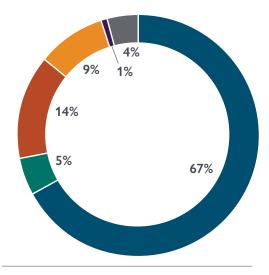


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### DASHBOARD



Market share of newly originated mortgages by lender type 2019 Q4

Big Six banksOther banks

Other banksCUs

MFCs
MIEs

Other mortgage lenders

#### Key variables 2019

\$499,816 average price | 2.3% increase

**Housing Starts** 



housing starts reached 208,685
-2% decrease

**Home Sales** 



486,323 MLS® sales +6.6% growth

	5-year Fixed Rate	Variable Rate
Interest Rate	3.17%	3.78%
Share of New Mortgages	37.6%	10.9%

#### Key insights on 4 different types of lenders in 2019 - Mortgages Outstanding



Market Share 72% Banks

AVERAGE MORTGAGE \$220,650

INTEREST RATE

3.1% - 5.2%

DELINQUENCY RATES

0.24%



Market Share 14%

Credit Unions and caisses populaires

AVERAGE MORTGAGE \$156,817

INTEREST RATE

NA

DELINQUENCY RATES **0.17**%

Market Share 9%

Mortgage Finance Companies (MFCs)

AVERAGE MORTGAGE

\$247,828

**INTEREST RATE** 

NA

DELINQUENCY RATES

0.24%



Market Share 1%

Mortgage Investment Corporations (MICs) and Private Lenders

**AVERAGE MORTGAGE** 

\$254,986

**INTEREST RATE** 

7% - 15%

**DELINQUENCY RATES** 

1.73%

Sources: Canadian Bankers Association, CMHC residential mortgage data reporting of NHA MBS issuers, Fundamentals Research and CMHC calculations based on the Survey of Non-Bank Mortgage Lenders.

### **EXECUTIVE SUMMARY**

#### **Mortgage Lending Trends**

- The acceleration of the total outstanding mortgage debt during the first half of 2020 partially reflected the trend in sales concluded before the pandemic-induced shutdowns and mortgage repayments.
- A large number of financial institutions in Canada have allowed mortgage payment deferrals for up to six months as part of extraordinary measures to help mortgage customers. These measures have resulted in a total of 760,000 deferred or skipped mortgage payments across chartered banks.
- These mortgage deferrals will affect scheduled periodic repayments. With the average monthly payment being approximately \$1,333 in Canada, the amount of deferred mortgage repayments is estimated slightly over \$1 billion per month.

#### Mortgage Rate Trends

- The overnight rate was cut by 150 basis points to help households and businesses through the economic disturbance. As a result, mortgage interest rates dropped in April 2020 on both variable-rate and fixed-rate mortgages.
- The widening positive gap between fixed and variable mortgage rates made variable-rate mortgages increasingly popular in April and May.

#### Mortgage Insurance Trends

- The upward trend in uninsured mortgages continued into the first quarter of 2020, as 63% of mortgages extended by chartered banks were uninsured.
- Portfolio-insured mortgages accounted for 31% of all insured mortgages from chartered banks at the end of 2019, down from 35% in 2018.
- Across non-bank mortgage lenders, the value of insured mortgages decreased slightly (1%) during the last quarter of 2019 compared to a year earlier.

#### Mortgage Lender Type Trends

- The Big Six banks maintained a strong foothold in the Canadian housing finance market in 2019, with a 67% market share of newly extended mortgages.
- MFCs continued to dominate the insured mortgage space after the larger lenders, as they held 20% of that market compared to a share of 12% for credit unions.
- Mortgage delinquencies of 90 days or more remained at relatively low levels for all mortgage lender types, which suggests that a steady share of mortgage holders continued to be able to make their payments or were able to defer their mortgage payments.
- MICs held approximately between \$14 billion and \$15 billion in mortgage debt, which continued to represent 1% in nationwide outstanding mortgages.
- Similarly to other regulated financial institutions, some MICs offered mortgage deferrals and other types of accommodations to financially strained mortgage consumers. An estimated 10% of mortgage consumers asked for a mortgage deferral.

#### **Mortgage Funding Trends**

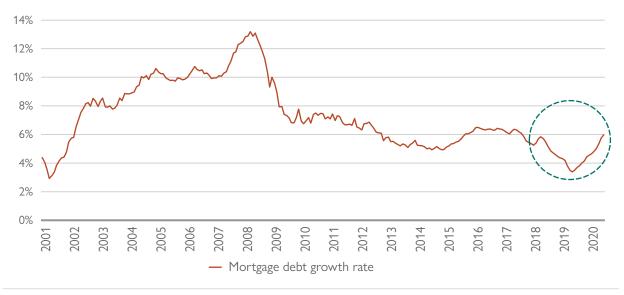
- Deposits continued to be the primary source of mortgage funding for the Big Six banks (66%) and credit unions (77%).
- Covered bonds made up 17% of total mortgage funding for Canada's Big Six banks at the end of the first quarter of 2020, representing an increase of 4% from the year before.
- Private securitization, continued to account for a very small share of the mortgage funding mix in Canada, with just 1.1%. However, the RMBS market appears to be expanding in Canada.

## SHIFTING TRENDS IN THE MORTGAGE LANDSCAPE

## Overall mortgage debt stabilized in 2019, before accelerating at the beginning of 2020 and into the first months of pandemic-induced lockdown period

In the first three months of 2020, before the economic disturbances resulting from the COVID-19 pandemic, a surge in residential property sales at the end of 2019 and higher prices resulted in increased mortgage origination (5.1% increase over the first three months of 2019). This was an acceleration compared to 2019 when the overall mortgage debt in Canada grew by 4%, a marginally slower rate than the previous year (see figure 1.1) The slight deceleration in 2019 was due to stagnant housing sales in the first half of the year that were somewhat offset by increasing national property prices (+1%).

Figure 1.1 Growth of residential mortgage debt has accelerated from January to May 2020



Source: Statistics Canada. Table 10-10-0129-01 Residential mortgage credit, outstanding balances of major private institutional lenders, Bank of Canada (Year-over-year change)

The acceleration of the total outstanding mortgage debt continued in April and May 2020 despite the pandemic-induced shutdown, and both home sales and new listings plummeted. This acceleration is partially reflecting the trend in sales concluded before the shutdown for which closing dates were set into the spring months and mortgages extended in the second quarter.

Also contributing to the growth in outstanding mortgage debt is the record level of mortgage consumers having deferred their mortgage payments and some consumers having consolidated other credit into their mortgage as a way to delay their debt payments and minimize costs in fees and interest. Indeed, many financial institutions have offered relief to their mortgage borrowers impacted by COVID-19 and allowed them to defer their mortgage payments. As these scheduled mortgage payments did not reduce the principal as scheduled and additional fees and interest increased the borrowers' outstanding balance, we saw the overall mortgage debt rise.

#### Mortgage trends lag home sales

The financial strains resulting from job and income losses, combined with physical distancing measures that limited the ability of buyers to visit properties in person, contributed to lowering the demand for housing during this period, which should reduce demand for new mortgages in the coming months. That said, the observed increase in mortgage originations during the lockdown period was largely due to the pre-settled home transactions that took place in the first quarter of the year. In fact, there can be a lag of up to several months between the time a property transaction is signed and the moment when the sale is notarized and the funds are transferred.

With partial economic re-openings across the country, sales activity showed signs of rebounding in May (+57% m/m) and June (+63% m/m), which suggests that those declines should ease over a similar timeline.<sup>1</sup>

#### Mortgage relief measures support financially strained Canadians

As the financial impact on consumers was becoming more evident through job losses and government imposed shutdowns, a large number of financial institutions in Canada allowed mortgage payment deferrals for up to six months as part of extraordinary measures to help mortgage customers and minimize the risks of further financial and market instabilities. These included the Big Six banks and other chartered banks, many credit unions, some mortgage finance companies (MFCs) and some mortgage investment entities (MIEs). According to the Canadian Bankers Association (CBA), more than 760,000 mortgage consumers either deferred their mortgage or skipped a payment.<sup>2</sup> These deferrals represent 16% of the residential mortgages held by chartered banks. Since many non-bank financial institutions also allowed such accommodations, we expect the total number of mortgage deferred to be higher.

<sup>&</sup>lt;sup>1</sup> For more information and forward-looking analysis on the housing market in Canada, see CMHC's *Housing Market Outlook—Canada*'s *Major Markets*: <a href="https://www.cmhc-schl.gc.ca/en/data-and-research/publications-and-reports/housing-market-outlook-canada-and-major-centres">https://www.cmhc-schl.gc.ca/en/data-and-research/publications-and-reports/housing-market-outlook-canada-and-major-centres</a>.

<sup>&</sup>lt;sup>2</sup> As of June 30, 2020.

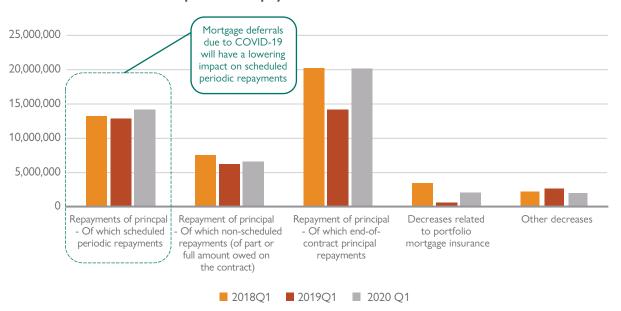


Figure 1.2 Mortgage deferrals due to COVID-19 will have a lowering impact on scheduled periodic repayments

Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations

These mortgage deferrals are expected to have an impact on scheduled periodic repayments. Typically, scheduled mortgage repayments are one of the main ways in which the value of outstanding mortgage debt decreases as borrowers pay down their debt every month. The average monthly payment being approximately \$1,333 in Canada,<sup>3</sup> the amount of deferred mortgage repayments is estimated slightly over \$1 billion per month. This significantly reduces influx of payments toward outstanding mortgage debt and is expected to contribute to increasing the total mortgage debt in the second and third quarters of 2020.

In addition, not only do we anticipate overall mortgage debt to increase because of these deferred mortgage payments, we also expect fewer mortgage borrowers will be making additional mortgage payments this year in order to accelerate their mortgage repayments (through lump-sum payments or accelerated repayments). According to the Financial Industry Research Monitor (FIRM) Residential Mortgage Survey,<sup>4</sup> 1 out of 5 mortgage consumers is planning to make an additional prepayment in 2020, which is much lower than in 2019, when 2 out of 3 mortgage holders planning extra payments in 2020 made a payment in 2019.

Additional measures were put in place to support the mortgage industry and limit the impacts of the shutdowns on financial and market stability. More specifically in regard to housing finance, Canada Mortgage and Housing Corporation (CMHC) announced a purchase of \$150 billion of insured mortgages as a measure to provide liquidity into the market and allow mortgage lenders to continue the issuance of residential mortgages in Canada. Additional measures were also put in place beginning in March 2020 by CMHC and other mortgage loan insurers, mortgage lenders and other financial institutions, the Bank of Canada, the Department of Finance and the Office of the Superintendent of Financial Institutions (OSFI) with the intent to ensure liquidity in the credit market, limit the risks of a rise in home foreclosures and a deterioration of market conditions, and reduce pressure on financial institutions (see table 1.1)

<sup>&</sup>lt;sup>3</sup> Equifax Canada, CMHC calculations.

<sup>&</sup>lt;sup>4</sup> The FIRM Residential Mortgage Survey is conducted by Altus Group and Ipsos. The results come from the Spring 2020 edition. Mortgage consumers were surveyed in April 2020.

**Table 1.1**<sup>5</sup>

Program Implemented by		Program details	Intent	
Expansion of	CMHC	CMHC will permit lenders to allow payment deferrals beginning immediately.	Both these initiatives are aimed at helping homeowners with either	
mortgage default	Canada Guaranty	-	insured or uninsured mortgages who	
management tools	Genworth	Canada Guaranty will extend the existing Homeownership Solutions Program	are financially strained by the COVID-19 outbreak.	
Big banks coordinated relief	Big six banks	Canada's big six banks will allow mortgage payment deferrals for up to six months as part of extraordinary measures to help customers struggling with the financial impacts of the novel coronavirus pandemic.  Other financial institutions, including some credit unions, Mortgage Finance Companies (MFCs) and even some Mortgage Investment Corporations and Mortgage Investment Entities (MICs and MIEs), are also allowing payment deferrals.	These alleviating measures for homeowners attempt to mitigate any potential downward pressure on the housing market that would force foreclosures, which could potentially lead to the deterioration of house prices.	
Expansion of default management tools for multi-unit residential properties	CMHC	CMHC's expansion of mortgage default management tools provide additional relief measures to help renters. In fact, CMHC requires that landlords with an insured multi-unit loan not evict any tenants.	This measure is intended to ensure that households experiencing employment loss or reduction in income are not found in a more vulnerable position. This measure also intends to stabilize rental markets in Canada.	
	CMHC		This program will provide long-term	
Insured Mortgage Purchase Program (IMPP)	Government of Canada	The Government will purchase up to \$150 billion of insured mortgage pools through CMHC.	stable funding to banks and mortgage lenders, which will help facilitate continued lending to Canadian consumers and businesses and add liquidity to Canada's mortgage market.	
Bank of Canada's interest rate cuts	Bank of Canada	Through three rounds of cuts, the Bank of Canada has lowered its target for the overnight rate to 0.25%.	This is intended to help the economy cope with the negative shocks of COVID-19 and the recent sharp drop in oil prices.	
	Minister of	The Minister of Finance has suspended the	The suspension of these regulatory	
	Finance	change to the mortgage rules set for April 6.	changes is aimed at reducing the	
Stress test	OSFI	OSFI has suspended all of its consultations and policy development on new or revised guidance until conditions stabilize. This includes the new proposed B-20 benchmark rate for uninsured mortgages. As a result, the benchmark rate as currently published by the Bank of Canada will remain in force until further notice.	process-related burden on financial institutions, which are also dealing with an increase in inquiries related to COVID-19. In addition, the great uncertainty in this unprecedented context has further encouraged the suspension of some measures, in order to ensure their appropriateness.	

