Commentary
Macroeconomic Scenarios: Canada's Residential Mortgage Market

DBRS Morningstar
May 6, 2020

Michael Heydt
Senior Vice President - Global Sovereign Ratings
+1 212 806-3210
michael.heydt@dbrsmorningstar.com

Paul LeBane
Vice President - Public Finance, Global Corporates
+1 416 597-7478
paul.lebane@dbrsmorningstar.com

Komal Rizvi
Vice President - Canadian FIG & Insurance
+1 416 597-7403
komal.rizvi@dbrsmorningstar.com

Robert Colangelo
Senior Vice President - North American Financial Institutions
+1 416 597-7559
robert.colangelo@dbrsmorningstar.com

Tim O'Neil
Managing Director - Head of Canadian Structured Finance
+1 416 597-7477
tim.oneil@dbrsmorningstar.com

Stefan Hilts
Associate Director of Quantitative Research
+1 212 806-3297
stefan.hilts@dbrsmorningstar.com

The rapid spread of the Coronavirus Disease (COVID-19) and the associated economic fallout has brought Canada's residential real estate market to a near standstill. Prior to the outbreak, the national housing market was heating up. Resale activity and home prices were increasing in early 2020, in large part due to robust population growth, a strong labor market, and declining mortgage rates. In addition, mortgages were performing well, with the share of mortgages in arrears running at just one quarter of one percent.

However, as the pandemic has led to an unprecedented collapse in economic activity and cast significant uncertainty over how quickly the economy will recover, the housing market has abruptly lost momentum. In the month of March, home sales fell 14% (m/m) and over three million Canadians - or 15% of the workforce - either lost their job or worked fewer hours. Moreover, the employment report was based on the week of March 15-21, one week before most large provinces closed all non-essential businesses. The economic data will be substantially worse in April.

The employment shock comes in the context of a household sector that is highly indebted; household debt-to-disposable income in Canada is 176%, which is elevated by international standards. Notwithstanding income support programs from the federal government and mortgage deferral options from the banks, the rise in unemployment will inevitably lead more households to fall behind, and potentially default, on their mortgage payments. The extent of the damage to the housing and residential mortgage markets, however, is far from clear.

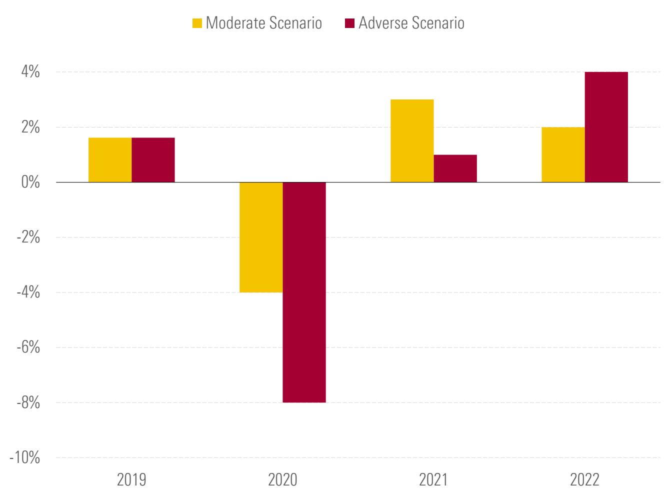
In this commentary, we build on our two macroeconomic scenarios for Canada to assess how the economic outlook could impact the residential mortgage market. These scenarios are not forecasts. Rather, they serve as benchmarks for our rating analysis. In the moderate scenario, mortgage arrears nationwide increase to approximately 65 basis points in 2020 and then gradually decline, while home prices fall by 10% cumulatively through 2022. The adverse scenario features mortgage arrears rising to 100 basis points and a 15% correction in housing prices by 2022. While the increase in mortgage arrears is more prominent in the oil-producing provinces, reflecting the more pronounced economic shock, home prices decline more sharply in those urban areas that experienced a significant run-up in prices in recent years, with home prices in Toronto falling 14% in the moderate scenario.

