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Canada's Debt Threat

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HIGHLIGHTS

- A central risk to Canada's economic recovery is its record household debt burden.
- Currently, the load is surprisingly affordable, given very low borrowing costs.
- Rising interest rates will compromise this, rendering home prices materially too high, and forcing some retrenchment in consumer and housing activity.
- This will be quite painful for a small subset of households, but does not represent a systemic risk. It will slow economic growth, but not devastate it.
- This takes some of the shine off Canadian markets.

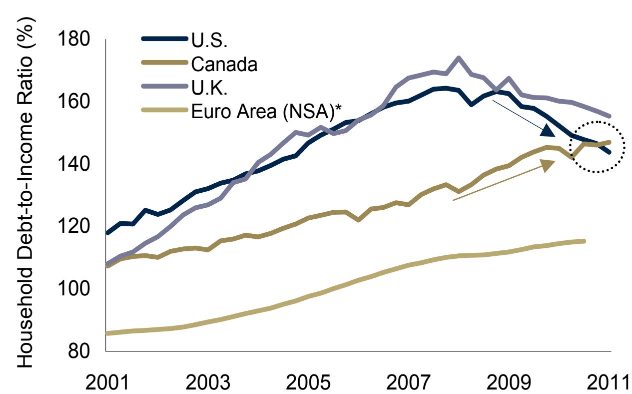
The Canadian economy has nimbly surfed a wave of flowing credit, housing market ebullience and resource riches to among the most resilient economic performances in the developed world. While this has been deeply satisfying, it is not an excuse for complacency. Successful investing requires a continuous assessment of downside risks. Internationally, Canada is threatened by the same rocky shoals as everyone else. These include Europe's fiscal crisis and the sustainability of U.S. economic growth.

Mercifully, the set of "Made in Canada" risks is far more compact. At the top of the list is Canada's towering household debt burden. This is a fascinating subject in that the very source of Canada's relative success during the worst of the credit crunch – a banking sector that kept on lending and households that kept on buying – could yet spell its undoing if newly enlarged household debt loads prove too onerous to bear. The subject is also timely: the imminent arrival of higher interest rates will soon put debt affordability to the test.

Dangerous Debt

The base instinct to fear for the sustainability of Canadian household finances is understandable. Canadians have partaken in a torrid love affair with credit, seduced by easy access to low borrowing rates. The stock of household credit has grown by over a third since the start of the credit crunch – averaging a meaty 8.1% growth per year. In contrast, personal disposable income has grown at just 4.0% per year. Credit cannot expand at twice the rate of income indefinitely.

Exhibit 1: Rising Canadian Household Debt-to-Income Ratio



*4 quarter moving average
Source: Haver Analytics, RBC GAM

This enthusiastic borrowing has served to pickle Canadians ever more deeply in a brine of debt. Canada's household debt-to-income ratio has now soured to a record high of 147%, and continues to rise (Exhibit 1). This puts Canada abreast of the U.S. – slightly higher, actually – and in stalking territory of the U.K. To make matters worse, American and British debt burdens are ebbing, while Canada's continues to mount.

While consumer credit growth has finally begun to slow, mortgage credit is again cycling higher. Canadian housing

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valuations are raising eyebrows. From a trough at the start of 2009, existing home prices have risen by a big 31%, or 12.2% per year. Over the past decade, home prices are 117% higher. Contrast this to the U.S., where home prices have fallen by 5% since the start of 2009, and are up only one-sixth as much over the past decade[1]. Linked to this, there is an understandable fear that the coming period of rising interest rates could prove venomous for household finances, all the more so in the context of a mortgage market that has increasingly embraced variable-rate products.

Manageable, So Far

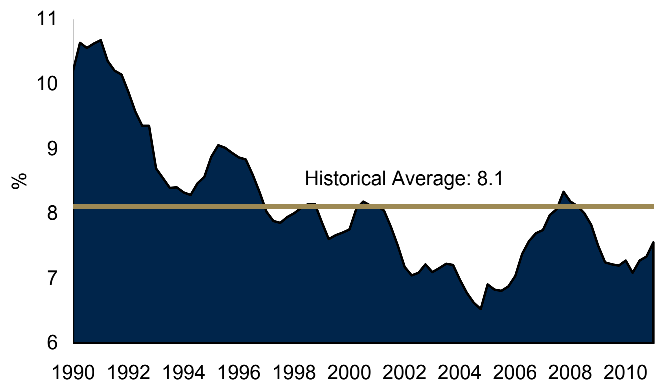
So far, however, Canadian household debt has been remarkably manageable. As a proxy for household stress, both mortgage and credit card delinquency rates are within range of their historical norms. Mortgage delinquencies are running at 0.43%, versus a long-term average of 0.42% and a subdued pre-crunch level of 0.24%. Credit card delinquencies are pegged at 4.33%, versus a long-term average of 3.69% and a pre-crunch level of 3.01%. Some deterioration is evident, but there is nothing shocking here.

Providing further evidence, the Canadian debt-service ratio – the fraction of household income dedicated toward servicing the interest on household debt – is at a pedestrian 7.6%, still below the historical norm of 8.1% (Exhibit 2). The same goes for the personal bankruptcy rate.

