Revitalizing The American Housing And Mortgage Markets: Are There Lessons To Be Learned From Canada's Recent Experience

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This paper compares the housing and mortgage finance systems in the United States and Canada. After examining these systems it goes on to explore how the two countries' systems affected the performance of the United States and Canadian economies, finance and housing during the recent financial meltdown. Finally the paper looks at whether there are lessons that could be learned from the recent mortgage and housing crisis.

Arthur W. Donner and Douglas D. Peters

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Arthur W. Donner and Douglas D. Peters

Executive Summary

The economies of the United States and Canada have many similarities as both countries share a continent and have extensive trade and investment links, including a free trade agreement. Of course the American economy is roughly ten times the size of the Canadian; however under normal conditions the relative importance of the housing and mortgage markets in both countries are roughly similar in relation to their respective GDPs. But the effects of the 2008-2009 recession were much milder in Canada and markedly different in the housing and mortgage markets. This was the result of differing systems and differing government involvement in both housing and mortgages.

What accounted for the much shallower Canadian recession in 2008-09, the stronger economic recovery and the comparatively healthier housing sector than in the U.S.? And what policy lessons can one extract from the stronger Canadian housing and mortgage market experience?

Stripped down to some core essentials, the following seemed to play an important part in explaining the different housing and mortgage finance patterns pre-dating, during, and in the aftermath of the Great Recession.

- Canada experienced a much shallower run up in housing prices 2000 to 2007 than in the U.S. At the same time, the sub-prime mortgage market did not take hold in Canada to the extent that it did in the United States.
- Most mortgages in Canada are originated and retained by the original lending institutions and the original lender has to continue to service the mortgage even when it is sold to a third party. This enabled both the lender and the homeowner to renegotiate mortgages more easily in Canada than in the United States.
- A higher proportion of Canada's mortgage market is funded by stable retail bank deposits than is the case in the U.S., where there is a greater reliance on secondary wholesale sources of funds. This is also consistent with the fact that Canadian banks have turned out to be more prudent with respect to the mortgages they offer, since these mortgages mostly remain on their balance sheets.

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- ***Another major difference is that mortgage interest rate deductibility in the United States encourages leveraged borrowing by the householder. This is not the case in Canada.***

The following expands upon some of the regulatory and institutional differences between the two countries.

There is considerable government involvement in housing and mortgages in both the United States and Canada. Taxation policies differ in that mortgage interest is income-tax deductible in the United States and is not deductible in Canada. This leads to a more stable housing market in Canada as houses are less levered. Neither imputed rent of owner-occupied dwellings nor the capital gains on the sale of such dwellings are taxed in either country.

Both countries have well-developed mortgage-default insurance systems with large government involvement. Both countries securitize mortgages but in the United States securitization is vastly more important than in Canada, where it is used less frequently. The mortgage market in the United States is dominated by many mortgage originators selling mortgages to large banks for securitization. In Canada mortgages are more likely to be originated in local branch banks and held by those banks.

The term structure of mortgages differs in the two countries with the standard mortgage in the United States a 30-year fixed term and in Canada a 5-year fixed term amortized over 25 years. This means that the interest rate risk falls more heavily on the borrower in Canada than is the case in the United States. In other words the mortgage business in the United States is more borrower friendly: in Canada it is more lender friendly.

There is also a political difference with respect to the influence of major financial institutions in the two countries as it affects housing, banking and mortgage finance. In the United States financial institutions are substantial contributors to political parties and candidates. In Canada corporations are prohibited from contributing to political parties or candidates. Thus financial sector lobbying is likely to be more effective in the United States than in Canada.

The two banking systems also differ in that in Canada the 5-year mortgage term allows banks to hold the majority of their mortgages on their books; in the United States the much longer term of the mortgages means the most mortgages are securitized to remove the interest rate risk and reduce capital requirements.

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Mortgage-default insurance in Canada is largely provided by CMHC, a crown corporation that insures mortgages for 100 per cent thus making such insured mortgages crown guaranteed and thus zero risk for capital purposes. Thus, mortgage lending in Canada is more conservative as there is little sub-prime mortgage business.

Both countries have seen an explosive growth in the shadow banking sector which has little or no formal regulation. The result has been that a great deal of systemic risk has been added to the financial systems in both countries. This is one area in which both countries need to improve regulation.

In summary, a key lesson from Canada's experience is that a well-regulated and government supported mortgage finance system adds to the stability of that market much more than a largely unregulated, purely private market system. This is exemplified by the largely unregulated initiation of mortgages in the United States with the originators having little or no interest in whether the mortgage will ever be repaid; the process continues on to the banks that securitize the mortgages and the investment banks that sell the securities to investors.

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Introduction: The Great Recession, the Explosive Growth of Shadow Banks and the Collapse of the Sub-Prime Housing Market

> "The ongoing problems in the U.S. housing market continue to impede the economic recovery. House prices have fallen an average of about 33 percent from their 2006 peak, resulting in about $7 trillion in household wealth losses and an associated ratcheting down of aggregate consumption. At the same time, an unprecedented number of households have lost, or are on the verge of losing, their homes. The extraordinary problems plaguing the housing market reflect in part the effect of weak demand due to high unemployment and heightened uncertainty. But the problems also reflect three key forces originating from within the housing market itself: a persistent excess supply of vacant homes on the market, many of which stem from foreclosures; a marked and potentially long-term downshift in the supply of mortgage credit; and the costs that an often unwieldy and inefficient foreclosure process imposes on homeowners, lenders, and communities." (Ben S. Bernanke, The U.S. Housing Market: Current Conditions and Policy Considerations, Jan. 4, 2012. p1.)

The Great Recession of 2008 and 2009 started with the collapse of the American sub-prime mortgage market. That collapse quickly spread into the broader mortgage market, investment banks, commercial banks, and the capital market. And what initially began as a financial and housing crisis in the United States in 2008 spread rapidly and dramatically across the entire developed world.

The causes of the economic and financial meltdown were both numerous and multi-faceted, and there is no simple explanation behind them. Some of the cause of the decline, however, can be traced to dangerous and undue growth and speculation in the financial sector combined with a stepping back in regulatory oversight and responsibility in the United States financial markets.

It is important to note that in the twenty years preceding the 2008-09 financial meltdown, most of the growth in financial intermediation in the United States centered not on the commercial banks, which were regulated by a number of government agencies and protected by the Federal Reserve System, but rather in the explosive growth in the non-bank or the so-called "shadow" bank financial system. The lightly regulated, or unregulated, shadow banking system is

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composed of broker-dealers, hedge funds, private equity groups, structured investment vehicles and conduits, money market funds and non-bank mortgage lenders.

The unusually rapid expansion of the non-bank financial system imposed massive systemic risk on the entire economy. Shadow bank institutions, like ordinary banks, were dependent on their ability to continually access short-term funds. But the shadow banks were also highly levered and often lacked adequate capital to cover their huge liquidity risks. And of course, unlike the commercial banks, the official oversight on both risk and leverage was light or nonexistent. In addition, the shadow banks did not formally have the ultimate protection of the Federal Reserve.

The fact that the "Great Recession" never turned into another "Great Depression" can also be traced to substantial and timely government and central bank intervention. While central banks acted with lightning speed in terms of the monetary levers, in general the fiscal responses were slower. Indeed, the avoidance of a global economic catastrophe was primarily the result of the scale and timeliness of governmental policy actions both in the United States and around the world. The three-pronged policy approach in the advanced countries included massive government spending, the bailing out and taking over of many failing financial institutions, and of course, the imposition of the easiest monetary policy since the 1930s.

As Henry Kaufman observed in a Financial Times web site article on April 27, 2009, it was the massive monetary policy and regulatory failures which accounted for the collapse of the sub-prime housing market.

> "The Federal Reserve has been hobbled by at least two major shortcomings that were primarily responsible for the current and several previous credit crises. Its failure to spot the importance of changing financial markets and its commitment to laissez faire economics were big mistakes and justify a fundamental overhaul of the Fed."

The recession in the United States was which statistically ended in the middle of 2009 was the longest and deepest downturn since the depression of the 1930s. The financial collapse became a worldwide phenomenon which is still being played out. And unfortunately, the housing sector meltdown in both real and financial terms in the United States is only currently providing some hope that it is bottoming out.

The United States and Canadian Housing Experiences Were Vastly Different Over the Past Decade

The economies of the United States and Canada have many similarities as both countries share a continent and have extensive trade and investment links, including a free trade agreement. Of course the American economy is roughly ten times the size of the Canadian; however the relative

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importance of the housing and mortgage markets in both countries are roughly similar in relation their respective Gross Domestic Products (GDP). The two countries also share similar social and cultural attitudes with respect to supporting housing and home ownership, but the respective details are quite different. Interestingly, home ownership rates have been similar in the two countries. In 2006 the American rate home ownership rate was about 67 per cent and the Canadian rate was a fraction higher at about 68 per cent. Because of the collapse of the American sub-prime housing market, the home ownership in the United States has recently dropped to about 65 per cent.

The decline in home ownership and the difficulty in obtaining mortgages has prompted economist, Diane Swonk in a March 2012 article to suggest that the United States might become a "Rental Nation." She notes that, "The demand for single-family rentals... has accelerated because those who can't qualify for a mortgage or are afraid to buy still want the amenities associated with living in a house instead of an apartment."[1]

In the United States, housing construction has traditionally been an essential and important growth sector in the domestic economy. And yet housing construction shrunk from six per cent of GDP in 2006 to a recent low of just over two per cent in 2011. When you add in the effect of a major collapse in housing prices, the huge loss of direct and indirect jobs in the construction sector, the negative influence of the housing sector meltdown on the rest of the real economy was dramatic. It is no wonder that economists keep writing about how the American economic recovery from this financial crisis has been unusually slow and extremely painful.

