

Too Tight? The Impact of Bank of Canada Tightening on BC Housing Markets

- The Bank of Canada is signalling that in response to elevated Canadian inflation, it will begin raising its policy rate or “tightening” monetary policy this year.
- Historically, Bank of Canada tightening has led to falling home sales and flattening home prices.
- With markets so out-of-balance, it will take a substantial decline in demand to return active listings to a healthy state.
- Model simulations show that the most likely outcome of this round of Bank of Canada tightening will be home sales falling to near their historical averages and for home price growth to moderate, but because of severely low supply, it is unlikely to result in significant home price declines.

Introduction

Later this year, the Bank of Canada is widely expected to embark on its first interest rate tightening cycle since 2018. In this Market Intelligence, we will consider how high interest rates might rise and using both historical data and model simulations, we analyze how BC housing markets may be impacted.

Why Are Rates Rising?

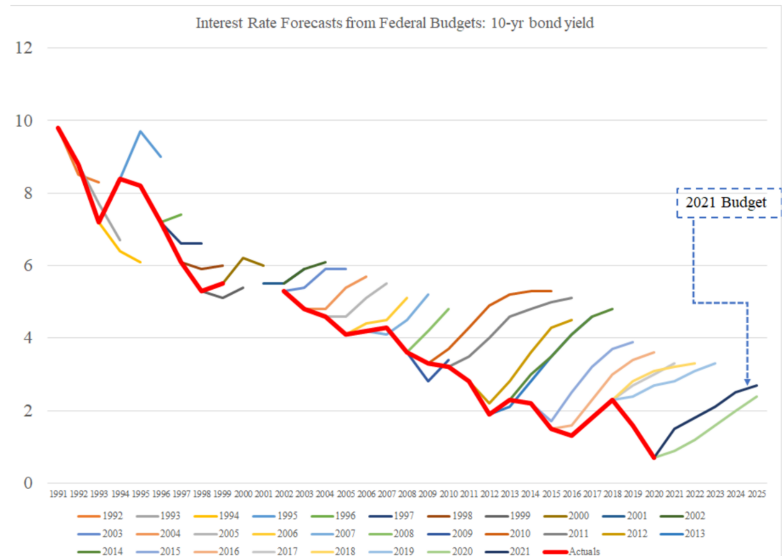
Since 1992, the Bank of Canada has been mandated to keep inflation within a range of 1 to 3 per cent, with a medium run target of 2 per cent. The Bank achieves this goal by adjusting its policy rate, commonly referred to as the target for the overnight rate (or just “overnight rate”), at a set schedule of eight meetings through the calendar year. When the Bank is raising rates, it is often referred to as “tightening” monetary policy and when its policy rate is being lowered, it is referred to as “loosening.”

Inflation in Canada is currently running well ahead of the Bank of Canada’s 2 per cent target. This inflation is a product of an economic recovery from COVID-19 in which consumer demand, especially for durable goods, has far outpaced the ability of a still fragile global supply chain to meet that demand. As a result, there is a shortage of everything from furniture to computer chips to the very containers in which the goods are shipped.

Added to those supply chain issues is a housing market that has seen prices rise about 20 per cent over the past year along with rising energy prices. Altogether, this combination of factors has led to the highest rate of inflation in close to two decades. Faced with these challenges, the Bank of Canada has two options. The first option is to allow demand to continue running hot and wait for supply chains to recover, trading off wage and employment gains for slightly higher inflation. The second option is to begin raising interest rates to lower demand and ease inflation.