<sup>&</sup>lt;sup>5</sup> Please note that this list only covers the programs and measures that are intended to impact directly and exclusively the mortgage markets in Canada. This list was last updated on July 24, 2020.

Program	Implemented by	Program details	Intent
		Effective July 1, the following changes will apply for new applications for homeowner transactional and portfolio mortgage insurance:	
CMHC's		• Limiting the Gross/Total Debt Servicing (GDS/TDS) ratios to our standard requirements of 35/42;	Ensure proper risk management of CMHC's insurance business to protect
Mortgage Insurance Underwriting Criteria Review	СМНС	Establish minimum credit score of 680 for at least one borrower; and	homebuyers, taxpayers and curtail excessive demand and unsustainable
		Non-traditional sources of down payment that increase indebtedness will no longer be treated as equity for insurance purposes.	house price growth, to promote financial stability .
		Suspended refinancing for multi-unit mortgage insurance except when the funds are used for repairs or reinvestment in housing	

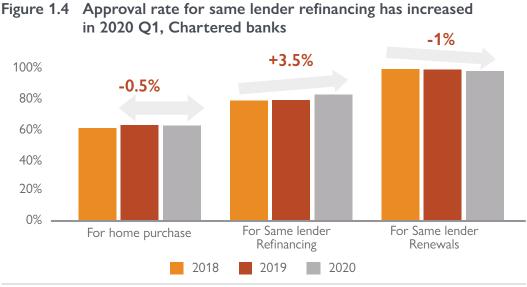
#### Mortgage originations pick up in 2020 after a weak 2019

New mortgages extended for property purchases jumped by 14% among banks in the first quarter of 2020 compared to the same quarter in 2019. This was true for both insured and uninsured mortgages, which respectively increased by 12% and 16% relative to the same period in 2019. Refinances also rose in the first quarter compared to the same quarter a year earlier, with a 21% increase. This was partly thanks to the rate of approval for these transactions rising from 78% to 81.5%, which could indicate that the quality of the applications improved.

30,000,000 Insured 25.000.000 20.000.000 15,000,000 Insured 10,000,000 Insured Insured 5,000,000 Mortgage originations Same lender Same lender Other renewals/ for the purchases refinancing renewals refinancing and of property other mortgages 2018Q1 2019Q1 2020Q1

Figure 1.3 Strong rebound in new mortgage activity early 2020, even more so amongst uninsured mortgages

Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations



Sources: CMHC residential mortgage data reporting of NHA MBS issuers, CMHC calculations

In 2019, most of the mortgage activity involved homeowners renewing their loans or switching to another lending institution (switches). In particular, renewals with the same lender increased by 11% relative to the previous year and accounted for more than half of all extended loans. While such renewals and switches do appear on financial institutions' balance sheets, they do not raise the overall mortgage debt outstanding. On the other hand, new mortgages issued for the purchase of a property and refinances do have an upward impact on outstanding mortgage debt. Their growth was relatively weak in 2019. More specifically, mortgage loans for property purchases barely increased in 2019 (+0.3%), while refinances shrunk by 4%. Stronger activity in some Eastern Canadian housing markets such as Montréal and Toronto partially offset the slower market activity in the Western provinces.

Another impact of COVID-19 for mortgage lenders may be seen in mortgage switches in the coming months. According to the FIRM Residential Mortgage Survey,<sup>6</sup> which surveys consumers on their expectations and behaviours with regard to mortgage decisions, 20% of consumers suggested they might be looking at switching lending institutions depending on whether their lender approved mortgage relief measures and how they dealt with accommodations during the crisis. Mortgage switches for refinance and renewals with a different lender accounted for 9.6% of all transactions that were not for the new purchase of a property in the first quarter of 2020—a rate similar to that recorded for the same period in 2019.

<sup>&</sup>lt;sup>6</sup> Conducted by Altus Group and Ipsos.

#### Fast facts on mortgage default insurance

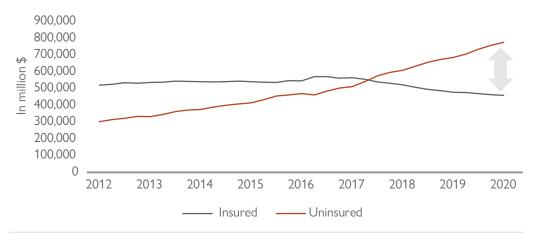
- For federally regulated lenders, default insurance is mandatory for mortgages where the borrower's down payment is less than 20% of the purchase price. These insured mortgages are also referred to as high ratio mortgages.
- Lenders can also request mortgage default insurance for homebuyers with a down payment of 20% or more, generally when the borrower has a poor or relatively short credit history or is self-employed. These insured mortgages are referred to as low ratio mortgages or conventional mortgages.
- With lenders being provided with insurance against borrower default, borrowers with smaller down payments are able to obtain mortgage loans at competitive interest rates as insurance reduces the overall risk level supported by the lenders.

- Portfolio insurance allows lenders to bulk-insure pools of previously uninsured mortgage loans and is typically paid for by the lender. Bulk-insuring mortgages helps lenders manage their capital, reduces lender risk and increases competition in the mortgage market by lowering entry barriers.
- Additionally, portfolio insurance primarily supports lender access to mortgage funding through government-sponsored securitization programs, which require mortgages to be insured. This enables smaller players, which do not have as many funding options as large banks, to better compete with large deposit-taking institutions.

#### Share of insured mortgages continues to shrink

Across chartered banks, 40% of outstanding residential mortgages were insured in 2019, much less than in 2016 when over 54% of mortgages were insured (see figure 1.5). This results partly from past regulatory changes that tightened mortgage insurance eligibility rules and also from rising house prices in many markets where prices are elevated and near or above the allowed insurable limit of \$1 million. The upward trend in uninsured mortgages continued into the first quarter of 2020, as 63% of mortgages extended by chartered banks were uninsured.

Figure 1.5 The increasing share of uninsured extended mortgages has widened the gap between outstanding insured and uninsured

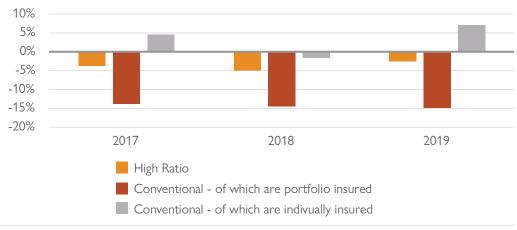


Source: Statistics Canada, Table 10-10-0134-01, Chartered banks, mortgage loans report, end of period, Bank of Canada, ( $\times$  1,000,000\$)

A look into non-bank mortgage lenders reveals a similar trend in the insured segment. During the last quarter of 2019, the value of insured mortgages decreased slightly (-1%) compared to the same period in 2018. However, uninsured mortgages extended during this period decreased at a faster rate (-4%).<sup>7</sup>

Partly contributing to the overall decline in the total value of insured mortgage debt was the decrease in the outstanding value of portfolio-insured mortgages for a third consecutive year (see figure 1.6). Portfolio-insured mortgages accounted for 31% of all insured mortgages from chartered banks at the end of 2019, down from 35% in 2018. The portfolio insurance "Purpose Test" in July 2016,8 combined with the regulation changes requiring low ratio insured mortgages to meet the same criteria as high ratio mortgages in November 2016 and increases in premium rates, contributed significantly to the downward trend in portfolio insurance.

Figure 1.6 While portfolio insured mortgages continue to trend downwards, 2019 marks a rebound of individually insured mortgages, Chartered banks



Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations (year-over-year change in volume)

Individually insured conventional mortgages, on the other hand, increased by 7% in 2019. While they only represent 9% of total insured mortgages, this increase can suggest banks have required more of their mortgage consumers with a down payment of 20% or more to obtain mortgage loan insurance to reduce overall risk.

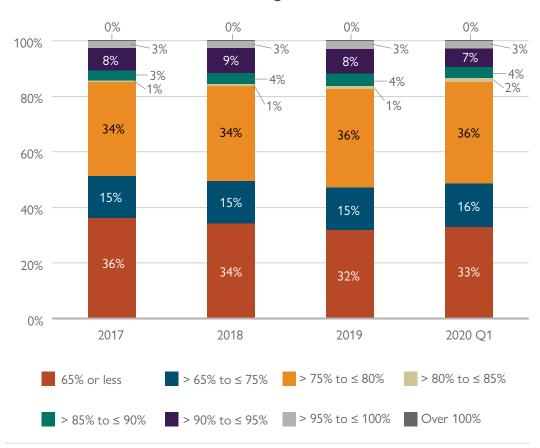
<sup>&</sup>lt;sup>7</sup> Note that sample and methodology has slightly changed between 2018 and 2019.

<sup>&</sup>lt;sup>8</sup> The "Purpose Test" restored low ratio portfolio insurance to its original purpose of supporting mortgage funding by requiring that portfolio insured loans must be included in an NHA MBS pool within six months.

#### New mortgages concentrate into the highest ranges of loan-to-value (LTV) ratios for mortgages that do not require insurance

The share of newly originated mortgages held by chartered banks with a loan-to-value (LTV) ratio of 65% or less has been decreasing in recent years (-3 percentage points). In parallel, mortgages with an LTV ratio between 65% and 75% and those with a ratio between 75% and 80% increased by 1 and 2 percentage points, respectively. Mortgages in both latter LTV ranges do not require mortgage insurance. These shifts reflect that the overall mortgage industry has taken on more risk, as larger shares of uninsured loans have lower buffers in the event of a large property price depreciation (see figure 1.7).

Figure 1.7 Newly originated mortgages has increased in loans with LTV ratios in the 65 to 80% range, Chartered banks



Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations

## Fast facts on different lender types

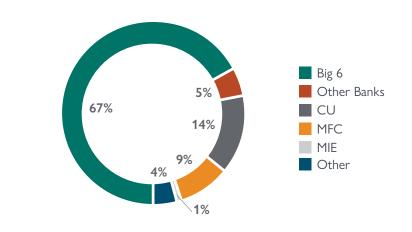
- Federally regulated financial institutions (FRFIs), such as chartered banks, trust and loan companies, and some life insurance companies.
- Provincially regulated financial institutions (PRFIs), mainly composed of credit unions and caisses populaires, and quasi-regulated lenders, such as mortgage finance companies (MFCs).
- Unregulated lenders, which mostly consist of mortgage investment entities (MIEs), such as mortgage investment corporations (MICs) and other incorporated mortgage financing businesses that pool money from investors. Unregulated lenders could also include purely private lenders, where individuals lend directly to other individuals.

For more information on the different lender types, see appendix 1 – Residential Mortgage Lender Types and appendix 4 - Glossary.

## Competitive landscape remained relatively unchanged in 2019

The Big Six banks maintained a strong foothold in the Canadian finance housing market in 2019, with a 67% market share of newly extended mortgages. The second most important players were credit unions and mortgage finance companies (MFCs), with estimated shares of the total market of 14% and 9%, respectively (see figure 1.8). MFCs continued to dominate the insured mortgage space after the larger lenders, as they held 20% of that market compared to a share of 12% for credit unions. In contrast, credit unions are the second most important player in the uninsured mortgage business, with a 14% share (see figure 1.9). These shares are roughly equal to those observed in 2018. During the first three quarters of the year, market shares of new extended mortgages had been trending upward for banks, at the expense of the credit union segment and some MFCs. However, this trend settled back to the shares observed at the end of 2018, as banks returned to their previous market shares.

Figure 1.8 Approvals/application ratio by type of loan, residential mortgages, Chartered banks



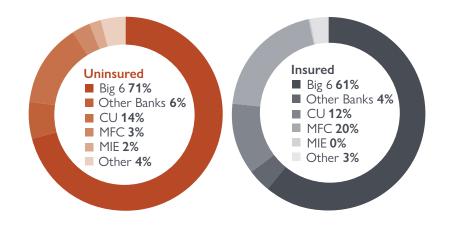
Source: Bank of Canada, Survey of Non-Bank Mortgage Lenders and CMHC Estimates

# Consumers continued to make their mortgage payments on time or were able to reach an agreement to defer their mortgage payments

Data from the credit rating agency Equifax Canada show that the shares of mortgage loans for which payments were delinquent for 90 days or more were still maintained at relatively low levels for all mortgage lender types in the second guarter of 2020.9 This suggests that a steady share of mortgage holders continued to be able to make their mortgage payments or were able to reach an agreement to defer their mortgage payments with their lender, allowing them not to be delinquent on their loan. There was a slight decline in mortgage delinquency for mortgage consumers with lenders other than banks or credit unions (which include MFCs).

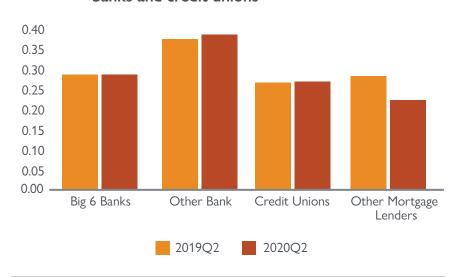
Given that many financial institutions have offered payment accommodations to their mortgage clients for up to six months, there continues to be a risk that a significant increase in mortgage delinquency will be observed in the third or fourth quarter of this year as these deferral agreements come to an end.