The Macroeconomic Outlook: Moderate and Adverse Scenarios

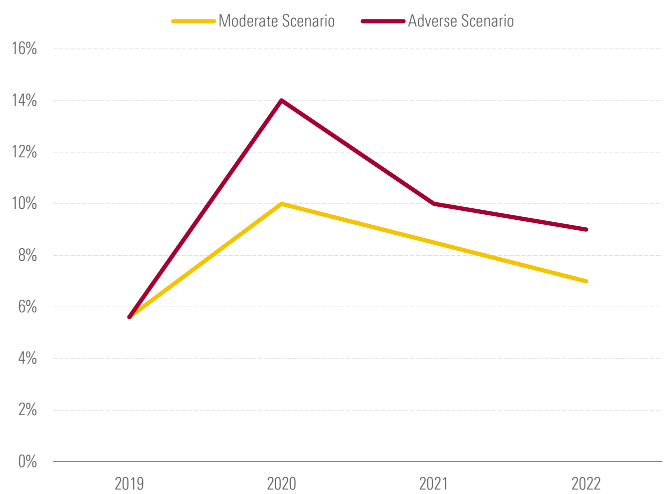
The ability of homeowners to pay their mortgage will largely depend on the duration of the coronavirus shock. To reflect the elevated level of uncertainty regarding the near-term outlook and to provide greater transparency, DBRS Morningstar published two macroeconomic scenarios on April 16th for a select group of economies, including Canada: a moderate scenario and an adverse scenario. These scenarios are not forecasts. Rather they are being used in the context of our rating analysis, with the moderate scenario serving as the primary anchor for current ratings, and the adverse scenario serving as a benchmark for sensitivity analysis for the same ratings. The scenarios are subject to revisions, and we plan to update both scenarios by end-May.

Exhibit 1 Canada: Macroeconomic Scenarios

Real GDP Growth



Unemployment Rate



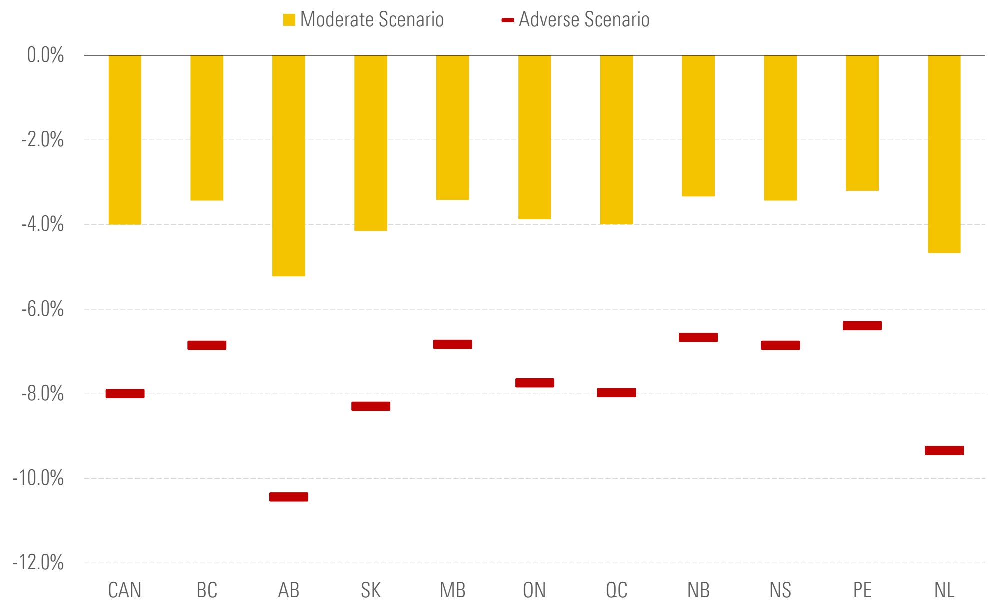
Source: Statistics Canada, Haver Analytics, DBRS Morningstar.

In the moderate scenario, we assume some success in containing the spread of the virus in the second quarter of 2020 and that strict social-distancing measures are gradually relaxed. The economy starts a relatively robust recovery in the third quarter. Notwithstanding some permanent output loss, growth is above trend next year and the national unemployment rate declines to 7.5-8.0% by the end of 2021.

The adverse scenario envisages substantially greater output losses as containment measures implemented to curb the virus's spread disrupt daily life longer than anticipated. Compared to the moderate scenario, the recession is deeper and the recovery is weaker. While some sectors might be able to recover the lost output as demand returns, other parts of the economy experience more long-lasting damage. In this environment, the national unemployment rate does not fall into the single digits until the second half of 2021.

All ten provinces experience sharp recessions in 2020 in the moderate scenario. The variation across provinces largely reflects whether the province is an oil producer. As a result, Alberta, Saskatchewan, and Newfoundland and Labrador suffer the largest declines in GDP due to the added impact of low oil prices.