Nonetheless, there is a growing sentiment among home builders and economists that the bottom of the long housing sector downturn may be at hand and that construction could actually increase in the year 2012. Builders are securing more permits, and the pace of housing starts rose in the fourth quarter of 2011. While it is still too early to confidently call a bottom to the housing sector in the United States, the evidence is certainly mounting in that direction.

The Canadian experience, both in macroeconomic terms and in the housing sector, was significantly easier and less disruptive than in the United States. Canada experienced a much milder recession in 2008-09 than did the United States and the Canadian housing and mortgage markets were far less affected than their American counterparts.

Chart A – Housing Starts – United States and Canada

[1] Diane C. Swonk," Rental Nation; Special Housing Market Edition," *Themes on the Economy*, Mesirow Financial, March 12, 2012.

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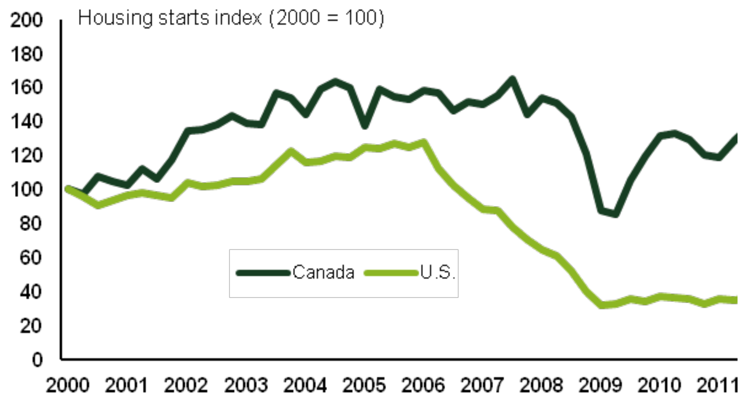
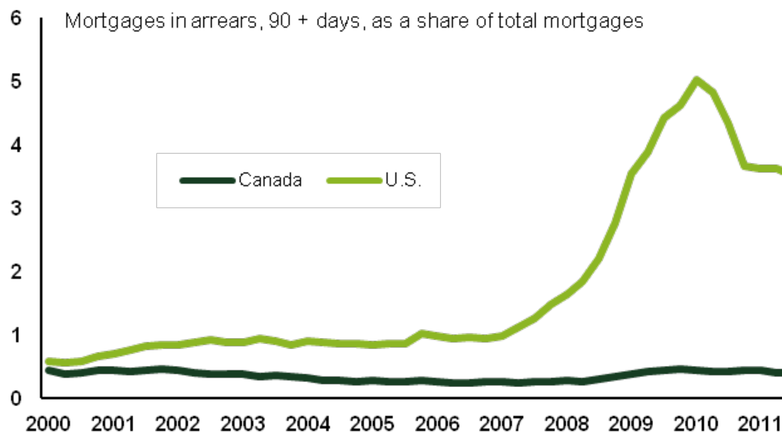


One of the most striking differences between the United States and the Canadian mortgage markets can be seen in the arrears and foreclosure data both preceding the beginning of the Great recession and since that time.

In 2007 in the United States about one per cent of all residential mortgages were in arrears for more than ninety days. In Canada the same rate was less than one-quarter of one per cent before the downturn began. By 2010 the mortgage arrears in the United States had reached a rate of five per cent of all mortgages. In Canada the same rate was less than 0.45 per cent.

Chart B – Mortgages in Arrears – United States and Canada



The difference was by a factor of one-tenth as is shown in the following chart. The United States rate is shown on the left-hand scale and the Canadian rate on the right-hand scale.

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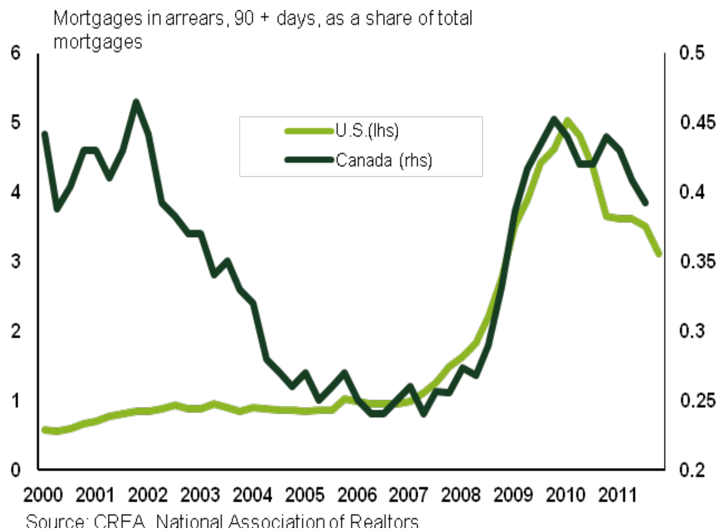
Chart C – Mortgages in Arrears – United States and Canada



Note in Chart C that the left-hand scale is the ratio of United States mortgage arrears and that the right-hand scale is the ratio of Canadian mortgage arrears. The patterns are similar through the recession but the ratios are much higher in the United States data.

There are several reasons behind these sharp country differences and those reasons will be discussed later in this paper.

It has been noted by a number of commentators and in a series of research papers that there are rather striking differences in the way that the two countries' housing and mortgage markets operate. Structural and regulatory differences became very important during and after the Great Recession began in 2008. In addition, there was a difference in the business cycle experience of the two housing sectors as well. That is:

- Canada did not experience a comparable housing price boom between the years 2000 to 2008, as was the case in the United States. Nor for that matter was the collapse in Canadian housing construction and prices during the Canadian downturn as pronounced as in the United States.
- As well, despite the fact that the American recession ended in the middle of 2009, housing construction and prices are still mired at close to the bottom of the recent financial meltdown period. In contrast, Canada's housing sector has continued to prosper both in terms of prices as well as in terms of new construction. As we point out later in

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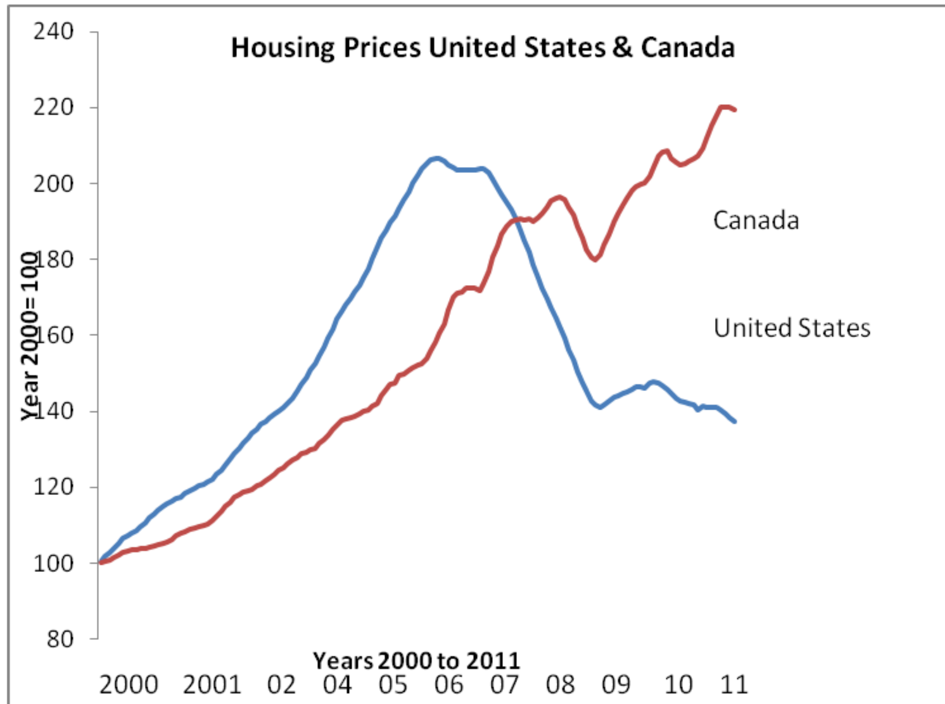
this paper, there are concerns about a housing correction in the two large urban markets of Toronto and Vancouver.

Chart D – Housing Prices – United States and Canada



Sources: S&P Case-Shiller 20-city composite, CREA. Both series are set at a value of January 2000 equalling 100.

This paper focuses on the housing and mortgage markets in the United States and Canada. We will first examine the economic effects of the recent housing and mortgage developments and contrast the effects in the two countries. Next we will look at the differences in government entities and programs in the two countries and the differing banking and mortgage institutions. Finally, we will examine these differences to see if there might be lessons or changes that could be of use to policy makers as they attempt to refine the legislation and conditions in the United States mortgage and housing markets.

An Overview of Key Structural and Regulatory Differences in United States and Canadian Housing Finance

The IMF recently published a paper which compared and contrasted how different countries managed their housing sectors, particularly the issue of housing finance. We have excerpted the following table from their report which focuses on the United States and Canada, since the table provides a valuable check list on the important differences.

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Perhaps one of the most striking differences is that on the surface Americans seem to be provided with a more favourable federal tax treatment than Canadians. That is, Americans are entitled to deduct the mortgage interest costs on owner-occupied homes, which is not the case in Canada. As well, Americans are permitted to deduct state and local property taxes on owner-occupied homes, while Canadians do not have a corresponding deduction. In addition, American investors are provided with a series of tax incentives relating to the provision of rental and low income housing. Once again, there is currently no comparable Canadian incentive, except that the Canada Mortgage and Housing Corporation (CMHC) does help finance low-income housing when Parliament provides funding.