Figure 1.9 Market share by lender type of newly originated mortgages, Uninsured mortgages (outbound) and Insured mortgages (inbound)



Source: Bank of Canada, Survey of Non-Bank Mortgage Lenders and CMHC Estimates

Figure 1.10 Delinquency rates remain relatively stable across banks and credit unions



Source: Equifax and CMHC Calculations

<sup>&</sup>lt;sup>9</sup> Please note that borrowers entering into a deferral agreement are not considered delinquent.

#### Fast facts on mortgage investment corporations (MICs)

- In 1973, the federal government passed laws enabling the creation of MICs to increase the "flow of mortgage funds" and provide a channel for small investors to participate more directly in housing finance markets through private lending.
- MICs are governed by the *Income Tax Act*, which requires compliance with certain directives:
- All interests in real property held by MICs must be in Canada.
- They must have oversight via provincial securities legislation, and they may accept foreign investment.
- They must invest at least 50% of the assets in residential mortgage loans, cash and insured deposits. The remaining assets can be invested in commercial or industrial properties, developments or other assets.
- They must have a minimum of 20 shareholders, and no shareholder can own over 25% of the total shares.
- MICs do not pay corporate tax and act as a flow-through entity. In order to avoid entity level taxation, a MIC has to pay 100% of all of its income as dividends to investors.

- These alternative lenders typically provide shorterterm mortgages at higher fees and interest rates to borrowers who have difficulty qualifying for loans from more stringently regulated lenders.
- These borrowers often include self-employed individuals, business entrepreneurs, real estate investors (with more than one property) and borrowers with short-term cash needs (due to bruised credit, divorce, health issues, a need to bridge presales or home purchases, etc.). MICs also issue loans for development projects and commercial properties.
- The distinct characteristics of MIC loans reflect the riskier profiles of their clientele. MICs, unlike traditional lenders, do not conform to prescriptive underwriting criteria. However, they generally define exit strategies to determine borrower eligibility for a loan.
- While this function supports some stability in the market by providing alternatives to borrowers, it also has the potential to introduce additional vulnerabilities into the housing finance system.

### MICs show slightly riskier profile and higher investor yields in 2019

In 2019, MICs held approximately between \$14 billion and \$15 billion in mortgage debt, which represents 1% in nationwide outstanding mortgages, a similar share as in 2018. This segment continued to be the fastest-growing segment in the mortgage industry, with an increase of approximately 7.6% (based on the 25 largest MICs) compared to 2018, while overall residential mortgage debt grew by 4% during this period. Additionally, since these lenders are usually more concentrated in large urban centres, growth of MICs was more predominant in centres such as Toronto, Vancouver and Calgary.

Data from a survey of MICs conducted by Fundamental Research Corporation showed that the risk profile of the MIC sector increased slightly in 2019, as suggested by a number of changing trends:

- First mortgages declined from 79.5% to 78% between the last quarters of 2018 and 2019, suggesting more MIC loans would not have creditor priority (on second, third and subsequent loans). Mortgage seniority indicates the level of risk and potential losses if the borrower fails.
- The average loan-to-value (LTV) ratio increased from 58 % to 60%, so the overall equity supporting a debt accounts for a smaller share of that debt, leaving a greater risk that a property depreciation or a foreclosure will result in the debt not being entirely covered.
- Delinquencies of 30 days or more and foreclosures rose, suggesting more borrowers are struggling to make their payments and MICs have an increased risk of losses.
- Activity continued to further concentrate in Ontario and recently increased in British Columbia, thanks to a slight recovery of the housing market at the end of 2019.

While these changes suggest the overall portfolio of loans in MICs increased in risk, the use of debt by MICs decreased during this period—as indicated by a lower debt-to-capital ratio. This lower reliance on debt from institutions also came with higher interest rates at which MICs are lending to individuals, which allowed MICs to provide slightly higher yields to investors, particularly in the first three quarters of 2019.

Decreases in interest rates were observed on loans to development projects and for commercial properties, likely due to higher MIC competition and higher value loans in these two segments.

Table 1.2 Increased exposure of first mortgages and concentration of mortgages in Ontario for the top 25 Mortgage Investment Corporations (MICs) in Canada

	Q4-2018	Q1-2019	Q2-2019	Q3-2019	Q4-2019
Average lending rate to individuals	9.2%	9.2%	9.1%	9.3%	9.8%
Average lending rate for development	9.2%	9.2%	8.5%	8.5%	8.4%
Range of lending rates	7.3% - 11%	7.3% - 11%	7.4% - 11.4%	7.3% - 11 %	7.2% - 11.4 %
Average Share of 1st mortgages	79.5%	79.7%	78.4%	78.0%	78.0%
Range of share of 1st mortgages	19% -100 %	19% -100 %	21%- 100%	22% - 100%	22% - 100%
Average Loan-To-Value (LTV ratio)	57.9%	57.9%	58.8%	58.2%	59.9%
Range of Loan-To-Value (LTV ratio)	43%- 72%	43%- 72%	38.6% - 70.57%	38.4% - 71%	52% - 70.5%
Debt to Capital	18.0%	18.0%	17.2%	15.9%	15.7%
Delinquencies of 30 days and +	N/A	N/A	3.25%	3.55%	4.39%
Foreclosures	N/A	N/A	1.88%	2.19%	2.36%

Geographical distribution	Q4-2018	Q1-2019	Q2-2019	Q3-2019	Q4-2019
BC	42.2%	42.8%	37.3%	33.2%	34.7%
Alberta	14.0%	13.8%	9.5%	11.2%	9.8%
Ontario	37.5%	37.6%	46.5%	49.4%	49.2%
Others	6.3%	5.8%	6.8%	6.3%	6.3%

#### Early impact of the COVID-19 pandemic on the MIC segment

Earlier this spring, through a special edition survey, Fundamental Research Corp. gathered some insights into the impact of the pandemic on MICs. This information complements the available data as an additional way to shed some light into this segment. Some key insights include:

- Similarly to the Big Six banks and other regulated financial institutions, some MICs and other mortgage investment entities (MIEs) offered mortgage deferrals and other types of accommodations to financially strained mortgage consumers. An estimated 10% of mortgage consumers asked for a mortgage deferral.
- As regulated financial institutions tightened their lending guidelines and credit availability, a greater number of mortgage consumers applied for a MIC mortgage. However, with the increased uncertainty on the housing market, some MICs expressed that they would pause originations, while others are maintaining their lending activity with additional caution.
- MICs received a significant number of redemption requests from investors during the months of high financial uncertainty. However, only very few have been approved. Not only are MIC investments not typically liquid but every MIC is different in terms of redemption policies. In many cases, there are fees and penalties associated with early withdrawals from investors in need of liquidity. These policies have helped to maintain some stability in the segment and ensure access to funds despite the rising uncertainty.
- If the impact of the pandemic continues, the likelihood of reducing, or even suspending, dividends at the end of 2020 could increase. As dividend payments are interest received (minus management fees, provision for losses and other expenses), the percentage of mortgage deferrals will directly affect MICs' revenue and, in turn, impact investor yields. According to Fundamental Research Corp., if 1 out of 4 mortgages were to be deferred for six months, investor yields could decline by approximately 20%.

#### Interest rates and market liquidity

The Bank of Canada sliced the overnight rate from 1.75% at the beginning of the year to 0.25%. The 150-basis-point drop resulted from three successive rate cuts—one during a scheduled announcement, followed by two emergency COVID-19-related announcements to help households and businesses through the economic disturbance. As a result, mortgage interest rates dropped in April 2020 on both variable-rate and fixed-rate mortgages (see table 1.3).

50% 45% 40% 35% 30% 25% 20% 15% 10% 5% 0% 5 years and more 3 to less Less than 1 year Variable rate 1 to less than 5 years than 3 years Fixed rate 2017 2018 2019 2020 YTD

Figure 1.11 Fewer consumers have opted for variable rate mortgages in the second half of 2019 up until the COVID-19 induced financial shock

Source: Statistics Canada. Table 10-10-0006-01 Funds advanced, outstanding balances, and interest rates for new and existing lending, Bank of Canada, CMHC calculations

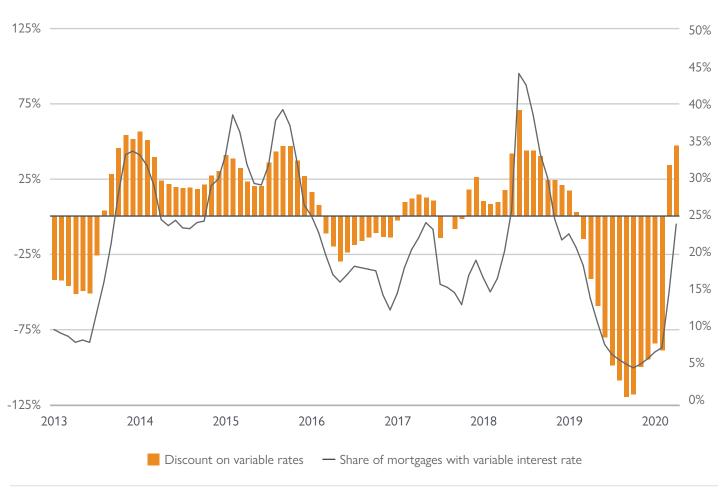
Table 1.3

		Apr-20	2020 Q1	2019	2018
	Fixed rate, 5 years and more	2.65%	2.84%	3.14%	3.43%
	Fixed rate, from 3 to less than 5 years	3.20%	3.38%	3.38%	3.34%
Insured	Fixed rate, from 1 to less than 3 years	2.68%	2.84%	3.08%	3.38%
	Fixed rate, , less than 1 year	5.48%	5.51%	5.59%	5.84%
	Variable rate,	2.31%	3.49%	3.93%	3.14%
	Fixed rate, 5 years and more	2.71%	2.90%	3.19%	3.53%
	Fixed rate, from 3 to less than 5 years	3.32%	3.40%	3.45%	3.39%
Uninsured	Fixed rate, from 1 to less than 3 years	2.72%	2.89%	3.10%	3.36%
	Fixed rate, , less than 1 year	5.10%	5.20%	5.22%	5.39%
	Variable rate,	2.14%	3.19%	3.69%	3.14%

Sources: Statistics Canada. Table 10-10-0006-01 Funds advanced, outstanding balances, and interest rates for new and existing lending, Bank of Canada; CMHC calculations

Generally, the majority of Canadians continued to opt for fixed-rate mortgages, more specifically with five-year terms in 2019 and through the first three months of 2020 (see table 1.3). As interest rates were cut early in 2020, the widening positive gap between fixed and variable mortgage rates made variable-rate mortgages increasingly popular in April and May (see figure 1.12). Despite the temporary drop in variable-rate mortgage discounts in March, the variable mortgage rate continued moving in tandem with the prime rate in April and May, which stands at an ultra-low level after the three consecutive rate cuts.

Figure 1.12 Increasing discounts on variable rate mortgages boost mortgage consumers interest for these rates



Source: Statistics Canada. Table 10-10-0006-01 Funds advanced, outstanding balances, and interest rates for new and existing lending, Bank of Canada, CMHC calculations

Conventional fixed mortgage rates are still relatively elevated compared to the very low Bank of Canada policy interest rate. This is partially reflective of lenders' concerns about access to liquidities, despite CMHC's Insured Mortgage Purchase Program (IMPP) and other efforts to maintain financial and market stability. In addition, lenders' funding costs and margins continue to influence this gap.

Indeed, since longer-term mortgages are financed on the bond markets, fixed mortgage rates are usually most closely linked to Government of Canada bond yields. With the five-year Government of Canada bond yield at an all-time low, the spread between the fixed five-year mortgage rate and the five-year government bond yield has widened substantially (see figure 1.13), implying that rates are not going down by as much as they would in other circumstances. While this widening of the spread can be partly driven by lenders' capacity constraints, such as available employee resources, and may also be reflective of lenders' pricing of potential credit risks brought about by economic uncertainties. Further, mortgage funding costs increase for similar reasons from the bond yield, which is also passed on to consumers.

Figure 1.13 Spread Between 5-Year Mortgage Rate and 5-Year Government of Canada Bond Yield (%)



Source: Bank of Canada

#### Mortgage funding trends

Mortgage lenders in Canada have a variety of sources for funding their lending activities, including retail and corporate deposits, unsecured debt funding, covered bonds, CMHC's public securitization programs, whole loan sales and private-label securitization. Different lender types use different funding mixes, with deposit-taking institutions relying heavily on deposits and others relying heavily on the secondary mortgage market. From 2018 to 2019, these breakdowns have remained consistent for each lender type.

Deposits are the primary source of mortgage funding for financial institutions that have access to them, such as the Big Six banks (66% of the funding mix) and credit unions (77% of the funding mix), since they tend to be the least expensive funding source. In addition to deposits, the three most common secondary mortgage market<sup>10</sup> sources of funding in Canada are:

- public securitization through *National Housing Act* Mortgage-Backed Securities (NHA MBS)<sup>11</sup> and Canada Mortgage Bonds (CMB) for insured mortgages only;
- · covered bonds for uninsured mortgages; and
- private-label securitization through asset-backed commercial paper (ABCP) and residential mortgage-backed securities (RMBS) for uninsured mortgages.

