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HIGHLIGHTS

- The Canadian housing market has long defied expectations of collapse, though fears linger.
- The near-term outlook remains quite benign. There are no particular signs of household distress, affordability is fine given low mortgage rates and construction is running precisely as it should. Worries about excessive condo activities and the influence of investors are overblown.
- Naturally, the medium-term outlook is somewhat more negative, dominated by deteriorating affordability due to rising mortgage rates. Still, the potential construction downside is surprisingly tame, limiting the likely economic damage to no more than a quarter percentage point of GDP per year.
- While more bearish scenarios are conceivable, they remain unlikely. As such, the Canadian housing market arguably takes a back seat to more pressing Canadian economic impulses, such as a lower loonie (good), lower oil prices (bad) and a stronger U.S. economy (good).

CANADIAN HOUSING IN SIX QUESTIONS

Among the many variables vying for influence over the Canadian economic outlook – prominently including a weaker currency, lower oil prices and a strengthening U.S. economy – the Canadian housing market has tended to capture the imagination of the public, the press and investors more than the rest.

There are three reasons for this fascination. First, the majority of Canadians own their home, making developments in the housing market of obvious relevance. Second, home prices have increased at a spectacular rate over the past decade, inducing glee in those already in the housing market and despair among those who are not. Third, there has long been a feeling of uneasiness about housing's future prospects.

This paper identifies six key questions whose answers together determine the extent of the challenges awaiting the Canadian housing market:

1) **Is household debt unsustainable?**
2) **Is housing affordability precarious?**
3) **Is residential construction exceeding demand?**
4) **Is the condo market especially overbuilt?**
5) **Are foreign buyers and investors a source of vulnerability?**
6) **Does the distribution of household debt reveal additional problems?**

In summary (Exhibit 1), we find that many of the concerns are overblown. In the near term, household-debt levels are perfectly sustainable, housing affordability is surprisingly normal and construction is merely keeping pace with demand. The condo market is perhaps more vulnerable than is the market for single-family homes – but less so than it appears – and support from foreign buyers and investors is not likely to dry up soon.

Exhibit 1: Canadian housing scorecard

	OUTLOOK			
	Near term	Medium term	Weight	Confidence
Household debt	Neutral	Slight negative	15%	Medium
Housing affordability	Neutral	Major negative	25%	Medium
Construction sustainability	Neutral	Slight negative	20%	High
Condo appetite	Slight negative	Slight negative	15%	Low
Foreign buyers and investors	Neutral	Neutral	10%	Low
Distribution of debt	Neutral	Negative	15%	Medium
Economic implications	**Neutral**	**Negative**		**Medium**

Note: "Near term" defined as over the next year, "Medium term" as 1–5 years. "Confidence" refers to confidence in forecast. Source: RBC GAM

The distribution of debt naturally reveals a few additional vulnerabilities, but nothing shocking.

On the other hand, the medium-term outlook is still somewhat negative. Looking further out, we expect household debt to become more burdensome, housing affordability to deteriorate significantly and construction to gradually ebb, reflecting slowing population growth. Still, disaster is unlikely.

Thus, while Canada's housing market certainly merits a watchful eye, it arguably attracts too much attention relative to other more relevant economic impulses, such as those involving the loonie, oil prices and the U.S. economy.

1) Is household debt unsustainable?

Canadian household debt is now at a historically large 164% of personal disposable income – near a record high and well above the U.S. and U.K. These figures have naturally led to fears that Canadians could eventually be forced to undertake a brutal deleveraging akin to the U.S. following the 2008 financial crisis.

Near-term calm

Fortunately, there is little immediate evidence of distress. While Canadian household-debt levels are high, they are nowhere near the highest in the world. Countries including Norway, Denmark, the Netherlands and Australia survive, and in some cases, thrive, with materially more debt (Exhibit 2).

In Canada's case, the cost of servicing the interest on all of this debt is quite low, and in fact commands the smallest share of income in decades (Exhibit 3). When principal payments are included, the Bank of Canada calculates that the ratio is still no higher than normal.

Furthermore, the era of excessive household-credit growth seems to be over. The debt-to-income ratio has stabilized as household-credit growth has been pared to a tame 4% per year. Part of the reason for this deceleration lies in self-regulating households that are wary of taking on additional debt.

Another part may be explained by macroprudential rule changes that have served to limit access to credit via stricter eligibility rules. Given international evidence that each macroprudential rule change seems only capable of undercutting demand for a quarter or two, Canada Mortgage and Housing Corporation (CMHC) has delivered a steady stream of rule changes in recent years. The latest tweaks have cut access to CMHC mortgage insurance for homes costing more than $1 million and for investors seeking to finance second homes. We expect further rule-tightening to continue as necessary to keep credit growth in check.[1]

Medium-term decline

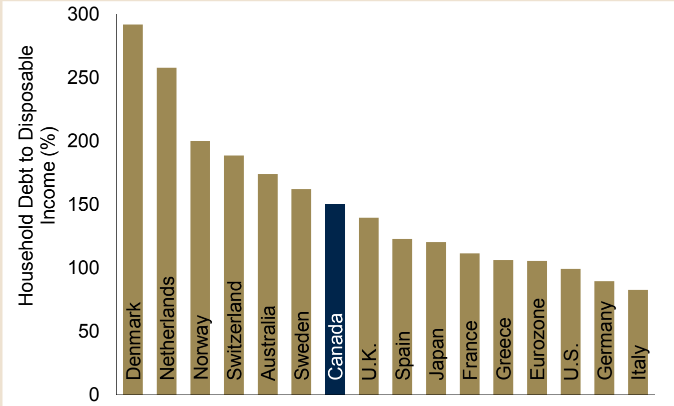
The medium-term outlook for household debt is somewhat worse, as higher borrowing costs will eventually push the debt-service ratio – at least the version that includes principal payments – into worse than usual terrain. Fortunately, a variety of mitigating forces should serve to limit the damage, and leave the overall medium-term outlook no worse than a slight negative.

Any parallels to the U.S. housing crash and household-deleveraging experience are limited, as the U.S. experience was caused only in part by high home prices and elevated levels of household debt (and not at all by rising rates). The more important contributors were sub-prime mortgages that lured far too many into the housing market, a securitization process that concealed the underlying risk, a credit market unprepared for adverse conditions and a spike in unemployment that brought the whole thing tumbling down. None of these conditions exist or appear likely in Canada.

History demonstrates that credit crashes have little to do with how much debt a country is carrying, but instead key off of how quickly and how recently the debt has been accumulated. The Bank of International Settlements has identified a technique for quantifying this risk via the departure of credit growth from its long-term trend. We implement this for Canadian household debt and find that the downside risk has faded over the past few years, from an extremely elevated risk to entirely normal readings today (Exhibit 4).

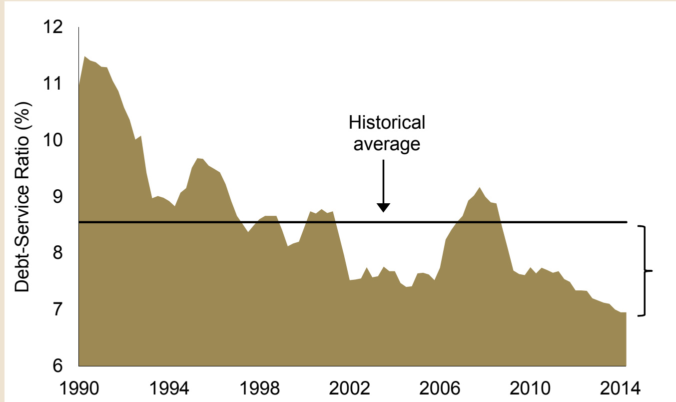
The type of debt that households have been accumulating also has a bearing on the risk (Exhibit 5). All types of borrowing boost the economy in the short run. The variation is in what happens

Exhibit 2: Canadian household debt nowhere near highest in the world



Note: Based on latest data available. Debt for households and non-profit institutions serving households. Figures differ slightly from made-in-Canada calculations. Source: Haver Analytics, RBC GAM

Exhibit 3: Cost of servicing Canadian household debt at historic low



Note: Debt-service ratio defined as cost of interest payments on debt only. Source: Statistics Canada, RBC GAM over the longer term. The most economically useful borrowing is deployed into capital investment – the stuff of machinery and bridges – as this increases the productive capacity of the economy without overheating it or blowing bubbles.

Of course, households aren't usually in a position to do much of this. Instead, they borrow to buy a house or finance discretionary spending. Fortunately, Canadians have been doing the more prudent of the two – buying homes that at least increase the asset side of the balance sheet, leaving their net financial position unaltered. In fact, for all of the accumulated household debt, household assets now outweigh liabilities by a remarkable 5.4 times.

Moreover, everyone has to live somewhere. A mortgage payment and the debt associated with it helpfully eliminates the cost of paying rent.

2) Is housing affordability precarious?

As Canadian home prices have risen, so has chatter about deteriorating affordability. Confusingly, various affordability metrics yield wildly different readings, with home valuation estimates ranging from 130% too high to 4% too low (Exhibit 6). We have strong opinions on which of these readings can be trusted, and which cannot.

Real home price

The real home price metric assumes that home prices should not rise any faster than inflation. It is tempting to agree – after all, a home is just a pile of bricks, copper and other commodities placed on a fixed plot of land. This measure notes that home prices have outpaced inflation by a whopping 130% since 1980.