Exhibit 2 Real GDP Growth by Province, 2020



Note: For full details of the moderate and adverse scenarios, see Appendix A at the end of the report.
Source: DBRS Morningstar.

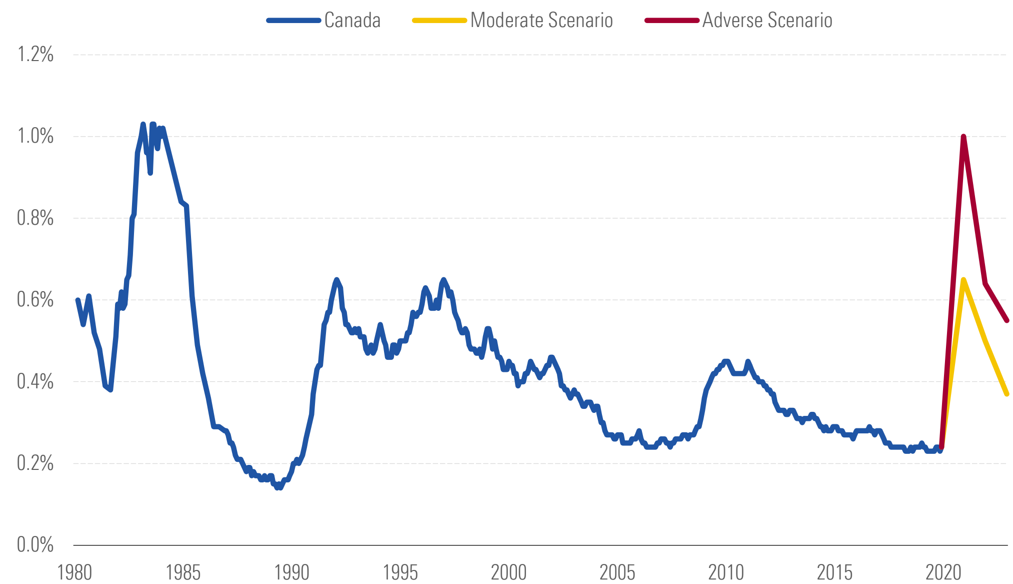
Mortgage Arrears and Housing Prices

We expand this exercise to include assumptions on mortgage arrears and housing prices. We make the assumption that arrears increase 9 basis points for each 1 percentage point increase in the unemployment rate. This errs on the side of caution given the historical relationship is closer to 6 basis points. In the moderate scenario, arrears nationwide increase to approximately 0.65% in 2020 as the unemployment rate hits 10%. In the adverse scenario, mortgage arrears rise to 1.00%, which would be on par with the early 1980s when Canada experienced its worst housing market crash. Mortgage performance at the provincial level vary according to the assumed increase in unemployment rates.

The outlook for housing prices amid the lockdown is difficult to assess. This is largely due to the unique nature of the shock. The public health crisis has reduced buyers' willingness and ability to see homes, while potential sellers are not listing their homes in the hope that conditions normalize. The limited number of transactions will make it difficult to discern how prices are responding to the economic shock.

In the macroeconomic scenarios released by DBRS Morningstar on April 16th, we assumed a modest decline in average home prices in most countries. We noted in the same commentary that we assumed relatively larger price declines in regions reliant on commodity exports and some urban centers. Within Canada, we model this decline by assuming that housing prices correct from existing levels of overvaluation, if any, based on a fundamental home price model.[1] In other words, the economic shock acts as a catalyst for home prices to adjust to levels consistent with the region's income growth and population growth.

Exhibit 3 Percent of Residential Mortgages In Arrears



Note: includes data from BMO, CIBC, HSBC Bank Canada, National Bank of Canada, RBC Royal Bank, Scotiabank, and TD Canada Trust. Also includes Canadian Western Bank and Manulife Bank as of April 2004 and Laurentian Bank as of October 2010.
Source: Canadian Bankers Association, Haver Analytics, DBRS Morningstar.

