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The Elusive Canadian Housing Bubble

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ABSTRACT

The cause of the housing bubble associated with the sharp run-up and the subsequent drop in home prices in the US over the period of 1999-2008 has been the focus of significant research attention. Despite numerous similarities, the Canadian housing market escapes the same level of interest, mostly due to the seemingly stable housing prices.

This paper explores the subject of a possible housing bubble in Canada. It examines a diverse array of factors that may have contributed to the rise in house prices in Canada. The paper evaluates each factor individually and determines the health of the Canadian housing market using common valuation techniques.

Results suggest that economic fundamentals in Canada provide little explanation for the Canadian house price dynamics. Market fundamentals have become insignificant in affecting house prices, and the price-momentum conditions characteristic of a bubble now exist. The extreme decoupling of the market prices from the underlying fundamentals suggests an upcoming correction in housing prices in Canada.

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I INTRODUCTION

A financial bubble is defined as trade in high volumes at prices that are considerably at variance with intrinsic values (King, Ronald R.; Smith, Vernon L.; Williams, Arlington W. and van Boening, Mark V., 1993). In the late 2000s, the Canadian housing market has exhibited both high volumes and prices that are considerably at variance with intrinsic values. Yet, the Canadian public remains on an ever-increasing buying spree with condo buildings in Vancouver and Toronto being 70 percent sold out by the end of the first weekend after being available for sale. Is there a bubble or is there not?

This is a question that has been debated for several years now. Both opponents and proponents of the housing bubble notion put forth facts and estimates to argue their cases. This debate will continue until either housing prices firmly stabilize at a certain level or plunge.

A critical look at the state of the housing market in Canada signals a growing bubble that is about to burst. This paper is structured in a way that covers the most important points pertaining to the current situation. It is not written to represent formal academic research, but it is designed to motivate readers to take an impartial look at the housing market and reassess it using the facts.

Much of this paper builds on primary research conducted in the Toronto area. Many individuals of different backgrounds were surveyed and interviewed for the purposes of constructing this document. The primary research helped to identify several common themes and misconceptions that exist amongst the Canadian public. The key objective of this paper is to address them along with presenting factual information that will show the current state of the housing market in Canada.

The paper uses the following structure to discuss these matters:

- “*Cost of Borrowing*”. This section builds on the primary research conducted for the purposes of this paper and examines the key items of interest rates and mortgage payments.

Section objectives:

- To clarify any misconceptions about the future directions of the interest rate
 - To illustrate the significance of rising mortgage rates on mortgage payments
 - To explain the impact of rising rates on the borrowers with short-term mortgages in the current interest rates environment
- “*Housing Affordability*” section provides a glimpse of the current state of housing affordability in Canada, draws historical parallels with the housing bubble of the late 1980s and compares recent surges in housing prices in four major Canadian cities to the mean household income.

Section objectives:

- To contrast the present affordability of the Canadian housing to the historical norms
 - To compare current housing prices in Canada to the peak of the real-estate bubble of the late 1980s
 - To show the widening gap developing between housing prices and mean household income
- The “*US and Canada*” section offers a direct comparison of the housing bubble in the US and Canada.

Section objectives:

- To refute a common myth that the Canadian housing market did not go “too far, too fast”
 - To disprove the misconception that the rise in the Canadian housing prices was not as intense as that of the US, and thus does not constitute a “bubble”

- To counter the views suggesting that other factors, such as housing affordability, are in better shape in Canada than in the US
- The *CMHC* (Canada Mortgage and Housing Corporation) part of this document contains a quick peek at the array of tool used by the Canadian government to temporarily prop up the prices in 2007-2008 and postpone the housing market collapse to a later date.

Section objectives:

- To explain how the housing market collapse was delayed
 - To show the tools leveraged in propping up housing prices
 - To demonstrate that the delay in bursting the bubble will have significant negative long-term effects on the Canadian economy
- In the “*Recession*” section, the subject of mass-madness is covered.

Section objectives:

- To show that Canadians are buying houses they cannot afford
 - To illustrate the disregard of fundamental income to price balance
 - To expose the increasing leveraging of Canadian households
- Finally, the “*Fundamental Valuation*” section concludes the message with providing fundamental valuation of the housing market from the rent to ownership cost perspective.

Section objectives:

- To show the absence of support for the current housing prices using various metrics
 - To contrast renting and owning in the today’s environment
 - To expose the fallacy of buying a property on the premise of renting it out in an event of a housing downturn

As mentioned earlier, this paper is intended to motivate readers to examine publicly available information with a goal of forming an educated opinion about the state of the housing market in Canada. I hope you will find the information presented in this paper helpful, and I thank you for taking the time to read it.

2 COST OF BORROWING

Real-estate purchasing is a significant event in the lives of many. Land is a finite and scarce resource. It is especially prominent in developed regions where the attractiveness of local economies and quality of life spurs competition for prime spots. The demand conditions are reflected in land prices, which are generally substantially higher than those of any other purchases an average person would make during his lifetime.

Unless a real-estate purchase is financed in full by the savings of the buyer, which is rarely the case in the modern developed world, a borrowing-lending activity must be involved. As mentioned before, the amount changing hands is in many cases comparable to the life-time earning potential of the buyer. Five, ten and even twenty-five percent down payment of a typical real-estate transaction creates a significant leverage of 19:1, 9:1 or 3:1 respectively. High leverage highlights the need for managing cost of borrowing given that this represents the greater portion of the funds employed in a real-estate transaction. This type of leveraged purchasing is wrapped in what is commonly known as a “mortgage”. By definition:

A mortgage is the transfer of an interest in property to a lender as a security for a debt.

Encounters with mortgages are the usual occurrences in daily lives for most adults living in developed countries. These encounters can be direct – such as borrowing, refinancing, and frequent payments. They can also be indirect – such as mortgage discussions that appear on the front pages of newspapers or that surface in conversations with colleagues. Yet, despite the widespread exposure to mortgages, the structure and details of the mortgage concept are surprisingly poorly understood.

In preparation for this research, I surveyed over 30 individuals from different walks of life. To my amazement, nearly a half of the current mortgage holders had only a very basic understanding of the mortgage structure or no understanding at all. Specifically, the lack of knowledge was prominent in discussions about the cost of borrowing in relation to the mortgage lending rate. Of the 30 mortgage holders interviewed, 15 percent understood percentage changes in the mortgage lending rate as being applicable to the monthly payment only, rather than the entire borrowed amount. These individuals viewed an increase of a percent in the mortgage lending rate as a percent increase to their monthly payment. In their view, a 10 percent increase to the mortgage rate would raise their monthly payment by the equal 10 percent, and their current hypothetical \$2,500 monthly payment would grow to a mere \$2,750. This major fallacy and the very vague understanding of the lending rate-monthly payment relationship exhibited by another 35 percent of respondents prompted me to dedicate a portion of this paper to this subject.

The basic annuity formula (References: Formulas) or any mortgage calculator shows that for interest rates between 4 and 14 percent on a mortgage amortized over 25 years, an increase in lending rate by one percent would result in an average monthly payment increase of 9 percent.

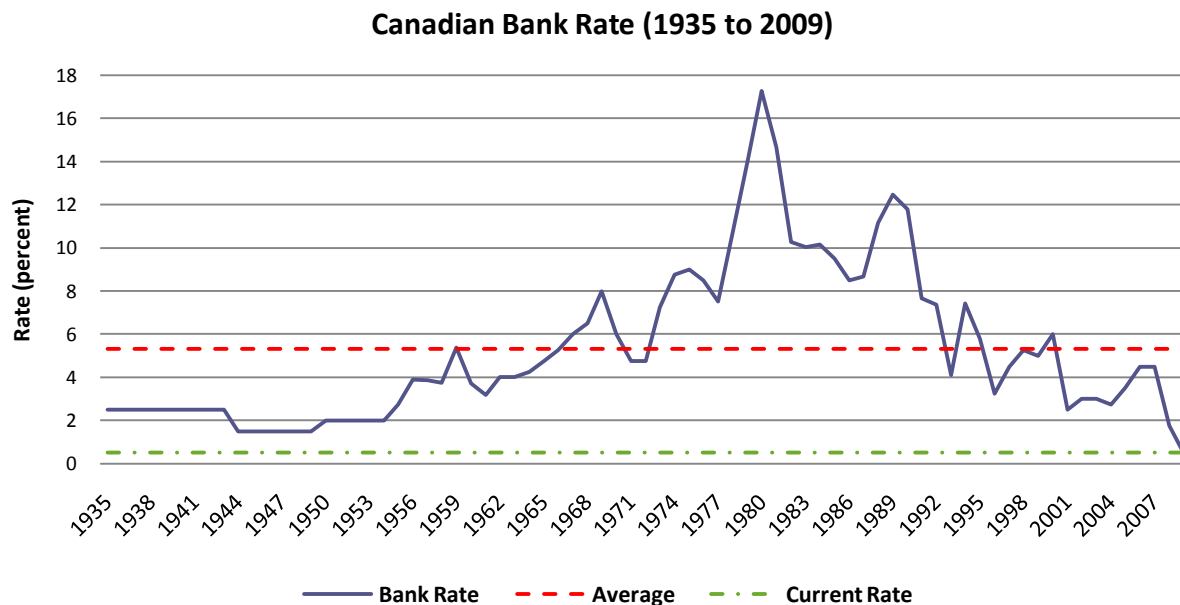
1 percent change in mortgage lending rate = 9 percent change in monthly mortgage payment amount

15 percent of my survey respondents expected a 10 percent mortgage rate hike to raise their current \$2,500 monthly payment to \$2,750. The reality is a 10 percent rise in interest rates from 4 to 14 percent on a mortgage amortized over 25 years will send a \$2,500 monthly payment to a stratospheric \$5,701 or 128% increase. This is a truly staggering discovery for those who did not budget for it.

9 to 1 ratio can be advantageous or devastating. Fear it not when the mortgage lending rates are expected to go down. However, if the rates are to go up, it may spread like wildfire through the ranks of borrowers, scorching those caught unprepared. So the real burning question here is where are we today? Are the rates expected to go down, stay flat or rise?

Exhibit 2.1 plots historical mortgage rates reported by the Bank of Canada for December of each year between 1935 and 2009.

Exhibit 2.1: Historical Canadian Bank Rate (1935 to 2009)

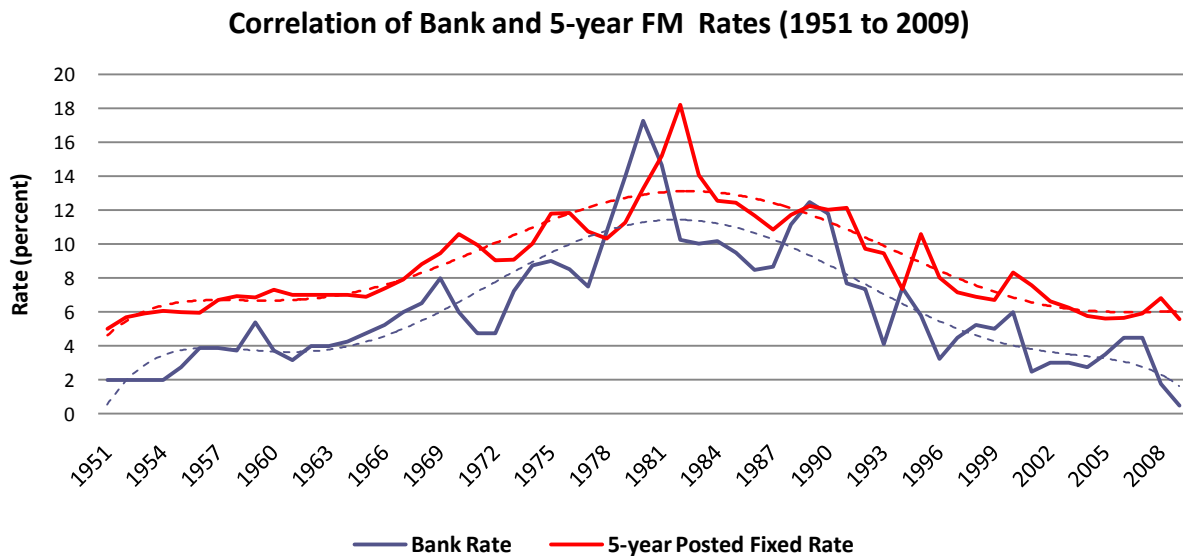


Source: Bank of Canada, Department of Monetary and Financial Analysis;

The bank rate is the rate of interest which a central bank charges on the loans and advances that it extends to commercial banks and other financial institutions. In Canada, the bank rate is defined as the upper limit of the overnight rate band announced each month by the Bank of Canada. The bank rate determines the relative cost associated with borrowing capital. By historical standards, borrowing in Canada has never been cheaper - not in the last 75 year. The only period that came close to the present times in terms of the lending rates was between 1944 and 1948, during the last years of World War II and at the beginning of the post-war reconstruction. Even then, the rate was kept at 1.5 percent vs. 0.5 percent today.

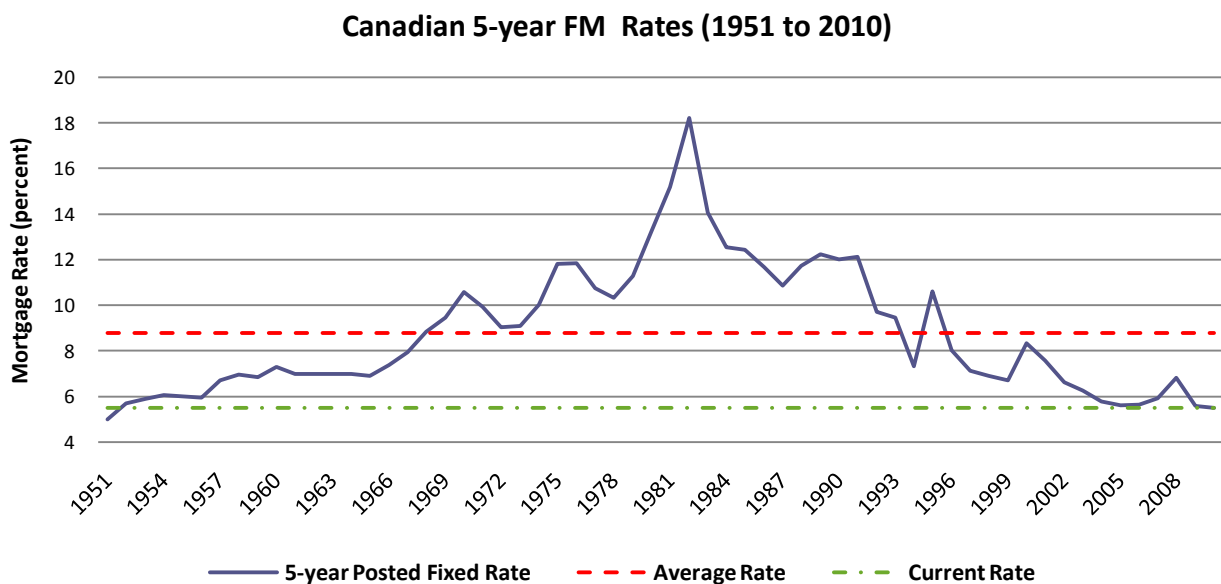
The present bank rate is 4.8 percent below its 75-year average. It has never been lower in the Bank of Canada's history, and there isn't much potential for lowering it any further, unless the Bank of Canada decides to pay interest to those who borrow from it. The only direction for the bank rate from the current level is up.

Although directly related to other types of lending activities in Canada, the bank rate is irrelevant in the context of many borrowers. Exhibit 2.2 illustrates the correlation of the 5-year fixed mortgage rate to the changes in the bank rate. The 5-year fixed mortgage rate is frequently used as a benchmark for tracking historical mortgage rates, and it is used in this paper for benchmarking purposes as well.

Exhibit 2.2: Canadian Bank Rate and 5-year Fixed Mortgage Rate (1951 to 2009)

Source: Bank of Canada; Canada Mortgage and Housing Corporation;

From the chart above it can be observed that the bank rate and the 5-year fixed mortgage rates are highly correlated. Once the bank rate begins its inevitable ascent, the mortgage rates will follow. How far will they go? Without referring to complex and largely unreliable economic models, the historical data helps to shed some light on the potential future level of the mortgage rates. Exhibit 2.3 displays the historical 5-year fixed mortgage rates for the period 1951 to 2010.

Exhibit 2.3: Canadian 5-year Fixed Mortgage Rate (1951 to 2010)

Source: Bank of Canada; Canada Mortgage and Housing Corporation;

The following section of the document deals with several examples and scenarios pertaining to mortgages. It must be noted that this paper uses a typical mortgage amortized over 25 years with payments made monthly, and the same principal amount for all examples.

Over the last 59 years the 5-year fixed rate mortgage rate averaged at 8.8 percent (Exhibit 1.3). At the time of writing of this paper, it stood at 5.49 percent. Assuming that the principal amount is the same, the following three scenarios review different situation pertaining to the possible direction of the bank rate:

- Moderate inflation; bank rate rises to still historically low, but plausible 4 percent
- Average inflation; bank rate reaches its long-term average
- High inflation; bank rate exceeds its long-term average

In the first scenario, the bank rate reaches and stays at a moderate level of 4 percent. From the bank to mortgage rate correlation and historical evidence, the 5-year mortgage rate would be approximately 7 percent, or 2.5 percent above today's level. According to the 9 to 1 ratio discussed earlier, a 2.5 percent increase will translate into approximately 24 percent rise in monthly payments.

The second scenario sends the bank rate to its historical average of 5.3 percent, an increase of 4.8 percent from today's levels. The result of such interest rate surge will be an approximate 35 percent hike in the monthly mortgage bill.

The last scenario deals with a situation deemed impossible in the current environment of gloomy and loud deflationary talks. Without going into a debate about the eventual effects of uncontrollable money-printing by central banks globally, let's assume that the ominous deflationary fears have failed to materialize. Instead, many major global economies find themselves in a desperate need to react to severe inflationary pressure. Under this assumption, being part of the global economy, Canada is forced to raise its rates to the above-average 10 percent. As a result, under the 9 to 1 ratio, the monthly mortgage payments will rise approximately 55 percent.

The question to ask yourself, can you afford paying 25, 35 or even 55 percent more on your current mortgage?

There is no linear formula to estimating the impact on different households. Another important consideration is your location on the yield curve.

The yield curve is the relation between the interest rate and the time to maturity of the debt for a given borrower.

Yield curve is a visualization of the interest rates for loans of different maturities, or the final payment date of a loan, at which point the principal is due to be paid. Loans with different maturity dates typically carry different interest rates. If all maturity dates and their corresponding interest rates for any given point in time are plotted on a chart, a yield curve is built. Exhibit 2.4 provides a snapshot of the current yield curve. The left part of the yield curve encompasses short-term maturities, and is called "short end". The right part representing maturities with longer durations is a "long end" of the yield curve.