In practice, however, real home prices are a poor measure of affordability. A key reason is that household incomes rise over time. Buyers can afford to pay more whether or not a house actually costs more to build.

Second, land is a scarce resource, especially in the context of a rising and urbanizing population. The price of land can and should expect to outpace inflation over time.

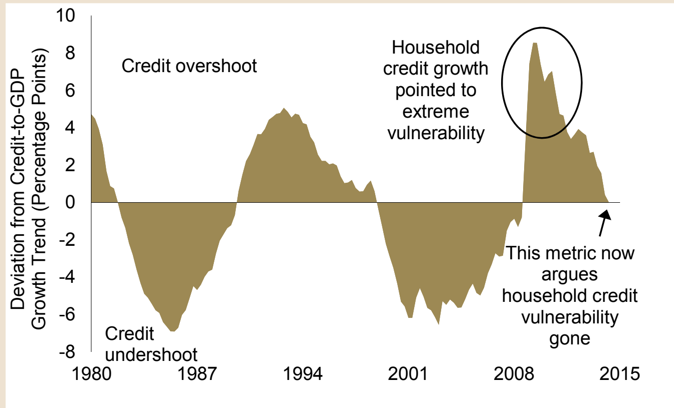
Third, the quality and size of homes have increased steadily over the years.

Home price-to-income

The home price-to-income ratio suggests that home prices should increase at the same pace as personal incomes. This addresses one of the key flaws of the prior measure. Nevertheless, this measure estimates that home prices are still 32% too high.

However, it neglects a further crucial consideration: few Canadians pay cash for their homes. The vast majority must borrow to do so, making interest rates a relevant but overlooked

Exhibit 4: Household credit vulnerability has faded



Note: Trend calculated using HP filter on quarterly data with lambda of 500,000.
Source: Haver Analytics, BIS, Bank of Canada, RBC GAM

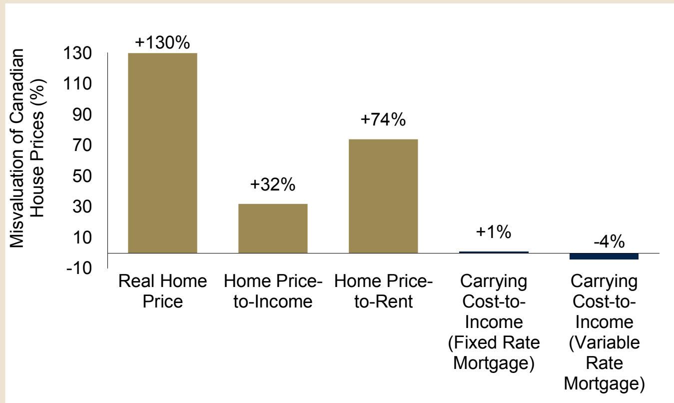
Exhibit 5: Not all credit is created equal

PURPOSE OF CREDIT

	CAPITAL	HOUSING	SPENDING
Benefit to short-term GDP:	High	High	High
Benefit to long-term GDP:	High	Medium	Low
Asset accumulation:	Yes	Yes	No
Bubble risk:	Low	High	Medium

Source: RBC GAM

Exhibit 6: Housing affordability depends on the measure



Note: Real home price is % change from 1980 level; price-to-income and price-to-rent versus average since 1975; carrying cost versus average since 1980.
Source: The Economist, Haver Analytics, RBC GAM

influence. Interest rates have declined for an unprecedented 30 years, leaving the effective cost of owning a home far lower than a simple ratio of a home's price to its owner's income would suggest.

Home price-to-rent

The home price-to-rent ratio takes a totally different approach. It ignores incomes, inflation and interest rates, and instead focuses on the relative allure of renting versus buying to meet one's shelter needs. The theory, then, is that the price of a home should be equal to a fixed (and presumably rather large) number of months of rental payments. The home price-to-rent ratio claims that Canadian home prices are a startling 74% too high.

However, there are four problems with this affordability metric.

First, and crucially, the methodology underlying the Canadian home price-to-rent ratio is flawed via its exclusive focus on purpose-built rentals (and exclusion of condo rentals). Purpose-built rentals are increasingly dated, as very few have been built in recent decades. Meanwhile, condo rentals are excluded despite representing practically the entirety of the new rental stock, with average condo rents running 25% to 50% higher than purpose-built rentals (Exhibit 7). Thus, the true home price-to-rent ratio is not nearly as extreme as official reports claim.

Second, and as with the prior affordability measures, the home price-to-rent ratio ignores the structural decline in the cost of borrowing, thus erring in making home-buying look relatively more expensive than it really is.

Third, buying and renting are not true substitutes. The selection of single-family homes for rent is relatively slim in Canada, and they are sprinkled unevenly across neighbourhoods. Renting also introduces an element of geographic risk, as the tenant does not have complete control over the duration of their stay. Furthermore, the transactional costs and effort required to sell a home, find another and physically move are quite high, rendering arbitraging cost gaps quite difficult in practice.

Fourth, rent controls artificially repress rents in some parts of the country. Similarly, Canada has a longstanding culture of home-buying, meaning Canadians are willing to pay at least a small premium for the privilege.

Carrying cost

The serious flaws in each of these metrics prod us toward the least flawed of the bunch: carrying-cost measures.[2] These come closest to approximating how Canadians themselves evaluate a prospective home purchase: by how much they earn versus how much their mortgage will cost on a monthly basis.

By this metric, home prices have actually behaved quite reasonably. Yes, prices have soared, but mortgage rates have plummeted and incomes have edged higher. The interplay between the three variables has left the carrying-cost measures almost precisely at fair value. A home financed with a fixed-rate mortgage is a mere 2% too pricey, while a home financed with a variable-rate mortgage is actually 4% cheaper than it should be (Exhibit 8). In other words, Canadians have quite responsibly calibrated their purchases to what they can afford.

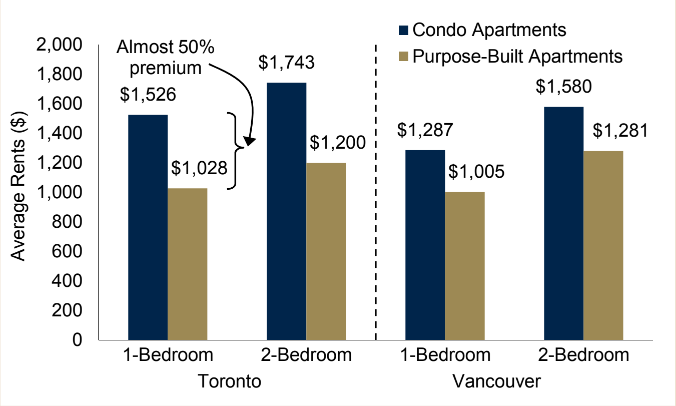
And with home prices puttering upwards at 2% to 6% per year (Exhibit 9), affordability doesn't appear to be deteriorating significantly.

Bigger issue later

Of course, once mortgage rates climb to normal levels,[3] the carrying-cost affordability calculations suddenly become much less friendly, lurching to the conclusion that home prices are 15% too high (Exhibit 10).

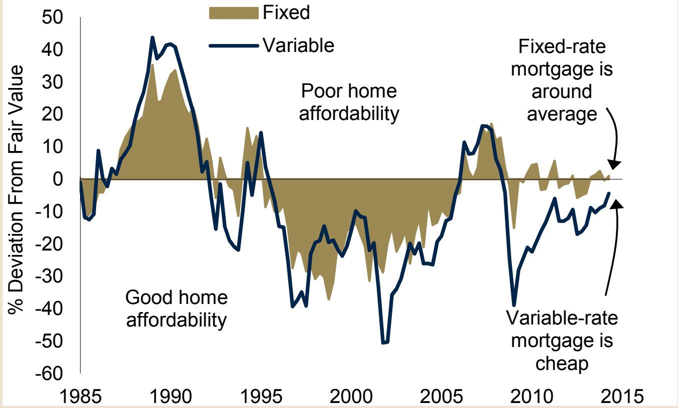
There are two ways this mismatch can be resolved. The first is painful and involves home prices falling by an abrupt 10%

Exhibit 7: Condo rentals are more expensive



Note: As of October 2013. Source: CMHC, RBC GAM

Exhibit 8: Canadian housing affordability OK for now



Note: Current carrying cost of a home versus the historical norm.
Source: CREA, Statistics Canada, Haver Analytics, RBC GAM

over the span of a few years, with rising incomes eroding the remainder of the affordability gap. The second possibility is much more muted: home prices simply flatline for four or five years, leaving the entire gap to be closed via rising incomes (increasing at a rate of perhaps 3–4% per year).

The latter scenario is the more likely, as the pain of higher mortgage rates won't bite quickly enough to result in a more extreme scenario. There are several reasons to anticipate a "slow burn":

- Central banks, including the Bank of Canada, are unlikely to tighten rates particularly quickly given their concern over the resilience of the economic recovery.
- The increase in bond yields (and thus term mortgage rates) should be restrained by investors substituting away from even lower yields in Japan and the Eurozone.
- A rising majority of Canadian mortgages[4] are locked into fixed rates, usually for a term of five years. This means it will take several years for the effects of higher mortgage rates to saturate the housing market.[5]

It is nevertheless the case that, in all scenarios, home prices eventually slip 15% behind their prior upward trajectory. This brings real consequences that we quantify later.

