

CAAMP
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Change in the Canadian Mortgage Market

Prepared for:

**Canadian Association of
Accredited Mortgage Professionals**

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Table of Contents

	<u>Page</u>
1.0 Introduction and Summary	3
Evolving Approaches	3
Mortgage Choices	4
Financial Parameters	5
Evolving Housing Markets	6
Outlook for the Mortgage Market	7
About CAAMP	7
About the Author	8
About Maritz	8
Disclaimer	8
2.0 Mortgage Choices	9
Dimensions of the Mortgage Market	9
Mortgaging Activity During 2012	9
Fixed Rate Versus Variable Rate Mortgages	10
Mortgage Amortization Periods	12
Actions that Affect Amortization Periods	15
Mortgage Arrears	17
Types of Mortgage Representatives Consulted	17
3.0 Financial Parameters	19
Interest Rates	19
Mortgage Rate Discounting	20
Housing Equity	21
Equity Take-out	22
Impacts of Future Rises in Interest Rates	23
Credit Cards	23
4.0 Evolving Housing Markets	25
Economic Impacts Have Started in the Resale Market	26
Outlook for Housing Starts in the Greater Toronto Area	27
Analysis for Urban Canada	30
Conclusion	32
5.0 Outlook for the Mortgage Market	35
Appendix – Analysis of Housing Market Outlooks for Major Market Areas	36
Vancouver CMA	37
Calgary CMA	38
Edmonton CMA	39
Ottawa CMA	40
Province of Quebec (Urban Areas)	41

List of Tables		
Table #	Contents	Page
Table 1-1	Estimates of Mortgage Market Dynamics During 2012	5
Table 2-1	Percentages of Mortgages by Type, By Age Group	10
Table 2-2	Percentages of Mortgages by Type, For New Purchase Mortgages and Recent Renewals	11
Table 2-3	Mortgages Renewed During 2012 to the Present, Types of Mortgages Prior to and After Renewal	11
Table 2-4	Percentages of Mortgages by Length of Original Amortization Period and y Current Expectation	13
Table 2-5	Original and Actual Amortization Periods (Averages), For Paid-off Mortgages, By Year Paid Off	15
Table 2-6	Actions taken in the Past Year to Alter Amortization Periods, by Period of Purchase	16
Table 2-7	Consumers' Use of Mortgage Representatives, During 2012/13	18
Table 3-1	Average Mortgage Interest Rates	19
Table 3-2	Changes in Mortgage Interest Rates for Mortgages Renewed During 2012 and 2013	20
Table 3-3	Equity Positions of Canadian Homeowners	22
Table 3-4	Profile of Credit Card Use by Age Group	24
Table 4-1	Summary of Anticipated Changes in Housing Starts Trends, and Potential Impacts on Related Employment for Several Major Market Areas In Canada	32

1.0 Introduction and Summary

Until now, housing has played a major role in the recovery from the recession of 2008/09: housing construction, resale market activity, and mortgage lending have contributed directly to job creation. Even more importantly, rising housing values have supported consumer confidence and consumer spending, and thereby led to job creation.

The health of the residential mortgage market depends on trends in the housing market, as well as the broader Canadian economy.

Concerns about growing levels of residential mortgage debt in Canada have led the federal government to make changes that have reduced federally-backed lending in Canada. The Canadian Association of Accredited Mortgage Professionals (“CAAMP”) has argued previously (most notably in the Fall 2012 “Annual State of the Residential Mortgage Market in Canada”) that most of the changes to mortgage insurance criteria have had relatively minor impacts, but that the change that took effect in July 2012 has had a more significant impact on housing activity.

That report also argued that mortgage market regulation in Canada has been “pro-cyclical” – it was liberalized when the housing market was peaking during 2006 and 2007 (contributing to an even stronger peak than would have otherwise occurred), but then regulations were tightened during recent years when activity was organically slowing and markets were moving towards balance.

This report has been prepared for CAAMP by Will Dunning, Chief Economist. It provides an overview of the evolving state of the residential mortgage market in Canada. Major sections of this report are:

- Introduction and Summary
- Mortgage Choices
- Financial Parameters
- Evolving Housing Markets
- Outlook for the Mortgage Market

Data used in this report was obtained from various sources, including an online survey of 2,000 Canadians. Almost 60% were homeowners with mortgages and the rest were renters, homeowners without mortgages, or others who live with their families and are not responsible for mortgage payments or rents. The survey was conducted by Maritz (a national public opinion and market research firm) for CAAMP, during April 2013.

Evolving Approaches

CAAMP has conducted semi-annual consumer surveys since the fall of 2005. The research has a core of data on the residential mortgage market.

But, the contents have evolved over time, as CAAMP has sought to contribute to better understanding of the residential mortgage market. CAAMP has developed new data, to support better decision-making by consumers, lenders and policy-makers.

In this edition of the survey:

- Mortgage amortization periods have been profiled in more detail than in prior editions.
- A lengthy discussion of the evolving housing market situation leads to conclusions that housing starts in Canada, which have recently begun to slow, will continue to slow until at least the end of 2014, and the total reduction (25% to 30% compared to the 2011/12 average) will be larger than is expected by most other analysts. This will result in a drop of employment in construction and related industries.

Mortgage Choices

Mortgage Types and Amortization Periods

For homes that have been purchased recently (during 2012 to the present), fixed rate mortgages are most popular, with an 85% share of new mortgages. Variable and adjustable rate mortgages have a 13% share and 3% are combination mortgages.

During recent years, mortgages with longer mortgage amortization periods have increased. For mortgages on homes purchased during 2012 to the present, 75% of mortgages have contracted amortization periods of 25 years or less and 25% have extended amortization periods. Overall the data indicates that 80% of all mortgages have contracted periods of no more than 25 years.

Analysis in this edition of CAAMP's research contrasts borrowers' expectations about their repayment horizons with the original contracted horizons. In addition, for homeowners who have fully repaid their mortgages, actual amortization periods are contrasted with the original contracted periods. In both analyses, repayment horizons are being significantly accelerated:

- For mortgages that have been repaid during the past two decades, actual repayment periods have generally been only two-thirds of the contracted periods.
- For current mortgages, borrowers are making significant efforts to accelerate repayment, including voluntarily increasing their regular payments and making lump sum pre-payments.
- A new analysis in this edition shows that even though contracted amortization periods lengthened during the past half-decade, recent buyers expect to repay their mortgages in the same time periods as their parents' generation (just under 20 years).
- The new analysis also finds that some owners who bought their properties many years ago have refinanced their homes, with the result that their total amortization horizons (the length of time from the date of purchase to the final repayment) can be long. However, in those few cases, loan-to-value ratios are quite low.

Flows in the Mortgage Market

Data from the survey has been combined to generate the following estimates of flows in the mortgage market during 2012.

<i>Activity</i>	<i>\$ Billions</i>
Mortgages for Purchases	\$110
Discharges or Transfers for Homes Sold	-\$29
Principal Increases for Equity Take-Out	\$39
Principal Repayment via Regular Payments	-\$60
Lump Sum Payments by Mortgage Holders	
- Mortgage Not Fully Repaid	-\$10
- Fully Repaid	-\$3
Total Increase in Mortgage Debt	\$47
Source: Maritz survey for CAAMP, spring 2013; analysis by the author.	

Among borrowers who took out a new mortgage during 2012 up to the time of the survey in April, 51% obtained the mortgage from a Canadian bank and 31% from a mortgage broker. Other categories accounted for 18% of new mortgages.

Financial Parameters

There are currently about 9.65 million homeowners in Canada, of whom about 5.95 million have mortgages and may also have a Home Equity Line of Credit (or “HELOC”). An estimated 3.70 million homeowners are mortgage-free, although they may have other forms of debt. In total, about 2.35 million Canadian homeowners have HELOCs.

Interest Rates

Looking at interest rates, the CAAMP/Maritz data indicates that:

- The average mortgage interest rate for homeowners’ mortgages is 3.52%, lower than the average of 3.64% found a year ago.
- For mortgages on homes purchased recently (during 2012 and 2013 to date), the average rate is 3.22%. For mortgages renewed recently, the average is 3.15%.
- Looking further, for borrowers who have recently renewed a mortgage, the average interest rate is now lower (by 0.91 percentage point) than the rates prior to renewal. Among borrowers who renewed, 79% (about 950,000) saw their interest rate fall, 15% (175,000) saw increases, and 6% (75,000) had no change. For borrowers who saw their interest rates increase at renewal, the increases were minor for most. It is estimated that about 25,000 of these borrowers had their rates increase by more than 1 percentage point. This is a very small number relative to the 5.95 million Canadian homeowners who have mortgages.
- Mortgage rate discounting remains widespread in Canada. During 2012 to the present, the average actual rate for 5-year (fixed rate mortgages) has been 2.20 percentage points lower than typical “posted” rates.

Home Equity

The CAAMP study asked questions that yielded estimates of homeowners' equity.

- On average, home equity in Canada is equivalent to 67% of the value of the homes.
- Among homeowners who have mortgages (but not HELOCs), on average their home equity represents 47% of the value of the homes.
- For owners with both mortgages and HELOCs, the equity ratio is 49%.
- For owners without mortgages but with HELOCs, the equity share is 79%.
- For owners without mortgages or HELOCs, equity is (of course) 100%.
- 83% of homeowners in Canada (about eight million out of 9.65 million) have 25% or more equity in their homes.

Equity Take-Out

About 8% of homeowners took equity out of their home in the past year. The average amount is estimated at \$48,000. These results imply that the total amount of equity take-out during the past year has been \$39 billion.

The most common uses for the funds from equity take-out are renovation (estimated at \$17.5 billion), followed by \$8.6 billion for purchases (including education), \$5.6 billion for investments, \$4.7 billion for debt consolidation and repayment, and \$2.5 billion for "other" purposes.

Impacts of Future Rises in Interest Rates

Low interest rates in Canada have strongly stimulated housing activity, and consequently resulted in growth of mortgage indebtedness. It is very reasonable to ask – as many have – if consumers will be able to afford their mortgage payments when interest rates inevitably rise.

CAAMP has addressed this important question in several forums, including a special research report ("Revisiting the Mortgage Market – The Risk is Minimal") published in January 2011. That research concluded that Canadian mortgage borrowers and lenders have been prudent and there is very substantial room to absorb higher interest rates. Anyone with an interest in this topic should read that report, which is available at the CAAMP website.

Evolving Housing Markets

The Canadian housing and mortgage markets experienced strong growth for most of the past decade, mainly due to rapid job creation. While the recession of 2008/09 and its aftermath slowed housing activity, a rapid rebound in sales, housing starts, and housing values played a key role in the economic recovery.

Historically-low interest rates have worked in Canada precisely because housing activity is highly interest-sensitive.

The federal government has decided to slow housing activity by tightening the terms on which mortgage loans can receive federal-government backing. Three sets of changes had minor impacts; a fourth set of changes that took effect in July 2012 has had an impact: subsequently, resale market activity has been suppressed for nine consecutive months, and is about 9% lower than it was during the year prior to the 2012 policy change.

CAAMP has argued that there will be negative impacts on housing starts, but later. Those impacts are now starting to appear. During 2011 and 2012, housing starts in Canada averaged about 205,000 units per year. Starts began to slow late in 2012. By April this year, the seasonally-adjusted rate had fallen to about 175,000, a 15% drop from the 2011/12 average.

Analysis in this report suggests that the rate of housing starts will continue to fall (although there will be gyrations along the way). By the end of 2014, the rate of starts is expected to have fallen to 150,000 units. By mid-2015, about 80,000 jobs will have been lost in construction and in related industries that provide goods and services to the construction process. In addition, there will be job losses related to the drop in resale market activity. Furthermore, slower growth of housing prices (and even declines in house prices) will negatively affect consumer confidence, spending, and job creation.

In total, by mid-2015, the housing market downturn will cause employment in Canada to be about 150,000 jobs lower than it would otherwise be.

Outlook for the Mortgage Market

Mortgage credit growth in Canada peaked about the start of 2008 (at about 13%). Subsequent to the recession of 2008/09, the growth rate settled to about 7%. Growth began to decelerate early in 2012, and has subsequently slowed further, due to the slowdown of resale market activity.

The growth rate is likely to remain close to the current rate (4.5% to 5%) for the balance of this year. During 2014, completions of new housing will begin to slow, and this will bring a further deceleration of mortgage credit growth. For 2014, the growth rate is forecast at 2.5% to 3.0%.