Higher Rates Likely, Not Certain

(Private Sector Forecasts of Interest Rates for Federal Budget)



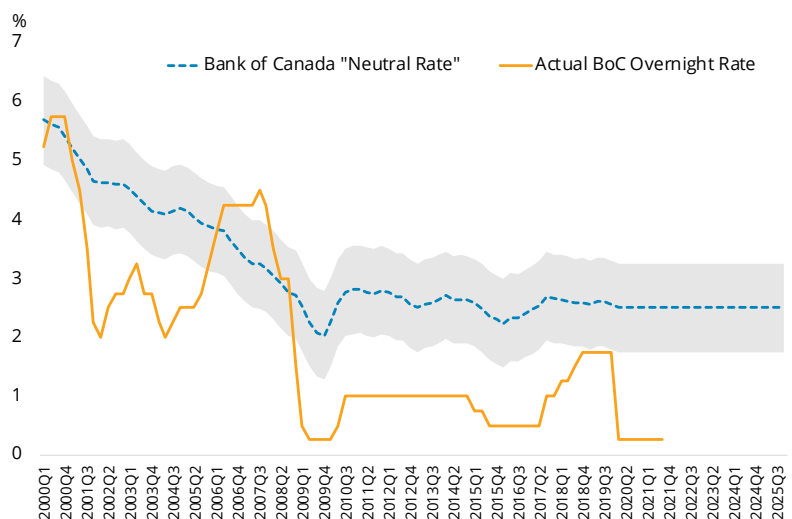
Source: Kevin Milligan

The Bank has clearly signaled its preference towards raising rates and markets have responded by driving five-year fixed mortgage rates sharply upwards in anticipation of future rate increases. However, the recent history of economic forecasting is littered with forecasts of rising interest rates that did not come to pass and uncertainty is even more heightened in the current pandemic environment. So, while higher rates are the most likely scenario, they are not a certainty.

How High Will Mortgage Rates Go?

When thinking about where interest rates will land in the long term, economists often use models of the so-called “neutral rate of interest,” usually defined as the level of real interest rates that would prevail when the economy is in its long-run equilibrium. Modern economic theory posits that when the Bank of Canada wants to stimulate the economy, it sets its overnight rate below the neutral rate.

Estimated Bank of Canada “Neutral” Rate



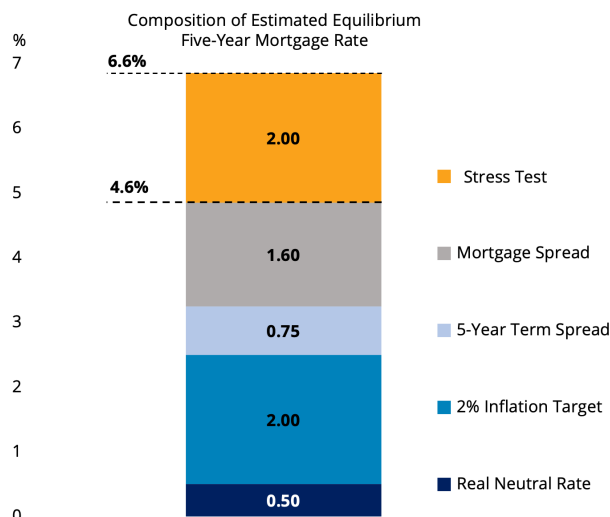
Source: BCREA Economics; Estimated from Laubach and Williams Neutral Rate Model with shaded confidence interval

Therefore, the lower the estimated neutral rate, the lower the Bank's overnight rate must go to provide a boost to growth and inflation. One reason that interest rates have been so low for so long is that the potential growth rate, and therefore the neutral rate of interest, in Canada has declined due to the aging of the Canadian workforce and low productivity growth in the Canadian economy.

Based on estimates from the standard model for the neutral rate of interest,¹ the neutral rate is currently about 0.5 per cent in real terms, or 2.5 per cent in nominal terms given the Bank's 2 per cent inflation target. This lines up with the Bank of Canada's official estimate of 1.75 per cent to 2.75 per cent as a range for the neutral rate. If we think of the neutral rate as the destination for the Bank of Canada, that will mean the overnight rate will need to increase by between

1.5 and 2.25 per cent. That increase would ripple through other Canadian interest rates and it means a higher cost of borrowing for Canadian banks and lenders and therefore higher mortgage rates. Under a scenario where the Bank of Canada returns its overnight rate to a neutral rate of 2.5 per cent, we can estimate a "neutral" five-year fixed mortgage rate by building up from the overnight rate using historical averages of interest rate spreads. Doing so implies a neutral five-year fixed mortgage rate of between 4 and 4.6 per cent, which would mean a qualifying rate of 6 to 6.6 per cent.

