

# Residential Mortgage Securitization in Canada: A Review

*Adi Mordel and Nigel Stephens*

- Residential mortgage securitization (together with mortgage insurance) plays an important role in the Canadian system of housing finance, especially given the rising share of government-supported (i.e., public) securitization over the past 15 years.
- The main social benefit for Canadians of public securitization is the support it provides for both diversity of choice and access to mortgage financing through a stable, cost-effective supply of funding to mortgage lenders. Public securitization also supports competition in the mortgage market by providing funding to small lenders,<sup>1</sup> which have fewer alternative funding sources. Financial institutions also benefit from public securitization by using these highly rated assets to meet regulatory requirements.
- The recent increase in public securitization has also led to public discussions about the government's exposure to the housing market, the balance between investment in residential real estate and other forms of investment, and the potential effects on household borrowing and the housing market. One approach to reducing the government's involvement in the housing market would be to consider adopting measures to reinvigorate private mortgage securitization in Canada.

## Introduction

Mortgage securitization, the process of converting illiquid mortgage loans into tradable securities, plays an important role in the Canadian financial system. Over the past 15 years, the share of mortgage credit in Canada that has been securitized has grown from about

10 per cent to 33 per cent. Of the amount securitized during that period, the share executed through public securitization increased from 50 per cent to almost 100 per cent.

In this report, we analyze the evolution of both public and private mortgage securitization in Canada to better understand the underlying public policy and economic determinants.

In particular, we consider the uses of mortgage securitization by financial institutions (FIs) to meet their funding needs and regulatory liquidity requirements. As well, we estimate that significant benefits accrue to the financial system as a whole from public securitization. Aggregate mortgage funding costs are reduced by about \$870 million annually. In addition, Canadian FIs save at least \$120 million per year for every \$100 billion of National Housing Act Mortgage-Backed Securities (NHA MBS) held for regulatory liquidity adherence.<sup>2</sup>

We then review potential implications of the extent of public securitization, noting that the Canadian government has taken steps to adjust its framework for housing finance to restrain the growth of public securitization. We conclude with a discussion of policies that could be considered to reinvigorate private securitization in Canada.

<sup>1</sup> In this report, the term "small lenders" refers to all financial institutions that access public securitization programs in Canada, excluding the Big Six banks.

<sup>2</sup> On 11 December 2015, the government announced changes to its public securitization programs. The estimates in this report are based on the guarantee fees that existed before the 11 December announcement. See the Canada Mortgage and Housing Corporation press release at <http://www.cmhc-schl.gc.ca/en/corp/nero/nere/2015/2015-12-11-0900.cfm>.

## Mortgage Securitization in Canada: The Context

### Institutional background

The federal government supports housing finance in Canada through mortgage insurance and public securitization programs.<sup>3</sup> Federally regulated lenders are required to obtain mortgage insurance on loans in which the homebuyer has made a down payment of less than 20 per cent of the purchase price.<sup>4</sup> Mortgage insurance is provided by the Canada Mortgage and Housing Corporation (CMHC) and private insurers; insurance from both sources is guaranteed by the government, although not to the same degree.<sup>5</sup>

In Table 1, we illustrate the interaction between mortgage insurance and securitization in Canada. Public securitization is provided through the NHA MBS and Canada Mortgage Bond (CMB) programs, both administered by CMHC (Box 1 provides further detail on these types of securities). Both programs use only insured mortgages; public securitization of uninsured mortgages does not exist in Canada.

**Table 1: Types of residential mortgage securitization in Canada**

Securitization	Underlying mortgage type	
	Insured	Uninsured
Public	National Housing Act Mortgage-Backed Securities and Canada Mortgage Bonds	Does not exist
Private-label	Intention to disallow announced	Asset-backed commercial paper and residential mortgage-backed securities

Note: Covered bonds are a direct obligation of financial institutions issuing the bonds and, hence, are not considered securitizations. Investors have recourse to the covered pool in the event of issuer default.

Source: Bank of Canada

Private-label securitization has existed in Canada since 1985. To reduce taxpayer exposure and encourage development of private mortgage markets, the government announced its intention to prohibit the use of insured mortgages as collateral in non-CMHC securitization vehicles.<sup>6</sup> To date, private-label securitization of

uninsured mortgages primarily consists of short-term asset-backed commercial paper (ABCP)<sup>7</sup> and some longer-term residential mortgage-backed securities (RMBS). New issuance of RMBS has been close to non-existent in Canada in recent years.

Covered bonds are another important source of funding that used to be backed by insured mortgages. However, in April 2012, the federal government announced a registered covered bond framework to be administered by CMHC. Under the framework, the bonds are only backed by uninsured mortgages. Subject to the prudential limit established by the Office of the Superintendent of Financial Institutions (OSFI), an FI can have outstanding covered bonds of no more than 4 per cent of its total assets. To date, under the framework, total issuance stands at over \$70 billion. Covered bonds are an alternative to public and private securitization as a source of funding for FIs.<sup>8</sup>

Table 2 compares the level of government involvement in the mortgage market across Canada, the United States, the United Kingdom and Australia. Compared with the United States, Canada exhibits a higher level of government involvement in mortgage insurance but a lower level of involvement in mortgage securitization. Australia has an active private mortgage insurance system with no public support, while the United Kingdom's private mortgage insurance system is limited. The United Kingdom also has temporary public mortgage insurance programs created by the government during the financial crisis. The table also indicates that the four countries have broadly similar rates of home ownership.

