

# CANADIAN BANKS

## *The Mortgage Squeeze*

Company	Rating	Current Price	Veritas Intrinsic Value	Yield	Market Cap (billions)	Average Daily Volume (000, 30 days)	Float Shares Outstanding (million shrs)
Bank of Montreal (BMO)	<b>Sell</b>	C\$83.93 US\$63.41	C\$80.00	4.1%	\$54.18	1,100.4	644.7
Bank of Nova Scotia (BNS)	<b>Sell</b>	C\$69.87 US\$52.77	C\$62.50	4.2%	\$84.22	1,793.0	1,204.8
Canadian Imperial Bank of Canada (CM)	<b>Buy</b>	C\$99.54 US\$75.17	C\$110.00	4.9%	\$39.33	1,189.9	394.8
National Bank (NA)	<b>Sell</b>	C\$45.62	C\$41.00	4.8%	\$15.41	1,081.5	337.0
Royal Bank of Canada (RY)	<b>Sell</b>	C\$82.03 US\$61.95	C\$77.00	4.0%	\$121.41	1,940.1	1,483.5
Toronto-Dominion Bank (TD)	<b>Buy</b>	C\$57.92 US\$43.75	C\$62.00	3.8%	\$107.49	2,353.1	1,852.9

### Financial Services

Mike Rizvanovic  
 mrizvanovic@veritascorp.com

Sherry Ye  
 sye@veritascorp.com



## THE MORTGAGE SQUEEZE

We believe that the measures announced by the Minister of Finance on October 3, 2016 aimed at cooling the Canadian housing market will materially impact a large portion of marginal borrowers in the coming years. Our analysis of the new qualification criteria for a 5-year fixed rate insured mortgage suggests that approximately 10% of all home buyers will either be completely priced out of the market or forced to purchase a home at up to a 20% lower price point.

We do not expect an immediate material impact on the housing market as long as it remains supported by persistently low interest rates and stable employment levels. We also note that the fallout from the new qualification criteria will be felt over time as it only applies to new originations and will not impact an existing borrower's ability to renew their mortgage. However, the government's efforts to cool the market through these changes, as well as others that have been recently announced, will continue to shrink the overall pool of home buyers, which we believe will reverberate throughout the entire housing market over time and may ultimately lead to a price correction.

The new measures include:

- 1. The application of a uniform stress test for all insured mortgages:** Effective October 17, qualification for all insured mortgages will be determined at the higher of (1) the negotiated mortgage rate or (2) the Bank of Canada's posted rate for a five-year conventional mortgage, which currently sits at 4.64%. This stress test is already applied to variable-rate mortgages and fixed-rate mortgages with a term of less than 5 years. As a result, the change will affect new borrowers that opt for a 5-year fixed rate mortgage, which happens to be by far the most popular mortgage product on the market – by some estimates 5-year fixed rate mortgages represent up to two-thirds of originations.
- 2. Restrictions on the eligibility for lenders to insure low-LTV mortgages:** Effective November 30, 2016, any low-loan-to-value ('low-LTV') mortgage that a lender wishes to insure through portfolio insurance (also known as bulk insurance) must meet the same criteria that were previously only applied to high-LTV mortgages.
- 3. New reporting requirements for principal residence capital gains exemption:** Effective for the 2016 tax year, taxpayers that have sold their principal residence must report the sale on their income tax return if they wish to claim capital gains exemption. Previously, documents only needed to be maintained for personal records and submitted to the Canada Revenue Agency in the case of an audit. A non-resident of Canada will not be eligible for any exemption.

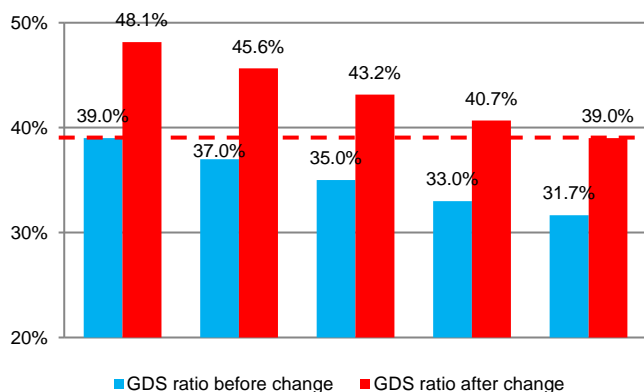
In addition to the aforementioned changes, the government has also launched a public consultation for a potential risk sharing policy with mortgage lenders. Under the proposal, lenders would be liable for a portion of future losses on insured mortgages. With the implementation of such a scheme likely a long way off, and its final form uncertain, it is premature to try and quantify the potential impact to the Big Six banks at this point in time, although it adds another potential housing-related headwind for the group as the government looks to further reduce risk to the taxpayer.