In our model-driven assessment of individual markets, we find that Toronto, Vancouver, Victoria, and Ottawa are the most overvalued markets (see Exhibit 4), In other words, prices in these markets appear to be above levels suggested by their economic fundamentals, and therefore pose the highest initial risks for a price correction. Montreal is moderately overvalued, while cities in the prairie provinces are considered the least overvalued, as prices in this region have seen very modest appreciation since the previous oil-price shock in 2015. In the moderate scenario, home prices in the overvalued cities decline 10-14% cumulatively over the next three years. In the adverse scenario, prices decline 14-18% over the same period. In addition, the fundamental home price model indicates that the condo market is more overheated than the single-family market. As a result, condos in the key markets of Toronto and Vancouver decline 19% and 15%, respectively, in the moderate scenario.

[1] These results are based on an approach that aims to differentiate price growth driven by underlying economics from that driven by speculative behavior. A market is considered to be overvalued when price levels rise above those explained by the historic relationship with long-term economic fundamentals. However, overvaluation does not necessarily mean that prices will fall. Overvalued markets with strong positive price momentum are likely to continue expansion in the short-run, but would be expected to revert to fundamental prices over the long run. Together, momentum and overvaluation form the basis of the forecast methodology. However, given the nature of the coronavirus shock, any prior positive momentum in home prices has been set to zero for this exercise. These results show our median expectation across a large number of simulated price paths in their respective economic environments.

Exhibit 4 Home Prices in Select Markets

	Overvaluation Estimates, 2019	3Y Price Adjustment (Moderate)	3Y Price Adjustment (Adverse)
Canada	20%	-10%	-15%
Toronto	26%	-14%	-18%
Vancouver	18%	-10%	-15%
Victoria	19%	-10%	-14%
Ottawa	18%	-10%	-14%
Montreal	11%	-6%	-10%
Calgary	1%	-6%	-11%
Edmonton	3%	-6%	-13%
Winnipeg	8%	-5%	-9%

Sources: CREA, Teranet, Bank of International Settlements, Statistics Canada, Haver Analytics, DBRS Morningstar.

It is important to note that the introduction of updated B-20 guidelines at the start of 2018 by the Office of the Superintendent of Financial Institutions (OSFI) had a cooling effect on the housing market. The guidelines tightened mortgage qualification rules and placed increased emphasis on ensuring borrowers had the ability to repay mortgages even in a stressed environment. As a result, the quality of lending improved (e.g. the share of mortgage loans that exceeded 450% of the borrower's income declined) and overvaluation levels at least temporarily declined. From December 2017 to mid-2019, overvaluation nationwide narrowed from 21% to 16%, before increasing again in the second half of 2019 and early 2020.

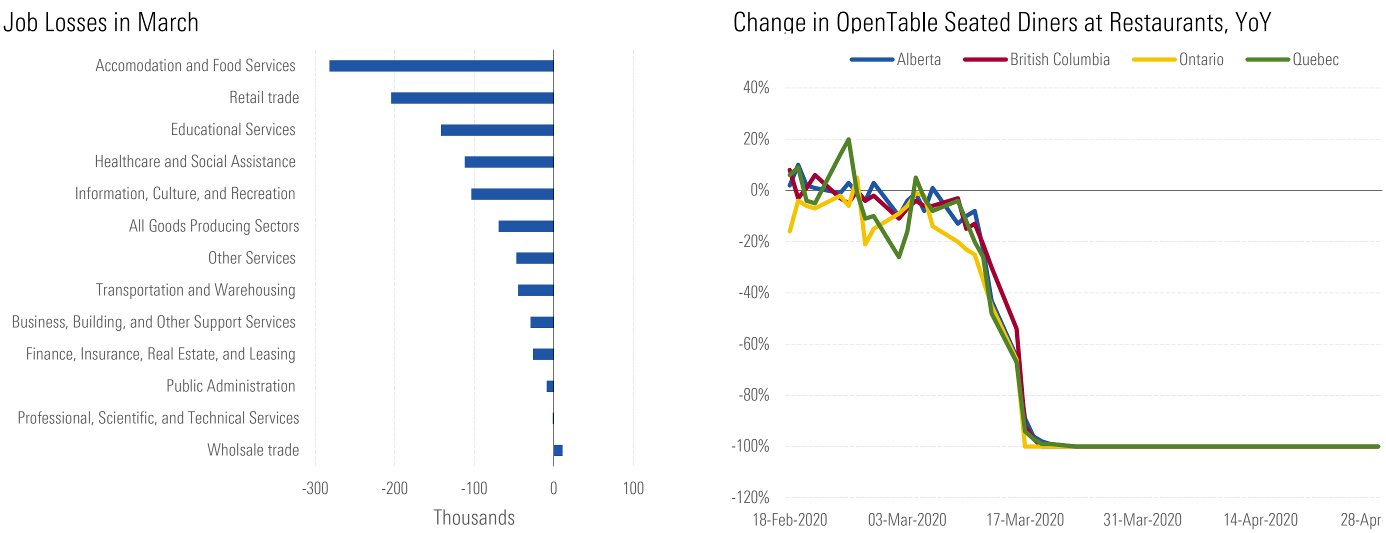
Making Mortgage Payments During the Shock and After the Shock