**Table 2: Cross-country comparison (per cent)**

	Canada	United States	United Kingdom	Australia
Share of public mortgage insurance	58.0	14.0	0.4	0
Share of public securitization	34.0	55.0	0.0	0
Home-ownership rate	67.6	65.1	64.6	67

Note: Public insurance in Canada is the insurance-in-force, i.e., the total amount of outstanding loan balances covered by mortgage loan insurance policies by CMHC and private insurers. For the United States, public insurance relates to Federal Housing Administration and Veterans Affairs loans, which are insured by the federal government. For the United Kingdom, it is the NewBuy Guarantee and the Help to Buy programs. Share of public insurance is to outstanding mortgage debt as of 2013 (for the United Kingdom, as of 2014). Shares of public securitization to outstanding mortgage debt for Canada and the United States are as of 2014. U.S. data are from the Securities Industry and Financial Markets Association and the Federal Reserve Board and are based on the ratio of agency MBS outstanding to total mortgage credit. See Chart 1-A for the Canadian data. Home-ownership rates are as of 2013 except for Australia (2011).

Source: Bank of Canada

3 The government also supports housing finance through other means, including tax credits and RRSP withdrawals for first-time home buyers.

4 Low-ratio mortgages (with down payments greater than 20 per cent) can also be insured by CMHC and private insurers with portfolio or transactional insurance. See Crawford, Meh and Zhou (2013) for a detailed discussion of the Canadian mortgage market.

5 CMHC mortgage insurance has a 100 per cent public guarantee, while for private insurers it is only 90 per cent. The government guarantee is activated when the insurer fails to honour its commitment to the lender.

6 See Government of Canada (2015).

7 About 20 per cent of the underlying residential mortgages backing ABCP are uninsured at present.

8 See the 2015 report by the C.D. Howe institute, "How to Make the World Safe for (and from) Covered Bonds" (Poschmann 2015).

Box 1

## National Housing Act Mortgage-Backed Securities and Canada Mortgage Bonds

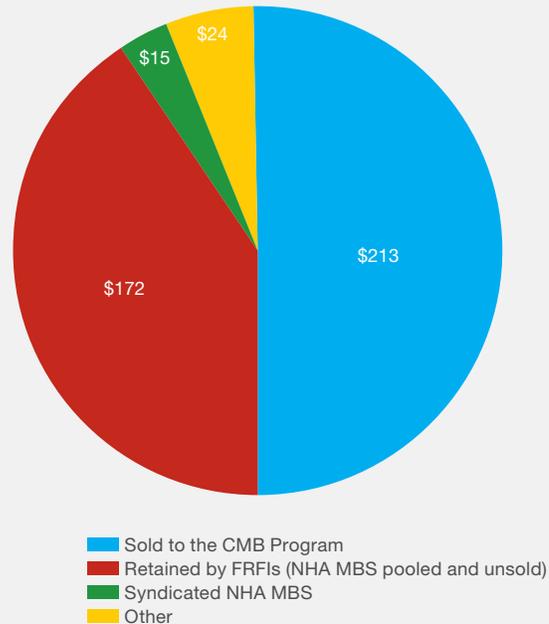
The NHA MBS Program, introduced in 1987, allows financial institutions (FIs) to issue mortgage-backed securities (MBS) that are backed by pools of residential mortgages insured under the *National Housing Act*. NHA MBS investors are not subject to payment risk or the underlying mortgage credit risk, owing to the Canada Mortgage and Housing Corporation’s (CMHC) timely payment guarantee of interest and principal, as well as the insurance on the underlying mortgages. Before 2015, the annual cost of guaranteeing the timely payment on a typical 5-year NHA MBS was four basis points.<sup>1</sup> Although investors face no credit risk, they are exposed to prepayment risk on the underlying mortgages that offer amortizing monthly cash flows. The majority of NHA MBS are fixed rate and are issued for a 5-year term, reflecting the popularity of the 5-year fixed-rate mortgage.

Since 2001, NHA MBS could be sold to the Canada Housing Trust (CHT), which funds these purchases by issuing Canada Mortgage Bonds (CMB). Similar to NHA MBS, CMB offer investors a timely payment guarantee; the guarantee fee is paid up front by the participating financial institution. Approximately half of newly issued CMB are fixed rate for 5-year terms. Unlike NHA MBS, the CMB Program converts monthly amortizing cash flows into typical bond-like payments (i.e., semi-annual or quarterly coupon payments and a final full principal payment). Thus, CMB appeal to a much broader investor base, and funding can be achieved at a relatively lower cost than for NHA MBS.

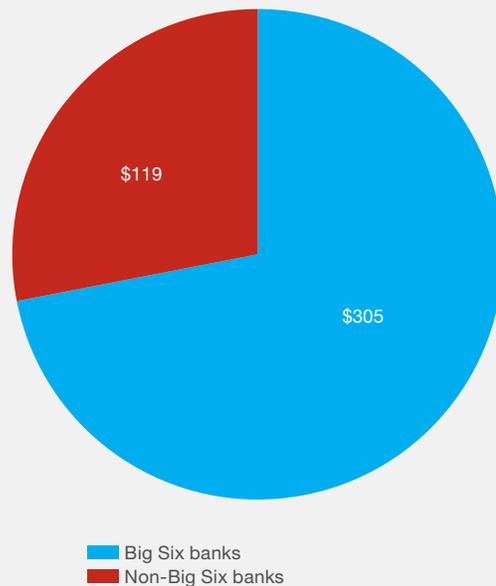
The public policy objectives of the NHA MBS and CMB programs are to “contribute to the efficient functioning, competitiveness, and stability of the housing finance system by helping ensure lenders and, in turn, borrowers have access to a reliable source of funding for residential mortgages regardless of economic cycles and market conditions” (CMHC 2014). These objectives address the goal of providing a reliable funding source throughout the economic cycle and supporting competition in mortgage lending by supplying cost-efficient funding to small lenders that have limited access to alternative sources. Figure 1-A provides breakdowns of the total amount of outstanding NHA MBS of approximately \$425 billion by usage and issuer.