The outstanding total of residential mortgage credit was \$1.16 trillion at the end of 2012. For the end of 2013, the forecast is \$1.21 to \$1.22 trillion; for the end of 2014 it is \$1.24 to \$1.25 trillion.

About CAAMP

CAAMP is the national organization representing Canada's mortgage industry. With 12,000 mortgage professionals, its membership is drawn from every province and from

all industry sectors. This diversified membership enables CAAMP to bring together key players with the aim of enhancing professionalism.

Established in 1994, CAAMP has taken a leadership role in Canada's mortgage lending industry and has set the standard for best practices in the industry.

In 2004, CAAMP established the Accredited Mortgage Professional ("AMP") designation to enhance educational and ethical standards for Canada's mortgage professionals.

CAAMP's other primary role is that of consumer advocate. On an ongoing basis CAAMP aims to educate and inform the public about the mortgage industry. Through its extensive membership database, CAAMP provides consumers with access to a cross-country network of the industry's most respected and ethical professionals.

About the Author

Will Dunning is an economist, and has specialized in the analysis and forecasting of housing markets since 1982. In addition to acting as the Chief Economist for CAAMP he operates an economic analysis consulting firm, Will Dunning Inc.

About Maritz

Maritz Research is a wholly owned subsidiary of Maritz Inc., the largest performance improvement company in the world, headquartered in St. Louis, Missouri. For more than 20 years, Maritz Inc. has been the largest provider of customer satisfaction research in the United States and a major supplier of brand equity research. In Canada, Maritz Research has been developing marketing research solutions for Canadian clients under the brand Maritz-Thompson Lightstone since 1977, and has grown to become one of Canada's largest full-service marketing research consultancies.

Disclaimer

This report has been compiled using data and sources that are believed to be reliable. CAAMP, Maritz, Will Dunning, and Will Dunning Inc. accept no responsibility for any data or conclusions contained herein.

The opinions and conclusions in this report are those of the author and do not necessarily reflect those of CAAMP or Maritz.

2.0 Mortgage Choices

This section uses data from the consumer survey to highlight consumer choices in the mortgage market. As in prior issues, this section provides data on mortgage types and amortization periods.

Dimensions of the Mortgage Market

There are currently about 13.7 million households in Canada¹, including:

- 9.65 million homeowners, of which 5.95 million have mortgages and 3.7 million are mortgage-free.
- Among the 5.95 million owners who have mortgages, about 1.75 million also have Home Equity Lines of Credit (known as “HELOCs”). Among homeowners without mortgages, about 600,000 owe money on a HELOC. This leaves about 3.1 million homeowners who have neither mortgages nor HELOCs.
- In total, about 2.35 million homeowners have HELOCs
- There are about 4.05 million tenants.

Mortgaging Activity During 2012

Combining various data from the consumer survey, it is estimated that during 2012:

- About 600,000 households bought homes. About 150,000 did not take mortgages (but of those about 25,000 took HELOCs). Out of the 450,000 buyers who took mortgages, a small number (about 25,000) have already repaid their mortgages. As of this April, the total outstanding mortgage principal for these buyers is estimated at \$110 billion, and a further \$6 billion is owed on HELOCs.
- Among the 600,000 households who bought homes, about 225,000 to 250,000 sold an existing home. Of those, about 175,000 to 200,000 had existing mortgages, with a combined total principal of \$29 billion. Discharges or transfers of these mortgages would partially offset growth of mortgage credit. In addition, there would have been some retirements of mortgage principals due to situations where homes were sold but the vendors did not buy another property. No estimate is available for this factor.
- About 200,000 Canadian homeowners fully repaid their mortgages during 2012. This includes the 25,000 who bought their homes and discharged the mortgage in the same year, and 175,000 who had obtained their mortgages in prior years.

¹ This estimate of total households is based on data from the 2011 Census, updated by this author based on housing completions and changes in vacancies. Prior to this issue of CAAMP’s report, estimates of households were derived by updating data from the 2006 Census. Estimates of percentage shares by tenure are based on data from the 2006 Census, updated by this author. In addition, a conceptual change has been made: previously the estimates included an adjustment for under-coverage (the estimated share of the population that was not counted in the 2006 Census). With this update, no adjustment is being made for under-coverage. By the time of the Fall 2013 report, housing data will be available from the 2011 National Household Survey and these estimates of households by tenure will be revised.

- About 800,000 homeowners with mortgages renewed or refinanced their mortgages during 2012. The combined total principal is \$128 billion; these borrowers also owe about \$12 billion on HELOCs.
- About 8.075 million homeowners had no mortgaging activity during 2012.

Other findings, which are developed in more detail later in this section, are:

- About 800,000 homeowners (8% of all homeowners) took equity out of their homes during the past year, adding about \$39 billion to their home mortgages and/or HELOCs.
- Based on the various information provided by consumers, it is estimated that regular mortgage payments resulted in a \$60 billion paydown of mortgage principal.
- In addition, it is estimated later in this section that almost one million current mortgage holders made lump sum payments in 2012, totaling \$10 billion. Furthermore, among the 200,000 Canadian who fully repaid their mortgages during 2012, lump sum payments totaled about \$3 billion.
- About 1.1 million mortgage holders voluntarily increased their regular payments.

Combining these estimates of additions and subtractions from the total pool of mortgage indebtedness, growth is estimated at \$45 to \$50 billion. This is lower than the estimate of growth published by the Bank of Canada (\$62.5 billion for the year to December 2012). However, the Bank of Canada figures include investment properties, second properties, and vacant dwellings, whereas the CAAMP estimate is for owner-occupied principal residences only. It appears that the CAAMP consumer survey has yielded a reasonably reliable portrayal of mortgage market dynamics. The reader is cautioned that the estimates are based on a sample survey and as such are subject to variation.

Fixed Rate Versus Variable Rate Mortgages

The CAAMP/Maritz study found that 69% of mortgage holders (about 4.1 million out of 5.95 million) have fixed rate mortgages, 26% (1.5 million) have variable and adjustable rate mortgages, and 5% (about 325,000) have “combination” mortgages, in which part of the payment is based on a fixed rate and part is based on a variable rate. In this edition of the CAAMP/Maritz study (as was the case a year ago) variable rate mortgages are most popular with people in the oldest age bracket.

<i>Mortgage Type</i>	<i>18-34</i>	<i>35-54</i>	<i>55 +</i>	<i>Total</i>
Fixed-rate	69%	69%	69%	69%
Variable or adjustable-rate	24%	26%	28%	26%
Combination	7%	5%	3%	5%
All Types	100%	100%	100%	100%
Source: Maritz survey for CAAMP, spring 2013; analysis by the author.				

As is shown in the first column of the next table, among mortgages for homes that were purchased or with mortgage renewals during 2012 to the present, fixed rate mortgages were chosen much more frequently, with shares at 85% and 82% respectively.

<i>Mortgage Type</i>	<i>Purchase During 2012/13</i>	<i>Renewal or Refinance During 2012/13</i>	<i>All Mortgages</i>
Fixed-rate	85%	82%	69%
Variable or Adjustable Rate	13%	13%	24%
Combination	3%	5%	7%
All Types	100%	100%	100%
Source: Maritz survey for CAAMP, spring 2013; analysis by the author.			

The CAAMP survey data also shows the interest rate types prior to the renewal. The table below summarizes the data for mortgage holders who renewed during 2012 to the present. To illustrate how to read this table - looking along the first row of data:

- 58% of the mortgages that were renewed during the period had a fixed rate prior to the renewal and a fixed rate afterwards.
- 19% of the mortgages had a variable/adjustable rate prior to the renewal but switched to a fixed rate.
- On the other hand, looking at the second row of data, 8% of the mortgage had a fixed rate prior to the renewal but switched to a variable rate.

The majority of borrowers did not change their mortgage type – the three bolded results along the diagonal sum to 68%. For the remainder (a substantial minority of 32%) there was switching to and from each of the three types of mortgages. The predominant form of shifting was from variable/adjustable rate mortgages to fixed rates mortgages.

<i>Current Type of Mortgage</i>	<i>Prior Type of Mortgage</i>			
	<i>Fixed Rate</i>	<i>Variable or Adjustable Rate</i>	<i>Combination</i>	<i>All Types</i>
Fixed Rate	58%	19%	4%	82%
Variable or Adjustable Rate	8%	6%	0%	13%
Combination	0%	1%	4%	5%
All Types	66%	26%	8%	100%
Source: Maritz survey for CAAMP, spring 2013; analysis by the author.				

Mortgage Amortization Periods

Mortgage holders were asked several questions related to mortgage amortization, to profile their choices and their expectations.

- Mortgage holders were asked when they expect to have their mortgages repaid. This data is used to compare their current expectations to the original amortization periods.
- In addition, data was collected from homeowners who no longer have mortgages, to compare their actual amortization periods to the original contracted periods.
- The following section discusses steps taken to change amortization periods.
- Then, in subsequent sections, more detailed information is obtained on actions taken by mortgage borrowers to shorten or lengthen their amortization periods, for example through voluntary payment increases, lump sum payments, and, on the other hand, through equity take-out.

A substantial majority of residential mortgages in Canada have contracted amortization periods of 25 years or less. The first column of the table below summarizes the survey data, which indicates that 80% of mortgages have original contracted periods of no more than 25 years and just 20% have original contracted periods exceeding 25 years. The share with extended amortization periods had increased during the prior past half decade, due to the availability of longer term mortgages. However, as of July 2012, the maximum amortization period for insured mortgages is 25 years (longer amortization periods can be obtained for mortgages that are not insured). The second column of data shows the distribution for homes that were purchased during 2012 and to date in 2013. This data indicates that a minority (25%) of homes purchased during this period had extended amortization periods (but this share is lower than in prior years, when the share was typically about 40%). It should be expected that the share with extended amortizations will fall during the coming years. To illustrate the impact of extended amortization periods in earlier years, the third column provides data for homes purchased during 2010 and 2011: for those homes purchased during those years, almost 40% of mortgages have extended amortizations, and the average contracted amortization period was longer, at just over 25 years.

The fourth to sixth columns in the table summarize consumers' expectations about how long their actual amortization periods will be, considering their current payment levels and plans for the future (including lump sum payments and additional efforts they have and will make to repay their mortgages). This data shows that some borrowers expect that their actual repayment horizons will be longer than their originally contracted amortization periods. In general, however, most borrowers expect to repay early, as the average expected amortization of 21.6 years (fourth column) is slightly shorter than the average contracted period (22.9 years, shown in the first column).

For the most recent buyers (which are illustrated in the second and fifth columns of data) large numbers expect to substantially accelerate repayment: the average expected repayment period of 17.2 years is 22% shorter than the average contracted period of 22.1 years, and 91% of recent buyers expect their actual amortization periods to be 25 years or less. A similar conclusion applies for home purchased during 2010 and 2011. We can, of course, question whether these expectations are realistic. A later section provides data on additional efforts that mortgage borrowers are making, and it does indeed appear that consumers' behavior is consistent with their expectations.

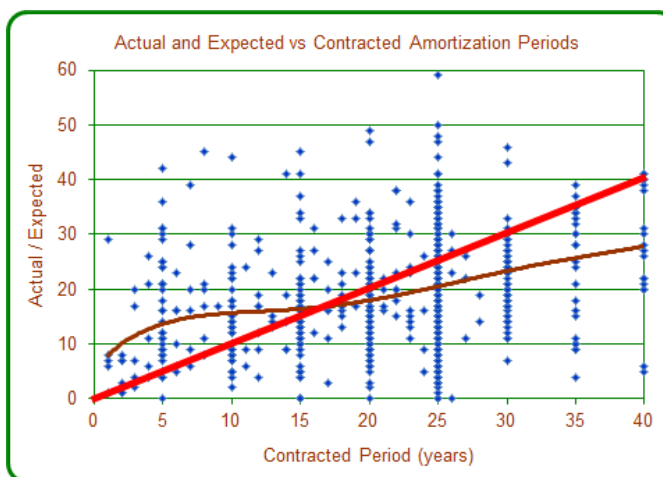
In all cases, the actual and expected amortization periods shown here and elsewhere are the number of years since the home was purchased. In some cases, the mortgages were obtained at a later date than the purchase, and therefore some amortization periods are over-estimated.

