BANK OF CANADA
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Monetary Policy Report

October 2023

Canada's inflation-control strategy

Inflation targeting and the economy

- The objective of Canada's monetary policy is to promote the economic and financial well-being of Canadians. Canada's experience with inflation targeting since 1991 has shown that the best way that monetary policy can achieve this goal is by maintaining a low and stable inflation environment. Doing so fosters confidence in the value of money and contributes to sustained economic growth, a strong and inclusive labour market and improved living standards.
- In 2021, the Government of Canada and the Bank of Canada renewed the flexible inflation-targeting strategy of the monetary policy framework for a further five-year period, ending December 31, 2026.[1]
- The inflation target was renewed at the 2% midpoint of the 1%–3% control range, with inflation measured as the 12-month rate of change in the consumer price index (CPI).
- The Government and the Bank agreed that the best contribution monetary policy can make to the economic and financial well-being of Canadians is to continue to focus on price stability. The Government and the Bank also agreed that monetary policy should continue to support maximum sustainable employment, recognizing that maximum sustainable employment is not directly measurable and is determined largely by non-monetary factors that can change through time.
- Further, the Government and the Bank agreed that because well-anchored inflation expectations are critical to achieving both price stability and maximum sustainable employment, the primary objective of monetary policy is to maintain low, stable inflation over time.

Inflation targeting is *symmetric* and *flexible*

- Canada's inflation-targeting approach is *symmetric*, which means the Bank is equally concerned about inflation rising above or falling below the 2% target.
- Canada's inflation-targeting approach is also *flexible*. Typically, the Bank seeks to return inflation to target over a horizon of six to eight quarters. However, the most appropriate horizon for returning inflation to target will vary depending on the nature and persistence of the shocks buffeting the economy.
- The 2021 agreement with the Government specifies that the 2% inflation target remains the cornerstone of the framework.
- The agreement further notes that the Bank will continue to use the flexibility of the 1%–3% control range to actively seek the maximum sustainable level of employment, when conditions warrant. The Bank will also continue to leverage the flexibility inherent in the framework to help address the challenges of structurally low interest rates by using a broad set of policy tools. The Bank will use this flexibility only to an extent that is consistent with keeping medium-term inflation expectations well anchored at 2%.

Monetary policy tools

- Because monetary policy actions take time to work their way through the economy and have their full effect on inflation, monetary policy must be forward-looking.
- The Bank normally carries out monetary policy through changes in the target for the overnight rate of interest (the policy rate). The Bank also has a range of monetary policy tools it can use when the policy rate is at very low levels. These tools consist of guidance on the future evolution of the policy rate, large-scale asset purchases (quantitative easing and credit easing), funding for credit measures, and negative policy rates. The potential use and sequencing of these tools would depend on the economic and financial market context.
- All of the Bank's monetary policy tools affect total demand for Canadian goods and services through their influence on market interest rates, domestic asset prices and the exchange rate. The balance between this demand and the economy's production capacity is, over time, the main factor that determines inflation pressures in the economy.

Communications

- Consistent with its commitment to clear, transparent communications, the Bank regularly reports its perspectives on the economy and inflation. Policy decisions are typically announced on eight pre-set days during the year, and full updates to the Bank's outlook are published four times each year in the *Monetary Policy Report*.
- The Bank is committed to explaining when it is using the flexibility of the inflation-targeting strategy.
- Given the uncertainty about the maximum sustainable level of employment, the Bank will consider a broad range of labour market indicators. The Bank will also systematically report to Canadians on how labour market outcomes have factored into its policy decisions.

Monitoring inflation

- In the short run, the prices of certain CPI components can be particularly volatile and can cause sizable fluctuations in CPI inflation.
- In setting monetary policy, the Bank seeks to look through such transitory movements in CPI inflation and focuses on "core" inflation measures that better reflect the underlying trend of inflation. In this sense, these measures act as an operational guide to help the Bank achieve the CPI inflation target. They are not a replacement for CPI inflation.
- The Bank's two preferred measures of core inflation are CPI-trim, which excludes CPI components whose rates of change in a given month are the most extreme, and CPI-median, which corresponds to the price change located at the 50th percentile (in terms of basket weight) of the distribution of price changes.

