

The real story behind housing and household debt in Canada: Is a crisis really looming?

Francis Fong, Chief Economist, CPA Canada



ABOUT CPA CANADA

Chartered Professional Accountants of Canada (CPA Canada) is one of the largest national accounting organizations in the world, representing more than 210,000 members. Domestically, CPA Canada works cooperatively with the provincial and territorial CPA bodies who are charged with regulating the profession. Globally, it works together with the International Federation of Accountants and the Global Accounting Alliance to build a stronger accounting profession worldwide. CPA Canada, created through the unification of three legacy accounting designations, is a respected voice in the business, government, education and non-profit sectors and champions sustainable economic growth and social development. The unified organization is celebrating five years of serving the profession, advocating for the public interest and supporting the setting of accounting, auditing and assurance standards. CPA Canada develops leading-edge thought leadership, research, guidance and educational programs to ensure its members are equipped to drive success and shape the future. cpacanada.ca

Electronic access to this report can be obtained at cpacanada.ca

© 2018 Chartered Professional Accountants of Canada

All rights reserved. This publication is protected by copyright and written permission is required to reproduce, store in a retrieval system or transmit in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise).

Table of Contents

Executive Summary	2
1. Introduction	5
2. Canada's housing problem, in a nutshell	6
3. More than meets the eye when it comes to mortgage debt	8
4. Canada's system simply does not share any of these problems	11
5. The range of players and practices are also dramatically different	15
6. Private label market is less of a concern	18
7. Detecting credit issues is key, and Canada is not without signs of potential problems	21
8. Mortgage aggregators add another layer of confusion	25
9. A lot needs to go wrong before this happens	26
10. Canada's biggest housing risk is also the most obvious	29
11. Concluding remarks	33
12. Bibliography	34

Executive Summary

There can be no doubt that household debt and overvaluation in the housing market are among Canada's largest domestic economic risks. With the 2006-08 housing crash in the US and subsequent financial crisis still fresh in our collective memory, Canadians are rightly concerned that we may be headed in the same direction. Indeed, the statistics underlying the housing market do appear to emphasize this possibility. Household debt continually hits record levels with each new data point, while home prices have already grown beyond what average Canadians are able to afford.

Yet, there is far more to this story than the headline statistics suggest. The underlying data indicate that Canada does not share the credit quality issues that plagued the US housing boom-bust cycle, such as the prevalence of subprime mortgages. In contrast, credit quality has actually improved alongside the growth in home prices. There are also substantial differences between Canada's mortgage market and that of the US and others. The way in which Canada uses mortgage securitization, a much higher concentration of mortgage activity among fewer financial institutions, and even a stricter regulatory regime all help contain the risk presented by record levels of household debt.

This is not to say that Canada is without risk. A growing share of the mortgage market is made up of less-regulated financial institutions beyond the big banks. In addition, recent data show that nearly a quarter of new borrowers hold debt exceeding 450% of their income – a level far beyond the 170% debt-to-income ratio at the national level that is normally quoted – making them significantly more vulnerable to the current rising interest rate environment.

Ultimately, the headline statistics belie a more complex underlying narrative and this issue is central to Canada's financial sustainability. An economic event or cyclical downturn in housing that triggers a deleveraging episode among Canadian households could have severe implications for the financial system and the broader economy.

So this important issue is not black or white. Recall that high home prices and household debt in the US prior to 2008 sparked similar concerns. But there were many other factors involved in turning their housing problem into an economic crisis. The ubiquitous spread of low credit quality mortgages, such as subprime, the indiscriminate insurance and mass

securitization of said mortgages for the purpose of being sold off to banks and investors, lax regulation, and insufficient capital buffers were all equally important ingredients.

Canada's mortgage finance system shares very few of those other factors. According to Equifax, the share of homebuyers with very good or excellent credit quality actually rose from 81.5% to 84% between 2013 and 2017. For new homebuyers, the improvement is even larger, with the share increasing from 79.4% to 82.4%. This suggests that home price gains are being driven by those who can actually afford such prices. Credit quality is the most important factor: without poor-quality mortgages like subprime permeating the financial system, the possibility of widespread losses on mortgages which, in turn, could trigger a financial crisis, is far lower. By extension, ensuring that credit quality remains high is critical to the ongoing stability of both the Canadian housing market and the broader economy.

The risk is further lessened by a much higher concentration of mortgage activity in Canada among fewer financial institutions and the way those institutions use securitized mortgages.

The core mortgage system is made up primarily of larger chartered banks and the Canada Mortgage and Housing Corporation, the latter insuring the majority of mortgages while also controlling nearly all of the mortgage securitization activity in Canada. In total, nearly 75% of all mortgages are held by banks, while 74% of all mortgage-backed securities are issued by those same institutions. This has both positives and negatives. On the positive, a more concentrated market means that regulators have a simpler task of tracking whether or not credit quality issues are bubbling up. This is particularly important for the mortgage securitization market, which is a critical funding tool for nearly every mortgage originator in the country. And in contrast with the US, where mortgage activity was far more dispersed and mortgages were being securitized purely for sale, more than 40% of securitized mortgages in Canada are retained by the financial institution itself for regulatory purposes. So the incentive for larger financial institutions to originate low credit quality mortgages is far lower, thereby lessening the risk of a systemic problem.

On the negative side, however, a more concentrated market also implies that should any credit risk somehow find its way into the system, the risk is far greater. And Canada is not without its own risks.

Specifically, non-bank lenders and other less-regulated players, such as mortgage aggregators, are playing a growing role in the mortgage market, particularly with regards to securitization. These financial institutions have seen their share of the primary mortgage-backed securities market rise significantly in the past decade, increasing from 1.2% to 15.8% since 2005. While these market participants technically have to follow the same rule book as the larger banks, there is still a question about whether less-regulated lenders are conducting the same level of due diligence on their borrowers as the larger incumbents would. This could potentially be a source of systemic credit risk given their growing role in the core of the mortgage finance system.

The biggest risk to Canada's housing market, ironically, is and has always been its most obvious risk. A recent Bank of Canada study estimated that while the total household debt-to-income ratio exceeds a record 170%, the share of new borrowers taking on uninsured mortgages with over 450% debt-to-income was 22% between 2014 and 2016 (Coletti et al, 2016). The vulnerability of these households to a rising interest rate environment has come into question since the Bank of Canada began hiking interest rates. Mortgage rates are roughly 100 basis points higher since the summer of 2017, at the time of writing, with more hikes likely to come slowly over time. This could potentially force a significant number of households into a difficult financial position, which could then trigger a broader slowdown in both housing and economic activity. This risk is further raised by the possibility that escalating trade tariffs with the US will force a slowdown in economic activity and an increase in the unemployment rate.

Yet fundamentally, credit quality appears to be strong and improving over time. Systemic risks appear relatively well-contained. Even if there were something sinister bubbling underneath the surface, the banking system is far better capitalized than banks were prior to 2008. Insured mortgages and mortgage-backed securities are explicitly guaranteed by the Canada Mortgage and Housing Corporation, and by extension, a federal government in relatively good fiscal standing. Even the Bank of Canada stands ready with extraordinary liquidity programs to help address funding shortfalls.

So we should consider the possibility that, given Canada's relatively healthy financial system, the current level of home prices is justified and that significant downward pressure is unlikely to occur. This is perhaps the most terrifying threat of all: not an imminent economic crisis, but the possibility that homes may never be affordable for those who are already priced out; that, on their way to becoming world class, our major cities stopped being the bastions of equal opportunity we like to think they are. This may simply be what Canada is now.

1. Introduction

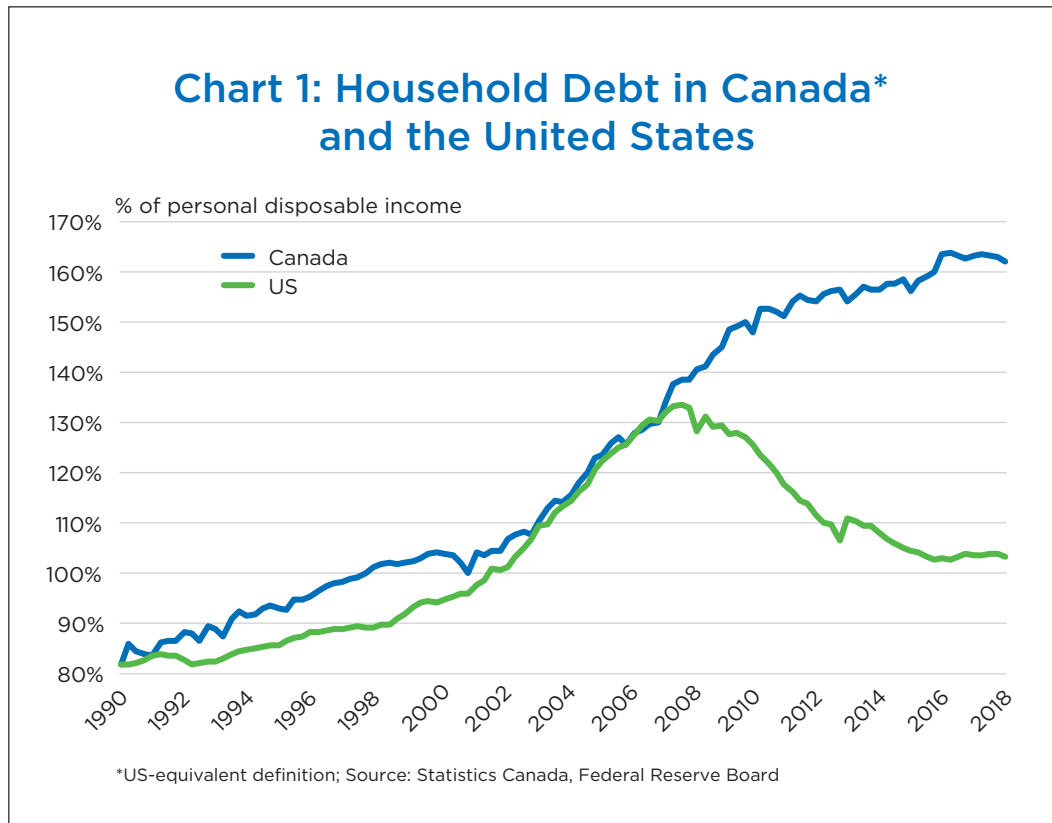
Household debt and housing are often cited as the largest domestic economic risks facing Canada today. With household debt and home prices at record levels, many have speculated that this level of activity is unsustainable and will eventually correct in spectacular fashion – similar to the 2008-09 financial crisis in the US. Indeed, the vulnerability to an economic shock is disconcertingly high – the recent pullback in housing activity has even given some cause to speculate that we are now in the midst of said correction.