## IMPACT OF NEW STRESS-TEST RULE MAY BE MATERIAL

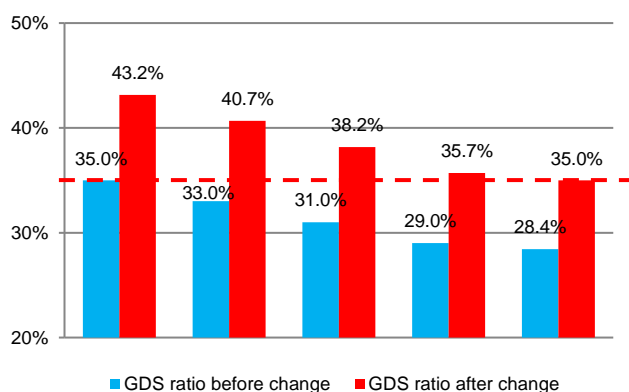
We believe the broadening of the stress test will significantly impact a large subset of marginal buyers (roughly 50% of those that would qualify for an insured 5-year fixed rate mortgage under the previous rules) and is in our view by far the most meaningful change that was announced. The impact of qualifying under the new rule pushes the Gross Debt Service (GDS) ratio materially higher for an average borrower. In Figure 1, we illustrate the effects of adding slightly more than 200 bps to the average qualifying interest rate for a range of borrowers split between those with a credit score of at least 680 and those below 680.

As shown, for stronger credit applicants ( $\geq 680$ ), only those with a GDS at or below 31.7% under the previous rules still qualify for the same mortgage following the changes. For weaker applicants ( $< 680$ ), only those with a GDS at or below 28.4% still qualify.

Figure 1  
**Impact of Stress-Test on GDS Ratios**  
**Credit Score of 680+**



**Credit Score less than 680**



Note 1: Our calculations are based on applying the differential between a 4.64% Bank of Canada posted rate and a 2.30% market rate.

Note 2: We apply CMHC mortgage insurance rates in our calculations.

Note 3: We assume a pre-tax household income of \$80,000 annually, \$100 in monthly heating costs, a property tax rate of 0.80% based on the purchase price of the home, and a 5% down payment when calculating GDS ratios.

Note 4: The purchase price of the home in our calculations is driven by the targeted GDS ratio.

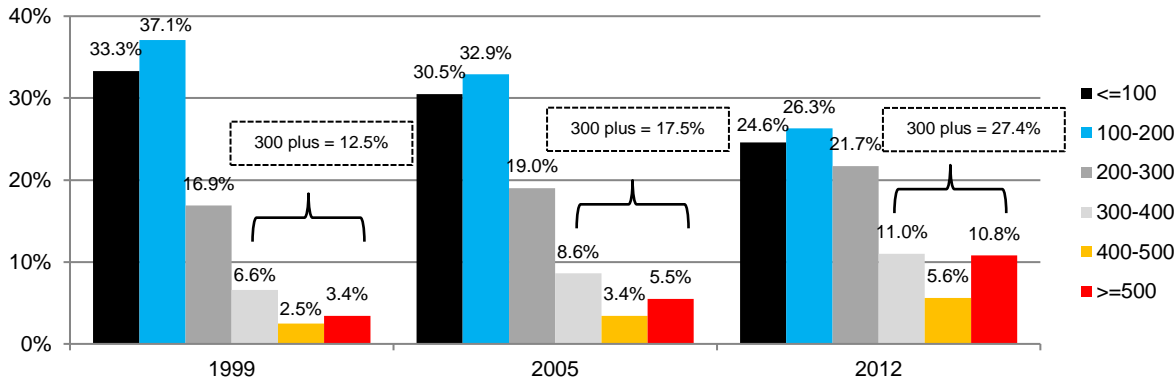
Source: Veritas estimates.

Note that our analysis does not attempt to estimate the potential impact on Total Debt Service (TDS) ratios as there is a lack of data on the level of total consumer debt by level of mortgage debt (i.e. we are implicitly assuming that GDS and TDS ratios are proportionate so that an individual with a maximum GDS ratio of 39% also has a maximum TDS ratio of 44%).

While there is a lack of public data on the distribution of GDS ratios for newly-originated insured mortgages, we believe that a significant percentage of new volume could be affected by the new rules. Our conclusion is based on a number of data points. First, runaway prices, most notably in Vancouver and Toronto, have made it ever more difficult for many buyers to enter the market; particularly first-time home buyers that are forced to stretch their finances.

Second, alarming levels of mortgage debt relative to disposable income for many Canadians suggests that the average buyer entering the market has a propensity to target a home that is barely within reach (i.e. they maximize their borrowing capacity to get the best possible home that they can afford). As highlighted in Figure 2, the distribution of the ratio of primary mortgage debt to disposable income as of 2012 (the latest available data) showed that more than 27% of households (i.e. for households with mortgage debt) had a ratio in excess of 300 percent; we believe that figure is even higher today.