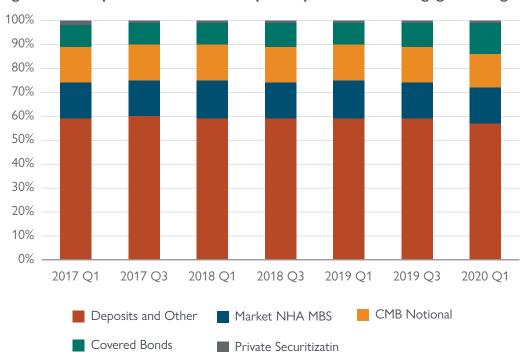


Figure 1.14 Deposits continue to be primary source of mortgage funding

Source: Sources: OSFI; CMHC Securitization; annual / quarterly reports; DBRS

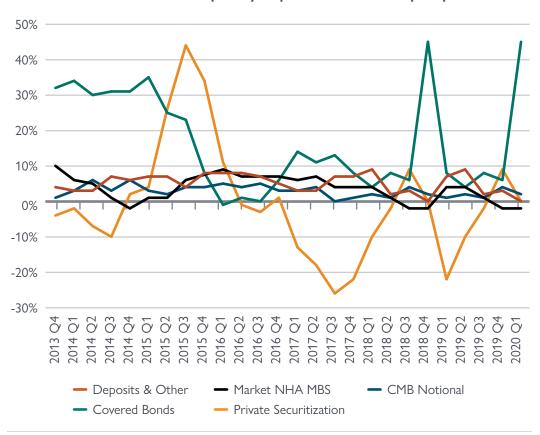
<sup>10</sup> The secondary mortgage market is where financial institutions trade mortgages that have been bundled into investment products to raise funds.

<sup>&</sup>lt;sup>11</sup> NHA MBS include those created and held on a lender's balance sheet as a potential liquidity source.

#### Public securitization

Public securitization includes *National Housing Act* Mortgage-Backed Securities<sup>12</sup> (NHA MBS) and Canada Mortgage Bonds (CMB). Lenders that lack access to deposits, such as MFCs, rely greatly on these programs. Excluding whole loan sales, these lenders funded 53% of their mortgages through NHA MBS and 30% through CMB in the last quarter of 2019. CMB are one of the less costly funding sources, because they attract a broad base of investors from around the world, thanks to their bond-like features and government guarantee. NHA MBS, by contrast, mainly attract domestic investors but are more flexible to issue and thus remain a popular funding option.

Figure 1.15 Covered bonds increase significantly, as they become eligible collateral for temporary expansion of term repo operations



Source: Sources: OSFI; CMHC Securitization; annual / quarterly reports; DBRS

<sup>&</sup>lt;sup>12</sup> NHA MBS include those created and held on a lender's balance sheet as a potential liquidity source.

#### Covered bonds

Covered bonds are dual recourse instruments with uninsured mortgages as eligible cover pool assets. The dual recourse feature—meaning that the investor has recourse against both the issuer and the covered pool—and specific covered bond legislation make covered bonds attractive to investors. The first covered bond issued by a Canadian financial institution was in 2007, and there are currently eight registered covered bond issuers in Canada. This source of funding has grown in importance, as it increased as a share of the total funding mix for mortgages from 5.6% in the fourth quarter of 2012 to 9.8% in the fourth quarter of 2019. The Office of the Superintendent of Financial Institutions (OSFI) and the Autorité des marchés financiers (AMF) apply a cap on covered bond issuances of 5.5% of total assets for financial institutions.

In the two weeks following the Bank of Canada's March 18, 2020, announcement that own-name covered bonds would be included as eligible collateral for its temporary expansion of term repo operations, financial institutions issued over \$58.7 billion in covered bonds (see figure 1.15). The temporary expansion of eligible securities as collateral for term repo operations will provide liquidity to financial institutions and allow them to extend credit to households and businesses. By the end of March, covered bonds made up 17% of total mortgage funding for Canada's Big Six banks, representing an increase of 4% from the year before.

#### Private-label securitization

Private-label securitization includes both asset-backed commercial paper (ABCP) and residential mortgage-backed securities ties (RMBS), which transfer the underlying mortgage risk to investors. It still accounts for a very small share of the mortgage funding mix in Canada, with just 1.1%. Despite its continued small size, the RMBS market appears to be expanding in Canada. Home Capital Group issued its first RMBS in over a decade in 2019, and TD Bank issued its first pool in the first quarter of 2020. The Bank of Canada has called for growth in this space as the market share of uninsured mortgages has been increasing. However, the timid space of RMBS as a share of mortgage funding is still limited in part by its less competitive funding costs. In addition, the lack of publicly available information on the performance of Canadian mortgages and the inconsistency of available mortgage data have resulted in limited investor demand and confidence on the market, notably in the case of foreign investors who have a limited understanding of the Canadian market.

0.63% 100% 2.69% 16.66% 15.39% 29.70% 7.40% 31.75% 80% 5.96% 33.45% 12.89% 9.80% 60% 19.57% 77.29% 51.57% 40% 58.09% 65.95% 20% 42.29% 18.09% 0% Other Regulated Lenders Big 6 Banks Credit Unions Unregulated Lenders All Small Lenders\* Deposits and Other Private Securitization Market NHA MBS CMB Notional Covered Bonds

Figure 1.16 Mortgage funding differs greatly depending on lender type

Source: Sources: OSFI; CMHC Securitization; annual / quarterly reports; DBRS

### ADDITIONAL RESOURCES



#### **APPENDIX 1**

## RESIDENTIAL MORTGAGE LENDER TYPES

#### Chartered banks

Description	Banks are the dominant players in the mortgage lending landscape in Canada. These depository institutions offer a complete variety of banking and financial services in person through their branch network and online. Bank customers can combine all finances under one institution.		
Regulation	regulated by the Office of the Superintendent of Financial Institutions (OSFI)		
Funding	All types of funding but mostly deposits.		
Regional concentration	While they are widespread across the country, they tend to have greater shares in urban and metropolitan areas.		

#### **Credit unions**

Description	Credit unions (or caisses populaires in Quebec) are the second largest players in the mortgage lending landscape. They are depository institutions that have a "co-operative" business model, meaning they are owned by their members (every member has an equal vote). They offer an entire range of financial services in terms of banking, lending and investment products. They are generally known for more personalized customer service.		
Regulation	Most are provincially regulated, with some moving to federal jurisdiction.		
Funding	All types of funding but mostly deposits.		
Concentration	Tend to have a higher presence in non-metropolitan areas than other financial institutions.		

#### Mortgage finance companies (MFCs)

Description	MFCs only offer mortgage loan products and are usually only accessible via the brokerage lending channel. They are non-depository lenders. MFCs generally have more competitive rates than larger lenders.		
Regulation	Quasi-regulated—While not explicitly subject to regulation, they still comply with regulation as they fund their mortgages with public securitization programs and wholesale funding.		
Funding	NHA securitization programs and wholesale funding		
Regional concentration	As they make use of the broker channel, they are generally widespread across the regions.		

#### Mortgage investment entities (MIEs)

Description	MIEs are mortgage lenders that provide products characterized by short-term loans (between 6 to 24 months) and higher interest rates. MIEs include mortgage investment corporations (MICs) and other private lenders. They generally lend to borrowers that don't qualify with traditional lenders, for either debt consolidation, sickness, bruised/absence of credit, income interruption, financial difficulties and real estate investments. When approving a loan, the main objective is to facilitate exit strategies for customers allowing them to eventually return to the traditional lending space. In many cases, they play an important liquidity role by providing funds to individuals in need of immediate cash to avoid defaulting on their mortgage payments, acting as a buffer in the mortgage landscape.
Regulation	Unregulated in the lending spectrum. However, some MIEs, including MICs, are regulated on the funding portion of the business.
Funding	MICs generally fund their mortgages by pooling money from a group of investors.  Private lenders either lend their own money or professionally managed funds.
Regional concentration	While MIEs are present in all provinces, MIC loans are more concentrated in B.C. and Ontario, which represent 78% of their lending with the majority concentrated in Vancouver and Toronto.

#### **APPENDIX 2**

## REGULATIONS AND POLICY CHANGES

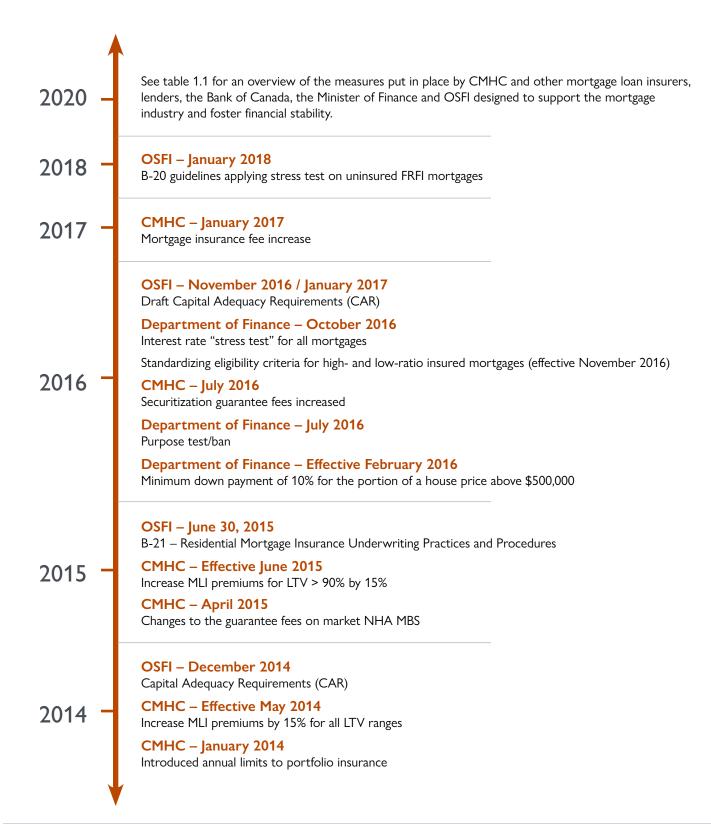
Since 2008, there have been a number of policy actions that have impacted the residential mortgage market. The Department of Finance has implemented multiple rounds of measures adjusting the rules for new government-backed insured mortgages, thereby reducing potential vulnerabilities in the housing market:

- 1. October 2008: The maximum amortization period was reduced to 35 years, the minimum down payment was increased to 5%, along with minimum credit score requirements and new loan documentation standards.
- 2. April 2010: The qualifying mortgage rate would be based on the higher of the mortgage contract rate or Bank of Canada conventional five-year fixed posted mortgage rate for mortgages with variable interest rates or fixed interest rates with terms less than five years. The maximum refinancing amount was lowered to 90% of the property value and the minimum down payment for investment properties was raised to 20%.
- 3. March 2011: The maximum amortization period was reduced to 30 years and the maximum refinancing limit was decreased to 85% of the property value. There also was a withdrawal of government guarantees on non-amortizing secured lines of credit (effective April 2011).
- 4. July 2012: The maximum amortization period decreased to 25 years while the maximum refinancing was limited to 80% of the property value. The maximum gross debt service ratio was set to 39% and the maximum total debt service ratio was 44%. CMHC also set the maximum purchase price to less than \$1 million.

- **5. February 2016:** The minimum down payment increased to 10% for the portion of a house price above \$500.000.
- 6. October 2016: All insured mortgages were required to qualify on the higher of the mortgage contract rate or Bank of Canada conventional five-year fixed posted mortgage rate ("stress test"). Standardizing eligibility criteria for high- and low-ratio insured mortgages was also introduced (effective November 2016). Refinanced mortgages, rental properties and properties purchased for over one million dollars are no longer eligible for portfolio/bulk insurance.
- 7. January 2018: The qualifying rate for all uninsured mortgages should be the greater of the contractual mortgage rate plus 2% or the five-year benchmark rate published by the Bank of Canada.

Other notable policy actions in recent years have been undertaken to strengthen the stability of housing finance: the Office of the Superintendent of Financial Institutions (OSFI) introduced guidelines for prudential mortgage underwriting, applying to lenders for both insured and uninsured mortgages (B-20) and to mortgage insurers (B-21). Lender guarantee fees on *National Housing Act* mortgage-backed securities (NHA MBS) and Canada Mortgage Bonds (CMB) have increased, along with the introduction of total guarantee and allocation limits for CMHC's securitization programs. Implementation of the 'ban' and 'purpose test' for low-ratio portfolio insurance was designed to encourage the development of private market funding alternatives.

