

Benchmarking the Canadian Mortgage-Backed Securities market

Executive summary

In this FTSE Russell Product Insight, we profile a new index series—the FTSE Canada NHA MBS 975 Index—which is designed to measure the performance of Canada’s mortgage-backed securities (MBS) market, an important sector of the investment opportunity set in Canada. We summarize the key characteristics of mortgage-backed securities and describe the core structural features of the Canadian MBS market. Through the lens of the newly launched index, we look at market dynamics, including issuance levels, interest rate spreads, prepayment rates and duration.

Introduction

With almost \$500 billion in principle amount outstanding as of the end of March 2020¹, the Canadian National Housing Act mortgage-backed securities market is an important part of the Canadian fixed income investment opportunity set. Investors in these securities, many of whom have historically been domestic banks, collect monthly cash flows in the form of coupon and principal payments of an underlying group of individual mortgage loans. These mortgages have been fully insured by Canada Mortgage and Housing Corporation (CMHC) and NHA MBS are assigned the same AAA rating as the agency. Recent updates to the CMHC programs under which NHA MBS are securitized and administered have been aimed at increasing the secondary market liquidity of these instruments. FTSE Russell has launched the first index to track the NHA MBS 975 market and further support its transparency.

Mortgage investments in Canada

Investors can gain exposure to the Canadian mortgage market through securities issued under the National Housing Act Mortgage-Backed Securities (NHA MBS) program and the Canada Mortgage Bond (CMB) program, both of which are administered by the Canada Mortgage and Housing Corporation (CMHC).

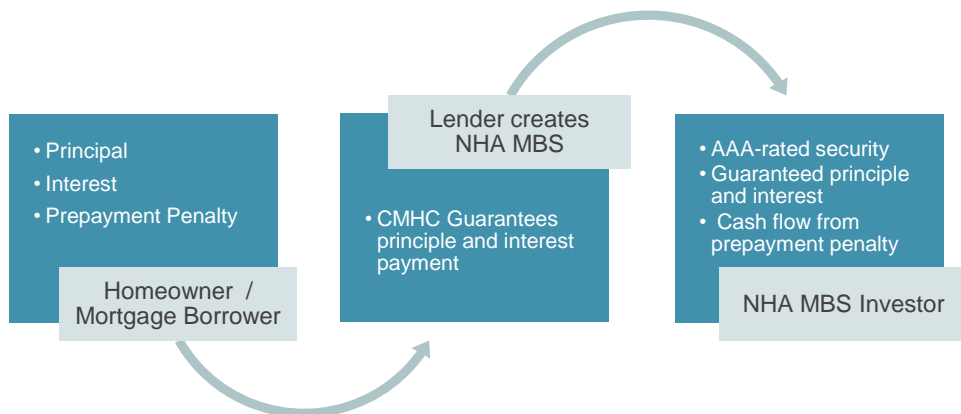
NHA MBS

First introduced in 1987, the NHA MBS program allows financial institutions to issue securities that are backed by groups of residential mortgages insured

¹ Source: Canada Mortgage and Housing Corporation (CMHC), <https://www.cmhc-schl.gc.ca/en/finance-and-investing/nha-mortgage-backed-securities/securitization-reports>, Monthly Report R120.

under the National Housing Act. The timely payment of principal and interest is fully guaranteed by the CMHC², mitigating the risk to investors that a homeowner will not repay his or her loan. The NHA MBS securities are AAA-rated, in line with the guarantor CMHC, and are typically classified in the Government Federal³ sector.

Figure 1. Mortgage securitization process



Source: FTSE Russell, for illustrative purposes only.

NHA MBS provide investors with access to a steady stream of monthly interest and principal payments. These principal payments can either be scheduled, as borrowers incrementally reduce the balance owed to the lender, or unscheduled, where borrowers repay their loans early. The nature of these principal payments distinguishes MBS from more traditional fixed income instruments, such as fixed-rate bonds typically issued by government or corporate entities.