**Figure 1-A: Composition of outstanding National Housing Act Mortgage-Backed Securities as of June 2015**

By usage, Can\$ billions



By issuer, Can\$ billions



Note: FRFIs are federally regulated financial institutions. Retained NHA MBS are reported as pooled but unsold by FRFIs. Syndicated NHA MBS are not sold only by the bank that created them, but rather by a syndicate of dealers. “Other” captures all remaining NHA MBS.

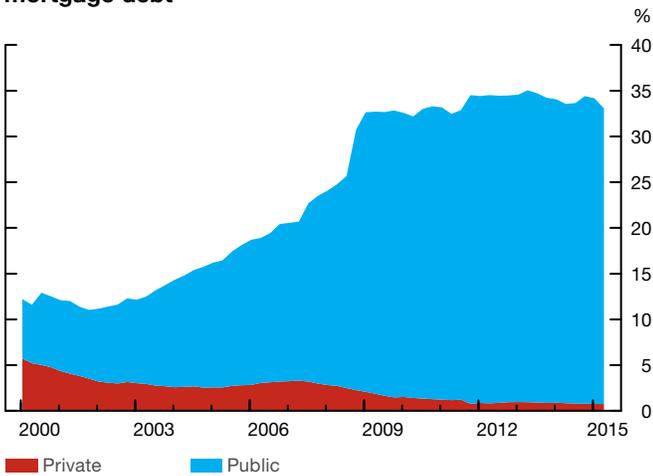
Sources: Canada Mortgage and Housing Corporation and Office of the Superintendent of Financial Institutions

<sup>1</sup> The cost of the annualized guarantee fee is higher than four basis points when the average life of the 5-year NHA MBS is less than five years. If, for example, the average life were three years, the cost would be roughly seven basis points.

## Market developments

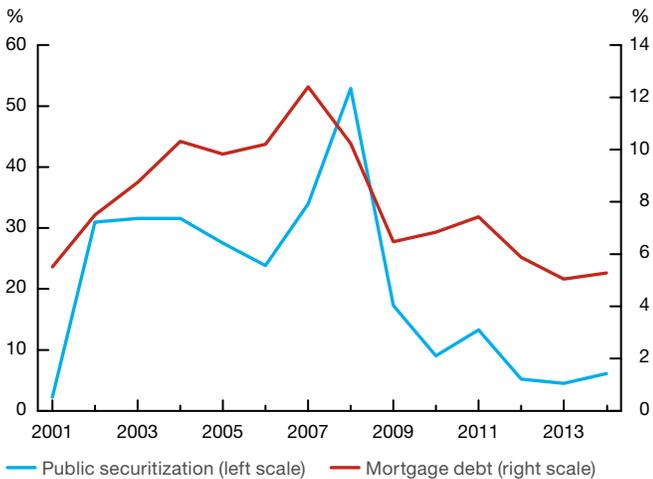
Chart 1-A shows the substantial rise in the share of outstanding securitized mortgage debt. In 2000, only about 10 per cent of the outstanding mortgage debt was securitized, and half of that was through private programs. By 2015, about a third of the outstanding mortgage debt was securitized, almost all through public programs. Not surprisingly, mortgage credit in Canada has tended to move directionally with public securitization, as is evident in Chart 1-B, which compares the annual growth rates for the two series.

**Chart 1-A: Ratio of outstanding securitization to residential mortgage debt**



Sources: Canada Mortgage and Housing Corporation and Statistics Canada Last observation: June 2015

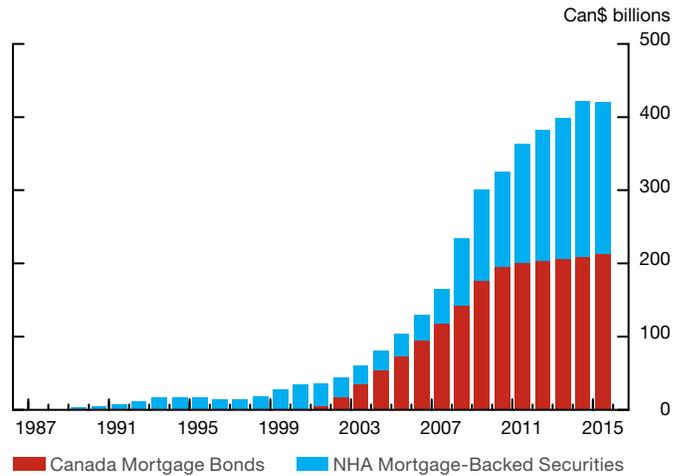
**Chart 1-B: Growth rates of outstanding public securitization and residential mortgage debt**



Sources: Canada Mortgage and Housing Corporation and the Bank of Canada Last observation: December 2014

The rapid expansion of public securitization is especially evident in the period between 2008 and 2010, in response to the Insured Mortgage Purchase Program, which allowed mortgage lenders to pool insured mortgages into NHA MBS and sell them to CMHC to obtain additional liquidity during the financial crisis.<sup>9</sup> Currently, the stock of public securitization continues to increase, although at a slower pace, in part because of limits imposed by the government on NHA MBS and CMB issuance (Chart 2).<sup>10</sup>