3) Is construction exceeding demand?

The conventional wisdom has long been that Canadian construction is stubbornly exceeding demographically sustainable demand. Whereas 200,000 to 250,000 annual new units have been the norm of the past decade, the rule of thumb has long been that only around 175,000 new housing units are actually needed each year.

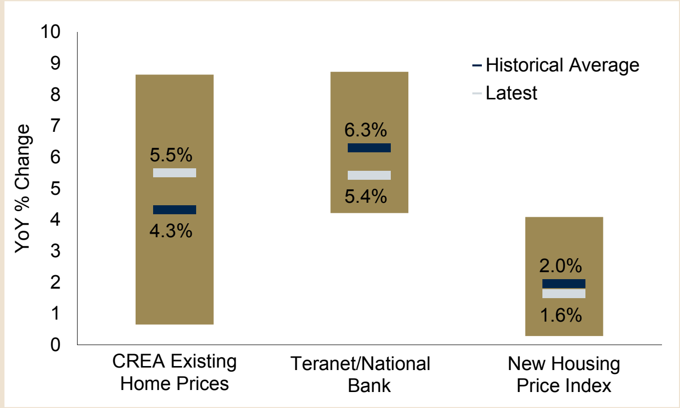
However, this assumption is slightly off. The necessary housing stock varies quite substantially according to population growth and underlying demographic shifts. Although population growth is no longer strong, the sustainable household formation rate is nevertheless running along at a significantly faster clip (Exhibit 11). Sluggish population growth among young people (who live mainly with their parents anyway) is being trumped by faster growth among seniors (who are much more likely to live alone).[6] Every household, of course, needs somewhere to live.

Housing flow

We calculate that the Canadian economy currently needs 200,000 housing starts per year to keep up with demographic demand. This is well above the aforementioned rule of thumb, and even a bit above the recent trend.[7]

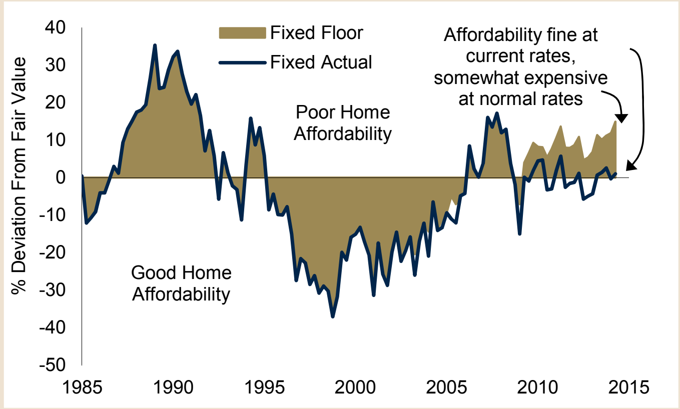
The approximate appropriateness of current construction rates can be independently corroborated by looking at the share of GDP dedicated to residential investment (Exhibit 12). The

Exhibit 9: Canadian home prices rising at normal clip



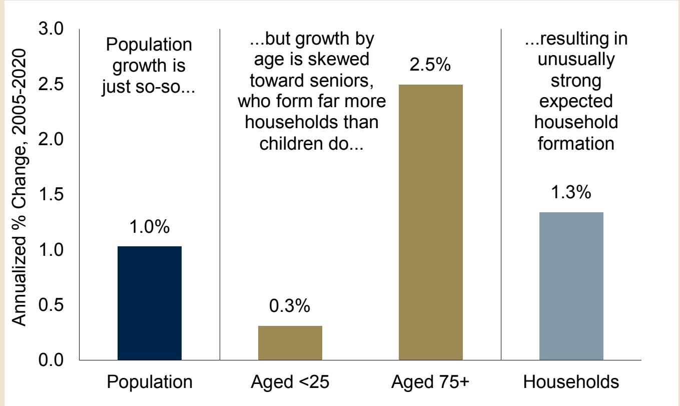
Note: Based on data since 1990 where data is available. Box represents the range of 25th and 75th percentile. CREA national residential average price; Teranet/National Bank of Canada Composite 11 Home Price Index; Statistics Canada New Housing Price Index. Source: Haver Analytics, RBC GAM

Exhibit 10: Canadian affordability will fall when rates normalize



Note: Fixed Floor imposes a minimum "normal" mortgage rate on the affordability calculations, and so in the current context reveals how affordability would look at normal mortgage rates. Source: CREA, Statistics Canada, Haver Analytics, RBC GAM

Exhibit 11: Surprisingly good household formation in Canada



Source: Statistics Canada, United Nations, Haver Analytics, RBC GAM nominal figure looks worryingly high, but this proves to be an illusion once inflation has been accounted for.[8] The volume of residential construction in Canada actually constitutes a normal share of output.

Market dynamics in the resale home market also continue to confirm a view that the market is healthy and reasonably balanced (Exhibit 13).

Housing stock over the medium term

When examined over the medium term, however, the construction outlook becomes slightly negative. This is due to the dimensions of the pre-existing housing stock, the average Canadian home size and shifting demographics.

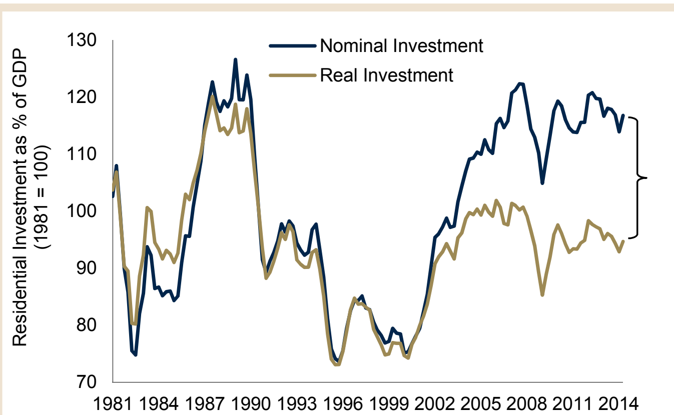
It is one thing for the flow of construction to be proceeding in line with the growth in households, as it currently is. It is something very different for the aggregate housing stock to be aligned with the overall number of households.

Our estimates[9] suggest that Canada started its recent housing boom with an inadequate housing stock. Subsequent strength has pushed the stock upwards out of this hole, and ultimately into a moderately overbuilt position (Exhibit 14). Fortunately, the excess is not enormous. We figure there are around 73,000 too many homes, representing just 0.5% of the overall housing stock. Some underbuilding will be necessary to restore balance.

A further cause for caution is that Canadian homes appear to have more rooms per person than other countries – including, surprisingly, more than the U.S. (Exhibit 15). Naturally, this would seem to bolster the view that the Canadian housing market is stretched. However, there are several tempering interpretations:

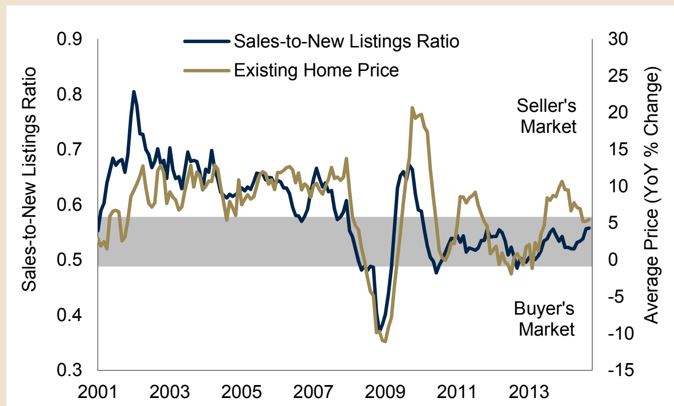
- First, current Canadian construction is skewed toward condos (which have fewer rooms), so regardless of the origin of this excess, it is unlikely that the surplus of rooms is new to the latest housing boom or getting worse.
- Second, if Canadian homes have more rooms, it helps to validate high home valuations.
- Third, Canada has among the lowest population densities in the world, meaning more land per household. It can be no coincidence that Australia is the other country at the head of the class, with the U.S. not far behind.
- Fourth, Canadian homes may have more rooms than the U.S. because of the near-universality of basements (which are less the norm in the U.S. West and South). It

Exhibit 12: Nominal residential investment is high, but not real investment



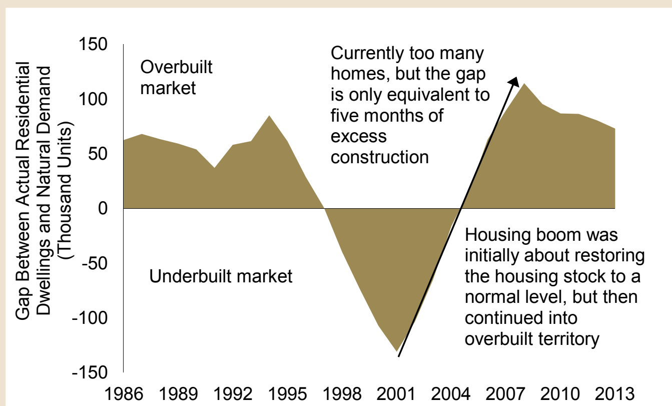
Source: Statistics Canada, Haver Analytics, RBC GAM

Exhibit 13: Resale housing market seems balanced



Note: Sales-to-New Listings ratio is calculated by dividing existing home sales by existing home new listings. Shaded area indicates balanced market as defined by a sales-to-new listings ratio in the range of the 34th to 67th percentile between 1988 and the present. Source: CREA, Haver Analytics, RBC GAM

Exhibit 14: Canadian housing stock slightly too large



Note: Natural demand calculated using UN population forecasts and historically normal age-based population-to-household ratios. Actual housing stock calculated using reported figures through 2000, then estimated via the rate at which new homes are completed (with a 1.12 multiplier from housing completions to increases in the housing stock due presumably to the conversion of some properties into multi-unit apartments), a 1.055 multiplier between the number of households and number of dwellings to reflect seasonal properties and a 0.015% annual teardown rate on the existing housing stock.
Source: CMHC, Statistics Canada, UN, Haver Analytics, RBC GAM

is debatable whether these basements – even renovated ones – deserve equal billing as functional rooms.