With respect to mortgage insurance differences, government agencies play an important role in both countries; nonetheless, there are significant differences. The crown corporation CMHC provides mortgage insurance to the private lender of 100 per cent of the insured mortgage loan. For the two non-governmental mortgage insurers the Department of Finance of the Canadian government provides the private lender with a guarantee of up to 90 per cent of the mortgage loan should the private mortgage insurer be insolvent. In the United States the corresponding coverage ranges between 20 per cent and 30 per cent.

In the words of the IMF article,

> "On funding of mortgages, Canada has a federal Crown Corporation, the Canada Mortgage and Housing Corporation (CMHC), originally created in 1946 to house returning war veterans. It is the dominant mortgage credit insurer with a 100 percent explicit government guaranty of the loan amount through its National Housing Act (NHA) program (similar to the FHA in the United States), while privately insured mortgages have a 90 percent government guarantee of the loan amount. In Canada, insurance is mandatory for mortgages with loan to value ratio above 80 percent (the insurance covers the full loan amount for the full life of the mortgage). CMHC is also the only provider of insurance for large rental, nursing and retirement homes and is engaged in securitizing insured mortgages; at end-2010, the Canada Mortgage and Housing Corporation covered 96 percent of the securitization funding to residential mortgage credit in Canada."[2]

The IMF article notes that the tax systems of both countries exclude the imputed rental income from owner-occupied housing. The United States tax system, however, allows the deduction of major expenses of home ownership – the expenses of mortgage interest and state and local property taxes. Both countries exclude from tax the capital gains on home sales. Canada does have a first-time home buyer tax credit. For investors the IMF study concludes that the United

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[2] IMF, *Home Sweet Home: Government's Role in Reaching the American Dream*, pp. 26-27.

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States tax system is more lenient than the Canadian as it excludes from tax: the interest on rental housing bonds; the interest on owner-occupied mortgage subsidy bonds; has an exception from passive loss rules for $25,000 of rental loss; and has accelerated depreciation on rental housing.[3]

The IMF study notes that both the United States and Canada have public mortgage insurance; in the United States through the FHA and VA; in Canada through the CMHC. Private insurance is available in both countries with private coverage in the United States at 20 to 30 per cent of loan value and in Canada at about 90 per cent of loan value.[4]

Wholesale funding of home mortgages is available in both countries. Such securitization in the United States is available with explicit government guarantees through Ginnie Mae and with implicit government guarantees through the GSEs, Fannie Mae and Freddie Mac. In Canada securitization is through the National Housing Act (NHA) mortgage-backed securities, and through Canada Mortgage Bonds. In both countries there are corporate bonds issued by special facilities: in the United States by the GSEs; in Canada by the Canada Housing Trust.[5]

The following table excerpted from the IMF study highlights the various public sector related mortgage funding institutions in Canada and the U.S.

[3] *Ibid,* Table 6, p. 26.
[4] *Ibid.*
[5] *Ibid.*

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Table 7. Canada and United States Mortgage Funding

	Ginnie Mae, USA	Fannie Mae, USA	Freddie Mac, USA	CMHC NHA-MBS Program, Canada	Mortgage Bond Program, Canada
Government guarantee	Explicit	Implicit	Implicit	Explicit	Explicit
Ownership	U.S. government	Stock market quoted [1/]	Stock market quoted [1/]	Canadian government	Canadian government
Reason for establishment	Finance government-insured loans and veterans' housing loans.	Provide liquidity for mortgage market during banking crisis of 1930s.	Promote secondary market for S&Ls.	Lower mortgage costs for Canadian borrowers by providing low-cost financing to banks; increase the supply of mortgage funds; and increase the competitiveness of the mortgage lending sector.	Lower mortgage costs for Canadian borrowers by providing low-cost financing to banks; increase the supply of mortgage funds; and increase the competitiveness of the mortgage lending sector.
Inception	1938, split from Fannie Mae in 1968	1938, split from Ginnie Mae in 1968	1970	1985	2001
Social policy targets	Yes	Yes	Yes	No	No
Funding structure	MBS only	MBS and on-balance sheet	MBS and on-balance sheet	MBS and on-balance sheet	MBS and on-balance sheet
Own mortgage product	No	Yes	Yes	No	No

Sources: Thomas, R. (2004), Finance Canada, and author's estimates.

[1/] Until mid-2010.

Sources; Evridiki Tsounta, Home Sweet Home: Government's Role on Reaching the American Dream, IMF Working Paper, August 2011, p27, 28.

A Number of Studies Have Recently Been Published Focusing On Key Structural Differences in Mortgage Finance between United States and Canada

When we began our research on this topic, we were pleasantly surprised to find the existence of a number of rather useful studies and/or reports on the differences that explain why Canada seems to have avoided the worst features of the housing and mortgage debacle that so crippled the U.S. economy.

Four of the articles and reports are highlighted in this section.

Kris Cyganiak web site article, November 22, 2010

Kris Cyganiak, in a recent web site article, highlighted 10 key distinctions between the Canadian and U.S. mortgage markets that helped Canada avoid the severity of a United States style

mortgage crisis. We have set out below an abridged summary of the ten key distinctions cited by Cyganiak.[6]

1. A higher proportion of Canada's mortgage market is funded by stable retail bank deposits than is the case in the U.S., where there is a greater reliance on secondary wholesale sources of funds. This is also consistent with the fact that Canadian banks have turned out to be more prudent with respect to the mortgages they offer, since these mortgages mostly remain on their balance sheets.

2. The majority of mortgage securitizations in Canada are run through a government sponsored NHA-MBS program which is managed by the CMHC, a Crown corporation. The program only covers approved insured mortgages and provides investors with a timely payment guarantee. The mortgages may be insured by either the CMHC, which is 100% backed by a sovereign guarantee or other approved private insurers, which insure the mortgage 100% in case of borrower default and, in case of private insurer default, are 90% backed by a sovereign guarantee. This avoids many of the problems in the U.S. caused by the ambiguity of government sponsored enterprises (GSE) liabilities.

3. An important difference between the two countries is that the enforcement of Canadian mortgages term is not as tilted in the borrowers' favor as it is in the United States. In the U.S., lenders have little recourse — they can take the keys and settle relatively quickly, or sue and go through great expense for a potentially lengthy period. In Canada, when a lending institution takes back a negative equity loan, they can go after the borrower's other assets to pay down the mortgage debt.

4. Canadian financial institutions are not as reliant upon short-term lines extended by other financial institutions. The degree of reliance upon such funding in the U.S. is what caused excessive exposure to short-term swings in market sentiment, not to mention adverse incentive effects.

5. Adjustable rate mortgage (ARMs) resets caused many of the problems in the U.S. The closest Canadian product parallel to the ARM is the variable rate mortgage, which constantly is repriced as the prime and Bank of Canada overnight rates are changed. During the run up to the financial crisis, Canadian mortgage lenders did not engage in offering unrealistically low teaser introductory rates. Furthermore, in Canada, some variable rate products adjust the principal, not the payment. That is, on balance, the shock effect from interest rate payment resets in Canada is nowhere close to what caused much of the problem in the U.S.

[6] Kris Cyganiak, "10 Key Differences Helped Canada Avoid a US Style Mortgage Crisis," BuyRIC.com web site, November 22, 2010.

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6. Whereas Canada has an advantage with respect to a diminished shock risk in variable rate mortgages, the advantage goes to the U.S. for fixed rate mortgages. This is because the term for U.S. mortgages is usually fixed for 30 years, and the mortgage borrower has a one-way put option to put the mortgage back to the lender and refinance in a falling rate environment. This is generally done more easily and cheaply than in Canada.

7. Mortgage interest is deductible against taxes in the U.S. It generally is not in Canada, with some exceptions. That creates vastly different incentives to leverage one's home in the two markets, although it also makes Americans more heavily reliant upon borrowing through mortgages than Canadians who borrow proportionately more via non-mortgage loans.

8. The evolution of the mortgage products has been quite different in Canada versus the United States. Examples of Canadian innovation like long-amortization mortgage products are absolutely nothing like Ninja (no-income no-job and no-assets) mortgages and liar loans. Mortgage innovation was needed in Canada, but has been relatively more conservative.

9. Unlike many U.S. banks prior to the meltdown, Canadian banks continued to apply prudent underwriting standards. In other words, they have always checked, and continue to check, incomes, verify job status, ask for sales contracts, etc. Many of these important background questions seemed to have been lost during the euphoria stage of pushing the sub-prime mortgage business. Canadian banks approve mortgages by first using the 5-year posted mortgage rate as a baseline check, even though in normal markets the five year rate is materially higher than the rate on shorter maturities.

10. Appraisal standards are generally higher in Canada, where appraisals are more likely to low-ball estimates of property value before making the final decision on how much to lend. Appraisers are also more likely to be independent.

Alex J. Pollock, "Comparing International Housing Finance Systems"

Alex J. Pollock of the American Enterprise Institute wrote in an article, "Comparing International Housing Finance Systems" the following:

> "Canada makes a pertinent comparison for the U.S. It is in population and economic size much smaller, of course-about one-tenth in both cases-but is in many ways very similar.
>
> ...
>
> Mortgage lending is more conservative and creditor-friendly. Canadian mortgage lenders have full recourse to the borrower's other assets and income, in addition to the security interest in the house. This means there is less incentive for underwater borrowers to

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> "walk away" from their house and mortgage. No tax deduction for interest probably increases the incentive to pay down debt. Most Canadian mortgage payments are made through automatic debit of the borrower's checking account and can be matched to paycheck frequency, a technical but important behavioral point. Canadian fixed-rate mortgages typically are fixed for only up to five years. Subprime mortgages were a much smaller part of the market.
>
> This relative conservatism has meant that Canadian banks, the principal mortgage lenders, while experiencing some pressure, have come through the international financial crisis in much better shape than their U.S. counterparts, with mortgage delinquencies so far well behaved."[7]

David Min, the Centre for American Progress

In his article David Min of the Centre for American Progress observes how many critics of what went wrong in the United States have distorted some of the key differences between the United States and Canadian mortgage and housing markets in terms of the level of government intervention and attributed too much government involvement as the reason for the American difficulties.