This strongly suggests that households are actually feeling pretty good despite high debt-to-income ratios. Perhaps this shouldn't be so surprising. While Canada is conventionally compared to the U.S. and U.K., others such as the Netherlands, Denmark and Norway maintain substantially higher household debt-to-income ratios. It seems there is no single level that can be viewed as an iron-clad threshold. The sustainable level is simply the level that people can afford. This depends on the stability of employment, the age of the population, the purpose of the borrowing and the cost of credit.

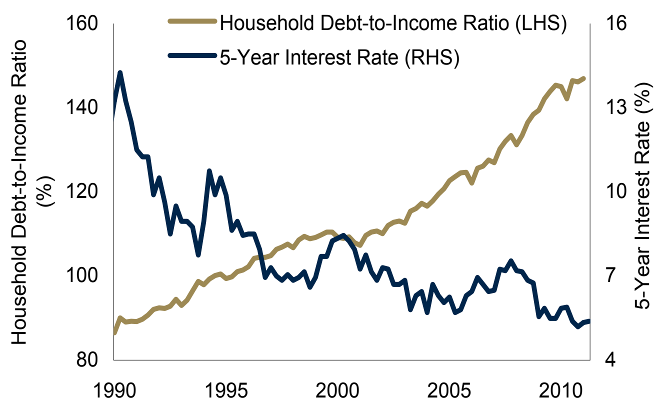
In recent years, every one of these metrics has smiled upon Canadian households. Canada's labour market has shone relative to its peers, allowing most households to keep up with their payments. The average age of Canadians has drifted higher over the past three decades, from less than thirty to forty years old. This has nudged

Exhibit 2: Canadian Household Debt-Service Ratio is Low



Source: Statistics Canada, RBC GAM

Exhibit 3: Falling Rates Have Driven Rising Debt



Source: Haver Analytics, RBC GAM

the average household into its peak debt accumulation phase. As home ownership has supplanted renting, Canadians are disproportionately borrowing for the purpose of buying a home. This provides a means of capital accumulation, and replaces rental payments.

Most importantly, the cost of credit is astonishingly cheap. Interest rates are at or near record lows, which massively reduces financing costs. The great secret of household debt and home prices over the last three decades is that the secular shift towards lower interest rates was the main driver for an equal but opposite shift towards higher indebtedness and rising home prices (Exhibit 3). Although home prices today average 6.5 times per capita personal income, versus just 3.8 times in 1980, monthly mortgage payments are actually more affordable today. Every percentage point drop in interest rates has enabled around a 10% increase in home prices. The cost of borrowing has made all the difference.

[1] When evaluated in Canadian dollar terms, Canada-U.S. home prices have diverged by a jaw-dropping 141% over the past decade.

More fundamentally, it is neither in the interest of borrowers nor that of lenders to engage in transactions that result in distress for either party. Certainly, this principle is hardly a fail-safe device – witness the U.S. housing debacle, where creditor interests were subsumed by opaque securitizations that foisted poor loans onto unsuspecting investors; and borrowers were insufficiently appreciative of the risk of declining home prices or the terms of their sub-prime mortgages. But under normal circumstances – arguably, Canadian circumstances – the pool of lenders is restricted to those realistically capable of repaying their loans. Barring major economic disruption, then, borrower distress is a rare occurrence.

The Other Side of the Ledger

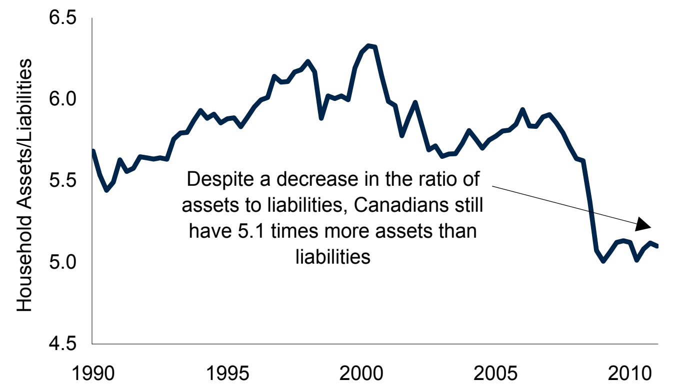
Simplistic criticisms of Canada's household debt-to-income ratio also tend to neglect a very important offset: there are two sides to every balance sheet. Yes, Canadian households have debts valued at 1.5 times their annual disposable income. But they also have assets valued at 7.5 times their annual disposable income. In other words, they have far more assets than debt (Exhibit 4), and this gap – their net wealth – continues to grow.

Debt Distribution

So far, our analysis has been confined mostly to averages. But the average household never goes bankrupt, never defaults on a loan and its primary breadwinner never becomes unemployed. It is individual households that suffer these indignities. In this section, we begin a march towards more granular data in an effort to shed additional light on at-risk groups.