The size of monthly unscheduled principal payments can vary across global MBS markets based on local mortgage market regulations. They can be relatively limited, as in the case of Canada, or highly variable, as in the case of the US agency MBS market, where cash flows can be highly dependent on the interest rate environment. In Canada, the likelihood of early prepayment is largely consistent, due to an indemnity clause built into the loans themselves. This clause charges the borrower a penalty that is equal to the difference between their existing interest rate and the prevailing market rate, essentially negating the economic benefit to a borrower of refinancing their mortgage at a lower rate. Therefore, the likelihood of early prepayment of the Canadian loans underlying NHA MBS is mitigated by the prepayment penalty provision, and any penalties paid by mortgagors who do repay early are paid to holders of the MBS pool.⁴

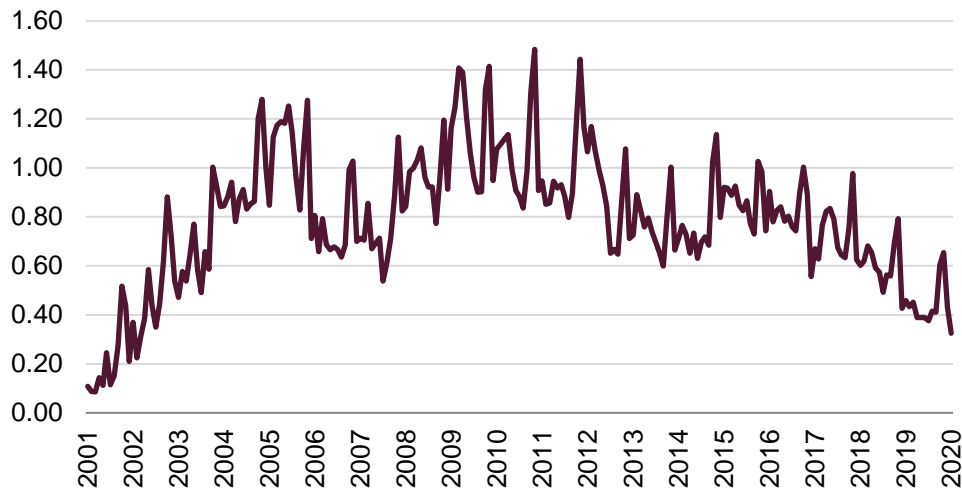
According to the data published by CMHC, the annualized partial prepayment rate (PPR) for Canadian NHA MBS has consistently been below 1.5% of the aggregate principal balance.

² Guarantee is by CMHC in its capacity as an agent of Her Majesty in Right of Canada, which is the legal entity representing Canada's head of state.

³ In accordance with FTSE Canada index classification schematic.

⁴ A feature of the NHA MBS 975 pool type.

Figure 2. Annualized prepayment rate (%) for 5-year fixed-rate 975 pools

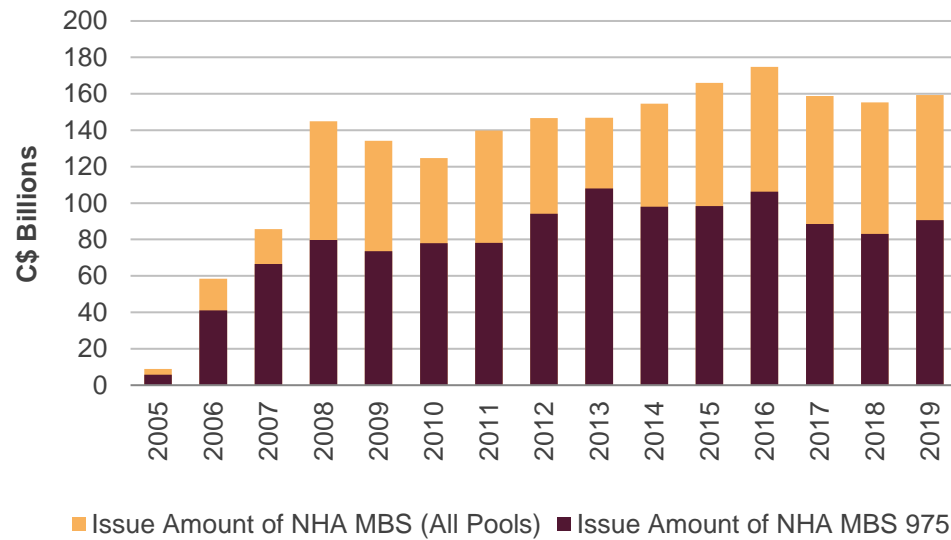


Source: Canada Mortgage and Housing Corporation (CMHC).