**Table 2-4
Percentages of Mortgages by Length of Original Amortization Period and by Current Expectation**

Amortization Period	Original Contracted Amortization Period			Expected Total Amortization Period		
	All Mortgages	Homes Purchased During 2012/13	Homes Purchased During 2010/11	All Mortgages	Homes Purchased During 2012/13	Homes Purchased During 2010/11
Up to 25 Years	80%	75%	61%	75%	91%	80%
More Than 25 Years	20%	25%	39%	25%	9%	20%
Including...						
26-30 years	11%	22%	17%	13%	8%	14%
31-35 years	5%	3%	19%	6%	1%	4%
36-40 years	3%	0%	3%	6%	0%	1%
Total	100%	100%	100%	100%	100%	100%
Average Amortization Period	22.9 years	22.1 years	25.2 years	21.6 years	17.2 years	20.0 years

Source: Maritz survey for CAAMP, spring 2013; analysis by the author.

The chart to the right provides a detailed presentation of the data. Each data point in this chart represents one or more actual mortgages. The chart compares original contracted amortization periods with the expected total periods; the chart also includes mortgages that have been repaid in full, for which the actual periods are shown.



In the chart, a solid red diagonal line indicates combinations for which the contracted amortization is the same as the expected or actual amortization. Any data point that is below the red diagonal line is a situation where the expected or actual amortization period is shorter than the contracted period. Conversely, for any point above the diagonal line, the expected/actual repayment period is longer than the contracted period.

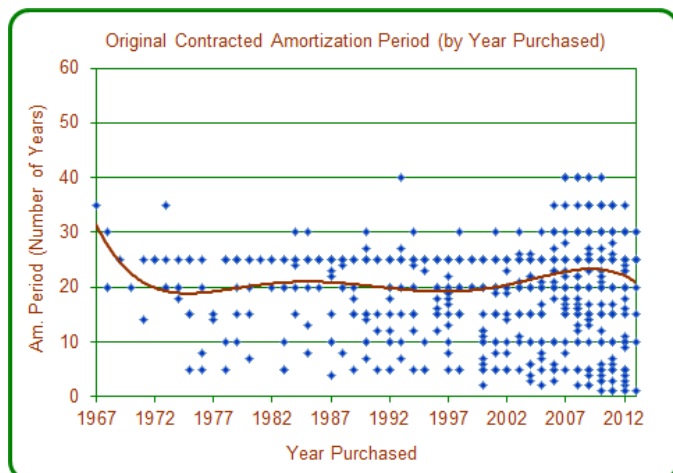
Another line has been added. The thin brown curved line shows a trend – essentially, the averages. The trend line indicates that for contracted periods that are quite short, the expected and actual amortization periods tend to be longer than the contract (this is clear because the trend line is higher than the diagonal line). At about 17 or 18 years the lines cross, meaning that for longer contracted periods, the expected/actual periods tend

to be shorter than the contract. For 40 year contracted periods, the expected amortization periods are about 27 or 28 years; for 35 year amortization, the expectation is about 25 or 26 years, for 30 year amortization, the expectation is about 22 or 23 years. For these extended amortization periods, the expected repayment periods are about one-third shorter than the contracted periods.

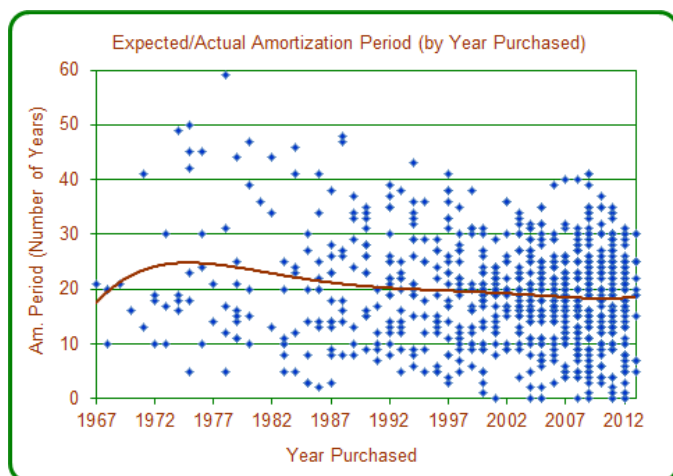
A slightly technical discussion might be helpful here. The chart contains 948 data points. But, because there are some combinations that occur frequently, the full detail is not visible. For example, there are 60 points for which the contracted period is 25 years and so is the expected/actual period, but in the chart these look like just one point; similarly, there are 33 points for which the contracted period is 25 years and the expected/actual period is 20 years (and there are very many other similar situations). The point of this discussion is that in the chart it appears that there are a lot of “extreme outliers” (far from the red diagonal line), but in actuality most of those extreme points represent just one case; on the other hand, while it isn’t obvious in the chart, most of the data points are reasonably close to the diagonal line and the trend line. The extreme outliers are actually a very small percentage of the data. This point applies to the chart above and to the two charts that follow.

Several other charts can be used to summarize the data on amortization.

In this chart, the trend line illustrates average contracted amortization periods, depending on the year when the property was purchased by the current owner. This shows that most of the time, most contracted periods were 25 years, but the average contracted period was close to 20 years. The average rose to about 23 years, when extended amortizations became available. The average contracted period now appears to be returning to 20 years.



This chart illustrates actual and expected amortization periods by year of purchase. In this case the trend line is almost flat, at about 20 years. This continues even late in the period when extended amortization was available. The message is that while many buyers took advantage of extended amortization, most of them have the intention of paying off their mortgages at about the same pace as their parents did. Interestingly, the trend line is



higher for early purchases (1970s and early 1980s) than for subsequent purchases. The reader should recall that the amortization periods shown in the chart represent the number of years between the original purchase and the expected final pay-off: among the handful of early buyers who have very long total amortization periods, some of these years might have been mortgage-free.

The available data does not provide a definite interpretation for these small numbers of situations with very long total amortization periods. But, this analyst's opinion is that there were two major causes:

- Some of these early purchasers completely or largely paid off their mortgages, but in later years refinanced, in order to renovate, to make a major purchase (such as a vacation property), to invest, or to assist their children (with education expenses, a down payment for a home, or a wedding). Also, in this group, some have now paid-off the refinanced mortgages.
- Mortgage interest rates rose very sharply in the early 1980s (to more than 20%) and the late 1980s (to about 14%). Some mortgage borrowers may have had to extend their amortization periods in order to cope with the increased interest costs.

This section ends with survey data on mortgages that have been repaid. It shows that for mortgages that were repaid during the 1990s and into the present, the actual periods were considerably shorter than the original contracted periods. The final column of data indicates that typically the actual amortization periods have been only about two-thirds of the contracted periods.

<i>Year Mortgage Paid off</i>	<i>Original Amortization Period</i>	<i>Actual Amortization Period</i>	<i>Change</i>	<i>Actual as % of Original</i>
1990s	18.2	13.9	-4.3	76%
2000-2004	18.1	12.0	-6.2	66%
2005-2009	19.9	12.8	-7.1	64%
2010-2013	17.9	11.7	-6.2	65%
Source: Maritz survey for CAAMP, spring 2013; analysis by the author.				

This data on outcomes for past generations of borrowers does not prove anything about what will be achieved by current borrowers, but for those of us who believe that Canadians have a culture of repaying debt promptly, the data in the next section provides confirmation.

Actions that Affect Repayment Periods

The spring 2013 CAAMP/Maritz survey asked homeowners who have (or previously had) mortgages about actions that change the number of years it takes to pay off a mortgage. Seven different actions were listed. Four of the actions would decrease the actual amortization period; three would increase the amortization period. The

consumers were asked if they have taken each of the actions in the past year. The responses are summarized in the next table.

The consumer responses indicate quite clearly that recent purchasers are more likely to take steps to shorten amortization periods than are prior purchasers (to increase their payments, make lump sum payments, increase the frequency of payment, or to explicitly reduce the amortization period when they renew or refinance their mortgage). They are also less likely to take steps that lengthen amortization periods (to increase the amortization period when they renew or refinance their mortgage, decrease the frequency of payments, or to take-out equity).

<i>Period of Purchase</i>	Actions that Shorten Amortization				Actions that Lengthen Amortization		
	<i>Increased amount of payment</i>	<i>Made a lump sum payment</i>	<i>Increased frequency of payments</i>	<i>Decreased amortization at renewal/refinance</i>	<i>Increased amortization at renewal/refinance</i>	<i>Decreased frequency of payments</i>	<i>Took-out equity/increased principal</i>
1990s	13%	13%	9%	7%	12%	10%	10%
2000-2004	14%	15%	8%	12%	6%	4%	8%
2005-2009	16%	17%	11%	10%	6%	5%	8%
2010-2013	18%	17%	10%	9%	6%	6%	5%

Source: Maritz survey for CAAMP, spring 2013; analysis by the author.

The survey also collected data on the dollar amounts of increased payments, lump sum payments, and equity take-out. Various survey data can be combined to estimate total amounts.

- Almost one-in-five mortgage holders (18% out of 5.95 million, or almost 1.1 million) voluntarily increased their regular payments during the past year. The average amount of increase was about \$300 per month, for a total of about \$4 billion per year. This is the effect of increases that were made during the past year. In addition, voluntary increases that were made in prior years are contributing to accelerated repayment of mortgages. The survey data indicates that in total regular mortgage payments included about \$60 billion in principal repayment during 2012.
- About 16% of mortgage holders (about 975,000) made lump sum payments during the past year. The average amount was about \$10,000, for combined repayment estimated at \$10 billion.
- In addition, the survey asked homeowners without mortgages when they had repaid the mortgage. About 200,000 borrowers repaid their mortgage during 2012. Total lump sum payments made at the time amounted to about \$3 billion.
- Out of 9.65 million homeowners, about 8% (or 800,000) took out equity during the past year. The average amount taken out was about \$48,000, for a combined total of \$39 billion.

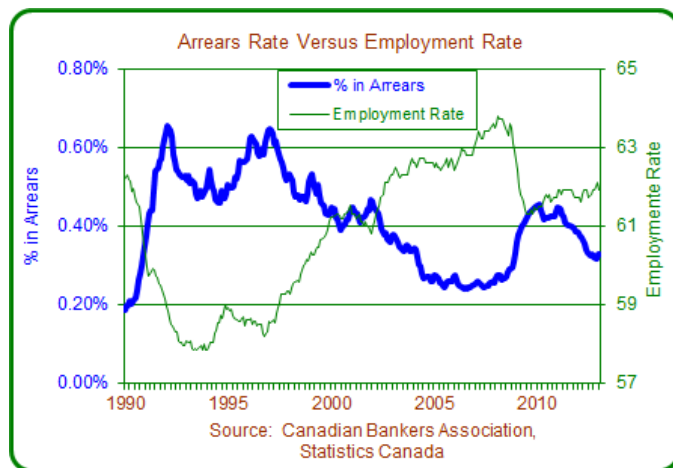
This snapshot portrays activity during a short period of just 12 months. It seems very reasonable to assume that over longer periods similarly substantial percentages of mortgage borrowers will take these actions to shorten their repayment periods.

Mortgage Arrears

Data on mortgage arrears from the Canadian Bankers Association, which covers 7 major banks, shows that a very small percentage of Canadian mortgage holders are behind on their payments (this data shows mortgages that are three or more months in arrears). That data shows that there was a rise in mortgage arrears during the recession, with a peak at the end of 2009 (although at a lower level than during the recession of the early-to-mid-1990s). The arrear rate fell during 2010 until late in 2012, and is now much healthier (at just 1-in-300 borrowers).

In the Canadian context, most mortgage defaults are due to reduced ability to pay, especially including job loss, but also income reductions due to reduced hours or reduced hourly pay rates. Marital breakdown is also a cause of financial difficulty (this might usually fit into the category of reduced ability to pay).

The chart to the right illustrates the importance of changes in the employment situation. It contrasts the arrears rates with the Canadian “employment rate” (not to be confused with the unemployment rate – this data shows the percentage of adults who are employed). The history of this data shows very clearly that changes – up or down – in the employment rate are followed several months later by changes in the arrears rate (in the opposite direction). The job losses that occurred during the recession can be considered the primary cause of the rise in mortgage arrears, as a sharp drop in the employment rate was followed several months later by a rise in the arrears rate. The employment rate has not completely recovered since the end of the recession (it is about two percentage points below the pre-recession peak), which helps explain why the arrears rate has fallen only slowly, and has not returned to the pre-recession low.



Types of Mortgage Representatives Consulted

Mortgage holders were asked which types of mortgage representatives they consulted when obtaining their current mortgages and, secondly, through which type of mortgage representative they obtained their mortgage.

For all current mortgages (regardless of when they were obtained), 57% were obtained from a bank, 25% from a mortgage broker, 10% from a credit union, 5% from a life insurance or trust company, and 3% from an “other” source.

The table below focuses more narrowly, on consumers who obtained their current mortgage during 2012 up to the time of the survey in April 2013 (either a new mortgage or a renewal of an existing mortgage).