Min observes that , "(i)n an effort to advance the argument that it was excessive government intervention, primarily through the moral hazard and market distortions created by the government sponsored entities Fannie Mae and Freddie Mac, that caused the mortgage crisis a number of observers, including the *American Enterprise Institute, The Washington Post, The Wall Street Journal, Marketwatch* and others have relied on incorrect or misleading claims to try to make the case that Canada's relative stability during the global bubble was due to the "free market" or private nature of its mortgage system. In fact, Canada's mortgage market experience shows quite the opposite."[8]

The important differences Min mentions are that Canada does not have a "Large market share for firms unregulated for safety and soundness; High numbers of mortgages originated by unregulated nonbank lenders; Dominant product is a long-term fixed-rate, prepayable mortgage."[9]

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[7] Alex J. Pollock, "Comparing International Housing Finance Systems," *National Mortgage News*, October 11, 2010.
[8] David Min, "The Facts about the Canadian Mortgage Banking System," *Center for American Progress*, August 2010, p.12.
[9] *Ibid.*

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Min goes on to state the further reason for the difference in the two countries' experience that saw, "the United States suffered its worst mortgage crisis in nearly a century while Canada remained relatively unscathed," was "the absence of unregulated lending channels in Canada," and because, "Canada tilts the playing field in favor of regulated lenders."[10]

Min concludes, "The key lesson Canada appears to teach us is that regulated, government-supported mortgage finance leads to greater sustainability and stability than its unregulated, purely private counterpart."[11]

CMHC, Comparing Canada and U.S. Housing Finance Systems, Just the Facts

The Canada Mortgage and Housing Corporation in its web-based publication "Just the Facts" emphasized the following Canada-U.S. distinction between the mortgage markets and public sector involvement. The following was highlighted in their report:

- "CMHC does not have a policy goal of increasing the rate of homeownership. Rather, we encourage the availability of housing across a variety of tenure types – homeownership, rental housing, supportive housing and transitional housing.
- In the U.S., federal policy actively encourages homeownership. Consistent with this policy, Fannie Mae and Freddie Mac, as government-sponsored enterprises (GSEs) were, before the recent economic downturn, required to support mortgages to low-income borrowers in specific neighbourhoods and geographic areas, as well as to other high-risk groups. At the same time, as privately owned companies, Fannie Mae and Freddie Mac endeavoured to maximize shareholder returns.
- In Canada, the *Bank Act* prohibits federally regulated banks from providing residential mortgages without mortgage loan insurance if the loan is greater than 80 per cent of the purchase price or value of the home. This insurance, which can be purchased from CMHC or private insurers, covers the entire amount of the loan and is for the entire life of the mortgage.
- In the U.S., lenders are not legally required to use mortgage loan insurance. However, because Fannie Mae and Freddie Mac are prohibited from purchasing uninsured mortgages when the borrower makes a down payment of less than 20 per cent, U.S. lenders will often require mortgage loan insurance.
- In Canada, the most common mortgage is the five-year fixed-rate closed mortgage. Historically in the U.S., the most common mortgage has been the 30-year fixed-rate open mortgage.
- In Canada, mortgages are typically "full-recourse" loans, which means the borrower continues to be responsible for repaying the loan even in the case of foreclosure. Lenders

[10] *Ibid*, p.13.
[11] *Ibid*, p. 22.

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can take legal action to recoup money from the homeowner if a foreclosed home is sold for less than the amount owing on the mortgage.

- The sub-prime market did not take hold in Canada to the extent that it did in the U.S. During the period leading up to the economic downturn the vast majority of mortgages in the U.S. were originated by third parties and were ultimately packaged and sold to investors who often did not understand the associated risk. Most mortgages in Canada are originated and retained by financial institutions whose goal is to maintain a long-term relationship with the borrower. Even when a mortgage is securitized, the originating lender most often continues to service the mortgage.
- The resilience of Canada's housing finance system during the recent financial crisis may be linked to a combination of factors, including prudent lending practices, a strong banking sector, careful regulatory oversight, supportive government involvement in mortgage insurance and securitization, and Canada's broader public policy backdrop, which does not place undue preference on homeownership.
- About 29 per cent of Canadian residential mortgages have been securitized, compared to about 60 per cent in the U.S. Almost all securitized Canadian mortgages are funded by mortgage-backed securities (MBS) guaranteed by CMHC under the National Housing Act. Over half of those MBS were held by the Canada Housing Trust, funded by CMHC-guaranteed Canada Mortgage Bonds (CMBs)."[12]

Review of the Differences noted between the U.S. and Canadian Mortgage Finance systems

Having looked at the various lists of differences noted by a number of authors we can now examine the common elements in those descriptions.

All the authors mention the heavy involvement of governments in both countries in the housing market. That involvement covers both government agencies with responsibility for housing as well as through taxation policies.

In the United States there are a number of government agencies involved in housing including, the FHA, the Veterans Administration, Ginnie Mae, Fannie Mae and Freddie Mac. In Canada the CMHC is the single government agency responsible for housing, though the federal Department of Finance and the Bank of Canada keep a wary eye on what is going on.

In taxation policy, neither country taxes the imputed rent on owner-occupied dwellings. The United States, however, allows the deduction of some of the major expenses of owner-occupied dwellings to be deducted from income including mortgage interest and municipal taxes. Neither

[12] Canada Mortgage and Housing Corporation, *Just the Facts*, "Comparing Canada and U.S. Housing Finance Systems" 2012.

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country taxes the capital gains from home sales nor allows capital losses from home sales to be deducted from income for tax purposes.

Both countries have well developed systems of mortgage insurance with both government and private insurers. In Canada federally-regulated financial institutions (banks and insurance companies) are required to obtain mortgage-default insurance when the borrower's down payment is less than twenty per cent. In the United States the FHA, Veterans Administration and Ginnie Mae plus Fannie Mae and Freddie Mac dominate the government sponsored insurance operations. In Canada CMHC is the government insurer with two private insurers receiving partial government guarantees. The differing insurance systems are mentioned by all authors.

Both countries have securitization systems and both have mortgage-backed bonds. In the United States there are securitizations of mortgages backed by government guarantees of Ginnie Mae and implicit guarantees of the GSEs, Fannie Mae and Freddie Mac. In Canada the guarantees of mortgages are under the National Housing Act through CMHC. Both countries have government agencies issuing bonds through conduits; in the United States through the GSEs, in Canada through the Canada Housing Trust and Canada Mortgage Bonds.

In Canada in 2010 roughly 70 per cent of the outstanding mortgage-default insurance was with the government owned CMHC, and the balance was with the two private insurers. It was reported that five-year fixed mortgages accounted for about 60 per cent of outstanding mortgages in 2010, with the balance either floating or a combination of fixed and floating. The same report noted that mortgage-default insurance was more popular in Canada than in the United States.[13]

The authors all mention the difference of the banking systems in the two countries. In the United States there is vast number of small banks with a fractured regulatory system involving both state and federal regulators. In Canada there are six dominant national banks with a single federal regulator. In Canada the banks are required to obtain mortgage insurance for all mortgages if the mortgage is greater than eighty per cent of the house valuation. There is no similar legal requirement in the United States but lenders usually require insurance.

The mortgage market in the United States is dominated by many mortgage originators selling mortgages to large banks for securitization. In Canada mortgages are more likely to be originated in local branch banks and held by those banks. Securitization is much more extensively used in the United States than in Canada.

Chart E – Degree of Mortgage Securitization - United States and Canada

[13] TD Securities , *Market Musings*, June 2010

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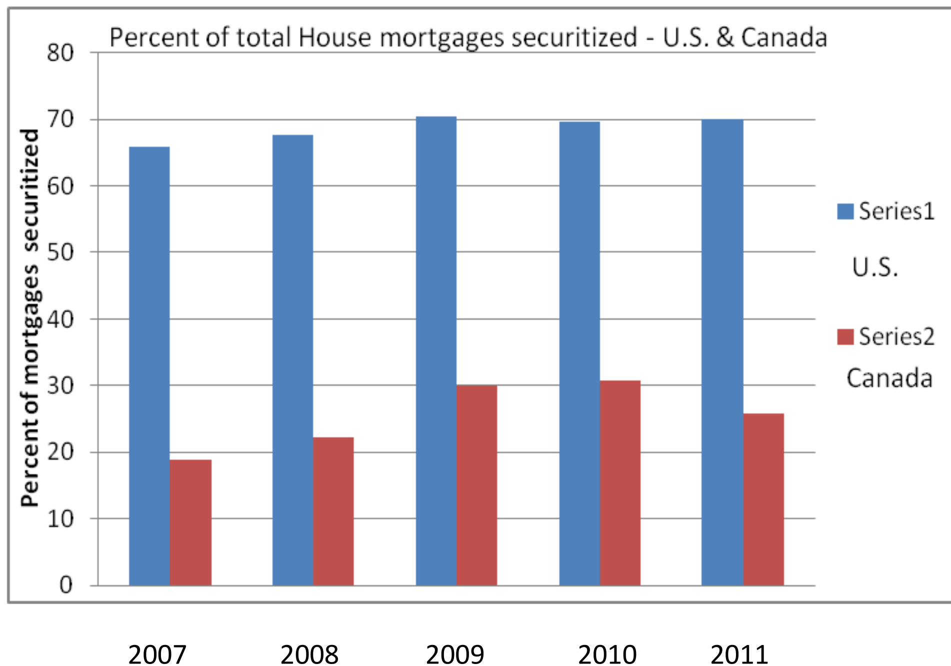

Sources: Federal Reserve Board, Statistics Canada Cansim table 176-0069 (Note: Statistics Canada state, “The data for Canada in 2011 were affected by the changes in International Financial Accounting Standards”).