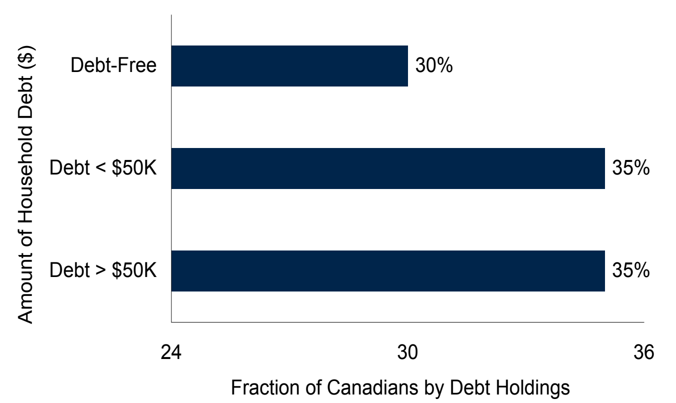
Thirty percent of Canadian households are debt-free. Another 35% have minimal debt of $50,000 or less. This is heartening. It is only the remaining third that carry a large burden of debt (Exhibit 5). Of these, there are many households whose debt easily runs three, four, and five times their annual income. These households are not necessarily as profligate as they may initially seem: a household with an average income that purchased an average-priced home would instantly incur a debt-to-income ratio of around 350%, on top of whatever student, vehicle, and credit card loans were previously outstanding. It is not hard to achieve a household debt-to-income ratio of 400% today.

Exhibit 4: Canadian Household Wealth Still Strong



Source: Haver Analytics, RBC GAM

Exhibit 5: 65% of Canadians Have Little or No Debt



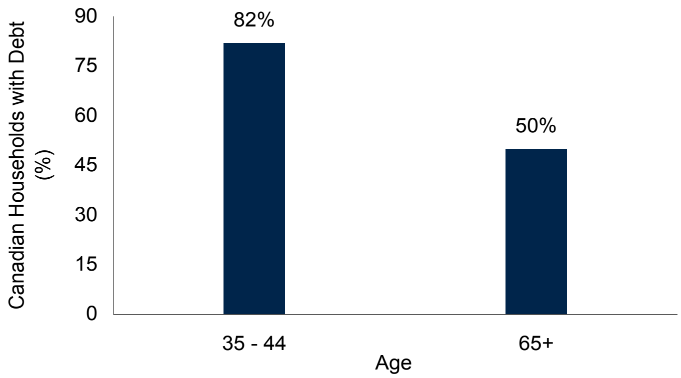
Source: Ipsos Reid – Canadian Financial Monitor

Nor is a household with a debt-to-income ratio of 400% necessary imperilled, so long as it is relatively young, relatively wealthy, has spare income, stable employment prospects and upward earnings mobility. Fortunately, most households and lenders seem to naturally heed this advice. Not all of these characteristics can be directly observed, but empirical evidence at least establishes that those with the most debt tend to also have an especially large asset base, are younger than average, and have a higher-than-average income. In turn, these final two traits usually translate into upward earnings mobility and stable employment prospects, respectively.

Age

Leading the way, fully 82% of Canada's households aged 35-44 are indebted, reportedly averaging $135,000 per household with debt. Other sources suggest this could even be materially higher. This is not surprising. Many young households carry student debt, have financed a wedding, support children, and have bought a house and car. The good news is that they are nearing their peak earning years, and most are able to make a serious dent in their debt over the subsequent decades. By the time they hit age 65, only 50% report any debt (Exhibit 6), and this averages a more modest $41,000. As a share of income, the load lightens even more substantially. Additionally, older borrowers are more likely to have a secured line of credit, meaning they have assets backing their debt, and their borrowing rate is lower. Still, there is evidence that the burden is growing. In the last five years, the fraction of debt-free seniors has fallen materially, and the average debt has increased by close to 60%. The siren call of cheap credit has not gone unheeded.

Exhibit 6: The Debt Life-Cycle at Work



Source: Ipsos Reid – Canadian Financial Monitor

Income

The most indebted households also tend to be those with the highest incomes. The average poor household is substantially less likely to have debt than the average rich household, and the amount for those with debt tends to be materially less. The evidence on this is clear. The evidence becomes considerably murkier on the subject of whether poor households also have less debt as a proportion of their income. An OECD study using 2005 microdata shows that the median household debt-to-income ratio for the bottom quintile of Canadian income earners is a remarkable ten times smaller than that for the middle quintile of income earners, and an amazing eighteen times smaller than the top quintile. This is a relief. In contrast, survey-based data from 2010 argues that Canadian household debt-to-income ratios – at least for households with debt – are roughly proportionate across the income brackets. It is not clear what to make of this conflicting evidence, even considering the methodological differences.

While richer households have most of the debt, they are also more likely to have offsetting assets, to enjoy two household incomes as a buffer against job loss, and to pay lower interest rates due to their tilt towards secured debt and away from credit-card debt. Arguably, poorer households are still the ones to fret over, as they tend to spend a far greater fraction of their income on dwelling costs than the rest, and so have less wiggle room when borrowing costs rise. And their level of indebtedness has also increased the fastest, up by 47% over the past five years.

Overall, it is reassuring that most Canadians seem to naturally scale their borrowing to their means. There are no demographic groups in flagrantly unsustainable situations. However, there are hints that household finances are starting to become less favourable for certain at-risk groups, including seniors and those with low income. This presents a risk, especially as rates rise.