NHA MBS 975 pool type

NHA MBS are issued in different pool types, distinguished by the features of the underlying mortgage loans. The most common mortgage pool type is the “975” type, which consists of traditional fixed-rate mortgages, representing over 80% of all NHA MBS currently outstanding, and approximately 60% of issuance in the last 10 years. Penalties for early prepayments or renegotiations that occur for loans in these pools are paid to the NHA MBS investors. The majority of 975 pools are issued with a 5-year fixed-rate term and are commonly amortized over a 25-year period.⁵

Figure 3. Pool type 975 issuance as a proportion of all NHA MBS issuance



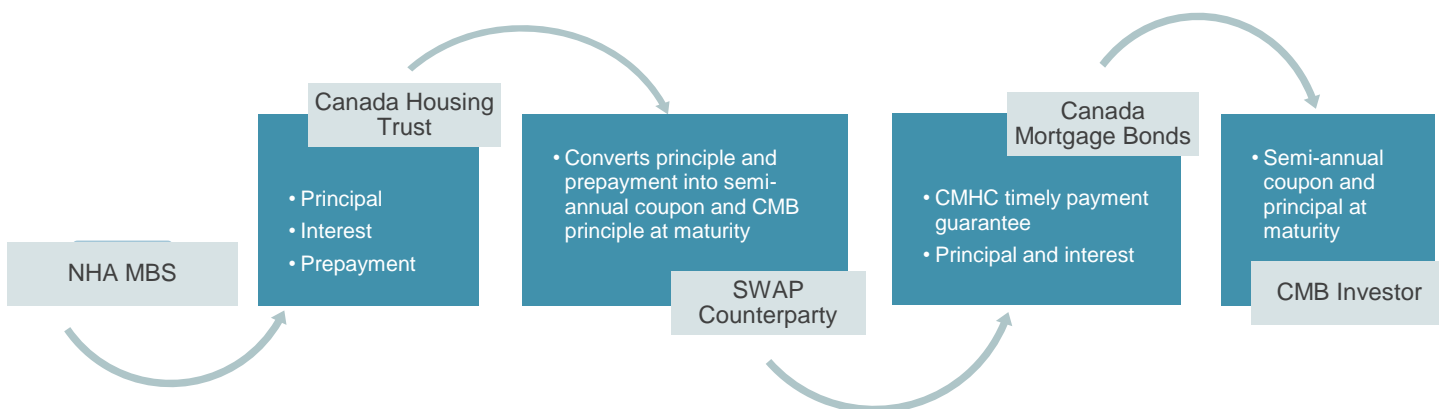
Source: CMCH, FTSE Russell.

⁵ Other amortization periods on the underlying load are possible

Canada Mortgage Bonds (CMB)

Investors can also gain exposure to Canadian mortgages through Canada Mortgage Bonds (CMBs). Since 2001, NHA MBS could be sold to a special purpose entity called the Canada Housing Trust (CHT), which funds these purchases by issuing Canada Mortgage Bonds. CMBs are CMHC-guaranteed, bullet-maturity bonds, with interest payments made semi-annually (for fixed-rate securities) and quarterly (for floating-rate securities) over the term of the issue.

Figure 4. Canada Mortgage Bond structure



Source: FTSE Russell, for illustrative purposes only.

Over the past 15 years, the issuance of both NHA MBS and CMB programs has grown, with recent new issuance patterns remaining relatively steady. The CMB program has been running at approximately C\$40 billion per year in issuance across fixed-rate and floating-rate bonds, with fixed-rate making up over 70% of the issuance in the last 10 years. Unlike NHA MBS securities, CMBs are eligible for the flagship FTSE Canada Universe Bond Index and the FTSE Canada Floating Rate Note Index⁶ respectively. As of March 2020 month-end, CMB fixed-rate bonds were the third largest issuer segment in the FTSE Canada Universe Bond Index, with a market capitalization of C\$178.5 billion across 24 bonds.