1 For more details, see *Joint Statement of the Government of Canada and the Bank of Canada on the Renewal of the Monetary Policy Framework* (December 13, 2021); *Monetary Policy Framework Renewal—December 2021;* and T. Macklem, "Our Monetary Policy Framework: Continuity, Clarity and Commitment" (speech to the Empire Club of Canada, Toronto, December 15, 2021).

The *Monetary Policy Report* is available on the Bank of Canada's website at bankofcanada.ca.

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Monetary Policy Report

October 2023

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Overview

Inflation continues to decline gradually in most economies. Higher policy interest rates and tight financial conditions are contributing to slowing global demand growth and easing price pressures, although inflation in services prices is sticky.

Global economic growth is slowing. While the US economy has been surprisingly robust, the weakness in China has been more pronounced than expected in the July Report.

In Canada, higher interest rates are working to ease price pressures, and consumer price index (CPI) inflation has come down significantly from its peak in June 2022. However, progress toward the 2% target is proving to be slow, and the pace of future declines in inflation remains uncertain. Core inflation has been more persistent than expected.

At the same time, demand growth has eased and supply is rising. Evidence suggests that the economy is approaching balance. With supply growing faster than demand, price pressures are expected to gradually moderate further.

Economic activity is forecast to be modest through most of 2024, with annual growth in gross domestic product (GDP) just under 1%. As past interest rate increases continue to work their way through the economy, they will weigh on household spending and business investment. Weak foreign demand is also expected to slow export growth. GDP growth is projected to rise to about 2½% in 2025.

Inflation is now projected to stay around 3½% until the middle of 2024. As the economy moves into excess supply and price pressures moderate, inflation is forecast to ease to about 2½% in the second half of 2024 and then return to target in 2025.

A considerable amount of uncertainty surrounds the forecast. Three-month rates of core inflation have remained elevated, in the range of 3½% to 4% for the past year. Near-term inflation expectations are still high, and there is a risk that they could become a driver of wage- and price-setting behaviour. Another risk is that the war in Israel and Gaza spreads further into a broader regional conflict, disrupting oil supplies and leading to a resurgence of inflation in energy prices.

Overall, there is more evidence that the economy is slowing, which is relieving price pressures. But the progress to price stability is slow, and inflationary risks have increased.

Global economy

Inflation is easing across most economies. Initially, this largely reflected falling energy prices. More recently, the decline in inflation in advanced economies has been led by slower growth in the prices of non-energy goods and shelter. Inflation in the prices of services remains elevated and is taking longer to adjust. Inflation is anticipated to continue its gradual decline as higher policy interest rates and the recent increases in yields on long-term bonds slow demand. However, higher oil prices are slowing the disinflationary process and increasing upside risks. Inflation in most major advanced economies is now expected to return to central bank targets in 2025, although the timing remains uncertain.

As projected in the July Report, global growth has been slowing and is forecast to ease further. The composition of global growth, however, has shifted (**Table 1** and **Box 1**).[1] For 2023, economic growth in the United States—Canada's largest trading partner—is now expected to be stronger than previously anticipated, while growth for China has been revised down.

Table 1: Projection for global economic growth

	Share of real global GDP* (%)	Projected growth† (%)			
		2022	2023	2024	2025
United States	16	1.9 (2.1)	2.2 (1.8)	0.8 (0.6)	1.2 (1.4)
Euro area	12	3.4 (3.5)	0.5 (0.3)	0.7 (1.0)	1.5 (1.5)
Japan	4	1.0 (1.0)	2.0 (1.3)	0.8 (0.9)	0.9 (1.2)
China	18	3.0 (3.0)	5.1 (5.5)	4.5 (4.7)	4.4 (4.3)
Oil-importing EMEs‡	34	4.5 (4.3)	3.6 (3.6)	3.0 (3.0)	3.4 (3.6)
Rest of the world§	16	3.5 (3.5)	1.7 (1.4)	1.4 (1.4)	1.3 (1.7)
World	100	3.4 (3.4)	2.9 (2.8)	2.3 (2.4)	2.6 (2.7)

* Shares of gross domestic product (GDP) are based on International Monetary Fund (IMF) estimates of the purchasing-power-parity valuation of country GDPs for 2022 from the IMF's October 2023 *World Economic Outlook*. The individual shares may not add up to 100 due to rounding.