Long-Run "Neutral" Mortgage Rate



Source: BCREA Economics; Haver

How Do Rising Interest Rates Impact Housing Markets?

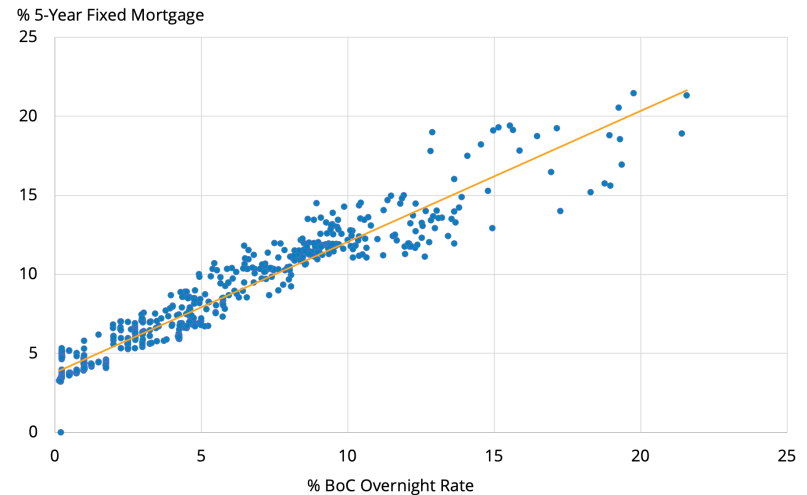
In simplified terms, monetary policy impacts the housing market by influencing borrowing costs for households and by either speeding up or slowing down economic growth and employment, which are key drivers of short-run housing demand. It can also impact the supply side of housing through its impact on the residential construction investment.

The impact on mortgage rates from changes in monetary policy arises via two channels. By setting the overnight rate, the Bank sets the minimum cost of borrowing for the financial system, which drives other short-term borrowing costs throughout the economy. For the housing market, this is most immediately apparent through changes in what is called the prime lending rate, which generally moves one-for-one with changes in the overnight rate and is the benchmark for pricing variable rate mortgages.

¹ Laubach and Williams. 2003. "Measuring the Natural Rate of Interest," *Review of Economics and Statistics* 85, no.4 (November): 1063-70.

The second channel is a bit more uncertain and complex. In Canada, the most common form of mortgage is a five-year fixed rate mortgage. Because financial institutions like to match the duration of their assets and liabilities, five-year mortgage rates tend to follow the cost of five-year borrowing for banks. Since the risk of Canadian banks failing or going bankrupt is very low, borrowing costs for a Canadian bank are similar to that of the virtually default-risk free Canadian government. Therefore, five-year fixed mortgage rates are highly correlated with five-year Government of Canada bond yields. While the Bank of Canada has significant control over short-term interest rates, it has less influence over longer term maturity bonds, including the interest rate or “yield” on the five-year government of Canada bond, which in turn tend to rise and fall with the expectations of global financial markets.