However, there is more to this story than meets the eye. Household debt and elevated home prices are not sufficient on their own to generate an economic crisis. The 2008-09 financial crisis actually shows us which ingredients are necessary to transform a cyclical downturn in housing into a full-blown crisis. And Canada has, perhaps surprisingly, very few of those ingredients.

This report goes beyond the headlines about household debt and home prices and investigates the institutions and systems underlying Canada's mortgage finance market in order to decode whether there is truly systemic risk embedded in the financial system. This is a critical question: how this particular risk evolves will have a direct impact on the ongoing stability of the financial system and thus the Canadian economy, and understanding that risk is key to ensuring that it remains contained.

2. Canada's housing problem, in a nutshell

It is not surprising that there are widespread fears that Canada's housing market may be headed for a significant downturn. Indeed, on the surface, many of Canada's main housing indicators flash serious warning signs that the market may be headed for a significant correction. Total household debt outstanding, for example, has doubled since 2006, in dollar terms. Meanwhile, debt as a share of personal disposable income (PDI) has been on an unrelenting uptrend, continuously hitting fresh records with each new quarterly data point. Canada's debt-to-PDI ratio has risen well beyond even the peak in the US prior to its housing crash in 2006 (Chart 1).



This continuous increase in household leverage has mostly benefited the housing market – three-quarters of total household debt growth has been in residential mortgages. This can easily be seen in the rapid pace of price gains in Canada's largest cities in recent years. Prior to the recent downturn in the Greater Toronto Area, for example, it took just six years for home prices to double. At its most extreme, prices rose by more than 40% in just eighteen months between the beginning of 2016 and the middle of 2017. And even after the modest correction of the past several months, the average price for a detached home is still well over \$1 million. Similarly, in Vancouver, homes in 2018 are worth twice what they were just eight years prior, and average prices exceed even those in Toronto.

But contrary to the focus on Toronto and Vancouver, this is not simply a tale of two cities. A similar story has played out all across the country. Ottawa's home prices doubled over the same time frame as in Vancouver. Prices in Victoria have risen by more than 40% just in the past two years. And despite a major crash in commodity prices driving up unemployment in Alberta and Saskatchewan in the past several years, home prices in places such as Calgary, Edmonton, Saskatoon, and Regina have seen only modest downward pressure and are still double what they were a decade ago.

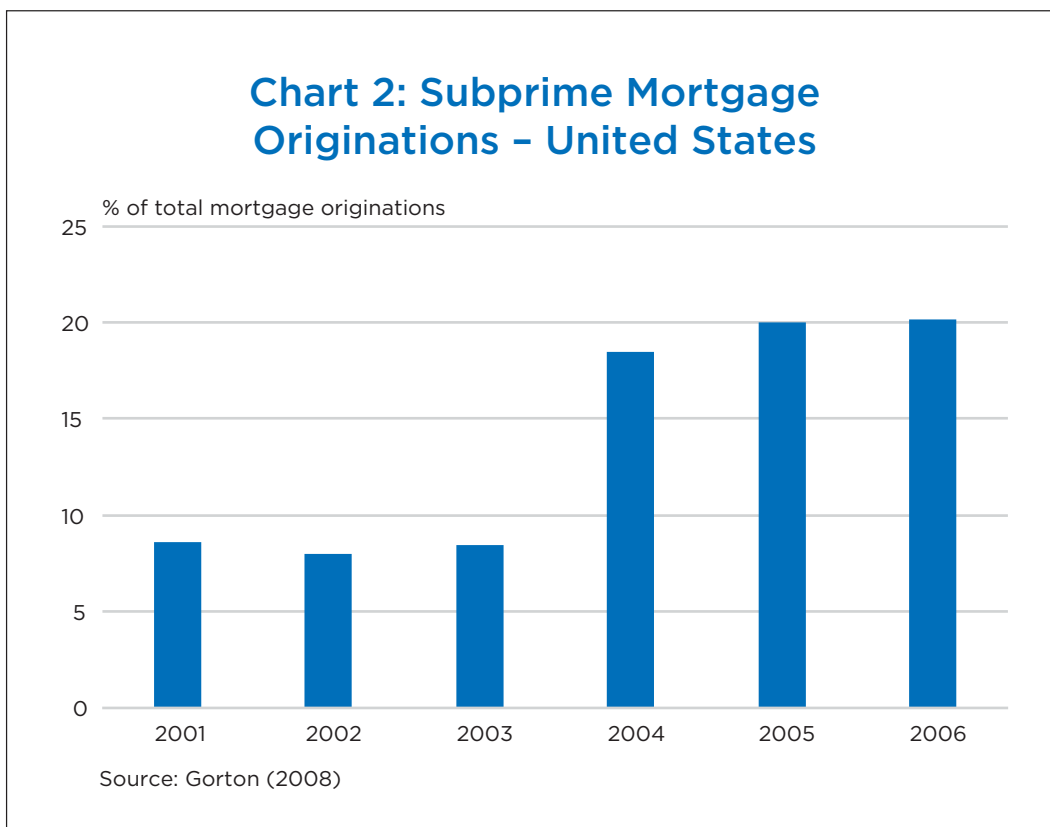
Observers also point to rental metrics as indicators of housing market tightness. The home price-to-rent ratio, which has also risen far above historical norms, highlights how much more expensive housing carrying costs tend to be relative to average rents. Meanwhile, historically low rental vacancy rates underscore how affordability problems are pushing would-be buyers into the rental market and putting pressure on the very limited rental stock. In Toronto, for example, the vacancy rate fell to just 1.1% as of 2017 – its lowest level since 2001. Meanwhile, Vancouver's vacancy rate has averaged a record low of 0.8% in the past 2 years.

The combination of these statistics paints a vivid narrative that Canada is highly vulnerable to a housing-related shock. The aggregate debt-to-PDI ratio is less concerning than the unknown share of highly leveraged borrowers who may have pushed themselves too far in order to be able to afford these extremely high levels of home prices. Numerous surveys have contributed to this uncertainty, pointing to large swathes of borrowers self-reporting that they are not able to afford even minimal increases in housing carrying costs, such as an increase in interest rates. The vulnerability thus stands that an interest rate shock or an unemployment rate shock could push these borrowers into default, triggering a US-style housing correction here in Canada.

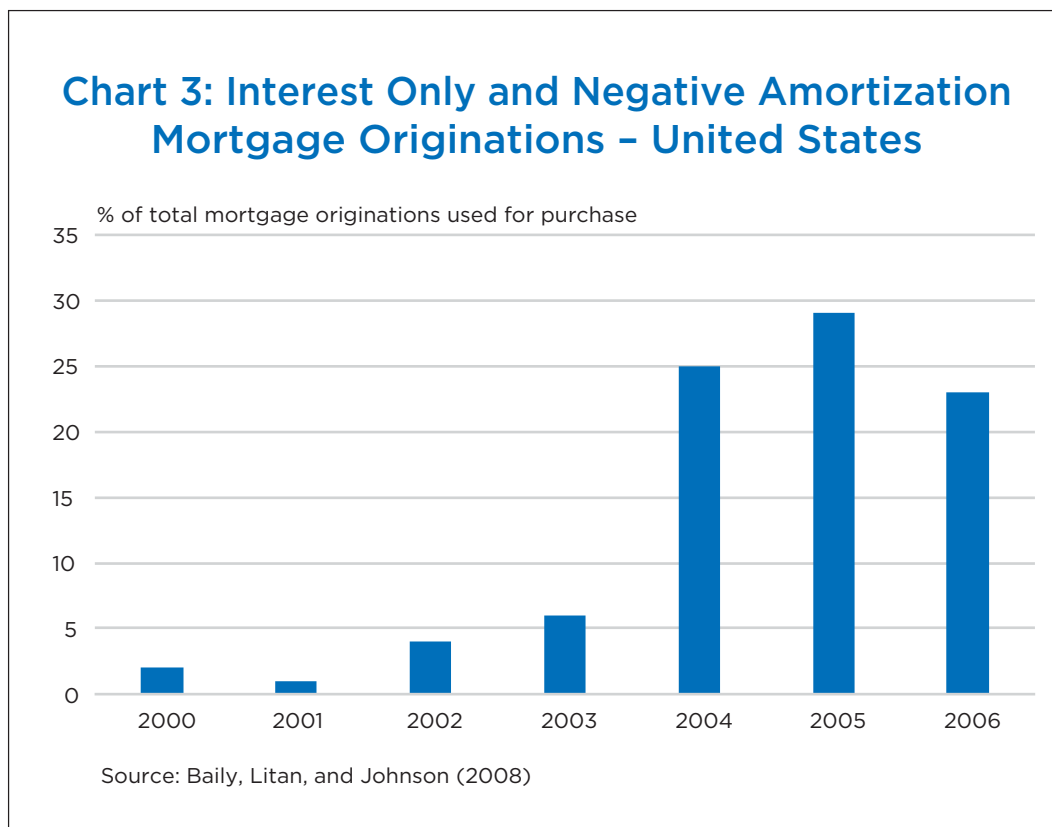
3. More than meets the eye when it comes to mortgage debt

That is typically where the narrative ends, but there is more to this story. In reality, high levels of household debt and home prices may be necessary pre-conditions for a housing crash, but they are not enough on their own. Policymakers and economists have since learned from the 2008-09 financial crisis which ingredients are sufficient to generate such a severe shock. And Canada's current situation shares fewer of those than the headline statistics might suggest.

Between 2004 and 2006, in the lead-up to the US housing crash, nearly 20% of US mortgage originations were subprime (Chart 2).



In other words, a significant share of borrowers who were taking on mortgages at the time had the least ability to actually carry those housing costs. This concern is further underscored by the types of mortgages they were taking on. Over those same years, roughly 25% of all originations featured either “interest only” or “negative amortization” payments (Chart 3) – these types of loans allowed borrowers to avoid principal repayments or make payments that were even less than the calculated interest, regularly adding to the outstanding principal of the mortgage.