The term structure of mortgages is mentioned by all authors. In the United States the most common form is the 30-year term mortgage. In Canada the most common form is the five-year fixed term mortgage, amortized over 25 years. This means that the interest-rate risk is shifted to the borrower in Canada, and in the United States that interest-rate risk is held by the lender or the mortgage security holder.

The authors mention that the mortgage business in the United States is more borrower-friendly while in Canada the mortgage business is more lender-friendly. In the United States borrowers can walk away from their mortgage while in most Canadian provinces lenders have recourse against all of the borrower’s assets.

The authors also note that mortgage lending is more conservative in Canada including more conservative borrowers and more conservative lenders, namely the banks. One author notes that appraisal standards are more conservative in Canada.

The authors also mention that the sub-prime mortgage market was much smaller in Canada than in the United States.

One difference between Canada and the United States, not mentioned by any of these authors is the political influence of political contributions to political parties and candidates. In the United

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States financial institutions and the mortgage and housing businesses have much greater political influence on legislation, regulation and supervision. In Canada such influence is minimal.

In Canada corporations, including banks, and labour unions are prohibited from contributing to political parties or candidates. Individuals are limited in their contributions to political parties and candidates to a maximum of $1100.00 in any given year. This limitation clearly makes the lobbying efforts of financial institutions, mortgage companies and house builders of much lesser significance in Canada than in the United States. In the United States there have been substantial political contributions and political influence from banks, mortgage brokers and the housing industry.

In Canada the political lobbyists arrive with empty purses which must make their lobbying efforts less listened to and less effective.

Canada Did Not Fully Avoid the Financial Shenanigans

The 2007-08 collapse of the asset backed commercial paper market was a black mark for the Canadian government. As well, as we note in the following section to this one, the initial Canadian government response to the economic and financial crisis was a bit slow off the mark.

Securitization: The Asset-Backed Commercial Paper Crisis

Asset backed commercial paper (ABCP) are short-term investment vehicles, usually with a maturity of between 90 and 180 days. The security itself is typically issued by a bank or other financial institution and offers a slightly higher yield than government treasury bills. The notes are backed by financial assets such as trade receivables, and are generally used for short-term financing needs. The commercial paper is backed by the expected cash inflows from the underlying longer-term assets.

Canada's flirtation with non-bank issued, asset-backed commercial paper created a milder version of the liquidity squeeze which occurred in the United States because of the sub-prime mortgage market meltdown. The Canadian asset-backed commercial paper (ABCP) market expanded dramatically from about $10 billion in 1997 to $115 billion in 2007. The mix of assets underlying commercial paper changed as well. In 2007, collateralized debt obligations (CDOs) and residential and commercial mortgage-backed securities together comprised more than 50 per cent of the underlying assets. And about two-thirds of the issuers of ABCP in Canada in 2007 were bank-sponsored conduits, and the remaining one-third of the issuers were non-bank conduits. Investors in ABCP included pension funds, corporations which used this paper in their cash flow management, and individuals.

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The Canadian shock hit in August 2007 when the ABCP issued by non-bank conduits stopped trading, and the holders of these securities became completely illiquid. When the $32 billion of ABCP became frozen, there was a justifiable worry that the contagion risk would spread into the entire Canadian the banking system.

As John Chant points out in a survey article on Canada's ABCP crisis:

> "Canadian financial markets were shaken in mid-August, 2007 when approximately $32 billion of non-bank, or third-party, sponsored asset-backed commercial paper (ABCP) was frozen by the inability of the conduits to rollover their maturing notes. The affected conduits represented 27% of the $117 billion ABCP market."
>
> "The assets held by third-party conduits were divided between traditional assets (29%) and synthetic, or derivative, assets (71%). Of the derivative assets, $17.4 billion (59% of total assets) were Leveraged Super Senior Swaps through which the conduits provided protection for others against credit losses."[14]

By September 2007, the non-bank sponsored ABCP conduits were unable to roll over new paper to repay their maturing liabilities. Contractual arrangements allowing such vehicles to access liquidity facilities were also not very clear, causing some of them to run out of liquidity in a very short period of time.

Chant also concludes that the ABCP crisis in Canada "was both predictable and preventable. It was predictable in that the fragile financial structure of ABCP conduits, together with their levered credit risks, combined to create a product highly vulnerable to shifting market conditions. It was preventable in that possible warning signals for investors were switched off."[15] He went on to argue that substantial new regulation of this type of investment is needed.

The resolution of the crisis was painful for the holders on the $32 billion of ABCP. In December of 2009 the federal government, together with the governments of Quebec, Ontario and Alberta created a senior funding facility to support the restructuring of non-bank ABCP. As a Canadian government web site points out, the non-bank sponsored ABCP vehicles were restructured into medium-term notes (to match more closely the term of the liabilities of the underlying assets) and the individual investors could choose to hold the assets or sell them off at a rather severe discount.[16]

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[14] John Chant, *The ABCP Crisis in Canada: The Implications for the Regulation of Financial Markets*, A Research Study Prepared for the Expert Panel on Securities Regulation, 2009.
[15] *Ibid,* p.42.
[16] Department OF Finance Canada, *Peer Review of Canada:* Executive Summary web site, Jan. 30, 2012.

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Fortunately, the Canadian banking system escaped relatively untouched in the process. As in the United States, there was an outcry in Canada by aggrieved investors against the credit rating agency which provided investment-grade credit rating to this paper.

Canada's Somewhat Tardy Response to the Global Financial Meltdown and Recession

Canada has received high praise for its response to the global financial crisis and recession from many quarters, including the International Monetary Fund. Nonetheless, close examination reveals that Canada's policy makers did not respond as quickly as many would have expected.

In September 2007, when the United Stated Federal Reserve lowered its key policy rate by 50 basis points the Bank of Canada was still thinking about raising rates to slow the Canadian economy, but kept rates steady at its September fifth policy making meeting. That decision was made despite the growing concern about a United States recession as well as considerable turmoil in Canada commercial paper market. There were calls for lower rates in Canada with commentators saying, "It is time for the Bank of Canada to drop interest rates by at least 50 basis points and to do it now."[17]

In Finance Minister Flaherty's Economic and Fiscal Statement of November 2008, with the U.S. economy already demonstrably in free fall, the Minister projected continued good times for Canada and federal budget surpluses. It said, "The Government is planning on balanced budgets for the current and next five years."[18] The Economic Statement was so unrealistic that the opposition parties banded together resolving to defeat the Conservative minority government at a vote on a non-confidence motion. The Prime Minister then asked the Governor-General to prorogue Parliament to prevent such a motion being voted on. Parliament was away for two months while the Minister and the Finance Department rethought their economic statement and finally brought forth a much more realistic budget statement when Parliament was finally recalled. In effect the November 2008 Economic Statement was so Panglossian that the Prime Minister ended up hiding behind the Governor-General's skirts for two months.

After that disastrous economic statement a much more expansionary budget was proposed. Since then the Canadian government's response to the international financial crisis became more responsible and reasonable as Canada moved into a period of economic difficulty and recession.

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[17] Arthur Donner and Doug Peters, "Cut interest rates now to unshackle the economy," Toronto Star, September 25, 2007.

[18] Canada, Department of Finance, "Protecting Canada's Future, Economic and Fiscal Statement," November 27, 2008, P.82.

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More recently, however, there have been suggestions from some that Canada might be about to suffer the same type of housing crisis as the United States did in 2007. Canadian house prices have been on the rise for the past decade as Chart D shows. A Bloomberg article on March 12, 2012 noted that, "Canadian housing prices have increased 44 percent since 2006, while U.S. prices have fallen 32 percent."[19] The article suggested that CMHC may need a bailout similar to the one given to Fannie Mae and Freddie Mac in the United States. The article also quotes cooler heads, like TD Bank's Chief Economist Craig Alexander, that say, "I'm not losing any sleep over the taxpayer liability of CMHC insurance." Alexander expects a mild drop in housing prices in Canada in 2012 of about two per cent.[20] Another economist, David Madani, in the same article forecasts a fall in housing prices of 25 per cent over the next three years. The delinquency rates in Canada are so low and there is no sub-prime problem one cannot reasonably see the same problem of a housing crisis arising in Canada in the near future.

In the first months of 2012 both the Canadian Finance Minister and the Governor of the Bank of Canada warned that Canadians were becoming too indebted. Despite these warnings, the attraction of historic low interest rates encouraged the continuing growth of individual indebtedness in Canada. The chartered banks' desire to increase lending, particularly in the mortgage business resulted in a competition for new mortgage loans. One bank recently lowered their base rate for five-year mortgages to an historic low of 2.99 per cent. Other Canadian banks were quick to follow. An interesting development was the offering of ten-year mortgages at 3.99 per cent. One might guess that the thinking behind the offering of a ten-year mortgage in Canada was that with interest rates at historic lows, those loans could be hedged with long term liabilities, such as bonds, and that the homeowners in years five plus would not likely have the opportunity to refinance their mortgages at any lower rates.