† Numbers in parentheses are projections used in the July Report.

‡ The oil-importing emerging-market economies (EMEs) grouping excludes China. It is composed of large EMEs from Asia, Latin America, the Middle East, Europe and Africa (such as India, Brazil and South Africa) as well as newly industrialized economies (such as South Korea).

§ "Rest of the world" is a grouping of other economies not included in the first five regions. It is composed of oil-exporting EMEs (such as Russia, Nigeria and Saudi Arabia) and other advanced economies (such as Canada, the United Kingdom and Australia).

Sources: National sources via Haver Analytics and Bank of Canada calculations and projections

1 The global projection was completed before third-quarter activity data for China were released.

Box 1

Changes to the economic projection since the July Report

Global outlook

The outlook for global growth is largely unchanged from the July Report, but some compositional differences are relevant for the Canadian outlook:

- The outlook for growth in 2023 in the United States has been revised up. Consumption and investment spending have been growing faster than expected in the July Report, supported by a stronger outlook for labour force participation and employment. However, long-term bond yields have increased sharply since July, and the higher levels are expected to persist. The associated tightening in financial conditions limits the extent of the revision, leaving the growth outlook for 2024 and 2025 broadly the same as in the July Report.
- The growth outlook for 2023 in China has been revised down. China's property developers are experiencing renewed financial strain. This stress in the property sector is weighing further on economic sentiment, adding to pressures in the broader financial system and slowing credit growth. As a result, domestic demand growth has slowed. Targeted policy actions are expected to keep growth in 2024 and 2025 roughly unchanged from the outlook in the July Report.

Canadian outlook

Supply and demand in the Canadian economy are now closer to balance, but inflationary pressures are more persistent than expected:

- Growth in gross domestic product (GDP) in the second quarter of 2023 was well below expectations. Household spending—both consumption and housing—was weaker than anticipated. Forest fires and the Public Service Alliance of Canada strike also had a bigger negative impact than originally estimated.
- The outlook for GDP over 2024 has been revised down because of weaker consumption and housing spending. This weakness is due to a more prolonged impact from past monetary policy tightening and higher long-term interest rates. **Table 2** and **Table 3** on page 11 present the revisions to the forecast for GDP growth.
- Potential output has been revised down slightly over the projection horizon, reflecting ongoing weakness in productivity. Unexpected strength in population growth has provided a partial offset. Overall, the projection now begins with the economy being in a situation of slight excess supply and remaining in excess supply throughout the forecast.
- The outlook for consumer price index inflation through to the end of 2024 has been revised up. About half of this revision reflects the higher assumption for oil prices. Shelter price inflation has also increased, and underlying inflationary pressures are more persistent than expected. Elevated inflation expectations, corporate pricing behaviour and strong wage growth have also kept underlying inflationary pressures higher than expected.

Slowing inflation

Falling energy prices lowered inflation rates across most regions over the first half of the year (**Chart 1**). More recently, slower growth in prices for both non-energy goods and shelter has contributed more to declining inflation than energy has. Inflation in services prices excluding shelter has been slow to adjust.

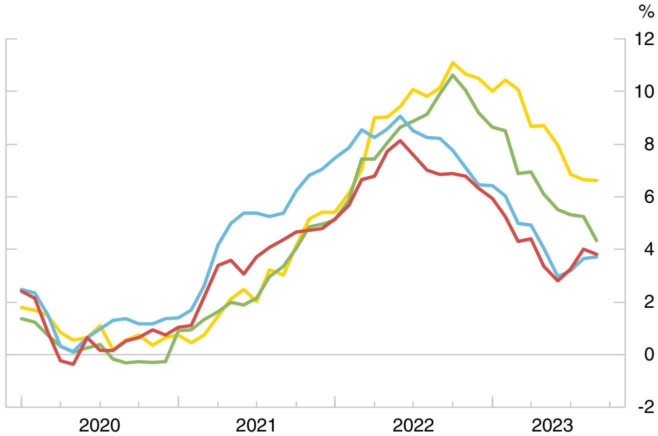
Inflation in non-energy goods prices has been easing because of supply and demand factors. On the supply side, pressures from global supply chain bottlenecks have lessened. At the same time, past increases in interest rates and a shift in spending patterns back toward high-contact services have slowed the demand for goods (**Chart 2**).