These types of loans increased access to the mortgage market for those who previously would not have been able to afford homeownership. However, the cost was a high degree of financial vulnerability for large swathes of borrowers who depended on continual refinancing in order to keep their mortgage payments low. Lenders, in turn, were only willing to do so on the basis of continued increases in home prices.

The mortgage market thus became saturated with these high risk, low credit quality assets that, simultaneously, financial institutions were insuring and using to create asset-backed securities, such as mortgage-backed securities (MBS) and collateralized debt obligations (CDO). Between 2001 and 2006, the share of subprime mortgages being securitized rose from roughly 50% in 2001 to over 80% in both 2005 and 2006 (Gorton 2008). Such a high percentage is a clear indication that mortgage originators were not concerned with the credit risk of the mortgages being issued, because they were being originated for the purpose of being packaged and sold, rather than being held.

Indeed, these complex derivatives were then being marketed as low-risk, high-yielding assets to systemically-important US financial institutions. By 2008, US banks and government-sponsored enterprises were holding more than US\$1.5 trillion in agency mortgage-backed securities and nearly US\$700 billion in non-agency AAA-rated CDOs (i.e. private label securities). Both of these types of assets would ultimately have significant credit exposure to the underlying subprime mortgages. When the housing market turned south and the inevitable wave of borrower defaults began, these financial institutions were ultimately the ones faced with massive losses on any and all related assets.

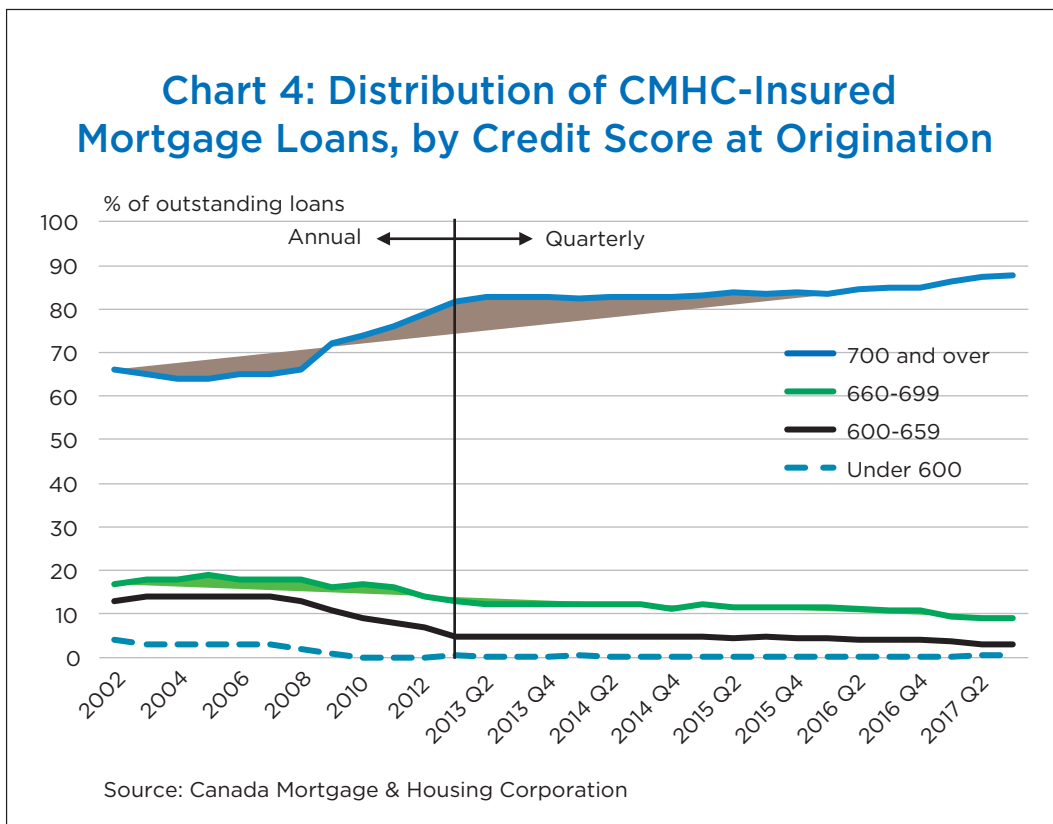
Insolvencies and bankruptcies among a massive range of financial institutions resulted, leading to even more losses among the creditors that provided their funding, leading to a dramatic tightening of credit conditions that ultimately brought down the rest of the US economy.

It is important to stress, at this point, that the severity of the 2008-09 financial crisis in the US was ultimately the result of a multitude of factors. Without the volume of subprime mortgages being originated, there would be no assets to securitize and sell. Without the ability to securitize and sell mortgages, there would have been no incentive to originate as many subprime mortgages as lenders did. Without insurers and credit rating agencies, these assets would not have been able to attract buyers. Without money market mutual funds and other lenders, there would not have been sufficient funding for this problem to grow to the size it did. Hundreds of players had their role to play, including private insurance companies, government-sponsored enterprises, credit rating agencies, traditional banks, investment banks, mortgage originators, mortgage brokers, asset management companies and mutual funds. The crisis was the culmination of all of it.

4. Canada’s system simply does not share any of these problems

Relative to the US, the fundamentals of Canada’s mortgage finance system are starkly different. Most critically, Canada’s housing market has not been driven by growth in low credit quality mortgages, despite the impression given by rapid price gains. Rather, credit quality has actually *improved* over time.

Two data points support this contention. The first comes from the Canada Mortgage and Housing Corporation (CMHC), which is the largest insurer of mortgages in Canada and also administers and guarantees the country’s primary mortgage securitization program, the National Housing Act (NHA) MBS program. Data on the portfolio of mortgages that it insures show that the share of borrowers with high credit scores has grown from an average of 65% between 2002 and 2008, to 88% as of the 3rd quarter of 2017 (Chart 4). Meanwhile, the share of borrowers with lower credit quality has fallen dramatically, particularly those with the lowest credit scores, whose share has fallen from 4% in 2002 to nearly 0% as of last year.



The CMHC data technically do not represent the majority of mortgages in Canada, so the fact that credit quality is so good within the program does not necessarily suggest that the entire market is free from poor credit quality mortgages. But the integrity of the NHA MBS program is important for a different reason.

When the US housing market turned in 2006 and financial institutions began facing losses on their mortgage portfolios, investors began to flee out of mortgage-backed securities and other assets backed by real estate. Financial institutions involved in originating and selling such assets not only faced losses on those securities they could not sell, they also lost an incredibly important funding tool. Financial institutions securitize assets and sell them to fund their operations. The NHA MBS program is no different.

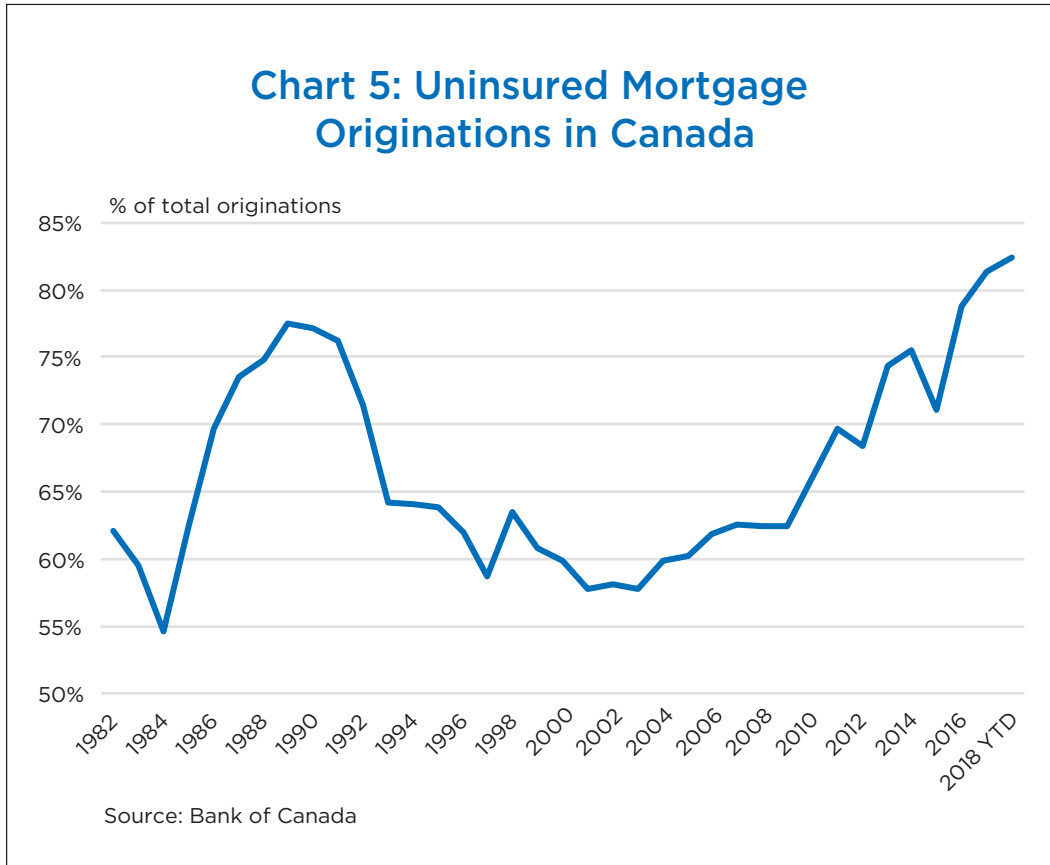
So even if it doesn't account for a significant share of the mortgage market, the integrity of the NHA MBS program is of paramount importance – if there were to be a credit quality issue and the housing market went bust, investors would invariably fear purchasing any more NHA MBS and banks and other mortgage originators would lose a critically important funding tool.

At the height of the crisis in 2008, despite Canada's largest banks having had minimal exposure to the US subprime mortgage market, the Department of Finance still instituted an emergency liquidity measure called the Insured Mortgage Purchase Program (IMPP) to, in a way, backstop the NHA MBS program. The IMPP was designed to act as a demand backstop in which the central bank would inject funding into the core banks by purchasing insured mortgages directly in case investors did indeed lose confidence in holding NHA MBS.