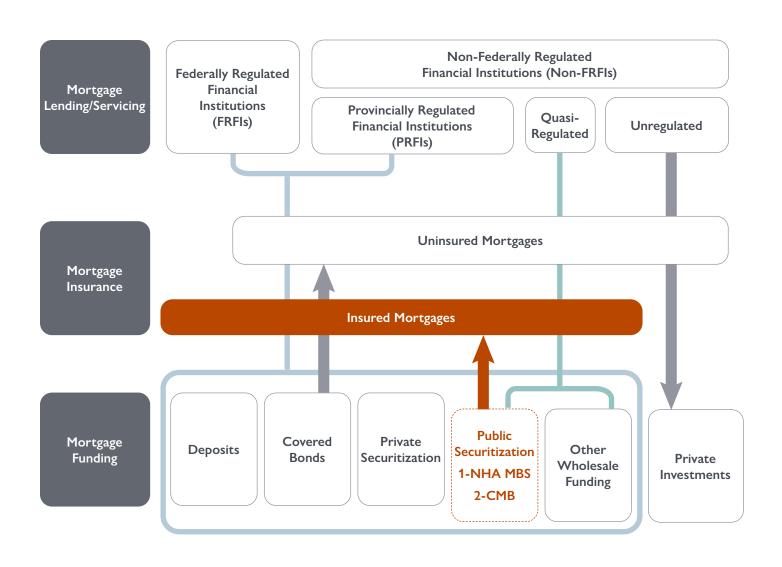
## HISTORY OF POLICY ACTIONS TO MANAGE HOUSING MARKET RISKS



2013 -	Department of Finance – August 2013 Introduced annual limits to government-backed securitization (CMB and NHA MBS)
	OSFI – End of 2012-2013 FY (Fiscal Year) B-20 – Principles for Sound Residential Mortgage Underwriting Practices (initial stress test)
	CMHC – December 2012 Implemented legal framework for Canadian covered bonds
	<b>Department of Finance – July 2012</b> For high LTV:
2012 -	Max. amort. = 25 years
	Max. refinancing 80% LTV
	Max. GDS = 39% and max. TDS = 44%
	MLI only available for < \$1M homes
	Description of Figure Manch 2044
	Department of Finance – March 2011  Max. amort. = 30 years
2011 –	Max. refinancing limited to 85% of the property value
	Withdrawal of gov. guarantees on non-amort. HELOCs (effective April 2011)
	Department of Finance – April 2010
	Debt servicing standards higher of the mortgage contract rate or
2010 -	BoC five-year fixed posted mortgage rate for high-ratio mortgages
	Max. refinancing limited to 90% LTV
	Min. down payment of 20% on investment properties
2000	OSFI – December 2009
2009 –	E-18 – Stress testing expectations
	Department of Finance – October 2008
2008	Max. amort. = 35 years
	Min. down payment = 5%

### APPENDIX 3

## HOUSING FINANCE IN CANADA 101



## APPENDIX 4 GLOSSARY

#### Asset-backed commercial paper (ABCP)

An asset-backed commercial paper (ABCP) is a short-term money market instrument. It is a privately securitized fixed-income instrument backed by a pool of financial assets other than residential mortgage loans (such as credit card debt, personal loans or auto loans).

#### Canada Mortgage Bonds (CMB)

Under the CMB Program, Canada Housing Trust (CHT), a special purpose trust consolidated in CMHC's securitization activities, issues non-amortizing bonds ("Canada Mortgage Bonds" or "CMB") to investors and uses the proceeds to purchase NHA MBS. Monthly cash flows ("principal and interest") from the NHA MBS are transformed via swaps into interest payments made semi-annually for fixed-rate and quarterly for floating-rate CMB and the repayment of the principal at maturity (a "bullet" payment). The timely payment of interest and principal of CMB to investors is guaranteed by CMHC and therefore backed by the Government of Canada.

#### Covered bond

A debt obligation in relation to which the principal and interest owing are guaranteed to be paid from the loans or other assets held by the guarantor entity. Under the Canadian covered bond legal framework, assets may not include insured mortgages. CMHC is responsible for administering the covered bond legal framework.

#### Federally regulated financial institution (FRFI)

Under the Bank Act of Canada, the term "federal financial institution" means (a) a bank, (b) a body corporate to which the Trust and Loan Companies Act applies, (c) an association to which the Cooperative Credit Associations Act applies, or (d) an insurance company or a fraternal benefit society incorporated or formed under the Insurance Companies Act. The Office of the Superintendent of Financial Institutions (OSFI) regulates and supervises all banks and federally incorporated or registered trust and loan companies in Canada, as well as insurance companies and fraternal benefit societies.

#### Gross debt service (GDS) ratio

The gross debt service (GDS) ratio is the percentage of the gross income that will be used for payments of housing-related expenses (principal, interest, property taxes and heating costs, plus the annual site lease for leasehold tenure and 50% of applicable condominium fees). To calculate the GDS ratio, the sum of all annual housing-related expenses must be divided by the annual gross income and then multiplied by 100. The GDS ratio is only one of the factors considered in the loan underwriting process. Mortgage professionals also use a borrower's total debt service (TDS) ratio and credit history to determine if the borrower can afford to purchase a home.

#### High ratio mortgage

A high ratio mortgage is a mortgage loan of more than 80% of the lending value of the property. This occurs when the borrower's down payment is less than 20% of the purchase price of the property. By law, borrowers must purchase mortgage loan (default) insurance from their lender when the loan-to-value (LTV) ratio of the loan is high. If there is a default on the part of the borrower, the insurance allows for certain losses to be paid back to the lender. Not all lenders offer high ratio mortgages.

#### Low ratio mortgage

Also known as a conventional mortgage, a low ratio mortgage is a mortgage loan of 80% or less of the lending value of the property. This occurs when the borrower's down payment is at least 20% of the purchase price of the property. These types of loans do not require mortgage loan (default) insurance by law, since their loan-to-value (LTV) ratio is equal to or less than 80%. Such loans do not normally require mortgage default insurance from CMHC or any other insurer, unless lenders so require because of special conditions.

#### Loan-to-value (LTV) ratio

The loan-to-value (LTV) ratio corresponds to the original balance of the mortgage loan divided by the original value of the property. The result indicates whether it is a high ratio or low ratio mortgage. The LTV ratio determines the maximum amount of a guaranteed mortgage based on the market value of a given property as collateral.

#### Mortgage default insurance

Mortgage default insurance, commonly referred to as mortgage insurance or mortgage loan insurance, protects the lender in the event of default on the part of the borrower. This type of insurance is required by the federal government for high ratio mortgages (down payment of less than 20%). The mortgage default insurance premium payable by the borrower is based on the amount of the mortgage loan and the size of the down payment. The premium can be paid in a single lump sum or it can be added to the mortgage loan and included in the monthly payments.

#### Mortgage funding

To fund mortgages granted to borrowers, lenders use a variety of sources. Mortgage funding provided by chartered banks (FRFI) as well as other regulated lenders and credit unions (PRFI) comes primarily from personal deposits and wholesale funding, and through covered bonds and public securitization (NHA MBS and CMB). In the case of quasi-regulated lenders, mortgage funding relies heavily on bank funding and public securitization programs. For unregulated lenders, the mortgage funding available to them comes primarily from private investment. Private securitization (RMBS and ABCP) represents only a fraction of the sources of mortgage funding used by lenders.

#### National Housing Act Mortgage-Backed Securities (NHA MBS)

The NHA MBS Program provides a framework for transforming insured residential mortgages into securities issued by approved issuers ("National Housing Act Mortgage-Backed Securities" or "NHA MBS"). The securitized mortgages are insured against borrower default by CMHC or by private insurers and therefore by the Government of Canada. The timely payment of interest and principal to investors in the securities is guaranteed by CMHC and therefore by the Government of Canada.

#### Portfolio insurance

Portfolio insurance allows lenders to bulk-insure pools of previously uninsured mortgage loans. Unlike transactional mortgage loan insurance, which is paid for by the borrower, portfolio insurance is typically paid for by the lender. Portfolio insurance provides lenders with access to mortgage funding through government-sponsored (public) securitization programs, which require insured mortgages.

#### Private securitization

Private securitization refers to securitization activities that are not sponsored by the Government of Canada, and includes asset-backed commercial paper and residential mortgage-backed securities. Unlike public securitization, these securities are backed by uninsured assets.

#### Provincially regulated financial institution (PRFI)

Provincially regulated financial institutions (PRFIs) mainly comprise credit unions, caisses populaires and other financial institutions that are registered or incorporated at the provincial level. These entities are regulated and supervised by the financial authority of their province jurisdiction. Their policies, supervisory and regulatory frameworks are therefore different from those of federally regulated financial institutions.

#### **Public securitization**

Public securitization refers to the two securitization programs that are sponsored by the Government of Canada, namely the NHA MBS (National Housing Act Mortgage-Backed Securities) Program and the CMB (Canada Mortgage Bonds) Program. Securitization is the practice of transforming financial assets into securities on the capital markets. A distinction is usually made between mortgage-backed securities, which are backed by mortgage loan receivables, and asset-backed securities, which are backed by receivables from assets other than mortgage loans. Unlike covered bonds and private securitization, public securitization programs require insured mortgages.

#### Purpose test

"Purpose test" rules introduced on July 1, 2016, prohibit the securitization of CMHC-insured mortgage loans outside public securitization programs. These rules generally limit portfolio insurance to mortgages used in the NHA securitization programs, and thus restore portfolio insurance to its original purpose of allowing access to funding for housing loans through NHA securitization programs.

#### Quasi-regulated lenders

Lenders described as quasi-regulated are those, such as mortgage finance companies, that underwrite and service insured residential mortgages sourced from mortgage brokers. These mortgages tend to be packaged and sold to federally regulated financial institutions (FRFIs) or securitized through government-sponsored programs. Since mortgages purchased by FRFIs must conform to federal government mortgage lending rules, these quasi-regulated lenders are indirectly subject to these same rules. Similarly, to qualify for government-sponsored securitization, their mortgages must adhere to federal government guidelines for insured mortgages.

#### Residential mortgage-backed securities (RMBS)

Residential mortgage-backed securities (RMBS) are securities on the capital markets that are backed by mortgage loan receivables. In this report, the term RMBS refers to the product of private securitization, as opposed to the two public securitization programs sponsored by the Government of Canada (NHA MBS and CMB). Privately securitized RMBS are backed by uninsured mortgage loans.

#### Total debt service (TDS) ratio

The total debt service (TDS) ratio is the percentage of the borrower's gross income that will be used for payments of housing-related expenses (principal, interest, property taxes, heating costs, etc.) and other debt obligations, such as car payments or payments on other loans. To calculate the TDS ratio, the sum of all annual housing-related expenses and other debt obligations must be divided by the annual gross income and then multiplied by 100. The TDS ratio is only one of the factors considered in the loan underwriting process. Mortgage professionals also use a borrower's gross debt service (GDS) ratio and credit history to determine if the borrower can afford to purchase a home.

#### Unregulated lenders

Unregulated lenders include corporations, individuals and other entities that offer mortgages but that are typically subject to neither federal nor provincial mortgage lending rules and guidelines. Unlike banks, trust companies, insurers and credit unions, these lenders do not take deposits and are not subject to federal government mortgage lending rules and oversight. For example, they are not subject to federal rules about the amount of funds they must keep in reserve for credit losses arising from mortgage loans.









#### ALTERNATIVE TEXT AND DATA FOR FIGURES

Figure 1.1 Growth of residential mortgage debt has accelerated from January to May 2020

Year	Mortgage debt growth rate	Total outstanding balances at month-end for major private institutional lenders, seasonally adjusted (\$)
2001	4.4%	430,763
	4.0%	430,886
	3.5%	431,540
	2.9%	432,012
	3.1%	433,448
	3.4%	435,886
	3.9%	439,939
	4.2%	442,739
	4.4%	446,188
	4.4%	447,943
	4.8%	450,990
	5.5%	454,526
2002	5.8%	455,561
	5.8%	455,870
	6.5%	459,587
	7.1%	462,578
	7.5%	466,123
	7.8%	469,889
	8.2%	475,883
	8.2%	479,223
	8.0%	481,757
	8.5%	486,146
	8.4%	488,650
	8.0%	490,672
2003	8.3%	493,475
	8.6%	494,876
	7.9%	496,027
	7.9%	499,139
	8.0%	503,422
	7.8%	506,387
	7.8%	513,239
	8.0%	517,752
	8.6%	522,976
	8.4%	526,885

8.9%	531,984
8.8%	534,037
<b>2004</b> 8.8%	537,101
8.9%	539,002
9.0%	540,611
9.3%	545,640
9.5%	551,101
10.1%	557,310
10.0%	564,380
10.1%	570,197
9.9%	574,513
10.2%	580,659
10.3%	586,751
10.6%	590,798
<b>2005</b> 10.4%	592,848
10.3%	594,313
10.3%	596,056
10.0%	600,020
9.9%	605,556
9.8%	611,808
9.8%	619,674
9.7%	625,688
10.0%	631,738
9.9%	638,233
9.8%	644,372
9.9%	649,113
<b>2006</b> 10.0%	652,168
10.2%	655,149
10.5%	658,712
10.8%	664,566
10.6%	669,481
10.5%	675,756
10.5%	684,903
10.3%	689,918
10.3%	
10.1%	703,009
9.9%	708,229

(continued)

Year	Mortgage debt growth rate	Total outstanding balances at month-end for major private institutional lenders, seasonally adjusted (\$)
	10.0%	713,839
2007	10.0%	717,201
	10.1%	721,398
	10.1%	725,147
	10.3%	732,908
	10.4%	739,109
	10.8%	748,724
	11.1%	761,062
	11.7%	770,636
	11.8%	778,924
	12.3%	789,420
	12.4%	796,001
	12.5%	803,146
2008	12.8%	809,292
	12.9%	814,438
	13.2%	820,829
	12.9%	827,346
	13.1%	836,001
	12.7%	843,547
	12.2%	854,066
	11.8%	861,355
	11.3%	866,888
	10.4%	871,217
	9.3%	870,269
	10.0%	883,431
2009	9.6%	886,747
	8.9%	887,274
	7.9%	885,960
	8.0%	893,199
	7.4%	897,891
	7.3%	905,230
	7.2%	915,272
	6.8%	920,030
	6.8%	926,032
	7.2%	933,813
	7.8%	937,877
	6.9%	944,633
2010	6.8%	946,628

	6.9%	948,797
	7.2%	949,706
	6.8%	953,912
	7.4%	964,421
	7.5%	973,250
	7.3%	982,470
	7.5%	988,776
	7.5%	995,121
	7.1%	1,000,098
	7.2%	1,005,639
	7.1%	1,011,657
2011	7.4%	1,017,031
2011	7.0%	1,015,085
	7.3%	1,019,184
	7.3%	1,023,155
	6.9%	1,030,536
	6.7%	1,038,327
	6.7%	1,048,170
	6.7%	1,055,325
	6.6%	1,061,246
	7.1%	1,071,358
	6.5%	1,071,291
	6.5%	1,077,013
2012	6.3%	1,081,319
2012	6.7%	1,083,537
	6.8%	1,088,208
	6.9%	1,093,404
	6.7%	1,099,090
	6.5%	1,105,315
	6.2%	1,112,707
	6.1%	1,119,763
	6.1%	1,125,925
	5.6%	1,131,137
	5.8%	1,133,147
	5.8%	1,139,719
2013	5.5%	1,140,928
	5.5%	1,143,444
	5.4%	1,146,948
	5.3%	1,151,327
	5.2%	1,156,332
	J.Z/0	1,100,002

