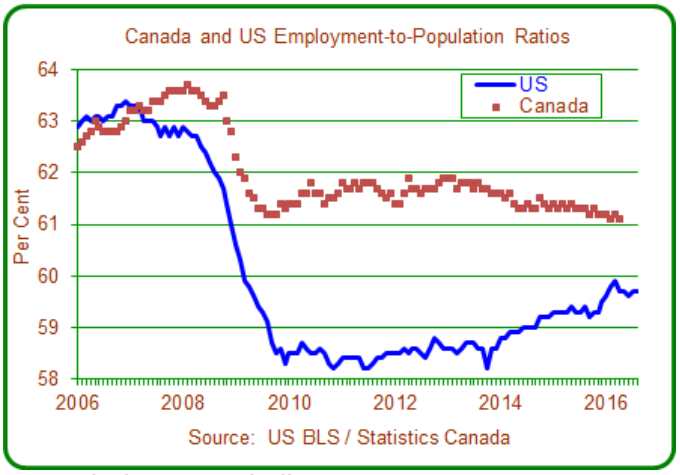


Late in 2012, the Canadian Association of Accredited Mortgage Professionals (now Mortgage Professionals Canada) published this author's research on the potential impact of the July 2012 change to mortgage insurance (*Annual State of the Residential Mortgage Market in Canada*). That review concluded that the policy change would negatively affect 11% of all mortgage borrowers. The greater impact (20%) that is seen in the resale market data confirms that second round effects can be substantial.

The key message here is that major policy changes that affect mortgage lending can have very substantial and very prolonged effects on housing activity.

Economic Impacts

A useful statistic for monitoring economic conditions (and for comparing different locations) is the percentage of adults who have jobs (known as the "employment-to-population ratio" or the "employment rate"). The chart here compares the employment rates for Canada and the US. It shows several key trends, including:



- The US had a much more severe recession than did Canada.
- Coming out of the recession (starting at about the end of 2009) the Canada and US were both in gradual recovery, with the rates of recovery being very similar.
- This similarity lasted until the start of 2013, at which point the employment rate began to slide in Canada but continued to recover in the US. At that time, there weren't any obvious major factors that would have caused this parting-of-the-ways. It is quite possible that six

months after the mortgage insurance policy change (which appears to have reduced housing market activity by 20% compared to what would have occurred otherwise), the reduction of housing market activity was having negative economic consequences.

- Subsequently, the US has shown greater improvement, in contrast to continued weakness in Canada. The current divergence is easily understandable as the consequence of the changed market for oil (and other major commodities).
- It is possible that this newly announced policy change will have housing market impacts similar to those seen in the wake of the July 2012 change. Thus, the economic consequences could be also be similar.

The point here is that housing is important to the economy and job creation (through both direct and indirect effects) and that policy changes that affect the housing market will have corresponding impacts on the economy.

Speaking more broadly: around the world, there is currently a desire to stimulate economies through low interest rates. Interest rates work on the economy by affecting decisions to save or spend, and to borrow. Low interest rates work their magic if people borrow. The most interest rate sensitive sector of the economy is real estate, and particularly residential real estate. Any policy that aims to constrain mortgage borrowing will also constrain the benefits of low interest rates. In short, it has to be expected that this policy change will likely impair the Canadian economy at least to some extent.

Credit Availability and Competition in the Mortgage Market

In Canada, most mortgage lending is done by the major banks. However, there is significant lending by smaller financial institutions, including pension funds, insurance companies, credit unions, and caisses populaires. There are other lenders that do not have their own funds to lend, but who obtain capital through "securitization" (by bundling mortgages and selling them as bonds). Under the new mortgage insurance policies, these lenders will now have to test the borrowers using the posted rate (rather than the actual contracted interest rate) and a maximum amortization period of 25 years (even though contracted amortization periods may be 30 years for "low-ratio" mortgages). This two-pronged testing will disqualify some unknown number of potential borrowers, who will either be pushed out of the market entirely, or may be pushed to lenders who do not securitize mortgages. In the event, this will reduce the market role for the lenders who securitize. Commentary in the media indicates that the impacts will be very substantial for these lenders.

In short, the policy changes will reduce competition in the mortgage market, to the benefit of the major lenders and to the disadvantage of consumers.

"Posted Rates"

Posted mortgage interest rates have a very artificial existence. Since virtually no mortgages are actually contracted at the posted rates, these posted rates are not being determined by the marketplace. They are set by lenders for administrative purposes. Their primary purpose is to be used in the calculation of penalties when someone repays their mortgage before the end of the contracted term. A second administrative purpose is in the qualification of borrowers for mortgage insurance.

Thus, lenders posted rates do not provide any signals about what is a "normal" interest rate, or what interest rates might be in the future. For that reason, there is no evidence-based argument that posted rates are the correct rates for testing borrowers' abilities to afford future payments.

A further significant argument against using posted rates for mortgage qualification is that they use current data to estimate conditions that might exist in the future, and the estimates could be incorrect. As an illustration:

- The data in Table 1 shows that using the posted rate of 4.64% rather than the actual market rate of 2.5% raises the estimated payment by 25.3%.
- However, if at renewal in five years the actual rate were to become 4.64%, the actual payment would rise by a smaller amount – by 20.5% (because so much principal is repaid during those five years, if the borrower pays only the required amounts; if the borrower makes any additional payments, the impact is even less).
- During those same five years, the borrower will in all likelihood have seen some income growth. If income grows by 10%, then the burden of the mortgage payment would rise by about one-tenth. Taking the first example from Table 1, the GDS ratio would rise from the initial 27.9% to 30.0% after the renewal.
- The policy requirement to use the posted rate at the start results in a 33.3% GDS in this example, which clearly over states the potential increase in the GDS (and TDS) ratio, by more than double.