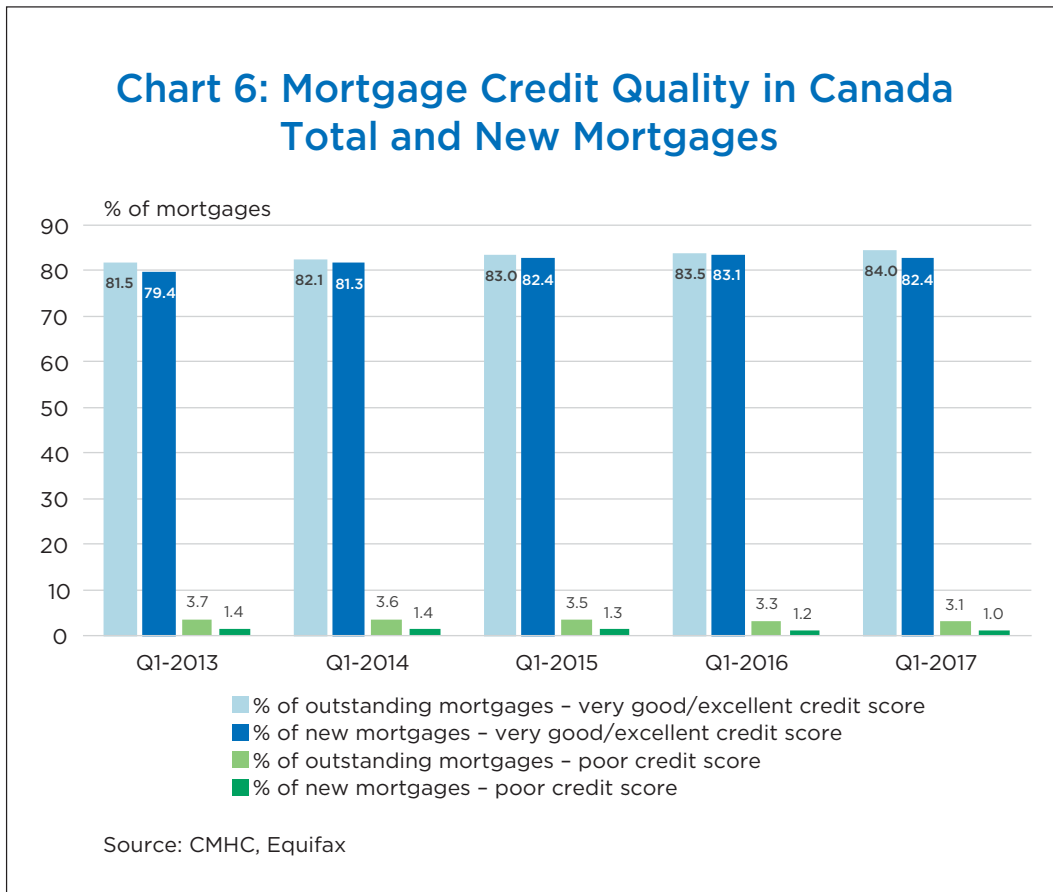
The backstop was ultimately not needed, but it does reinforce the importance of this program. The fact that credit quality is very good and has been improving over time suggests that policymakers have recognized the need to further protect the program from exposure to credit risk.

As shown below, however, insured mortgages have actually become the exception, rather than the rule. Changes made to mortgage insurance regulations by both CMHC and the federal Department of Finance have made eligibility more restrictive. For example, mortgage insurance is capped on homes worth more than \$1 million. Given how high home prices have risen, even modest detached properties in the largest urban centres go beyond that price tag, meaning that a large share of borrowers are not eligible.

It is thus no surprise that approximately 82% of mortgage originations are actually uninsured (Chart 5), a share that has increased sharply in the past several years, and therefore would not be covered by the CMHC data. So even if the NHA MBS program were clean, credit risk could easily have crept into the uninsured space.



However, according to data from Equifax, which covers the large majority of the mortgage market in Canada and so would include both insured and uninsured mortgages, the shift towards higher credit quality still holds. The proportion of borrowers with either very good or excellent credit quality has risen from 81.5% in 2013 to 84% as of 2017. Among new borrowers, the shift is even more pronounced, with the share rising from 79.4% of borrowers to 82.4%. Again, these increases come at the expense of those with lower credit quality – the share of borrowers with poor credit scores fell from 3.7% to 3.1% among all borrowers, and from 1.4% to 1.0% among new borrowers over that same time frame (Chart 6).

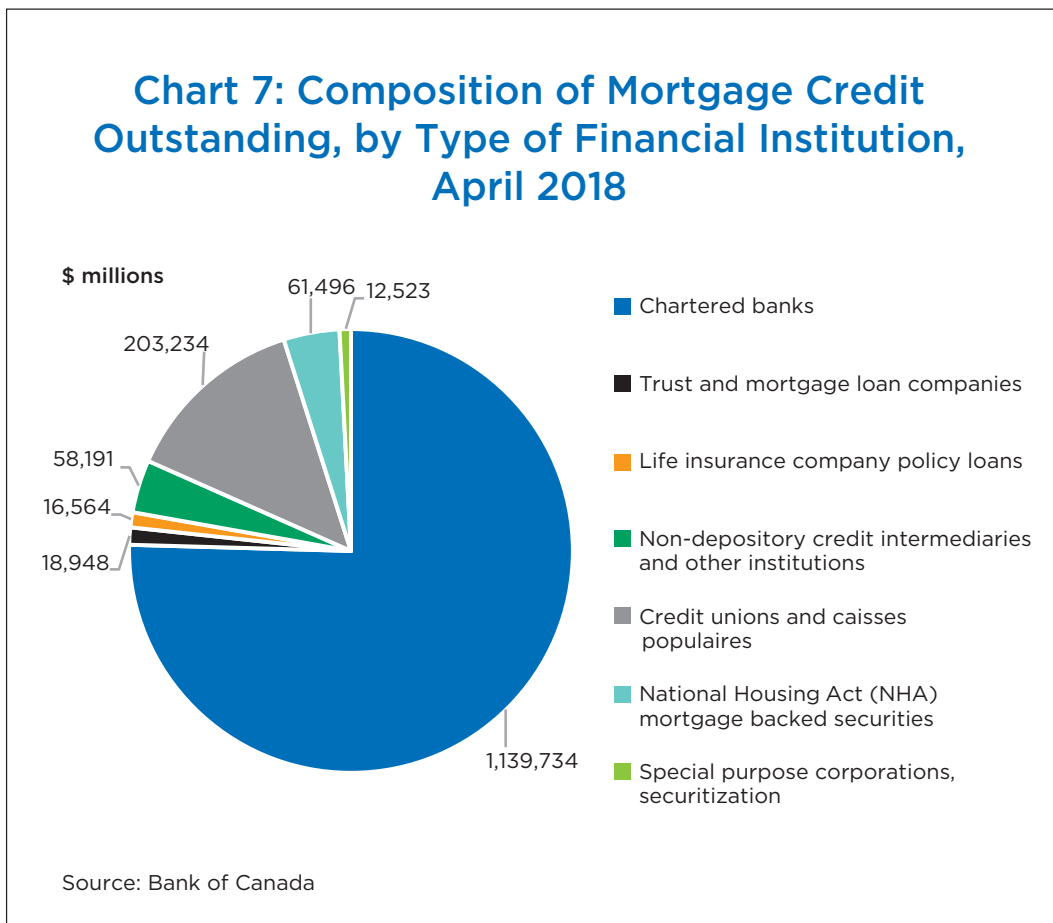


The bottom line is that there does not seem to be a systemic credit quality issue. Without one, the likelihood of a cyclical housing market correction generating sufficient losses among financial institutions to trigger a tightening in credit conditions would be relatively low. This would make an economic event capable of pushing the Canadian economy into recession that is purely centred on housing equally unlikely.

5. The range of players and practices are also dramatically different

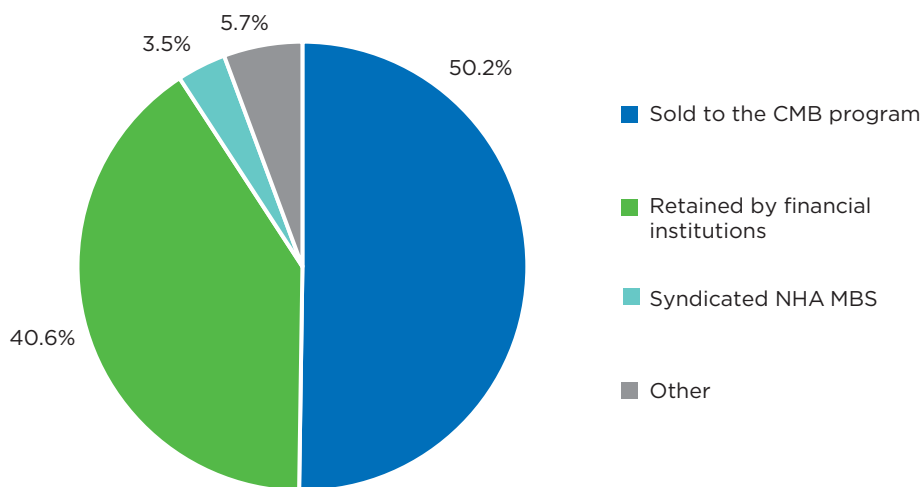
Beyond the fundamental issue of credit quality, there are several other aspects of Canada’s mortgage finance system that lessen the overall risk of a cyclical downturn in housing causing a larger economic crisis. Chief among them is the concentration of mortgage credit among Canada’s largest financial institutions and the way in which those institutions use mortgage-backed securities.

The country’s chartered banks account for roughly 75% of total outstanding mortgage credit, amounting to over \$1.1 trillion (Chart 7), a fair amount of which is held in NHA MBS.