**Chart 2: Outstanding public mortgage securitization**



Source: Canada Mortgage and Housing Corporation Last observation: June 2015

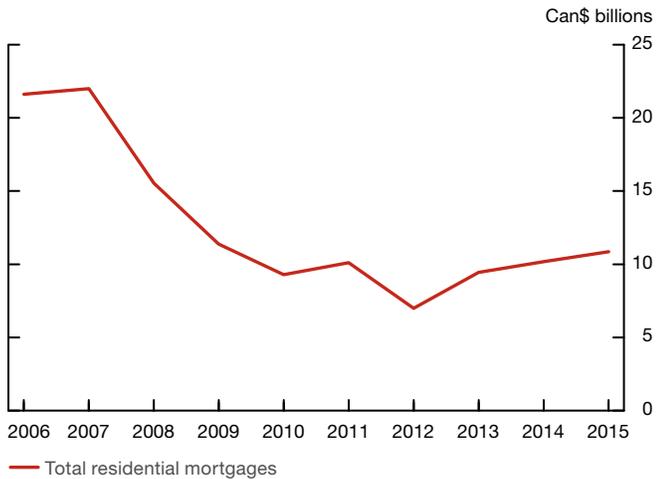
Before the financial crisis, there was also an active market for ABCP and, in 2006, approximately \$20 billion of the underlying assets were residential mortgages (some of which were insured). The non-bank-sponsored ABCP market, which mainly invested in complex credit derivatives known as collateral debt obligations that were backed by U.S. subprime mortgages, experienced severe disruptions in the summer of 2007, since issuers were unable to roll over their short-term debt.<sup>11</sup> Since then, the ABCP market has contracted substantially and, as of June 2015, only about \$10 billion of the outstanding securities were backed by residential mortgages (Chart 3).

Several factors explain the rising share of public securitization in Canada from both the demand and supply perspectives. For FIs, CMB are a cost-effective funding

<sup>9</sup> A description of the program is available at <http://www.parl.gc.ca/content/lop/researchpublications/prb0856-e.htm>.

<sup>10</sup> While annual issuance of CMB since 2013 has been held to \$40 billion a year, the annual issuance of NHA MBS was lowered to \$80 billion a year for 2014 and 2015 (from \$85 billion in 2013).

<sup>11</sup> Kamhi and Tuer (2007) discuss the collapse of the non-bank ABCP market in Canada.

**Chart 3: Outstanding residential mortgages funded through asset-backed commercial paper**

Source: Dominion Bond Rating Service

Last observation: June 2015

tool, especially for smaller institutions that do not have a branch network of deposits and lack alternative funding sources. As well, from a regulatory perspective, NHA MBS qualify (as do CMB) as high-quality liquid assets (HQLA) under the terms of the Basel III Liquidity Coverage Ratio (LCR).<sup>12</sup> As of June 2015, about 40 per cent of the outstanding stock of NHA MBS was retained by federally regulated FIs, which could help them meet the LCR requirement.

For NHA MBS and CMB, investors also benefit from a timely payment guarantee (offered by the government through CMHC for a fee, called the guarantee fee) on the securities' interest and principal. This enhances demand for the securities, since investors do not face credit risk or uncertainty as to the timing of cash flows from the securities. In addition, the timely payment guarantee allows NHA MBS and CMB to be government securities from a credit perspective, which enhances their attractiveness to investors.

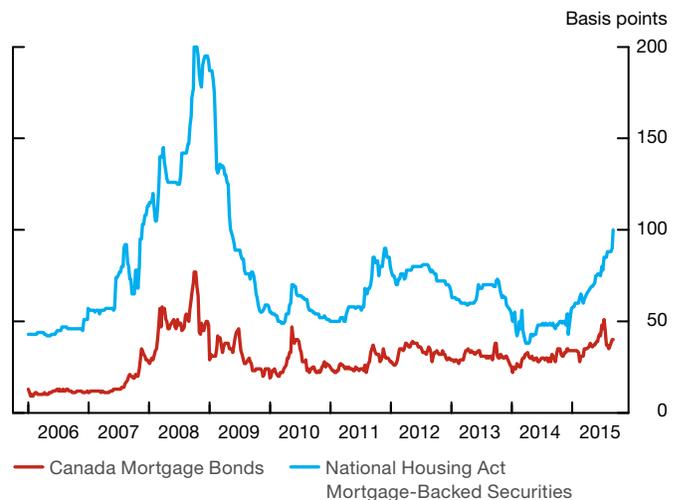
## Quantifying the Impact of Government-Supported Securitization

In this section, we examine the potential impacts of public securitization in Canada, specifically, the benefits that accrue to the financial system and

<sup>12</sup> Under Basel III, a bank needs to have an adequate stock of unencumbered HQLA that can be converted easily and immediately in private markets into cash to meet their liquidity needs for a 30-calendar-day liquidity stress scenario. The LCR is the ratio of the stock of HQLA to total net cash outflows. The standard requires that, absent a situation of financial stress, the value of the ratio should be no lower than 100 per cent (i.e., the stock of HQLA should at least equal total net cash outflows). During a period of financial stress, however, institutions may use their stock of HQLA, thereby causing the ratio to fall below 100 per cent.

FIs, and attempt to quantify two of them: the cost-effectiveness of funding and the regulatory benefit of meeting the LCR.<sup>13</sup>

Canadian mortgage lenders and borrowers benefit from the certainty and availability of funding provided by CMHC securitization, especially through the CMB Program. The regular schedule of CMB issuance and relatively steady issuance volumes on a quarterly basis provide lenders with certainty of cost-effective funding, which is valuable for business planning purposes. That value was highlighted in 2008 during the financial crisis, when access to market funding for FIs worldwide became severely restricted. During that time, the CMB Program continued to issue bonds on its regular schedule, in increased volumes, albeit at wider spreads. This is shown in Chart 4, which reports indicative (expected) spreads for new issuances of NHA MBS and CMB over 5-year Government of Canada bonds.