Lastly, and perhaps most importantly, are the deteriorating demographic considerations. Slowing population growth reduces the demand for new homes. In five years, Canada's needs will fade from 200,000 units annually to 190,000 units. This means a mild 1% construction decline per year. In 25 years, the figure falls all the way to just 125,000 units (Exhibit 16).

4) Is the condo market especially overbuilt?

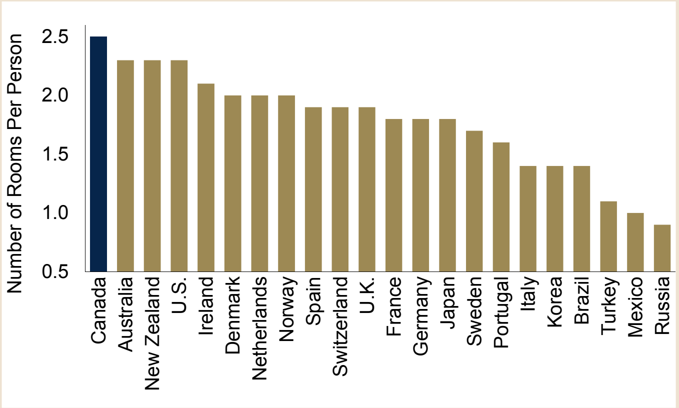
The large number of cranes darkening the skies over Toronto and Vancouver are viewed by many as evidence of reckless condo overbuilding.

There is no denying a basic uptick in condo construction. Multi-unit construction[10] now accounts for the majority (52%) of housing starts, up from just 29% in 1997 (Exhibit 17).

Equally, it is fair to acknowledge that the condo market currently looks slightly less robust than the single-family market, both from the perspective of inventories and prices.

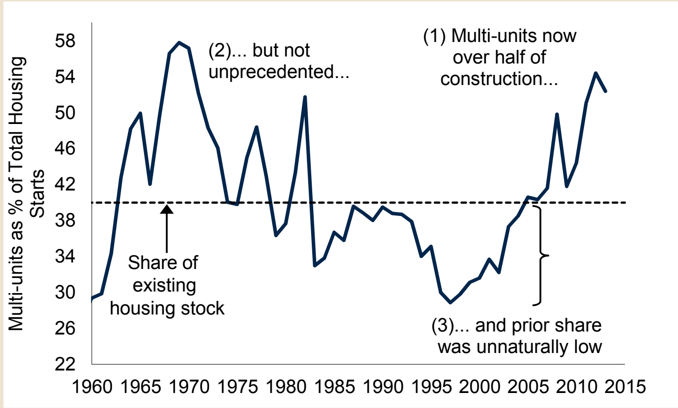
With regard to inventories, condo units appear to be selling less quickly than before. The supply of resale condos for sale has increased moderately over the past few years in most cities. The trend is more mixed for new condos (Exhibit 18).

Exhibit 15: Canadian homes have more rooms



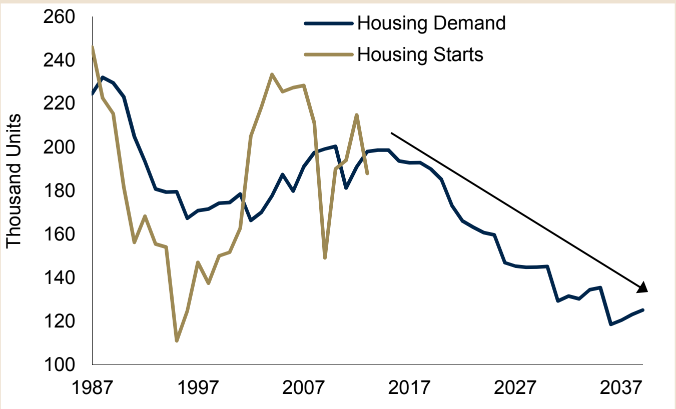
Source: OECD Better Life Index 2014, RBC GAM

Exhibit 17: Multi-unit starts shift higher



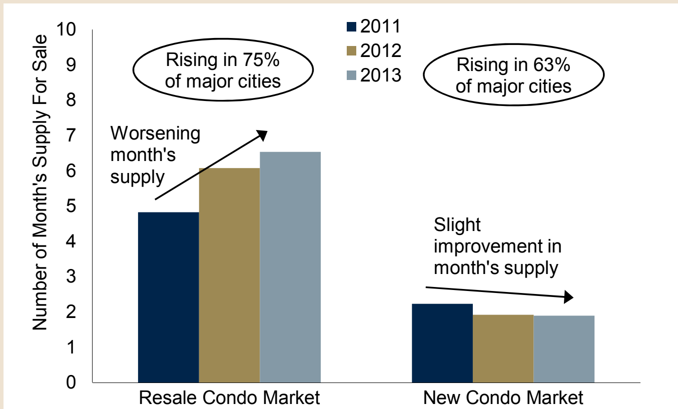
Note: Multi-units defined as row houses and apartments, excluding semi-detached. Source: CMHC, Haver Analytics, RBC GAM

Exhibit 16: Construction matches current demand, but must gradually fall



Note: Housing starts-equivalent measure of demand calculated using UN population forecasts, historically normal age-based population-to-household ratios, a 1.03 multiplier from housing completions to housing starts, a 1.12 multiplier from housing completions to increases in the housing stock (due presumably to the conversion of some properties into multi-unit apartments after completion), a 1.055 multiplier to reflect the existence of seasonal properties and a 0.015% annual teardown rate on the existing housing stock. Source: CMHC, Statistics Canada, UN, Haver Analytics, RBC GAM

Exhibit 18: Canadian condo market internals soften modestly



Note: Bars calculated using weighted average of major Canada cities. Circle calculations based on change from 2011 to 2013. Source: Conference Board of Canada/Genworth Canada, RBC GAM

Similarly, condo prices are rising more slowly than in the single-family market, a gap that has been in place since the onset of the financial crisis (Exhibit 19).

Exaggerated concerns

However, we suspect some of the more extreme concerns about the condo market are unrealistic.

Given that the overall rate of dwelling construction in Canada is about right, any excess condo construction must simultaneously mean that there are too few single-family homes being constructed. Thus, this is a debate about composition rather than absolute excesses.

The overall housing stock[11] is 40% multi-unit properties. This means that the 29% multi-unit construction share of the late 1990s clearly constituted underbuilding. Therefore, part of the recent shift toward condo construction merely represents a counterbalance to this earlier era. The current construction share remains shy of the all-time high of 58% set in the late 1960s.

Shift in preferences

Changing demographics and tastes go a long way toward justifying the remainder of the recent shift toward condos.

The demographic aspect of this shift has already been laid out: the rising number of one-person households and childless couples naturally tilts demand toward condos over single-family homes. Furthermore, an aging population increasingly seeks to avoid the hassles of home maintenance and drive less.

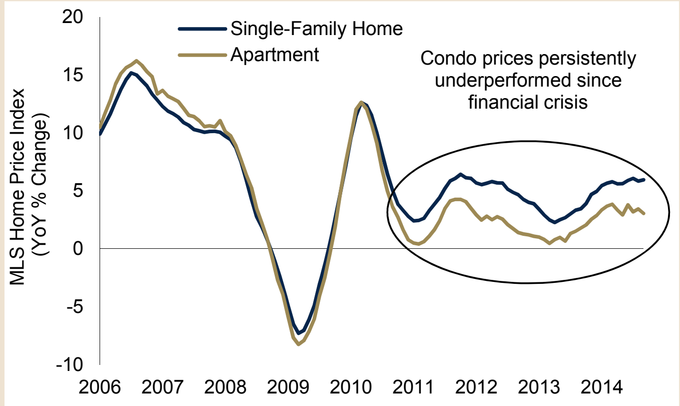
Supplementing this is an apparent shift in housing preferences among the young. Whereas the classic aspiration was once to settle down in the suburbs, many young people increasingly prefer to remain downtown (necessarily, in multi-unit dwellings). There are several plausible reasons why.

Growing cities compounded by geographic impediments (such as Vancouver's ocean, waterways and mountains, and Toronto's lake and greenbelt) render each new iteration of suburban homes – the classic stomping ground for new families – ever more distant from the urban core and thus less practical from a commuting perspective.

Moreover, young people seem less interested in owning a car or driving than previous generations. From 1998 to 2008, there was a 28% drop in the fraction of Americans aged 16–19 with a driver's license.[12] Increasingly, young people want to live where they work and play.