This may appear, on the surface, to be similar to the state of the US in 2006 in which banks were purchasing MBS en masse. However, the reality is far different. According to the Bank of Canada, roughly 41% of all outstanding NHA MBS in 2015 were issued for the purpose of being retained by the financial institution itself (Chart 8). In other words, Canadian banks were taking their insured mortgage portfolios, securitizing those assets, then holding on to the resulting securities. The reason, as the central bank notes, is that mortgages require a financial institution to hold capital and liquidity buffers against those assets in case of borrower default. A securitized mortgage, however, still requires capital to be held in case of loss, but the financial institution is able to relieve the liquidity buffer requirement, thus lowering the overall “carrying cost” of the asset. In addition, NHA MBS can also be converted into Canada Mortgage Bonds (CMB), which also have the side benefit of being held as contingent liquidity – high-quality, highly liquid assets that banks are required to hold that can be sold at a moment’s notice should the financial institution come under funding stress (Cateau et al, 2015).

Chart 8: Composition of Outstanding NHA Mortgage-Backed Securities, by Usage, as of June 2015



Source: CMHC, OSFI, Bank of Canada Financial System Review December 2015

In other words, the end result might appear similar relative to the US, but Canada's banks are basically holding their own mortgage assets in securitized form rather than purchasing another institution's assets.

This changes the incentive completely - US financial institutions were incentivized to originate mortgage assets, insure, and securitize them with the sole intention of selling them to another institution, thus allowing the originating firm to ignore the masked credit quality of the mortgage. Holders of these assets were, in turn, buying them for the return. In Canada, if nearly half of all MBS are retained by the financial institution, thus exposing them directly to their own losses if the mortgage goes into delinquency, then the incentive is to originate an asset with as high a quality as possible to limit that risk. They are not holding it for the return since it would be roughly similar regardless of whether one holds a securitized mortgage or the mortgage itself.

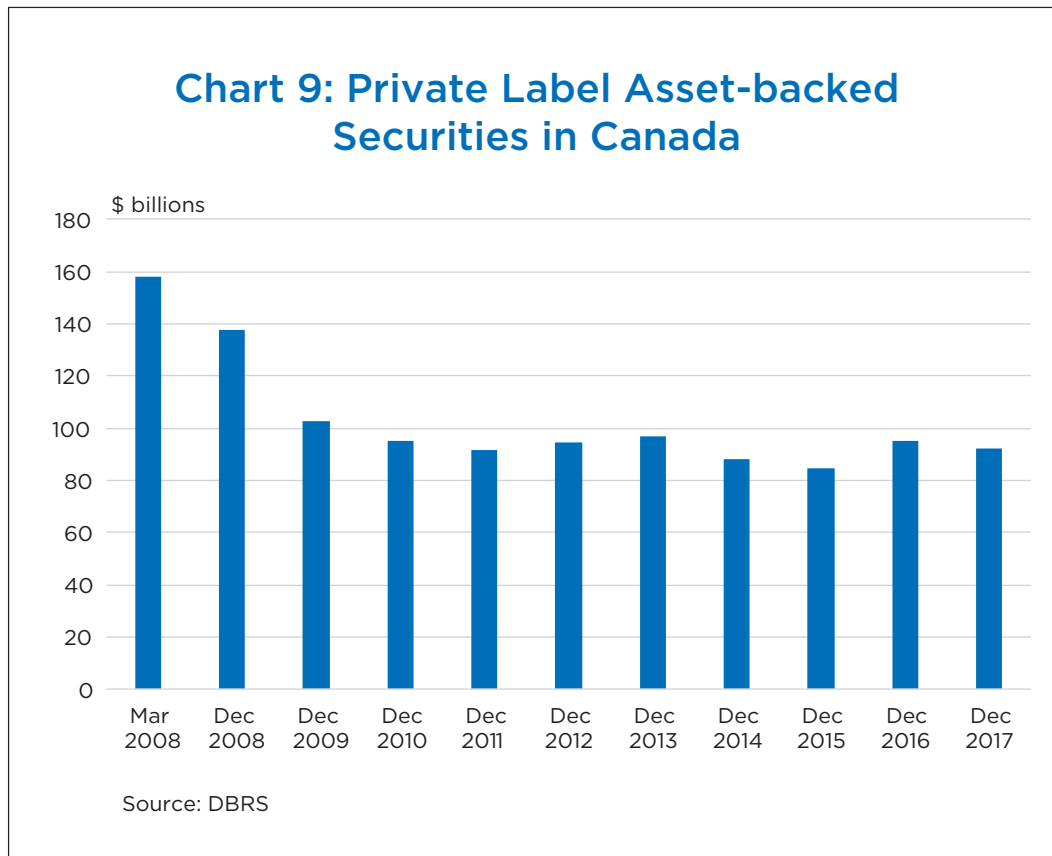
In other words, at least a significant portion of the NHA MBS system avoids the moral hazard problem that plagued the US MBS market.

6. Private label market is less of a concern

This does not suggest that Canada's MBS system is completely insulated from credit risk since there remains the other 60% of the NHA MBS not being retained by financial institutions that we may need to worry about. In addition, even if the NHA MBS portfolio were completely clean and risk-free, recall that in the US, a sizable portion of the MBS market was outside of the government-backed mortgage insured market. A complex web of entities was involved in originating, insuring and selling what were referred to as "private label" securitized assets backed by real estate, which also made up a significant portion of the poorer credit quality assets that ultimately flooded that market. A separate contingent of financial institutions was then involved in purchasing those assets.

Even in the US, with its less concentrated banking system, there still would have been some level of concentration of mortgage activity among the largest banks in combination with government-sponsored enterprises such as the Federal National Mortgage Association (Fannie Mae, FNMA) and the Federal Home Loan and Mortgage Corporation (Freddie Mac, FHLMC). But they did not operate on an island. Exposure to poor credit quality private label assets still crept their way into the core of the financial system through either core banks purchasing these assets directly or through indirect exposure in which a core bank would face credit exposure to another financial institution that faced direct losses on its private label mortgage-related assets.

Thankfully, Canada's private label market is small. Compared to the roughly \$1.5 trillion mortgage market and \$483 billion NHA MBS sub-market, private securitization in total amounted to a relatively small \$92 billion at the end of 2017 (Chart 9), only a subset of which would be related to mortgages. So even if there were significant credit quality issues within this portfolio, the likelihood of a significant credit event having a knock-on effect on the core financial system is likely minor.



This is critically important – the high-level concentration of mortgage activity and the limited scope of mortgage securitization in Canada basically imply that the largest banks and CMHC act as the “core” of the mortgage market from both a funding and an origination perspective. This has both positives and negatives. On the one hand, if credit risk were to creep its way into the core mortgage system, the potential for significant credit losses at even one large bank to have a knock-on effect on the rest of the financial system is orders of magnitude greater than it would be in a country with a more dispersed mortgage system.

On the other hand, the fact that mortgage activity is concentrated within a relatively self-contained core suggests that the broader economy may be insulated from a credit event that may occur among financial institutions, lenders and others to which the core has relatively little exposure. Canada’s regulators, such as the Office of the Superintendent of Financial Institutions (OSFI), thus have a much easier time tracking systemic credit risk given that there are physically fewer financial institutions within the core to track. The largest banks are also subject to a much stricter regulatory regime than banks

globally were before 2008 – from higher capital and liquidity buffers, to rules around stress testing, funding stability and overall risk taking – which further lessens the risk within the core.

Let us consider an example where there are credit quality issues within the private label MBS market that led to borrower defaults on the underlying mortgages, losses on the MBS, a loss of liquidity in that market, and insolvencies among those that depended on that market for funding. However, the core mortgage system does not have any exposure to either the financial institutions going bust or the MBS. Such a credit event would certainly have a significantly negative impact on the borrowers involved and might disqualify them from credit markets entirely. Such an event might also have a negative spillover effect on home prices and home sales more broadly. However, if the core mortgage system is unexposed to any direct or even indirect losses, then Canada's largest banks and CMHC could continue to function on a normal basis. Overall credit conditions would not tighten significantly, and the mortgage market would be broadly unimpeded. The only difference is that lower credit quality borrowers who depended on that private market to access credit would then be forced back into the core banking system, where they could be subject to tighter rules around income testing and credit quality, which might result in their ineligibility for a mortgage.

7. Detecting credit issues is key, and Canada is not without signs of potential problems

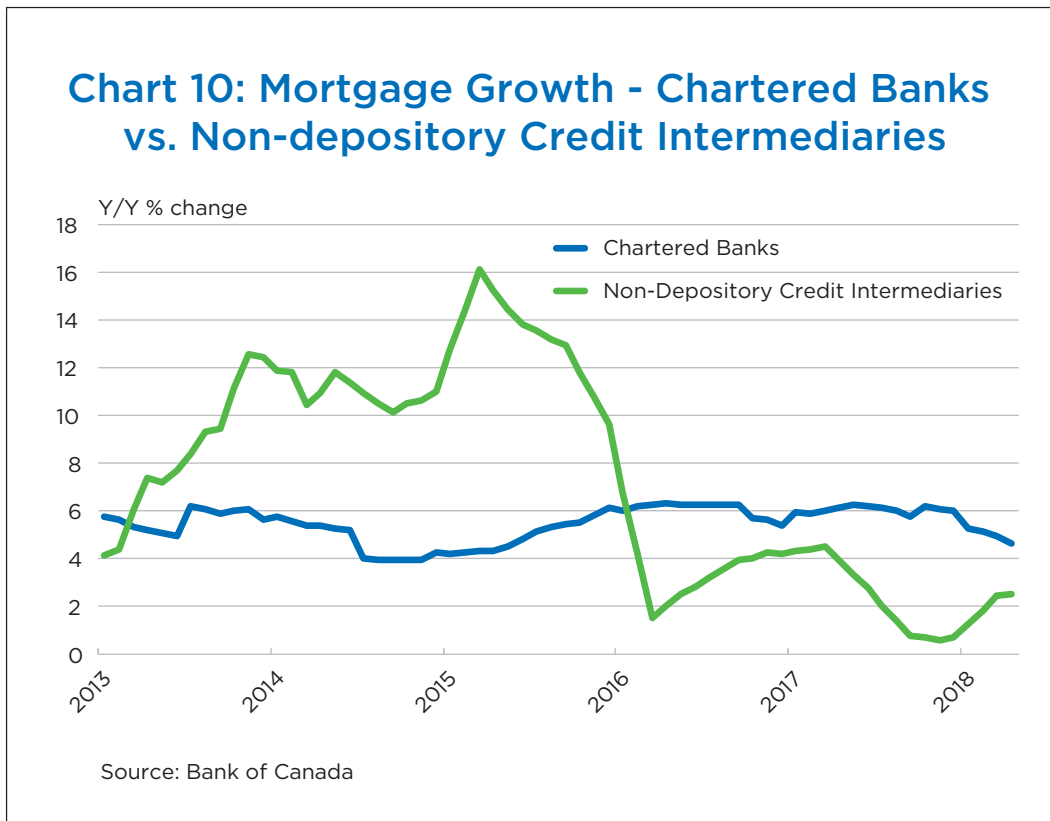
The key is thus ensuring that credit risk does not permeate into the core. If regulators and policymakers are interested in ensuring the ongoing stability of both the financial system and the housing market, protecting the core mortgage system from credit risk is vital.