**Chart 4: Spreads of NHA MBS and CMB over 5-year Government of Canada bonds**

Source: Royal Bank of Canada

Last observation: September 2015

Another important benefit of government-backed securitization programs is that they limit severe procyclical contractions in the extension of mortgage credit during a crisis, when access to funding may be impaired. For example, between 2008 and 2014, the average annual growth rate in outstanding mortgage credit in Canada was 6 per cent, whereas in the United States, mortgage

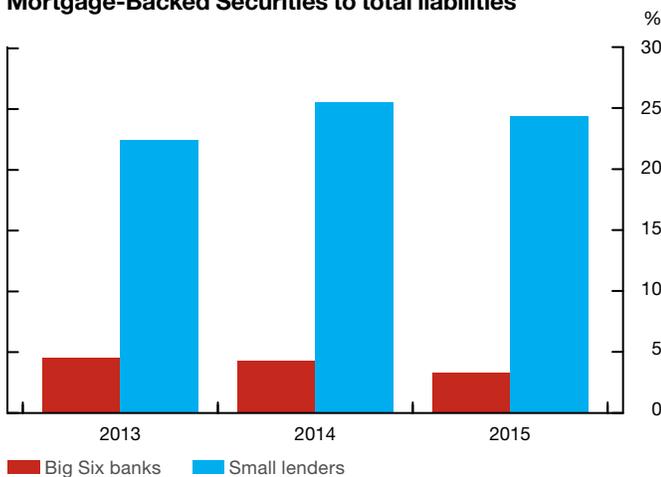
<sup>13</sup> It is challenging to disentangle the benefits of mortgage insurance from those of securitization. For that, we would need a type of mortgage securitization that does not exist in Canada, one in which the government provides a timely payment guarantee on MBS that are backed by uninsured mortgages (Table 1). Evidence from the United States suggests that in the 1990s and 2000s, the difference in interest rates for borrowers between mortgages that were more easily securitizable and those that were not was up to 24 basis points (Adelino, Schoar and Severino 2012).

credit contracted by approximately 2 per cent per year, even after accounting for the increased issuance of MBS by government-sponsored enterprises. While there were clearly other important factors at play, public securitization in Canada helped support growth in mortgage credit during this period. Finally, Canadian banks also use NHA MBS and CMB as collateral in repo transactions. Gravelle, Grieder and Lavoie (2013) document that these securities account for about 20 per cent of repo collateral (classified as obligations of Crown corporations). Further, FIs can pledge NHA MBS and CMB in the Large Value Transfer System, which allows them to use other securities for other purposes.

### The cost-effectiveness of public securitization

Canadian institutions use a variety of sources to meet their funding needs, with the mix depending on the cost-effectiveness of the options. Funding sources for the Big Six banks include wholesale instruments such as short-term debt and senior unsecured bonds, covered bonds backed by pools of mortgages, securitized issuances (including the NHA MBS and CMB programs and vehicles backed by credit card receivables), and retail and corporate deposits. Funding by the large Canadian banks may also take place in a variety of currencies, in particular for senior unsecured bonds and covered bonds, with the foreign currency proceeds typically swapped back to Canadian dollars. Small lenders are more limited in their funding options and rely to a greater extent on the NHA MBS and CMB programs for funding, as indicated in Chart 5.

**Chart 5: Ratio of outstanding National Housing Act Mortgage-Backed Securities to total liabilities**



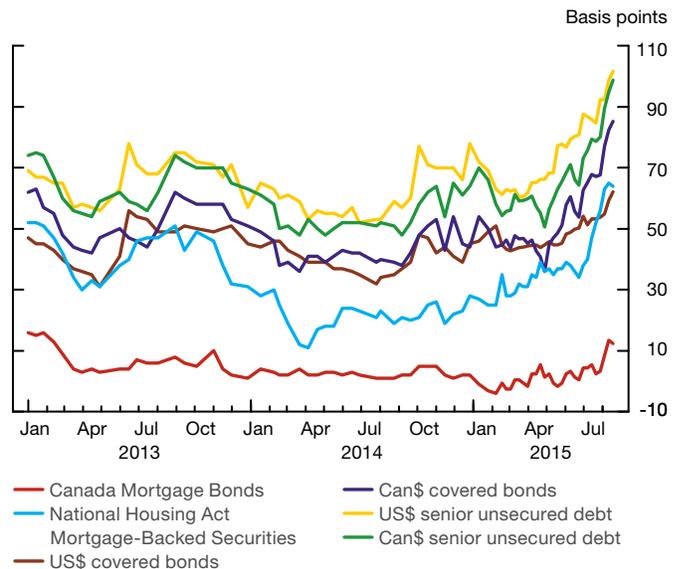
Note: Ratios are as of June of each year.  
 Sources: Office of the Superintendent of Financial Institutions and Canada Mortgage and Housing Corporation  
 Last observation: June 2015

We estimate the cost-effectiveness of funding from the NHA MBS and CMB programs by comparing their cost of funds with the cost of the next-cheapest source of long-term wholesale funding. We measure how much funding costs for lenders would rise if the NHA MBS and CMB programs did not exist.

This approach follows the methodology employed by CMHC’s evaluation of the CMB Program, which was prepared by KPMG and released in 2008.<sup>14</sup> Although the approach allows us to compare the cost-effectiveness of the NHA MBS and CMB programs, its drawback is that the methodology requires some simplifying assumptions; namely, that the funding cost of the next-cheapest alternative would not increase if the programs ceased, that funding in sufficient size would be available from the alternative, and that CMB and NHA MBS funding is raised only at the 5-year term.