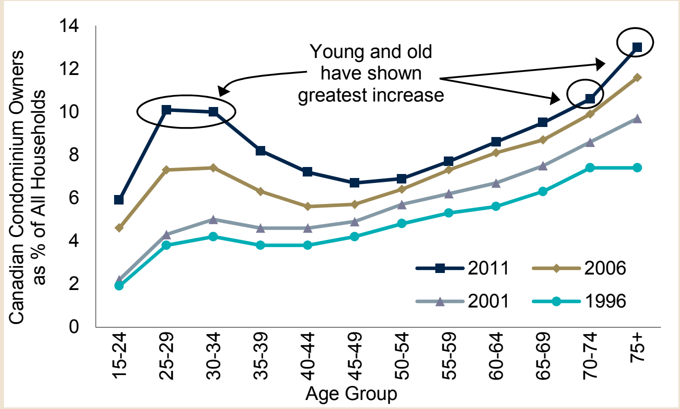
All of this has led to an increased appetite for condo living, regardless of age, though especially among the young and old (Exhibit 20).

Exhibit 19: Condo prices lag in Canada



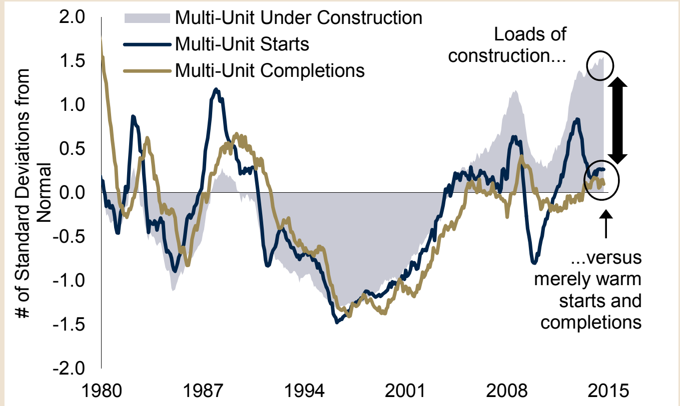
Source: Canadian Real Estate Association, RBC GAM

Exhibit 20: Condo appetite rising over time



Source: Canadian Housing Observer 2013, CMHC, RBC GAM

Exhibit 21: Worries of a condo construction glut...



Note: Apartments and row houses per 100,000 people over 25 years of age. Historical average since 1976. Source: CMHC, Statistics Canada, Haver Analytics, RBC GAM

The condo pipeline

A remaining concern about the condo market is that the pipeline of condos under construction seems to be far bigger than usual, and completely out of line with the recent rate of condo starts and completions (Exhibit 21). The fear is that, once completed, all of this construction could completely overwhelm demand.

However, we are decreasingly worried by this scenario.

The key to understanding this is that the modern residential building appears to take around twice as long to build as those of decades past (20 months rather than 10 months). There are several plausible reasons why. The desire to "pre-sell" as many condos as possible may lead to some foot-dragging in the early stages of construction. The fact that multi-unit dwellings are increasingly built in downtown cores means projects are more complicated and require more coordination. Furthermore, the fact that multi-unit dwellings appear to be growing ever taller also increases the complexity of the projects (and physically reduces the ratio of usable to overall constructed space[13]).

If condos take twice as long to build, then the market requires twice as much construction at any time to ensure a normal supply of completed condos (Exhibit 22). As a result, we suspect the supposed condo-construction bulge does not actually exist.

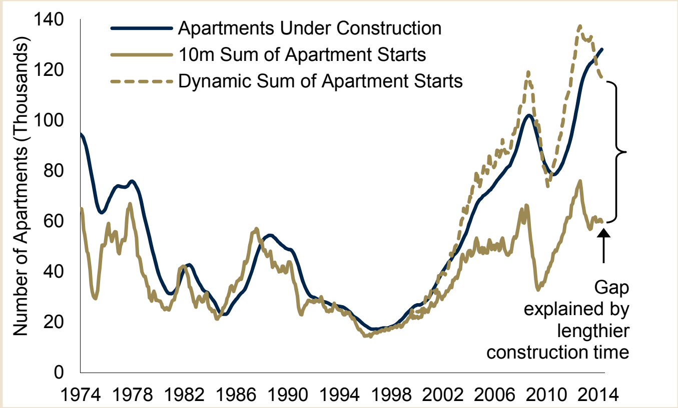
Remaining condo worries

The risk to condo builders actually seems fairly tame. CMHC estimates that 89% of condos under construction are presold. At a minimum, banks usually require at least 75% of units sold before extending financing. This means that, barring an extreme home-price correction that completely wipes out the value of the 15%–20% deposit that most buyers make on their condos, builders are reasonably insulated from housing-market gyrations.

Another worry is that condos might be too expensive relative to single-family homes. Toronto condos regularly cost more on a square-foot basis than a house, despite the absence of land. However, this is less troubling than it first looks:

- First, location is everything. Condos tend to be in extremely attractive locations relative to single-family homes.
- Second, the condo stock is much newer and of a higher quality than the existing single-family housing stock. The fact that condos rent out for 25% to 50% more than purpose-built rentals confirms this.
- Third, condos offer amenities such as gyms, pools and recreation rooms that do not figure into their square footage.
- Fourth, condo fees do not vanish into a sinkhole – they mostly cover the maintenance costs that homeowners of all stripes incur.[14]

Exhibit 22: ...Condo construction glut vanishes upon close examination



Note: Dynamic Sum of Apartment Starts scales the average construction time steadily upward from 10 months to 20 months between 2000 and 2009, then holds constant at 20 months thereafter. Source: Haver Analytics, RBC GAM

- Fifth, the cost per square foot of a dwelling usually declines as its size increases. This makes sense: even the smallest homes have kitchens and bathrooms, which are expensive to build. Most of the extra square footage in larger homes is due to relatively inexpensive family rooms, additional bedrooms and renovated basements. Therefore, while condos are smaller than the average stand-alone property, they are not necessarily much cheaper to construct.

5) Are foreign buyers and investors a source of vulnerability?

Some pundits worry that Canada's housing market is unduly exposed to a large number of foreign buyers and/or investors (the two groups substantially overlap) who might suddenly flee en masse, leaving a gaping hole. To the contrary, we actually view these groups as a fairly stable source of demand.

Foreign buyers

There is little reliable data about the extent of foreign buying of Canadian homes. Anecdotes tend to make the foreign fraction seem quite high, but these likely exaggerate reality. A key source of confusion is that it can be difficult on the surface to distinguish "foreign" buyers – those who own Canadian property, but do not live in the country – from immigrant buyers. Immigrants now represent 40% of Vancouver's population and 46% of Toronto's.

More credible estimates of foreign buyers put them at around 5% of the total demand. Of course, this varies by region and sector. Foreigners may represent as much as 40% of the Vancouver luxury property market, for instance.

Foreigners appear unlikely to retreat from the Canadian housing market. One reason is that even "foreign" buyers usually have fairly deep Canadian connections, either via visas, citizenship or family – the latter frequently in the form of children or spouses living in the very homes they have purchased (even though they themselves do not spend most of the year there). Frequently, they aspire to move to Canada themselves or plan to retire there. Moreover, in selecting Canada, they seek not so much an appreciating asset as the freedom, education, health care, clean air, natural beauty and cultural mosaic associated with the country.

To the extent that a large fraction of foreign buyers come from emerging markets, especially China, there are four other considerations. First, residents of emerging market countries continue to build wealth at a rapid rate, increasing the supply of potentially well-to-do home buyers. Astonishingly, a recent survey in the *South China Morning Post* found that half of China's millionaires plan to leave the country within five years.[15]

Second, these foreign buyers appear relatively inelastic in their demand. They have shown little inclination to shift away from the expensive Vancouver market and toward less expensive destinations. In fact, many view the Vancouver housing market as relatively cheap, given that other popular destinations are the even pricier Hong Kong, Singapore, London and Sydney. As further evidence of this inelasticity, swings in the Canadian dollar have had little obvious effect on the appetite for Canadian homes over the past several years. To the extent that they buy homes with cash, the spectre of rising rates is irrelevant.

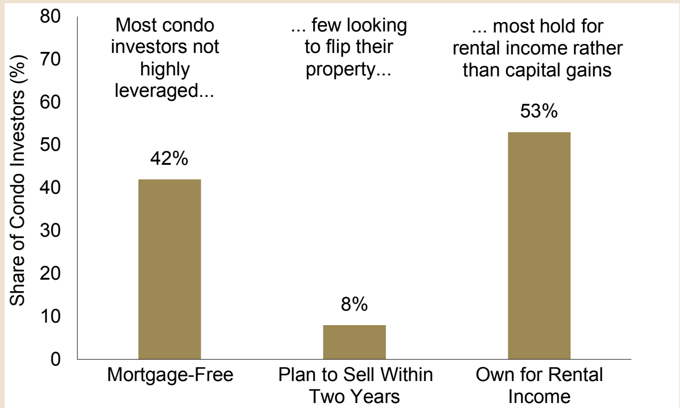
Third, Chinese investors tend to be skeptical about traditional portfolio investments, such as stocks and bonds. This is not entirely unreasonable given that the Chinese stock market is dominated by state-owned enterprises with poor governance track records, and the bond market continues to be weighed down by repressed interest rates. Consequently, they view housing as their primary investment vehicle. This attitude may fade over time, but it is unlikely to vanish overnight.