(continued)

<b>l</b> ear	Mortgage debt growth rate	Total outstanding balances at month-end for major private institutional lenders, seasonally adjusted (\$)
	5.3%	1,164,256
	5.3%	1,171,437
	5.1%	1,176,895
	5.3%	1,185,551
	5.4%	1,192,114
	5.6%	1,196,618
	5.2%	1,199,509
2014	5.2%	1,200,465
	5.2%	1,202,883
	5.1%	1,205,753
	5.0%	1,209,016
	5.0%	1,214,619
	4.9%	1,221,735
	5.0%	1,230,229
	5.2%	1,237,749
	5.0%	1,245,045
	4.9%	1,250,970
	4.9%	1,255,826
	5.1%	1,260,732
2015	5.2%	1,262,909
	5.3%	1,267,131
	5.4%	1,270,483
	5.5%	1,275,244
	5.5%	1,281,626
	5.7%	1,291,025
	5.9%	1,302,535
-	6.0%	1,312,480
	6.1%	1,320,428
-	6.1%	1,327,849
	6.2%	1,334,073
	6.5%	1,342,540
2016	6.5%	1,345,077
	6.4%	1,348,686
	6.4%	1,351,265
	6.3%	1,355,722
-	6.4%	1,363,073
	6.4%	1,373,607
	6.3%	1,384,757

	6.3%	1,395,034
	6.4%	1,405,347
	6.4%	1,412,609
	6.4%	1,418,994
	6.3%	1,426,535
2017	6.1%	1,427,549
	6.1%	1,430,400
	6.2%	1,435,358
	6.4%	1,442,102
	6.3%	1,449,131
	6.2%	1,458,571
	6.1%	1,469,059
	5.8%	1,476,580
	5.5%	1,483,336
	5.5%	1,489,718
	5.4%	1,495,185
	5.3%	1,501,591
2018	5.4%	1,504,769
	5.7%	1,511,996
	5.8%	1,519,109
	5.7%	1,524,257
	5.5%	1,528,466
	5.2%	1,534,286
	4.9%	1,540,572
	4.7%	1,546,518
	4.6%	1,551,816
	4.5%	1,556,106
	4.4%	1,560,442
	4.3%	1,566,489
2019	4.2%	1,567,851
	3.8%	1,569,698
	3.5%	1,572,421
	3.4%	1,575,991
	3.5%	1,581,973
	3.7%	1,590,942
	3.8%	1,599,544
	4.0%	1,608,483
	4.1%	1,616,180
	4.4%	1,625,076
	4.6%	1,631,497
L		

Year	Mortgage debt growth rate	Total outstanding balances at month-end for major private institutional lenders, seasonally adjusted (\$)
	4.7%	1,639,622
2020	4.8%	1,643,581
	5.0%	1,648,146
	5.4%	1,656,686
	5.8%	1,666,714
	6.0%	1,676,663

Sources: Statistics Canada. Table 10-10-0129-01 Residential mortgage credit, outstanding balances of major private institutional lenders, Bank of Canada (Year-over-year change)

Figure 1.2. Mortgage deferrals due to COVID-19 will have a lowering impact on scheduled periodic repayments (\$)

	2018Q1	2019Q1	2020 Q1
Repayments of princpal - Of which scheduled periodic repayments	12,852,772	12,542,987	13,810,657
Repayment of principal - Of which non-scheduled repayments (of part or full amount owed on the contract)	7,373,177	6,006,506	6,438,513
Repayment of principal - Of which end-of-contract principal repayments	19,749,055	13,842,709	19,705,527
Decreases related to portfolio mortgage insurance	3,319,281	575,620	2,013,781
Other decreases	2,122,254	2,563,234	1,922,234

Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations

Figure 1.3. Strong rebound in new mortgage activity early 2020, even more so amongst uninsured mortgages (\$)

	2018Q1	2019Q1	2020 Q1
Mortgage originations for the purchases of property -Insured	9,155,074	9,185,654	10,269,231
Mortgage originations for the purchases of property - Uninsured	29,413,838	22,621,447	26,260,658
Same lender refinancing - Insured	737,098	609,742	701,736
Same lender refinancing- Uninsured	18,342,213	15,734,062	19,120,213
Same lender renewals - Insured	18,505,187	18,752,667	21,786,917
Same lender renewals- Uninsured	18,103,573	21,806,522	29,345,851
Other renewals/ refinancing and other mortgages - Insured	1,106,360	1,159,970	856,458
Other renewals/ refinancing and other mortgages - Uninsured	3,442,744	4,309,841	6,823,184

Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations

Figure 1.4. Approval rate for same lender refinancing has increased in 2020 Q1, Chartered banks

Period	For home purchase	For same lender refinancing	For same lender renewals
2016Q1	68.4%	80.5%	98.2%
2016Q2	70.4%	78.3%	97.6%
2016Q3	74.4%	80.2%	97.2%
2016Q4	70.2%	79.9%	97.0%
2017Q1	63.7%	77.8%	96.3%
2017Q2	64.7%	77.4%	96.8%
2017Q3	64.9%	79.5%	97.0%
2017Q4	63.6%	79.6%	96.6%
2018Q1	59.8%	77.4%	97.8%
2018Q2	63.1%	79.6%	97.6%
2018Q3	67.4%	80.8%	97.6%
2018Q4	65.5%	79.7%	97.6%
2019Q1	61.8%	77.9%	97.6%
2019Q2	63.1%	79.3%	97.0%
2019Q3	66.3%	80.4%	96.8%
2019Q4	65.8%	83.1%	97.1%
2020 Q1	61.3%	81.4%	96.7%

Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations

Figure 1.5. The increasing share of uninsured extended mortgages has widened the gap between outstanding insured and uninsured (\$)

Year	Insured	Uninsured
2012	521,027	303,152
	526,457	316,058
	534,791	323,171
	531,811	333,881
2013	536,693	332,498
	538,631	345,219
	545,199	363,491
	543,558	371,706
2014	541,455	375,481
	539,794	389,429
	542,552	401,293
	545,012	408,300

Year	Insured	Uninsured
2015	542,369	414,694
	539,373	434,209
	537,725	457,104
	548,210	463,269
2016	545,986	471,038
	571,970	462,083
	572,114	484,654
	562,133	503,451
2017	566,236	511,516
	556,224	541,464
	540,987	576,260
	532,289	597,267
2018	522,491	610,269
	508,820	633,812
	496,330	656,957
	487,836	674,938
2019	479,269	686,489
	476,211	707,123
	470,382	735,118
	464,815	758,187
2020	460,116	776,875

Source: Statistics Canada, Table 10-10-0134-01, Chartered banks, mortgage loans report, end of period, Bank of Canada, (x 1,000,000\$)

Figure 1.6. While portfolio insured mortgages continue to trend downwards, 2019 marks a rebound of individualy insured mortgages, Chartered banks

	2017	2018	2019
High Ratio	-3.74%	-5.00%	-2.61%
Conventional - of which are portfolio insured	-13.81%	-14.44%	-14.95%
Conventional - of which are indivually insured	4.58%	-1.68%	7.06%

Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations (year-over-year change in volume)

Figure 1.7. Newly originated mortgages has increased in loans with LTV ratios in the 65 to 80% range, Chartered banks

Percentages	2017	2018	2019	2020 Q1
65% or less	36%	34%	32%	33%
$> 65\%$ to $\leq 75\%$	15%	15%	15%	16%
> 75% to ≤ 80%	34%	34%	36%	36%
> 80% to ≤ 85%	1%	1%	1%	2%
> 85% to ≤ 90%	3%	4%	4%	4%
> 90% to ≤ 95%	8%	9%	9%	7%
> 95% to ≤ 100%	3%	3%	3%	3%
Over 100%	0%	0%	0%	0%

Source: CMHC Residential Mortgage data reporting of NHA MBS issuers, CMHC Calculations

Figure 1.8. Market share by lender type of newly originated mortgages

Lender Type	Total
Big 6	36%
Other Banks	15%
CU	34%
MFC	1%
MIE	3%
Other	8%

Source: Bank of Canada, Survey of Non-Bank Mortgage Lenders and CMHC Estimates

Figure 1.9. Market share by lender type of newly originated mortgages, Uninsured mortgages (outbound) and Insured mortgages (inbound)

Lender Type	Insured Mortgages	Uninsured Mortgages	Total
Big 6	61%	71%	67%
Other Banks	4%	6%	5%
CU	12%	14%	14%
MFC	20%	3%	9%
MIE	0%	2%	1%
Other	3%	4%	4%

Source: Bank of Canada, Survey of Non-Bank Mortgage Lenders and CMHC Estimates

Figure 1.10. Delinquency rates at the end of the second quarter in 2020 remain relatively stable across banks and credit unions

Lender Type	2019Q2	2020Q2
Big 6 Banks	0.28	0.28
Other Bank	0.37	0.38
Credit Unions	0.26	0.27
Other Mortgage Lenders	0.28	0.22

Source: Equifax and CMHC Calculations

Figure 1.11. Fewer consumers have opted for variable rate mortgages in the second half of 2019 up until the COVID-19 induced financial shock

Period	2017	2018	2019	2020 YTD
5 years and more	35.5%	29.2%	37.6%	46%
3 to less than 5 years	18.0%	16.1%	26.3%	24%
1 to less than 3 years	23.2%	21.3%	19.3%	11%
Less than 1 year	4.9%	5.8%	6.0%	6%
Variable rate	18.4%	27.6%	10.9%	14%

Source: Statistics Canada. Table 10-10-0006-01 Funds advanced, outstanding balances, and interest rates for new and existing lending, Bank of Canada, CMHC calculations

Figure 1.12. Increasing discounts on variable rate mortgages boost mortgage consumers interest for these rates

Year	Discount on variable rates	Share of mortgages with variable interest rates
2013	-42.7%	10.1%
	-43.0%	9.6%
	-46.8%	9.2%
	-52.0%	8.4%
	-50.0%	8.7%
-	-51.8%	8.4%
-	-26.3%	12.4%
-	3.2%	16.4%
	27.5%	21.5%
	44.7%	28.0%
	53.5%	33.3%
-	50.8%	33.8%
2014	55.5%	33.3%
	50.0%	31.9%
	38.8%	29.2%
	23.0%	24.7%
	20.8%	23.9%
	18.8%	24.6%
	18.0%	23.6%
	18.5%	23.5%
	17.5%	24.3%
	20.5%	24.5%
	26.3%	29.2%
	29.5%	30.1%
2015	40.0%	33.3%
	37.8%	38.6%
	31.3%	36.3%
	22.3%	32.0%
	19.5%	29.5%
	19.3%	29.3%
	35.0%	31.9%
	42.3%	37.9%
	46.0%	39.3%
	46.0%	37.2%
	36.5%	32.3%
	26.0%	26.6%

2016	15.5%	25.2%
	6.8%	23.0%
	-11.8%	20.0%
	-20.3%	17.4%
	-30.3%	16.4%
	-24.5%	17.4%
	-19.3%	18.5%
	-16.8%	18.3%
	-14.3%	18.1%
	-11.5%	17.9%
	-14.0%	14.7%
	-14.5%	12.7%
2017	-3.0%	14.9%
	9.0%	18.3%
	11.0%	20.7%
	13.8%	22.3%
	11.8%	24.3%
	10.0%	23.4%
	-14.8%	16.1%
	0.2%	15.7%
	-8.8%	15.0%
	-2.0%	13.4%
	17.3%	17.3%
	25.3%	19.3%
2018	9.5%	17.0%
	7.5%	15.1%
	8.7%	16.9%
	16.8%	20.5%
	41.0%	26.0%
	70.0%	44.1%
	43.0%	42.6%
	43.0%	38.6%
	39.3%	33.4%
	23.3%	30.3%
	23.5%	24.8%
	20.0%	22.0%
2019	16.5%	22.8%
	2.3%	21.0%
	-15.5%	18.6%
	-42.0%	14.2%
	- 12.070	(continued)

Year	Discount on variable rates	Share of mortgages with variable interest rates
	-59.8%	11.0%
	-80.8%	8.1%
	-99.5%	6.8%
	-109.3%	6.1%
	-120.3%	5.5%
	-118.8%	5.0%
	-100.5%	5.5%
	-95.5%	6.2%
2020	-85.0%	7.1%
	-89.5%	7.7%
	33.3%	15.1%
	46.5%	24.1%

Source: Statistics Canada. Table 10-10-0006-01 Funds advanced, outstanding balances, and interest rates for new and existing lending, Bank of Canada, CMHC calculations

Figure 1.13. Spread Between 5-Year Mortgage Rate and 5-Year Government of Canada Bond Yield (%)

Date	Mortgage Rate (%)
5/12/2010	3.14
5/19/2010	3.41
5/26/2010	3.44
6/2/2010	3.31
6/9/2010	3.34
6/16/2010	3.29
6/23/2010	3.46
6/30/2010	3.57
7/7/2010	3.35
7/14/2010	3.25
7/21/2010	3.44
7/28/2010	3.35
8/4/2010	3.44
8/11/2010	3.46
8/18/2010	3.33
8/25/2010	3.31
9/1/2010	3.29
9/8/2010	3.20
9/15/2010	3.14