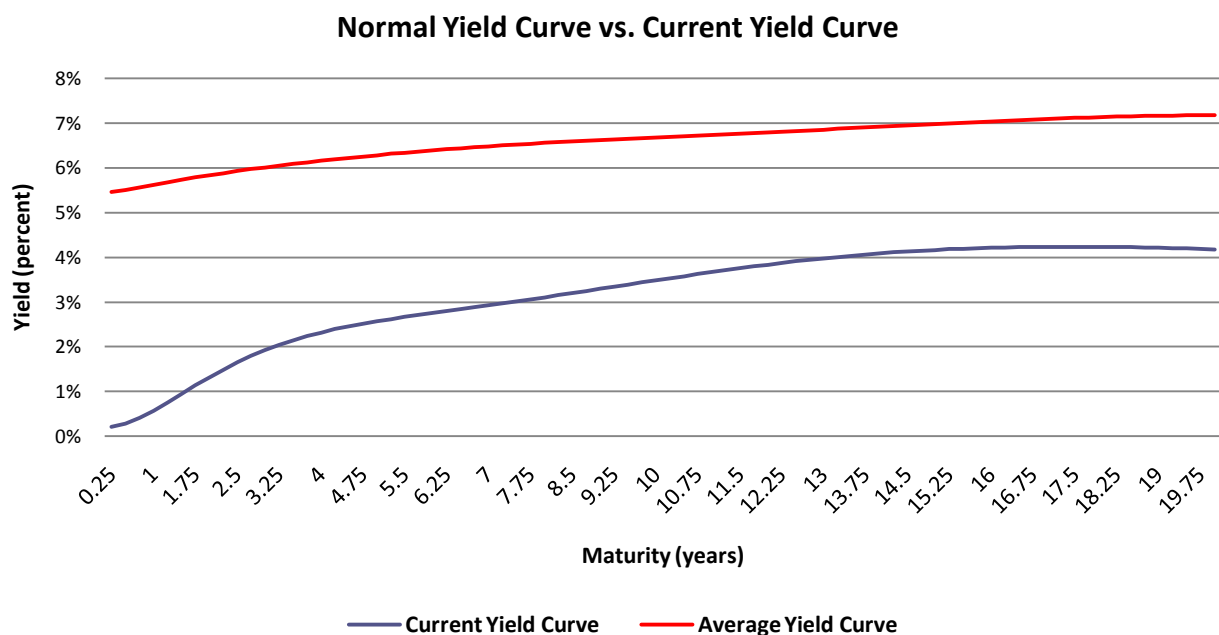
Why is yield curve important to home owners? A typical, or "normal", yield curve gradually slopes upwards. In some cases, the gap between the short-term and long-term rates widens, and the slope of the yield curve becomes more pronounced. This is called a "steep" yield curve, and it is exactly how the current yield curve looks now. For a visual comparison of the "normal" and "steep" yield curves please refer to Exhibit 2.4. Please notice the gap

width between the two lines on the left side and on the right sides of the chart. The distance between the two lines is much greater on the left than on the right.

Again, why is yield curve important to home owners? Once the yield curve begins to gravitate towards its “normal” form, it flattens. The flattening can be achieved through either declining long-term rates, rising short-term rates or both. As was discussed at the beginning of this section, the 5-year rates are unlikely to decline any further, and will eventually rise. Short-term rates will rise as well. However, short-term rates are expected to rise *more rapidly* than the long-term rates, as the increase, due to the bank rate changes, is compounded by the yield curve flattening. The short-term rate will swing up sharply, meaning the 1-, 2- and 3- year mortgages will experience sharper ascent than the 5- and 10-year mortgages will. Shorter term mortgages may still carry lower rate than 5- and 10-year mortgages. However, the increase of the short-term rates is expected to be greater than that of the long-term rates. While the home owners borrowing under 5-year mortgage agreement are expected to pay 25, 35 or 55 percent more in the future, those borrowed under the 1- and 2-year maturity terms can expect their payments to rise by 40, 50 and 70 percent respectively under the scenarios discussed earlier.

If you, as a home owner, have difficulties making your mortgage payment today under the 1-, 2- and 3-year mortgage term agreements, be prepared to be thrown over the edge by the impending interest rate hike. Plan your borrowing accordingly and don't get lured by “teaser” or misleadingly low short-term rates into taking greater loans than you can afford.

Exhibit 2.4: Normal (Averaged Between 1986 and 2010) vs. Current “Steep” Yield Curves



Source: Bank of Canada;

SECTION SUMMARY

This section deals with the concept of bank rates, mortgages and cost of borrowing. The main take-away from this section is that the bank rates have no alternative, but to rise in the future. It is not a question of “if”, but rather of

“when” and “how much”. The interest rate increase will lead to commensurable increases in mortgage rates. As mortgage rates go up, the cost of borrowing translated into monthly payments will rise about 10 times faster. The effects will be more noticeable for borrowers with short-term loan agreements, such as 1-, 2- and 3-year mortgages who might see increases in their monthly mortgage payments ranging anywhere from 30 to 70 percent. If you intend to buy a real-estate property, please base your judgement on the payments you *will* eventually have in the future, rather than on unsustainably low payments offered to you now.

3 HOUSING (UN)AFFORDABILITY

Mortgage rates do not possess a problem in an environment of affordable house prices. After all, if home owners spend only a small fraction of their income towards home ownership, a rise of 25 or even 50 percent wouldn't be an issue. Where is Canada today in terms of housing affordability?

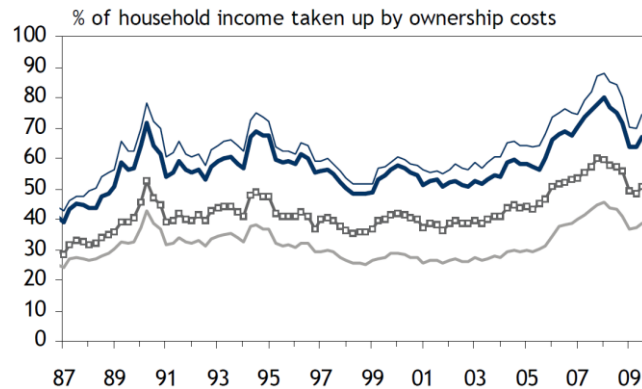
To answer this question I refer to the quarterly housing affordability releases compiled by the Royal Bank of Canada. In its November 2009 edition RBC states:

The string of significant improvements in housing affordability in Canada finally came to an end in the third quarter [of 2009].

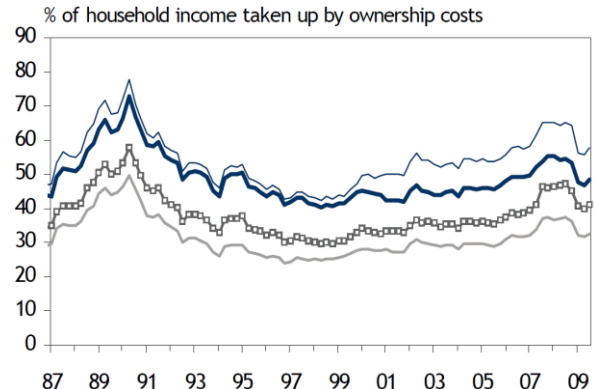
The following charts compiled by RBC visualize housing affordability in the 4 largest Canadian cities:

Exhibit 3.1: Housing Affordability in Key Metro Markets (November 2009)

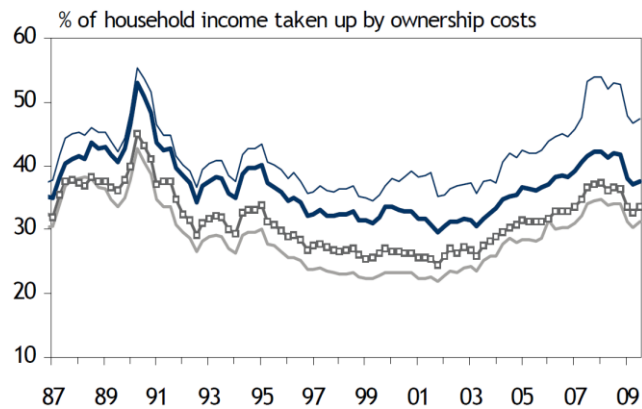
Vancouver



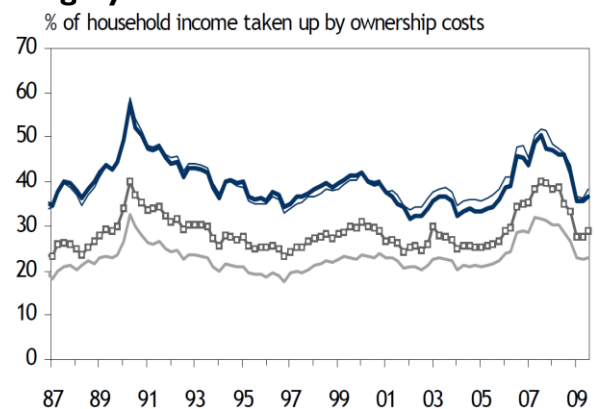
Toronto



Montreal



Calgary



— Standard two-storey — Detached bungalow —□— Standard townhouse — Standard condo

Source: Royal Bank of Canada, November 2009;

In Vancouver, Toronto and Montreal, housing affordability reached levels substantially above their historical average. In fact, in Vancouver housing affordability is close to being the worst on record, exceeding levels experienced during the real-estate bubble of the late 80s. Of the 4 cities, the situation in Calgary appears to be

moderate and in line with historical norms due to the increase of mean household income that counterbalanced the recent real-estate price increases.

Let's pause for a moment to digest the RBC report:

- An average Vancouver household (that is a family of usually two income earners, not a single person) spends over 70 cents of every *pre-tax* dollar they earn on house ownership costs. Deduct unavoidable taxes, and this amount would rise to nearly 100 percent of an average household income in Vancouver
- An average Toronto and Montreal household spends over 57 and 47 of their *pre-tax* income on house ownership costs, or nearly 80 and 70 percent of their after-tax income respectively

An average Vancouver household spends almost a dollar on every dollar they earned. This is during:

- A severe recession (a subject that deserves its own section, and as such is covered later in this paper)
- Historically low interest rates

Incredible! Vancouver's property prices are reaching not just all-time highs in nominal terms, but are exceeding those seen during the previous real-estate bubble in real-terms. However, cheerleaders of a perpetually growing housing market point out that housing affordability, which can be taken as a sign of measurement of the housing market health in Toronto, Montreal and Calgary is not nearly as bad as during the housing bubble of the late 80's. This myth of positive affordability figures can be easily refuted by referring back to the cost of borrowing.

RBC Economics Research's housing affordability measures show the proportion of median pre-tax household income required to service the cost of mortgage payments (principal and interest), property taxes and utilities. Of these components, mortgage payments comprise approximately 80 percent of the overall housing costs. Back in 1990, at the peak of the real-estate bubble, the 5-year mortgage rate was 12 percent. It was 5.59 percent at the time RBC compiled its November 2009 report. Mortgage rates conceal the underlying prices by skewing affordability numbers. The poor affordability during the last bubble was experienced not as much due to inflated housing prices, but rather due to high borrowing costs. To level the field and understand how today's real-estate prices compare to those of the late 80's bubble, it is necessary to adjust the affordability measure for mortgage rates.

The 6.4 percent difference in mortgage rates suggests that on the same mortgage the monthly payments in 1990 were approximately 70 percent higher than today. Thus, today's affordability figures must be multiplied by a factor of 1.36 (80 percent mortgage component adjusted to 70 percent difference due to the mortgage rates). The results speak for themselves (see Exhibit 3.2):

Exhibit 3.2: Adjusted Affordability in Key Metro Markets

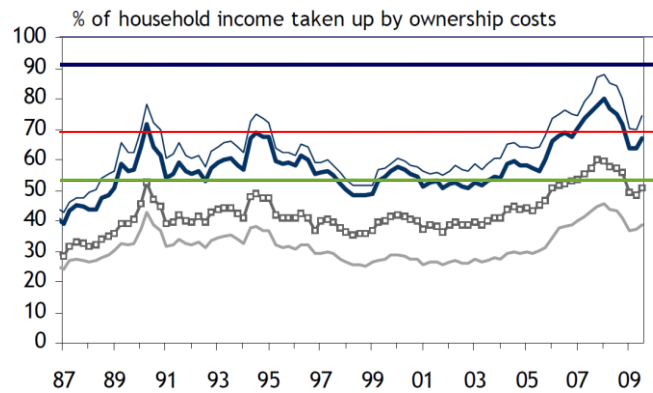
	Affordability Measure							
	Detached bungalow		Standard two-storey		Standard townhouse		Standard condominium	
	Current	Adjusted to 1990	Current	Adjusted to 1990	Current	Adjusted to 1990	Current	Adjusted to 1990
Toronto	48.6	66.1	57.8	78.6	41.0	55.8	32.8	44.6
Montreal	37.5	51.0	47.4	64.5	33.6	45.7	31.3	42.6
Vancouver	66.8	90.9	74.2	100.9	50.8	69.1	38.7	52.6
Calgary	36.7	49.9	38.5	52.4	29.0	39.4	23.0	31.3

Source: Royal LePage, Statistics Canada, RBC Economics Research, November 2009;

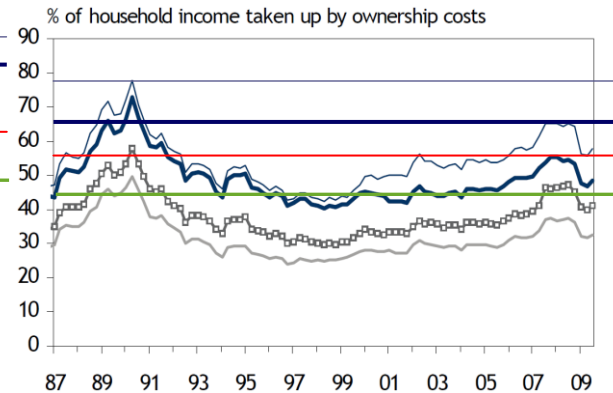
The adjusted affordability measures were added to the chart (Exhibit 3.3) to visualize the comparison.

Exhibit 3.3: Housing Affordability in Key Metro Markets (November 2009)

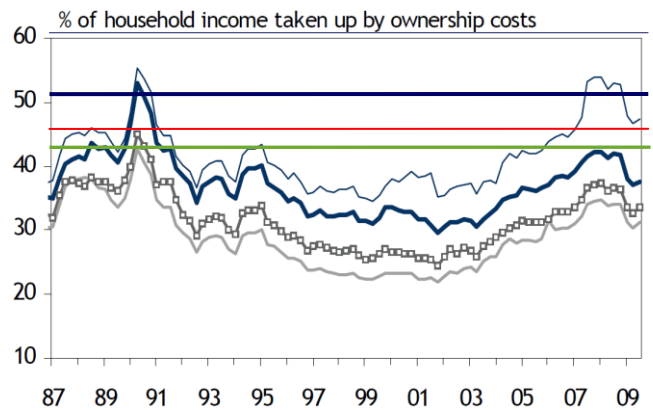
Vancouver



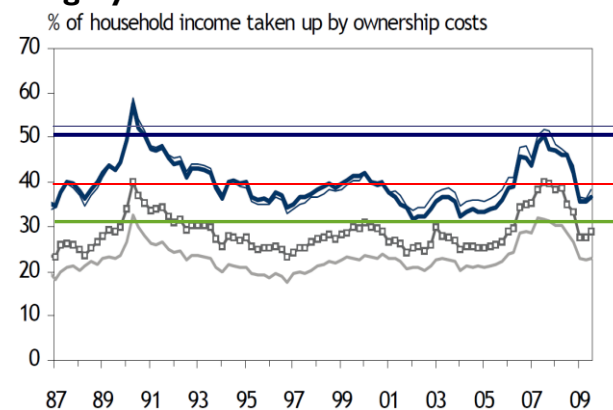
Toronto



Montreal



Calgary



— Standard two-storey — Detached bungalow — Standard townhouse — Standard condo

Source: Royal Bank of Canada, November 2009;

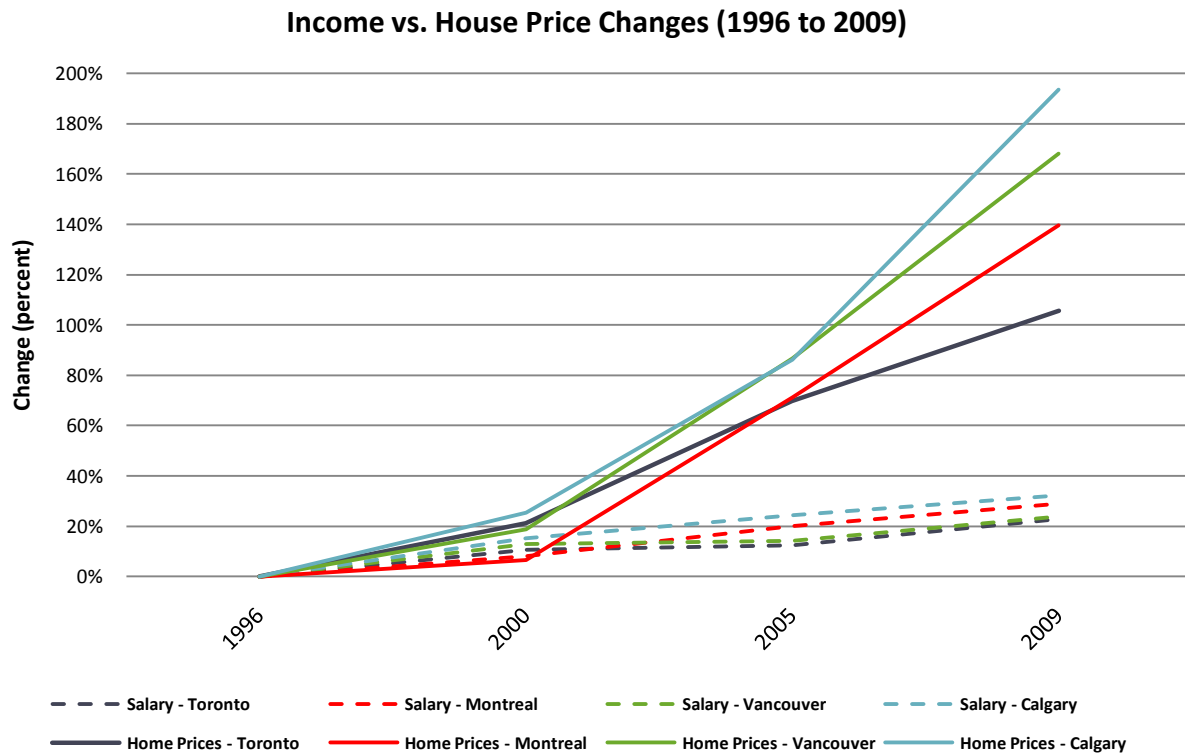
In both Vancouver and Montreal, today's real-estate prices *substantially* exceed those seen during the peak real-estate bubble in 1989 in both nominal and real-terms. In Toronto and Calgary, real-estate prices are near their peak of the late 80's bubble in real-terms. In fact, if today's mortgage rates were at the level experienced in 1990, the ownership costs of an average Vancouver house would be above 100 percent of *pre-tax* household income.

Today's prices in the four major Canadian cities are not cheap by any measurement. Comparatively, in real-terms (proportionally to the income of home owners), they are at the same level or higher than those at the peak of the previous real-estate bubble. Does it appear rational and sustainable?

I foresee many readers overlooking or ignoring the fact that all calculations are done in *real-terms* (relative to the median income), rather than *nominal*. To illustrate the difference, Exhibit 3.4 has been included. Between 1996 and 2009, the average household income rose by 23 to 32 percent in the four largest Canadian cities. Over the same period, the average house prices in these cities increased between 100 and 200 percent. The gap between the income and house prices growths is the most prominent in Vancouver: from 1986 to 1991 house prices doubled, in 2002 they tripled and by 2008 they had increased more than 6 times. House price gains have averaged

8.7 percent annually over the last 22 years in Vancouver. If you live and work in Vancouver, did you get a 8.7 percent salary increase every year in the last 22 years?