The first impression one has at looking at Chart D, or any series of housing prices in Canada, is that a housing bubble is in progress and that a correction must follow. Close analysis, however, shows that there are marked differences between Canada in 2012 and the United States in 2006. Whether or not a housing bubble is in progress in Canada and a major correction happens later one will have to wait and see.

The Canadian Banks Have Been Well Capitalized, and Thus Better Situated To Handle a Mortgage Liquidity Drain

After the recent financial meltdown, it was almost as if the Canadian banks and their regulators could do no wrong in the eyes of European and American counterparts.

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[19] www.bloomberg.com/news/print/2012-03-09/ghost-of-Fannie-mae-haunts-canada. Article by Andrew Mayeda and Greg Quinn, March 9, 2012.

[20] Globe and Mail, Report on Business, "How now, housing bear?" March 2012, p.16.

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This relative envy is exemplified in the fact that the Canadian banks seem to sail through the recent crisis rather easily, though they suspended increases in their dividend payments.

For example, Kris Cyganiak's comments on the Canadian banks were as follows:

> "After the shock of the Worldwide Financial Crisis, Canada's banking system received global accolades. For the third consecutive year, the World Economic Forum has ranked Canada's banking system as the soundest in the world. Former Federal Reserve Chairman Paul Volcker repeatedly acknowledges inherent strengths in the Canadian banking system and touts it as a model for the United States. In fact, Canada was one of the few countries that did not experience bank failures in the recent global financial and banking crisis. No Canadian financial institution required a bailout and ratings agencies continue to view Canadian banks as among the best capitalized in the world."[21]

Grant Robinson of The Globe and Mail reported on May 9th of this year that five of Canada's largest financial institutions had been named to a list of the world's strongest banks by the *Bloomberg Markets* magazine. Specifically, five of Canada's six largest chartered banks made it into its list of the world's 20 best capitalized banks. The smallest of the six banks, the National Bank of Canada, earned the best score of its Canadian peers, ending up in the number three spot. "Among the Canadian financial institutions on the list, Canadian Imperial Bank of Commerce ranked fourth, Toronto-Dominion Bank ranked 12th, Royal Bank of Canada ranked 17th and Bank of Montreal placed 19th."

The Bloomberg report ranked each bank based on five sets of data: first, the Tier 1 capital ratio, or the amount of equity capital held at a financial institution compared to its risk-weighted assets, was given a 40% weight in the scoring system; second, the ratio of non-performing assets to total assets, which measures the quality of a bank's holdings (a 20% weight); third, the loan loan-loss reserves ratio (a 20% weight); fourth, the deposit to funding ratio (a 15% weight); and fifth, the ratio of costs to revenue (a 5% weight).

The fact that Canada had the most banks on the list was not surprising considering that country imposed higher capital levels of the country's banks compared to many countries. Indeed, this is one of the basic reasons that Canadian banks weathered the financial downturn of 2008 better than banks in the United States and Europe due to stricter regulations that require them to keep more capital on their books. It should also be noted that Canada has a "principles-based" regulatory system for banks and federally-regulated insurance companies.

[21] Kris Cyganiak, 10 Key Differences Helped Canada Avoid a US Style Mortgage Crisis, BuyRIC.com web site, November 22, 2010.

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Analysis of the Major Differences between the United States and Canadian Housing and Mortgage Markets that affected their Economic Performance

Income Tax Deductibility of Mortgage Interest – Another Look

As we have already mentioned, one notable difference between Canadian and United States mortgage markets is that Canada does not allow mortgage interest to be deducted from taxable income as the United States does. In his paper David Min[22] states that this is not a significant difference. He argues that, "In the aggregate, then, Canadian tax policies seem to be comparable to those in the United States in encouraging and subsidizing home buying."[23]

In our view Min is under-emphasizing the incentive differences to the individual home owner. In the United States the individual is encouraged to maximize the amount of his or her home mortgage as the interest is tax deductible. In Canada the home owner is encouraged to reduce his or her mortgage as the interest paid is paid with after-tax dollars. The result is a more stable housing market in Canada because the home owners use less leverage. The United States mortgage-interest tax deductibility encourages high leverage in the housing market thus making that market less stable.

The income-tax deductibility of mortgage interest also encourages the home owner to buy or build larger houses as the United States government is paying part of the mortgage payment. As Gloeser points out, "the most obvious distortion is that the subsidies encourage people to invest excessively in housing relative to other forms of capital."[24] That incentive is missing in Canada although there are other housing incentives in Canada that encourage home ownership but not to the extent of the United States interest deductibility incentive.

In a wide-ranging paper on the effects of mortgage interest deductibility (MID) on home ownership in the United States Hilber and Turner conclude, "on average, the MID has no statistically significant impact on home ownership attainment."[25] They also state, "We conclude

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[22] David Min, "True North: The Facts about the Canadian Mortgage Banking System," Center for American Progress, August 2010.
[23] *Ibid*, pg.19.
[24] Edward L. Gloeser, "Housing Policy in the Wake of the Crash," Daedalus, September 22, 2010.
[25] Christian A. N. Hilber and Tracy M. Turner, "The mortgage interest deduction and its impact on homeownership decisions," Draft paper, August 12, 2010.

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that the MID is a costly and ineffectual policy for boosting homeownership and social welfare."[26]

In other words, the massive tax expenditure on mortgage interest deductibility, which was estimated to amount to $98.5-billion in 2012 plus a further tax expenditure on the deductibility of State and Local Government property taxes of $24.9-billion (Office of Management and Budget, 2012) seems to have little if any effect on the level of home ownership but considerable effect as a subsidy to mortgage brokers, financial institutions and to the upper-income individuals to build or buy larger dwellings with larger mortgages. In addition, it seems to have the unintended effect of promoting higher-leveraged homes and a less stable housing market.

The Funding and Quality of Mortgages in Canada and the United States

The quality of mortgages in the United States and Canada differs substantially as Cyganiak points out.

> "It has been said that the NINJA (no income no job no assets) mortgages that were offered by United States banks were the "straw that broke the camel's back" leading to the 2007-2008 mortgage crisis, which devastated the US housing market and created a foreclosure crisis that is still being felt today. These NINJA mortgages allowed lenders to provide mortgages in the United States without verifying income or job status. This example of poor lending practices and regulation along with sub-prime lending was at the root of what caused the most damage to the US housing market in the current recession." [27]

The previous NINJA description of the United States mortgage problem simply had or has no counterpart in Canada. The negative equity reality of what happened in the United States when the meltdown began was simply not reproduced north of the American border. Federal Reserve Chairman Ben Bernanke describes how negative equity, delinquent borrowers and foreclosures still plague the U.S. economy in 2012. "Negative equity is a problem because it constrains a homeowner's ability to remedy financial difficulties. . . . Mortgage servicers were unprepared for the large number of delinquent borrowers and failed to invest the resources necessary to handle them properly, resulting in severely flawed and, in some cases, negligent servicing practices. Exacerbating the problem, some of the incentives built into servicing contracts encouraged foreclosures rather than loan modifications." [28]

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[26] *Ibid.*

[27] Kris Cyganiak, 10 Key Differences Helped Canada Avoid a US Style Mortgage Crisis, BuyRIC.com web site, November 22, 2010.

[28] Ben S. Bernanke, ``The U.S. Housing Market: Current Conditions and Policy Considerations," Jan. 4, 2012. p5.

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The mortgage market in the United States is estimated at some $17-trillion while Canada's mortgage market is only about $1-trillion. Both countries, however, have mortgage markets that are roughly the same size in relation to their economies. Thus it is valid to compare the methods of funding housing mortgages in the two countries, while remembering the relative size of the two economies.

In Canada the six major banks fund the majority of home mortgages on their books. In the United States almost an equal percentage of home mortgages are funded through securitization. It was not always the case that the mortgages were securitized in the United States. In the 1970s about seventy-five per cent of mortgages in the United States were financed on the books of banks and other regulated financial institutions such as Savings and Loan associations.[29] In Canada securitization has had minimal development when compared to the United States. There are several reasons for this difference.

The most common form of mortgage instrument in the United States is the thirty-year fixed-rate mortgage. In the early 1980s the extremely sharp rise in interest rates highlighted the interest-rate risk of funding thirty-year mortgages with short-term funds. The Savings and Loan crisis of that period was in large part a result of that type of funding system. Many of the Savings and Loan institutions were funding their portfolio of thirty-year mortgages with very short-term deposits. When interest rates shot up in the early 1980s their cost of funds rose but their mortgage portfolio returns remained stagnant. The result was a disastrous set of failures. With that lesson learned financial institutions sought to fund long-term mortgages through the securitization process.

In Canada a very different picture arose. The Canada Interest Act, which dates from the 1880s, sets out that any residential mortgage that has been in existence for five years can be repaid by the borrower with a penalty of a maximum of three-month's interest. In Canada the standard residential mortgage is five-year fixed rate amortized over twenty-five years. The lender wishes to commit for only five years because of the conditions imposed by the Canada Interest Act. Funding a five-year term mortgage is easy with relatively short-term deposits. This short-term type of mortgage does shift the interest-rate risk to the borrower. As interest rates rise, about one-quarter of all mortgages come due every year and must be renewed in Canada. The borrower must then renew his or her mortgage at the interest rate that is prevalent at the time the five-year term runs out. That could mean a small or substantial increase or reduction in monthly mortgage payments for the individual mortgage borrower in Canada. This is in sharp contrast to the guarantee of thirty years of set payments on mortgages in the United States.

[29] David Min, "True North: The Facts about the Canadian Mortgage Banking System," Center for American Progress, August 2010, p.6.