Comparison of the NHA MBS and CMB

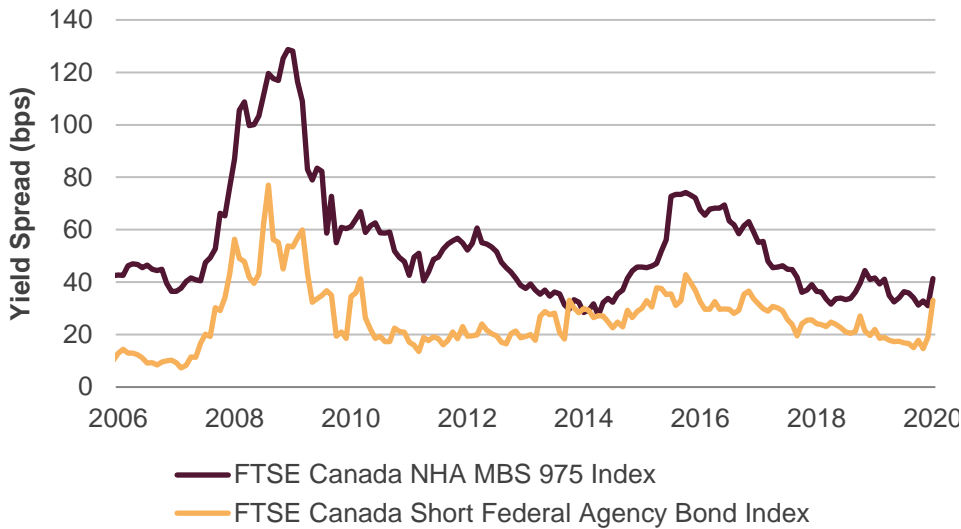
Given that their underlying exposures are related, the yield spreads and performance of these AAA-rated, Government / Federal classified segments, NHA MBS and CMB are often compared. CMB are typically very liquid instruments, with an evolved repo market (which allows the ability to raise short-term capital through a repurchase contract between two parties), domestic and international demand, and a well-established curve. The NHA MBS market is typically made up of a larger number of securities, with smaller issue sizes, that are purchased by a more concentrated group of investors.

Figure 5 provides historical yield spread of these segments through the indexes that track each instrument type. The relative yield spreads of the FTSE Canada NHA MBS 975 Index and the FTSE Canada Short Term Federal Agency Bond Index are shown over the FTSE Canada Short Term Federal Non-Agency Bond

⁶ FTSE Canada Universe Bond Index includes securities with fixed rate semi-annual coupon payments; MBS securities are excluded.

Index.⁷ By comparison, the NHA MBS has tended to exhibit a wider spread and higher yield.

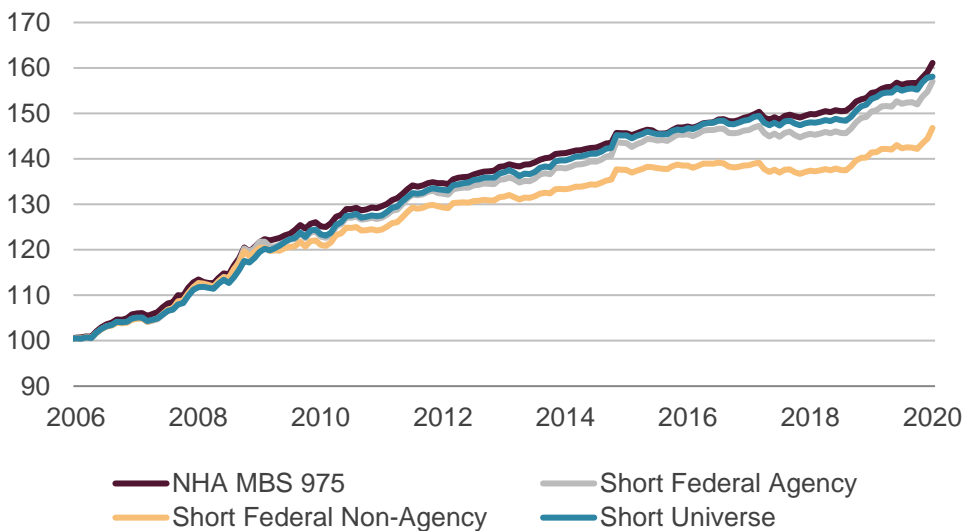
Figure 5: Yield Spread for NHA MBS 975 Index over the FTSE Canada Short Federal Non-Agency Index



Source: FTSE Russell. Data as of March month end each year.