Exhibit 3.4: Comparison of Income to House Price Changes (1996 to 2009)



Source: Statistics Canada;

SECTION SUMMARY

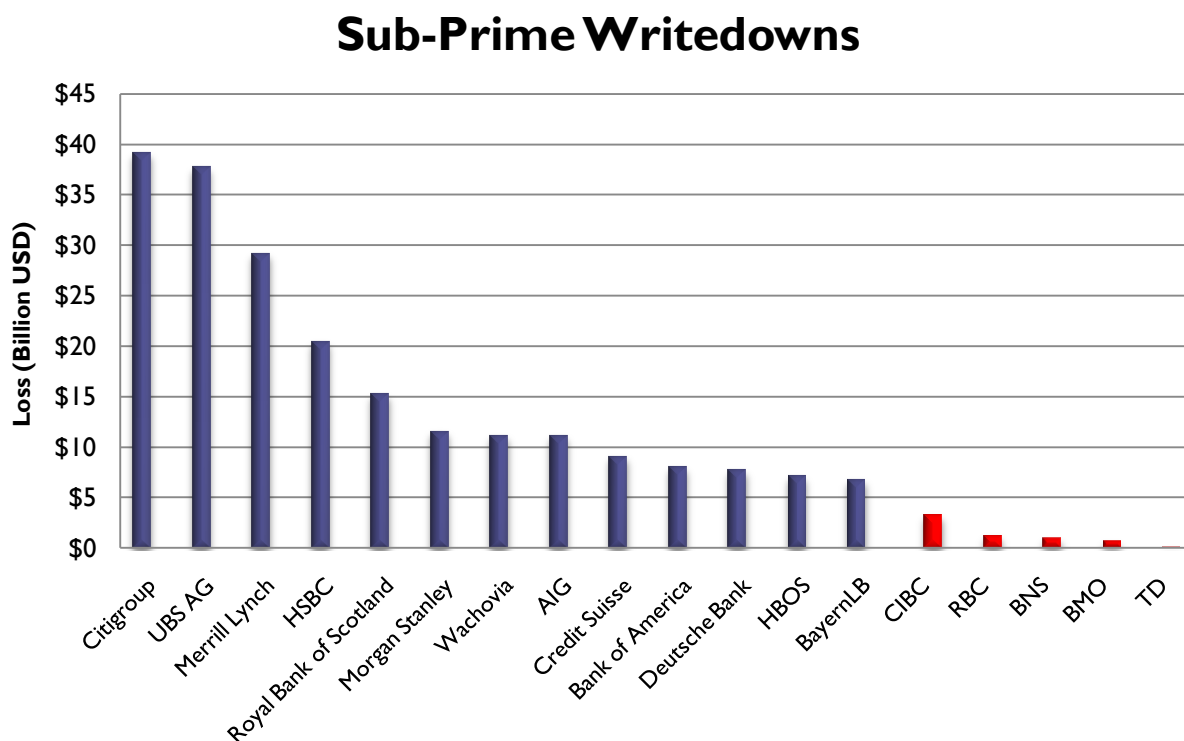
This section evaluated housing affordability and housing prices. By historical standards, home prices are not cheap. Today's median home prices are at or above their peak during the last real-estate bubble of the late 80s and early 90s. Income increases is a good benchmark for evaluating relative housing costs. Over the last 13 years, house prices in Toronto, Montreal, Vancouver and Calgary rose 5-10 times quicker than incomes in these cities. Incomes simply did not keep up with the rising home prices. Housing affordability (or un-affordability would be a better term in case of Canada) is significantly above its long-term average now. While it is lower than that at the peak-bubble in 1990, it is expected to skyrocket into the stratosphere once the bank rates rise and the mortgage rates follow. Despite the historically low mortgage rates, housing affordability in Vancouver is close to being the worst on record (the actual record was set less than two years ago). Once bank and mortgage rates gravitate towards their long-term average, housing affordability in Vancouver will approach 100 percent. In other words, an income-earning family in Vancouver would have to spend every penny they earn on housing costs. This is in addition to learning tax evasion methods, as this 100 percent would be of their pre-tax income. While not as dire as it is in Vancouver, housing affordability of Toronto, Calgary and Montreal will deteriorate and likely exceed levels seen during the last real-estate bubble. If you are planning to buy a house, a townhouse or a condo in one of these cities now, please consider the fact that you are purchasing the least affordable and the priciest (in real-terms) property in modern (or recorded) history.

4 THE US AND CANADA – NOT AS DIFFERENT AS THEY APPEAR

Let's rewind time back to late 2007 and early 2008. The fear of a bursting real-estate bubble has a firm grip on the global economy. Real-estate prices plunge worldwide. Financial institutions implode under the pressure of mounting losses. Bad loans and foreclosures skyrocket. Massive selling anxiety pushes global markets into oblivion. Then Q1 of 2009 comes and brings a complete market meltdown, sending investors running for the exit globally.

As the dust begins to settle in Q2 of 2009, the global community comes to the realization the sky isn't falling. With a solid market bottom in sight, the losses are now mostly accounted for. The respite in the sub-prime initiated panic allows markets to assess the situation. A look at the bank losses pertaining to sub-prime paints the following picture (Exhibit 4.1):

Exhibit 4.1: Sub-Prime Writedowns



Source: Various Sources;

It is apparent that the Canadian banks weathered the financial storm better than their peers in other countries. It is not just that the *collective* writedowns of the top 5 Canadian banks were smaller than a loss of any *single* financial institution on the "Top 13 Biggest Losers" list (Exhibit 4.1). It is also the fact that none of the Canadian banks required government bailout to stay afloat. The evident soundness of the Canadian banking system received well-deserved praise from around the world, and foreign delegations begin streaming to Canada to learn more about the basis upon which the strong Canadian banking system rests. The stability of the Canadian banks injected much needed confidence in the eventual economic recovery in Canada. The confidence was further assured by the recovering global markets.

Around the same time, the Canadian public was able to pause and assess the real-estate market situation in Canada. Just like the banking system, the Canadian housing market was the beaming image of health and stability. While some metropolitan areas of the US witnessed 50-60 percent declines in home prices, real-estate prices in the four largest Canadian cities dropped approximately 10-15 percent and rapidly bounced back, reaching all-time high levels in Toronto.

Naturally, the parallels between the Canadian banking system and real-estate market were drawn. Both exhibited remarkable resilience. Both withstood the headwinds of the financial crisis without collapsing. With the global economy beginning to recover, the logical conclusion of “the worst is behind us” was made. And as many begin to believe the slide in real-estate prices in Canada is reversed, explanations of how Canada managed to escape the real-estate disaster similar to the one that hit the US and UK begin to pile up.

It doesn't take long to find real-estate pundits offering their views on fundamentally sound reasons why Canada avoided the collapse. They can be seen posting authoritative articles on the front pages of weekly newspapers, speaking publicly on CNBC and offering expert advice in numerous investment newsletters and press-releases. Amusingly, the following inarticulate posting located on www.DiscoverVancouver.com summarizes these views with remarkable clarity (posted on 24 October 2008):

all you people that think vancouver's housing market is crashing are losers. vancouver's housing market has gone up another 10% this month alone. when there's a global recession, people want to invest their money in safe place and the only safe place right now is in vancouver real estate. it's a sure win. we have the best economy in the world, vancouver 2010 olympics, everybody wants to live here, and we are the #1 city in the world!!!

if you don't buy now, you'll be priced out forever! housing is extremely cheap right now compared to other cities like new york, tokyo, paris, london.

Generally, supporters of the averted housing crisis notion conclude that there wasn't a housing bubble in Canada to begin with. Sure enough, some agree that prices are at historically high levels in real-terms and that affordability is near or above record highs. However, they say, it is all relative. Relative to the rest of the world, especially the US, house prices in Canada are still cheap. And relative to the US, Canada hasn't experienced the housing craze and explosion in prices. Thus, the fact that Canada did not see a price collapse as the US did is fully warranted simply because our “bubble” has never reached the proportions of the US madness.

This common fallacy cannot be further away from reality. First of all, ignoring basic valuations in favour of making comparisons between dissimilar markets is inherently flawed. Even if Canada did not go through the same boom as the US did, it doesn't mean that current prices are supported by any fundamentals. No matter what transpired in other places of the world, Canadian residential real-estate is overvalued, prices are at historically high-levels in nominal and real terms, and affordability is exceptionally poor in the environment of historically low interest rates. Once these fundamentals begin to exert themselves, the relativistic argument (e.g. “it's not as bad as Miami was in 2007”) will not be able to sustain the current price levels.

Secondly, Canadians have developed a firm misconception that the Canadian real-estate market wasn't (isn't) as inflated as that of the US was in 2007. Let's dissect this view and examine it using comparable metrics. Exhibit 4.2 shows an overlay of price index changes for select US (dashed lines) and four major Canadian cities (solid lines). The starting point is the year 2000 – the year when the housing prices took off in both countries. At the peak of the US bubble in 2006-2007, Calgary, Montreal and Vancouver were “outperformed” only by the hottest real-estate spots in the US – Miami, FL, Los Angeles, CA, Las Vegas, NV and Tampa, FL. However, the three Canadian

cities “bubbled up” more than the average of the 20 major US cities did (black line). In comparison, Toronto rose only moderately, keeping pace with Boston and Chicago.

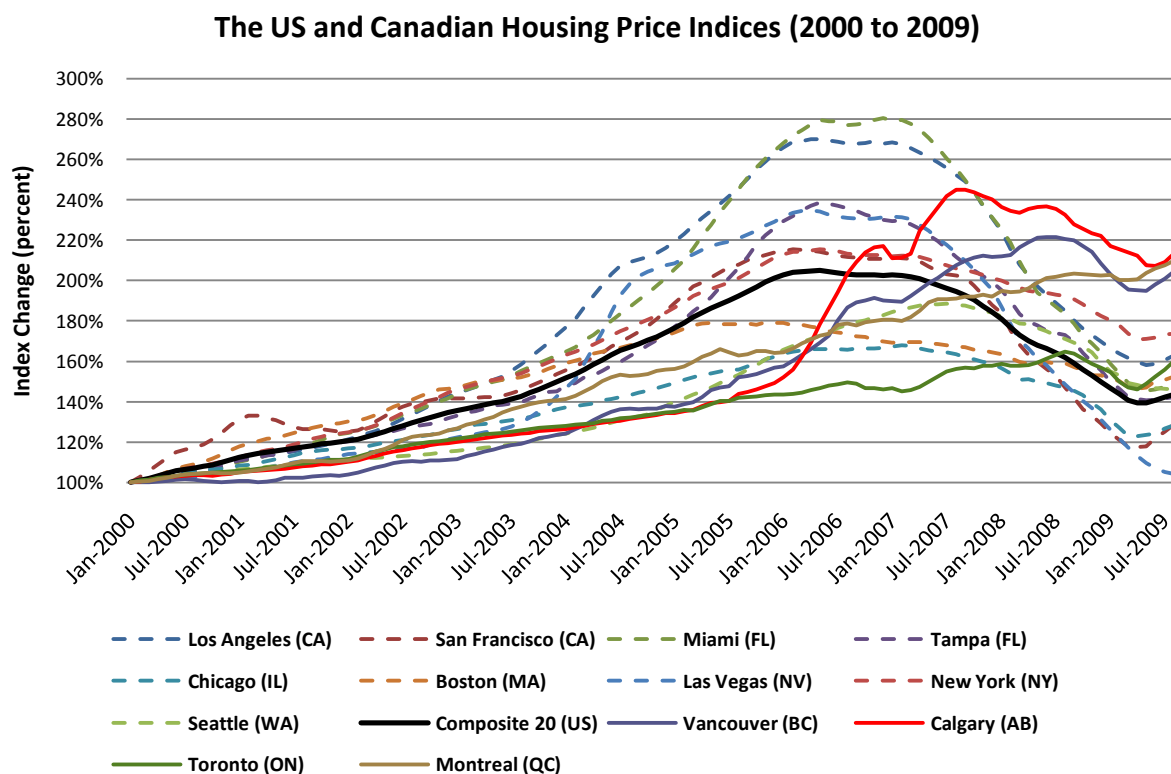
The Canadian bubble inflated to a size of a hot air balloon and flew away into the stratosphere just as quickly as the *hottest* US cities did. Furthermore, the housing prices ascent in the three Canadian cities is *above* the average for the 20 major US cities. There is no reason for Canadians to be complacent, as the Canadian bubble had a magnitude of no less than that of the US.

The real-estate bubble in Canada is/was by no means less significant than that of the US.

2007 was the year of the spectacular sub-prime mortgage collapse in the US, leading to a wider market meltdown. The panic quickly spread to the other parts of the world, causing the “domino effect” that burst bubbles in other countries. The Canadian housing market felt the pressure and slightly deflated. However, defying rational expectation, the Canadian housing market swiftly “recovered” to continue with its upward trajectory. The US housing prices corrected to more reasonable levels, but the Canadian housing market didn’t.

Fast-forward from 2007 to 2009: while the US prices corrected from their peak to levels more in line with the long-term trend, the Canadian bubble flies high at a low Earth orbit in search for a prickle.

Exhibit 4.2: Comparison of the US and Canadian Housing Price Indices – Select Cities (2000 to 2009)



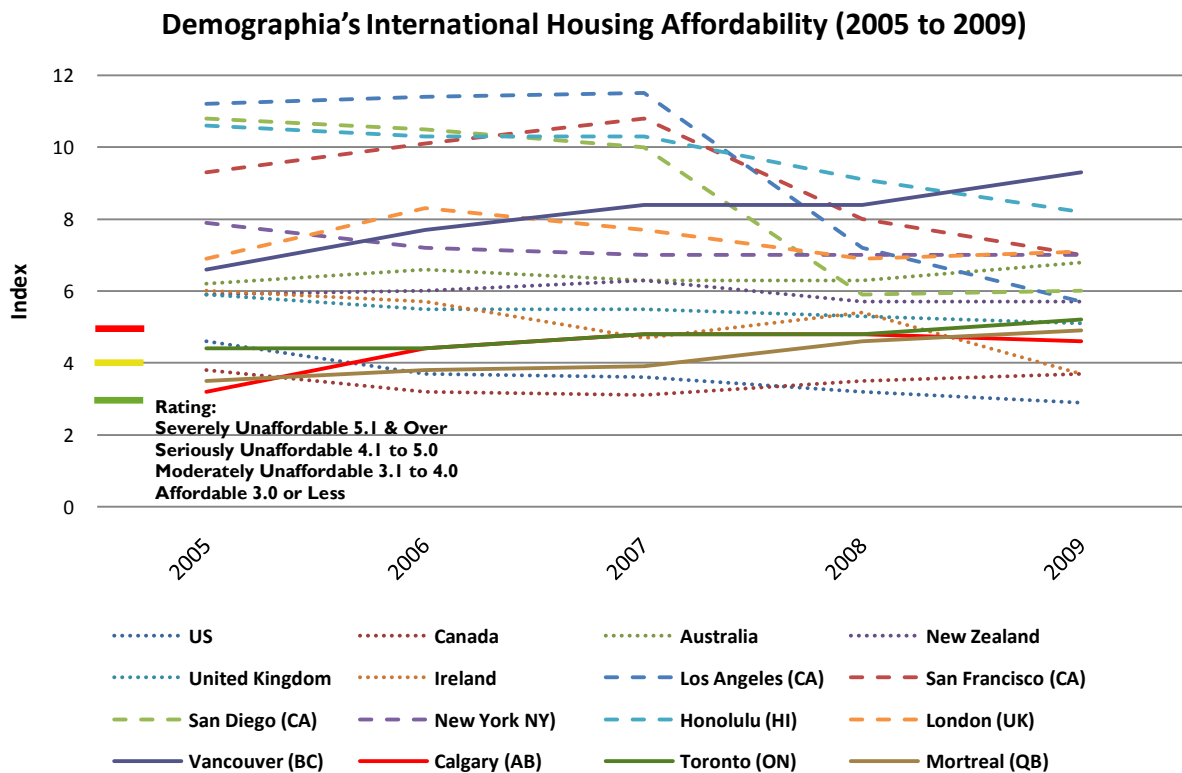
Source: Case-Shiller; Teranet – National Bank House Price Index;

Over the last 10 years, the boom cycle in the US real-estate market sent indices soaring over 100 percent from their 2000 levels. However, half of the gains were forfeited during the subsequent bust. The Canadian market did not follow the same path, and the moderate correction of 2008-2009 did not bring prices down far enough. Housing prices in Vancouver, Montreal and Calgary are still more than 100 percent above their 2000 starting point, and Toronto is up more than 60 percent.

The rapid rise in asset prices isn't the single most reliable indicator of a bubble. Certainly, a case for introducing a secondary measurement of housing affordability can be made. This would be done to eliminate any distortions in perception caused by any significant price adjustments. For instance, if prices in a severely undervalued market double, then a bubble might not form, as the market remains undervalued even in the environment of doubling housing prices. However, if prices in an already overvalued market double, bubble conditions are very likely to develop.

It was determined earlier that the housing prices of the four largest Canadian metro areas rose just as sharply as those in the epicentres of the US housing disasters. However, they did not plunge alongside the US indices. A plausible explanation can be found in the possibly undervalued conditions of the Canadian housing market at the beginning of the housing boom. The key question to answer is whether the housing affordability in the four major Canadian cities managed to stay in the acceptable range despite the sharp increases in housing prices. Exhibit 4.3 displays the results of the annual Demographia International Housing Affordability Survey. For comparison purposes, some of the most overvalued cities in the US, London, UK and country averages were added to the chart.

Exhibit 4.3: Demographia's International Housing Affordability (2005 to 2009)



Source: Demographia;

Demographia's affordability measurement is built on a ratio of median house price divided by gross annual median household income. Based on the long-term data, real-estate is considered "affordable" if this ratio stands at 3.0 or less, meaning that if the mean household income is \$100,000 the mean property price is \$300,000 or less. Once the ratio climbs to the range between 3.1 and 4.0, the real-estate is deemed "moderately unaffordable". With this ratio between 4.1 and 5.0, real-estate is viewed as "seriously unaffordable", and above 5.1 it becomes "severely unaffordable".

The annual Demographia International Housing Affordability Survey reveals surprising results. Predictably, during the peak of the US housing boom the affordability measurement in cities including Los Angeles, San Diego, Honolulu, and San Francisco reached double-digit levels. In retrospect, it is hard to comprehend the rational and thinking process of buyers snatching houses they wouldn't be able to pay off during their lifetime. Vancouver didn't trail far behind, staying solidly in the "severely unaffordable" category and surpassing both London, UK and New York, NY by mid-2006. During that time, Calgary and Montreal gradually rose from "moderately unaffordable" levels to "seriously unaffordable". Toronto, being excessively pricey already, stayed within the "seriously unaffordable" band.

Once the bubble burst and home prices plunged, the affordability improved in the most overpriced cities in the US and UK. But not in Canada. Instead, the housing affordability *average* in Canada moved closer to the upper boundary of the "moderately unaffordable" band. Instead, the *mean* house price in Canada became less affordable than that of the US. During the crisis, Montreal and Calgary edged dangerously close to crossing the "severely unaffordable" line, while in 2009 Toronto finally managed to turn itself into a "severely unaffordable" city. And Vancouver outshined them all.

In 2009, Vancouver became the most unaffordable city among 272 markets. Presently, Vancouver is less affordable than London, UK, Los Angeles, CA, Miami, FL, New York, NY, Sydney, AU or any other city in Australia, Canada, Ireland, New Zealand, the United Kingdom and the United States.

The differences in the US and Canadian tax systems must also be factored into the overall equation. In the US, home mortgage interest is tax deductible. This is not the case in Canada. Keeping all other variables the same, the tax-deductible interest allows US home owners to carry a higher home price to income ratio than their Canadian counterparts can. It further highlights the problem in Canada: if the housing market in the US collapsed under the weight of unaffordable mortgages *in the environment of tax-deductible mortgage interest*, then what does the future hold for the Canadian market that is just as unaffordable, but provides no tax benefits for Canadian home owners?

SECTION SUMMARY

The intensity of the US housing madness has been well studied, documented and discussed in countless books, magazines, academic papers, and TV shows. Hundreds of thousands of Internet websites contain information, timelines, details, analysis and conspiracy theories of when, why and how it occurred. The tsunami of data pertaining to the situation in the US easily overshadows and mutes already muffled voices preaching about the existence and danger of the Canadian housing bubble. In this environment, it is easy to ignore them.