Bank of Canada Tightening Leads to Higher Mortgage Rates



Source: Haver

History of Rate Tightening and BC Housing Markets

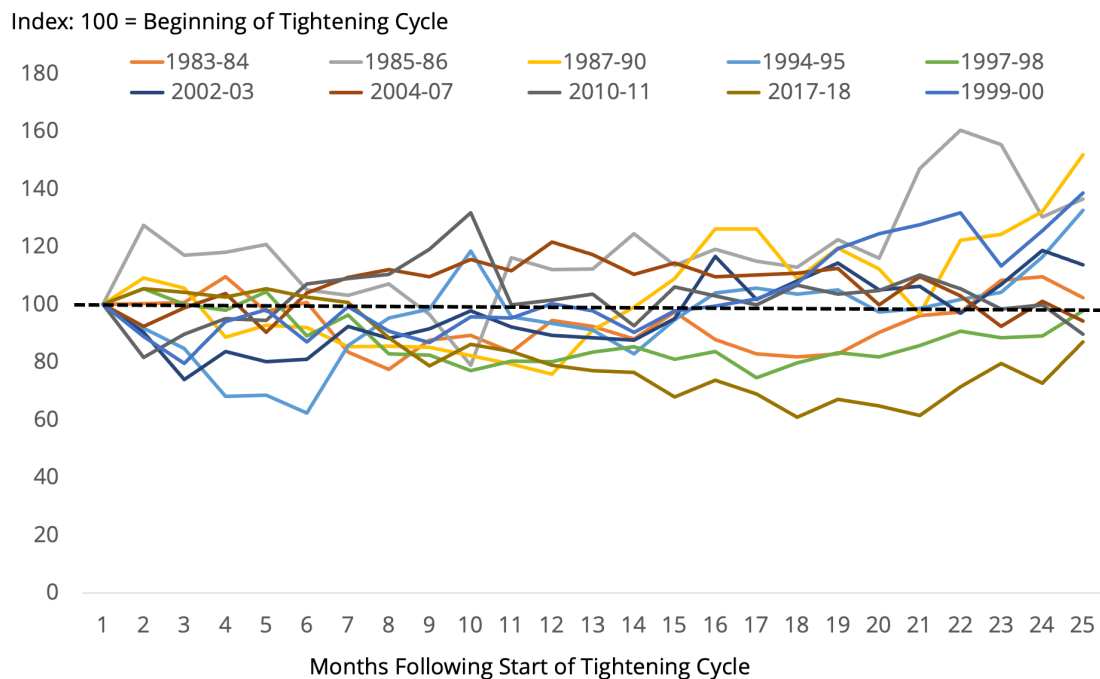
To examine how housing markets may react to Bank of Canada tightening this year, we begin with a look at how home prices and sales specifically have reacted to rising interest rates in the past.

The Bank of Canada has embarked on ten tightening cycles since 1980, which is the first year for which we have MLS® data. These cycles occurred during a mix of monetary regimes including the less precise or goal-oriented monetary policy regime of the 1980s as well as the inflation-targeting regime implemented in 1992.

Importantly, only one of these rate-tightening cycles occurred alongside the B20 mortgage stress test. It is not yet empirically clear whether the introduction of a minimum qualifying rate has changed the reaction of home sales and prices to rising contract rates. For example, given that the stress test is currently the higher of 5.25 per cent and the contract rate plus 200 basis points, it could be that there are now threshold effects such that the impact of mortgage rates on the housing market are non-linear, increasing after the five-year fixed rate breaches 3.25 per cent. We certainly saw significant stimulus to the housing market from falling mortgage rates during the pandemic despite a still stringent stress test rate.

To visualize the wide range of outcomes for the housing market following the start of a rate tightening cycle, we have indexed real (inflation-adjusted) MLS® average home prices and MLS® sales in BC to the start of each tightening period and observed how those measures evolved over the subsequent two-year period. It is worth noting that sometimes tightening cycles overlapped during the two-year analysis period.