Housing Affordability in Perspective

The housing market has played a central role in the formation of debt, constituting the fastest growing and single largest household liability.

The Canadian landscape is littered with unfulfilled prophecies of imminent housing collapse. It goes without saying that a housing correction has not yet occurred. How has this been avoided? To understand, it is best to think about housing affordability in the very way that buyers do. This is not in terms of a home's absolute price tag, but in terms of whether a household can make the monthly payment fit into their budget. Thanks mainly to low borrowing costs, they usually can.

Current Affordability

For a fixed-rate mortgage, we estimate that the average monthly payment on a new mortgage is no more than 5% above the historical norm[2]. For a variable-rate mortgage, we calculate that the monthly payment on a new mortgage is actually 8% too low. That is to say, those obtaining variable mortgages still find home valuations

[2] It is an open question whether our affordability calculations are too optimistic or too pessimistic. We use the average disposable income per labour force member, an average home price, a 25% downpayment, a 25-year amortization period and an average mortgage rate. The downpayment assumption may be slightly generous given behaviour in recent years, but the amortization period may be somewhat frugal – these provide offsetting influences, leaving the exercise about right. These affordability figures are contrasted to the average level since 1985.

somewhat cheap (though substantially less so than in the spring of 2009 when valuations were 38% cheaper than usual). These surprising results materially explain the persistent enthusiasm for home buying, even as home prices have risen. Homes just aren't that expensive right now according to the metric that matters (Exhibit 7).

Sustainable Affordability

Of course, rock-bottom interest rates won't last forever, and the key change on the horizon is higher borrowing costs via the Bank of Canada. Our affordability measure is based upon the monthly carrying cost, and this will obviously deteriorate once interest rates begin to rise. Presuming a return to historically normal mortgage rates (the average of 1995 through today), we calculate that "sustainable affordability" will be considerably worse than current affordability (Exhibit 8).

And that's the rub. For a fixed-rate mortgage, a return to the historically normal cost of borrowing would render houses 18% too expensive for new entrants. For a variable-rate mortgage, home prices become 14% too expensive.

Regional Affordability

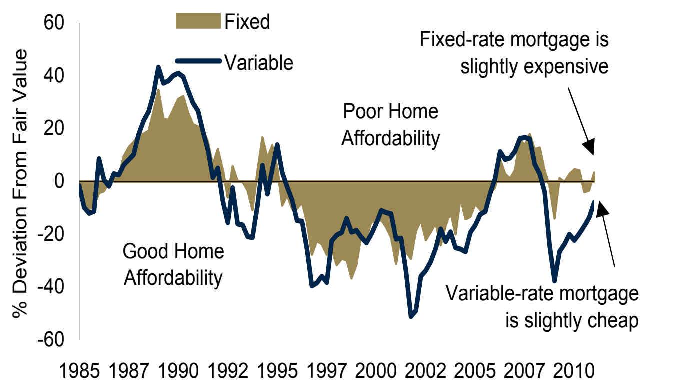
National averages can sometimes conceal regional divergences, especially for the hotter markets, such as Vancouver and Toronto. In our view, it is not coincidental that some of Canada's biggest cities experience the worst affordability. This is a common feature globally, and reflects the gravitational pull that large cities exert for economic, cultural and familial reasons. Consequently, it is unsurprising that household debt loads tend to be biggest in Alberta, British Columbia, and Ontario. Is it possible some housing markets in these provinces have gone too far?

Vancouver

Vancouver home prices have risen by a frightening 23% over the past year, merely the continuation of a highly caffeinated trend. Unsurprisingly, affordability has suffered. Even at current interest rates, carrying costs are 30% beyond the historical norm for a fixed-rate mortgage, and 22% too high for a floating-rate mortgage. Projecting affordability once interest rates have normalized is even grimmer: Vancouver home prices will be 40% too high for fixed-rate borrowers, and 38% too high for variable-rate borrowers.

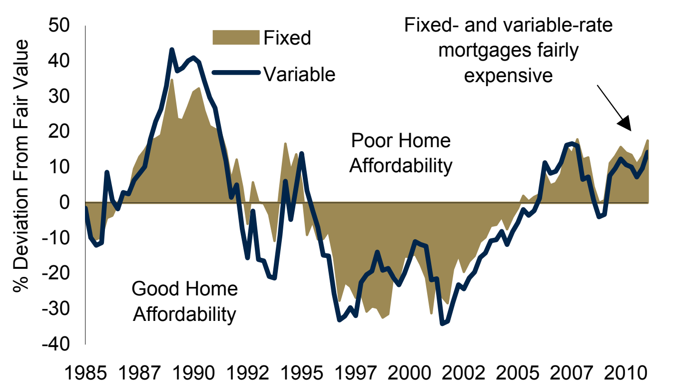
Clearly, Vancouver is an extraordinarily pricey market. Arguably, some premium is warranted due to its physical

Exhibit 7: Canadian Current Affordability Gap



Note: Calculates the current carrying cost of a home versus the historical norm.
Source: CREA, Statistics Canada, RBC GAM

Exhibit 8: Canadian Sustainable Affordability Gap



Note: Calculates the carrying cost of a home once borrowing costs have returned to normal levels, versus the historical norm.
Source: CREA, Statistics Canada, RBC GAM

beauty, attractive climate, limited landmass, and Asian investment. However, our methodology already indirectly accommodates this: it merely compares the carrying cost of a Vancouver property to the historical Vancouver norm, not to the national level. Even at the best of times, Vancouverites were already spending 50% more than the rest.