Nonetheless, it should not be forgotten that:

- "Bubbling" in the Canadian housing sector was no less intense than in the US
- The housing prices in the four major Canadian cities went "too far too fast" at par with the 20 largest US metropolitans

- Housing affordability situation in the four major Canadian cities is currently at par or worse than that of the hotspots of the US housing boom

The targeted efforts of industry lobbyists, politicians, perma-bullish squads of TV personalities and authoritative newspaper writers have certainly achieved their goals of gently guiding the views of the Canadian public into the desired direction. The campaign of self-deception has succeeded. In spite of the obvious signs of a housing bubble, Canadian buyers flock to grand openings of new condo sites, snatching 40, 50 and 60 percent of available units on the first day of site opening. This does not, however, diminish the fact that the Canadian real-estate market is positioned for a significant correction similar to that of the US.

If you are thinking of buying a house or a condo in Vancouver, Toronto, Montreal or Calgary today, imagine that you are buying a condo in Miami in early 2007. The chances are you are buying near historically high prices (in relation to your income) and historically poor affordability. Of course, mean income can miraculously jump to restore the right balance of home price to income, and tomorrow you'd be earning double of what you make today. More likely, however, gravity will pull housing prices down, in line with their historical norms. Remember, Canada experienced the same real-estate bubble as the US did. It just hasn't burst yet.

5 CMHC - THE POSTPONED CRISIS

Naturally, a question of “why didn’t it happen in Canada” arises. The ominous signs such as prices rising too quickly and too far, poor affordability, extreme price to income ratio, excessive borrowing and near-extreme debt levels carried by Canadian households are clearly in existence. However, 2008 has passed and the prices have recovered. Now, at the beginning of 2010, many see the global economic revival ahead of us. Logically, it occurs to observers that since the worst is behind us and the prices did not implode, there must be fundamental factors propping the market.

The simple fact is the housing crisis in Canada was not prevented or fully experienced. It was merely delayed.

The article posted on “Worthwhile Canadian Initiative³⁶” captures the mistake many Canadian make with respect to the Canadian housing market:

Real bubbles are unstable; they burst when you prick them. They don't spontaneously revert to their original size. Soap bubbles aren't like tennis balls. If the bubble metaphor means anything, it has to mean that. If asset price bubbles aren't unstable, and don't burst when you prick them, or re-inflate immediately, then the bubble metaphor is useless.

How do you know if something was a bubble? If you prick it and it bursts, it probably was a bubble. If you prick it and it goes back to the original size, it probably wasn't³⁶

The “bubble” metaphor is referenced to illustrate the point of bursting a bubble. The “if it didn’t burst right away, it is not a bubble” statement certainly sounds convincing, but cannot be further from the truth. A soap bubble takes about 0.3 of second to inflate, and the full sequence of popping last less than 1/100 of a second. The short duration of the bursting cycle makes any timely repairs and re-inflation nearly impossible (however, I wouldn’t rule out any future scientific break-through in the area of soap bubble repairs). Asset bubbles develop over several years and the burst cycles may last as long as several years too. Having the right tools in place, it is possible to put a band-aid over the punctured surface and quickly re-inflate asset prices even higher. The key question is in the set of tools available for the job.

The reason the US government was unable to plug the hole and prevent the bubble from bursting in 2007 lies in the exhaustion of available means to do so. The secret bubble formula developed by Samsam Bubbleman in his 20-year career pales in comparison to the even more covert stew developed by the Grand Wizard of bubbleology Alan Greenspan. However, all good things eventually come to an end, and the hollow entity known as the US housing market collapsed under its own weight.

Through the right mix of business practices and regulations, the Canadian mortgage lending industry showed prudence in accepting the financial instrument of mass destruction that innovated the entire US financial sector to the ground. Canada banks generally did not practice sub-prime lending. Nor acceptance of mortgage-backed securities was as widespread in Canada as it was in the US. All of these and many other financial tricks available to central bank conjurors were already fully employed and worn out in the US. But not in Canada.

When the US housing bubble gave way in 2007, the shock waves rippled through the fabric of the global financial world at speed and intensity of those triggered by the Tsar Bomb. The Canadian housing market, being in a similar bubble, began deflating. However, the government of Canada took aggressive measures to delay the inevitable.

The bubble can be re-inflated if air inflows into the bubble exceed outflows. This condition can be achieved through a careful manipulation of the supply and demand balance. In the US, the sub-prime lending injected excessive numbers of buyers into the market over the years. In turn, the disproportionate demand pushed the housing prices higher. Unfortunately for the US government, such artificial market stimulation cannot last forever. Fortunately for the Canadian government, a large and untapped pool of potential sub-prime buyers existed, and resources for generating extra demand to prop prices were readily available.

In 2007 the Harper government allowed the CMHC (Canada Mortgage and Housing Corporation) to dramatically change its rules. The down payment requirements were reduced to zero percent and the amortization period was extended to 40 years. These changes were included in the first Conservative budget in May of 2006. In August of 2008, these rules were tightened under the mantra of instituting yet another barrier to lax lending to safeguard the Canadian financial system stability. Under the changes implemented in 2008, the minimum down payment was set to 5 percent and maximum amortization period was reduced to 35 year. Cynically, Prime Minister Harper described the adjustment as “In the U.S., they are still responding to the fallout of the subprime mortgage mess. In Canada, we acted early over the past year.”²⁸

But the long-term damage to the Canadian economy was already inflicted by the Harper government’s irresponsible policies conceived in 2006 and implemented in 2007²⁸. The “face-saving” backpedalling of 2008 did not go far enough and lending standards remain perilously lenient.

To grasp the idea of the damage done by the introduction of 35- and 40-year mortgages, consider the repayment schedule. Typically, mortgage payments consist of two components: principal repayment and interest. The shorter the mortgage duration, a greater portion of the principal must be included in each payment. The longer the mortgage duration, a lesser portion of the principal must be repaid with each payment, and thus the overall payment amount decreases. Because of this, longer term loans allow borrowers to carry more debt.

However, with the repayment period of 35 to 40 years, mortgages effectively become interest-only loans, whereby borrowers merely pay interest without noticeably reducing the principal amount. This type of mortgage would appear beneficial to a financially constrained borrower. A household earning \$8,000 net income a month generally would not be interested in extending a mortgage duration from 20 to 40 years and reducing their monthly payments from let’s say \$1,600 to \$1,400 a month. It makes no material impact on their monthly budget, but doubles the duration of indebtedness. However, for a household earning \$2,500 in combined income this \$200 saved would make a substantial difference.

Let’s assume that based on the real-estate prices in the area, the monthly mortgage payments for the cheapest property are set at \$1,600 a month. Earning \$2,500 monthly, a family simply cannot afford it, even with substantial cuts in other areas of their expenditures. However, if the mortgage term is extended to 35 years from the usual 25, the monthly payments become \$1,400. This is barely affordable, yet possible for the household in question to pay. So they buy the house and become the proud home owners. Another family earns \$150,000 a year gross, or roughly \$8,000 monthly after taxes. They have a posh 2-garage 4-bedroom house in Toronto and pay \$5,000 a month for it. Now, they are offered to take a 40-year mortgage instead of their current 20-year one. With the unchanged payment of \$5,000 a month they happily improve their living conditions and move into a 3-garage 5-bedroom house. Good for them. A person with an on and off employment situation has a hard time accumulating the necessary down payment to buy a condo. It is not a problem anymore, as new regulations allow him to take a mortgage with 0 percent down. He could never dream of owning a real-property, and now he finally owns it. Good for him. As Finance Minister of Canada Jim Flaherty describes it:

“These changes will result in greater choice and innovation in the market for mortgage insurance, benefiting consumers and promoting home ownership.”

These changes certainly promote home ownership, as many people who would never dream of having a house can finally buy it. It is good for them, as they finally can afford a property of their own. It is good for the market, as large injections of new buyers into the market creates extra demand and drives home prices higher. It is good for lenders, as they can issue mortgages to a larger population and earn higher profits. It is good for politicians, as they appear as prudent financial managers. It is good for everyone, until the rates begin to go up. And when the music stops, the lights go off.

Interest rates cannot stay at the current unprecedentedly low levels forever. In fact, they are expected to rise as soon as the economy shows signs of recovery to prevent it from overheating. This is not a question of “if”, as determined earlier, but the question of “when”, and this “when” is just around the corner. Once the rates go up, the \$1,400 mortgage payment for the first family will turn into \$1,800. The \$5,000 monthly outlay out of the budget of the second family will become \$6,500. The rate hike throws both families over the edge and they are forced to foreclose or sell their property at a loss just to be rid of the now unbearable monthly payments. These houses sold at fire-sale prices will be multiplied by 1,000s, and this avalanche of sellers will push home prices down.

You don't have to be an economist to trace the logical chain of events. Nor do you have to be an historian with the knowledge of events of the distant past. It has just happened in the US in 2007, and all you need to do is go on the Internet and search for “housing crisis in the US”. Since 2007, the government of Canada has taken *all the same steps that led to the boom and subsequent collapse of the US housing market*. The US market collapsed because it was overvalued and built on unsustainable fundamentals. The Canadian market resembles the 2006 housing market in the US with a stunning accuracy.

If 0 down payment 40-year mortgages weren't enough, the government of Canada rolled out a whole slew of new programs to prop the market by stimulating demand through new buyers who cannot afford to own a house. Home Buyers' Plan (HBP)²⁴, which allows first-time buyers to withdraw \$25,000 from their RRSP account towards a home purchase, is another example of fiscal incentives that the government of Canada introduced to fuel the buying spree.

All these programmes have a common theme – they cannot last forever. The more of them used to stimulate the market to new highs, the greater the collapse will be once they are exhausted. Many will say that by taking drastic measures, the Canadian government prevented the disaster. It must be understood the disaster was *not averted, but postponed*. The structural imbalances within the system were not eliminated, they were worsened. The government of Canada resembles a firefighter who piles a large load of firewood on top of the flames he is trying to extinguish. For a brief period of time the results of his efforts would appear as a success - the flames disappear from view and the fire would seem to be gone. However, in a matter of minutes the blaze will engulf the firewood pile, burning higher and stronger than before. By injecting new buyers into the system, the government of Canada temporarily propped the prices. However, these buyers were not in the system previously because they were unable to carry the cost of home ownership under the prudent rules. With the new rules, they will be the first to fail once interest rates go up, and they will magnify the problem tenfold once prices begin to drop again.

Having discussed the dangers of the course chosen by the Harper government for Canada, let's review the facts behind these conclusions.

On December 10, 2009, the Governor of the Bank of Canada, Mark Carney, warned that Canadian families were becoming more vulnerable to interest rate fluctuations. While other countries such as the United States and Britain have seen reductions in personal debt-to-income ratios, Canadians have added more debt. Mark Carney concludes that up to 10 percent of households would face serious problems meeting their house payments if interest rates rise^{17; 18; 20}. The percentage of households where interest payments exceed 40 per cent of income could increase to near 10 per cent by 2012 under certain interest rate assumptions⁷. This is above the 6.1 percent

average of the last 10 years, and well above the long term average. Minister of Finance Jim Flaherty echoed the comments about the risk of rising personal debt^{7; 11; 22}.

This admission of the danger of the current situation is certainly welcome. However, it misses the crucial link to the policies designed and implemented by both Carney and Flaherty. Reckless and irresponsible moves to artificially stimulate the housing market through inflated demand were done by luring those who cannot afford to buy a house into buying one. Now, both public figures act shocked, surprised and worried about the 10 percent of households that are expected to default once the interest rates go up.

The plot thickens from here. Neither Carney nor Flaherty discussed the inconvenient disclosure made by the CMHC in 2008. CMHC demonstrated that it increased its approval of high-risk borrowers to prop up the housing market. Exhibit 5.1 shows the CMHC published scorecard.

Exhibit 5.1: CMHC Scorecard

Activity	Performance Measures	2007 Actual	2008 Plan	2008 Actual
Provide a range of mortgage loan insurance products for homeownership and rental housing	Total mortgage loan insurance approved in units	803,151	578,539	919,790
	Total mortgage loan insurance approved (\$M)	125,066	86,073	148,327
	Per cent of rental and high ratio homeowners units approved to address less-served markets and/or to support specific government priorities	36.9	33	41.8
	Operating expense ratio (%)	10.7	12.1	12.0

Source: CMHC;

Focus on item #3. The growth in rental approvals in 2008 was not declared as substantial. Thus, the increase from 36.9 to 41.8 percent in approvals was mostly for high-risk homeowners. Did CMHC increase sub-prime lending to “support specific government priorities”? It certainly appears so. CMHC's massive sub-prime mortgage scheme does a good job of maintaining the appearance of an economic recovery.

With the Harper government's blessing, CMHC rolled out full-blown sub-prime lending operations^{9; 11; 12; 13; 14}. Jacquie McNish and Greg McArthur write (Friday, Dec. 12, 2008):

New mortgage borrowers signed up for an estimated \$56-billion of risky 40-year mortgages, more than half of the total new mortgages approved by banks, trust companies and other lenders during that time, according to banking and insurance sources. Those sources estimated that 10 per cent of the mortgages, worth about \$10-billion, were taken out with no money down.

In a research note, Scotiabank economists Derek Holt and Karen Cordes confirm:

Lenders have been scrambling to get enough products to put into the federal government's Insured Mortgage Purchase Program over the months, and that may have translated into excessively generous financing terms.

Perhaps, CMHC does not have to bear the risk of the issued mortgages. It must be shared by lenders as well. The Mortgage credit outstanding published by CMHC strongly suggests otherwise (Exhibit 5.2).

Exhibit 5.2: CMHC – Mortgage Credit Outstanding (\$ millions)

	2007	2008	1Q08	2Q08	3Q08	4Q08	1Q09
TOTAL	775,899	871,419	838,434	860,742	887,469	906,923	916,579
% change (year-over-year)	11.6	12.3	13.1	12.8	11.9	10.5	9.3
Banks	442,116	469,576	464,724	473,952	488,597	460,197	446,699
Trusts	8,550	9,802	9,450	9,702	10,110	10,226	10,108
Caisse & Cr. Unions	102,500	110,412	107,800	109,342	111,920	113,916	114,903
Life Ins. Co.	14,790	15,406	15,102	15,277	15,534	15,558	15,360
Pension Funds	13,238	15,105	14,385	14,954	15,409	15,553	15,914
Others	31,691	31,128	31,340	31,219	30,771	29,212	28,275
Special Purpose Vehicles	24,884	22,729	23,920	23,466	22,135	20,755	19,840
NHA MBS	138,130	197,260	171,713	182,828	192,993	241,505	265,480

Source: CMHC as per reference on americacanada.blogspot.com;

The americacanada.blogspot.com¹⁰ noticed that between 2007 and Q1 2009, Canadian banks increased their mortgage credit outstanding listed on their books by only 1 percent (from 442.1 billion to 446.7 billion). Over the same period, CMHC increased its mortgage credit outstanding through issuance of MBS (mortgage-backed securities) by 92 percent (from 138.1 billion to 265.5 billion). This is a strong indicator that banks are reluctant to lend, while CMHC adds more liabilities to its books to comply with politically motivated instructions of the government.

Nearly 90 of mortgages issued between 2007 and 2009 were securitised through Mortgage Back Securities. By definition:

A mortgage-backed security (MBS) is an asset-backed security or debt obligation that represents a claim on the cash flows from mortgage loans, most commonly on residential property.

Mortgage securitisation is a process of aggregating mortgages in a pool, then issuing new securities backed by the pool. It helps to mitigate the risk, spreading it amongst a greater number of creditors. It also helps by liabilities off lenders balance sheets.

CMHC's MBS should be a concern to all Canadians. MBS have proven to be a financial instrument of mass destruction in the US. When you think of MBS, think of Fannie Mae and Freddie Mac. Through MBS, American lenders spread the risk, sharing it with the parties who did not directly participate in sub-prime lending. Once the bubble burst, it wasn't just lenders responsible for bad loans, but also all investors holding MBS in their portfolio. In Canada, the situation is different. MBS issued by CMHC are *guaranteed* by the government of Canada. What it means is when the loans go bad, the investors who purchased risky investments and benefitted from holding them all these years³ will not be responsible for losses. It will be Canadian taxpayers who are on the hook to compensate for CMHC's sub-prime lending.

Nearly 90 of mortgages issued between 2007 and 2009 were securitised. By the end of 2007, there were \$138 billion in MBS that is guaranteed by CMHC, which covers approximately 17 per cent of all outstanding mortgages. By July 2009, that figure rose to \$290 billion. CMHC's stated goal was to guarantee \$340 billion by the end of this year and is on track to reach \$500 billion by the end of 2010, which would be equal to 1/3 of the Canadian GDP. In fact, between 2008 and 2010 CMHC's issuance of MBSs will likely exceed the combined total issued by CMHC in its 62-year long history prior to 2008. To reiterate, once borrowers begin to default, it will be Canadian taxpayers who will have to bailout CMHC.

SECTION SUMMARY

At the beginning of this section, it was quoted:

How do you know if something was a bubble? If you prick it and it bursts, it probably was a bubble. If you prick it and it goes back to the original size, it probably wasn't.³⁶

The unfortunate fact is Canadians perceive the current situation in exactly the same way. The global economy is viewed on the path to recovery. The worse appears to be behind us, and if the bubble didn't burst, it wasn't a bubble.

Unlike the US, Canada has had an untapped pool of sub-prime borrowers. Through a lengthy period of abused interest rates and sub-prime lending, the US has exhausted all means of adding more buyers into the mix to support the housing boom. However, in Canada, the government was able to turn CMHC into a sub-prime lender, and it opened the gates to thousands of new buyers to enter the housing market. The scheme worked, and new demand re-inflated the bubble.

In my conversations with others, I noticed many view this detrimental move as positive: the bottom-line is the government did not allow prices to fall. Consider this metaphor.

Everyone likes to party, but no one likes a hangover. If one partied a bit too much last night, he will face a headache, nausea, dizziness, fatigue and other highly unpleasant post-party symptoms today. One alternative is to admit the mistake of yesterday, suffer through a day of hangover, and move on to leading more productive life tomorrow. Another alternative is to keep drinking. Drinking in the morning helps to conceal side-effects of the last night party, or so I was told. Unfortunately, the proper remediation of hangover in this fashion will leave you dead-drunk again. So the hangover was not fully experienced today, because it was postponed until tomorrow. Well, tomorrow you will face the same tough choice – experience a hangover, which will be much worse after two days of non-stop alcohol consumption, or keep drinking. You may choose to continue with the “fighting fire with fire” approach, but eventually substance abuse will catch up with you. At the worst, you may turn into a version of Ozzy Osbourne, walk into your bedroom and announce to your wife (assuming you still have a wife at this point) “We’ve had a little talk and it’s clear that you have to die.” At this time, you are likely to go through a rehab clean-up, experience ruined personal and professional life, and be left with a bill for the gallons of consumed alcohol.

On a serious note, the point of the above metaphor is that sometimes it is necessary to acknowledge irresponsible behaviour and face today's reality in order to avoid a bigger problem in the future. If you think of the Canadian government during the 2007-2008 period, it acted as a friendly bartender who kept pouring drinks into your glass, assuring you it will help to avoid a hangover. Surely, the hangover was avoided on the day the glasses were filled again. However, it cannot go on perpetually, and the subsequent crisis will be much worse when it eventually unravels.

The hangover is not a problem. It is a logical consequence of the behaviour exhibited the day before. Headache and other unpleasant side-effects are just the indicators of excessive and harmful toxins in your body. To avoid the problem, you should concentrate on limiting alcohol consumption, and not fighting the headache. Similarly, when a “low fuel” light turns on in a car, the problem isn't the light itself, but the low fuel level in the car. Disabling the light will not solve the problem. To rectify it you will need to make a trip to a gas station, pull out the wallet and buy some gas.

Economy functions in exactly the same manner. Drop in housing prices is not the problem in itself. It is an indicator of excessively high housing prices, low affordability or oversupply. The true issue is imbalances in a

particular asset class or in overall economy. Housing prices would plunge because they don't reflect the underlying fundamental value of the properties. The problem rectification efforts should be focused on purging these imbalances from the system, and not artificially propping up prices.