Broadly, there does not appear to be a significant issue, given that the existing data suggests that credit quality is good and improving over time.

However, this again does not imply that Canada is completely insulated from credit risk. Rather, Canada needs to worry about a hidden credit quality problem – for example, whether or not low credit quality mortgages are being masked as high quality through documentation fraud on the part of borrowers or insufficient due diligence on the part of lenders, etc.

And from this perspective, there is at least one worrying trend: the rising importance of non-bank mortgage lenders and mortgage aggregators in Canada.

After the recession ended, mortgage credit extended by non-depository credit intermediaries (i.e. mortgage lenders that do not have access to deposits with which to fund a mortgage portfolio like banks and credit unions) grew significantly faster than any of their competitors. Between the end of 2013 and the beginning of 2015, year-over-year growth in mortgages held by these lenders averaged 11.3%, more than double the 4.8% average growth rate posted by the chartered banks (Chart 10).



These intermediaries, also known as non-bank lenders or mortgage finance companies (MFCs), had two distinct advantages over the larger incumbents during this time. The first was that they are not regulated to the same extent as the larger banks. If a bank wished to lend to a lower credit quality borrower, for example, it would be expensive to do so given the capital and liquidity buffers needed to safeguard against the higher probability of loss. Because those barriers are not applied to MFCs, they can tap a far wider range of potential borrowers at a much lower cost.

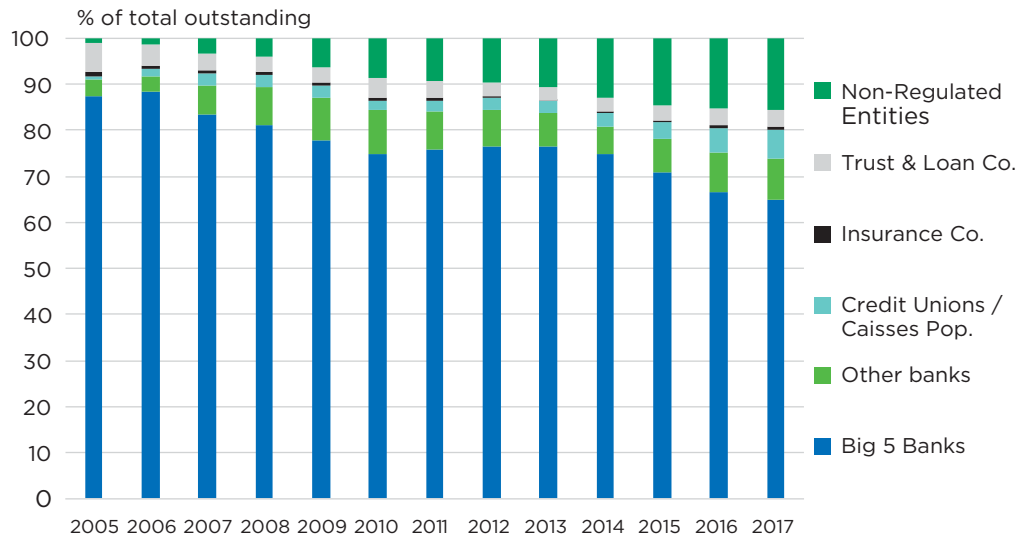
Up until 2013, that regulatory advantage was largely dwarfed by the fact that banks could offer more competitive interest rates. By nature of their size and reach, banks have access to a much deeper and more liquid funding pool than smaller players – lower funding costs mean banks can pass on savings to customers in the form of lower interest rates.

However, the second advantage for MFCs came in 2013, when CMHC implemented a policy designed specifically to increase access to the NHA MBS and CMB programs for a wider range of lenders. CMHC has an annual allotment of mortgages it can insure and securities it can guarantee. Prior to this change, the large majority of that annual allotment was taken by the

largest banks in Canada, leaving little access for other players in the market. In order to increase competition within the mortgage market, CMHC's 2013 policy basically allocated the annual cap equally among participants (Coletti et al, 2016). Being able to fund one's mortgage portfolio through the NHA MBS and CMB programs, according to the Bank of Canada, provides a significant funding advantage, on average, from 11 basis points for NHA MBS to 40 basis points for CMBs relative to senior unsecured debt (Cateau et al, 2015). Lower funding costs imply that a lender can offer borrowers a more competitive interest rate.

In simple terms, MFCs could then compete on par with the larger incumbent players from a mortgage rate perspective. And because they could tap lower credit quality borrowers, while also undercutting the banks further due to lower regulatory costs, they were able to grow much faster. Between 2005 and 2017, the share of NHA MBS outstanding accounted for by non-regulated entities, which include both MFCs and mortgage aggregators, rose from just 1.2% in 2005 to 15.8% as of 2017 (Chart 11).

Chart 11: NHA Mortgage-Backed Securities – Remaining Principal Balance Outstanding, by Type of Issuer



Source: Canada Mortgage & Housing Corporation

This presents a potential moral hazard problem that could result in lower credit quality mortgages penetrating the core mortgage finance system. Less regulatory oversight and the ability to tap lower credit quality borrowers gives these lenders the incentive to do so. Moreover, a recent Bank of Canada study in 2016 suggests that banks are now purchasing some mortgages directly from MFCs. This is because MFCs have a comparative advantage when tapping mortgages that originate from mortgage brokers, an increasingly popular way for households to negotiate mortgage rates. Rather than establishing the infrastructure to deal with the wide network of brokers across the country, banks purchase the mortgages directly from MFCs in order to diversify their mortgage portfolios beyond the locations where they have a physical presence.

From a risk perspective, there are now two ways for credit risk to potentially penetrate the core mortgage finance system. Mortgages originated from MFCs are now entering the banking system directly via purchases, while also being securitized into NHA MBS for funding purposes. According to the Bank of Canada, mortgages originated by MFCs also tend to have higher loan-to-income ratios and higher total debt service ratios relative to those originated by banks and credit unions, meaning the loss risk is also greater. Between 2013 and 2016, the Bank of Canada calculated that 29% of mortgages originated by MFCs had loan-to-income ratios beyond 450% and total debt service ratios beyond 42%, the latter of which is generally too high to be eligible for mortgage insurance (Bilyk et al, 2017).

For this to be a problem, however, these lenders need to be originating low credit quality mortgages and masquerading them as high credit quality mortgages since the data suggest that credit quality is getting better both broadly and within the NHA MBS system. This can occur if mortgage brokers and less-regulated MFCs are not conducting the same level of due diligence as their larger bank counterparts in ensuring that originated mortgages conform to the standards in order to be insured. These include borrowers not exceeding standard total and gross debt service ratios, maximum loan-to-value ratios, confirmation of a borrower's income, income stress testing, etc. Should they be lax in their underwriting processes, then it is possible that a lower credit quality borrower could pass the tests that they might have failed at a larger, more stringent lender.

8. Mortgage aggregators add another layer of confusion

Mortgage aggregators take this potential risk one step further. Aggregators take an originating firm's mortgages and securitize them on their behalf, putting an additional layer of obscurity between the originator and the final investor. Now, an investor depends on both the originator and the aggregator to have conducted their due diligence on their behalf, presenting one more layer in which credit quality can be muddled.

Moreover, aggregators do not deal only in residential mortgages, as one might assume. It is within CMHC's framework to insure multi-family mortgages - mortgages extended to developers, renovators and others that are building or purchasing more than a single unit of housing at a time. These mortgages, according to the Bank of Canada, originate from the same MFCs discussed earlier, many of which also have multi-family and commercial lending arms (Coletti et al , 2016). Mortgage aggregators play a role in establishing a wider network of potential investors that might be interested in gaining exposure to the Canadian housing market at an earlier stage than when a homebuyer is purchasing a home. The risk then is potentially higher as investors are buying into an income stream backed only by the underlying plot of land and the potential to develop that into housing rather than a final product with a firm market value. The mortgage underwriting process is also far different for a multi-family mortgage than a residential mortgage; instead of income testing and stress testing, it involves ensuring a borrower has sufficient net worth and that the building/property has gone through a proper appraisal, environmental assessment and other inspections. These complications raise the concern that investors may not be fully aware of the level of credit risk when purchasing an MBS backed by multi-family mortgages.

9. A lot needs to go wrong before this happens

There are several mitigating factors that suggest that the risk that low credit risk is penetrating the core mortgage system is lower than it may sound. The first is that MFCs and other non-deposit-taking lenders depend heavily on securitization to fund their mortgage portfolios. The Bank of Canada pegged this share at over 50% as of the 4th quarter of 2015 (Coletti et al, 2016). CMHC is not unaware of the possibility and risk of low credit quality mortgages entering the system – there are strict regulations around the “performance” of the insured mortgages that make their way into NHA MBS and CMBs. Should delinquency rates on mortgages within any particular MBS issuance increase beyond a fairly small threshold, for example, lenders may lose their status as an “approved lender” of insured mortgages or as an “approved issuer” of MBS. The incentive for MFCs is thus in favour of ensuring that the credit quality of their mortgages remains high; otherwise they might lose access to their most important funding source. The same issue applies to aggregators, as well. Being an approved issuer implies that the same performance requirements apply, even if they are not the originator of the underlying mortgages.