History: Home Sales Following Start of Tightening



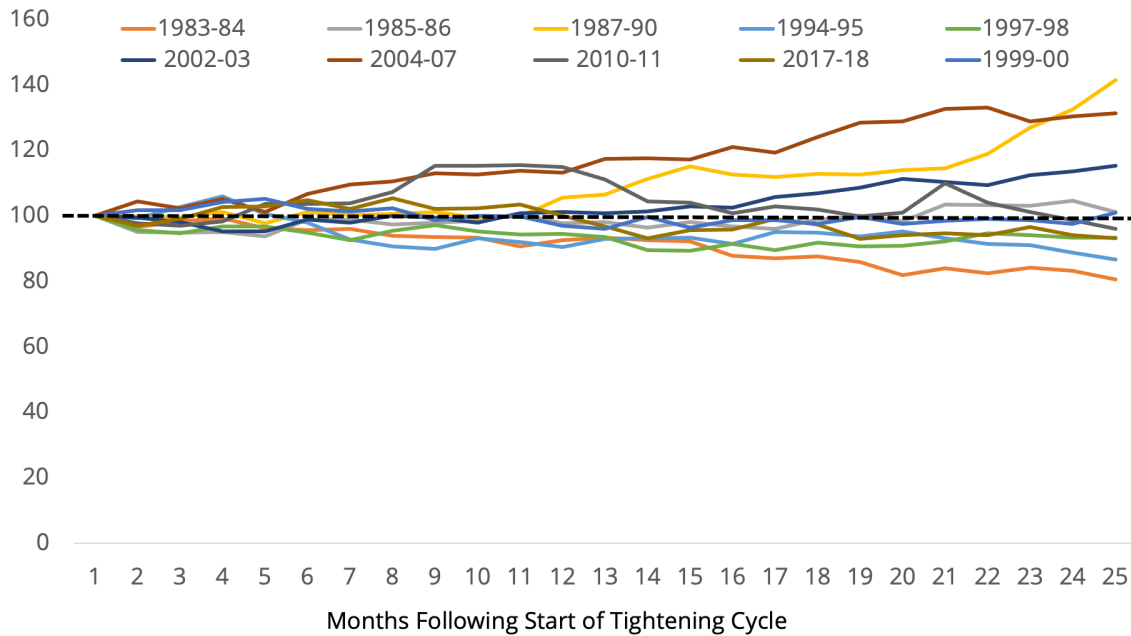
Source: BCREA Economics

The results are largely as expected. Often home sales benefit from strong economic growth and central banks act to tighten rates to forestall a potential overheating of the economy. Therefore, in many cases home sales are already falling from high levels of activity. Rising interest rates were associated with lower home sales in 70 per cent of the tightening cycles we examined, with the average decline in unit sales reaching about 5 per cent by the end of the first year before recovering by 14.5 per cent by the end of 24 months. However, the latter result is heavily skewed by strong sales recoveries in the 1980s. More recent tightening cycles have seen home sales down about 10 to 15 per cent two years following the start of monetary tightening.

The impact of rising rates on home prices also follows economic intuition, although with some anomalous periods. Home prices remained down 12 months after the start of tightening in 60 per cent of the cycles analyzed, while in roughly half of the cycles prices remained down 24 months after tightening began. Averaging across all ten rate-tightening cycles, home prices were on average down 0.5 per cent after six months, but up 0.6 per cent after 12 months and up 3.9 per cent after 24 months. Note that we have used inflation adjusted or “real” prices so that the average change in price is net of inflation.

History: Home Prices Following Start of Tightening

Index: 100 = Beginning of Tightening Cycle



Source: BCREA Economics

The average and range of the impact of historical rate tightening on home sales and home prices are summarized in the table below.

Table: Summary of Historical Impact of Bank of Canada Rate Tightening on BC Home Sales and Prices

	% Increase/Decrease					
	Sales			Prices		
	6-month	12-month	24-month	6-month	12-month	24-month
Low	- 16.5	- 23.0	- 13.0	- 7.4	- 7.2	- 19.6
High	9.3	17.4	52.0	9.5	17.3	41.4
Average	- 3.5	- 4.6	14.5	- 0.5	0.6	3.9

What Might Happen This Time?

How a Bank of Canada tightening cycle impacts the housing market depends on the initial conditions of the market and the economy. For example, rate-tightening cycles that begin when market conditions are tight may lead to a more tempered impact on prices. The intuition being that an under-supplied market can better absorb a decline in demand arising from higher borrowing costs.

To better understand how a rising rate environment may impact the market over the next two years, we have used our Canadian macroeconomic model alongside our primary housing model to simulate alternative paths for the Bank of Canada overnight rate and the resulting impact on Canadian mortgage rates and BC housing markets. The scenarios we have simulated include the following:

1. The overnight rate returns to its pre-pandemic level of 1.75 per cent.
2. The overnight rate rises to 2.25 per cent, the mid-point of the Bank of Canada's estimate range for its neutral rate.
3. The overnight rate reaches an above neutral level of 3 per cent to combat persistently high inflation.
4. The overnight rate rises to 1.75 per cent, but the yield curve flattens leading to only a moderate increase in five-year mortgage rates.