Still, the extent of the Vancouver mispricing is probably overstated. Fresh anecdotes and (slightly dated) empirical evidence confirm a bifurcation in the Vancouver housing market. Home prices have risen through the stratosphere for the top 20% of the market, while they have proceeded with greater caution for the remaining 80%. To illustrate, the average Vancouver condo price increased by 12% between 2009 and 2010. But high end condo prices rose by 26%, while the remaining 80% of the market rose by just 4%. Similarly, for detached homes, the average gain was 15% between 2009 and 2010. But high end home prices rose by 21%, while the remainder of the market rose by a less extreme 10% (Exhibit 9).

This is a modest relief, because the luxury home market is arguably less exposed to rising rates than the rest: a disproportionate fraction are purchased with cash, and high end borrowers usually have an income buffer.

Overall, the Vancouver housing market appears quite hot. Even excluding the top quintile of homes, affordability is substantially worse than the rest of the country and looks to have deteriorated more quickly. There remains a significant and growing affordability gap in the city, and it should be viewed as the canary in the coal mine for the rest. Whatever happens to the country, Vancouver should lead the way.

Toronto

Mercifully, Toronto's housing market does not appear to be quite as out of hand as Vancouver's. True, home prices managed a large 9% gain over the past year. But affordability at current borrowing costs is rather ordinary, at 7% too expensive for those with a fixed-rate mortgage, and 4% too cheap for those with a variable rate. Of course, sustainable affordability is much worse, as rising interest rates will translate into home prices that become 21% too high for those with fixed-rate mortgages, and 18% too high for those with variable-rate mortgages.

Calgary and Edmonton

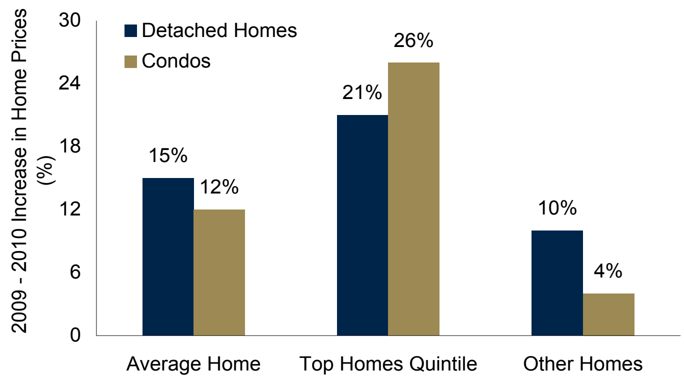
Calgary and Edmonton are often identified as other potential trouble spots for the Canadian housing market. They have been through classic boom-bust cycles in recent years, in line with the fortunes of oil and gas. Broadly, these cities align with the Toronto findings. Home prices are perhaps a touch too high today, but will be substantially too high once interest rates rise.

Consequences

Clearly, home prices have limited scope for further appreciation, at least once rate hikes begin. The best case is stagnation for several years as income growth gradually whittles away the affordability gap. Equally likely is a moderate decline in prices of 10% or less, a scenario made even more likely if home prices keep rising until the first rate hike (Exhibit 10).

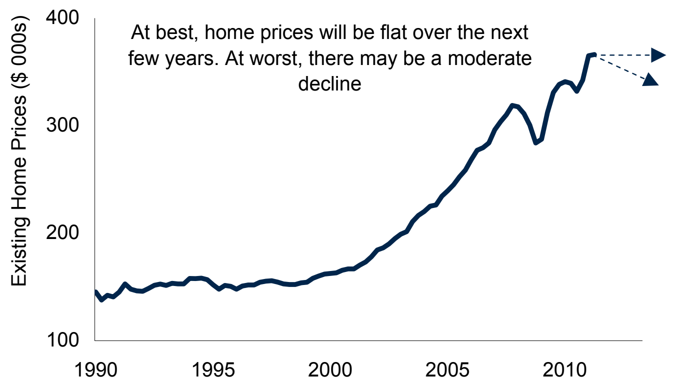
It is unlikely that the housing market will crack of its own initiative, because current carrying costs on a national basis are manageable, and materially different from the tail end of the 1980s when very poor affordability prompted a multi-year decline. Rising interest rates will be the catalyst, and the longer this is delayed, the nastier the future affordability problem will become. In the meantime, the piecemeal introduction of regulatory reforms to the housing market over the past few years is exerting a slight drag.

Exhibit 9: Vancouver Home Prices Increasing Most Quickly at the Top



Source: Urban Futures

Exhibit 10: Canadian Existing Home Prices



Source: Harver Analytics, RBC GAM

Household Stress Testing

We now take our microscope to its finest resolution, with the intention of reviewing the plight of individual households in the context of rising borrowing costs. Several sources provide useful data and welcome insight, including the Bank of Canada's Financial System Review, various publications from the Canadian Association of Accredited Mortgage Professionals (CAAMP), Ipsos Reid's Canadian Financial Monitor, and an assortment of Statistics Canada, Bank of International Settlements, International Monetary Fund, and the Canada Mortgage and Housing Corporation (CMHC) publications.