The table shows shares for new mortgages separately from mortgages that have been renewed, renegotiated, or transferred. The second data column shows that for new mortgages, 51% were obtained from a bank, 31% from a mortgage broker, and 18% were obtained from other types of mortgage representatives. The fourth data column shows that for mortgages that were renewed, 66% were obtained from a bank, 21% from a mortgage broker, and 13% were from other types of representatives.

Table 2-7				
Consumers' Use of Mortgage Representatives, During 2012/13				
<i>Type of Mortgage Representative</i>	<i>New Mortgage</i>		<i>Renewal</i>	
	<i>Consumer Consulted Mortgage Professional</i>	<i>Obtained Through Mortgage Professional</i>	<i>Consumer Consulted Mortgage Professional</i>	<i>Obtained Through Mortgage Professional</i>
Mortgage Representative from a Canadian Bank	74%	51%	80%	66%
Mortgage Broker	61%	31%	39%	21%
Mortgage Representative from a Credit Union	23%	9%	15%	9%
Mortgage Representative from a Life Insurance or Trust Company	18%	3%	10%	2%
Other	5%	5%	6%	2%
Total	181%	100%	151%	100%

Source: Maritz survey for CAAMP, spring 2013; analysis by the author.

3.0 Financial Parameters

Interest Rates

The CAAMP/Maritz study collected data on mortgage interest rates for current mortgage holders. The average mortgage interest rate for these mortgage borrowers is 3.52% as of the spring of 2012, down slightly from the 3.64% average found a year ago.

Very few residential mortgages in Canada have high interest rates. In this survey, just 1% of mortgage rates are 8% or higher.

The next table looks at average mortgage interest rates by type of mortgage, for all mortgages and for two subsets: mortgages for homes purchased during 2012 to the present and mortgages that were renewed during the same period.

This survey data shows that:

- Mortgages that have been initiated or renewed during the past year have, on average, lower interest rates compared to all mortgages.
- Interest rates vary depending on mortgage type, with fixed rate mortgages having higher rates than for variable/adjustable mortgages. For recent mortgages (the second and third lines of data), the average spreads between fixed and variable/adjustable rates are 0.43 points and 0.61 points.

	Mortgage Type			All Types
	Fixed-rate	Variable or Adjustable Rate	Combination	
All Mortgages	3.67%	3.01%	3.29%	3.52%
Purchases During 2012/13	3.13%	2.70%	N/A (1)	3.22%
Renewals During 2012/13	3.16%	2.55%	NA (1)	3.15%
Source: Maritz survey for CAAMP, spring 2013; analysis by the author.				
Note: (1) insufficient data to generate an estimate				

The survey also asked those who have renewed a mortgage what the interest rate was prior to renewal, and those rates have been compared to the mortgage borrowers' current rates. The results are summarized in the next table. It shows that among borrowers who have renewed a mortgage since the start of 2012, almost 80% had a reduction in their interest rate and just 15% had an increase. On average, for all mortgages renewed during that period, the interest rate was reduced by 0.91 percentage point.

Table 3-2			
Changes in Mortgage Interest Rates for Mortgages Renewed During 2012 and 2013			
<i>Change in Interest Rate</i>	<i>Fixed-rate</i>	<i>Variable or Adjustable Rate</i>	<i>Total</i>
% with Rate Decreased	81%	70%	79%
% with Rate Unchanged	3%	17%	6%
% with Rate Increased	16%	13%	15%
% with Rate Increased by 1 Point or More	2%	0%	2%
Total	100%	100%	100%
Average Change in Interest Rate (percentage points)	-0.91	-0.99	-0.91
Source: Maritz survey for CAAMP, spring 2013; analysis by the author.			
Note: estimates are not available for combination type mortgages due to small sample size.			

Combining the various estimates developed in this study:

- Out of 5.95 million homeowners who have mortgages,
- About 1.2 million have renewed their mortgages during 2012 to the present.
- About 950,000 have seen their mortgage rates fall.
- About 75,000 had no change in their interest rate.
- 175,000 had their rates increase.
- About 25,000 of these households have seen increases of 1 percentage point or more. For many of these households, the increases in monthly mortgage payments may be significant, but in the big picture of the Canadian housing market, in which there are 9.65 million households who own homes, this is an insignificant change.

The data from this study indicates that very few mortgage borrowers have been negatively affected by increases in interest rates for their mortgages.

Mortgage Rate Discounting

The average mortgage interest rate reported here (3.67%) for fixed rate mortgages is well below the typical posted (advertised) rates that have been available during the past year. Since the start of 2012, posted rates for five year terms have averaged 5.25%². The much lower actual rates found by the survey confirm that there is a substantial amount of discounting in the mortgage market.

This section uses the survey data to generate an estimate of the extent of discounting.

The study group includes a wide range of mortgages, including a full range of lengths of term to renewal, fixed rate versus variable rate mortgages, and the mortgages have been originated over a prolonged period. This results in a wide range of mortgage rates.

² Source: For posted rates, data are obtained from the Bank of Canada, using “Conventional mortgage” rates (estimated as of each Wednesday).

In order to produce a meaningful summary of the interest rates, one subset of the study group was selected for further analysis:

- Mortgages that were initiated, renewed, or refinanced since the beginning of 2012.
- With fixed rates, rather than variable rates.
- With 5-year terms.

For this group of mortgage borrowers:

- For those mortgages, the average mortgage interest rate is 3.05%. In contrast, the average posted 5-year mortgage rate was 5.25%. Based on this data it appears that Canadians negotiated mortgage rate discounts averaging 2.20 percentage points (for 5-year terms).
- Every mortgage within this subset of the database had an actual interest rate lower than the average posted rate. In fact the highest recorded actual rate was 3.75%.
- All of these borrowers received a discount of 1.5 percentage point or more versus the average posted mortgage rate.

Housing Equity

Data from the consumer survey has been used to generate estimates of home equity in Canada. The equity amounts have been calculated by comparing the value of owner-occupied homes in Canada with the associated mortgages and home equity lines of credit (known as "HELOCs").

Based on data from the 2006 and 2011 Census, updated using data on completions of new housing, the author estimates that there are currently about 13.7 million occupied dwellings in Canada. Of these, about 9.65 million are owner-occupied, including about 5.95 million with mortgages and 3.70 million without mortgages. CAAMP's spring 2013 survey data has been used to further refine the estimates across four categories, which are shown in the second last line of the table.

The table below illustrates that most Canadian homeowners have considerable amounts of home equity, amounting to 67% of the value of their homes. This leaves a debt ratio of 33%.

In total, about 4% of homeowners have equity ratios of less than 10%. This includes a very small percentage of owners (about 1%) who are estimated to have negative equity. Among homeowners who have mortgages (with or without an additional HELOC) 7% have less than 10% equity (comprising an estimated 400,000 households). A further 1.2 million Canadian homeowners have equity in the range of 10% to 24.99%. This leaves 83% of Canadian homeowners (about 8 million out of 9.65 million) with 25% or more equity. Even among the 5.95 million homeowners who have mortgages (with or without a HELOC), 73% have equity ratios of 25% or higher.

Table 3-3
Equity Positions of Canadian Homeowners

<i>Equity as Percentage of Home Value</i>	<i>Mortgage Only</i>	<i>Mortgage and HELOC</i>	<i>HELOC Only</i>	<i>Neither Mortgage Nor HELOC</i>	<i>Total</i>
negative equity	1%	5%	0%	0%	1%
0-4.99%	2%	2%	0%	0%	1%
5-9.99%	3%	3%	0%	0%	2%
10-14.99%	7%	2%	0%	0%	3%
15-24.99%	17%	11%	4%	0%	9%
25-49.99%	31%	36%	13%	0%	21%
50-74.99%	24%	26%	25%	0%	17%
75-99.9%	16%	16%	59%	0%	13%
100%	0%	0%	0%	100%	32%
Total	100%	100%	100%	100%	100%
Number of Households	4,200,000	1,750,000	600,000	3,100,000	9,650,000
Average Equity Ratio (%)	47%	49%	79%	100%	67%

Source: Maritz survey for CAAMP, spring 2013; estimates by the author.

Equity Take-out

The survey data indicates that 8% of all homeowners holders took out equity from their homes or increased the amount of the mortgage principal within the past twelve months. The average amount of equity take-out is estimated at about \$48,000.

Various findings from the survey can be combined to estimate total equity take-out by Canadian mortgage holders:

- At present there are about 9.65 million homeowners in Canada.
- 8% of them have taken out equity during the past year (about 800,000 households).
- The average amount taken out was about \$48,000.
- Combining these factors, the total amount of equity take-out is calculated as \$39 billion during the past year.

Those who took out equity were asked what they used the money for. Some people indicated more than one purpose. Based on the responses, it is estimated that:

- \$4.7 billion (12%) of the money would be used for debt consolidation or repayment.
- \$17.5 billion (45%) would be used for renovation or home repair.
- \$8.6 billion (22%) would be used for purchases (including spending for education).
- \$5.6 billion (14%) is for investments.
- \$2.5 billion (6%) is for “other” purposes.

Impacts of Future Rises in Interest Rates

During the past five years, there have been concerns that when interest rates “inevitably” rise, consumers will be unprepared, resulting in unaffordable rises in mortgage interest costs. This has been expressed repeatedly by senior government officials and the economics profession.

CAAMP has attempted to contribute to the discussion, through semi-annual research reports on the mortgage market and in particular through two editions of a special report “Revisiting the Mortgage Market” that were published in January 2010 and January 2011. Readers with an interest in this topic are strongly encouraged to view those reports, which are available at the CAAMP website. Through analysis of large datasets of individual mortgage transactions the January 2011 report found that the vast majority of these borrowers are positioned to afford payment increases that would result if their interest rate rises to a 5% rate. In total, about 2,000 to 2,500 recent home buyers (those who purchased in 2010) might have TDS ratios of 45% or more. The report concluded that this is an extremely small number relative to the total number of homeowners in Canada.

In addition, data generated by this spring 2013 consumer survey has yielded some additional findings. As was discussed in an earlier section, substantial shares of mortgage borrowers have voluntarily increased their regular payments and/or made lump sum payments. These payments reduce their potential amortization periods to less than the contracted periods. It means that if interest costs increase to unaffordable levels, the borrowers can often reduce their payments (within the limits imposed by the contracted amortization period).

Finally, the timing of interest rate increases remains uncertain. We have been talking about “inevitable” rises in rates since at least September 2008. The expectations of economists remain mixed, although at this point few (if any) expect any sizable rises in interest rates for at least a year, and the horizon for increases keeps being pushed into the future.

Credit Cards

The spring 2013 CAAMP/Maritz survey collected data on credit cards. Results are summarized in the table below. This shows that:

- Two-thirds of Canadian credit card holders generally pay-off their balances monthly.
- Most Canadians hold one or two credit cards. About 30% hold three or more cards and fewer than one-in-ten have no credit cards.
- Current outstanding credit card balances average about \$3,500. Among those who generally pay-off their balance monthly, the average current balance is \$1,270; for those who generally carry a balance, the average balance is currently about \$6,500.

**Table 3-4
Profile of Credit Card Use by Age Group**

	Age Group						Total
	18-24	25-34	35-44	45-54	55-64	65 and over	
% Who Generally Pay-off Monthly	68%	63%	60%	68%	71%	84%	67%
Number of Cards							
0	16%	9%	7%	11%	8%	6%	9%
1	45%	39%	31%	28%	29%	25%	32%
2	29%	29%	30%	31%	22%	30%	29%
3	7%	13%	17%	14%	20%	21%	16%
More than 3	3%	10%	15%	15%	21%	19%	14%
Average Current Balance							
All Credit Card Holders	\$1,522	\$2,784	\$4,760	\$3,978	\$4,191	\$1,921	\$3,526
Generally Pay-off Monthly	\$799	\$1,141	\$1,656	\$1,575	\$1,267	\$756	\$1,270
Generally Carry a Balance	\$2,592	\$4,556	\$7,921	\$7,293	\$8,714	\$5,523	\$6,516

Source: Maritz survey for CAAMP, spring 2013; estimates by the author.