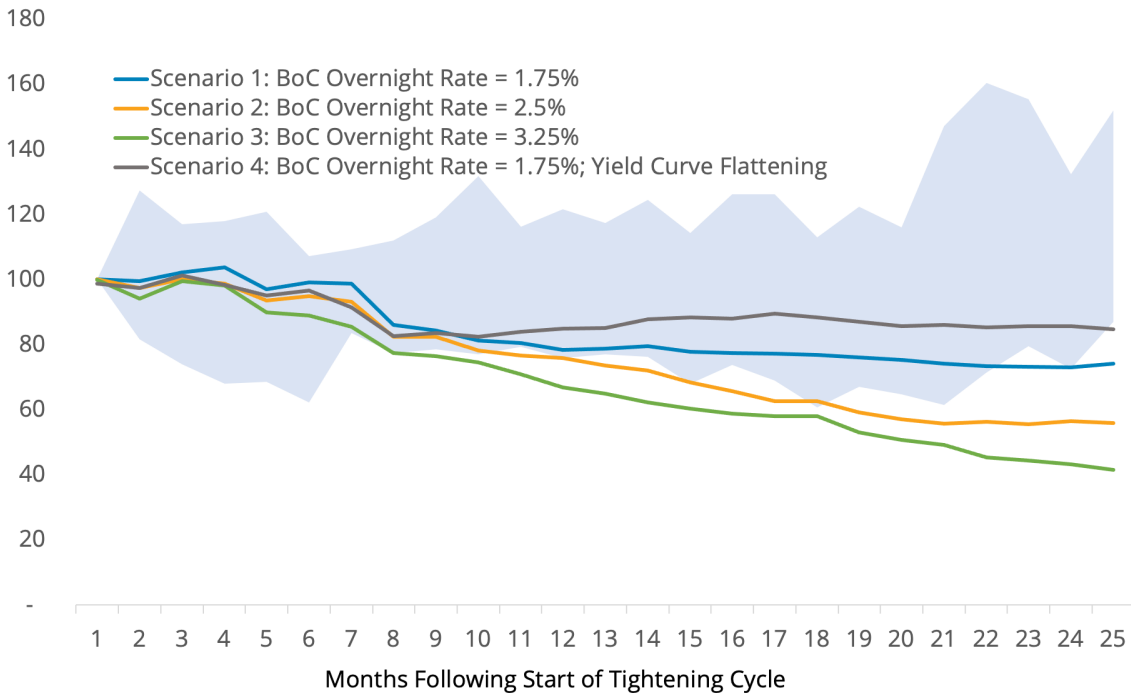
Each of these scenarios assumes the Bank of Canada begins raising its overnight rate in the middle of 2022, except for Scenario 3 where the Bank is assumed to tighten earlier in the second quarter. The results of those simulations are summarized in the accompanying charts, plotted against the historical range of outcomes following the start of a Bank of Canada rate-tightening cycle.

Home sales under Scenario 1 show sales falling from current elevated levels before levelling out to a point that is approximately 25 per cent below their starting point by the end of two years. That impact is in line with historical outcomes and, in this cycle, sales are coming down from a record-high level. Under a scenario where the yield curve flattens as bond markets begin expecting the Bank of Canada has made a policy error resulting in slower future growth, like the experience in 2019, home sales would level out near their long-run average. We view these as the two most likely scenarios. If the Bank does raise its policy rate more aggressively in response to an overheating economy, then our models show that home sales would decline more significantly.