The correction process is painful. No one likes to see the value of their homes going down. However, this is a necessary adjustment to bring all elements of the equation back to balance. Again, home prices will adjust because they are not supported by fundamentals, and not because someone did not stop them from collapsing. As painful as it is in a short-run, the long-term benefits of it are quite obvious. Present affordability levels demand household to spend greater portion of their income to cover home ownership costs. After the housing price adjustments, home ownership costs will go down, and home buyers will retain a larger part of their income for other things like travel, clothing, cars and entertainment. It makes a big difference if a property costs 3 times of your annual income vs. 5.2 in Toronto and 9.3 in Vancouver now.

Going back to the discussion about CMHC, it must be mentioned that the actions of the Canadian government inflicted significant damage on Canada and its population. If you are of an opinion that the current prices *are* supported by the underlying fundamentals, then you would probably agree that the market forces would have pushed the prices back up eventually. In such case, all the wasteful spending of the Harper government has been done in vain, as they are irrelevant in the bigger schema of things. The upward correction would have happened with or without them, albeit at a slower pace.

However, if you believe fundamentals aren't there, and the house of cards is bound to collapse, especially as new storeys are continuously added to it, consider the impact of the Harper government's intervention. Assume if left on its own, the real-estate downturn of 2007 would have impacted a population of X thousands people. Now, another group of Y thousands buyers has been added to the mix through various programs designed to support home prices, which pushed prices higher. Rising prices have provoked a group of Z thousands buyers to chase the momentum in fear of missing out on profits or being totally priced out from the market. Simultaneously, CMHC insured N billion dollars in risky mortgages. The aftermath of the impending housing market bust will no longer be limited to the original X thousands people, but would also impact the Y + Z thousands buyers who have been sacrificed to drive home prices higher in 2008-2009. CMHC would face an excessively high default rate streaming from all three groups X, Y and Z (substantially higher than the long-term average), and will unquestionably require a bailout.

Unfortunately, integrity and long-term vision is a rare quality amongst politicians. Individuals such as Paul A. Volcker and David A. Dodge, who have strong will to make politically unpopular moves to position their countries on a path to long-term prosperity, appear once in a generation. Much more frequently, Alan Greenspan, Ben Bernanke and Mark Carney would show up on the scene, and implement politically convenient policies to build an illusion of prosperity at the expense of long-term financial well-being. Canadians owe no favours to Steven Harper, Jim Flaherty and Mark Carney. They did not prevent the bubble from bursting; they merely postponed it. There are no miracles in how the Canadian housing bubble managed to stay afloat. However, at the end, more homeowners will suffer from the upcoming housing market correction. The ballooning national debt due to the careless sub-prime lending of CMHC and wasteful programmes designed to re-inflate the housing bubble will be shared by all Canadians. According to the CMHC financial statements, the corporation has only \$8 billion equity backing \$200 billion in assets⁸. Once defaults rise, the Canadian government will have no choice, but to bail out CMHC. The scale of bailout will likely dwarf all other financial emergency responses done by the Canadian government in the history of Canada. Higher national debt, increased taxes and reduced social services will be the direct result of the Harper government's intervention to maintain an illusion of the Canadian housing market health.

6 RECESSION - A PECULIAR CASE OF RISING PRICES AND VOLUMES

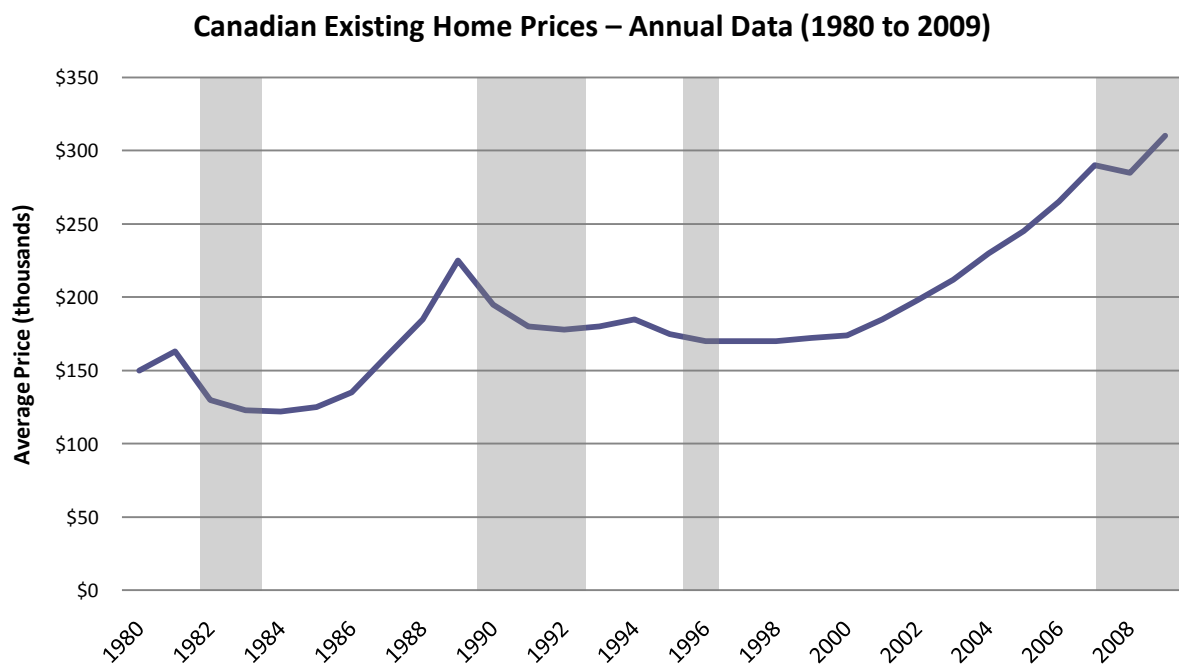
“Whom the Gods wish to destroy they first make mad”

Recession is a phase of economic cycle during which a slowdown in economic activity can be observed over a period of time. While recessions are generally believed to be caused by a drop in spending, the underlying causes are more closely linked to broader economic imbalances.

Recessions are a troubling experience for the general population. As economy restructures itself, excesses in many areas are eliminated, and the “domino effect” propagates through the system, impacting most other economic sectors. Economic slowdown reduced demand for labour because of the dwindling business activity, and causes higher unemployment. It carries certain social implications, as wages are typically depressed, employed population is fearful for their jobs and higher percentage of unemployed weights on country’s resources.

In the environment of uncertainty, general population tends to scale back on much of non-essential expenditures, such as restaurants and expensive clothing. Typically, uncertain employment situation presses people to postpone any major purchases such as cars and homes, as people either have no income to fund them or worry about their future employment. It is logical to expect a slowdown in the housing market. The diminishing buyers’ activity suppresses housing prices. Exhibit 6.1 shows the correlation of the housing prices in Canada and economic activity (recessional periods are highlighted by shaded areas).

Exhibit 6.1: Canadian Existing Home Prices – Annual Data (1980 to 2009)

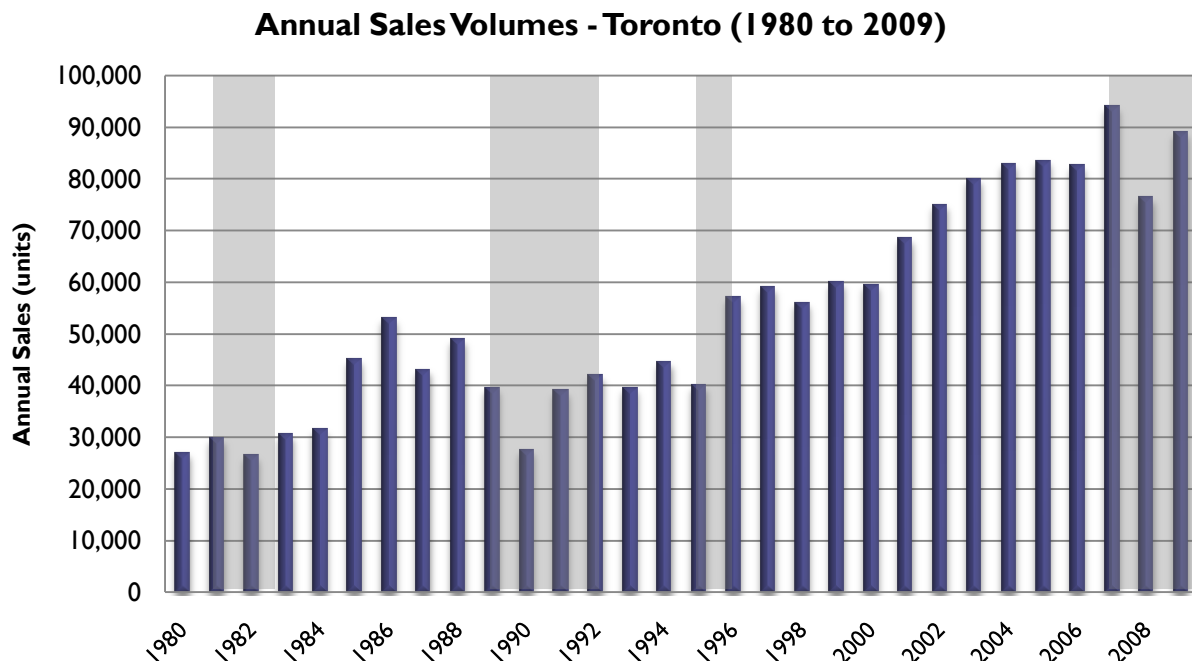


Source: MLS; CREA; Statistics Canada;

Quite predictably, Exhibit 6.1 confirms that economic downturns depress housing prices. It was the case during the major recessions of 1982-1983 and 1990-1993, and the economic downturn of 1996. However, it is not the case now. In fact, during the current recession housing prices in Toronto and Vancouver reached all-time highs. This

observation defies any logic and reason. An unlikely, but plausible explanation can be found in sales volume: if sales volume is light, it can introduce higher volatility and home prices might temporarily spike. Taking Toronto as a proxy for the booming Canadian housing market, the following section evaluates several important trends observed in the Canadian housing sector.

Exhibit 6.2: Annual Sales Volumes – Toronto (1980 to 2009)



Source: Toronto Real Estate Board;

Exhibit 6.2 shows historical sales volume in the GTA area. The chart reveals several notable observations. Typically, during economic downturns real-estate sales stay depressed due to the lack of buyers on the market. This is not a case during the 2007 recession. Aside from the sales deep in 2008, sales remained at all-time high throughout the current recessionary period.

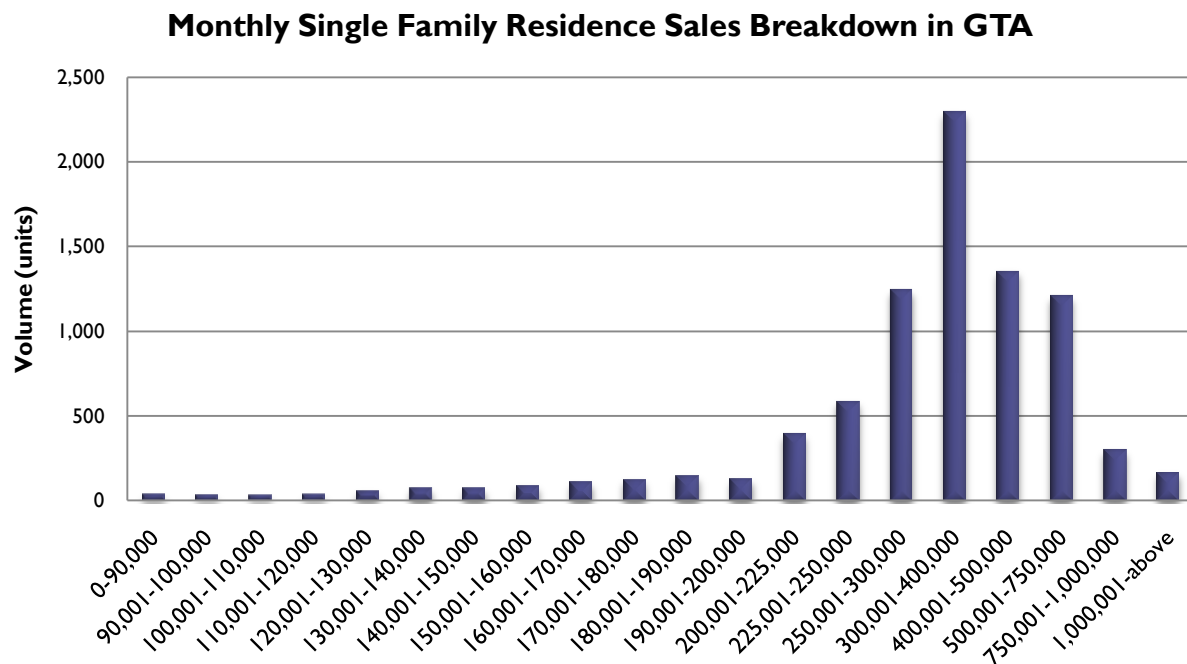
Furthermore, the data series shows that sales more than doubled from 1980 to 1997, and then nearly doubled again by 2007. At the same time, the population of Metro Toronto increased just 13 percent from 1980 to 1997, and approximately 20 percent between 1980 and 2007 (Statistics Canada; Toronto.ca). In 1980 home sales stood at 12.8 per 1,000 citizens of Toronto. In 1996 this number increased to 25.0, and by 2007 they reached 37.6.

The rising velocity at which real-estate changes hands is indicative of speculations within the system. The tripling per capita sales over the 27 year period are difficult to explain by a rational behaviour. However, interviews with property buyers help to clarify the situation. The new “Canadian Dream” of many Torontonians is personified by a concept of an investment property continuously appreciating in value, while being occupied by tenants paying off the mortgage. Furthermore, Torontonians have quickly learned the notion of new and un-built condo units rapidly appreciating in price by the time they are finished. The formula of endless riches, as accepted by the Toronto public, is fairly simple: all you need to do to become rich is to buy a new condo with the intention of reselling as soon as it is built. Or, if you miss the opportunity to flip an unfinished property, you buy a freshly built condo from a person who was lucky enough to buy this unit before it was completed. Then you rent it out and wait for its price to go up. In either case, the key is to buy, and the sooner you buy, the richer you become.

Sounds familiar? Because it has been observed and well documented less than two years ago. Similar scenes were widespread in Florida, Nevada and California in 2004-2006. Just buy a real-estate property, and you are set for life. Why work, if your property price increases by \$50,000 a year? Buy two, or even better, three properties, and you will never have to work again. The US has gone through the pains of this philosophy just now, but apparently Canadians believe it will be different here.

As Exhibit 6.2 suggests, Torontonians buy a lot; much more than warranted by the natural population growth. But what do they buy? Exhibit 6.3 shows the distribution of sales by price range in GTA.

Exhibit 6.3: Monthly Single Family Residence Sales Breakdown by Price Range in GTA



Source: Toronto Real Estate Board;

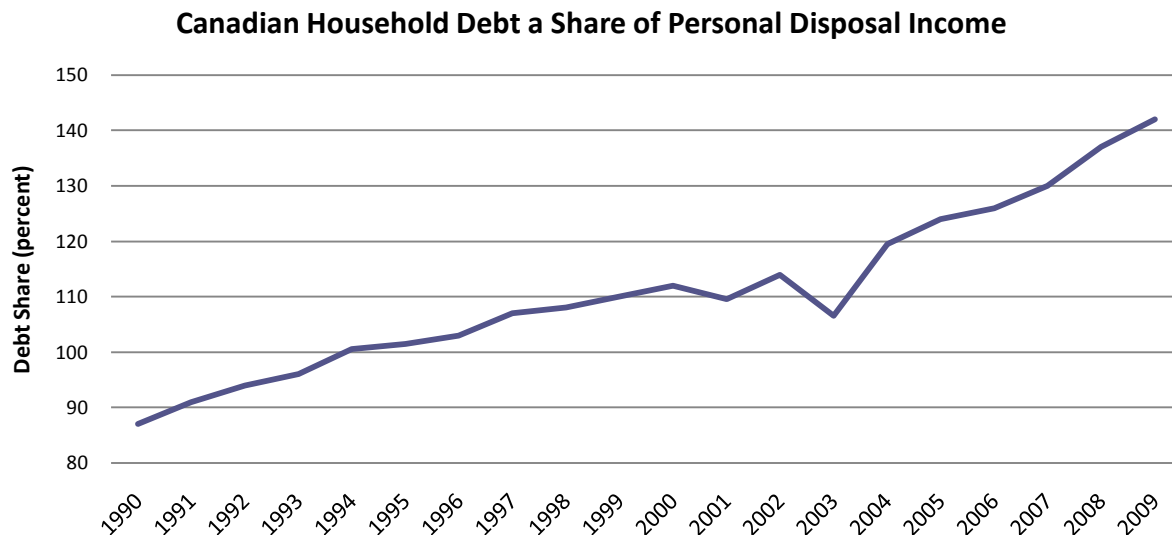
The price distribution of homes sold in Toronto is heavily skewed to the high-end of the range. Most of the transactions occur between \$250,001 and \$750,000. In fact, the combined total within this range exceeds *combined total* in all other price categories by a ratio of 3 to 1. Sales of properties valued over \$750,000 are comparable to the combined total within the \$160,000 to \$200,000 range or the \$200,001 to \$250,000 segment.

The long-term norm for housing price to income ratio is 3. For a major city like Toronto, it is not uncommon to see the ratio as high as 4 on a sustainable basis. Within the mid-point of 3.5 in mind, the housing price distribution suggests that Toronto has as many households with income of \$40,000 to \$65,000 as households earning \$180,000 and above. The *average* household of Toronto must earn \$137,000, as the average price of a house in Toronto hovers around \$480,000, as reported in the fall of 2009.

Odds of winning 6/49 did not change since the inception of the game. They remained at healthy 13,983,816:1. If the number of winning lottery tickets didn't swell dramatically over the years, what are the sources of this unexplained opulence? The answer is simple – debt^{7; 22}.

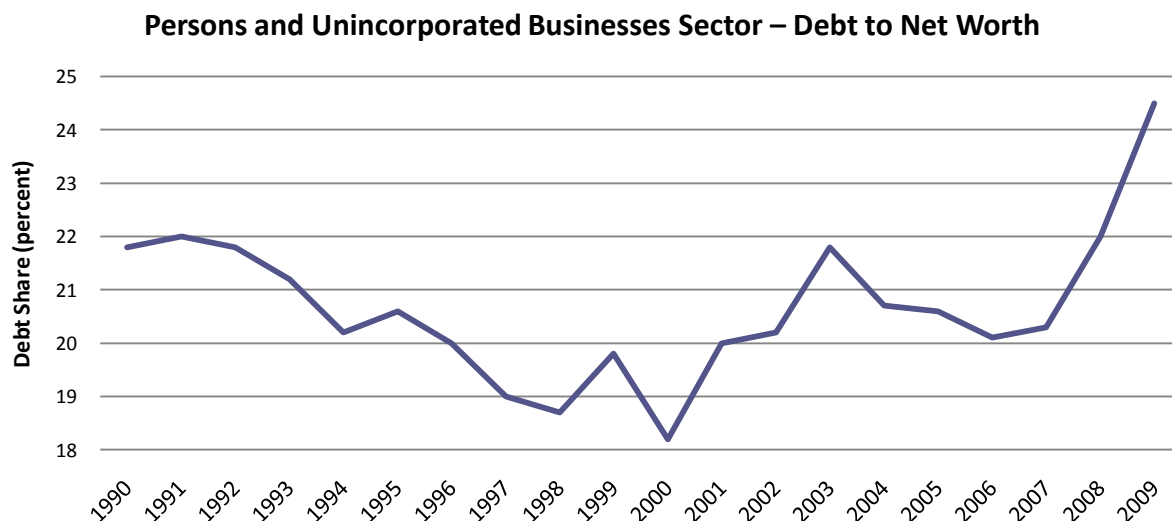
Exhibits 6.4 and 6.5 show changes in the Canadian household debt as a share of personal disposable income and debt to equity ratio. While the latter deepened between 1990 and 2000, the 1990 to 2009 period shows significant gains in both measurements.