Second, the heavy reliance on securitization also means that policy changes with regards to insured mortgages impact these lenders to a far greater degree. The recent B-20 guidelines that resulted in stricter rules around income testing and stress testing, for example, have had a significant impact on the growth of mortgages among these firms. The double-digit growth that occurred between 2013 and 2015 has since slowed to less than 1.5% year-over-year in the past 12 months (Chart 10). This is a positive sign – it suggests that these firms are actually responding to policy changes and that they were likely following the rules closely enough for them to have had an impact. If they had been skirting the rules all this time, then they would continue to do so and the stricter rules would have had no impact.

Lastly, a 2015 compliance review of mortgage brokers in Ontario, conducted by the Financial Services Commission of Ontario (FSCO), noted that “in general, the majority of mortgage brokerages understand the requirements of the Mortgage Brokers, Lenders, and Administrators Act (MBLAA), and FSCO’s expectations for brokerages to have complete policies and procedures to govern their day-to-day activities and ensure compliance with the legislation.”

It noted that policies and procedures appeared to be adequate given the nature, complexity and size of the brokerages examined. However, it did find an “unacceptable decline” in the level of compliance regarding public relations material and disclosure requirements.

Ultimately, even if there were a significant issue, non-bank mortgage lenders are actually quite a small part of the mortgage market – in total, they represent just 3.6% of outstanding mortgage credit (Chart 7). Though this likely understates the full role played by these firms given that they account for at least 10% of total NHA MBS and CMB outstanding, they are still dwarfed by the larger segments of the market, such as that of banks and credit unions.

And even if losses did begin to mount, those losses would still have to exceed CMHC’s own capital buffer held to absorb such losses and the explicit backing of the insured mortgage market by a federal government in relatively good fiscal standing. They would also have to be large enough to exceed the well-capitalized buffers of the actual banking system, if losses were to ever spread and cause a drop in liquidity severe enough to exceed the Bank of Canada’s ability to step in and provide emergency liquidity through its traditional programs and through extraordinary programs like the IMPP; not to mention the Bank of Canada itself notes that mortgages originated by MFCs tend to have slightly higher credit scores and lower arrears rates relative to those originated by banks and credit unions (Coletti et al, 2016).

What about private lenders?

More recently, concerns have been raised about the spectre of a housing bubble due to the growth of private lending in the mortgage market – private citizens using their own capital to lend to borrowers. Several news articles have exposed this phenomenon.¹

Fundamentally, the risk to the financial system and the economy stemming from private lending is relatively small. Even if the market were large, it is important to understand that private loans stand outside of the broader financial system. Even if lenders were originating mortgages to highly-vulnerable, low credit quality borrowers and those borrowers began to default, the losses would most likely impact only the lenders themselves. There is notionally no connection between private lenders and the broader financial system, so there would be no way for losses to impact credit conditions and trigger a domino effect of losses.

There is, however, a common concern that the activities of private lenders might trigger a domino effect of declining home prices that drags down the rest of the housing market. However, a decline in home prices, even one significant enough to push borrowers underwater (i.e., their mortgage is larger than what the house is worth), does not automatically trigger delinquency or force the borrower into fixing the situation. A shift in home prices does not cause lenders to reassess all of the properties that underlie its mortgage portfolio, nor do lenders go after borrowers who fall underwater. So long as borrowers continue to make consistent mortgage payments, a cyclical or even structural decline in home prices does not change the status quo.

However, it does mean that borrowers are stuck with their current lenders and in their current situations as any move to refinance their home, take out additional equity or switch lenders results in a re-appraisal of the home, exposing the negative equity situation.

And contrary to the US experience, borrowers cannot simply walk away from their homes if they owe more than the house is worth. Canada's loan system operates on a recourse basis – in a default situation, a lender can go after a borrower's other assets to make up the amount owed. So while borrowers in the US were likely to walk away from homes, leading to the bank holding the full loss on the asset and the burden of short-selling the property, this is less likely to occur in Canada.

¹ <https://torontolife.com/real-estate/how-private-lenders-and-debt-crazed-homebuyers-are-pushing-torontos-real-estate-market-to-the-brink/>

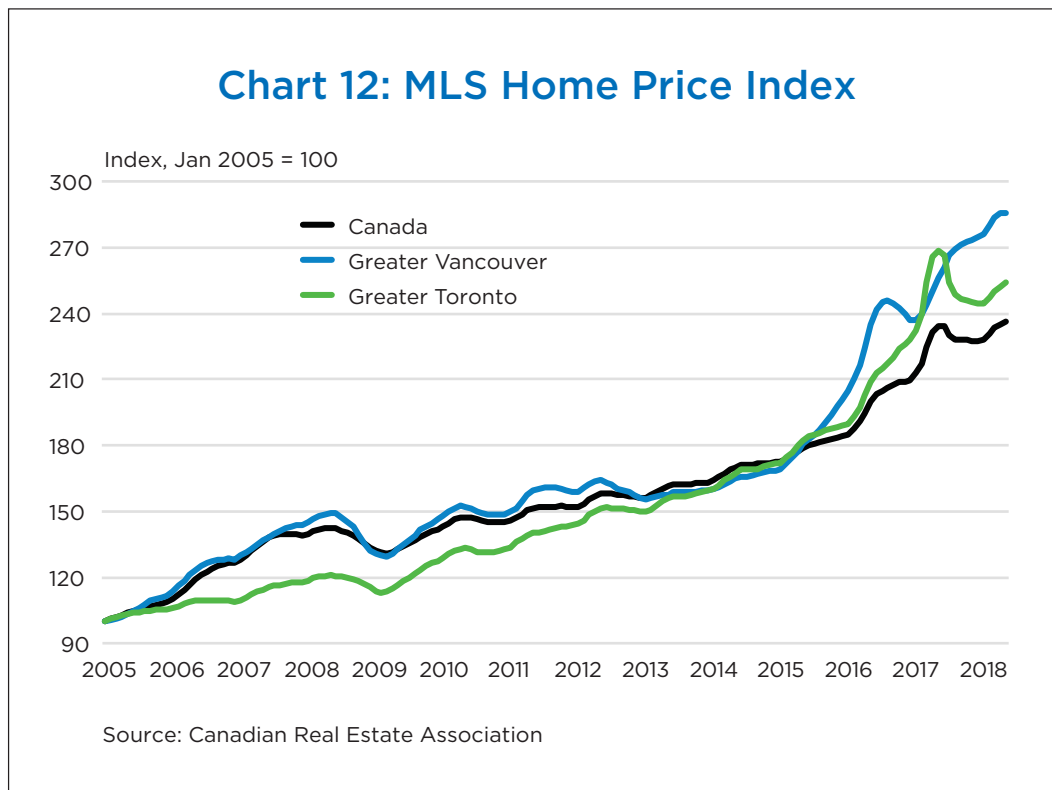
10. Canada's biggest housing risk is also the most obvious

Canada's mortgage finance system ultimately gives us both cause for concern and some peace of mind. There are clear pockets of risk in the form of mortgage finance companies, mortgage aggregators, and the exposure that the bigger banks and the NHA MBS system have to mortgages they originate. The possibility that credit risk is a growing problem is all the more serious given record levels of household debt. Keeping track of whether credit migration is occurring (i.e. a shift in average credit scores) will thus be key to ensuring the ongoing stability of Canada's housing market.

However, as of yet, there is no evidence of something sinister building beneath the surface, which means the biggest risk to the housing market still remains a more general correction. And the most likely trigger of that is either an increase in interest rates pushing borrowers into difficult financial straits or a shock to the unemployment rate, or both.

In fact, we are already in the midst of the former. The Bank of Canada has raised interest rates on four occasions since last year, pushing its Overnight Rate target from 0.50% to 1.50%. Mortgage rates have followed suit, with the rate on 5-year fixed mortgages having increased by roughly an equal amount over the same time frame, according to CMHC. OSFI also implemented its much-debated B-20 guidelines, which, among other things, enforced more stringent income verification processes and new stress testing rules on uninsured mortgages. Alongside a series of other regulatory measures implemented by the governments of BC and Ontario, such as surtaxes on foreign buyers, the housing sector has faced enormous headwinds in recent months.

Existing home sales have, as a consequence, fallen by more than 20% since the spring of 2016 and are now at a five-year low, according to the Canadian Real Estate Association (CREA). Home prices have not been as responsive – on an average basis, all of the gains recorded since the beginning of 2016 have been wiped out. However, average prices reported by CREA tend to be skewed by the composition of sales. On a quality-adjusted basis, prices fell by less than 3% and are already on their way back up. Even in the Greater Toronto Area, the MLS home price index fell by 9%, but has already stabilized. Prices in the Greater Vancouver Area recorded an even milder 4% decline and have since grown by 21% (Chart 12).



Whether there will be further downward pressure on prices remains an open question. The fact that home sales are so low while home prices appear to have stabilized could speak to a fundamental imbalance between supply and demand in Canada's major cities, or to the possibility that more downward pressure is yet to come.

The key to answering that question is to gauge the vulnerability of households to rising interest rates. Numerous surveys had indicated that a significant minority of borrowers would not have been able to afford even a 1 percentage point increase in interest rates prior to the recent hiking cycle.² Several rate hikes in, and more recent surveys are confirming that many Canadian households are feeling the pinch.³