4.0 Evolving Housing Markets

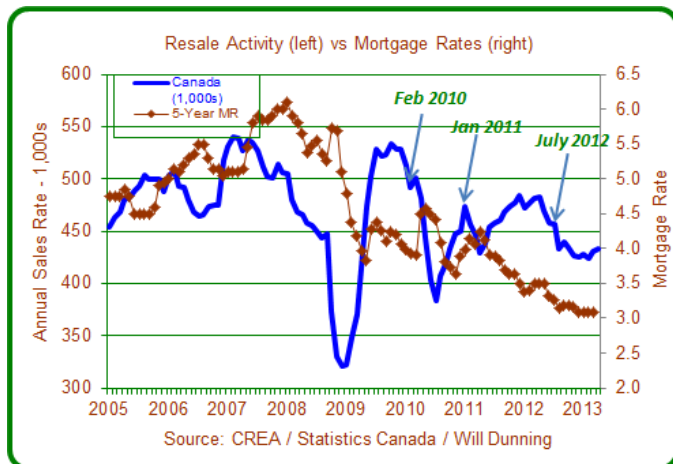
Conditions in the residential mortgage market are highly connected to conditions in housing markets. At this date, it is fair to say that housing markets in Canada are in a state of transition and that there is a high degree of uncertainty about the housing market outlook. By extension, the mortgage market is also in transition and there is uncertainty about its outlook.

This section of the report provides some opinions and analysis of housing markets, which leads to suggestions about the future of the mortgage market.

CAAMP's Fall 2012 report "Annual State of the Residential Mortgage Market in Canada" drew a conclusion that changes made to mortgage insurance criteria (which took effect in July of 2012) had the potential to have prolonged negative consequences for Canadian housing markets. Most other analysts have acknowledged that there has been an impact, but have also stated that the impacts should be short-lived, and markets will soon return to prior levels of activity, as was seen following prior policy changes.

Nine months later, the expected rebound has not yet materialized, as is clear in data from the Canadian Real Estate Association. This analyst argues that those other analysts missed an important factor, and is illustrating this in the chart to the right.

By chance, the changes that took effect in February 2010 and January 2011 coincided with sharp rises for mortgage interest rates. In both instances, sales activity fell sharply at the time; interest rates soon fell back, and sales activity rebounded. The policy change that took effect in July 2012, on the other hand, did not coincide with changes in interest rates, or with any other changes in economic conditions that might have caused the drop in sales activity.



Moreover, CAAMP has obtained very large databases of high-ratio mortgages that were approved in 2009 and 2010, and these databases were used to simulate the impacts of various changes in mortgage insurance criteria. This analysis, which was discussed in more detail in CAAMP's Fall 2012 report, found that few of the mortgage borrowers would have been disqualified by the changes that took effect in February 2010 and January 2011. But, the policy change of July 2012 would have disqualified 11% of high ratio mortgages that had been approved in 2011. The analysis also considered that borrowers who were negatively affected could become qualified once again by saving larger down payments: on average it would take 3.5 years to save the necessary additional down payments – if the borrowers could save 10% of their pre-tax incomes (which would be a major challenge for most of them, and therefore actual savings periods would often be even longer).

Thus, two analysis approaches in the Fall 2012 report led to conclusions:

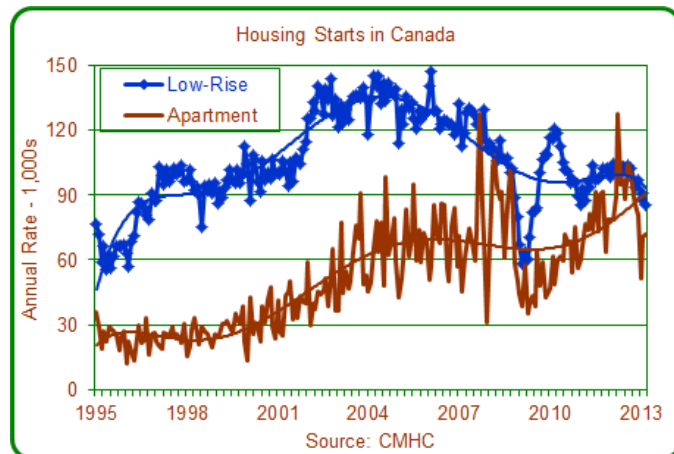
- Firstly, that the policy change that took effect in July 2012 would have a significant impact on housing activity.
- Secondly, that the negative impact would be long lasting.
- A third conclusion was that the housing market impacts have the potential to affect the broader economy.

At this date, resale market activity has been impaired for nine months. Evidence on any broader economic impacts is sketchy. But, this analyst expects that the broader economic impacts will take some time to materialize. The analysis that is presented below concludes that adverse economic impacts will become increasingly obvious during the coming two years.

Economic Impacts Have Started in the Resale Market

Broader economic impacts will arise through several channels:

- Reduced resale activity brings lower incomes and employment across industries that are directly and indirectly involved in sales, financing, legal services, moving, renovations and repairs, sales of furniture and appliances, landscaping, etc. During the past nine months, the dollar volume of resale activity was 8.3% lower than during the year prior to the 2012 policy announcement. This slowdown will affect employment across many industries. Because the job losses will be quite widely-distributed, they will be very difficult (if not impossible) to spot.
- Housing starts will be affected, but much more gradually. Impacts on employment and the broader economy will materialize only slowly. The chart to the right illustrates monthly data as well as long-term trends. Starts of low-rise housing (including single-detached, semi-detached, and row housing) have fallen during the past decade, but apartment starts have increased). During the past few months, the trend for low-rise housing has fallen further. For apartments, activity has dropped during the past four months, but because the data is quite volatile, the trend line for apartments (the smooth brown line) has not yet turned down. The following section discusses the outlook for housing starts and concludes that we are on the cusp of a sizable downturn that will have substantial consequences for employment.
- Another potential major impact on the broader economy is likely to occur through the “wealth effect” of housing: when house prices rise, the positive impacts on consumer confidence and on consumers’ personal finances encourage more spending. The housing wealth effect has been a very powerful driver of job creation subsequent to the recession of 2008/09. The government has stated that it expects the mortgage



insurance policy change to cause a slowdown in house price growth (and that it will be comfortable with actual drops in house prices). Therefore, a weakened wealth effect can be expected to cause consumers to spend less and jobs will be lost. Any negative effects from this cause will be very difficult to identify because the losses will be widely distributed across the entire economy. But, unless the economy can find a major source of growth other than consumer spending, a substantial slowdown of job creation during the coming two years is a feasible outcome,

Outlook for Housing Starts in the Greater Toronto Area

This author has analyzed Canadian housing markets since 1982, and has drawn a few conclusions. One of these is that the main driver of housing starts (and the best predictor of future housing starts) is the state of the resale housing market. Furthermore, the best indicator of the state of the resale market is the “sales-to-listings ratio” – the number of sales divided by the number of homes that are offered for sale.

The author’s theory is that when there is ample choice in the resale market, home buyers are most likely to meet their needs by purchasing a resale property. However, if choice is constrained, then a new home becomes a more likely choice. Moreover, if there is too little resale supply, prices will rise, which makes new home construction more profitable, and this encourages home builders to offer more supply. Sales of new homes result in housing starts at a later time: a change in the resale market affects numbers of housing starts, but not instantly.

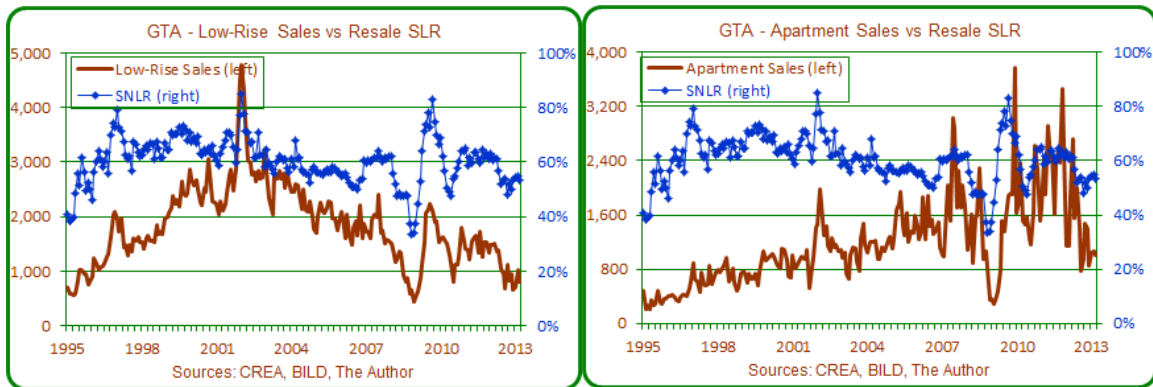
This section uses data from the Greater Toronto Area (“GTA”) to illustrate the theory and the conclusions. Then, the next section adapts the analysis for urban areas of Canada. Recognizing that conditions and the outlook vary across the country, an Appendix provides a similar analysis for several major market areas in Canada.³ In each case, the data ends as of March 2013 (and the analysis includes eight months of impacts since the change to mortgage insurance criteria).

In this discussion, a sequence of charts is used to illustrate the data and trends in the housing market. The charts contrast sales in the low-rise sector (which includes single-detached, semi-detached, and row homes) and apartment sector with the “sales-to-new-listings ratio” (or “SNLR”)⁴. This data shows that new home sales tend to respond very rapidly to changes in the SNLR. This relationship is evident in the second half of the period, in both the low-rise and apartment sectors. But, in the first half of the period, there are two factors: sales respond to changes in the SNLR but there are also upward trends in sales: the SNLR is not the only factor that affects new home sales. In this case, during the first half of the period, the GTA economy was in recovery from a severe

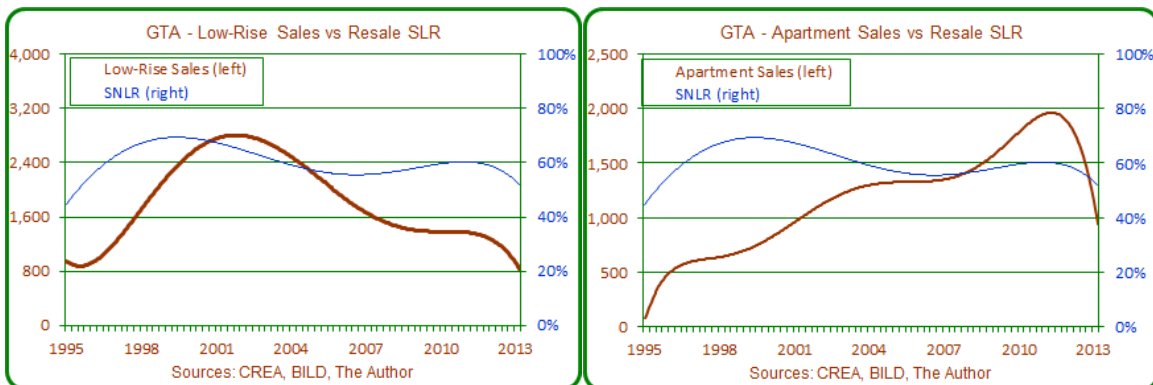
³ The charts use data obtained from the Canadian Real Estate Association (“CREA”), Building and Land Development Association (“BILD”), and Canada Mortgage and Housing Corporation (“CMHC”). All interpretations are by The Author. There is no suggestion that any of these organizations might agree with the interpretations.

⁴ In Canadian resale housing market data, there are two concepts of listings: “new listings” are units that have been offered in the market during the period; “active listings” are units that were available for purchase during the period. Because data on active listings is not available consistently across Canada, the new listings concept is used here. However, in general, data on active listings is preferred as it gives a better indication of the state of supply.

recession. The economic recovery resulted in rapid job creation, increased migration into the area, and an increased rate of population growth, which boosted housing demand. A different factor emerged during the second half of the period, in the low-rise sector: new home sales did not respond as strongly as they “should” have to changes in the SNLR. This occurred because there was a shortage of supply (insufficient numbers of building lots were available). On the other hand, sales of apartments behaved almost exactly as they “should” have, given the conditions that existed (in addition to the influence of resale market conditions, low mortgage interest rates encouraged buying by first-time home buyers and investors).



In the next pair of charts, the actual data has been replaced by trend lines that represent the data (the thin blue line represents the SNLR; the thick brown lines represent sales). Again, in both sectors it can be seen that sales bear some relation to the SNLR. In addition, during the first half of the period there was a rising sales trend. During the second half there was another factor that caused low-rise activity to be lower than it should be; meanwhile, apartment activity was bolstered by low interest rates. In both of these charts it is very clear that late in the period, a rapid drop in the SNLR led to sharp drops in sales. That point is the main take-away from this analysis, which will be further explored – the downturn of resale market activity that followed the change in mortgage insurance criteria last summer is in the early stages of causing a drop in housing starts.