Since funding costs on the cheapest alternative change over time, as indicated in Chart 6, we report a range for the funding advantage of CMB and NHA MBS in Table 3, which is based on the chart.<sup>15</sup> The table indicates that, over the sample period, the average cost advantage for a Big Six bank from the CMB Program relative to the next-best alternative was about 40 basis points, and the relative benefit of NHA MBS was about 11 basis points.

**Chart 6: Indicative 5-year all-in funding costs (as spread to 3-month CDOR)**



Note: CDOR = Canadian-Dollar Offered Rate  
 Source: Dealer quotes  
 Last observation: September 2015

<sup>14</sup> *Canada Mortgage Bonds Program Evaluation* (KPMG 2008).  
<sup>15</sup> Funding costs are based on biweekly dealer quotes between January 2013 and September 2015 and include guarantee and syndication fees. Guarantee fees on NHA MBS and CMB are based on the fee level before 1 April 2015. Funding costs are swapped back to Canadian dollars and expressed in terms of a spread to the 3-month Canadian-Dollar Offered Rate.

For comparison, the KPMG report, which evaluated only the CMB Program over the 2001–06 period, concluded that the average cost advantage of that program over the next-best alternative was about 18 basis points.

**Table 3: All-in funding cost advantage of Canada Mortgage Bonds and NHA Mortgage-Backed Securities versus the next-cheapest private alternative (basis points)**

	Minimum	Average	Maximum
CMB	28	40	51
Syndicated NHA MBS	0	11	28

Source: Bank of Canada

Estimating the cost advantage of NHA MBS and CMB as funding sources for small mortgage lenders is more difficult. On the one hand, the cost of CMB funding is higher for lenders who require third-party assistance in the CMB swap and sourcing of replacement assets backing CMB issues, reducing the relative cost advantage of CMB funding.<sup>16</sup> On the other hand, the cost of alternative sources of wholesale funding for small lenders is generally higher than that of the Big Six banks, increasing the relative cost advantage of CMB funding. In addition, to the extent that small lenders meet a higher proportion of their total funding needs through the NHA MBS and CMB programs than do the Big Six banks (as indicated in Chart 5), the programs provide a greater relative advantage to small lenders.

Given the overall supply constraint on CMB and NHA MBS, small lenders also benefit from the allocation methodology used by CMHC to distribute NHA MBS issuance and CMB funding among FIs. Available funding is allocated equally to all FIs, regardless of their size or requests for funding. As a result, small lenders are able to access the public securitization programs for a greater relative share of their funding needs, providing more-stable funding sources and helping them to compete against other mortgage lenders.

One can roughly estimate the alternative private funding costs for small lenders by considering an RMBS issuance completed in 2014. The weighted average spread of all the tranches issued in the market was about 40 basis points over NHA MBS. Assuming that the averages from Table 3 are representative, the issuer paid its RMBS investors about 70 basis points more than what it would have paid for CMB funding.

Based on the current outstanding stock of NHA MBS and CMB, and assuming that their relative funding cost advantage is the same across all institutions, we estimate the aggregate annual funding benefit of these programs to be about \$870 million for all FIs that access the programs.<sup>17</sup>

## The use of public securitization to meet the Liquidity Coverage Ratio

The Basel Committee on Banking Supervision requires banks to have (at a minimum) sufficient HQLA to cover stressed cash outflows over a 30-day period (BCBS 2013). The total amount of HQLA distinguishes between the highest-quality liquid assets (Level 1 HQLA) and those that are somewhat less liquid (Level 2 HQLA). While there is a cap on the amount of Level 2 assets (they can comprise no more than 40 per cent of total HQLA), there is no cap and no haircut on Level 1 assets. In this sense, they can be held in unlimited amounts for LCR purposes (i.e., total HQLA requirements can be met entirely by any specific Level 1 asset).<sup>18</sup>

Both NHA MBS and CMB qualify as Level 1 assets. They have the added advantage of carrying a zero risk-weight capital requirement because they are government guaranteed.<sup>19</sup> However, NHA MBS are an attractive instrument for FIs to hold for the LCR because they are readily convertible from mortgages on their books and have a higher yield than Government of Canada bonds and CMB.

The advantage of using NHA MBS to meet the LCR requirement can be estimated by considering the cost of holding the next-cheapest alternative, provincial bonds—which also qualify as Level 1 assets. We compare the cost of converting insured mortgages to a 5-year NHA MBS held for the LCR versus buying provincial bonds for the LCR by funding the purchase through the cheapest wholesale funding instrument, covered bonds, on the assumption that the NHA MBS and CMB programs did not exist.

<sup>16</sup> Lenders participating in the CMB Program must substitute maturing NHA MBS sold to the Canada Housing Trust with replacement assets and must engage in a swap with CHT where they exchange the interest flows on CMB issues with those on the securities backing the CMB.

<sup>17</sup> As of June 2015, the stock of outstanding CMB totalled \$213 billion, whereas the estimated outstanding stock of syndicated NHA MBS stood at about \$15 billion. Multiplying the outstanding amounts of these instruments by their respective average cost advantages (40 basis points and 11 basis points, respectively) yields a total benefit of about \$870 million.

<sup>18</sup> For further discussion on the Basel III liquidity standards, see Gomez and Wilkins (2013).