Figure 2  
**Distribution of Primary Mortgage Debt to Disposable Income for Canadian Households with a Mortgage (2012)**

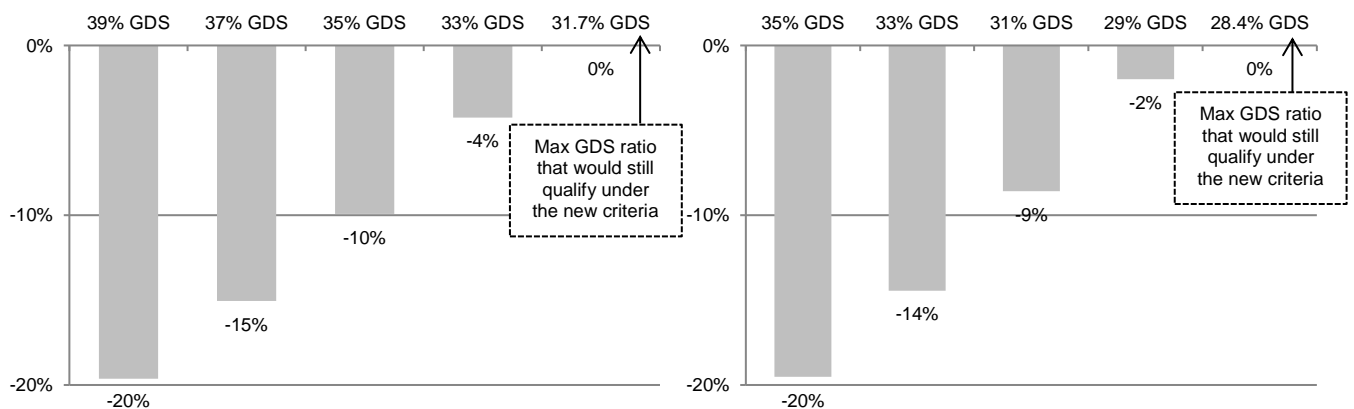


Source: CD Howe report titled 'Mortgaged to the Hilt: Risks From The Distribution of Household Mortgage Debt' (published December 2015).

Genworth MI Canada (TSX:MIC) recently disclosed that slightly more than one-third of the mortgages insured by the company so far in 2016 would have had difficulty qualifying under the new stress-test requirement. Given that up to two thirds of Canadians opt for a five-year fixed rate mortgage (based on industry surveys), that implies that roughly half of the insured mortgages underwritten by MIC in 2016 had a GDS or TDS ratio within 6% or 7% of the maximum level.

While the stress-test requirement is certain to push some marginal buyers completely out of the housing market, those still inclined to make a purchase would have to either do so at a lower price point or come up with a larger down payment. Beginning with the first option, which we believe is the more viable of the two, a borrower with a maximum GDS ratio under the previous rules would be forced to find a home that is roughly 20% less expensive (Figure 3). Over the short term that suggests a possible shift in demand towards lower-priced homes such as condos, although we expect that the adverse impact of a shrinking pool of home buyers is likely to eventually cascade throughout the entire housing market to some degree.

Figure 3  
**Percentage Decline in Purchase Price Required to Remain Below the Maximum GDS Ratio Following Stress Test**  
 Credit Score of 680+      Credit Score less than 680



Note 1: Our calculations are based on applying the differential between a 4.64% Bank of Canada posted rate and a 2.30% market rate.

Note 2: We apply CMHC mortgage insurance rates in our calculations.

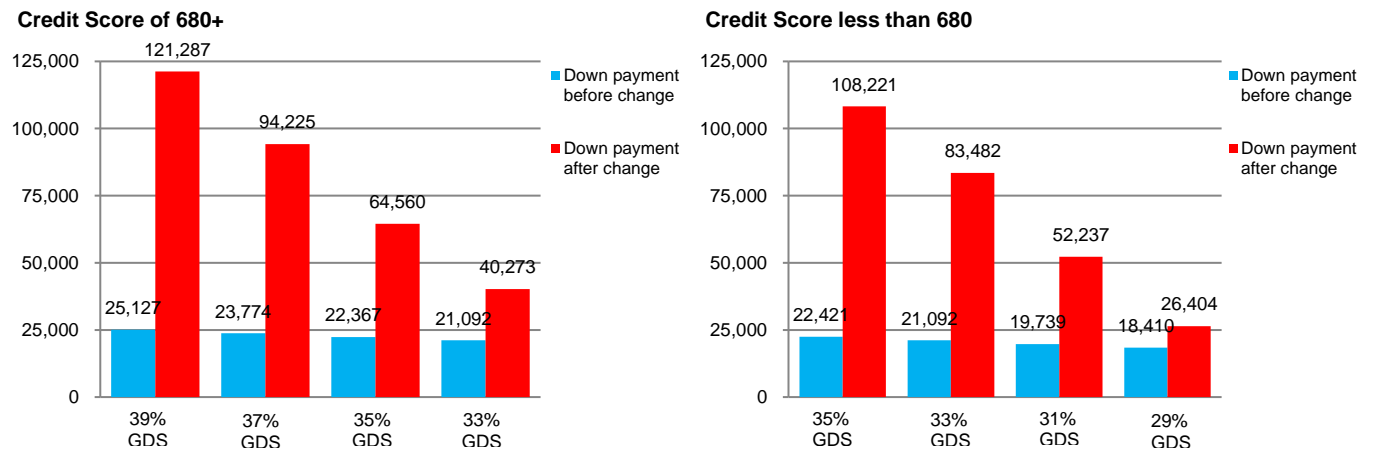
Note 3: We assume a pre-tax household income of \$80,000 annually, \$100 in monthly heating costs, a property tax rate of 0.80% based on the purchase price of the home, and a 5% down payment when calculating GDS ratios.

Note 4: The purchase price of the home in our calculations is driven by the targeted GDS ratio.

Source: Veritas estimates.