Figure 6 shows historical return of NHA MBS 975 Index has been higher than that of other duration-matched government securities.⁸

Figure 6. Comparison of NHA MBS 975 Index returns versus duration-matched indexes



Source: FTSE Russell. Data as of March month end each year.

⁷ FTSE Canada Short Term Federal Non-Agency Bond Index includes issuance from the Government of Canada only.

⁸ In Figure 7, the performance of NHA MBS, which typically have a term to maturity of less than 5 years, is compared to the 1-5 year component of other FTSE Canada Government Indexes.

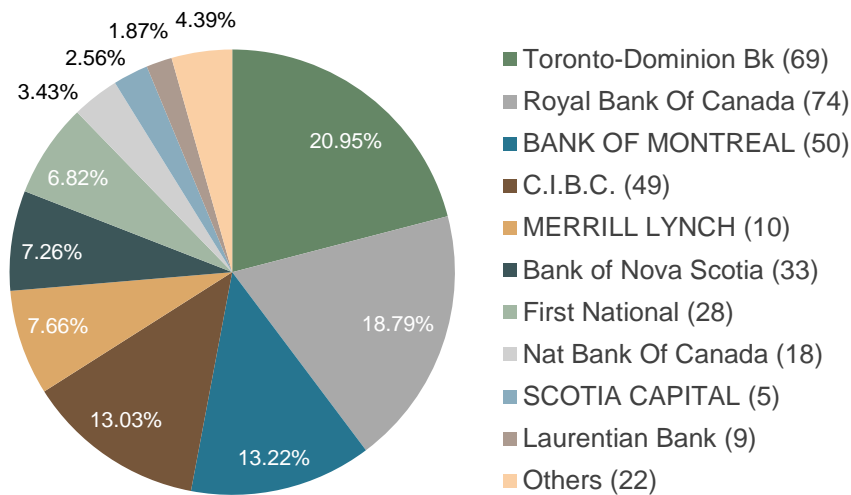
FTSE Canada brings transparency to the NHA MBS market

The FTSE Canada NHA MBS 975 Index is the first dedicated index for this segment of Canada’s fixed income market. It provides a benchmark for investors to use in the management of their MBS portfolios and offers price transparency to the market.

The NHA MBS 975 Index is a market-cap-weighted index that tracks the 975 pool of NHA MBS with at least one year to maturity and a minimum of C\$200 million in issuance and C\$100 million of bonds outstanding. Index users are able to assess risk using its robust analytics, which utilize the industry standard Linear Liquidation Model (LLM). The index reflects new entries and exits on a monthly basis, and reflects all cash flows (coupon, principal payments, penalty for prepayments) as they are reported.

In addition to providing investors with a tool for risk assessment, a transparent broad market index of the NHA MBS 975 offers diversification to asset allocation previously unavailable through other Canadian benchmarks, as well as captures a breadth of exposure within the index. At the end of March 2020, the NHA MBS 975 Index had a market capitalization of C\$132 billion across 373 securities from 19 issuers, with an average yield of 0.91% and a duration of 2.3 years. Figure 7 shows the distribution for the top 10 issuers in the index as of March 2020 month end. Typically issued by some of the major lenders in Canada, given the CMHC guarantees, NHA MBS are rated AAA and classified as Government Federal in the FTSE Canada index schematic, which is comparable with CMB securities.