Emergency fiscal support measures and payment deferral options should cushion the impact of the employment shock on households' ability to pay their mortgages in the near term. The federal government's Canada Emergency Wage Subsidy (CEWS) program delivers a monthly payment of up to $3,388 for up to three months. For those who have lost their job, the Canada Emergency Response Benefit (CERB) provides cash support up to $2,000 per month, for up to four months. In addition, Canadian lenders are offering mortgage payment deferral options for borrowers affected by the virus on a case-by-case basis, which allows borrowers to defer payments for up to 6 months.

Notwithstanding these extraordinary measures, we still expect mortgage arrears to increase in the months ahead. Some workers will not be eligible for either federal program. For others, the income support will still not be enough to make their mortgage payments. Many lenders have also said that deferrals would only be an option for those borrowers that were in good standing prior to the crisis and current on their mortgage payments. This means that many people who were struggling to meet their mortgage obligations before the shock are unlikely to find much relief and could see their arrears balance increase.

The ability of households to pay their mortgages after the shock is also a concern, particularly as federal support programs end and the bank deferral programs expire. Depending on the duration of the shock, parts of the labor market could experience more long-lasting damage. In March, the shock to the labor market was broad-based but three consumer-facing sectors accounted for more than half of the job losses: (1) accommodation and food services, (2) retail, and (3) information, culture and recreation. Jobs in these sectors account for about 20% of total employment. If Canadian consumers remain risk averse, even as the economy opens up, workers in these sectors could face a depressed jobs market for months, if not years. In addition to consumer-facing industries, the oil sector is a concern. The oil-producing provinces did not experience the brunt of the layoffs in March, but exceptionally low oil prices could lead to structural changes in those provinces and prolonged labor market weakness.

Exhibit 3 Employment and Consumption



Source: Statistics Canada, OpenTable, Haver Analytics, DBRS Morningstar.

Signposts That Tell Us Where Things Are Going

The difference between the moderate and adverse scenarios largely depends on the duration of the shock; that is, the length of time until the public has greater confidence that the spread of the coronavirus is contained and the necessary healthcare capacity is in place to treat patients with the disease. As some provinces begin reopening this week, high-frequency consumption indicators and consumer-facing employment data could provide guidance on the pace of the recovery and the post-lockdown economic landscape.

Another factor that could influence the mortgage market relates to the effectiveness of government policy in helping households bridge the gap. To assess this in the near term, we are monitoring the share of borrowers that are asking for forbearance on their mortgage payments. At the end of April, over 700,000 requests have been completed or are being processed by member banks, according to the

Canadian Bankers Association. Any rise in the months ahead could suggest that income support programs are insufficient and that a robust recovery would need to materialize soon in order to avoid a sharp increase in mortgage arrears.

Notes: All figures are in Canadian dollars unless otherwise noted. DBRS Morningstar notes that this commentary was amended on May 11th to correct the share of workers in the labor force that either lost their job or worked fewer hours, which is 15%.

Appendix A: Moderate and Adverse Scenarios

Real GDP Growth

Moderate Scenario

	2019	2020	2021	2022
CAN	**1.6%**	**-4.0%**	**3.0%**	**2.0%**
BC	1.9%	-3.4%	3.3%	2.5%
AB	0.5%	-5.2%	2.8%	2.4%
SK	0.7%	-4.2%	2.8%	1.7%
MB	1.3%	-3.4%	2.8%	1.7%
ON	1.7%	-3.9%	3.2%	1.9%
QC	2.7%	-4.0%	3.2%	1.8%
NB	0.7%	-3.3%	2.6%	0.9%
NS	1.3%	-3.4%	2.7%	1.1%
PE	2.5%	-3.2%	2.6%	1.7%
NL	2.0%	-4.7%	2.4%	0.7%