Fourth, the recent crackdown on Chinese corruption could in the short run push more Chinese money out of the country and into Canada.

Of course, the outlook is not completely risk-free. One important consideration is the regulatory landscape. An important point of access for foreign buyers – Canada's Immigrant Investor Program – was cancelled earlier this year due to perceptions that it did not attract and encourage the sort of entrepreneurial mindset that was intended.

This curb could reduce foreign demand in the short run, but it is unlikely to evaporate altogether. Quebec has retained a scaled-back investor program, which continues to provide backdoor access to the rest of the country. Many foreigners gain access via other immigration programs. And a new improved immigrant investor pilot program is expected shortly. More generally, Canada is in the process of substantially revising its immigration rules, with the goal of attracting the same number of immigrants, but better aligned with the economy's needs. It is hard to fathom this being a net negative for the housing market over the long run.[16]

Exhibit 23: Condo investors are a level-headed bunch



Note: Based on survey conducted in 2013. Source: CMHC, RBC GAM

Condo investors

The bulk of investment purchases involves condos. There is no single definitive figure for the share of condos held by investors, but it appears to be fairly high. CMHC figures that investors account for 17% of condo purchases. Builders estimate that the figure is closer to 50% or 60%, though they are usually referring to Toronto, where even CMHC's conservative figures find that 43% of newly completed Toronto condos are investor-bought.[17]

The question, of course, is whether the big contribution to sales from investors is problematic. We believe it to be a fairly benign trend, and historically quite normal. Whereas the single-home market has always been dominated by homeowners (currently 91% are owner-occupied), only 35% of existing multi-unit dwellings are owner-occupied. Thus, the introduction of new condos that are 40% to 50% owner-occupied is actually nudging the overall multi-unit share higher.

Healthy investor attitude

A CMHC survey of condo investors yields results that are inconsistent with a sudden retreat (Exhibit 23):

- Forty-two percent of condo investors are mortgage-free, and just one-fifth put less than 20% down. Few are highly levered investors, meaning that the pain of rising mortgage rates shouldn't be unusually problematic for them.
- Only 8% of condo investors plan to sell their property within two years, suggesting the vast majority are not flippers looking for a quick buck. In fact, over half have purchased their condo for rental income rather than the prospect of capital gains.

- Investors do not harbour unrealistic expectations of riches. Just 48% of investors expect Toronto condo prices to rise, and 37% expect higher prices in Vancouver over the next year.

Investor returns

The available condo rental yield of between 1% and 5% (on levered and unlevered investments alike) is hardly compelling.[18] However, in the current environment of ultra-low bond yields, such returns are frankly not a bad substitute for the bond market. Rising rents and home prices should increase the returns to existing unlevered investors over the long run. Levered investors also enjoy these benefits, but these pluses must be weighed against rising mortgage rates.

Additionally, many so-called investors (in that their condo is not their primary residence) are not truly investors in the classic sense. They do not care about rental yields or capital gains, instead using the condo as a second home perhaps for holidays, on weekends or for business trips.

Rental absorption

Despite rumours of high condo vacancy rates, the official figures seem quite tame, averaging a 2% or lower condo rental vacancy rate across major Canadian markets. This is comparable to purpose-built rental buildings (Exhibit 24).

An alternate estimate from a CMHC survey finds that condos held by investors have a 6.9% vacancy rate. Even this higher number is miles below anecdotes of half-vacant buildings. The gap between the two sets of figures may possibly be reconciled by the “investors” who treat their condo as a second home and leave it empty most of the time.

Investors are irrelevant

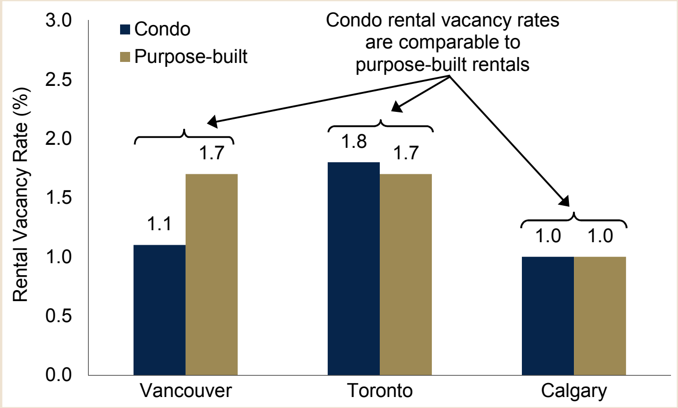
In the spring of 2014, CMHC stopped insuring mortgages on second homes. This may dampen investor demand, but arguably not by much since most investors make large enough down-payments that CMHC was never part of the calculation.

But never mind that – fundamentally, investors just don’t matter as much as they first seem to. Keep in mind that overall residential construction is running approximately in line with demographically supported demand. It doesn’t matter who buys these new homes – people need them to live in. If individual investors were to retreat, builders would likely shift construction away from condos and toward rental buildings to meet the underlying tenant demand.

6) Does the distribution of household debt reveal additional problems?

Averages can conceal important information about where the greatest household debt pressures and risks lie. More granular data is thus useful for identifying the areas of greatest vulnerability.

Exhibit 24: Rental vacancy rates are low



Note: As of October 2013. Source: CMHC, RBC GAM

To provide an example of why the underlying distribution of debt matters, it is not at all unusual for a young family in a major Canadian city to have – and thrive – with a debt-to-income ratio of 400%, far in excess of the 164% national average. They manage this because they are at a point in their careers when salaries often rise briskly, they likely enjoy the stability of two incomes and they have a long period in the workforce ahead of them. In contrast, it is concerning if a household on the cusp of retirement has one-quarter that amount of debt. The extremes matter, as does the context around them.

The underlying distribution of household debt is for the most part reassuring. Canadian lenders and borrowers seem to be fairly adept at gauging what constitutes a reasonable amount of debt given a household’s specific circumstances and prospects. This makes sense: banks wish to avoid lending to people who are unlikely to repay the debt, and borrowers don’t wish to go through the pain of a forced home sale, mortgage foreclosure or bankruptcy.

Illustrating this, higher-income Canadians carry far more debt on average than low-income households, and people with higher credit scores have undertaken the bulk of household borrowing in recent years (Exhibit 25).

Most Canadians have little debt

It is worth stepping back for a moment and recognizing just how few Canadian households are heavily indebted (Exhibit 26). Almost a third are debt-free, another 42% have less than $100,000 of debt and a mere 26% owe more than $100,000.

Framed differently, only 34% of Canadian households have a mortgage, and the average balance among these is a tame $155,000. Thus, most Canadians will be only minimally affected by rising interest rates over the next several years.

Geographic distribution

Some cities are certainly more vulnerable than others, though it is not as simple as identifying where home prices are highest on an absolute basis or relative to incomes. What matters is how far from its localized "normal" each market is. Exhibit 27 demonstrates that the definition of normal across the U.S. varies between home prices that cost less than two times annual income in some regions to more than eight times in others. As the distribution around each data point shows, home prices encounter resistance when these costs depart significantly from the local norm, whether or not the absolute level is high.

In this context, what is relevant is not that Vancouverites normally spend 59% of their income servicing their mortgage, versus 40% in Toronto. What matters is that the latest Vancouver reading is slightly more elevated relative to its norm than Toronto.

Age-based distribution

The age-based distribution of debt is also important, as people in their 30s and 40s are much better positioned to carry and eventually pay down debt. Fortunately, the debt profile broadly aligns with this ideal. The heaviest debt loads in Canada are held by those who are early to mid-career – carrying a mortgage and a car loan, and paying for childcare. In contrast, those just starting out usually have somewhat less debt, and those in retirement usually have significantly less debt – around one-third the level of the peak age group.

Seniors nevertheless constitute a potential risk point for Canadian household debt. Whereas in recent years the fraction of households in debt has declined nicely for younger age groups, there has been an increase among households headed by a person 65 or older. The fraction of indebted seniors has lately risen above 50%. And there is reason to think that when the current middle-aged cohort reaches retirement age, it could have even more debt to grapple with given the high prices they have paid for their homes and the likely burden of rising mortgage rates.

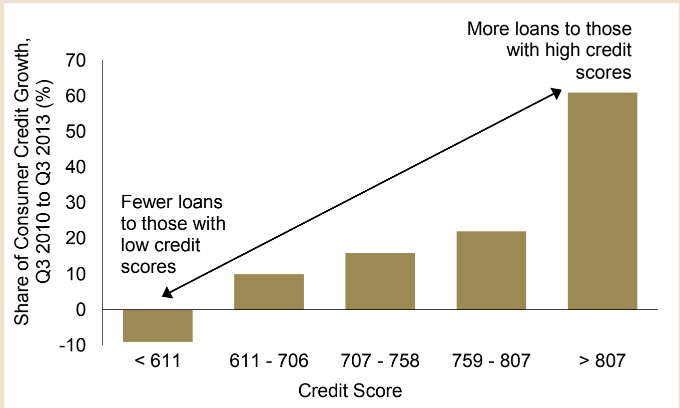
Evaluating the most vulnerable

Lastly, we cut to the chase by focusing on those households that are most at risk.