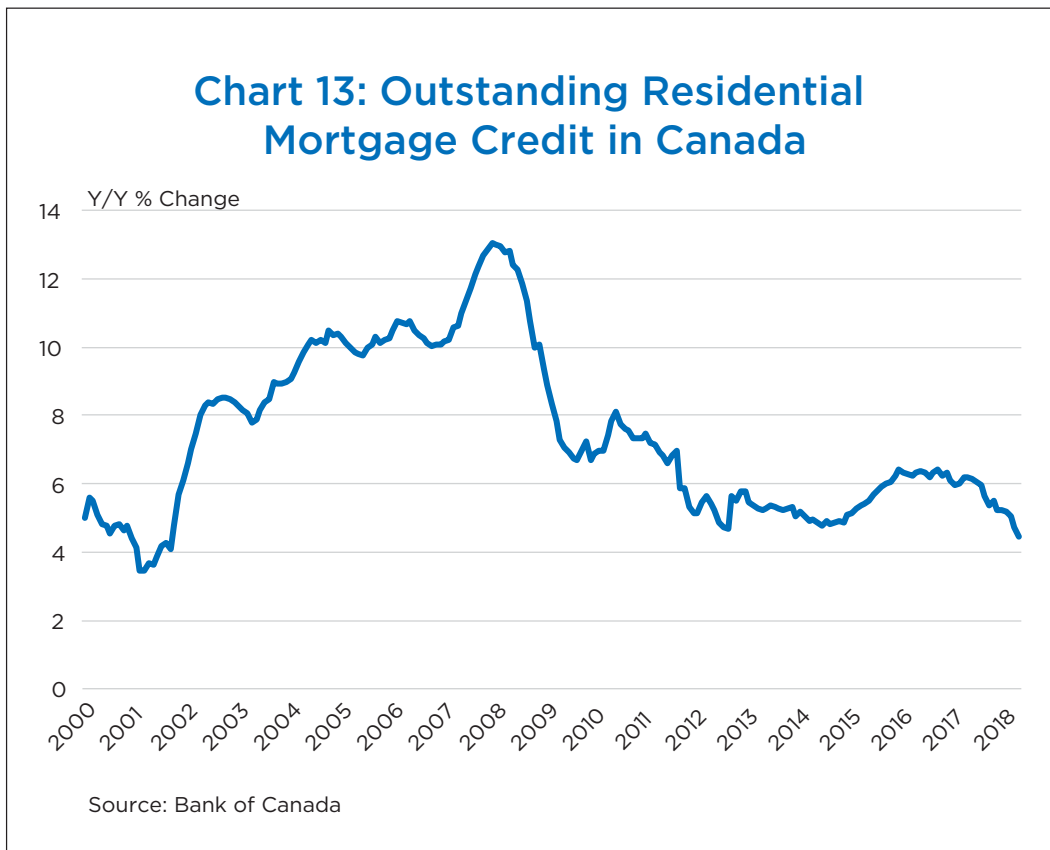
A recent study by the Bank of Canada showed that, among regulated lenders such as banks and credit unions, 22% of borrowers who took out uninsured mortgages (i.e. they were able to put down a 20% down payment) between 2014 and 2016 had loan-to-income (LTI) ratios exceeding 450% – a level considered to carry a high level of vulnerability to rate hikes. Broken down

² <https://www.cbc.ca/news/business/transunion-debt-interest-rates-1.3759844>

³ <https://mnpdebt.ca/en/blog/trouble-ahead-canadians-increasingly-feeling-the-impact-of-higher-interest-rates>

by income bracket, they also found that the poorest borrowers were the most likely to be over-indebted – 44% of those borrowers exceeded 450% LTI. This is potentially a serious vulnerability as we do not know whether lower-income Canadians have the ability to shift consumption and continue to meet their mortgage obligations as interest rates rise.

More broadly, the evidence does show that both existing and prospective borrowers are responding to the interest rate increases, as mortgage growth is slowing steadily. On a year-over-year basis, household mortgage growth hit 4.4% in May 2018, its slowest pace since 2000 (Chart 13). The combination of rising rates, persistently high home prices, low home sales and slowing credit growth point to the strong possibility that further downward pressure on home prices is still in the cards. However, that is far from certain, and even then, that pressure is likely to occur over time as rates slowly rise.

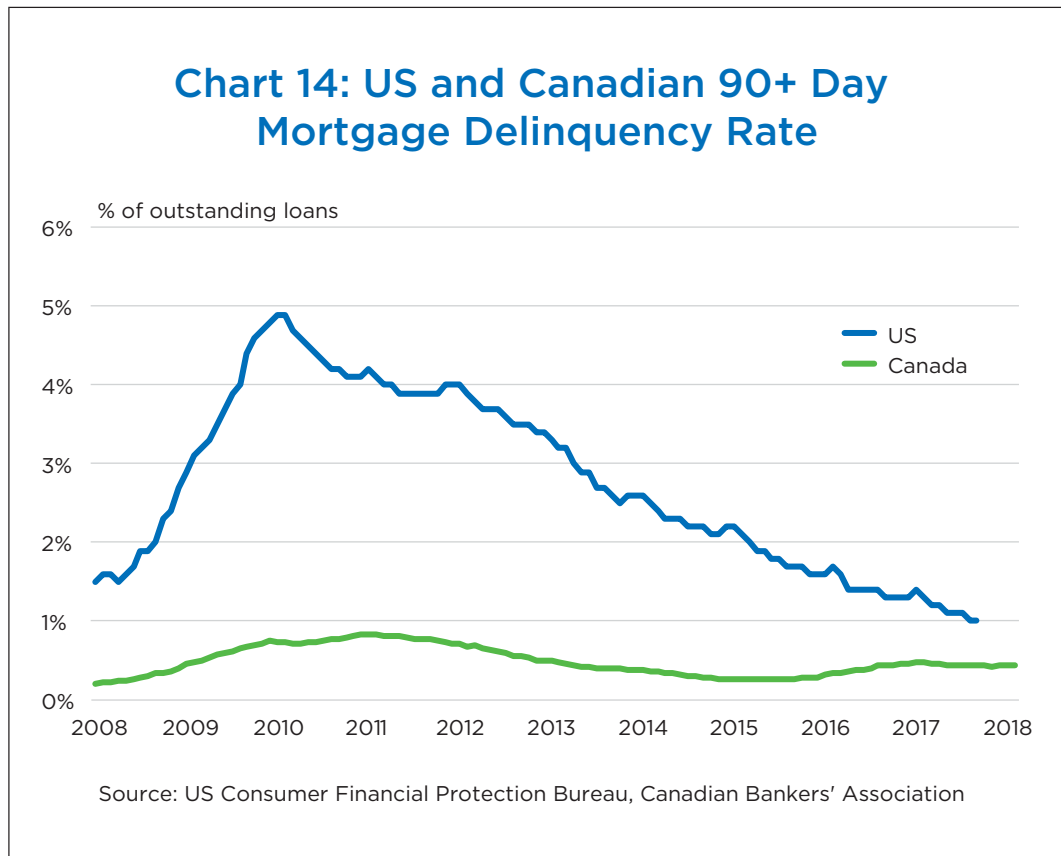


The potentially larger risk to the housing market is if the unemployment rate were to suddenly increase sharply. This is certainly a possibility given the potential impact of escalating trade tariffs. And if highly indebted borrowers are struggling to meet their mortgage obligations in a rising rate environment, that

struggle would be far more difficult should Canadians start losing their jobs in significant numbers. The risk from an increase in unemployment, however, is not necessarily clear.

Take, for example, Alberta’s experience in 2014. After oil prices crashed, the provincial unemployment rate doubled from 4.4% to 9%. Yet, despite the 118,900 increase in unemployed Albertans, the mortgage arrears rate rose by just 0.2 percentage points, according to the Canadian Bankers’ Association (Chart 14).

Relative to the 3.4 percentage point increase in delinquencies recorded in the US between 2008 and 2010, Alberta’s mortgagors appear to have weathered the oil downturn quite robustly. This particular shock was obviously concentrated in one sector and had little knock-on effect on the broader financial system. However, the miniscule increase in mortgage delinquencies speaks to the stability of the housing market. No doubt the impact on the housing market would be far larger in the event of a coordinated, nationwide recession triggered by trade, but to what degree is an unknown.



11. Concluding remarks

If there is one key takeaway from this discussion, it is that there are far more intricacies in the housing market than meet the eye. Looking solely at home prices and household debt levels overlooks both the complexity of the mortgage finance system and the ingredients necessary for Canada's record debt levels to translate into a broader economic crisis.

From a financial stability perspective, the most important factor is that credit quality is fundamentally strong and even getting better over time. Without low credit quality mortgages permeating the financial system, Canada remains relatively insulated from the kind of economic shock that most fear when looking at high-level indicators.

There are several potential risks worthy of serious scrutiny, however. The activities of less-regulated mortgage finance companies, mortgage aggregators and other non-bank lenders and their growing role in the broader mortgage finance system are certainly cause for concern. So, too, is the vulnerability presented by the relatively high concentration of highly leveraged borrowers.

However, the overall risk presented by housing does appear to be relatively well-contained, begging the question that if these levels of home prices are not being driven by unsustainable growth in bad credit to over-indebted households, then what factors are driving home prices up so high? A possible answer, though unpalatable, is that homes are fairly priced. That contrary to Canada's notion of fairness and equality, the laws of supply and demand have simply pushed the fair market price of housing in major markets beyond what many can afford. This could very well be what Canada is today: a country of world-class cities that are no longer the bastions of equal opportunity for homeownership they once were.

12. Bibliography

1. Acharya, Viral V. & Richardson, Matthew. 2009. "Restoring Financial Stability: How to Repair a Failed System." John Wiley & Sons, Inc.
2. Baily, Martin N., Litan, Robert E., & Johnson, Matthew S. November 2008. "The Origins of the Financial Crisis." Initiative on Business and Public Policy at Brookings. Fixing Finance Series - Volume 3.
3. Bilyk, Olga, Ueberfeldt, Alexander, & Xu, Yang. November 2017. "Analysis of Household Vulnerabilities Using Loan-Level Mortgage Data." Bank of Canada Financial System Review.
4. Calabria, Mark. March 2011. "Fannie, Freddie, and the Subprime Mortgage Market." Cato Institute Briefing Papers No 120.
5. Cateau, Gino, Roberts, Tom, & Zhou, Jie. December 2015. "Indebted Households and Potential Vulnerabilities for the Canadian Financial System: A Microdata Analysis." Bank of Canada Financial System Review.
6. Coletti, Don, Gosselin, Marc-Andre, & MacDonald, Cameron. December 2016. "The Rise of Mortgage Finance Companies: Benefits and Vulnerabilities." Bank of Canada Financial System Review.
7. Gorton, Gary B. September 2008. "The Panic of 2007." NBER Working Paper Series. Working Paper 14358.
8. Gravelle, Toni, Grieder, Timothy, & Lavoie, Stephane. June 2013. "Monitoring and Assessing Risks in Canada's Shadow Banking Sector." Bank of Canada Financial System Review.
9. Mordel, Adi, & Stephens, Nigel. December 2015. "Residential Mortgage Securitization: A Review." Bank of Canada Financial System Review.



CPA

CHARTERED
PROFESSIONAL
ACCOUNTANTS
CANADA

277 WELLINGTON STREET WEST
TORONTO, ON CANADA M5V 3H2
T. 416 977.3222 F. 416 977.8585
CPACANADA.CA