Adverse Scenario

	2019	2020	2021	2022
CAN	**1.6%**	**-8.0%**	**1.0%**	**4.0%**
BC	1.9%	-6.9%	1.1%	4.9%
AB	0.5%	-10.4%	0.9%	4.8%
SK	0.7%	-8.3%	0.9%	3.5%
MB	1.3%	-6.8%	0.9%	3.4%
ON	1.7%	-7.7%	1.1%	3.7%
QC	2.7%	-8.0%	1.1%	3.7%
NB	0.7%	-6.7%	0.9%	1.7%
NS	1.3%	-6.9%	0.9%	2.2%
PE	2.5%	-6.4%	0.9%	3.5%
NL	2.0%	-9.3%	0.8%	1.3%

Unemployment Rate

Moderate Scenario

	2019	2020	2021	2022
CAN	**5.6%**	**10.0%**	**8.5%**	**7.0%**
BC	4.7%	8.8%	7.2%	6.0%
AB	6.9%	12.7%	11.2%	9.2%
SK	5.4%	10.9%	9.6%	7.9%
MB	5.3%	8.5%	7.7%	6.3%
ON	5.6%	9.6%	8.1%	6.6%
QC	5.1%	9.5%	7.7%	6.4%
NB	8.0%	11.3%	10.6%	8.7%
NS	7.2%	11.2%	10.2%	8.4%
PE	8.8%	11.5%	10.8%	8.9%
NL	11.9%	15.6%	15.8%	13.0%

Adverse Scenario

	2019	2020	2021	2022
CAN	**5.6%**	**14.0%**	**10.0%**	**9.0%**
BC	4.7%	12.3%	8.8%	7.9%
AB	6.9%	17.8%	12.7%	11.4%
SK	5.4%	15.2%	10.9%	9.8%
MB	5.3%	11.9%	8.5%	7.6%
ON	5.6%	13.4%	9.6%	8.6%
QC	5.1%	13.3%	9.5%	8.5%
NB	8.0%	15.8%	11.3%	10.2%
NS	7.2%	15.7%	11.2%	10.1%
PE	8.8%	16.1%	11.5%	10.4%
NL	11.9%	21.8%	15.6%	14.0%

Source: Statistics Canada, DBRS Morningstar.