At present, there is no sign of serious distress: mortgage arrears and credit card delinquency rates are low and declining, signalling that even households at the most vulnerable end of the spectrum are avoiding trouble (Exhibit 28).

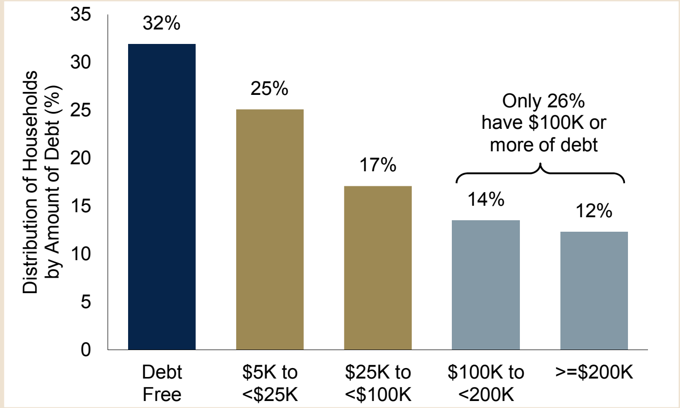
However, the fraction of Canadians exposed to a dangerously high debt-service ratio (defined in this instance as interest plus principal) of at least 40% has been inching upwards over the past several years, from 5.6% in 2007 to 5.9% more recently. This isn't an especially problematic level or increase by itself, but it has happened at the same time that the fraction of households

Exhibit 25: Rational borrower and lender behaviour limits risk



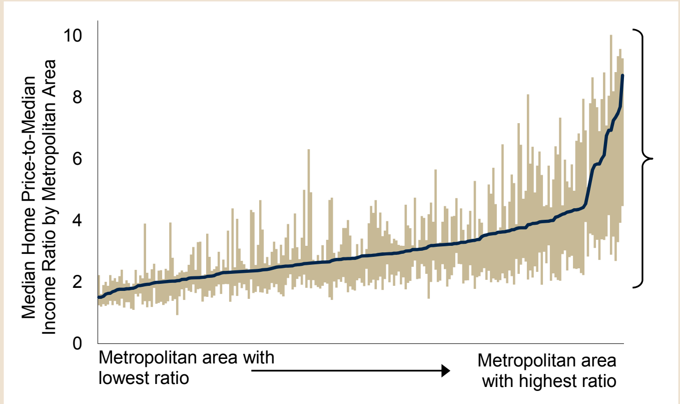
Source: Equifax Canada Inc., Bank of Canada, RBC GAM

Exhibit 26: Most Canadian households not too heavily indebted



Note: As at 2014. Source: Ipsos Reid, RBC GAM

Exhibit 27: "Normal" housing affordability varies enormously



Note: Based on latest data available. Shaded area represents the range of historical median home price-to-median income ratios of 228 metropolitan areas in the U.S. sampled. Source: NAHB, Haver Analytics, RBC GAM paying a 4.00% mortgage rate or higher has plummeted from 98% to just 27% (Exhibit 29). As mortgage rates rise in the future, the share of households that are extremely vulnerable will rise to higher-than-normal levels. Higher mortgage and credit-card delinquency rates should follow.

Conclusion

The six key questions posed in this report return quite a mixed interpretation of Canada's housing market (summarized in the Exhibit 1 scorecard). Broadly, the near-term outlook appears benign, tilting only slightly in a negative direction.

On the other hand, the medium-term outlook is distinctly negative. The coming drags may not be quite as large as many imagine: household debt levels are less extreme than they look, housing affordability will be poor but not atrocious, construction should slow but not collapse, investors and foreign buyers are unlikely to flee en masse, and only a small fraction of Canadian households are quite vulnerable to rising rates. Nevertheless, the housing market is set to soften over the coming years, mainly as affordability deteriorates.

Base case forecast

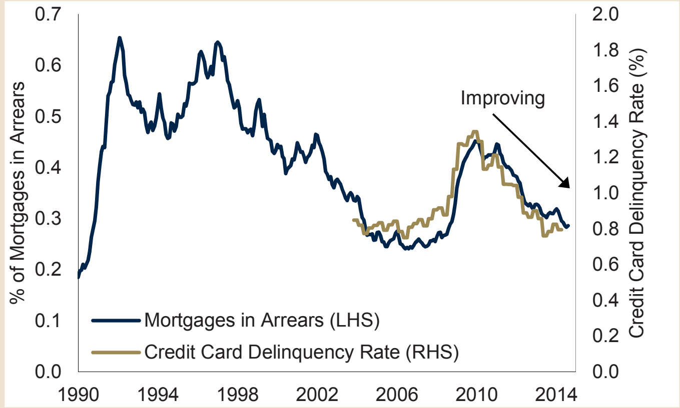
The economic implications of a housing slowdown over the next five years can be divided into construction and affordability components (Exhibit 30).

Our base case forecast is that construction activity will impose a mere 0.5 percentage point drag on the economy, spread over the next five years because building activity need only decline slightly over this period to remain aligned with demand (we also assume a moderate decline in renovations). However, because higher rates are set to significantly worsen affordability, a diminished home-price trajectory should curtail spending (via the so-called "wealth effect") by a cumulative 0.75 percentage point off GDP growth.[19]

Combined, then, we imagine that the economy could expand by a cumulative 1.25 percentage points less than otherwise over the next five years. This is a noticeable but not crippling burden, amounting to 0.25 percentage point less growth per year (refer to Appendix A for a more bearish scenario). This drag should be distributed fairly broadly, affecting builders (via diminished new construction and fewer renovations), slowing consumption and dimming government revenues (via diminished land-transfer fees, lower builder fees and slower growth in the property tax base).

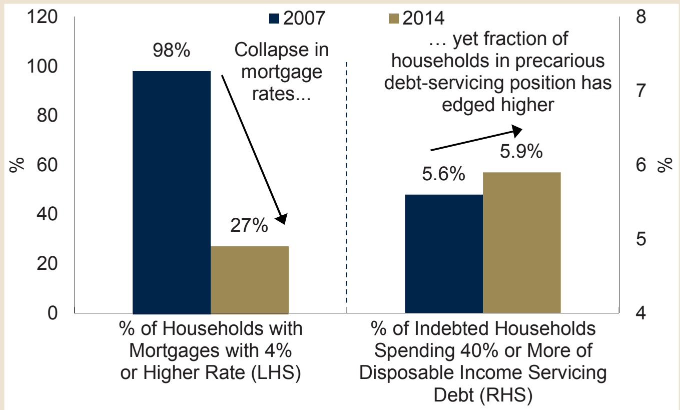
Overall, though, other factors look set to play a more central role in the Canadian economic outlook, among them lower oil prices (bad), a weaker Canadian dollar (good) and a stronger U.S. economy (good).

Exhibit 28: Little evidence of borrower stress



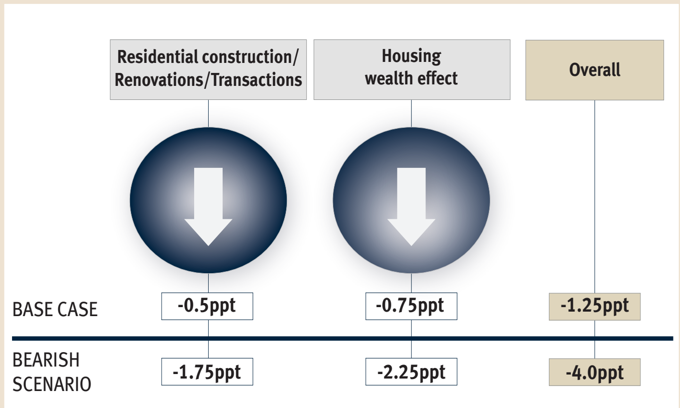
Note: Residential mortgage in arrears for 3+ months. Credit card delinquency rate of 90+ days for VISA and MasterCard. Source: Canadian Bankers Association, RBC GAM

Exhibit 29: Some households vulnerable to higher rates



Note: As at 2014. Debt-service ratio excludes credit card debt, includes principal payments. Source: Ipsos Reid, RBC GAM

Exhibit 30: Economic implications



Source: RBC GAM

APPENDIX A: BEARISH SCENARIO

A significantly worse scenario is conceivable, but improbable. A key reason is that potent housing corrections usually require two active ingredients (Exhibit 31). Rising rates and/or diminishing credit availability usually provide the first ingredient. What is needed is the addition of a second ingredient, usually a spike in unemployment.[20]

Rising rates are quite likely in the coming years, but the probability of a large increase in unemployment seems fairly low given our economic forecasts. Furthermore, their collective probability – the odds of both triggering at the same time – are even lower, especially since it is hard to fathom the Bank of Canada pushing interest rates higher if the labour market goes into a tailspin.

Despite the low odds, it is nevertheless worth contemplating an adverse scenario given the high stakes. We do this with the help of four analytic approaches.

A) Scorecard stress testing

The first approach mechanically revisits the scorecard of Exhibit 1 and forces a more negative conclusion by downgrading the outlook on a sliding scale according to our relative confidence in each of the key conclusions reached in this report.[21]

This transformation results in a slight negative near-term outlook and a major negative medium-term forecast. Thus, a nastier housing correction is theoretically conceivable given the uncertainty that exists around our base case forecast.