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In his paper David Min points out that short-term mortgages, "constrain the ability of central banks to conduct monetary policy."[30] He cites the Miles Report of 2004 on the British mortgage market to support his conclusion that "countries where short-term mortgages (such as the Canadian 5-year mortgage) were predominant, interest rate changes had far greater impacts on housing prices. As a result, central banks in these countries must be much more careful about implementing interest rate changes because such action can more easily drive housing bubbles and downturns."[31]

In effect central bank interest rate changes were more effective on consumers in countries such as Canada. If the objective of central bank policy is to affect consumer-spending decisions then countries with short-term mortgages would be more affected by central bank policies and thus much less stringent policies would be needed. In Canada when the central bank raises interest in order to slow the economy and economic growth or to dampen inflation the impact on the consumer is much more immediate. As mortgage rates rise, about one-quarter of all mortgages are affected in any set year. In the United States with its thirty-year set mortgage, interest rate changes affect household income only with a much longer-term impact.

Another important difference in funding between Canada and the United States is the effect of holding government-guaranteed mortgages on a bank's balance sheet on the requirements for bank's regulated capital. Min points out this difference as being of great importance. He states, "Canada tilts the playing field in favor of regulated lenders."[32] In Canada the Canada Housing and Mortgage Corporation (CMHC) guaranteed mortgages are considered sovereign-risk securities as the Canadian government is the owner of CMHC. In the United States the two major mortgage guarantee companies Fannie-Mae and Freddie-Mac are private companies (at least until recently) but with only an implicit guarantee of the United States government.

The Canadian mortgage market underwent many structural innovations and changes over the years. Canada integrated the old "four pillars" of the financial system through revised legislation, particularly in 1987 and 1992 and during 2006 after the federal government liberalized mortgage insurance. All those helped Canada weather the current recession and avoid a mortgage crisis similar to that of the United States.

As David Min of the Center for American Progress concludes in a report which examined the two countries experiences during the financial meltdown,"In short, there are many important differences between the mortgage systems of the United States and Canada, and given the

[30] *Ibid*, pg. 20.
[31] *Ibid*, pg. 20.
[32] *Ibid*, pg. 13.

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relative stability of our northern neighbor we would do well to heed the obvious lessons its experience teaches. But such lessons should be based on a firm grasp of the facts about Canadian housing finance, and not upon false or misleading claims. The key lesson Canada appears to teach us is that regulated, government-supported mortgage finance leads to greater sustainability and stability than its unregulated, purely private counterpart."[33]

The Banking Models Are Quite Different

The most common model of banking in Canada is for the individual bank branch to seek to obtain the mortgage of a customer as well as that customer's savings, checking and other banking business. The short term of the mortgage contract in Canada enables the bank to fund these mortgages with relatively short-term deposits of individuals. This protects the bank from interest rate risk. Canadian banks are very careful of this risk as they have seen interest rates rise to some phenomenal heights over the past thirty-five years.

The Canadian model is not dissimilar from the banking model in the United States that predominated in the 1970s. At that time some seventy per cent of home mortgages were held by regulated financial institutions in the United States, particularly banks and Savings and Loan associations. With the sharp rise in interest rates in the early 1980s funding of these 30-year mortgages became subject to huge interest rate risk and the result was massive failures of financial institutions.

Accordingly, American banks saw the need to offset the term mis-match between assets and liabilities and turned to the securitization of their mortgage assets. Securitization is the financial practice of pooling various types of contractual debt such as residential mortgages, commercial mortgages, auto loans or credit card debt obligations and selling them off to investors. Mortgage-backed securities are a perfect example of securitization. Mortgages are accumulated into one or more large pools, which in turn can be divided into smaller pools to be sold off to investors. In effect such sales provide liquidity for the issuing bank.

The securitization had two effects. It removed the long-term assets from the balance sheet of the financial institution thus reducing the need for capital as well it removed the interest rate risk from funding long-term assets with short-term deposits. The push to securitization came from both the reduced need for capital as well as the reduced funding risk.

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[33] Min, David, *True North: The Facts about the Canadian Mortgage Banking System*, Center for American Progress, August 2010, p.32.

In recent years in the United States some banks have continued holding mortgages on their balance sheets and have covered the interest-rate risk by hedging that risk. Hedging the funding risk of 30-year mortgages is possible for individual banking institutions but hedging the interest rate risk for some $17-trillion mortgages would seem an unlikely possibility.

It would seem that the securitization of the huge mortgage market is an attempt to change the long-term nature of the individual mortgage contract into a financial instrument that can be bought and sold by short-term investors. The recent financial fiasco is in part an unravelling of this attempt. The mortgage instrument remains both a credit risk as well as an interest-rate-risk instrument. Bundling mortgages into financial packages appeared to remove neither the credit risk nor the funding risk, at least in the longer term.

The question that might be asked is whether the United States mortgage market could operate with much shorter term mortgages? The Canadian five-year mortgage does shift the interest rate risk to the borrower while the United States 30-year mortgage leaves that interest rate risk with the financial institution. Does the United States economy need to operate with 30-year mortgages? Or would a shorter-term mortgage allow a return to a banking model similar to the model of the 1970s?

One of the advantages the Canadian banking model has is that the individual customer knows the bank that holds his or her mortgage. During the recent financial crisis in Canada some banks took the initiative to inform their branch offices to be lenient on customers who might have temporary difficulties with mortgage payments. The close relationship between bank and customer prevented unnecessary foreclosure proceedings that in the United States became common as the mortgage customers of mortgage servicers were seldom in a position to know or even contact each other.

There is a clear trade-off here between a more stable financial system and the more stable borrowing by the individual mortgage borrower. In Canada with its five-year term mortgages the mortgage borrower assumes part of the interest rate risk. In the United States with its thirty-year mortgages the mortgage borrower is more secure but the entire financial system is at risk.

The Growth of Securitization: Increased Shadow Banking Activity and Systemic Risk

In both Canada and the United States securitization has been the source of much of the difficulties in the financial markets. In Canada it was the Asset-Backed Commercial Paper fiasco; in the United States the collapse of the sub-prime mortgage market. In both cases unregulated conduits were the core of the problem.

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The securitization of assets into unregulated conduits is, in essence, an unregulated pseudo-banking system. The conduit in effect is a banking operation. The conduit borrows from the public and buys assets that are much longer term than the holders of the securities would normally hold. In the case of the mortgage-backed securities sold by the New York investment houses the mortgages held by the conduit were thirty-year mortgages but the investors sought securities that were liquid and that could be sold in the market. The conduits, or pseudo-banks, held virtually no capital and little liquidity. From an investor perspective, holding the securitized paper of a highly leveraged operation was very risky. The result was a crisis in this pseudo-bank arena.

The rating agencies, which were paid to provide investment-grade ratings by the sponsors of the conduits, were clearly a part of the problem. Their ratings made this fallacious banking system operate. The key, however, is in regulating the conduits, either by requiring recourse to the initiators capital or by requiring the conduits to become regulated financial institutions themselves.

Banking Regulation

In the United States banks are regulated by both the federal and state governments. In Canada, banks are chartered and regulated by the federal government. The Office of the Superintendent of Financial Institutions (OSFI) regulates the banks in Canada as well as the federally chartered insurance companies and credit union national associations. It should be noted that in Canada the securities regulation is provincial and is thus as fractured as the regulation of the United States banking system. By contrast the United States has a national securities regulator, the Securities and Exchange Commission (SEC) and a regulator for the commodities trading.

Bank regulation in Canada is usually described as principles based or objectives based. Much of banking regulation in the United States is rule based. The Department of the Treasury in its "Blueprint for a Modernized Financial Regulatory Structure" in 2008 pointed out that an optimal regulatory structure for the United States would be an "objectives-based regulatory approach, with a distinct regulator focused on one of three objectives – market stability regulation, safety and soundness regulation associated with government guarantees, and business conduct regulation."[34]

In other words that set of rules is similar to the Canadian system with regard to the regulation of banks. The OSFI and the CDIC regulates safety and soundness, the Bank of Canada looks to

[34] The Department of the Treasury, *Blueprint for a Modernized Financial Regulatory Structure*, March 2008.

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market stability and the Financial Consumer Agency looks after consumer issues and business conduct.

The Treasury report suggests that to address their state–regulated insurance system that the, "Treasury recommends establishing an optional federal charter for insurers within the current structure." The structure would include licensing, regulation and supervision of all companies that chose to be federally regulated. Such a system might be a model Canada could consider for securities regulation since the recent Supreme Court decision disallowing federal regulation of the securities business in Canada.

Conclusion: Lessons for Policymakers in the United States and Canada

The American and Canadian residential mortgage markets are vastly different in scope, regulatory oversight, and in terms of protections offered the mortgage holder and lending institutions. Structural and regulatory differences also played a role. The major difference, however, is that in Canada the borrower and lender are in most cases closely related; in the United States, because of securitization, that is usually not the case. As Canadian banks move deeper into the United States banking market there is a question whether the Canadian prudent lending culture might change. In both countries there are large government supports for housing; in the United States there is the unique and large tax expenditure in the deductibility of mortgage interest from taxable income; in Canada there is the large government support through the full guarantee of mortgages by CMHC. But in both countries the homeownership rates are about the same. These differences all seemed to have played a role in the American and Canadian housing and mortgage markets experiences since 2000.

Aspects of this Study that the United States Authorities Should Consider

We generally agree with Min's conclusion and repeat it here once again. "The key lesson Canada appears to teach us is that regulated, government-supported mortgage finance leads to greater sustainability and stability than its unregulated, purely private counterpart."[35]

The shadow banking system which by definition has a major mismatch problem between deposits and loans, should be carefully regulated with respect to leverage and if regulated should have access to liquidity, perhaps nearly as much as the formal banks. The shadow banking

[35] Min, p. 22.