Using a higher down payment to avoid moving down in purchase price (i.e. to still be able to buy that dream home) is clearly not an option for the majority of insured borrowers. For those that are close to the upper end of the maximum GDS ratio, the required increase in the down payment to qualify under the new stress-test amounts to tens of thousands of dollars based on our calculations for a household with pre-tax annual income of \$80,000 (Figure 4). In some cases the revised down payment jumps from 5% of the purchase price to more than 20%.

Figure 4  
**Additional Down Payment Required to Maintain Maximum GDS Ratio Following Stress Test**



Note 1: Our calculations are based on applying the differential between a 4.64% Bank of Canada posted rate and a 2.30% market rate.

Note 2: We apply CMHC mortgage insurance rates in our calculations.

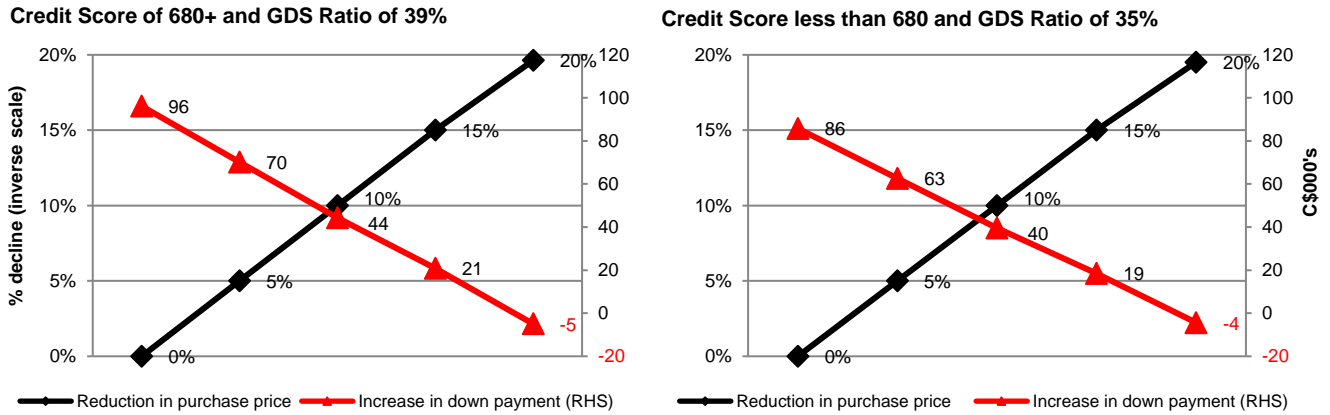
Note 3: We assume a pre-tax household income of \$80,000 annually, \$100 in monthly heating costs, a property tax rate of 0.80% based on the purchase price of the home, and a 5% down payment when calculating GDS ratios.

Note 4: The purchase price of the home in our calculations is driven by the targeted GDS ratio.

Source: Veritas estimates.

Given that some borrowers may choose to incorporate both a lower price point and a higher down payment in order to make the math work, we show several combinations in Figure 5 that would fully offset the punitive impact of the stress-test for the marginal borrower with a maximum GDS ratio that would qualified under the previous criteria. We believe that the vast majority of borrowers would have little choice but to opt for a lower price point as many are finding it difficult to even come up with a 5% minimum down payment.

Figure 5  
**Combinations of Purchase Price Reduction and Higher Down Payment Needed to Offset Stress Test for Insured Mortgage Borrower with a Maximum GDS Ratio**



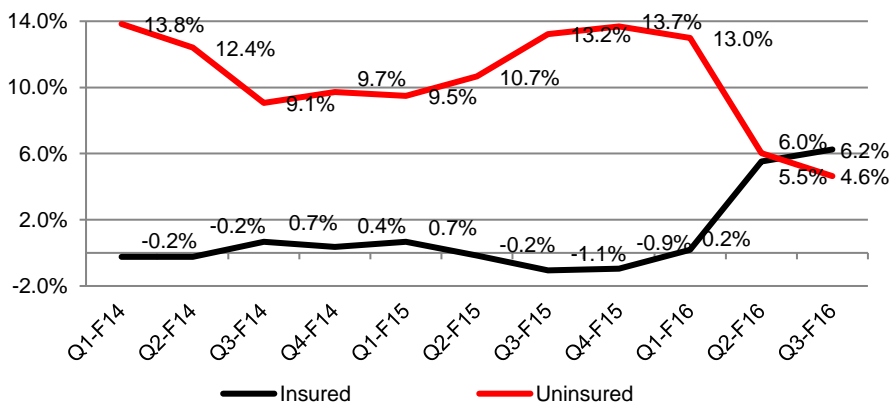
Note 1: Our calculations are based on applying the differential between a 4.64% Bank of Canada posted rate and a 2.30% market rate.  
 Note 2: We apply CMHC mortgage insurance rates in our calculations.  
 Note 3: We assume a pre-tax household income of \$80,000 annually, \$100 in monthly heating costs, a property tax rate of 0.80% based on the purchase price of the home, and a 5% down payment when calculating GDS ratios.  
 Note 4: The purchase price of the home in our calculations is driven by the targeted GDS ratio.

Source: Veritas estimates.