Our model simulations show only a minor impact on home prices in the first two years following the Bank raising its overnight rate. The tempered impact on prices from future rate tightening is entirely the result of the starting point of record low active listings. Even with a significant drop in home sales, it will take a substantial period to rebuild existing home inventories. Therefore, in the worst-case scenario with high and persistent inflation, we would likely see stronger impacts on prices beyond the 24-month time horizon. In our model, the mechanism for this to occur is a heavy decline in home sales that prompts a significant build-up of re-sale listings.

Simulations: Home Sales (MLS® Unit Sales)

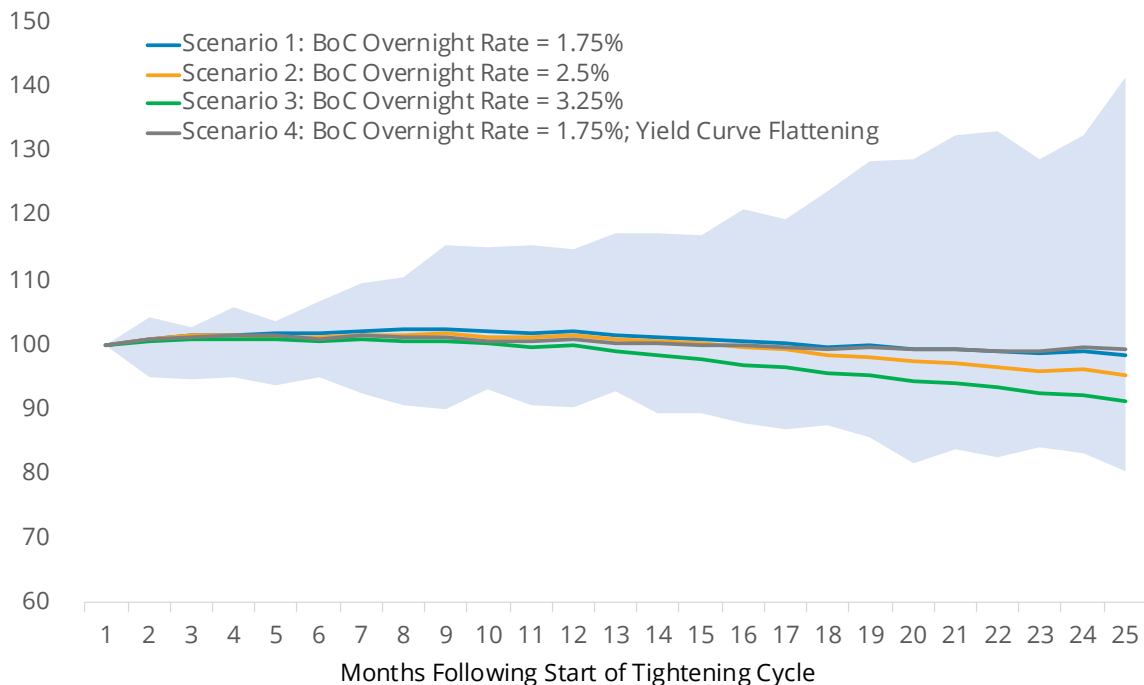
Index: 100 = Start of Bank of Canada Tightening



Source: BCREA Economics; Shaded area is the historical range of sales following past tightening cycles

Simulations: Home Prices (MLS® Inflation-Adjusted Average Price)

Index: 100 = Start of Bank of Canada Tightening



Source: BCREA Economics; Shaded area is the historical range of prices following past tightening cycles

Conclusions

The Bank of Canada is widely expected to begin raising its overnight policy rate in the coming months and Canadian mortgage rates have already begun to rise in anticipation of tighter future monetary policy.

The results of our analysis, which combines a historical perspective with supporting model simulations, indicate that the monetary tightening cycle is likely to cause declining home sales and a flattening of home prices. The severity of the decline in sales and the potential decline in home prices will depend on the final destination for the Bank of Canada and for Canadian mortgage rates.

The presence of a mortgage stress test, though hard to formally capture in our simulations, could mean a significant departure from historical norms especially if it is not re-calibrated for sharply higher mortgage rates. Fortunately, the Office of Superintendent for Financial Institutions has committed to reviewing the minimum stress test rate on an annual basis.