<sup>19</sup> According to OSFI, because NHA MBS are guaranteed by CMHC, they receive a zero per cent risk weight in recognition of the fact that obligations incurred by CMHC are legal obligations of the Government of Canada. See [http://www.osfi-bsif.gc.ca/eng/fi-if/rg-ro/gdn-ort/gi-ld/Pages/CAR\\_chpt3.aspx](http://www.osfi-bsif.gc.ca/eng/fi-if/rg-ro/gdn-ort/gi-ld/Pages/CAR_chpt3.aspx).

Table 4 indicates that the benefit of NHA MBS for LCR purposes differs, based on the amount issued.<sup>20</sup> For the first \$6 billion, FIs would save, on average, 22 basis points, and for any amount issued above \$6 billion, FIs would save about 12 basis points. This means that, for FIs in aggregate, the benefit for each \$100 billion of NHA MBS held for LCR purposes amounts to at least \$120 million annually.<sup>21</sup>

**Table 4: The cost advantage of adhering to the Liquidity Coverage Ratio with NHA Mortgage-Backed Securities vs. provincial debt**

Annual cost of creating NHA MBS	For the first \$6 billion: 10 basis points Any amount above \$6 billion: 20 bps
Cost to hold provincial bond for the LCR	
Issue covered bond	Canadian-Dollar Offered Rate + 44 bps
Return on provincial bond	CDOR + 12 bps
Total holding cost	32 bps
Cost differential	for the first \$6B: 22 bps for any amount above \$6B: 12bps

Source: Bank of Canada

## Potential Implications of Government-Supported Programs

Although benefits accrue to mortgage lenders from accessing CMHC securitization programs, there are also risks associated with these programs. There is the risk that CMHC will be called upon under the timely payment guarantee to meet interest and/or principal payments on NHA MBS or CMB issues. CMHC reserves for this risk by charging lenders guarantee fees, and it holds capital against its securitization exposures of about \$1.6 billion (year-end 2014). There are, however, other potential vulnerabilities and risks associated with public securitization from a financial stability perspective that may not be fully incorporated in the level of guarantee fees. We review those below.

### Impact on the supply of mortgage credit

Since lenders can securitize mortgages under the public securitization programs in a cost-effective manner, they may overextend mortgage credit and underinvest in other productive assets (such as small business loans). The latter may occur because mortgage-backed

funding for FIs through public securitization is more cost-effective and stable than non-mortgage-backed funding, creating an incentive to extend more mortgage credit than would occur without public securitization. An increase in mortgage credit could lead to more leveraged households and elevated house prices.

While public securitization programs may support competition, they may also increase vulnerabilities in the financial system by influencing the business models of mortgage lenders. For example, mortgage finance companies (MFCs) are important participants in the residential mortgage market. MFCs typically underwrite and service insured mortgages sourced from brokers. They tend to sell a large proportion of their mortgage loans to federally regulated financial institutions (FRFIs), which may use them in CMHC securitization programs for funding or regulatory purposes, or into CMHC securitization programs. In this way, MFCs rely to a considerable extent on funding from public securitization programs. Without these programs, it is not clear if MFCs' other sources of funding, which are less stable than deposits (e.g., syndicated lines of credit from banks), would be reliable and large enough to support their mortgage activities.

MFCs are less-regulated lenders (i.e., they are not directly regulated by OSFI), although they must abide by residential mortgage underwriting guidelines for FRFIs.<sup>22</sup> Limited available data also suggest that MFCs are highly leveraged, leaving them less able to manage liquidity and maintain income following an increase in mortgage defaults (although mortgage insurance limits the eventual losses). The participation of MFCs (supported by public securitization programs) in the residential mortgage market increases competition, but more transparency and analysis are needed to better understand their business models and their potential impact on financial system risk (see the June 2015 *Financial System Review*).

### Use of securities for regulatory requirements

As noted earlier, since NHA MBS (and CMB) qualify as Level 1 assets, FIs can use them in unlimited amounts to meet the LCR requirement. As of year-end 2014, about \$184 billion in NHA MBS were retained on-balance-sheet, mainly by the Big Six banks, and NHA MBS represent the most effective asset for FIs to use for LCR purposes.

From a public policy perspective, when the government was restricting the use of portfolio mortgage insurance to limit public exposure to housing finance, it noted that “[T]hese measures will restore taxpayer-backed portfolio

<sup>20</sup> The cost of 5-year NHA MBS is based on the guarantee fee schedule as of 1 April 2015. For the first \$6 billion, the upfront guarantee fee was set at 0.30 per cent, or 10 basis points annually, assuming that the average life of NHA MBS is three years. Similarly, for any amount above \$6 billion, the fee was set at 0.60 per cent, or 20 basis points annually. We exclude the cost of insuring the mortgages. Spread levels are relative to the 3-month CDOR and are based on average biweekly dealer quotes between January 2013 and September 2015. We use 5-year Ontario bonds as the provincial proxy.

<sup>21</sup> Holding CMB for collateral purposes is more expensive than holding provincial bonds, given the relatively lower yield on CMB. However, the liquidity of CMB may make them an attractive security for LCR purposes.

<sup>22</sup> MFC-originated mortgages purchased by FRFIs must conform to OSFI Guideline B-20, and MFCs are motivated to follow the principles set out for mortgage insurers in OSFI Guideline B-21 so that mortgages can qualify for CMHC securitization programs.

insurance to its original purpose of allowing access to funding for mortgage assets” (Government of Canada 2013).

Effective 1 April 2015, CMHC increased the guarantee fees applied to NHA MBS for each FI and, in particular, doubled the fees on issuances above \$6 billion.<sup>23</sup> In addition to encouraging the development of alternative funding options in the private market, the differential guarantee fee structure may reflect the variety of ways in which FIs use NHA MBS. It is also consistent with the program’s stated objective of promoting competition, since smaller lenders, who are more likely to use NHA MBS for funding and demand less than the \$6 billion cut-off, will be paying lower fees than FIs that demand larger amounts.