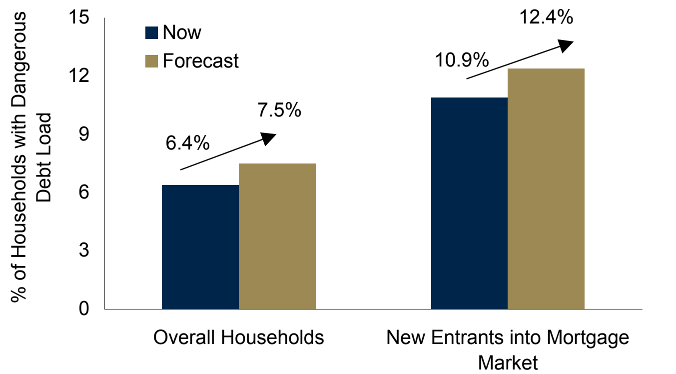
The Bank of Canada calculates that the fraction of Canadian households in debt danger – those spending greater than 40% of their gross income servicing debt – will rise from around 6.4% today to 7.5% by mid-2013[3]. Based on a CAAMP simulation focusing only on recent entrants into the mortgage market, we calculate that a normalization of mortgage rates would increase the imperilled fraction of this particularly vulnerable subgroup from 10.9% to 12.4%. Both sets of estimates reveal material increases (Exhibit 11) and will place significantly more Canadians in a difficult position, but neither do they foretell an economy-wide disaster.

How is it that so many Canadians will be able to handle rising rates without undue burden? First, most Canadian households enjoy a modicum of spare capacity – a gap between their income and expenses – and so can accommodate higher borrowing costs. Second, the majority of existing mortgage-holders have fixed-rate mortgages, and will be blissfully unaffected for several years. Third, never underestimate the steps that people will go to in an effort to avoid displacement or default: options include renegotiating the terms of their mortgage; better budgeting; borrowing from family; or procuring a second job (or second worker). Fourth, the spectre of declining home prices is irrelevant to the household stress-testing discussion – it does not affect affordability for existing homeowners in any way, and as a silver lining improves affordability for future buyers. Instead, the risk lies primarily in those with variable-rate mortgages, and in recent homebuyers.

Spare Capacity

Most households with mortgages can afford to pay more than they are. Over the past year, 25% of mortgage holders have increased the amount of their regular monthly payment, and 24% have made a lump-sum payment. What's more, for around 60% of borrowers, their monthly payments were significantly higher than the minimum required level, leaving room for a reduction if needed. Strikingly, the average mortgage paid off between 1990 and 2011 took one-third less time than initially budgeted. This

Exhibit 11: Household Debt Stress Testing



Note: "Overall Households" calculated as fraction of households spending more than 40% of gross income servicing debt.
New Entrants calculated as fraction of new mortgage market entrants spending more than 40% of their gross income servicing debt plus property taxes.
Source: Bank of Canada, CAAMP, RBC GAM

demonstrates the magic of rising incomes (and, to be fair, a secular decline in interest rates that will not be repeated).

Historically, mortgage holders have spent less of their income on shelter costs than have renters, hinting at some spare capacity[4]. Renters are about three times more likely to be in "severe housing need" (as defined by the share of money they spend on shelter) than home owners. Not surprisingly, virtually the entirety of the relatively small subset of homeowners reporting "severe housing need" occupied the bottom income quintile. Most homeowners with average to above-average incomes have plenty of spare capacity.

Interestingly, even for those with low incomes, the condition of "severe housing need" is often only temporary. Based on data from 2002-2004, fewer than half of those in the bottom income quintile had high shelter costs for all three years.

Fixed-Rate Mortgages

Risks are well contained for the two-thirds of Canadian mortgage holders with a fixed interest rate. Presuming the standard five-year term, the significant majority of those whose mortgages come due for renewal over the next three years will enjoy a reduction in borrowing costs. This is consistent with the experience of the past two years, when 77% of rollovers resulted in a lower mortgage rate, averaging 80 basis points less. Those with

[3] In our view, the rate of income growth may be faster than the Bank of Canada assumes, but the increase in borrowing rates may also be faster (the Bank of Canada used market-based expectations which are extremely cautious). These factors offset each other, and so the final estimates are likely about right.

[4] Given that a portion of a mortgage payment is effectively forced saving (precluding the need for as much saving via other avenues), this is doubly true: mortgage-holders could theoretically afford to sustainably pay an even greater share of their income on their dwelling than could renters.

mortgages coming due in 2015 and beyond are more likely to confront a higher monthly rate, but this is a) rather distant and still quite speculative; and b) likely to be tempered by three years of rising household incomes.