Exhibit 6.4: Canadian Household Debt a Share of Personal Disposal Income



Source: Statistics Canada;

Exhibit 6.5: Persons and Unincorporated Businesses Sector – Debt to Net Worth

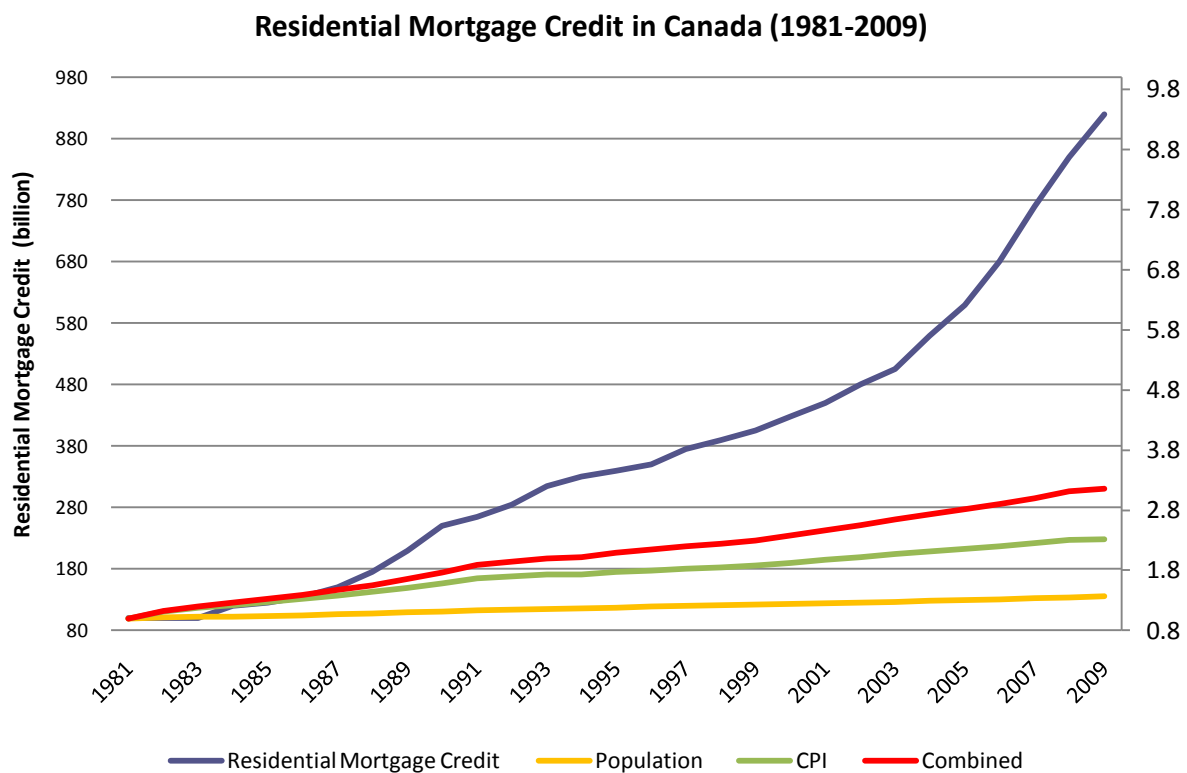


Source: Statistics Canada;

Debt remains the secret driving force behind the ongoing home purchasing spree. Debt is the main reason for the price distribution to be heavily skewed toward the high-end of the range, as buyers borrow more ever than before to fund their real-estate purchases.

Temporarily, historically low interest rates allow borrowers to carry greater debt while maintaining debt servicing costs unchanged. The provisional and unsustainable nature of the current situation escaped the much-deserved attention of the Canadian public. Canadian borrowers continue to pile on debt without much consideration for future liabilities and their ability to meet their payments. Exhibit 6.6 shows the residential mortgage credit growth between 1981 and 2009.

Exhibit 6.6: Residential Mortgage Credit Growth in Canada (1981-2009)



Source: CMHC, Bank of Canada, Statistics Canada;

The world doesn't stay still. Inflation and population growth have material impact on many aspects of daily lives, including combined outstanding mortgage credit value in Canada. As population expands, so does the mortgage credit to accommodate this growth. As home prices rise due to the inflation, so does the mortgage credit. To contrast the growth in the latter categories – inflation and population growth – their annual recordings were plotted on the chart alongside the residential credit outstanding. The combined total represents an accumulative effect of the population growth and inflation. The gap between the debt in form of residential mortgages accumulated by Canadians and the combined impact of the population expansion and inflation is staggering. Over the 1981-2009 period the cumulative effect of population expansion and inflation warranted a 210 percent increase in residential mortgage credit. In reality, changes in outstanding mortgage debt have totalled 820 percent, or 4 times the natural growth. This rapid expansion of the residential mortgage credit suggests an accumulation of debt amongst Canadians. Presently, as percentage of income, Canadian owe more than ever before.

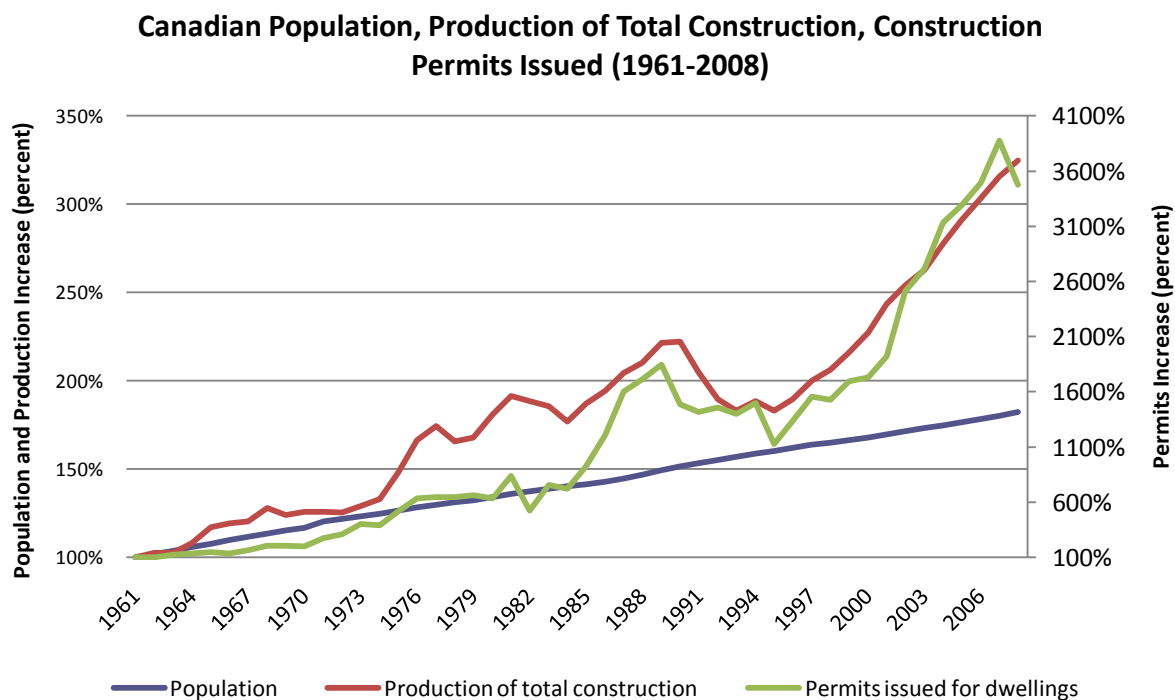
This situation, however, did not go unnoticed. The members of the business community expressed their concerns regarding the ballooning debt. Bank of Montreal economist Douglas Porter positioned it as⁷:

Household debt as a share of income has risen solidly, so I think it is a medium-term risk to the economy.

Porter is not alone. Numerous prominent figures of the business community shares similar concerns. Despite luring Canadians into deeper indebtedness with its policies, the central bank expressed serious concerns about Canadians continuing taking on record-high levels of debt. In its December semi-annual financial sector review, the central bank warned that Canadians are putting themselves and the financial system at a risk by carrying and accumulating too much debt⁷.

Land and liveable dwellings built on it represent a scarce and valuable resource. Housing availability shifts the supply/demand balance and inevitably impacts the price momentum, as home shortage ignites competition for available dwellings. The home price action, and unavoidable debt taking, might be fully justified by the availability of homes in Canada. Potential inability of the construction industry to keep up with the population expansion in the country might be the key to understanding the current price action. Exhibit 6.7 contrasts the indexed population growth in Canada to the production of new homes and number of construction permits issued.

Exhibit 6.7: Canadian Population, Production of Total Construction, Construction Permits Issued

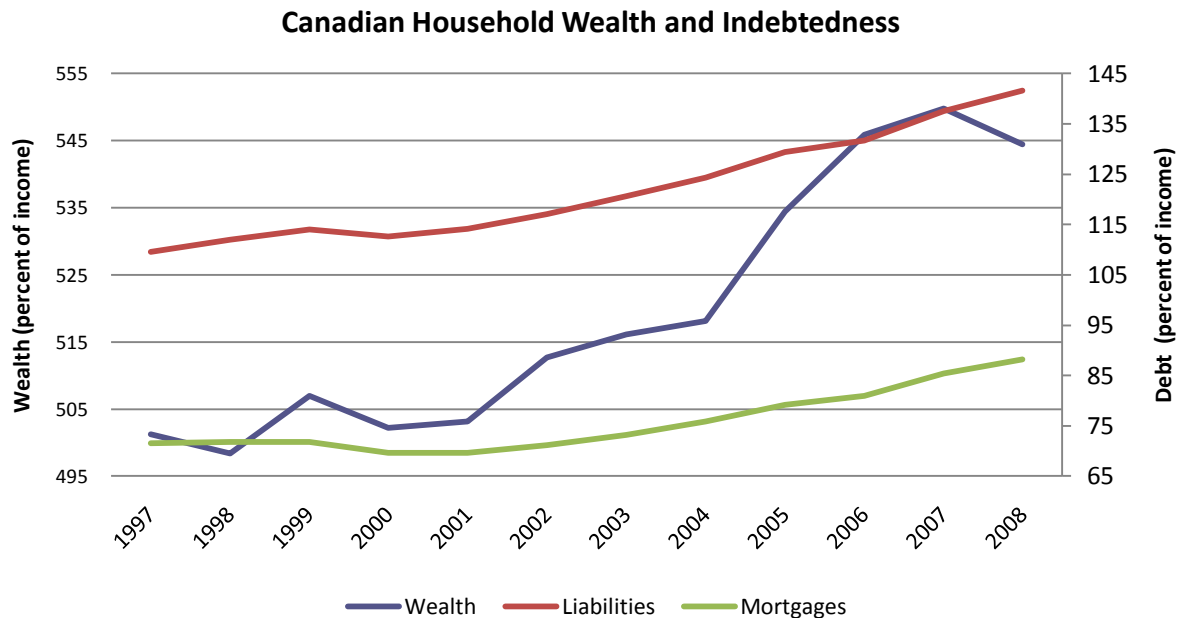


Source: OECD 2008;

The production of total dwelling construction and number of permits illustrate the oversupply of homes in Canada. Notably, the growth in the number of permits issued spiked around the housing bubble of the late 80's, and then quickly came down to align itself with the natural population expansion. However, in 1995 it took off again, and currently it hovers significantly above the level warranted by population increases. It can be argued that the family structure in Canada has changed, and presently there are more single parents and single home owners than ever before. However, structural demographic changes do not explain the doubling of production of total construction from 1995 to 2008, while over the same period the Canadian population increased only by 13.7 percent.

Just before closing this section, Exhibit 6.8 presents a snapshot of trends for net wealth and liabilities amongst Canadian. No comments necessary, as the chart speaks for itself.

Exhibit 6.8: Canadian Household Wealth and Indebtedness as Percent of Nominal Disposable Income



Source: OECD 2008;

SECTION SUMMARY

At the beginning of the previous section, it was quoted:

How do you know if something was a bubble? If you prick it and it bursts, it probably was a bubble. If you prick it and it goes back to the original size, it probably wasn't³⁶.

The unfortunate fact is that due to the relative stability of the Canadian financial sector many Canadians have grown overly complacent. They perceive the current housing market situation in exactly the same way. The global economy is viewed on the path to recovery. The worse appears to be behind us, and if the bubble didn't burst, it wasn't a bubble.

Unlike the US, Canada has an untapped pool of sub-prime borrowers. Through a lengthy period of misused interest rates and sub-prime lending, the US has exhausted all means of adding more buyers into the mix to support the housing boom. On the contrary, the Canadian prudence of the past permitted the current government to prop up the housing prices by turning CMHC into a sub-prime lender and opening the gates to thousands of unqualified borrowers to buy a home. It certainly had a positive short-term effect on the housing prices. However, it forced a larger portion of the Canadian population deeper into debt. Presently, more than ever before, Canadians rely on the artificially low interest rate to service their liabilities.

The growth of the housing prices and post-2007 period of high activity on the housing market are not surprising. Greater demand pushed prices higher, and cheap credit allowed effortless financing of the price inflation. However, it leads to an erroneous conclusion about the health of the system.

A comparison of the population growth to the expansion of the housing sector strongly suggests overbuilding. Perhaps, not as severe as the housing situation was in Miami, FL or Spain, the oversupply of homes shows an immense disconnect between the prices warranted by the supply/demand conditions and the market prices. The decoupling of the market from its fundamentals signals a mass insanity that has engulfed Canadians. And mass madness it is. Collectively, Canadians build more homes than they need, buy more homes than they require for living, spend more than they can afford and finance these senseless purchases with debt they cannot service in the long run.

At present, the Canadian economy still hasn't fully recovered, and fears of double-deep recessions are fully warranted. Unemployment edges higher. The wealth of Canadians is diminishing. Yet, the housing activity remains stronger than ever both in terms of volume and price growth. The surge of the housing market builds an illusion of a prosperous Canadian population capable of buying pricey properties. The unfortunate reality is the purchases are financed by mounting debt, rather than increasing wealth. Canadians are sinking deeper into debt by buying houses they cannot afford. The driving force behind many purchases remains The Greater Fool who would eventually take houses off the "investors'" hands at a higher price. If everyone is waiting for a greater fool, who is left to be one?

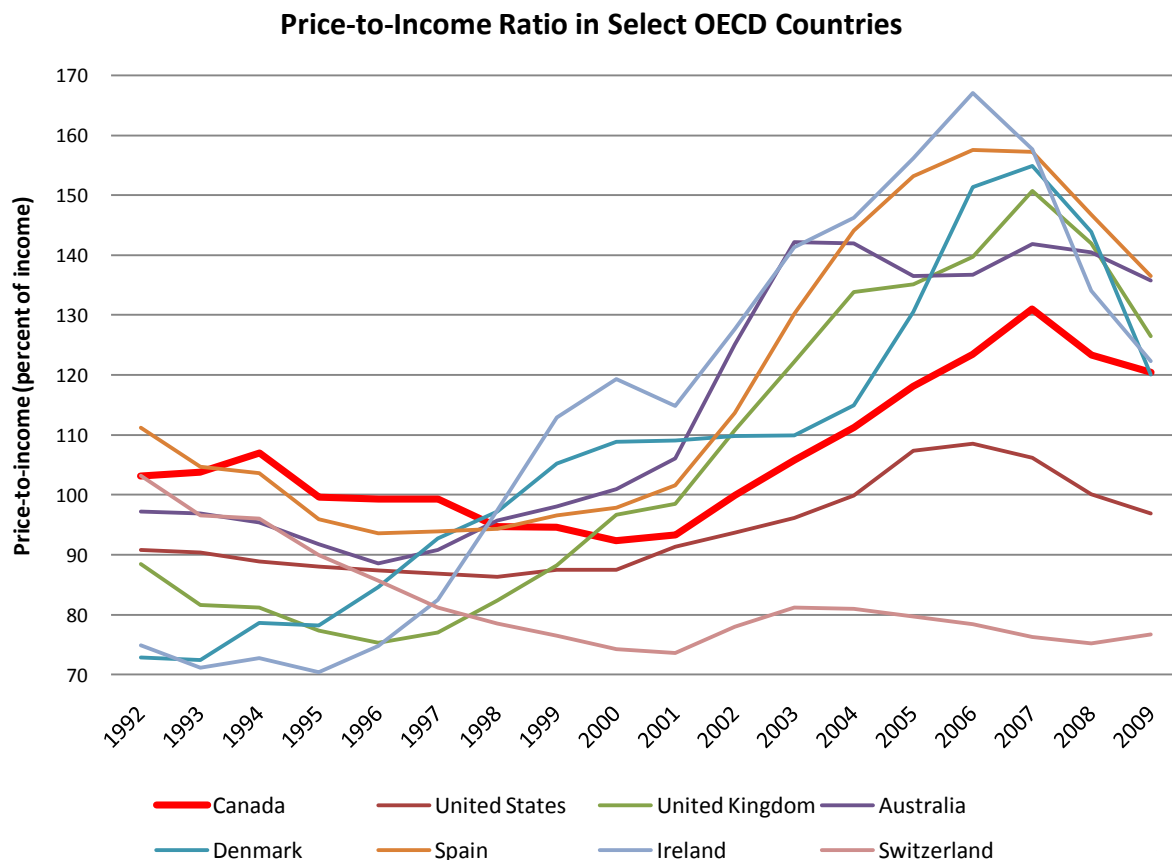
7 FUNDAMENTAL VALUATION

The discussion of a bubble is not complete unless relevant fundamental valuations are fully explored. Some of them, such as price-to-income ratios were covered in earlier sections. This part of the paper covers these again and other most commonly used fundamental valuation metrics to judge the health of the Canadian housing market.

Exhibit 7.1 shows price-to-income ratio as calculated by OECD. Naturally, this ratio, which indicates housing affordability from the perspective of home owners, is higher in many European countries. Namely, Germany, France, UK, Spain, Ireland, Netherlands, Norway, along with Australia and New Zealand exceed Canadian valuations on the price-to-income ratio basis. However, after a 5-year period of widening, the gap between these countries and Canada finally has narrowed. Presently, price-to-income ratio in Canada stands near the levels presently seen in these other countries.

In comparison to the US, who has undergone a recent bubble, the Canadian ratio hovers significantly above the US levels. During the years of the housing boom in the US, Canada “outperformed” the US in terms of un-affordability of homes. Throughout the real-estate bubble, housing prices in the US remained more affordable than those in Canada. Presently, real-estate in Canada on *per-income basis* is 24 percent more expensive than homes in the US.