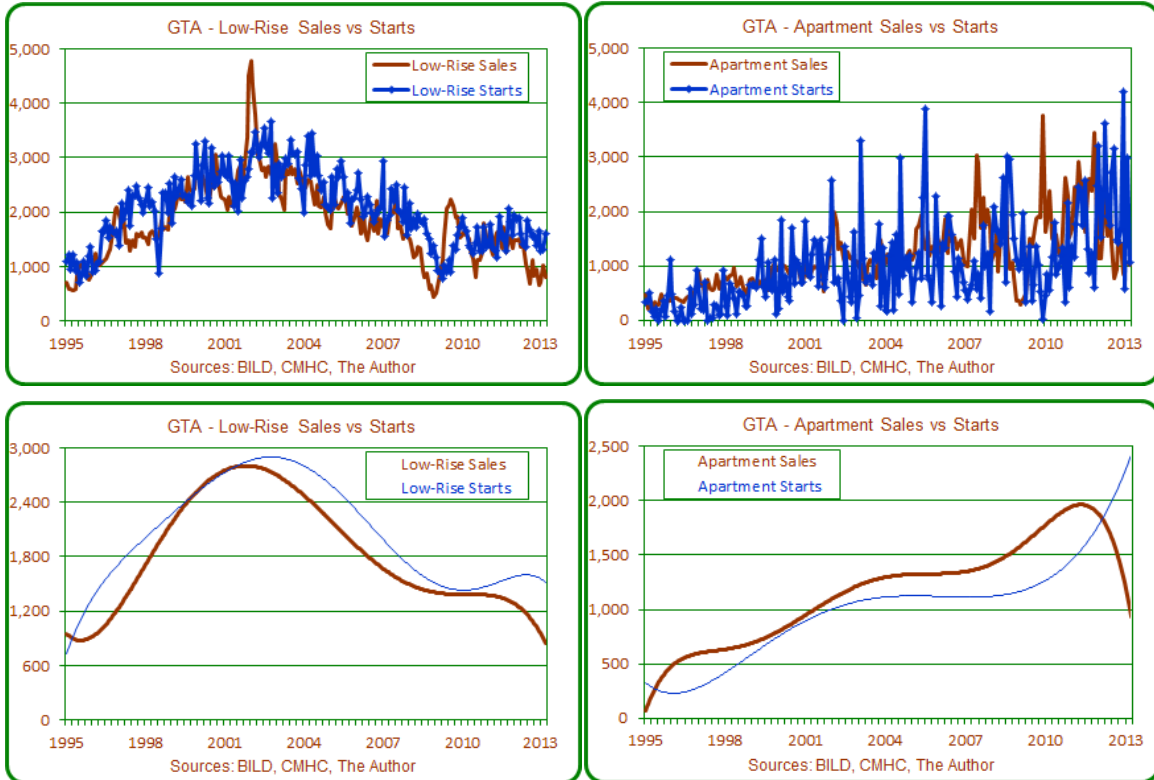


Sales of new housing generally occur prior to the start of construction. In consequence, changes in the rate of new home sales are followed by changes for housing starts at a later date. We can also say that data on new home sales provide an excellent “leading

indicator” for housing starts. In the next pair of charts (on the next page) new home sales are contrasted with housing starts in the GTA. However, due to the volatility of the data from month-to-month, few readers will be able to see any relationships in these charts. Therefore, a second pair of charts shows the trend lines. In the trend charts:

- There is a very clear relationship for the low-rise sector – starts tend to follow about 12 to 15 months behind new sales. With the recent sharp drop in sales of new low-rise homes, it can be expected that starts will fall as well, most likely beginning during the second half of this year. Based on the data, the drop in low-rise housing starts in the GTA might be about 40% from recent levels, and by even more compared to the volumes that were seen prior to 2008. Low rise housing starts in the GTA averaged about 19,000 units during 2011 and 2012. By the time the slowdown has fully occurred (perhaps by late this year or early next year), low-rise starts might have fallen to a rate of about 1,000 per month, or 11,000 to 12,000 per year.
- For apartments, there is not a clear relationship during most of the period. This is because there is great deal of variation in the amount of time that the builders need to prepare for construction. However, there is clarity late in the period: there was a sharp rise in the sales trend at about the start of 2007; the starts trend followed about two years later. The sales trend for apartments began to turn down at about the end of 2011, and a much sharper drop occurred following the change in mortgage insurance criteria in the summer of 2012. Starts for apartments can be expected to follow that downturn, at some point. But, it is quite possible that the downturn for starts of apartments will be quite gradual. For one thing, there is a large number of condominium apartments that have been sold but construction has not yet started: according to *Urbanation*, at the end of March 2013, there were 30,095 units (in 126 projects) that were actively selling in the pre-construction phase in the Toronto CMA. Out of these units, 18,102 were sold. It is possible that not all of the 126 projects will proceed to construction, but most will. Based on the data shown below, and the data from *Urbanation*, it is quite likely that apartment starts will remain strong for about another year, following which a slowdown can be expected. Apartment starts averaged about 26,000 units per year during 2011 and 2012. By the time the slowdown has fully occurred (perhaps during the second half of 2014), activity might have fallen to a rate of about 1,000 per month (12,000 to 13,000 per year).
- Combining the two sectors, total housing starts in the Greater Toronto Area averaged about 45,500 units per year during 2011 and 2012. Based on the market data, starts can be expected to slow to a rate of about 2,000 per month (23,000 to 25,000 per year) by late 2014. In other words, the annual rate of housing starts in the GTA would be reduced by about 20,000 to 22,000 units.

Housing construction is an important generator of jobs, directly in the construction industry, as well as in industries that provide goods and services used in the construction process. A 20,000 to 22,000 drop in the rate of housing starts can be expected to reduce employment by about 35,000 jobs, just for the Greater Toronto Area. The drop in employment will occur quite gradually, depending not just on housing starts but also on how quickly construction is completed on the individual projects. It should be expected that most of the reduction in employment will have occurred by mid-2015.



Analysis for Urban Canada

Unfortunately, data on new home sales is not available outside of the Greater Toronto Area. But, for other areas, a “reduced form” approach can be used, in which housing starts are contrasted with the sales-to-new-listings ratio. For these areas, we expect to see that movements in the SNLR affect housing starts with a lag, and therefore the SNLR may function as a leading indicator for future trends in housing starts.

In this analysis for urban Canada (and in the Appendix, where several major market areas are considered), two pairs of charts are shown. The first pair contrasts sales-to-new-listings ratios with starts of low-rise homes and then apartments; the second pair shows the trend lines. In the trend charts, the SNLR data is illustrated with a thick blue line; the housing starts data is shown with a thin brown line.

The first chart contrasts the SNLR to low-rise housing starts, and in the second chart the data has been converted to trend lines. The expected trend can be seen here, that when the SNLR changes, the trend line for low-rise starts moves a bit later: the lag time seem to be about a year. Based on the Toronto analysis, this is as expected.

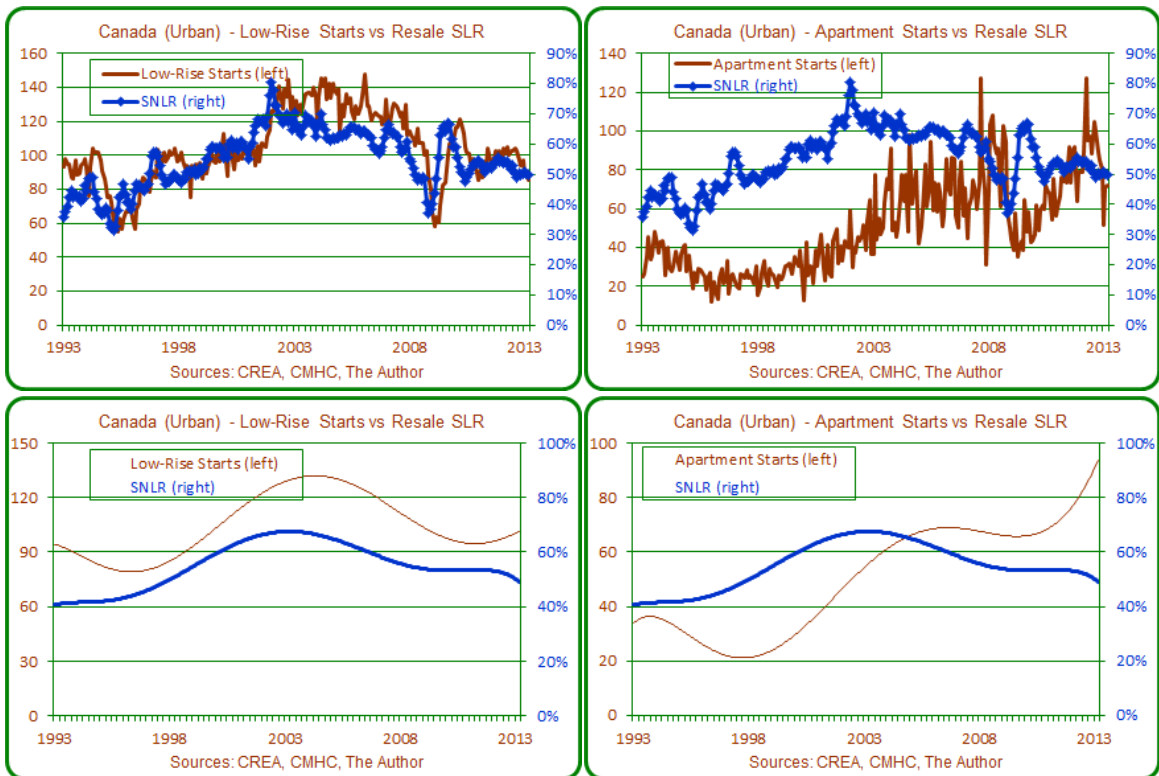
At the end of the period, the trend line for the SNLR has started to fall. This is the consequence of the change in mortgage insurance criteria that took effect in July 2012, which has caused sales to fall. The trend line for starts has not yet started to fall. But, the actual data in the first chart hints that the drop-off has started, and a few more months of this should cause the trend line to unambiguously turn downwards.

During 2011 and 2012, low-rise starts in urban areas of Canada averaged just under 100,000 units per year. Based on the relationship with SNLR, low-rise starts are likely to fall to about 80,000. It is expected that this adjustment will be largely complete by the end of this year.

In the apartment sector, the starts data is even more erratic and difficult to read. The second chart shows the trends. Looking at the middle of the time period, it appears that the lag time between SNLR and housing starts is about three years (this long lag occurs because construction of apartments is much more complicated than for low-rise homes). Towards the end of the period, the SNLR is flat, and then beginning to fall, but starts of apartments continue to rise. This has occurred because builders made so many sales during 2007 to 2011 that they have struggled to get them all under construction (as has been seen in the new home sales and housing starts data for the Toronto area). Builders are now catching up.

Based on the data for Toronto, which dominates condominium apartment activity in Canada, we ought to assume that sales of new apartments are now slowing (because of the weakening of demand). Eventually, starts will also fall – but the timing is uncertain.

During 2011 and 2012, starts of apartments in urban Canada averaged 85,000 units per year. By the time the adjustment has been completed (perhaps by the end of 2014), the level might have fallen to about 50,000.



Conclusion

This analysis suggests that in urban Canada, housing starts will fall by about 20,000 units in the low-rise sector and 35,000 units for apartment. In urban Canada, housing starts will fall to about 130,000 (versus a prior level of about 185,000). For all of Canada (urban plus rural areas), the drop will be from a 2011/12 average of 205,000 to about 150,000.

Construction of new housing is an important creator of jobs, not just in the construction industry, but also in industries that supply goods and services to the construction process. Each low-rise dwelling results in at least 1.75 “person-years” of employment; apartments result in at least 1.25 jobs per dwelling unit.

In total, the housing market downturn will reduce housing starts by about 55,000 units, and reduce related employment by about 80,000 jobs.

The analysis of major market areas (in the Appendix) points to similar magnitudes of impacts.

- The major markets that have been considered in the Appendix accounted for 65% of Canadian housing starts during 2011 and 2012.
- The analysis of those markets (which is summarized in the table below) suggests that once housing starts have adjusted to weakened market conditions, starts in these areas will fall by about 40,000 units, or about 30% compared to the average seen during 2011 and 2012. The adjustment of housing starts will be largely finished by late 2014.
- For these centres, employment that is generated by residential construction and in related industries might fall by 60,000. This adjustment process will be largely complete by mid-2015.
- Those estimates are for major market areas are consistent with the conclusion that housing starts for all of Canada will be reduced to about 150,000 units and related employment will be reduced by about 80,000.