When Will We See the Impacts?

History tells us that in the near term there will be gyrations in the data. Even though the new policy takes effect in less than two weeks, there could be a short term bump in sales, and then a setback. Our first good evidence of the impacts on sales will be the reports for December and January that are released by the Canadian Real Estate Association at mid-January and mid-February.

Price effects will take longer to show up: buyers and sellers need time to make pricing decisions based on the gradually emerging evidence from other sales.

Impacts on mortgage lending will also take time to appear, because the mortgage funds are advanced when the sale is completed not when the sale is agreed, and because there are reporting and publication lags for the data.

Potential for Unintended Consequences

This major policy change will have its intended consequence of reducing housing activity and mortgage borrowing (although the magnitude is uncertain). There will also be unexpected consequences. For example:

- Prior to the policy change, the use of the posted rate only for variable rate mortgages and fixed rate mortgage with terms less than five years has provided some incentive for borrowers to go with the longer, fixed rate mortgages. The "levelling of the playing field" will remove that incentive and we could very well see more use of variable rate mortgages and fixed rate mortgage with terms less than five years, increasing risk for those borrowers.

- As discussed earlier, there is a potential for reduced funding and reduced competition, resulting in higher actual interest rates, for both purchases and for mortgage renewals.

Other Issues to be Addressed

There are other issues still under discussion or pending. These include pending increases in mortgage insurance premiums.

More importantly, OSFI is considering increasing capital requirements related to mortgage portfolios. In addition, the Minister of Finance plans to hold a consultation on a "deductible" for mortgage insurance. Either of these changes would raise lenders costs and would result in higher interest rates in the market place (affecting borrowers actual costs, not just the notional costs used in the qualification process).

Regional Impacts

The table on the next page provides a preliminary review of regional conditions and potential impacts of an 8% drop in sales. It focuses on the sales-to-new-listings ratio (or "SNLR"). The SNLR indicates the state of balance in the resale market. The SNLR is a very good predictor of price growth and of future housing starts (which are also influenced by job creation). A high SNLR (and rapid price growth) indicate a need and opportunity to expand the housing stock through new construction.

For each of the provinces, the data includes the average SNLR over the past 12 months (up to August 2016). Then assuming that sales are reduced by 8% the actual SNLR is adjusted. (The 8% factor is the mid-point of the 6-10% range of first round effects. Potential second round impacts have not been included, but they would be additional). The last column in the table provides the author's estimate of the balanced market thresholds (the SNLRs at which we should expect moderate price growth). Because markets are rarely in an actual state of balance, it can be difficult to estimate the balanced market thresholds, and in some cases the estimated thresholds could be incorrect (in Quebec, for instance).

Preliminary findings:

- For Canada as a whole, the SNLR is well above its "balanced market" threshold. An 8% reduction in sales would leave the ratio above the threshold. The actual change in the national average price will depend on the mix of effects across the provinces.
- Newfoundland: the current SNLR is slightly below the threshold, and the price data hints that prices may now be falling. A reduction in sales would add to the risk of price drops.
- Prince Edward Island: the current condition appears to be a modest "sellers' market" with moderate price growth. A sales drop would most likely result in a flattening of prices.
- Nova Scotia: the market balance has recently improved and prices have been roughly flat. There is risk of price reductions in the event of reduced sales.
- New Brunswick: the current state is "balanced", with slight price growth. There is a risk of disruption.
- Quebec: despite what appears (statistically) to be a strong "sellers' market", Quebec is currently experiencing only modest price growth. This is at risk of turning to a "buyers' market" with price declines.
- Ontario has a very strong "sellers' market". An 8% drop in sales would still result in price growth, although at a less frantic rate.

- Manitoba: the provincial price is close to flat, reflecting a market just below the "balanced market" threshold. There is substantial risk of disruption and price declines.
- Saskatchewan: the SNLR indicates a very weak state (although at this time the provincial average price is flat or falling fractionally – a case of "downward stickiness"). A further (policy-induced) sales decline would be highly risky, and could overcome that stickiness.
- Alberta: the SNLR is well below the balanced market threshold (although prices appear to be relatively flat to date). There is high risk of price declines.
- British Columbia has a very strong "sellers' market". An 8% drop in sales would, at first glance not materially affect conditions. However, this would be on top of the 15% foreign buyers' tax in the GVRD. The combination of two constraints is likely to substantially tame price growth.

Table 3
The State of Balance in Provincial Resale Markets

Province	*Actual SNLR (past 12 months)*	*Adjusted for 8% Sales Reduction*	*Balanced Market Threshold*
Newfoundland	39.1%	36.0%	42%
Prince Edward Island	54.9%	50.5%	Unknown
Nova Scotia	49.8%	45.8%	44%
New Brunswick	44.8%	41.2%	43%
Quebec	49.6%	45.6%	38%
Ontario	67.3%	61.9%	50%
Manitoba	56.8%	52.3%	58%
Saskatchewan	39.3%	36.2%	54%
Alberta	47.6%	43.8%	56%
British Columbia	75.3%	69.3%	47%
Canada	60.6%	55.8%	52%

Source: calculations by Will Dunning, using data from the Canadian Real Estate Association

About the Author

This report has been prepared by Will Dunning, the principal of Will Dunning Inc. He has specialized in the analysis and forecasting of housing markets since 1982. This includes 15 years in various market analysis positions at Canada Mortgage and Housing Corporation. In addition to being an independent economic consultant, he acts as the Chief Economist for Mortgage Professionals Canada and occasionally consults to the Canadian Home Builders Association.