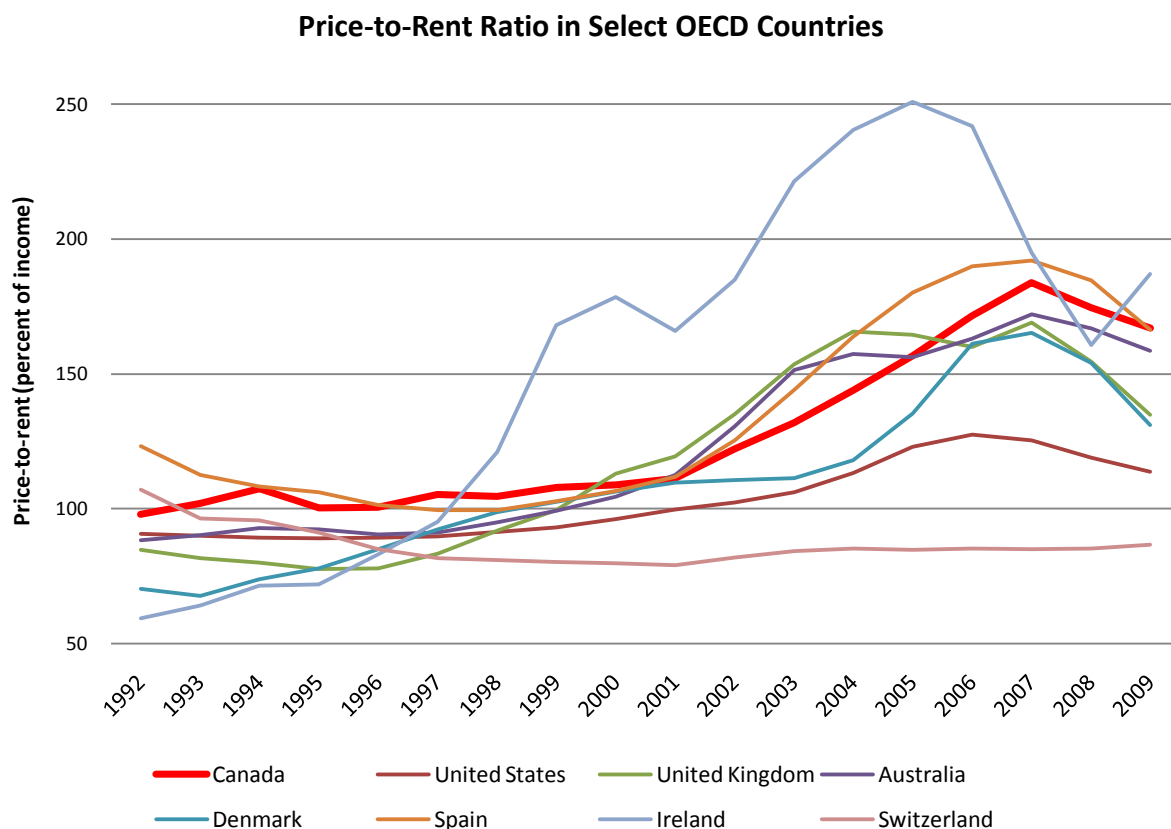
Exhibit 7.1: Price-to-Income Ratio in Select OECD Countries



Source: OECD 2008;

The price-to-rent ratio compares residential real estate prices to the monthly rents that can be earned from the property. It is a fundamental valuation for investment properties, as investors compare expected cash flows to the investments costs. The price-to-rent ratio is a useful metric, as it automatically corrects any inflationary distortions and puts a relative housing price in perspective. OECD calculates the price-to-rent ratio by dividing residential home costs by annual rent. Exhibit 7.2 presents this ratio for select OECD countries.

Exhibit 7.2: Price-to-Rent Ratio in Select OECD Countries



Source: OECD 2008;

Between 1992 and 2009, the price-to-rent ratio grew in most OECD countries with the exception of Japan, France, Italy, Finland, Korea and Switzerland. However, by 2009 the majority of OECD countries witnessed significant downward corrections, as home prices came down from their highs. The ratio in Canada decreased, but not nearly as much, and is presently second highest only to Ireland. From the investors' perspective, the high price-to-rent ratio makes Canada an unattractive place to invest, the same investment in other countries will bring higher rent income. The high price-to-rent ratio also indicates relatively high home prices in Canada.

Direct comparison to the post-bubble US reveals a highly unattractive investment environment that presently exists in Canada. In the US, similarly priced properties bring 50 percent more in rent income than similar properties in Canada.

There are several reasons for this section of the document to investigate relationships between historical rents and ownership costs. Aside from the aforementioned valuation metrics that signals out-of-balance situations in the housing market, the price-to-rent relationship carries additional meaning. Firstly, people always can choose

between buying and renting. The direct substitution for owning a home is renting it. Understandably, home ownership demands a certain premium, as a mortgage is gradually paid off and on a long-enough scale, real properties always appreciate in price. Also there is the human factor of pride and prestige associated with home ownership. However, when the premium exceeds certain limits, owning a house stops making financial sense. For instance, if monthly ownership costs for a condo are \$10,000, while the same unit in the same building can be rented for \$2,000, buying it simply cannot be justified from the financial perspective.

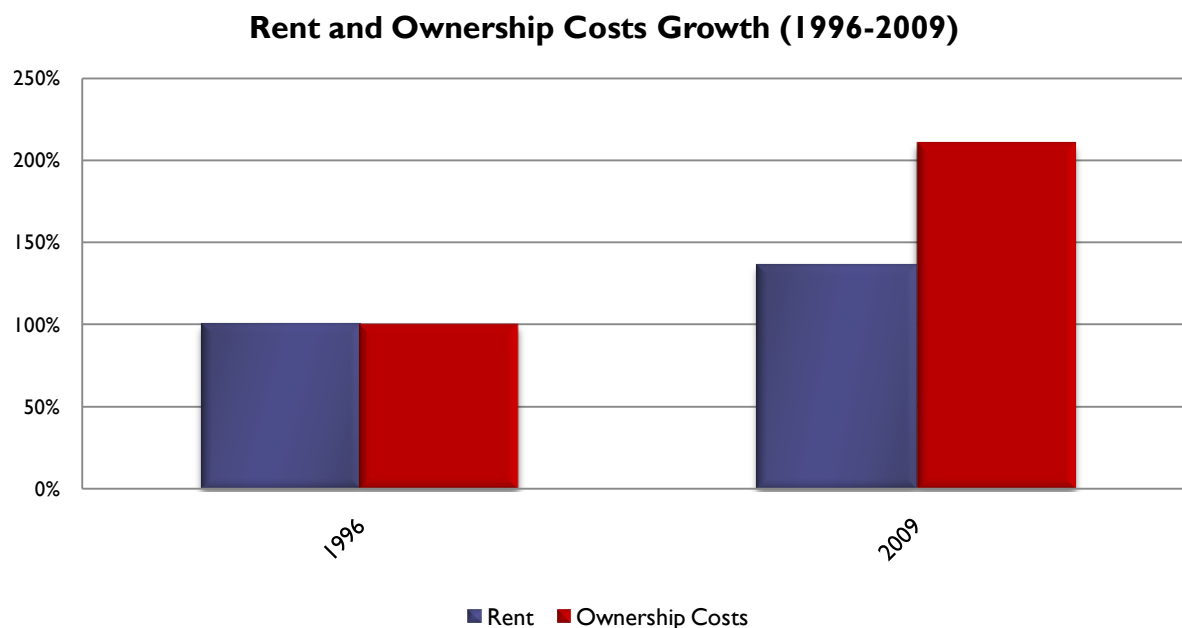
The second reason for dedicating a substantial part of this paper to the price-to-rent ratio is the “property as an investment” concept. At the right price, a condo or a house can be bought with the intention of renting it out. The tenants would cover all or most ownership costs, eventually bringing a steady income stream to the unit owners. However, if the property price is too high, its owners will have to subsidise someone living in their apartment, as the rental income would not be enough to cover all related ownership costs.

The last concept that will be covered in this section is “if I cannot afford to live in it, I’ll move out and rent it out”. This notion relies entirely on the assumption that property can be rented out at a desired price. If this is not the case, owners will be forced to sell at whatever price the market offers.

The Canadian housing bubble generally refers to the four major Canadian cities. On the price-to-income measurement, Calgary and Montreal remain very close to Toronto, while Vancouver is significantly less affordable. For most of the following examples, values observed in Toronto will be used as a proxy for these four metropolitans.

Exhibit 7.3 shows the difference in apartment rent and ownership costs growth in the Toronto area between 1996 and 2009. The comparison is done on the weighted average of the mean 1-, 2-, and 3-bedroom apartment rent and ownership costs for similarly sized condo units. Ownership costs include mortgage (under the 10% down payment assumption), property taxes and maintenance fees.

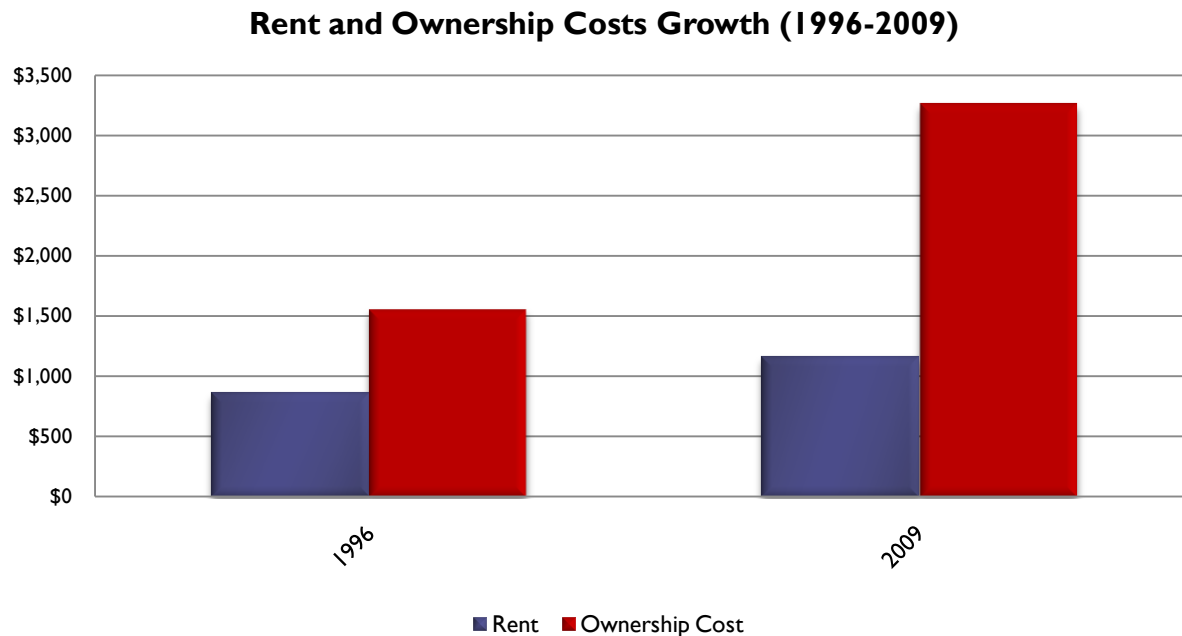
Exhibit 7.3: Rent and Ownership Costs Growth (1996-2009)



Source: Statistics Canada, Toronto.ca, MLS;

During the 13 years period from 1996 to 2009, rental costs in Toronto increased by 36 percent. Over the same period, the ownership costs rose by 110 percent due to the spiking housing prices, rising maintenance cost and property increases in property taxes. Exhibit 7.4 presents the same view in nominal dollars.

Exhibit 7.4: Rent and Ownership Costs Growth (1996-2009)



Source: Statistics Canada, Toronto.ca, MLS;

Remarkably, the premium that condo ownership commands over renting a similarly-sized apartment increased from 82 percent in 1996 to approximately 180 percent in 2009. The high premium annuls any financial benefits that buying a real-estate property brings.

In many cases, a real-estate property is viewed as a retirement investment. Over the years, it is gradually paid off, and by retirement time it represents an item of value that carries a very low maintenance cost. This is a true assumption, but the price of the property must be right. Let's review a 2-bedroom apartment located in downtown Toronto, as an example. Presently, an average rent would be approximately \$1,300 in an apartment building. A 2-bedroom, 2-bathroom condo would be priced near \$450,000. The monthly ownership cost would be near \$3,850 (\$3,000 mortgage payment, \$625 maintenance fees, and \$225 property tax). The monthly difference between renting and owning will stand at approximate \$2,550, which would translate into approximately \$30,000 annually.

Let's assume a highly unlikely event of housing prices in Toronto avoiding a collapse, and increasing at a steady pace of 3 percent a year. At the same time, rents, property taxes and maintenance fees keep up with inflation, and rise at 3 percent a year as well. All savings from choosing a rent vs. owning a condo, i.e. the difference between the rent and ownership costs, are reinvested in safe bonds at 5 percent. There are no transaction fees associated with condo sales.

After 5 years, the renter will accumulate \$176,000, while the condo owner will have \$143,710 after selling the unit for \$464,000.

After 10 years, the renter will accumulate \$395,000, while the condo owner will have \$298,000 after selling the unit for \$538,000.

Finally, at the end of the mortgage term, the house is fully paid off, and is now worth \$838,000. However, by that time the renter will amass \$1,438,000 by saving and safely investing the difference between the rent and the cost of ownership.

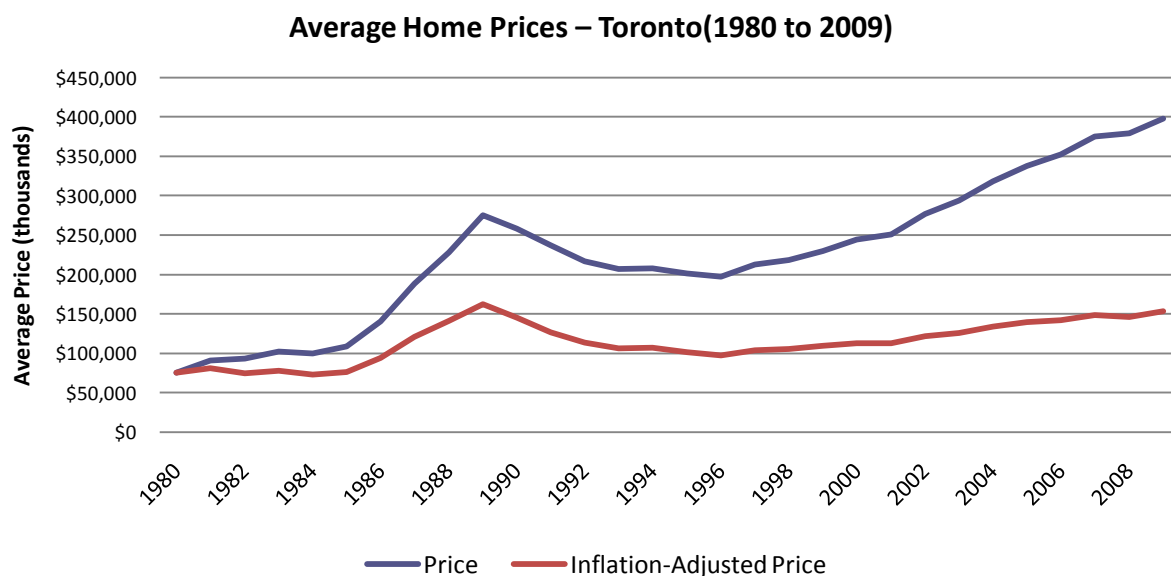
What this example intends to demonstrate is *at the present housing prices* in major Canadian cities rents represent a better choice from the financial perspective. Additional factors, such as inevitably rising mortgage rates and transaction costs, will only further compound the issue. This example certainly doesn't mean to say that rents are always a better option. Under normal conditions, the balance may easily shift in favour of home ownership. However, at the current unsustainably overinflated real-estate prices, renting an apartment without doubt makes a lot more financial sense.

However, this paper intends to demonstrate that the housing bubble in Canada is about to pop. In such a case, it is not inconceivable to imagine a healthy home price drop of 40-45 percent in Vancouver, 25 to 35 percent in Toronto and 15 to 25 percent in Montreal and Calgary. In such a case, a renter will be better off by far.

When asked about their rational for purchasing a property at the peak of a possible bubble, many buyers reply "I am intending to live in this house, so I don't care if the price goes down." Don't you care that you can buy the same house in 3-4 years for 3/4 or even 2/3 of today's price? Don't you care that you can pay it off in 15 years instead of 25? Don't you care that you can also save by renting while you are waiting? Exhibit 7.5 shows housing prices in Toronto between 1980 and 2009. Owners that avoided buying a home in 1988 and 1989 purchased the same property in 1992 at almost a 30 percent discount.

It is an erroneous approach to blindly snatch a property without comparing its current price to its fundamental value and short- and mid-term price growth prospects.

Exhibit 7.5: Average Home Prices – Toronto (1980 to 2009)

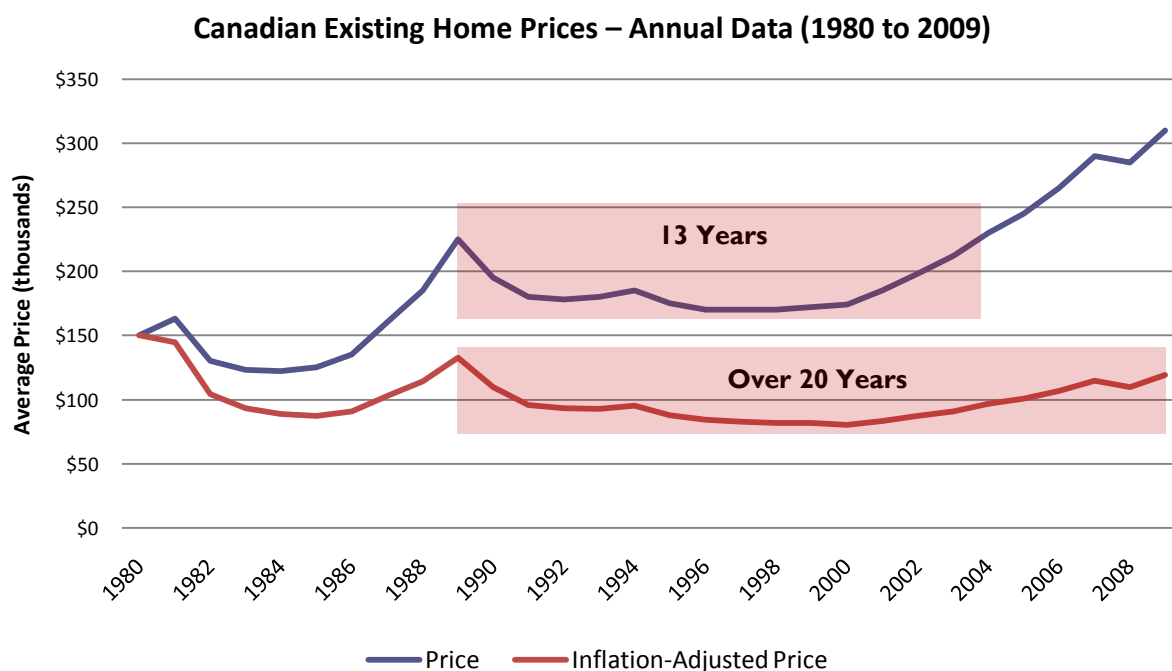


Source: Toronto Real Estate Board;

Another response frequently received from the speculative buyer pertains to renting the property out. Even if prices go down, on a long enough scale they will recover. During that time, the property can be rented out, which would cover the ongoing costs.

Exhibit 7.6 shows the recovery time between the peak of the late 80's bubble, and the moment the prices reached the same point. Since 1989, it took 13 years for the prices to fully recover to their 1989 highs in nominal terms and over 20 years in real. To translate it into the cost for home owners, let's consider the price of renting a condominium. It was determined earlier that ownership costs of a 2-bedroom condominium located in downtown Toronto is about \$3,850. This unit can be rented out for approximately \$2,300 in today's market. The difference of \$1,550 a month would be subsidized by the property owner. Assuming that the current housing bubble will bear close resemblance to the previous one, the total amount that would be required to cover the rent-to-ownership gap will be nearly \$200,000. In other words, the *home owner will pay* approximately \$200,000 over a 13 year period for someone living in his home. It is hard to make any sense out of this. Over the same period, the amount paid off for the unit will be close to the same amount - \$200,000, and the net-gain will be zero in nominal terms. In real, inflation adjusted terms, those who bought homes at the peak of the late 80's bubble still did not recoup their investment. This can hardly be considered a good investment strategy.

Exhibit 7.6: Canadian Existing Home Prices – Annual Data (1980 to 2009)



Source: MLS; CREA; Statistics Canada;

Finally, the last common argument covered in this section is if you don't buy now, you will be forever priced out of the market. According to the history of home prices in Canada, this is not the case. Once prices drop or stabilize after a vigorous surge, they tend to stay flat for a period between 3 and 10 years. It gives buyers sufficient time to make an educated purchasing decision. In modern history, prices did not exceed fundamental valuations on the broad range of metrics for a long time. Eventually, either prices came down or incomes caught up, but the price-to-income balance is eventually restored. Currently, it is expensive to buy a home if counted in annual household incomes. Ultimately, it would become cheaper because of rising incomes or dropping prices.