Appendix B: Mortgage Arrears

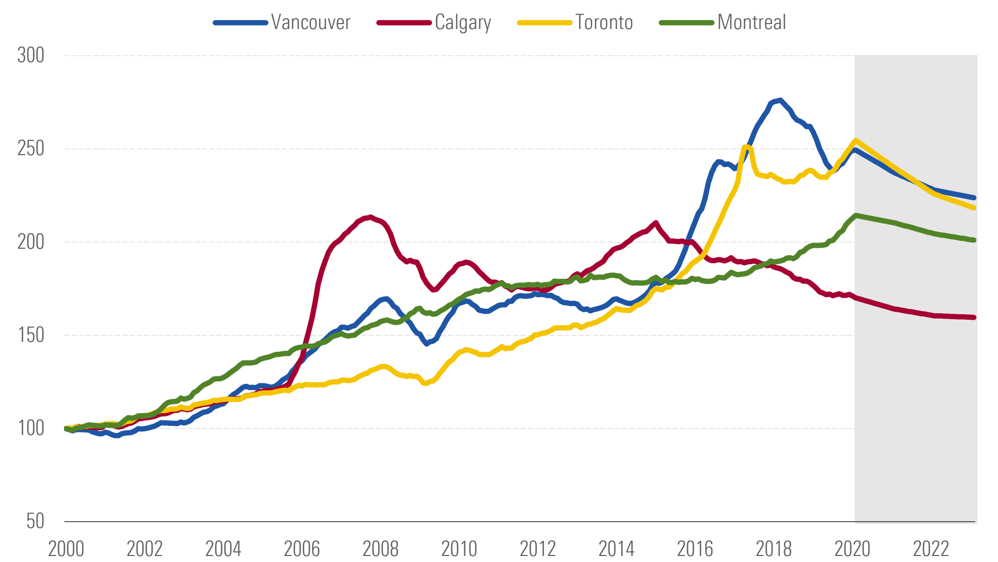
By Province

	Moderate Scenario				Adverse Scenario		
	2019	**2020**	**2021**	**2022**	**2020**	**2021**	**2022**
CANADA	**0.24%**	**0.64%**	**0.50%**	**0.37%**	**1.00%**	**0.64%**	**0.55%**
British Columbia	0.14%	0.51%	0.37%	0.26%	0.82%	0.51%	0.43%
Alberta	0.50%	1.02%	0.89%	0.71%	1.48%	1.02%	0.91%
Saskatchewan	0.86%	1.36%	1.24%	1.09%	1.74%	1.36%	1.26%
Manitoba	0.37%	0.66%	0.59%	0.46%	0.96%	0.66%	0.58%
Ontario	0.09%	0.45%	0.32%	0.18%	0.79%	0.45%	0.36%
Quebec	0.27%	0.67%	0.50%	0.39%	1.01%	0.67%	0.58%
New Brunswick*	0.47%	0.77%	0.70%	0.53%	1.17%	0.77%	0.67%
Nova Scotia*		0.83%	0.74%	0.58%	1.24%	0.83%	0.73%
Prince Edward Island*		0.71%	0.65%	0.48%	1.13%	0.71%	0.61%
Newfoundland and Labrador*		0.80%	0.82%	0.57%	1.36%	0.80%	0.66%

*Arrears data for New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland and Labrador are classified together as Atlantic Region.
Source: Canadian Bankers Association, Haver Analytics, DBRS Morningstar.

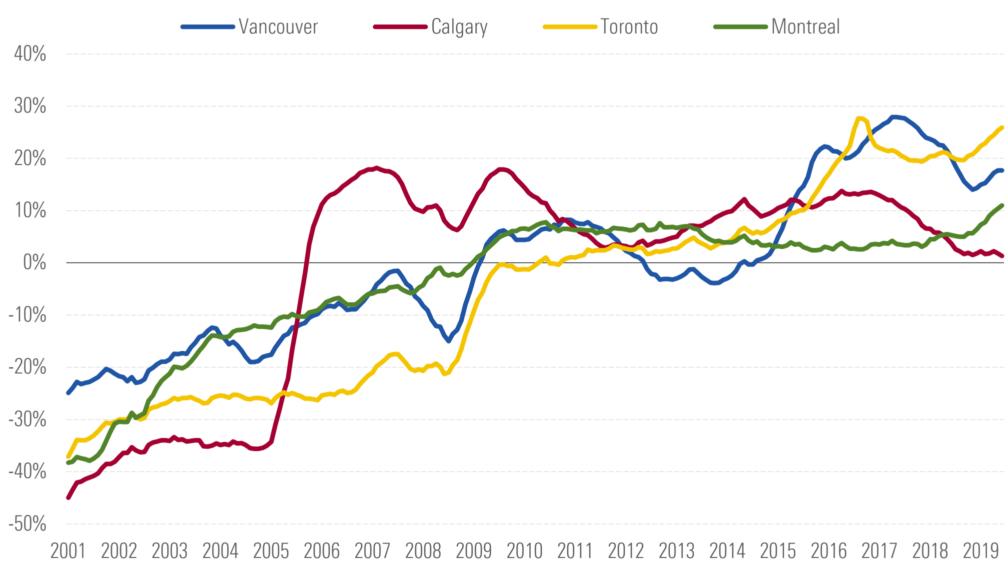
Appendix C: Home Price Valuation

Home Price Indices in the Moderate Scenario, January-2000 = 100



Sources: CREA, Teranet, Bank of International Settlements, Statistics Canada, Haver Analytics, DBRS Morningstar.

Over/Undervaluation of Home Prices by City, Percent



Sources: CREA, Teranet, Bank of International Settlements, Statistics Canada, Haver Analytics, DBRS Morningstar.

About DBRS Morningstar

DBRS Morningstar is a global credit ratings business with approximately 700 employees in eight offices globally.

On July 2, 2019, Morningstar, Inc. completed its acquisition of DBRS. Combining DBRS' strong market presence in Canada, the U.S., and Europe with Morningstar Credit Ratings' U.S. footprint has expanded global asset class coverage and provided investors with an enhanced platform featuring thought leadership, analysis, and research. DBRS and Morningstar Credit Ratings are committed to empowering investor success, serving the market through leading-edge technology and raising the bar for the industry.

Together as DBRS Morningstar, we are the world's fourth-largest credit ratings agency and a market leader in Canada, the U.S., and Europe in multiple asset classes. We rate more than 2,600 issuers and 54,000 securities worldwide and are driven to bring more clarity, diversity, and responsiveness to the ratings process. Our approach and size provide the agility to respond to customers' needs, while being large enough to provide the necessary expertise and resources.