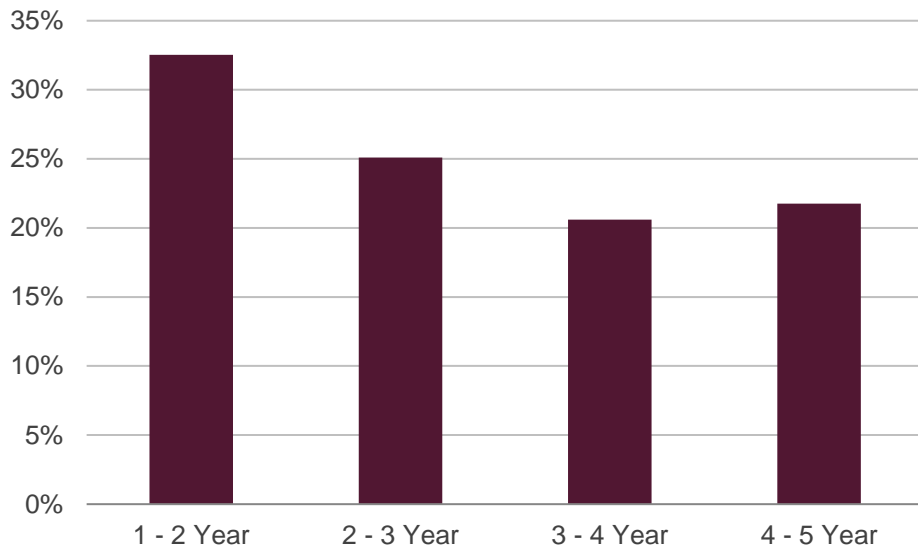
Figure 7. FTSE Canada NHA MBS 975 Index market weight distribution of top 10 issuers



Source: FTSE Russell. Data as of March 2020 month end.

Due to the natural issuance pattern in this sector, the index provides a fairly even weights distribution across the maturity spectrum, as demonstrated in Figure 8.

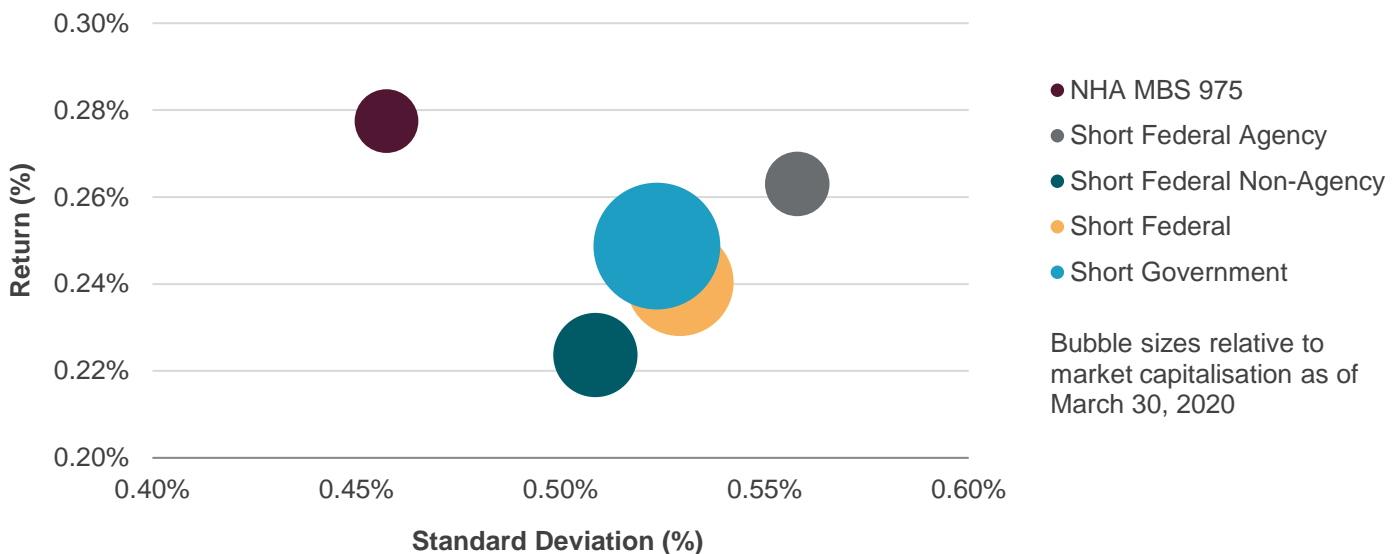
Figure 8. FTSE Canada NHA MBS 975 Index market weight distribution by term



Source: FTSE Russell. Data as of March 2020 month end.