## UNINSURED VOLUMES TO DRIVE MORTGAGE BUSINESS FOR THE BIG SIX GOING FORWARD

Quantifying the potential impact of the new stress-test qualification on new mortgage volume for the Canadian banks is challenging as loan origination volumes are not disclosed by any of the Big Six and there is little information on the current split of new originations between insured and uninsured mortgages. However, as shown in Figure 6, significantly higher growth rates in the uninsured book over the past couple of years certainly suggests that the majority of new volume being generated by the large banks today is in uninsured balances [the convergence in growth the last two quarters was related to large bulk insurance transactions by Scotiabank (TSX:BNS) and Royal Bank (TSX:RY)]. As such, we do not expect any material short-term impact on origination volume for the Big Six as a result of the rule change.

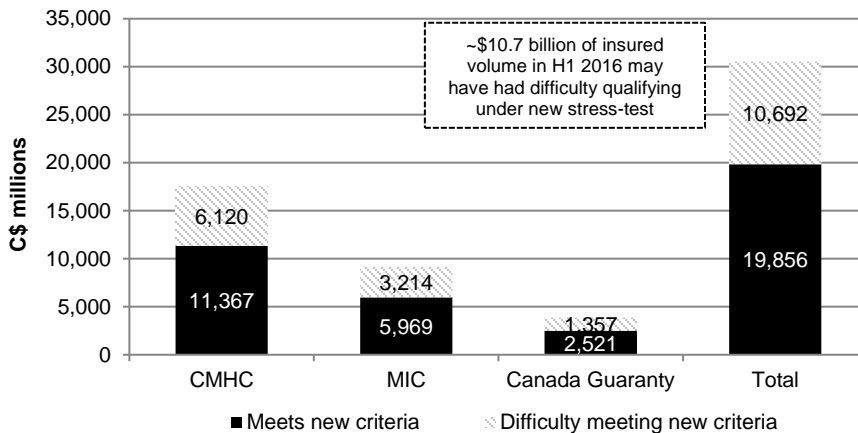
Figure 6  
**Big Six Banks – Aggregate YoY Growth in Canadian Residential Mortgages: Insured vs. Uninsured**



Source: Company reports and Veritas calculations.

Extrapolating from MIC's disclosure that slightly more than one-third of insured mortgages originated by the company in the first half of 2016 would have had trouble meeting the new stress-test requirement and applying that same ratio to insured originations by CMHC and Canada Guaranty over that period implies that up to \$10.7 billion of insured volume at the industry level may have been at risk of not qualifying for insurance under the new rules (Figure 7).

Figure 7  
**H1 2016 Newly Insured Transactional Insurance**

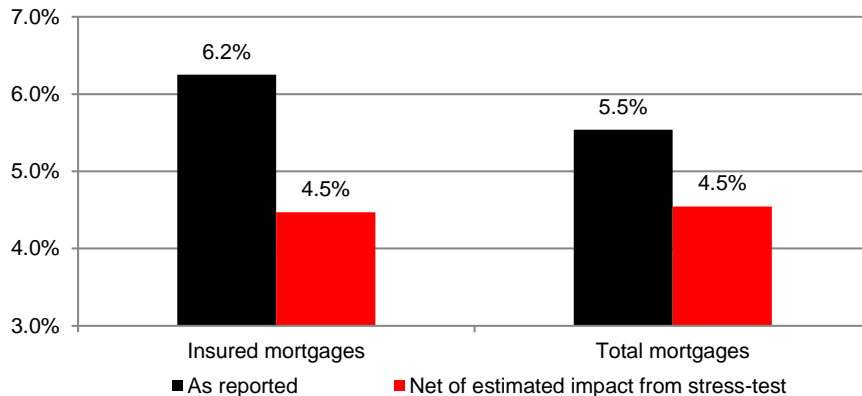


Source: Company reports and Veritas estimates.

Assuming the Big Six Canadian banks maintained their market share in insured mortgages through the first half of 2016 (roughly 70% based on our estimates), and annualizing H1 2016 volumes for the mortgage insurers, we estimate that roughly \$15 billion in annual insured mortgage originations for the Big Six may no longer qualify for insurance under the new stress-test requirement. However, any subsequent reduction in originations would be partially mitigated as some borrowers would opt to purchase a lower-priced home.

If we then assume that only 40% of those originated balances remained (i.e. half of the non-qualifying buyers were priced out of the market while the half that remained purchased a lower-priced home), and apply that reduction retroactively to the Big Six banks' Canadian residential mortgage portfolio, we estimate that aggregate YoY growth for the group in Q3-F16 would have been 4.5%, slightly lower than the reported 5.5% (Figure 8). For insured mortgages specifically, the growth rate would have been 4.5% rather than 6.2%. That scenario would imply roughly a \$9 billion reduction in new insured mortgage originations.