Shelter price inflation, though generally still high, is now declining in most advanced economies. This is expected to reduce overall inflation, but the extent of the impact will likely vary across countries. This variation is partly due to differences in how national price indexes measure housing costs (**Box 2**). In the United States, shelter costs are expected to be a significant driver of falling inflation in 2024 because rent is not rising as sharply as before.

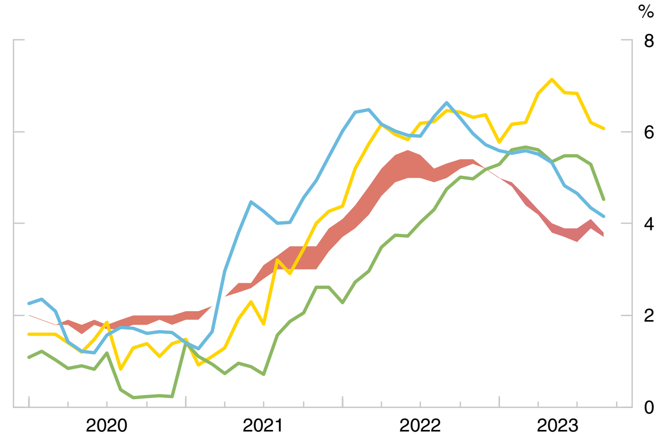
Chart 1: Inflation is slowing

Year-over-year percentage change, monthly data

a. Total inflation



b. Core inflation



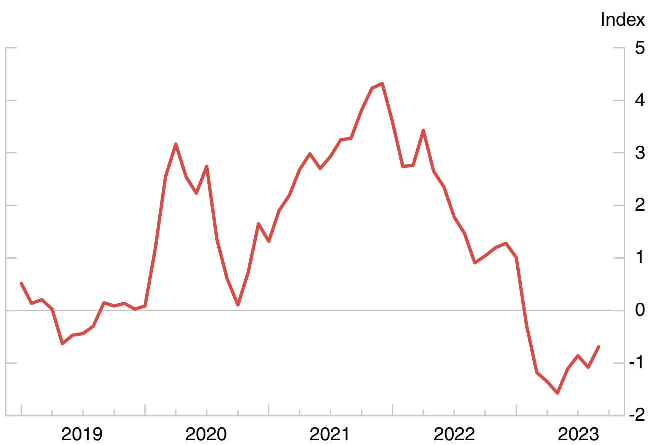
Note: The rate of inflation is calculated based on the Harmonised Index of Consumer Prices for the euro area and the consumer price index (CPI) for all other countries. Core inflation is a range of CPI-trim and CPI-median for Canada and CPI excluding food and energy for the other countries.

Sources: Statistics Canada, US Bureau of Labor Statistics, Eurostat and Office for National Statistics (United Kingdom) via Haver Analytics and Bank of Canada calculations

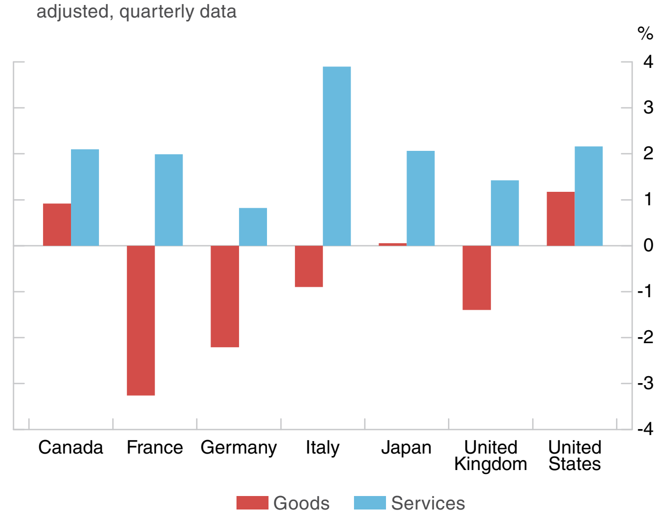
Last observation: September 2023

Chart 2: Supply chain pressures have eased, and consumer spending has shifted from goods to services

a. Global Supply Chain Pressure Index, monthly data



b. Real consumption, year-over-year percentage change, seasonally adjusted, quarterly data