As we saw in earlier analysis, the NHA MBS 975 Index has historically offered some outperformance and yield pick-up in comparison with FTSE Canada Federal Agency Indexes (which consists primarily of CMB securities) and other government bond indexes published by FTSE Canada. Over the past 15 years, the NHA MBS 975 Index has shown a higher return and a lower volatility when compared to other government bond segments in Canada. It has also provided a higher yield with a lower duration.

Figure 9. FTSE Canada NHA MBS 975 Index returns compared to standard deviation



Source: FTSE Russell. Data from December 2005 to March 2020, inclusive.

Summary

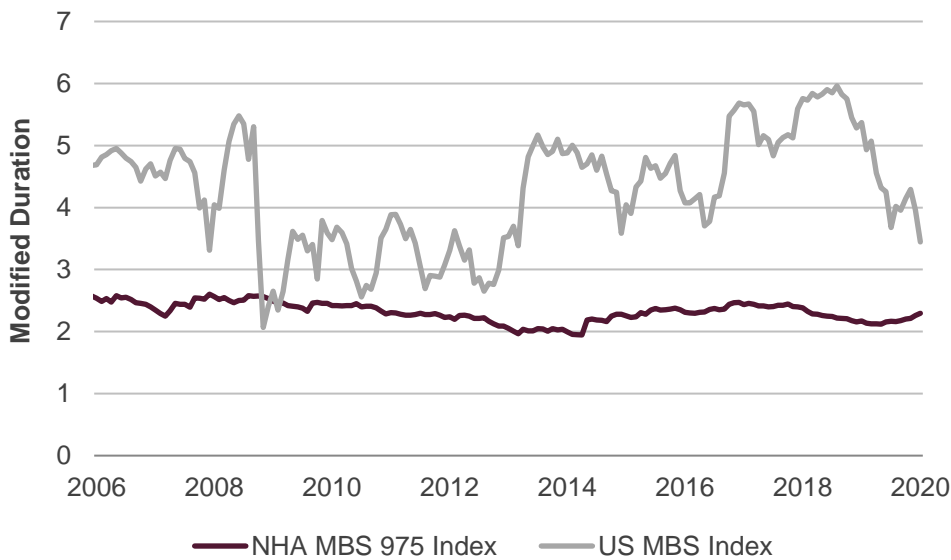
The development of a dedicated benchmark for the NHA MBS 975 asset class is a critical step in adding transparency to this market as it continues to grow in prominence. Now, more than ever, it is critical for investors to have access to additional tools to manage their investment choice set, enabling them to diversify their asset allocations and access the breadth of fixed income market opportunities available in Canada.

Appendix: Comparison of mortgage securitization in Canada and the US

When looking at the Canadian MBS market, comparisons are often drawn with the much larger and more complex US agency MBS market. The US agency MBS market refers to pass-through pools guaranteed by three US government agencies: Freddie Mac, Fannie Mae and Ginnie Mae. These agencies guarantee the principal payment of a “pool” of mortgage loans in exchange for a fee, similar to the CMHC backing of Canadian mortgages. The behavior of the two markets is fairly distinct, however, with an important difference worth highlighting.

Prepayment risk is one of the fundamental considerations of investing in mortgage securities, since the speed at which an MBS holder receives unscheduled principal payments is core to the security’s risk and valuation. US mortgage borrowers are not subject to the same type of prepayment penalties as their Canadian counterparts, hence US MBS prepayments can be highly volatile and correlated to the interest rate environment vis a vis the economic advantage to refinance.⁹ These dynamics result in very different duration profiles in the two markets (see Figure 7), with Canadian mortgages maintaining a steady duration profile, while US mortgage duration tends to fluctuate. The homeowner behavior driving mortgage prepayments, which accelerate when interest rates are falling, mean that US MBS are also negatively convex, which is not true for Canadian NHA MBS.

Figure 10. Comparison of the Canada NHA MBS 975 Index and FTSE US MBS Index duration



Source: FTSE Russell. Data as of March month end each year.

⁹ In the context of agency guaranteed MBS pass through pools, defaults are also a cause of prepayment as the agencies repay defaulted / delinquent loans.

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EMEA

+44 (0) 20 7866 1810

North America

+1 877 503 6437

Asia-Pacific

Hong Kong +852 2164 3333

Tokyo +81 3 4563 6346

Sydney +61 (0) 2 8823 3521

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