Variable-Rate Mortgages

The risk is greater and more immediate for the 35% of Canadian mortgage holders in possession of variable-rate mortgages (Exhibit 12). Understandably, their borrowing costs climb more readily when interest rates begin to rise. Even here, the risks are more nuanced. A sizeable fraction of those with variable-rate mortgages will not experience an immediate increase in borrowing costs, as one popular mortgage product leaves the monthly payment initially unchanged, offsetting a rising variable-rate interest payment with a declining principle payment.

The majority of those with variable-rate mortgages began their home ownership odyssey when interest rates were higher, so an increase in interest rates will simply be a return to a previously affordable level. Currently, variable-rate mortgages are cheaper than fixed-rate mortgages, meaning the initial period of rising monthly payments will only equalize the cost with their fixed-rate brethren. We have already established that the majority of mortgage holders have at least some spare capacity to handle a rising monthly payment. Lastly, the vast majority of Canadian homeowners have significant equity in their home (on average close to 50%), and would be able to simply sell and downsize if the monthly financing became untenable. Default and bankruptcy are hardly the first options for the small subset of households that would be unable to make their new mortgage payments.

New Homebuyers

The risk is clearly greatest of all for those who have just purchased a home. This is for several reasons. They are on average earlier in their career, and their income has not yet fully blossomed. They often begin with little equity in their dwelling, having neither contributed much equity up front, nor made many mortgage payments, nor enjoyed the fruit of rising home prices. Their debt load is likely at its lifetime peak. The most recent cohort has also been more inclined toward variable-rate mortgages than prior generations. All of this leaves them especially exposed to rising rates and falling home prices.

Even still, the situation is not as perilous as it must initially seem. Granted, around 3% of Canadians with

Exhibit 12: Mortgage Market Risk Hierarchy

Source: RBC GAM

mortgages report negative equity, and another 10% have equity from 0-15%, so might be susceptible if home prices corrected materially. The majority of those affected would be recent home buyers. But negative home equity by itself is of limited consequence. It has no impact on one's monthly payment, and it is legally difficult for Canadians to abandon their mortgage and home.

For those with a traditional 5-year fixed-rate mortgage, their affordability will be unaffected by rising rates for the better part of half a decade, by which point rising nominal incomes and an increased equity stake should address the bulk of the issues.

The most endangered group are surely those households with a new variable-rate mortgage (Exhibit 13). They suffer from minimal equity and are exposed to rising borrowing costs. However, the risks are likely overstated. First, by virtue of their recent mortgage approval, their employment and financial position are very likely sound. Second, as part of the mortgage-approval process, they had their capacity to service debt directly vetted via a variety of income tests. The tests incorporated a buffer to protect against adverse events such as rising rates, meaning that this group should be capable of affording at least a moderate increase in borrowing costs. Third, a regulatory change in 2010 now requires that variable-rate mortgage applicants first be approved at the going 5-year fixed rate. In the current context, this guarantees the capacity to handle at least a 100-basis-point increase in borrowing costs. Fourth, the minimum downpayment increased to 5% of the value of the home several years ago, adding some buffer against a negative equity position.

The State of Stress

These findings argue that the risk of rising interest rates is manageable for the vast majority of Canadians. Vancouver may be a key exception, as it looks quite frothy and carries significantly greater downside.

Inevitably, mortgage delinquency rates will go up moderately in response to a housing slowdown, as will metrics like the personal bankruptcy rate. Some losses will accrue to lenders. But by virtue of the way the Canadian mortgage market is constructed, the banking sector itself will be remarkably immune from the direct consequences of this. For one, Canada's biggest banks have national franchises, and so are well insulated from sharp downturns in individual markets.

Second, any mortgage with less than 20% in initial equity has by law been insured by CMHC (or, less frequently, by a private insurer), and so losses accrue mostly to CMHC instead of the banks. Far from representing a repeat of the traumatic events surrounding Freddie Mac and Fannie Mae in the U.S., CMHC remains well capitalized and enjoys the explicit full faith and credit of the Government of Canada. In a worst-case scenario, there is precedent from the early 1980s for the government transferring capital to CMHC. Systemic risks are quite low.

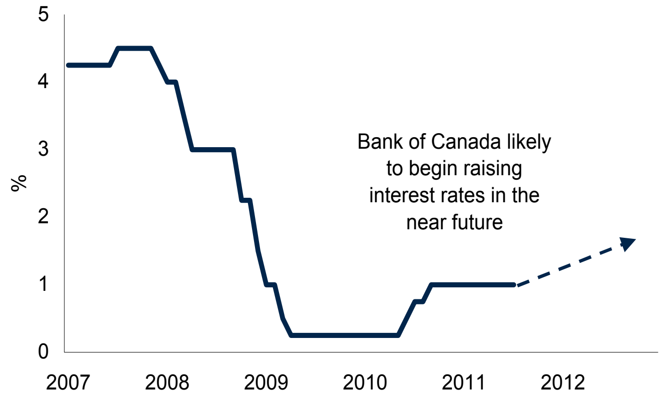
Regulators deserve commendation for their tweaks to mortgage rules over the past several years, as these steps have reduced risks. There is more they could do, however. All mortgage applicants could be tested, not just against the 5-year fixed rate, but against a figure no less than the historically normal five-year fixed rate, or even the current rate plus a few percentage points. Alternately, the debt service thresholds used to establish income sufficiency (GDS and TDS) could be tweaked slightly lower to leave additional spare capacity to accommodate rising rates or diminishing income.