9/29/2010       3.38         10/6/2010       3.42         10/13/2010       3.35         10/20/2010       3.38         10/27/2010       3.23         11/3/2010       3.27         11/10/2010       2.99         11/17/2010       2.87         11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.63         1/12/2011       2.63         1/2/2011       2.57         2/9/2011       2.57         2/9/2011       2.57         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.63         4/6/2011       2.94         4/20/2011       2.97         4/27/2011       3.15         5/11/2011       3.15         5/11/2011       3.19         6/1/2011       3.20<	9/22/2010	3.25
10/6/2010       3.42         10/13/2010       3.35         10/20/2010       3.38         10/27/2010       3.23         11/3/2010       3.27         11/10/2010       2.99         11/17/2010       2.87         11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.63         1/12/2011       2.67         1/26/2011       2.67         1/26/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.63         4/6/2011       2.85         4/13/2011       2.97         4/27/2011       3.15         5/11/2011       3.15         5/18/2011       3.19         6/1/2011       3.25         6/8/2011       3.17		
10/13/2010       3.35         10/20/2010       3.38         10/27/2010       3.23         11/3/2010       3.27         11/10/2010       2.99         11/17/2010       2.87         11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.63         1/12/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.83         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.63         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.15         5/18/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20<		
10/20/2010       3.38         10/27/2010       3.23         11/3/2010       3.27         11/10/2010       2.99         11/17/2010       2.87         11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/2/3/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.15         5/18/2011       3.16         5/25/2011       3.17         6/15/2011       3.25		-
10/27/2010       3.23         11/3/2010       3.27         11/10/2010       2.99         11/17/2010       2.87         11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17		
11/3/2010       3.27         11/10/2010       2.99         11/17/2010       2.87         11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.57         2/9/2011       2.57         2/9/2011       2.70         2/16/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
11/10/2010       2.99         11/17/2010       2.87         11/124/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.63         4/6/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
11/17/2010       2.87         11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.57         2/9/2011       2.70         2/16/2011       2.83         3/2/2011       2.83         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.63         4/6/2011       2.63         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.15         5/11/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
11/24/2010       2.96         12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/29/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.17         5/4/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
12/1/2010       2.75         12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.97         4/27/2011       3.04         5/4/2011       3.15         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
12/8/2010       2.70         12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.83         3/2/2011       2.83         3/9/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.15         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
12/15/2010       2.63         12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/11/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
12/22/2010       2.77         12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
12/29/2010       2.74         1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
1/5/2011       2.63         1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
1/12/2011       2.66         1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
1/19/2011       2.67         1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
1/26/2011       2.63         2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
2/2/2011       2.57         2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
2/9/2011       2.70         2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
2/16/2011       2.64         2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
2/23/2011       2.83         3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
3/2/2011       2.80         3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
3/9/2011       2.68         3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
3/16/2011       3.00         3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
3/23/2011       2.76         3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
3/30/2011       2.63         4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
4/6/2011       2.85         4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		<del>-</del>
4/13/2011       2.94         4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
4/20/2011       2.97         4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
4/27/2011       3.04         5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
5/4/2011       3.17         5/11/2011       3.15         5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
5/11/2011     3.15       5/18/2011     3.16       5/25/2011     3.19       6/1/2011     3.25       6/8/2011     3.17       6/15/2011     3.20	4/27/2011	
5/18/2011       3.16         5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20		
5/25/2011       3.19         6/1/2011       3.25         6/8/2011       3.17         6/15/2011       3.20	5/11/2011	3.15
6/1/2011     3.25       6/8/2011     3.17       6/15/2011     3.20	5/18/2011	3.16
6/8/2011     3.17       6/15/2011     3.20	5/25/2011	3.19
6/15/2011 3.20	6/1/2011	3.25
	6/8/2011	3.17
6/22/2011 3.20	6/15/2011	3.20
	6/22/2011	3.20

Date	Mortgage Rate (%)
6/29/2011	3.09
7/6/2011	3.28
7/13/2011	3.36
7/20/2011	3.16
7/27/2011	3.24
8/3/2011	3.51
8/10/2011	4.04
8/17/2011	3.87
8/24/2011	3.79
8/31/2011	3.71
9/7/2011	3.94
9/14/2011	3.94
9/21/2011	3.79
9/28/2011	3.75
10/5/2011	3.79
10/12/2011	3.71
10/19/2011	3.72
10/26/2011	3.69
11/2/2011	3.86
11/9/2011	3.94
11/16/2011	3.93
11/23/2011	3.97
11/30/2011	3.83
12/7/2011	3.96
12/14/2011	4.04
12/21/2011	4.04
12/28/2011	4.01
1/4/2012	3.99
1/11/2012	4.03
1/18/2012	3.99
1/25/2012	3.93
2/1/2012	3.88
2/8/2012	3.73
2/15/2012	3.87
2/22/2012	3.76
2/29/2012	3.80
3/7/2012	3.81
3/14/2012	3.61
3/21/2012	3.53

3/28/2012	3.67
4/4/2012	3.83
4/11/2012	3.90
4/18/2012	3.83
4/25/2012	3.75
5/2/2012	3.86
5/9/2012	3.96
5/16/2012	3.98
5/23/2012	4.04
5/30/2012	4.03
6/6/2012	3.97
6/13/2012	3.99
6/20/2012	3.95
6/27/2012	4.03
7/4/2012	4.01
7/11/2012	4.04
7/18/2012	4.09
7/25/2012	4.08
8/1/2012	3.94
8/8/2012	3.85
8/15/2012	3.73
8/22/2012	3.85
8/29/2012	3.86
9/5/2012	3.92
9/12/2012	3.79
9/19/2012	3.83
9/26/2012	3.93
10/3/2012	3.96
10/10/2012	3.88
10/17/2012	3.82
10/24/2012	3.85
10/31/2012	3.90
11/7/2012	3.92
11/14/2012	3.95
11/21/2012	3.90
11/28/2012	3.93
12/5/2012	3.98
12/12/2012	3.92
12/19/2012	3.84
12/26/2012	3.87

Date	Mortgage Rate (%)
1/2/2013	3.81
1/9/2013	3.80
1/16/2013	3.80
1/23/2013	3.84
1/30/2013	3.74
2/6/2013	3.75
2/13/2013	3.74
2/20/2013	3.78
2/27/2013	3.92
3/6/2013	3.94
3/13/2013	3.77
3/20/2013	3.80
3/27/2013	3.85
4/3/2013	3.88
4/10/2013	3.88
4/17/2013	3.96
4/24/2013	3.95
5/1/2013	3.99
5/8/2013	3.87
5/15/2013	3.78
5/22/2013	3.76
5/29/2013	3.67
6/5/2013	3.69
6/12/2013	3.51
6/19/2013	3.49
6/26/2013	3.30
7/3/2013	3.37
7/10/2013	3.32
7/17/2013	3.48
7/24/2013	3.38
7/31/2013	3.40
8/7/2013	3.38
8/14/2013	3.25
8/21/2013	3.16
8/28/2013	3.44
9/4/2013	3.29
9/11/2013	3.21
9/18/2013	3.31
9/25/2013	3.45

10/9/2013       3.45         10/16/2013       3.44         10/23/2013       3.61         10/30/2013       3.63         11/6/2013       3.56         11/13/2013       3.51         11/20/2013       3.54         11/27/2013       3.51         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.14         4/16/2014       3.14         4/16/2014       3.12         5/14/2014       3.23         5/21/2014       3.23         5/21/2014       3.23         5/21/2014       3.29         6/4/2014       3.18         6/11/2014       3.19	10/2/2013	3.48
10/16/2013       3.44         10/23/2013       3.61         10/30/2013       3.63         11/6/2013       3.56         11/13/2013       3.51         11/20/2013       3.54         11/27/2013       3.61         12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.28         3/26/2014       3.30         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.2		
10/23/2013       3.61         10/30/2013       3.63         11/6/2013       3.56         11/13/2013       3.51         11/20/2013       3.54         11/27/2013       3.61         12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/14/2014       3.23         5/21/2014       3.23         5/21/2014       3.23         5/21/2014       3.19         6/4/2014       3.19         6/4/2014       3.19         6/11/2014       3.19 </td <td></td> <td></td>		
10/30/2013       3.63         11/6/2013       3.56         11/13/2013       3.51         11/20/2013       3.54         11/27/2013       3.61         12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.28         3/26/2014       3.23         4/9/2014       3.21         4/9/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.19         6/18/2014       3.29         6/4/2014       3.19         6/18/2014       3.22 <td></td> <td></td>		
11/6/2013       3.56         11/13/2013       3.51         11/20/2013       3.54         11/27/2013       3.61         12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.10         4/30/2014       3.12         5/7/2014       3.23         5/21/2014       3.23         5/21/2014       3.23         5/21/2014       3.29         6/4/2014       3.19         6/18/2014       3.23         6/18/2014       3.23		
11/13/2013       3.51         11/20/2013       3.54         11/27/2013       3.61         12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.28         3/26/2014       3.08         4/16/2014       3.14         4/23/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/21/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22		
11/20/2013       3.54         11/27/2013       3.61         12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/19/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.35         3/19/2014       3.28         3/26/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.12         5/7/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22		
11/27/2013       3.61         12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/19/2014       3.62         2/19/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/7/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22		
12/4/2013       3.57         12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.28         3/26/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22		
12/11/2013       3.54         12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.10         4/23/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22		
12/18/2013       3.52         12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/21/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22		
12/25/2013       3.44         1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.23         6/18/2014       3.23         6/25/2014       3.22		
1/1/2014       3.39         1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.23         4/2/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.23         6/18/2014       3.23         6/18/2014       3.23         6/25/2014       3.22		
1/8/2014       3.44         1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22		
1/15/2014       3.58         1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.28         3/26/2014       3.28         3/26/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.19         6/18/2014       3.23         6/25/2014       3.23		
1/22/2014       3.57         1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	17 07 20 1 1	
1/29/2014       3.67         2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.23		
2/5/2014       3.66         2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.23	1/22/2014	3.57
2/12/2014       3.57         2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.23         6/18/2014       3.23         6/25/2014       3.23	1/29/2014	3.67
2/19/2014       3.62         2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.23         6/18/2014       3.23         6/25/2014       3.23	2/5/2014	3.66
2/26/2014       3.61         3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/7/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.23         6/18/2014       3.23         6/25/2014       3.23	2/12/2014	3.57
3/5/2014       3.32         3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.19         6/18/2014       3.23         6/25/2014       3.23         6/25/2014       3.23	2/19/2014	3.62
3/12/2014       3.35         3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.23         6/18/2014       3.23         6/25/2014       3.23	2/26/2014	3.61
3/19/2014       3.28         3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	3/5/2014	3.32
3/26/2014       3.30         4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	3/12/2014	3.35
4/2/2014       3.21         4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	3/19/2014	3.28
4/9/2014       3.08         4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.23	3/26/2014	3.30
4/16/2014       3.14         4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.23	4/2/2014	3.21
4/23/2014       3.10         4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.23	4/9/2014	3.08
4/30/2014       3.12         5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	4/16/2014	3.14
5/7/2014       3.15         5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	4/23/2014	3.10
5/14/2014       3.23         5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	4/30/2014	3.12
5/21/2014       3.23         5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	5/7/2014	3.15
5/28/2014       3.29         6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	5/14/2014	3.23
6/4/2014       3.18         6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	5/21/2014	3.23
6/11/2014       3.19         6/18/2014       3.23         6/25/2014       3.22	5/28/2014	3.29
6/18/2014     3.23       6/25/2014     3.22	6/4/2014	3.18
6/25/2014 3.22	6/11/2014	3.19
	6/18/2014	3.23
7/2/2014 3.19	6/25/2014	3.22
	7/2/2014	3.19

Date	Mortgage Rate (%)
7/9/2014	3.23
7/16/2014	3.28
7/23/2014	3.32
7/30/2014	3.27
8/6/2014	3.32
8/13/2014	3.27
8/20/2014	3.23
8/27/2014	3.27
9/3/2014	3.21
9/10/2014	3.14
9/17/2014	3.08
9/24/2014	3.13
10/1/2014	3.23
10/8/2014	3.31
10/15/2014	3.42
10/22/2014	3.36
10/29/2014	3.23
11/5/2014	3.27
11/12/2014	3.25
11/19/2014	3.26
11/26/2014	3.33
12/3/2014	3.34
12/10/2014	3.42
12/17/2014	3.44
12/24/2014	3.35
12/31/2014	3.45
1/7/2015	3.57
1/14/2015	3.67
1/21/2015	3.94
1/28/2015	4.10
2/4/2015	4.17
2/11/2015	4.05
2/18/2015	4.02
2/25/2015	4.00
3/4/2015	3.83
3/11/2015	3.85
3/18/2015	4.00
3/25/2015	3.99
4/1/2015	4.01

4/8/2015	3.89
4/15/2015	3.87
4/22/2015	3.70
4/29/2015	3.66
5/6/2015	3.51
5/13/2015	3.54
5/20/2015	3.57
5/27/2015	3.68
6/3/2015	3.63
6/10/2015	3.55
6/17/2015	3.70
6/24/2015	3.69
7/1/2015	3.83
7/8/2015	3.98
7/15/2015	3.96
7/22/2015	3.96
7/29/2015	3.81
8/5/2015	3.85
8/12/2015	3.92
8/19/2015	3.99
8/26/2015	3.92
9/2/2015	3.90
9/9/2015	3.86
9/16/2015	3.77
9/23/2015	3.83
9/30/2015	3.83
10/7/2015	3.82
10/14/2015	3.87
10/21/2015	3.81
10/28/2015	3.82
11/4/2015	3.68
11/11/2015	3.64
11/18/2015	3.68
11/25/2015	3.72
12/2/2015	3.75
12/9/2015	3.82
12/16/2015	3.81
12/23/2015	3.90
12/30/2015	3.90
1/6/2016	3.98