<i>Market Area</i>	<i>Average Starts 2011 and 2012</i>	<i>Anticipated Change in Annual Rate of Starts</i>	<i>Impact on Employment</i>
Greater Toronto Area	45,478	-20,000 to -22,000	- 35,000
Vancouver CMA	18,447	-5,000 to -5,500	- 7,500
Calgary CMA	11,067	+600 to +1,800	+ 2,500
Edmonton CMA	11,085	+1,250 to +1,750	+ 2,500
Ottawa CMA	5,910	-1,600 to -1,800	- 2,500
Quebec (urban areas)	41,163	-14,000 to -16,000	- 20,000
Source: analysis by The Author, using data from various sources			

This analyst readily admits that there is a wide range of uncertainty in this and any economic forecast.

That admitted, the author reminds the reader that six months ago he concluded that the housing market downturn would have prolonged consequences. At that time, virtually all other analysts expected that the impacts would be short-lived. Three quarters of a year after the policy change, a rebound has not occurred and there is an increasing accumulation of evidence that points to a prolonged impact. Initially the evidence was only in the resale market; more recently, additional evidence is being provided by a downturn in housing starts – which, as has been seen above, is only just beginning and can be expected to worsen considerably.

Moreover, even if housing sales soon “return to normal”, there has already been a considerable loss of housing activity that should have happened but did not. The lost sales will have consequences for future housing starts and related employment.

This is a partial analysis:

- There will be reductions of housing starts and related employment in most areas of Canada, especially in British Columbia and Ontario. In Manitoba, Saskatchewan, and Atlantic Canada, reductions in housing starts may be less severe, but even so, activity and related employment in those areas will be below potential.
- For all of Canada, by late 2014, housing starts might be 50,000 units (or more) below the average of 204,400 that was seen during 2011 and 2012. For the second half of 2014 and during 2015, the rate of housing starts in Canada might be about 150,000 units.
- There will be further job losses related to the slowdown of resale market activity. Since the policy change, the dollar volume of resale activity has fallen by 8.5%, which is costing jobs across many industries.
- Slower growth of house prices (or even price declines) will negatively affect consumer confidence and spending, costing jobs.
- In sum, it is conceivable that by mid-2015, employment attributable to housing activity and the “wealth effect” from housing may be 150,000 lower than it would be in the absence of the changes to mortgage insurance criteria.
- The path for total employment will depend upon the extent to which job creation can be accelerated in other areas of the economy.

A further consequence of the housing market downturn is that rental market vacancy rates will fall: a slowdown for housing starts will cause a later slowdown of housing completions. The availability of housing will fall short of the growth of the population. Vacancy rates that are lower than they need to be will result in rent increases that are more rapid than they need to be, and greater hardship for tenants. These consequences, however, will not become obvious for some time, perhaps during 2015 and beyond.

A final thought: some comments have been made recently that a slowdown in housing starts would be a healthy thing. The argument is that housing starts have exceeded the “demographic requirement” and therefore there is an excess of housing; slower production would allow that excess to be mopped-up.

But, demographic analysis is usually not a useful guide to how much housing is actually needed by the population: during the past three decades housing starts have almost

never matched demographic estimates – economic cycles (especially job creation) are vastly more important than demographics.

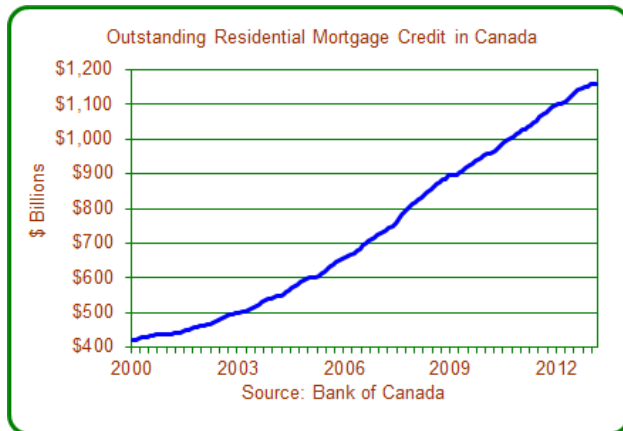
If there is over-production, there will be concrete evidence in the form of rising vacancies. That has not happened. Canada Mortgage and Housing Corporation reports that the vacancy rate in Canada (as of last October) was 2.6%, which is identical to the average of the past 40 years: if anything, the evidence is that housing production has been in balance with the needs of the population – until now.



5.0 Outlook for the Mortgage Market

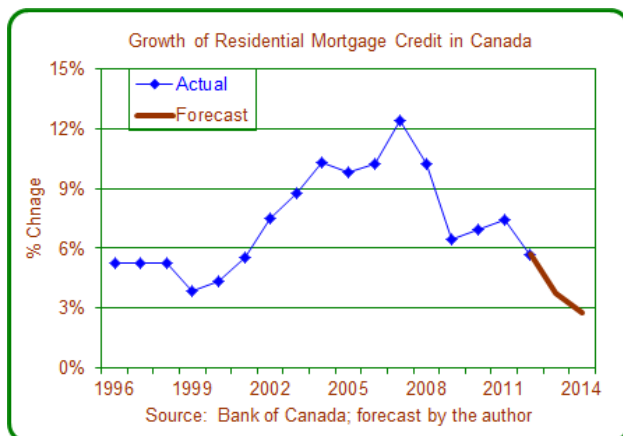
In early 2002, mortgage credit in Canada began to expand very rapidly. In just 7.5 years, the outstanding amount of mortgage credit doubled, from \$470 billion to \$940 billion. Growth slowed somewhat in the aftermath of the 2008/09 recession, but at rates of about 7% per year, mortgage indebtedness continued to expand more rapidly than incomes.

A further deceleration began early in 2012. This phase was not immediately apparent in year-over-year growth rates, but looking at changes over shorter periods (say, three month changes converted to annual rates) it was becoming increasingly obvious during the first half of 2012 that mortgage activity was slowing. The mortgage insurance changes that took effect in July 2012 resulted in an instantaneous drop in resale market activity, causing mortgage activity to slow further late in 2012.



A major contributor to mortgage demand is completions of new homes. With a slowdown in housing starts just now starting to develop (as was discussed in the prior section) housing completions will be sustained at current levels (or even higher) for most of this year. Therefore, and assuming relatively stable resale market activity and stable completions, mortgage activity is unlikely to slow much more this year. Total growth for 2013 is likely to be in the range of 4.5% to 5.0%, which would bring outstanding residential mortgage credit to just over \$1.2 trillion by year end.

Housing completions will gradually decelerate during 2014, resulting in a gradual, further deceleration of demand for mortgages. Meanwhile, we can expect that continued low interest rates will continue to allow mortgage holders to rapidly repay the principals. By the end of 2014, the growth rate is likely to be in the range of 2.5% to 3.0%, and outstanding residential mortgage credit would be \$1.24 to \$1.25 trillion

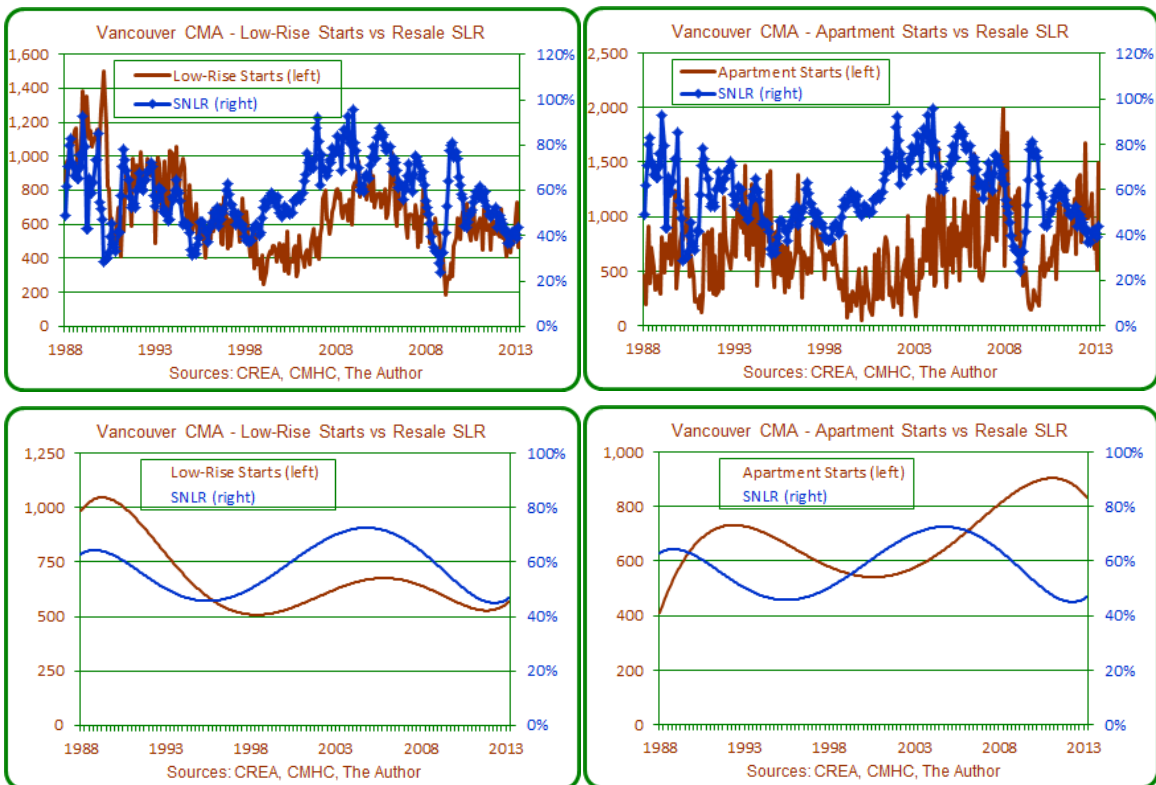


Appendix

Analysis of Housing Market Outlooks for Major Market Areas

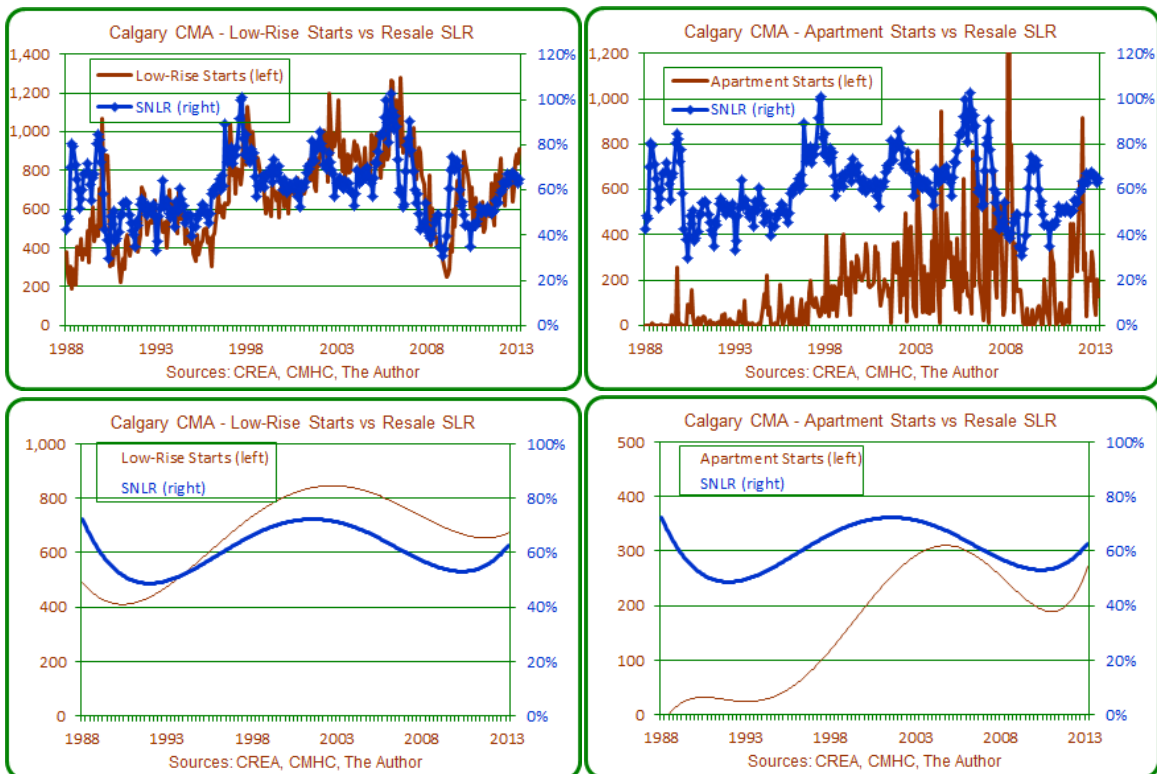
Vancouver CMA

- The Vancouver housing market was already in a state of transition prior to the policy change last summer. Subsequently, there has been a further weakening of sales and the SNLR has fallen to a very low level. In the charts below, the trend line for SNLR is likely to fall further during the coming months. Among the major markets discussed here, Vancouver is by far the weakest (using the SNLR as the yardstick).
- In the low-rise sector, the charts show that starts have lagged behind the SNLR, by perhaps a year to a year and a half. A complicating factor is that the rate of starts has trended downwards, likely due to poor affordability, and this has weakened the relationship between SNLR and starts. Given the trends in the data, it is possible that low-rise housing starts will be stable at about the current level, but there is also a possibility of a further (small) drop in housing starts, perhaps 100 units per month.
- For apartments, there is a relationship between SNLR and starts, but with a very long lag time. The trend line for starts suggests that a slowdown has begun, in response to a prolonged gradual weakening of the resale market. This data suggests that apartment starts will continue to fall. In perhaps a year and a half to two years from now, the starts rate might be 550 to 600 units per month, or 6,600 to 7,200 units at an annual rate. By contrast, during 2011 and 2012, apartment starts averaged about 11,800 units.
- Total housing starts in the Vancouver CMA averaged about 18,400 units per year during 2011 and 2012. Based on the market data, the monthly rates of starts may fall to about 1,100, or an annual rate of 13,200, a drop of 5,000 to 5,500 compared to the 2011/12 average. Related employment would fall by about 7,500.