Exhibit 13: Assessing the Risk for New Variable-Rate Mortgage Holders*

BAD NEWS	GOOD NEWS
• Exposed to rising borrowing costs • Little initial equity in home • Lower household income than average • Debt load at lifetime peak	• Most mortgage-holders have some capacity for higher payments • Currently paying less than fixed-rate brethren • Low home equity of limited consequence for affordability • Recently approved for mortgage, so sound income and finances • Applicants tested against higher fixed rate mortgage cost, so can afford rising rates

*In an environment of rising borrowing costs.
Source: RBC GAM

Exhibit 14: Bank of Canada Overnight Target Rate



Source: Bank of Canada, RBC GAM

Bottom Line

Bank of Canada

The Bank of Canada is arguably tightening monetary policy later than it should be (Exhibit 14). This comment is based equally on the state of home prices and the broader economy. The fundamental error for both has been to underestimate the hunger for cheap credit, which continued unabated in Canada through the worst of the credit crunch even as U.S. appetite plummeted.

The fact that household credit growth has now begun to slow on its own does not mean the matter has been tidily resolved. Credit is growing more slowly because households are literally bumping up against the limits of what they can afford. And the mortgage credit subcomponent is barely slowing at all, because Canadians are still dead set on taking advantage of once-in-a-lifetime borrowing rates, and profiting from rising home prices.

There is a popular misconception that the Bank of Canada cannot afford to raise interest rates because this would prove too damaging for mortgage holders. The opposite is in fact true. The reality is that the Bank of Canada cannot afford to delay raising interest rates, for precisely the same reason. The longer the Bank delays, the more marginal borrowers will enter the market and be walloped when rates rise, and the further home prices will go above their equilibrium levels, only to tumble later.

Macroprudential rules might normally be expected to keep the housing market centred, leaving the central bank on the periphery. But interest rates have been so abnormally low that the effect of a stricter regulatory framework has been almost completely subsumed by the allure of low borrowing costs. Even if one agrees with the view that central banks should not be in the business of targeting asset bubbles, it is equally true that they should not be in the business of creating them in the first place – arguably what has happened here.

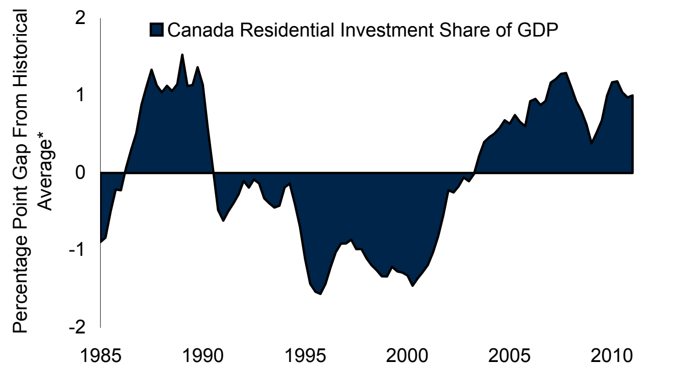
Economic Effect

Currently, Canada's housing market is contributing to a robust economic performance, and for now represents an upside risk to growth. But once rates begin to rise in the relatively near future, it should morph into an outright drag. This will bring with it several consequences.

Consumer spending should soften materially, according to our calculations. Households will have to reallocate a fraction of their income away from spending and towards their higher monthly debt payments (Canada's debt-service ratio is on track to exceed the historical average within the next 18 months, and to continue rising from there). They will also demand less credit in response to higher borrowing costs. Finally, falling home prices will create a negative wealth effect that pushes the personal savings rate higher as households compensate for lost wealth.

In turn, overall GDP growth should be nicked, due to this diminished consumer spending growth, a decline in the (currently elevated) residential investment share

Exhibit 15: Residential Investment To Fall Back Towards Normal



*Average: Q1-1981 to Q1-2011
Source: Statistics Canada, RBC GAM

of GDP (Exhibit 15), reduced labour force mobility, and less real estate-driven government revenue. This is unlikely to be an outright recessionary event, nor does it fully compromise the ongoing economic recovery. But it should be palpable, and most unhelpful.

Market Implications

The main purpose of this investigation has been to establish whether Canadian investments are at significant risk from high household debt levels. The answer is complicated. Currently, households are just fine. But their condition will deteriorate as rates rise, creating affordability problems. These problems don't look to be of a systemic nature, meaning they aren't about to take down the banking sector or threaten the viability of the economic recovery. But we fully expect economic growth to be tempered, and this does take some of the shine off Canadian equities, and moderate our negative view on bonds.

Overall, we continue to maintain a cautiously constructive outlook on Canadian stocks, as the banking sector is well protected and the resource sector should be left mostly untouched – these constitute the two major sectoral drivers of the Canadian market. However, it is undeniable that certain sectors – those catering to consumers and housing, in particular – could lose some of their mojo. For bonds, we are moderately negative. But this has far more to do with the prospect of Bank of Canada rate hikes than a concern over government or corporate solvency.

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A NOTE ON FORWARD-LOOKING STATEMENTS