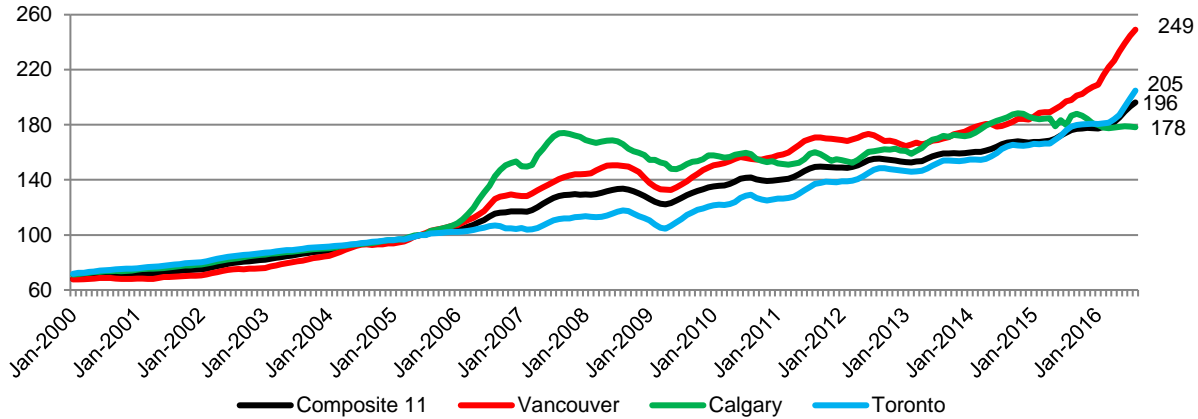
Figure 8  
**Big Six Canadian Banks: Aggregate YoY Growth in Canadian Residential Mortgages in Q3-F16**



Source: Company reports and Veritas estimates.

The reduction in growth rates shown in Figure 8 above is not material, although measuring the impact of the rule changes retroactively does not fully capture the potential fallout for the Canadian banks moving forward given the risk of a housing price correction, particularly in over-heated markets such as Vancouver and Toronto (Figure 9). While difficult to quantify, we believe that a Canadian housing market slowdown could lead to an outright decline in outstanding mortgage balances for the Big Six banks over the medium term as existing loans continue to amortize while new originations are transacted at a lower price point. We note that the 5.5% YoY growth in average Canadian mortgage balances for the Big Six reported in Q3-F16 was accompanied by a very robust increase in home prices over that period; 24.3% in Vancouver, 13.3% in Toronto, and 10.9% in Canada as a whole (based on the Teranet House Price Index).

Figure 9  
**Teranet House Price Index through August 2016 (indexed to 100 in June 2005)**

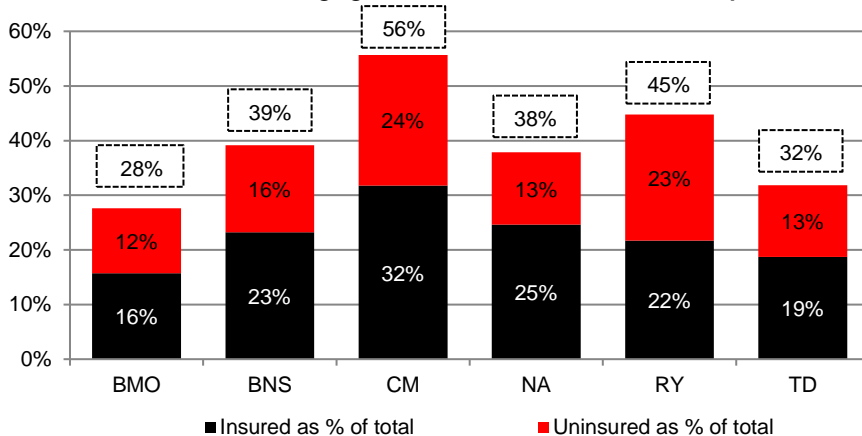


Source: Teranet – National Bank House Price Index.

## DIVERGING STRATEGIES IN CANADIAN MORTGAGE LENDING

Among the Big Six banks, CIBC (TSX:CM) and RY have the largest exposure to Canadian residential mortgages, which accounted for 56% and 45% of their total loans, respectively, at the end of Q3-F16 (Figure 10). The Bank of Montreal (TSX:BMO) and TD Bank (TSX:TD) stand out as the least exposed due to their sizable lending businesses in the United States. With respect to insured mortgages specifically, CM's exposure is by far the most prominent at almost one-third of total loans, roughly double the level of BMO.

Figure 10  
**Canadian Residential Mortgages as a % of Total Loans & Acceptances as of Q3-F16**

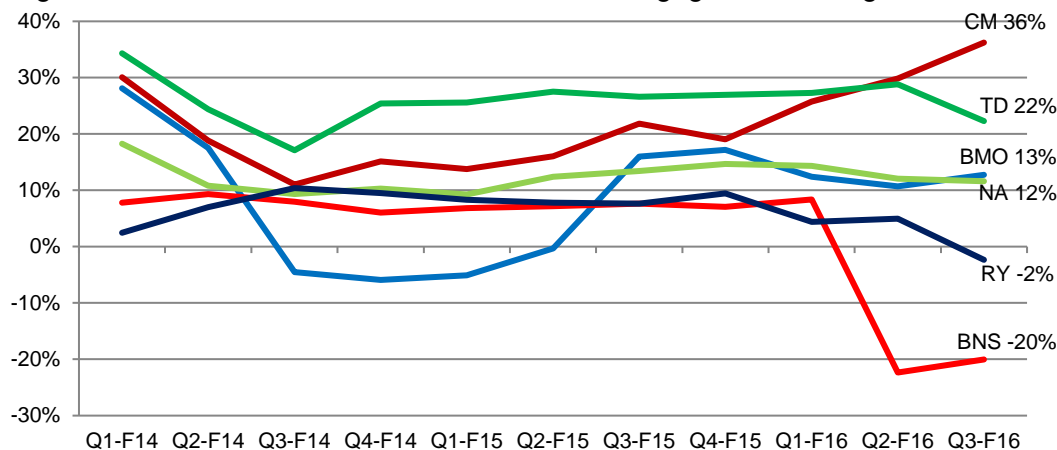


Source: Company reports and Veritas calculations.