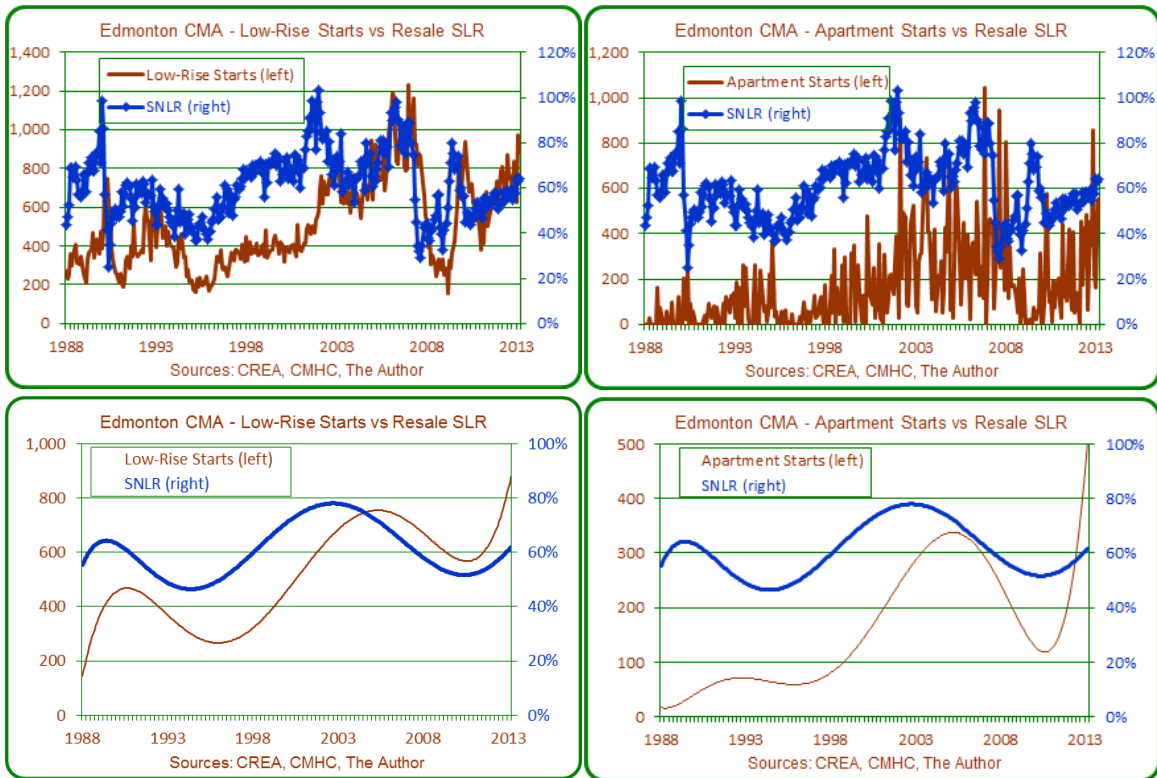
Calgary CMA

- The trend for SNLR has increased during the past two years, but in the wake of the mortgage insurance changes last summer the SNLR has stopped rising, as is illustrated by the last few data points in the first chart. Therefore, the trend for SNLR is unlikely to rise further under current conditions.
- For low-rise homes, the data shows that starts lag about 12 months behind changes in the sales-to-new-listings ratio. For example, the trend for the SNLR began to turn up early in 2011 and the housing starts trend began to rise a year later. With the trend for the SNLR unlikely to rise by much more, the data suggests that the monthly rate of housing starts might rise by about another 50 to 100 units.
- For apartments, in general there is a relationship between SNLR and starts, but it is not stable, and there is also a rising trend for apartment starts. This rising trend has occurred because condominium living has become more accepted as a housing option in Calgary. The recent rise in the SNLR suggests that apartment starts might be stable or rise slightly, by perhaps 50 units per month.
- Total housing starts in the Calgary CMA averaged about 11,000 units per year during 2011 and 2012. Based on the market data, the monthly rates of starts can be expected to rise slightly, by 50 to 150 units per month, or 600 to 1,800 at an annual rate. Taking the mid-point, related employment would rise by about 2,500.
- About two years ago, the SLNR and housing starts data showed the beginning of a recovery from a prolonged downturn (which had started about the end of 2005). The author's argues that the change in the mortgage insurance criteria last summer has weakened the recovery, although the recovery continues: in the absence of those rule changes, the outlook for the Calgary housing market would be even more optimistic, and the expected amount of housing-related job creation would be larger.



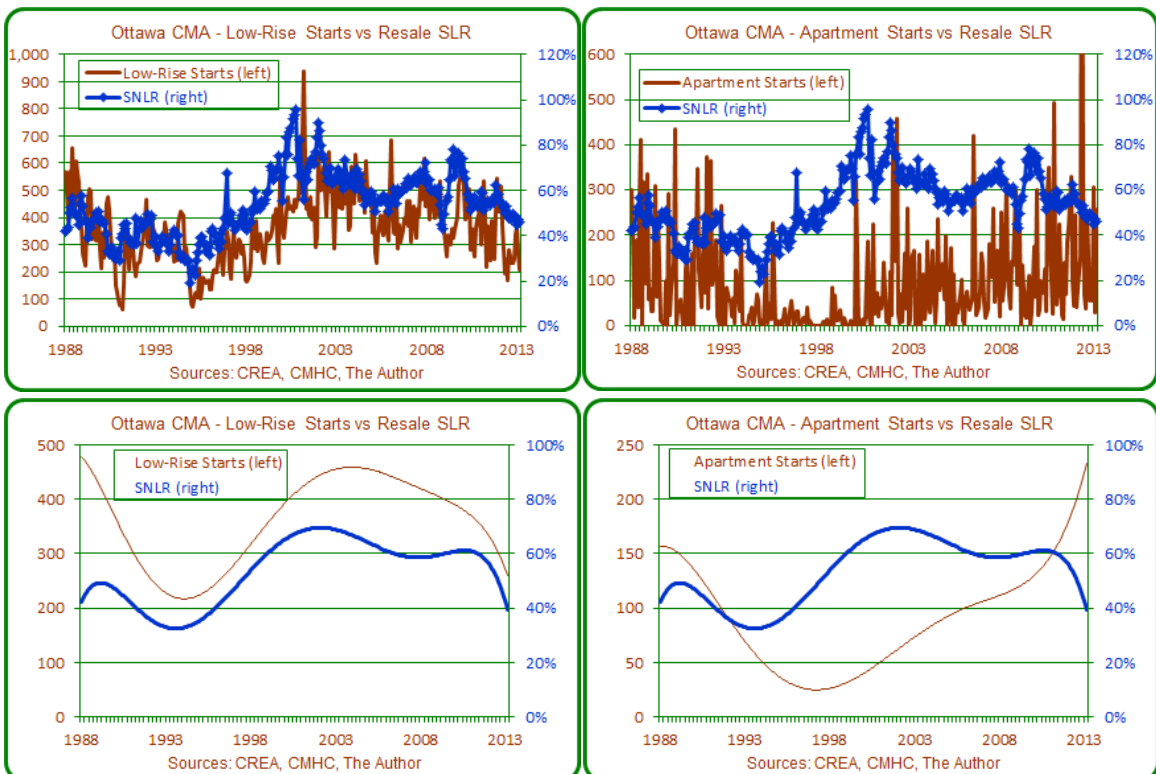
Edmonton CMA

- The Edmonton housing market continues to improve: the SNLR has continued to rise despite the change in mortgage insurance criteria and housing starts continue to rise.
- In general, housing starts have the expected relationship with the SNLR, as starts follow SNLR with lags, for both low-rise and apartments. In both sectors, however, starts have also trended upwards, indicating that other factors, especially population growth, are contributing to stronger housing demand.
- In both sectors, there is a possibility that housing activity has recently “overshot” the level of demand, which could be the result of investment buying (in both sectors). This might result in higher vacancies in the rental sector during the next two years.
- Total housing starts in the Edmonton CMA averaged about 11,000 units per year during 2011 and 2012. At present, the starts trends are well in excess of that (about 14,000 units, annualized). Based on the market data, the current sustainable rate of starts might be just over 1,000 units per month, or about 12,500 annualized. Therefore, during the coming year, activity might fall from recent levels, but exceed activity during 2011 and 2012.
- This increase in housing starts in comparison to 2011 and 2012 might cause employment to rise by about 2,500.



Ottawa CMA

- The Ottawa housing market began to weaken in early 2012, before the announcement of the mortgage insurance policy change. The SNLR has continued to fall (although the extent of the fall is slightly over-stated by the mechanically-generated trend line). The SNLR indicates that the Ottawa market is quite weak in historic terms, and that it is now one of the weakest major markets in Canada.
- Low-rise starts have followed the trend for the SNLR, with a reasonably short lag-time. It appears that low-rise starts have largely adjusted to the slowdown, and activity might not change very much more going forward. Low-rise starts averaged about 3,800 units per year during 2011 and 2012; continuation of recent levels of activity would result in an annualized rate of about 3,300 units.
- In the apartment sector, starts were reasonably consistent with the SNLR until recently. But it appears that activity has increasingly exceeded the market requirement during the past two years. It is possible that apartment starts will remain elevated for some time, but then slow to less than 1,000 units per year. By contrast, apartment starts averaged about 2,100 during 2011 and 2012.
- Total housing starts in the Ottawa CMA averaged almost 6,000 units per year during 2011 and 2012. A reduction during the coming year and a half to two years to about 4,300 would cause employment in construction and related industries to fall by about 2,500.



Province of Quebec (urban areas)

- The SNLR indicates that housing markets in Quebec were relatively stable and balanced prior to the policy change that took effect in July 2012.
- In the low-rise sector, it appears that starts have tended to follow movements in the SNLR, although the indicated lag time is very long. The recent drop in the SNLR can be expected to cause starts to slow. The data in the first chart hints that the adjustment process may have started, but the mechanically-generated trend line in the second chart does not yet show a change. During 2011 and 2012, low-rise starts averaged about 16,500 units; the pending adjustment is likely to reduce starts to an annualized rate of 13,000 to 14,000.
- For much of the period covered in the charts, apartment starts showed the influence of changes in the SNLR (with very long lag times). But, for the past five years, apartment starts have been divorced from the resale market influence. During 2011 and 2012, apartment starts averaged almost 25,000 units. It appears that there has been a substantial amount of investment activity. A market adjustment might be expected to reduce the starts rate by one-half, to 12,000 to 13,000 units.
- Combining the two sectors, total housing starts in urban Quebec averaged about 41,000 units during 2011 and 2012. During the coming year and a half to two years starts may fall to about 25,000 to 27,000 units at an annualized rate. The expected reduction is about 14,000 to 16,000, or about 35% to 40%. The reduction has started during the past few months, and about 40% of the anticipated drop has already occurred.
- Employment in construction and related industries may fall by 20,000.