### Effect on alternative funding models

Alternative funding vehicles, such as private-label securitization markets, can be used to fund mortgages and transfer and diversify risk in a way that would benefit the real economy (BoE and ECB 2014). In Canada, the availability of low-cost publicly guaranteed funding may reduce the incentive for FIs to explore the development of alternative mortgage funding vehicles, namely private-label mortgage securitization. For example, during its review of the CMB Program, KPMG interviewed representatives of the big five banks, which indicated that “in the absence of the CMB program, private securitization vehicles would have been issued, probably by the big five banks as single issuers and possibly as multi-seller vehicles for smaller players” (KPMG 2008, p. 31).

It is not certain, however, that FIs would develop alternative funding models if access to public securitization programs were reduced. FIs could choose to utilize existing funding sources to a greater extent in situations where the benefits of the alternative models are uncertain, set-up challenges are high and their additional funding needs may not be large.<sup>24</sup> Private securitizations may also be limited, since they cannot be backed by insured mortgages. As such, the development of private vehicles depends in part on the growth rate of uninsured mortgage credit and the extent to which it outstrips FIs’ existing funding sources.

## Policy Options to Promote Private Securitization

The government could continue to reduce public involvement in the housing market by adopting policy measures to promote a private-label securitization market.<sup>25</sup> In addition, the government could consider changes to public securitization, which could take the form of some or all of the following: further increases in the cost to access CMHC programs, additional reductions in the issuance caps under CMHC programs or restrictions on the eligibility of lenders able to participate in the programs.

Fostering a private-label mortgage securitization market in Canada could help to achieve a rebalancing of private and public securitization. Such a market could benefit the economy by helping lenders fund assets and diversify risks (Schembri 2014; BoE and ECB 2014). In that respect, the Bank of Canada announced that, as of April 2015, term asset-backed securities of high quality, including residential mortgage-backed securities, would be considered as eligible collateral for the Standing Liquidity Facility (SLF).<sup>26</sup> Other measures that could promote an appropriate framework for private-label mortgage securitization include principles for eligible collateral, reporting requirements and structure standardization.

Some steps to reduce public securitization have already been put in place. As part of its 2014 budget, the federal government announced that it would implement measures to reduce taxpayer exposure to the housing sector and increase market discipline in residential lending. For example, while the annual issuance of CMB since 2013 has been kept at \$40 billion a year, the annual issuance of NHA MBS was lowered to \$80 billion a year for 2014 and 2015 (from \$85 billion in 2013) (GoC 2014). And, as mentioned earlier, the government also raised the guarantee fees on NHA MBS and CMB as of 1 April 2015, and announced further changes on 11 December 2015 (effective July 2016), to encourage the development of alternative funding options in the private sector.

Going forward, the government has other options in addition to a further increase in guarantee fees or a reduction in issuance caps on these securities. It could also consider an auction-based mechanism whereby the right to issue NHA MBS and the allocation of funding under the CMB Program could be distributed based on bidding by financial institutions. As such, an institution in need of funds would be willing to offer a higher price.

<sup>23</sup> See [http://www.cmhc-schl.gc.ca/en/hoficlincl/mobase/upload/MBS\\_Advice\\_Guarantee\\_Fee\\_Increase-Dec-1-2014.pdf](http://www.cmhc-schl.gc.ca/en/hoficlincl/mobase/upload/MBS_Advice_Guarantee_Fee_Increase-Dec-1-2014.pdf). For the issuance of 5-year NHA MBS of up to \$6 billion, the upfront guarantee fees increased from 0.20 per cent to 0.30 per cent. For any amount above \$6 billion, the fee was set at 0.60 per cent. For the issuance of a 5-year CMB, the guarantee fee was raised from 0.20 per cent to 0.40 per cent.

<sup>24</sup> One alternative model is covered bonds, which are limited to four per cent of the total applicable assets of the deposit-taking institution.

<sup>25</sup> Another alternative could be to expand the use of covered bonds as a source of mortgage funding. See Poschmann (2015).

<sup>26</sup> For a detailed description of this change, see <http://www.bankofcanada.ca/2015/01/planned-changes-assets-eligible-collateral/>.

This approach might be appropriate, since prices would more accurately reflect demand and the riskiness of the lenders.<sup>27</sup> However, this mechanism could impair the competitive position of smaller lenders on a relative basis.

Another approach could be to lower the size of the CMB Program and dedicate it to small lenders, recognizing that small lenders do not enjoy the same access to funding as large lenders. An alternative that is less distortionary than quantity constraints is for the government to consider setting higher fees for large lenders that participate in the programs. In general, both options would be consistent with the policy objectives of the CMHC securitization programs and with the philosophy that government intervention in the market should take place only in cases of market failure.

<sup>27</sup> An institution that needs funding will offer a higher yield than an institution with less-pressing needs at the time it submits its auction offer to CMHC.

## Conclusion

The public “footprint” in the Canadian mortgage securitization market has increased in recent years. The public role provides stable mortgage funding for FIs and promotes competition from small lenders in that market. It also has consequences for the allocation of savings, the business models chosen by small lenders and the cost of regulatory compliance by banks.

This increase in the public footprint has led to a discussion about the government’s role in housing finance from a range of perspectives, including that of financial stability. The government has implemented a number of measures in recent years to reduce the public’s involvement. Further discussion and analysis of potential policy options, including those to promote private mortgage securitization, would be useful.

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