With the Canadian government gradually reducing its commitment level to the housing market by pricing out the marginal borrower it is clear that uninsured mortgages will continue to account for the bulk of new originations moving forward for the large Canadian banks. Among the Big Six, CM and TD have been by far the most aggressive in growing uninsured balances over the past couple of years (Figure 11). For both banks, most of the recent growth has been concentrated within British Columbia and Ontario. Conversely, BNS and RY have lagged peers for the past several quarters, even excluding the impact of bulk insurance purchases in recent quarters.

Figure 11

**Big Six Banks: YoY Growth in Canadian Residential Mortgages Outstanding**

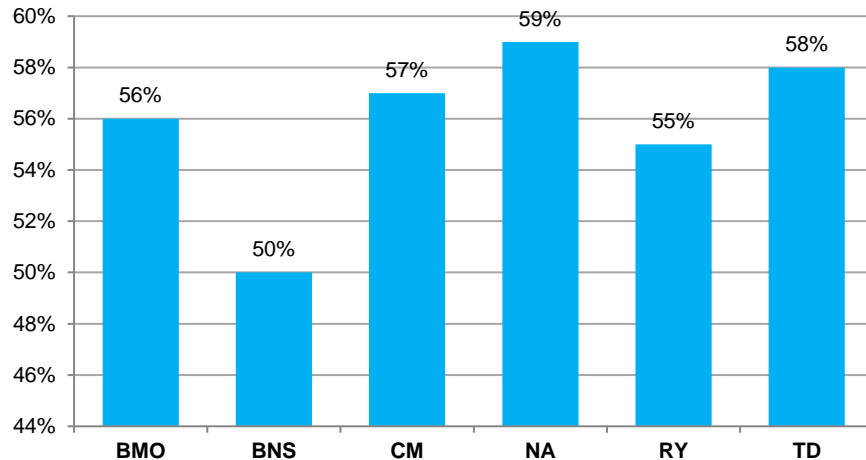


Source: Company reports and Veritas calculations.

There has been a clear divergence in strategy among the Big Six banks when it comes to business mix in the Canadian lending portfolio. CM and BNS stand out at opposite extremes. CM is aggressively growing its uninsured mortgage portfolio even in frothy markets such as Vancouver, while BNS continues to shift its Canadian loan mix towards higher spread lending such as auto loans and credit cards. As such, the impact to loan growth in Canada for each bank stemming from any future slowdown in the Canadian housing market will not depend solely on the level of current exposure to that book of business. In CM's case, much of its outsized growth has been driven by improved distribution capabilities.

From a credit perspective it is difficult to gauge how much incremental risk CM is adding to its existing loan book. While weighted average LTV ratios on uninsured mortgages are generally low for all of the banks (Figure 12), there is no transparency provided on the distribution of those ratios. Having a large subset of uninsured loans sitting at the high end of the 80% LTV maximum might be considered risky through a housing downturn, but it is hard to argue there is much risk in a loan that has an LTV of 60% at origination, even to a foreign buyer. Further, we believe that any future credit issues in the consumer loan portfolio through an economic downturn will be largely concentrated in unsecured lending.

Figure 12

**Weighted Average Loan-To-Value Ratios on Uninsured Mortgages as of Q3-F16**

Note: NA's LTV ratio is based on both residential mortgages and HELOCs.  
Source: Company reports.

## PORTFOLIO INSURANCE RESTRICTIONS LARGELY AN ISSUE FOR MONOLINE LENDERS

The decision to restrict portfolio insurance will have a significant impact on Canadian monoline mortgage lenders as it will directly impact their ability to fund their business through securitization, which they rely on quite heavily. The significance of the new rules was evident in MIC's disclosure that "approximately 50% to 55%" of the company's portfolio insurance written in 2016 would no longer be eligible for mortgage insurance under the new requirements, which are highlighted in Figure 13 below.

For the Big Six Canadian banks, or any lender that funds their business predominately with a well-established retail deposit franchise, the impact will be much more modest. However, with portfolio insurance becoming less available and likely materially more expensive going forward (as described in Veritas's recently-published report titled [The Mortgage Tempest and The OSFI Teapot](#)), we believe the Big Six lenders will become more cautious in their credit adjudication for uninsured mortgages. Without the ability to offload risk to the taxpayer to the same degree as in the past, we suspect the banks will be inclined to only underwrite uninsured mortgages that they are confident enough to keep on their balance sheet.