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institutions leverage should be reduced and to the extent that they are the original packagers of mortgage loans, their liquidity should be carefully monitored.

There is also a need to very carefully monitor and regulate the securitization process. It should be noted that the rating agencies have failed to do their jobs in rating these complicated securities. And investors worldwide were asleep in their own assessment of the United States mortgage-backed securities and that includes some of the most well-known banks and other financial institutions. It is clear that the system of incentives involved in United States housing finance were geared to short-term profits, not to maintain the long-term viability of the banks and other financial institutions. Some requirement of financial institutions to ensure that they, when operating as advisors, take the interests of their customers first would have been a help to prevent the recent crisis.

Bank regulations with an objectives-based approach seem to operate better from a total systems perspective. A move toward a national banking and other financial institution regulation system would be more optimal.

The Canadian mortgage financing system is more tightly regulated and protected than its American counterpart. Perhaps some move toward a single federal government agency for insuring the housing mortgage market might be considered.

We understand the emotional importance of the mortgage-interest-rate deductibility in American tax legislation. But the beneficiaries of mortgage-interest-rate deductibility appear to be primarily affluent Americans, mortgage brokers and financial institutions. Home ownership which is supposed to be encouraged by this clause appears to be little affected or not at all affected. The home ownership rate in Canada is about the same as in the United States and Canada has no similar mortgage interest deductibility. In addition mortgage-interest deductibility adds to the instability of the housing market as it encourages increased mortgage leverage.

The huge tax expenditure caused by the tax deductibility of mortgage interest and municipal taxes needs to be addressed. The tax anomaly here is that the major expenses (mortgage interest and municipal taxes) are allowed as deductions from taxable income but the income from the investment in homeownership (imputed rent) is not added to taxable income. Perhaps, as a way to reduce the cost of this huge tax expenditure, if homeowners with family incomes above a certain amount, say $100,000, want to claim those deductions they would also be required to add the imputed rent of their housing investment to their taxable incomes?

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Adopting the Canadian banking model would require numerous changes and is likely not even to be possible. The shorter term mortgage makes it possible for Canadian banks to fund their mortgage portfolio with term deposits. Some American banks do fund their mortgage portfolios on their own books by using hedging insurance. That is possible for a small number of institutions but it would seem unlikely that a mortgage market of $17-trillion could be hedged with any degree of success without incurring systemic risk. The question of whether Americans would be willing to shoulder the interest rate risk with a five-year term mortgage as Canadians do is a question.

This report has stressed that the initiation of mortgages in the United States by a largely unregulated group should be very worrisome. Initiating a mortgage with no interest in whether or not it will ever be paid has clearly been a problem. Another aspect of the same problem is in the securitization process where the financial institution setting up the conduit has no interest in whether or not the underlying mortgages in the portfolio are valid or reasonable.

The financial sector influence on the legislative, regulation and supervision of financial institutions is much greater in the United States than in Canada, particularly because of the importance of political contributions by those institutions.

The sub-prime mortgage market did not take hold in Canada to the extent that it did in the United States. As well, most mortgages in Canada are originated and retained by the original lending institutions and the original lender has to continue to service the mortgage even when it is sold to a third party. This has enabled both the lender and the homeowner to renegotiate mortgages easier in Canada than in the United States as often American homeowners do not know who owns their mortgage. The result is a far greater occurrence of defaults and foreclosures in the United States.

Central bank policy has also played an important role. Both central banks, rather mistakenly in our view, still formally cling to the view that their national priority is not any single market or asset class, but rather national economic indicators, primarily consumer-price inflation. This means that when a bubble occurs in a separate market such as housing or equity prices, in theory they should not have to respond using either general policy, such as interest rates, or specific policies linked to the specific market. We think the inflation mantra is particularly dangerous, and partly explains why the housing bubble in the United States was not curtailed earlier and at a lower cost. It should be noted that the American housing bubble occurred in a relatively low inflation period.

Aspects of this Study that the Canadian Authorities Should Consider

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While some shadow bank activities are useful, it is important that the growth of this sector in Canada continue to be monitored from a systemic risk basis. Canadians should try to avoid the massive expansion of an unregulated and unprotected shadow banking sector, which effectively got the American economy into such trouble.

The Canadian federal government has tightened up the rules respecting the issuing of mortgages, and this represents a very reasonable policy. The Bank of Canada used to use margin requirement changes as a tool for controlling equity price bubbles, and our view is that this instrument should be reintroduced as a policy tool. As well, since the housing mortgage market is so important, we think that the Canadian central bank should have input into the decisions that alter the terms being made available by the banks and other lending institutions.

There is a need in Canada to very carefully monitor and regulate the securitization process. It should be noted that the rating agencies in both countries have failed to do their jobs in rating these complicated securities. And investors have failed to do the necessary analysis to determine the value of some of these complicated securities as was the case in the asset-backed commercial paper crisis. There is a clear need for adequate information to be supplied to investors in such securities.

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Appendix

Mortgage Default Insurance in Canada

In Canada mortgage-loan-default insurance is required by all federally-regulated financial institutions (banks and insurance companies) when the loan-to-value ratio of a mortgage loan is eighty per cent or greater. Such insurance is offered by the government owned CMHC and by two private insurance companies, Genworth Financial Mortgage Insurance Company Canada and Canada Guaranty Mortgage Insurance Company. The premium is paid by the lender but is usually collected from the borrower or can be added to the face value of the mortgage. The insurance covers the full amount of the mortgage loan for the full term of the mortgage.

The two private insurers of mortgages operate with a partial guarantee from the Department of Finance of the Government of Canada. The lender is guaranteed payment of its loan in the following manner. If a loan is in default and the property is sold and there is still some amount owing then if the private insurer is insolvent then the Government will pay. The amount the government pays is subject to a deductable of ten per cent of the original loan. "To make it possible for private insurers to compete effectively with CMHC, the Government also backs private mortgage insurers' obligations to lenders through guarantee agreements that protect lenders in the event of default by the insurer. The Government's backing of private insurers' business that is eligible for the guarantee is subject to a deductible equal to 10 per cent of the original principal amount of the mortgage loan."[36] One would estimate that the cost of this reinsurance is relatively small as the number of defaults in Canada has been small.

The Canadian government through its ownership of CMHC and through its guarantee of the private insurers has a major influence over the mortgage market in Canada. This allows the federal government to set the rules for insured mortgages in Canada. In 2008, for example, The Canadian government raised the loan-to-value ratio for insured mortgages in Canada. At the same time the acceptable credit score for insured mortgages was raised and the acceptable mortgage amortization period was lowered from 40 to 35 years. The Canadian government further set a maximum of 45 per cent on borrowers' debt service ratio as well as excluding some high-ratio mortgages from government guarantee. All of these measures were done to lower the risk profile of mortgages in the light of a very strong housing market and historically low interest rates and in reaction to innovations that occurred in the mortgage market since 2006.

[36] Department of Finance Canada, News Release 2008-051, *Backgrounder Mortgage Insurance*, web site www.fin.gc.ca.

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As the government stated; "Since the fall of 2006, the mortgage markets have experienced a period of accelerated financial innovation. The marketplace has been quick to adopt these innovations, which permit such features as: longer amortization periods; higher loan-to-value ratio loans; Niche products for near-prime borrowers; and streamlines documentation requirements."[37]

Table of Premiums for Mortgage Loan Insurance in Canada

	Premium on Total Loan		**Premium on Increase to Loan Amount for Portability and Refinance**	
Loan-to-Value	Standard Premium	Self-Employed without 3rd Party Income Validation	Standard Premium	Self-Employed without 3rd Party Income Validation**
Up to and including 65%	0.50%	0.80%	0.50%	1.50%
Up to and including 75%	0.65%	1.00%	2.25%	2.60%
Up to and including 80%	1.00%	1.64%	2.75%	3.85%
Up to and including 85%	1.75%	2.90%	3.50%	5.50%
Up to and including 90%	2.00%	4.75%	4.25%*	7.00%*
Up to and including 95%	2.75%	N/A	4.25%*	*
90.01% to 95% — Non-Traditional Down Payment* **	2.90%	N/A	*	N/A
Extended Amortization Surcharges Add 0.20% for every 5 years of amortization beyond the 25 year mortgage amortization period.†				

Source: CMHC and Genworth Financial websites.

Since 2008 the Canadian government has moved three times to tighten the rules for CMHC guaranteeing of home mortgages because of concerns that the Canadian housing market was becoming overvalued and thus CMHC's insurance and the government's own guarantee of the

[37] *Ibid*.

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private insurers might be at risk of a possible downturn in house prices. The changes in rules were applied equally to the private insurers when their mortgages were government insured.

The present insurance limit placed on CMHC is $600-billion and that corporation has been close to its limit recently. There is also a limit on the Department of Finance guarantee of the private insurers of $250-billion. In a recent bill before Parliament the government has placed CMHC's operation under the scrutiny of the Office of the Superintendent of Financial Institutions (OSFI). Formerly a federal minister had oversight but the Finance Minister has stated that CMHC has become a major financial institution and therefore should be under the supervision of OSFI like other financial institutions such as the banks and federally chartered insurance companies. The two private mortgage insurers are under the supervision of OSFI.

The Finance Minister also recently announced that CMHC insured mortgages would not be eligible for inclusion in the securitization of mortgages by the Canadian banks. These securities are called covered bonds. The effect will be that only uninsured mortgages will form the underlying securities for the bank-issued covered bonds. It is believed that this move will add to the banks' cost of funds and thus put some upward pressure on mortgage interest rates.

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