B) GDP stress testing

The second approach is depicted as the "bearish scenario" in Exhibit 30. It ventures beyond the base case forecast by imagining that construction plummets to 125,000 units annualized and that home prices fall by 25% over the next several years (instead of flat-lining in the base case – which itself represents a 15 percentage point undershoot of the normal upward trend). These adjustments cause the net economic drag to explode from just 1.25 percentage points to a hefty 4.0 percentage points. This would eliminate almost half of Canada's economic growth over the next five years.

C) Venn diagram stress testing

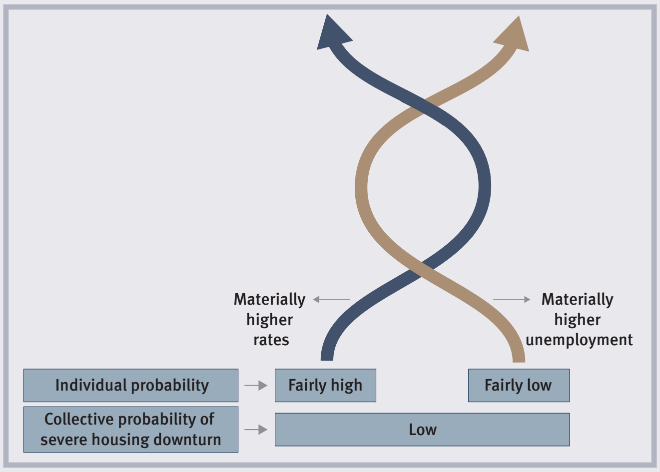
Approach C differs from Approach B in that it evaluates the specific burdens that could befall the credit market, as opposed to merely calculating an aggregate economic impact.

In the event of an across-the-board 25% home-price correction, 28% of mortgage holders would find themselves without any equity in their home (Exhibit 32). This is an important group, because the recent U.S. experience demonstrates that they are about 30% more likely to default on their mortgage than other mortgage holders.

Of course, Canada has far fewer "no recourse" mortgages than the U.S., meaning it is more difficult for borrowers to abandon a home and its associated mortgage at the first sign of trouble.

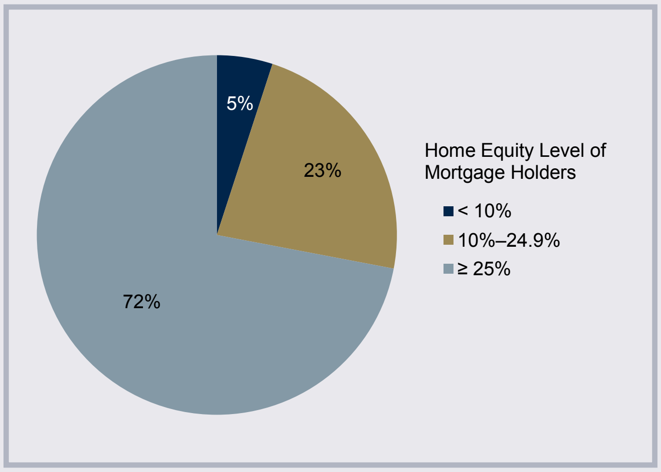
Furthermore, the vast majority of Canadians would continue to be gainfully employed in even the most adverse economic scenario. Where the risk lies is in the resulting Venn diagram

Exhibit 31: Housing crisis requires two ingredients



Source: RBC GAM

Exhibit 32: Decent home equity levels in Canada



Note: Percentage of mortgage holders with different amounts of home equity. May not add to 100% due to rounding. Source: Looking for a "New Normal" in the Residential Mortgage Market, May 2014. CAAMP. RBC GAM overlap of households with negative equity and households suffering a job loss.

Canada's mortgage delinquency rate would spike from its current reading of just 0.3% to around 1.3% in the event of a three-percentage-point unemployment rate increase.[22] This represents more than a quadrupling, and would be about twice as bad as the worst reading since the data series began in 1990. On the other hand, it would be a far cry from the worst of the U.S. experience, where mortgage delinquencies peaked at an unfathomable 11% for single-family homes. Replicating the U.S. experience would require several additional adverse triggers, including bank capital shortfalls and an unwillingness by lenders to roll mortgages.

D) Third-party stress testing

Lastly, the Bank of Canada stress tests Canadian household debt as part of its semi-annual Financial System Review. The central bank estimates that the combination of a 220-basis-point increase in mortgage rates (which seems plausible if a bit aggressive) and the aforementioned three-percentage-point increase in the unemployment rate would result in past-due mortgages rising by around 0.8 percentage point – very close to our own conclusion in Approach C. The fraction of households paying 40% or more of their income for debt servicing would rise from a moderate 6% to a high 8%, signalling materially increased distress among households.

Overall, a bear case scenario seems quite unlikely, but would create serious problems for the economy and credit market were it to transpire, if nowhere near the scale of the U.S. housing bust.

Notes:

[1] We believe the best further steps would be to cap the debt-to-income ratio at a lower level and to test it against historically normal mortgage rates.

[2] Carrying cost affordability measures are also not perfect. For instance, our measures compare the average income to the average monthly mortgage payment. It might be preferable to examine the median measures, since high incomes at the absolute top of the income spectrum likely distort the average income. It is true that the average home price may also be distorted higher, providing some amount of offset, but higher income households generally spend a smaller share of their money on housing.

[3] Our forecast for "normal" mortgage rates assumes a normal government 10-year yield of around 3.75% (as articulated in our November 2013 Economic Compass entitled "Estimating a Normal Yield").

[4] 70% of Canadian mortgages are currently fixed rate, though fewer HELOCs are. When the two are combined, perhaps 60% of home loans are for a fixed rate.

[5] Additionally, even as mortgage rates rise, some homeowners renewing their mortgage will find that their new rate is nevertheless lower than it was five years before when they previously locked in.

[6] Looking forward, although anecdotally there is an increased inclination for young people to return to the family nest after school or to live with roommates (thus reducing household formation rates), a large chunk of this is cyclical, not permanent. Moreover, CMHC projects that the number of single-person households and couples without children will grow markedly in the coming years, versus a decline in couples with children.

[7] Could construction therefore be running too low, rather than too high? We wouldn't want to push that notion too aggressively (as the housing stock numbers will soon explain).

[8] One plausible reason for this is that homes prices have increased too much (as discussed in the affordability section), sending the dollar value of residential investment higher. To consider it a further point of vulnerability here would be double counting.

[9] Estimating demand requires first converting age-based population figures into an approximation of the number of households per age cohort, and then summing the total across age groups. The link between the two is only formalized via census data once every five years, requiring interpolation and extrapolation for the rest. This is then stretched to reflect the fact that each household in Canada normally possesses an average of 1.06 homes (seasonal properties and vacancies reflecting the excess). Estimating the net level of the housing stock requires taking official estimates that were discontinued after the year 2000 and mapping them forward via housing completions, minus the usual rate of teardowns (0.15%), plus an extra 12% assumed increase in the housing stock above and beyond completions that appears to originate from a fraction of new homes being converted into multi-unit dwellings (such as renting out the basement) after construction is complete.

[10] Multi-unit defined for this purpose as apartments plus row houses, but excluding semi-detached homes.

[11] According to the 2011 census.

[12] 64% of eligible Americans 19 years and under had a driver's license in 1998, versus just 46% in 2008.

[13] After all, no one lives in the empty elevator shaft soaring into the sky.

[14] Statistical agencies figure that the upkeep of a home requires reinvesting 1.5% to 2.0% of the home's value each year.

[15] Though it is hard to fathom that many actually doing so.

[16] It is theoretically possible that Canada could impose targeted stamp taxes on foreign buyers, much as Hong Kong and Singapore have done. But it would arguably be out of keeping with Canadian values to exclude one particular group, and any concern about excessive demand is more usefully addressed by curtailing investment activity more generally, regardless of the origin of the investor.

[17] CMHC finds that, overall, 26% of the Toronto condo stock is rented out.

[18] There are additional subtle drivers that may render the estimated yield better than it looks. One is that rented condos tend to be disproportionately single-bedroom units and located on lower (less valuable) floors. Thus, in comparing the average condo's price to the average condo rental rate, there is a mismatch in the relative quality of the average property under consideration for each.

[19] A recent Bank of Canada paper ("Household Borrowing and Spending in Canada", 2012) found that home-equity extraction drove as much as 2% of Canadian consumption in 2010. However, this equity extraction was quite stable despite fluctuating home prices. In turn, one should not assume that home equity extraction would collapse altogether if home prices were to soften in the future. On a related note, a recent Canadian Association of Accredited Mortgage Professionals (CAAMP) estimate figures that among homeowners who took equity out of their home over the past year, 32% went to consolidate their debt, 25% went to home maintenance and renovations, and 24% went to investments. Only 19% went directly toward consumption. Thus, any wealth effect hit would be distributed in part into renovations and other investment asset classes.

[20] Recall, for instance, that the Toronto housing bubble of the late 1980s/early 1990s was popped by rising borrowing costs followed by a local unemployment rate that came close to tripling.

[21] To illustrate how this works, we leave a forecast unchanged if our confidence in it is "high," we downgrade it by one notch if our confidence is "medium," and by two notches if our confidence is "low." To illustrate, a one notch downgrade would entail a "neutral" outlook becoming "slight negative." A two notch downgrade would take a "slight negative" outlook to "major negative."

[22] On the assumption that half of the households with negative equity and a lost job would default on their mortgage.

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