SECTION SUMMARY

Applying fundamental analysis using various valuation metrics is a useful exercise to estimate relative property value. It eliminates distortions introduced by external factors such as inflation and puts nominal price in perspective. From time to time, market value will deviate from the underlying fundamentals, and this situation may last for extended periods. However, when the gap between the fundamental and market values widens to the extreme, such a shaky state typically begins to signal an inevitable upcoming correction.

The global housing boom of the early 2000s has sent housing prices sharply higher in many developed and developing countries. The long-term balance of home prices to other components of the economy has been violated. The correction of 2007-2009 exposed the instability of the situation, bringing housing prices lower and closer to the long-term trends.

Canada did not steer clear of the housing rush. Home prices in Canada rose just as quickly as those in many other countries. And just like in many other countries, fundamental values of homes in Canada did not keep up with the rising prices, driving key valuation metrics out of balance.

The fact that the US has done through a housing bubble is no longer questioned. Given the unique positioning of the US with respect to Canada, it can be useful to benchmark Canada to the US to gauge a relative health of the Canadian housing market. According to price-to-income and price-to-rent metrics, the housing boom in Canada has contributed to a greater divergence between fundamental and market prices (Exhibits 7.1 and 7.2). The housing affordability and balanced price-to-rent ratio deteriorated just as rapidly in Canada as they did in the US. This strongly signals an upcoming correction. While the price correction lies in the US's past, it is still in the Canadian future.

Current housing prices in Toronto, Vancouver, Montreal and Calgary are difficult to rationalize using any combination of fundamental metrics. As history shows, this leads to a price correction. The disparity between gains in income, growth in rental rates and home prices in Canada is quite apparent. Over the last 13 years, growth in home prices substantially outperformed all other components. From the fundamental price-to-rent perspective, real-estate as an investment no longer represents an attractive asset. In fact, at the current home prices in major Canadian cities, renting an apartment makes more financial sense than owning it. This market state leads to an array of predictable consequences. For instance, renting a property out now requires a substantial subsidy by the home owner, which effectively eliminates renting out as a contingency measure in case of income loss.

8 PARTING WORDS

Alan Greenspan in his December 19, 2002 speech argued that asset bubbles cannot be detected. In 2007, his successor Ben Bernanke endorsed the Greenspan doctrine, concluding that the Fed cannot reliably identify bubbles in asset prices. This extraordinary admission made by the two Federal Reserve chairmen ignited a wildfire of cheerful followers repeating the message. Hordes of financial advisors, portfolio managers, economists and investments strategists joined the chorus of voices who explained performance gaps as part of the unpredictable nature of the financial markets.

In fact, even Wikipedia in its “Economic Bubble” article states:

Within mainstream economics, many believe that bubbles cannot be identified in advance, cannot be prevented from forming, that attempts to "prick" the bubble cause financial crises, and that instead authorities should wait for bubbles to burst of their own accord, dealing with the aftermath via monetary policy and fiscal policy.

Yet, there are plenty of economists and investors that saw the recent markets turmoil coming. They acted accordingly, and shared their forecasts with the investment community. Some of them, notably Peter Schiff, toured the country warning everyone who was willing to listen about the upcoming collapse. Nouriel Roubini was named Dr. Doom for pointing out the cliff the US housing market was heading for. At the time, their Cassandraian prophesies were dismissed as inappropriate. Now, they are referred to as prophets.

Schiff and Roubini saw the crisis coming. Yet, Greenspan and Bernanke, with all their infinite access to information, did not see it. It raises the question of competence of either chairman, as Schiff and Roubini didn't use any mystical powers or Voodoo techniques to predict the future direction of the economy. What they looked at were fundamentals, and fundamentals told the full story about the disastrous sub-prime market meltdown before it occurred. Fundamentals don't lie. They might be ignored, overlooked or downplayed. They might be muted by the century-old saying “it is different this time”. But they always come back with a vengeance and take back a dollar on a penny from every person who ignored them.

“It is different this time” works every time, as bullish messages resonate with the investors much better than bearish news does. The nature of most human-built social systems is contingent upon positive news, and there will be no shortage of authoritative figures preaching growth of a particular asset. It takes an enormous will and political power to follow the path set by Roubini and Schiff. They were mocked and laughed at for years before the crisis. It is much simpler to send good vibes and positive waves to the public, and blame it on unpredictable and undetectable bubbles, just as the Greenspan-Bernanke pair did.

It must be remembered that most of the industry participants in the investment field feed of positive news. Investment banks succeed through successful placement of debt and equities. Advisors, mutual fund administrators have a vested interest in asset classes going up, as they have to report positive returns to their clients. The greater portion of the investment industry's success is directly linked to the market going up. Similarly, the real-estate industry needs prices to go up too. Real-estate agents have a direct interest in convincing their clients that the home they'll buy will appreciate in value. It is difficult to sell a home on a premise “buy it now, or the price will plunge tomorrow, and you will be able to get it at half-price in a week.” Real-estate brokers and developers, mortgage brokers and other parties involved in real-estate transactions have a personal interest in promoting the illusion of prices rising into perpetuity. The mass media outlets don't want to be labelled clueless. It is much less problematic to go with the flow, quote industry experts and then publish Greenspan's infamous excuses in case things go wrong. However, a hard look past industry experts, TV personalities and co-workers may reveal a lot more useful information about the current state of affairs. Challenging them for the sake of being different is not an

approach, but evaluating fundamentals to see where the industry “experts” and even aimlessly wondering Federal Reserve chairmen are wrong is.

What do the fundamentals say about the Canadian housing market? The most common valuation metrics are the price-to-income ratio, price-to-rent ratio, affordability index, median multiple and household debt. All of them were covered relative to the long-term Canadian average in the earlier sections of this report. Benchmarking against the US was done for most of the metrics, as the US closely resembles Canada in many respects and has just gone through a real-estate bubble burst.

The price-to-income ratio in Canada is at a historically high level. In fact, in some cities it is the highest on record. Over the last 13 years home prices have become decoupled from homeowners income, the mean household income has risen by 23 to 32 percent in the four largest Canadian cities. Over the same period, the average house prices in these cities increased between 100 and 200 percent. Based on the price-to-income ratio, the four major Canadian cities experienced growth comparable to that of the hottest spots of the US housing bubble. Yet, the US bubble burst, but home prices in Canada remained around these tremendously high levels.

The price-to-rent ratio in Canada is second only to Ireland amongst all OECD countries, which effectively makes Canada the least attractive place for real-estate investments. Based on this metric, the Canadian housing market is 50 percent overvalued in comparison to the US's.

Affordability in Canada is approaching historically high levels. In Vancouver, the housing affordability index exceeded the peak of the latest housing bubble of the late 80s. Adjusted for interest rates, the current affordability index in other Canadian cities is at par or above the peak of the late 80s bubble. If interest rates went up to the historical average, average households in Toronto and Vancouver would be paying 100 percent or more of their gross income towards ownership costs.

On the median multiple ratio measurement, Vancouver (9.3), Toronto (5.2), Montreal (4.9), and Calgary (4.6) hover substantially above the “normal” 3.0 level. Based on this valuation, Toronto is considered a “severely unaffordable” city, while Montreal and Calgary lie on the border between being “seriously unaffordable” and “severely unaffordable”. Vancouver prominently stands out even from this crowd: it is not just “severely unaffordable”, but it is also the least affordable city in Canada, the US, UK, Ireland, Australia and New Zealand.

Canadian household debt has set record highs (Exhibit 6.4). It is not surprising. After all, if incomes could not keep up with rising home prices, somehow all these homes purchased in record volumes over the last five years had to be paid for.

And finally, there is no shortage of new homes in Canada to justify the price levels from the supply/demand perspective. In fact, Canada is in a period of highly pronounced overbuilding (Exhibit 6.7). Oversupply warrants lower prices. On the contrary, the stubborn prices edge higher and set all-time high records.

On all fundamental measurements, the Canadian housing market is severely overvalued. “Severe” is the word that describes the depth of the housing crisis Canada is currently in. Naturally, this statement is open for debate. On almost a daily basis, rosy news about the health of the Canadian housing markets stream in from the Internet portals and TV screens. Unsubstantiated rumours of the bubble are publicly refuted by numerous industry professionals. Voices like those of Garth Turner¹ and David Rosenberg's^{16, 23} are largely dismissed as baseless alarmists talking. And why wouldn't they be ignored by the public, if all kinds of experts convincingly explain that the current state of the market does not constitute a bubble? One or two alarmists put against hundreds, if not thousands, of reputable and articulate experts. It is not surprising that the public continues with the buying spree. So many experts cannot be wrong, right? Well, rewind time back to 1999 and review the headlines that dominated the landscape of the financial press back then. “Buy stocks! Invest in dot com! There are no valuation issues!

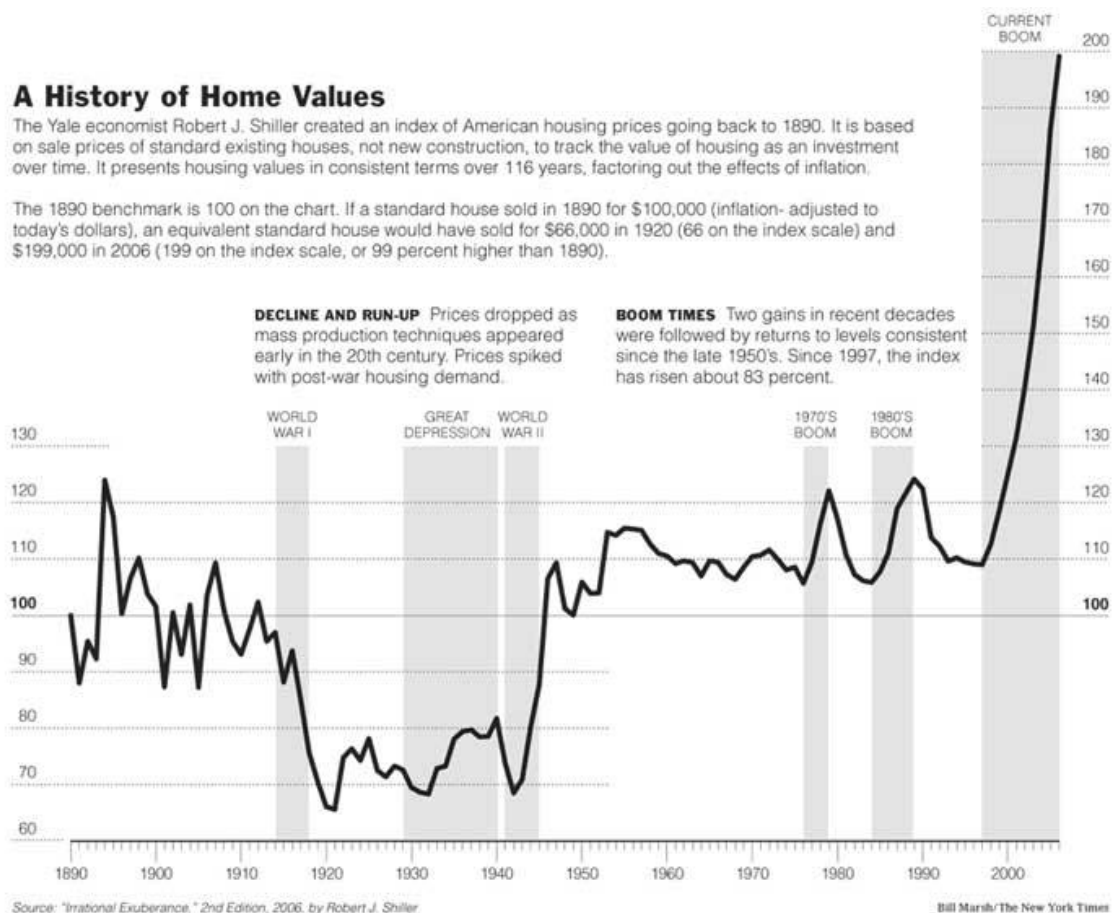
NASDAQ is below its true value!” Hordes of bank analysts, reputable investors and TV personalities, they all somehow missed it back then, convincing themselves, their employers and clients that despite all the signs of an issue that there wasn’t one. And they did it again in 2005-2006 with housing. And many of them are overlooking it again now.

While it is puzzling from the perspective of an unbiased observer, the industry pros get caught up in the moment of making money almost as easily as the general public does. Partially it is driven by a hope of getting out just before it bursts. In many cases, it is driven by competency issues. Kudos to Greenspan and Bernanke, ineptitude among the industry participants can be hidden behind the mysterious and unpredictable market forces notion.

The commonality that unites the dot com and housing bubbles lies in the complete disregard for the underlying fundamentals. Time after time, boom-and-bust cycles prove that asset classes cannot be valued in a void. In all cases when the asset class goes exceedingly out of sync with its fundamentals, gravity ultimately takes over and the asset prices come crashing down hard. The bigger the unwarranted boom, the harder the fully justified crash.

Cutting through the white noise generated by the myriads of market participants, a fundamental valuation using any mainstream metric signals that the Canadian housing market is overheated and overvalued. Without fundamental support, it has no legs to stand on, and once the crutches provided by the Harper government wear off, it will inevitably fall. Exhibit 8.1 shows a chart by the Yale economist Robert J. Shiller published in his 2006 book “Irrational Exuberance,” 2nd Edition.

Exhibit 8.1: A History of Home Values in the US (1890 to 2006)



Source: "Irrational Exuberance," 2nd Edition, 2006 by Robert J. Shiller;

The chart plainly illustrates the point of the housing market getting out of sync with reality. After World War II, the norm for the market was to hover around the 110 mark. During the 1970's and 1980's booms, the market rallied above the 120-percent level, followed by a subsequent drop to its long-term average. Between 1998 and 2006 it has jumped to the 200-percent level. It is quite apparent by simply looking at the chart that such a sharp increase in real prices could not be sustained. Between 2007 and 2009, the US housing market ended up with the biggest drop on record, and while the bottom is in sight, it hasn't been reached yet. The chart of the Canadian housing market, especially that of Vancouver, bears a striking resemblance to the US's²⁹. The Canadian market experienced a jump in home prices almost as sharp as the US housing market did (Exhibit 4.2). What does it bode for the Canadian home prices?

From the definition, "a financial bubble is trade in high volumes at prices that are considerably at variance with intrinsic values" (King, Ronald R.; Smith, Vernon L.; Williams, Arlington W. and van Boening, Mark V., 1993). Canada has both components - high volumes and home prices that are considerably at variance with intrinsic values. The fundamentals in Canada are similar to the comparative metrics in the US at their bubble peak. Of course, despite the fundamentals and despite the "too far, too fast" factor, the existence of a housing bubble can be challenged. However, citing David Rosenberg²³, "*If it walks like a duck...*"

It is worth reminding ourselves that the bubble in Canada did not burst due to the massive intervention by the Harper government. The intervention was orchestrated by injecting thousands of new buyers - many of whom cannot afford owning the property they purchased - into the market to prop up the prices. The scheme worked, and the disaster was temporarily averted. However, the problem was not fully or even partially rectified. By postponing the bubble deflation, the bubble was inflated further. If a housing market collapse would have caused pain and distress on behalf of a large and overleveraged Canadian population in 2007, the housing crash of 2011 will affect all the same buyers, plus many more of those who were sacrificed to keep the prices going up. More fire sales and more competing properties on the sell side will cause a sharper and a deeper downturn that would have been experienced in 2007. Furthermore, CMHC, the second largest crown corporation in Canada, would require a bailout due to all the risky sub-prime mortgages it has insured. Every single one of the main sub-prime lenders in the US went out of business or required a massive bailout^{24, 27; various sources}. Unlike the US, the Canadian sub-prime lender would not require a bailout. In Canada, the bailout is already embedded in the system. It would simply be passed on to tax payers in the form of a larger national debt, higher taxes or tighter funds for social programs.

Amongst the most frequently asked questions is "*when will it burst*". Unfortunately, calling the top or the bottom of the market is as reliable as tossing a coin. Markets can be assessed for their intrinsic value, and bets can be placed on the future direction of a market. Entering or exiting the market at the precise turning point is a coincidence. However, identifying an area where it is expected to reverse is possible with some degree of certainty.

There are three main triggers that may help to set off the housing market decline. They are: HST, Olympics and rising rates. In the Toronto area, a buying spree is influenced to a large degree by the rumours of the upcoming tax harmonisation. The implications of it are generally not well understood, and buyers are trying to dodge the HST introduction by buying homes now. It transfers demand from the future to the present, creating a temporary intense upward pressure on property prices. Once the HST takes effect in Ontario, the urgency to buy will be instantly removed. Since much of the demand was transferred to and fulfilled in the past, the post-HST demand will drop. With no intense upward pressure and no buyers, the perception of the housing prices perpetually rising will be broken. The changing perception of the sustainability of the housing prices rise would destabilize the myth of real-property as a safe and profitable investment, and trigger a selling spree.

Another possible trigger is the post-Olympic hangover in Vancouver. Before the Olympics, massive investments in the infrastructure of a host city are made. Many areas, especially construction and real-estate, benefit from the

expansion that is required for the games. Once the games are done and gone, most host cities face a rude awakening in the form of unwanted facilities that cannot be run profitably. In the case of Vancouver, the most overvalued city in Canada and the US, a stoppage of investment flow in real-estate and infrastructure might effortlessly translate into disillusionment about the property prices. As home prices in Vancouver are not supported by any fundamentals and driven mostly by human misapprehensions, anything that will bring daydreamers back to reality will destroy the prices and cause property devaluation.

Finally, the most probable cause that will trigger a housing market collapse in Canada will come in the form of a trivial interest rate hike. It was the straw that broke the camel's back in the US, and it can take the same role in Canada. Canadian homeowners are overleveraged beyond their capacity to carry mortgages under the "normal", by historical standards, interest rates. The government estimates that 10 percent of home owners are susceptible to defaults once interest rates go up. Once rates go up, the events are likely to unravel just as they did in the US. Defaulting homeowners lead to fire-sale prices and excessive inventory. Excessive inventory and price competition pushes down prices. Lower prices dash hopes of investors who find themselves holding a highly leveraged and money-losing asset. It leads to more fire-sales. Once the prices drop 10-15 percent, defaulting homeowners and fearful investors are joined by people with negative equity who have given up on their property. This spiral continues for some time, until prices finally stabilize substantially below their starting levels.

The 2010 Winter Olympics game will come to a close on February 28, 2010, HST will be rolled out on July 1, 2010, and interest rates are expected to begin rising in the second half of 2010^{17, 18}. If any, or all, of the above scenarios materialize, 2011 will be marked by a major downturn in home prices in Canada. Only this time, the government will not have access to the same tools to delay it, and sub-prime borrowers thrown into the mix between 2007 and 2009 will only magnify the problem.

Wikipedia states:

Within mainstream economics, many believe that bubbles cannot be identified in advance, cannot be prevented from forming, that attempts to "prick" the bubble cause financial crises, and that instead authorities should wait for bubbles to burst of their own accord, dealing with the aftermath via monetary policy and fiscal policy.

History shows that this statement fully applies to the Federal Reserve led by Greenspan and Bernanke. However, a moderate knowledge of economics allows an observer to detect large discrepancies in asset valuation and to act accordingly. Presently, the Canadian housing prices exhibit a tremendous shift to extreme overvaluation. It is time to reassess purchasing decisions and act accordingly.

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FORMULAS

Basic Annuity Formula:

$$PV(A) = \frac{A}{i} \cdot \left[1 - \frac{1}{(1+i)^n} \right]$$

1. $PV(A)$ is the value of the annuity at time=0
2. A is the value of the individual payments in each compounding period
3. i equals the interest rate that would be compounded for each period of time
4. n is the number of payment periods.