Date	Mortgage Rate (%)
1/13/2016	4.13
1/20/2016	4.01
1/27/2016	3.96
2/3/2016	4.03
2/10/2016	4.16
2/17/2016	3.99
2/24/2016	4.00
3/2/2016	3.92
3/9/2016	3.94
3/16/2016	3.91
3/23/2016	3.93
3/30/2016	3.98
4/6/2016	3.95
4/13/2016	3.91
4/20/2016	3.84
4/27/2016	3.75
5/4/2016	3.89
5/11/2016	3.96
5/18/2016	3.87
5/25/2016	3.85
6/1/2016	3.92
6/8/2016	4.02
6/15/2016	4.11
6/22/2016	3.94
6/29/2016	4.02
7/6/2016	4.20
7/13/2016	4.18
7/20/2016	4.06
7/27/2016	4.09
8/3/2016	4.09
8/10/2016	4.17
8/17/2016	4.09
8/24/2016	4.08
8/31/2016	4.08
9/7/2016	4.02
9/14/2016	3.91
9/21/2016	3.93
9/28/2016	4.05
10/5/2016	3.95

10/12/2016	3.88
10/19/2016	3.93
10/26/2016	3.96
11/2/2016	3.96
11/9/2016	3.82
11/16/2016	3.70
11/23/2016	3.66
11/30/2016	3.64
12/7/2016	3.65
12/14/2016	3.48
12/21/2016	3.43
12/28/2016	3.48
1/4/2017	3.53
1/11/2017	3.55
1/18/2017	3.54
1/25/2017	3.47
2/1/2017	3.53
2/8/2017	3.63
2/15/2017	3.47
2/22/2017	3.48
3/1/2017	3.49
3/8/2017	3.41
3/15/2017	3.43
3/22/2017	3.48
3/29/2017	3.57
4/5/2017	3.58
4/12/2017	3.58
4/19/2017	3.64
4/26/2017	3.61
5/3/2017	3.65
5/10/2017	3.58
5/17/2017	3.73
5/24/2017	3.66
5/31/2017	3.70
6/7/2017	3.71
6/14/2017	3.53
6/21/2017	3.51
6/28/2017	3.36
7/5/2017	3.22
7/12/2017	3.14
	I.

Date	Mortgage Rate (%)
7/19/2017	3.32
7/26/2017	3.26
8/2/2017	3.29
8/9/2017	3.32
8/16/2017	3.35
8/23/2017	3.33
8/30/2017	3.33
9/6/2017	3.18
9/13/2017	3.06
9/20/2017	3.04
9/27/2017	3.09
10/4/2017	3.12
10/11/2017	3.12
10/18/2017	3.17
10/25/2017	3.29
11/1/2017	3.34
11/8/2017	3.37
11/15/2017	3.36
11/22/2017	3.35
11/29/2017	3.37
12/6/2017	3.34
12/13/2017	3.34
12/20/2017	3.19
12/27/2017	3.17
1/3/2018	3.13
1/10/2018	3.04
1/17/2018	3.14
1/24/2018	3.09
1/31/2018	3.06
2/7/2018	3.01
2/14/2018	3.04
2/21/2018	3.00
2/28/2018	3.10
3/7/2018	3.10
3/14/2018	3.15
3/21/2018	3.04
3/28/2018	3.14
4/4/2018	3.11
	3.08

4/18/2018	3.01
4/25/2018	2.96
5/2/2018	2.97
5/9/2018	3.14
5/16/2018	3.02
5/23/2018	3.07
5/30/2018	3.23
6/6/2018	3.18
6/13/2018	3.17
6/20/2018	3.31
6/27/2018	3.41
7/4/2018	3.28
7/11/2018	3.27
7/18/2018	3.29
7/25/2018	3.15
8/1/2018	3.09
8/8/2018	3.08
8/15/2018	3.15
8/22/2018	3.16
8/29/2018	3.09
9/5/2018	3.18
9/12/2018	3.09
9/19/2018	3.04
9/26/2018	3.02
10/3/2018	2.91
10/10/2018	2.91
10/17/2018	2.93
10/24/2018	2.96
10/31/2018	2.92
11/7/2018	2.90
11/14/2018	2.98
11/21/2018	3.05
11/28/2018	3.07
12/5/2018	3.27
12/12/2018	3.28
12/19/2018	3.44
12/26/2018	3.41
1/2/2019	3.49
1/9/2019	3.43
1/16/2019	3.41

Date	Mortgage Rate (%)
1/23/2019	3.44
1/30/2019	3.51
2/6/2019	3.51
2/13/2019	3.50
2/20/2019	3.54
2/27/2019	3.54
3/6/2019	3.65
3/13/2019	3.69
3/20/2019	3.79
3/27/2019	3.91
4/3/2019	3.77
4/10/2019	3.78
4/17/2019	3.68
4/24/2019	3.85
5/1/2019	3.79
5/8/2019	3.77
5/15/2019	3.80
5/22/2019	3.72
5/29/2019	3.88
6/5/2019	4.04
6/12/2019	3.95
6/19/2019	4.01
6/26/2019	3.94
7/3/2019	3.93
7/10/2019	3.81
7/17/2019	3.74
7/24/2019	3.83
7/31/2019	3.73
8/7/2019	3.99
8/14/2019	4.00
8/21/2019	3.92
8/28/2019	4.02
9/4/2019	4.04
9/11/2019	3.76
9/18/2019	3.73
9/25/2019	3.77
10/2/2019	3.85
10/9/2019	3.87
10/16/2019	3.63

10/30/2019       3.73         11/6/2019       3.66         11/13/2019       3.65         11/20/2019       3.66         11/27/2019       3.68         12/4/2019       3.60         12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.54         6/3/2020       4.54         6/3/2020       4.54         6/10/2020       4.56         6/17/2020       4.56         6/17/2020       4.56         6/17/2020       4.56         6/17/2020       4.56 <th>10/23/2019</th> <th>3.66</th>	10/23/2019	3.66
11/6/2019       3.66         11/13/2019       3.65         11/20/2019       3.76         11/27/2019       3.68         12/4/2019       3.60         12/11/2019       3.60         12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.80         2/19/2020       3.83         2/12/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.59         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.54         6/3/2020       4.54         6/10/2020       4.54         6/10/2020       4.56         6/17/2020       4.56		
11/13/2019       3.65         11/20/2019       3.76         11/27/2019       3.68         12/4/2019       3.60         12/11/2019       3.60         12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.80         2/12/2020       3.83         2/26/2020       3.83         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.59         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.54         6/3/2020       4.54         6/3/2020       4.54         6/10/2020       4.56         6/17/2020       4.56         6/17/2020       4.56		
11/20/2019       3.76         11/27/2019       3.68         12/4/2019       3.62         12/11/2019       3.60         12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.80         2/19/2020       3.83         3/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.61         5/6/2020       4.61         5/13/2020       4.54         6/3/2020       4.54         6/3/2020       4.54         6/17/2020       4.56         6/17/2020       4.56		
11/27/2019       3.68         12/4/2019       3.62         12/11/2019       3.60         12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.61         5/27/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/17/2020       4.56		
12/4/2019       3.62         12/11/2019       3.60         12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         3/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.59         4.67       5/20/2020       4.54         6/3/2020       4.54         6/17/2020       4.56         6/17/2020       4.56		
12/11/2019       3.60         12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.59         4/29/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/3/2020       4.54         6/17/2020       4.56         6/17/2020       4.56		
12/18/2019       3.49         12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/19/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.61         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/10/2020       4.56         6/17/2020       4.56         6/17/2020       4.56		
12/25/2019       3.55         1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/3/2020       4.54         6/17/2020       4.56         6/17/2020       4.56         6/17/2020       4.56		
1/1/2020       3.51         1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.54         6/3/2020       4.54         6/3/2020       4.56         6/17/2020       4.56         6/17/2020       4.56         6/17/2020       4.56		
1/8/2020       3.57         1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.53         5/27/2020       4.53         5/27/2020       4.54         6/3/2020       4.56         6/17/2020       4.56         6/17/2020       4.56         6/17/2020       4.56		
1/15/2020       3.65         1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/3/2020       4.56         6/17/2020       4.56		
1/22/2020       3.73         1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/3/2020       4.56         6/17/2020       4.56         6/17/2020       4.56		
1/29/2020       3.85         2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/3/2020       4.56         6/17/2020       4.56         6/17/2020       4.56		
2/5/2020       3.78         2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56	··	
2/12/2020       3.80         2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.54         6/3/2020       4.54         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56		
2/19/2020       3.83         2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56		
2/26/2020       3.98         3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.54         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56		
3/4/2020       4.31         3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	2/19/2020	
3/11/2020       4.64         3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56	2/26/2020	
3/18/2020       4.11         3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56	3/4/2020	4.31
3/25/2020       4.26         4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56	3/11/2020	4.64
4/1/2020       4.49         4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	3/18/2020	
4/8/2020       4.39         4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56	3/25/2020	4.26
4/15/2020       4.60         4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56	4/1/2020	4.49
4/22/2020       4.59         4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.56         6/24/2020       4.56	4/8/2020	4.39
4/29/2020       4.63         5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	4/15/2020	4.60
5/6/2020       4.61         5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	4/22/2020	4.59
5/13/2020       4.67         5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	4/29/2020	4.63
5/20/2020       4.53         5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	5/6/2020	4.61
5/27/2020       4.54         6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	5/13/2020	4.67
6/3/2020       4.49         6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	5/20/2020	4.53
6/10/2020       4.56         6/17/2020       4.57         6/24/2020       4.56	5/27/2020	4.54
6/17/2020     4.57       6/24/2020     4.56	6/3/2020	4.49
6/24/2020 4.56	6/10/2020	4.56
	6/17/2020	4.57
7/1/2020 4.58	6/24/2020	4.56
	7/1/2020	4.58

Source: Bank of Canada

Figure 1.14. Deposits continue to be primary source of mortgage funding

Period	Deposits & Others	Market NHA MBS	CMB Notional	Covered Bonds	Private Securitization
2017 Q1	59%	15%	15%	9%	2%
2017 Q3	60%	15%	15%	9%	1%
2018 Q1	59%	16%	15%	9%	1%
2018 Q3	59%	15%	15%	10%	1%
2019 Q1	59%	16%	15%	9%	1%
2019 Q3	59%	15%	15%	10%	1%
2020 Q1	57%	15%	14%	13%	1%

Source: Sources: OSFI; CMHC Securitization; annual / quarterly reports; DBRS

Figure 1.15. Covered bonds increase significantly, as they become eligible collateral for temporary expansion of term repo operations

Period	Deposits & Others	Market NHA MBS	CMB Notional	Covered Bonds	Private Securitization
2015 Q1	4%	10%	1%	32%	-4%
2015 Q2	3%	6%	3%	34%	-2%
2015 Q3	3%	5%	6%	30%	-7%
2015 Q4	7%	1%	3%	31%	-10%
2016 Q1	6%	-2%	6%	31%	2%
2016 Q2	7%	1%	3%	35%	4%
2016 Q3	7%	1%	2%	25%	26%
2016 Q4	4%	6%	4%	23%	44%
2017 Q1	8%	9%	4%	8%	34%
2017 Q2	8%	9%	5%	-1%	11%
2017 Q3	8%	7%	4%	1%	-1%
2017 Q4	7%	7%	5%	0%	-3%
2018 Q1	5%	7%	3%	6%	1%
2018 Q2	3%	6%	3%	14%	-13%
2018 Q3	3%	7%	4%	11%	-18%
2018 Q4	7%	4%	0%	13%	-26%
2019 Q1	7%	4%	1%	8%	-22%
2019 Q2	9%	4%	2%	4%	-10%
2019 Q3	2%	1%	1%	8%	-2%
2019 Q4	3%	-2%	4%	6%	9%
2020 Q1	0%	-2%	2%	45%	0%

Source: Sources: OSFI; CMHC Securitization; annual / quarterly reports; DBRS

Figure 1.16. Mortgage funding differs greatly depending on lender type (\$ Millions)

Funding Source	Deposits & Others	Market NHA MBS	CMB notional	Covered bonds	Private securitization	Total Mortgage Lending
Big 6 Banks	\$790,738.98	\$162,326.25	\$93,222.22	\$209,894.63	\$3,382.00	\$1,259,564.09
Other Regulated Lenders	\$95,381.00	\$16,702.84	\$54,104.44	\$3,828.80	\$398.00	\$170,415.07
Credit Unions	\$162,190.75	\$12,910.80	\$33,347.51	\$8,257.25	-	\$216,706.32
Unregulated Lenders	\$11,324.54	\$32,276.38	\$18,587.49	\$0.00	\$396.00	\$62,584.42
Total Excl. Aggs.	\$1,059,635.27	\$224,216.28	\$199,261.66	\$221,980.68	\$4,176.00	\$1,709,269.89
Aggregators/Sponsors	-\$88,228.91	\$26,130.15	\$44,382.84	\$0.00	\$17,715.93	\$0.00
Total Incl. Aggs.	\$971,406.36	\$250,346.42	\$243,644.50	\$221,980.68	\$21,891.93	\$1,709,269.89
All Small Lenders Incl. Aggregators/ Sponsors	\$180,667.38	\$88,020.17	\$150,422.28	\$12,086.05	\$18,509.93	\$449,705.81

Source: Sources: OSFI; CMHC Securitization; annual / quarterly reports; DBRS