Figure 13

**New Criteria for Low-LTV Mortgage Insurance**

- A loan for the purchase of a property or subsequent renewal of such a loan;
- A maximum amortization length of 25 years;
- A maximum property purchase price below \$1,000,000 at the time the loan is approved;
- For variable-rate loans that allow fluctuations in the amortization period, loan payments that are recalculated at least once every five years to conform to the original amortization schedule;
- A minimum credit score of 600 at the time the loan is approved;
- A maximum GDS ratio of 39% and a maximum TDS ratio of 44% at the time the loan is approved, calculated by applying the greater of the mortgage contract rate or the Bank of Canada conventional five-year fixed posted rate; and,
- A property that will be owner-occupied.

Source: Department of Finance Canada.

## CONCLUSION

We believe last week's announced changes by the Minister of Finance will have a meaningful impact on the ability of marginal borrowers to obtain an insured mortgage. The magnitude of the impact is uncertain for the housing market in the short-term, which continues to be supported by historically low interest rates and stable employment levels. However, we expect these changes coupled with other recently-announced changes by regulators to reverberate throughout the entire housing market gradually over time. That may ultimately lead to a price correction as the overall pool of home buyers continues to shrink and with a further significant decline in borrowing rates unlikely.

Our EPS targets and intrinsic value estimates for the large Canadian banks are unchanged for now as we have already incorporated slowing loan growth of 5.7% and 4.9% in F2017 and F2018, respectively. That is comfortably below the average YoY growth rate of 9.1% that was reported by the Big Six in Q3-F16. We maintain our Buy ratings on **CIBC** and **TD Bank**, and Sell ratings on **Bank of Nova Scotia**, **Canadian Western Bank**, **Bank of Montreal**, **National Bank** and **Royal Bank**.



**Head of Research**

Sam La Bell, MA, MBA  
slabell@veritascorp.com

**Accounting & Special Situations Group**

Anthony Scilipoti, FCPA, FCA, CPA (Illinois)  
ascilipoti@veritascorp.com

Dimitry Khmelnitsky, CPA, CA  
dkhmelnitsky@veritascorp.com

Howard Leung, CPA, CA, CFA  
hleung@veritascorp.com

Taso Georgopoulos, CPA, CA, CFA  
tgeorgopoulos@veritascorp.com

Nigel D'Souza, B.Sc.  
ndsouza@veritascorp.com

Frank Meng, CPA, CA  
fmeng@veritascorp.com

**Consumer Staples & Consumer Discretionary**

Kathleen Wong, CPA, CA, CFA  
kwong@veritascorp.com

Ahmad Faheem  
afaheem@veritascorp.com

**Energy & Special Situations**

Nima Billou, MBA, CFA  
nbillou@veritascorp.com

**Industrials, Utilities & Special Situations**

Darryl McCoubrey, CPA, CA  
dmccoubrey@veritascorp.com

Nasiba Akhmedova, MBA  
nakhmedova@veritascorp.com

Dan Fong, BA, HBA, CFA  
dfong@veritascorp.com

**Financial Services**

Mike Rizvanovic, CFA  
mrizvanovic@veritascorp.com

Sherry Ye  
sye@veritascorp.com

**Precious Metals**

Sid Subramani, P. Eng, MBA  
ssubramani@veritascorp.com

**Telecommunications & Technology**

Desmond Lau, CPA, CA, CFA  
dlau@veritascorp.com

**Client Support & Business Development**

Stuart Rolfe, B.A.Sc.  
srolfe@veritascorp.com

Julie Griffin, ACCA  
jgriffin@veritascorp.com

Veritas Investment Research Corporation ("Veritas") its directors, officers, employees and their immediate families are prohibited from trading any position in the securities profiled in a report thirty (30) days before and five (5) days after the publication date where the report involves coverage initiation or a change of opinion. Veritas has not offered any consulting, financial advisory, investment banking or underwriting services to the companies mentioned. Veritas does not accept research fees from the companies profiled herein. The information contained in this report has been obtained from sources believed reliable however the accuracy and/or completeness of the information is not guaranteed by Veritas, nor does Veritas assume any responsibility or liability whatsoever. All opinions expressed are subject to change without notification. This report is for information purposes only and does not constitute and should in no way be construed as a solicitation to buy or sell any of the securities mentioned herein. The contents of this research report do not, in any way, purport to include any manner of legal advice or opinion. The intention of this report is to provide a forthright discussion of business, accounting and financial reporting issues, as well as generally accepted accounting principles and the limits of their usefulness to investors. As such, please do not infer from this report that the accounting policies of any company mentioned herein are not allowed within the broad range of generally accepted accounting principles, or that the policies employed by that company were not approved by its auditor(s). This report may not be reproduced in whole or in part without the express prior written consent of Veritas. Veritas is a 100% employee owned firm. ©2016 Veritas Investment Research Corporation.



Our Vision

**To seek the truth from the facts.**

Our Mission

**To be our clients' trusted source  
of independent knowledge and advice.**

---

Veritas Investment Research Corporation  
TD West Tower  
100 Wellington Street West Suite 3110, PO Box 80  
Toronto, Ontario, Canada M5K 1E7

416.866.8783  
[www.veritascorp.com](http://www.veritascorp.com)

This research report is a product of Veritas Investment Research and is considered third party research under the rules of the Investment Industry Regulatory Association of Canada ("IIROC"). Accordingly, this research report was not prepared in accordance with the disclosure requirements set out under IIROC Rule 3400. The content of this research report is solely the responsibility of Veritas Investment Research."