Note: The Global Supply Chain Pressure Index (GSCPI) provides a comprehensive summary of potential supply chain disruptions that controls for demand-side factors. GSCPI readings measure standard deviations from the index's historical average. An increase (decrease) in the index reflects an increase (decrease) in supply chain pressures from historical norms.

Sources: Federal Reserve Bank of New York, Statistics Canada, US Bureau of Economic Analysis and Organisation for Economic Co-operation and Development via Haver Analytics and Bank of Canada calculations

Last observations: panel a, September 2023; panel b, 2023Q2

Strong demand, tight labour markets and the impact of businesses' inflation expectations on their price-setting behaviour are hindering the adjustment of inflation in services prices, particularly in the United States. As a result, prices of services are expected to adjust gradually as tight monetary conditions slow demand. Overall, inflation is expected to be close to central bank targets across most major advanced economies in 2025.

Box 2

Differences in shelter price inflation across advanced economies

Many advanced economies have experienced large movements in shelter price inflation over the last few years (**Chart 2-A**). After a modest decline during the first year of the COVID-19 pandemic, shelter price inflation rose rapidly starting in 2021. It has peaked in most economies but remains well above the pre-pandemic trend.

These recent movements in shelter price inflation have varied widely across countries. This is due to differences in economic conditions in each country and the way shelter costs are measured in a country's consumer price index (CPI). In general, shelter price inflation in most advanced economies includes two key components: rental price inflation and owner-occupied housing (OOH) price inflation.

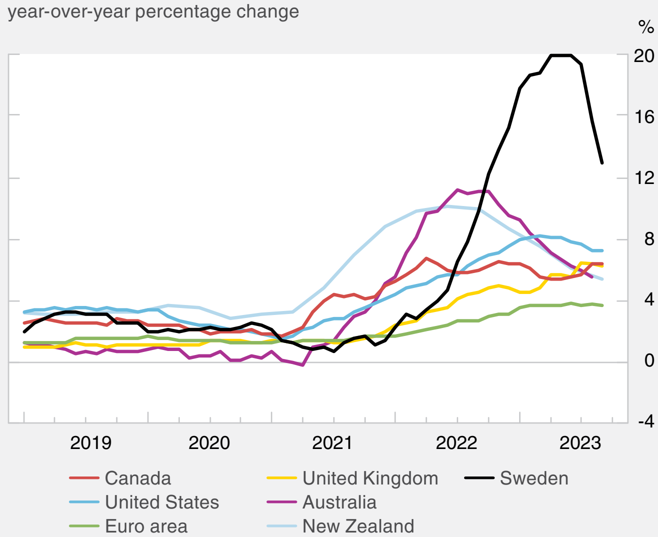
Measures of rental price inflation are often based on survey responses, though the exact method to calculate this measure varies from country to country. In Canada, information in the CPI is updated monthly based on survey responses. In the United States, survey responses are gradually phased into the CPI over six months. As a result, changes in rent prices in the US market show up slowly in official measures and the effects on inflation tend to be persistent.

For OOH price inflation, three approaches stand out among advanced economies:

- In Canada and Sweden, OOH price inflation is calculated using a variation of a user cost approach. This method estimates the direct cost of owning and occupying a home. As a result, it includes both out-of-pocket expenses—such as mortgage interest, home repairs and insurance—and implicit costs that a homeowner would normally incur, like depreciation.
- Other countries, such as the United States, calculate OOH price inflation using a rental equivalence approach. This method estimates the market price that homeowners would pay to rent similar accommodations. These countries do not explicitly include mortgage interest costs in their shelter price indexes.

Chart 2-A: Shelter price inflation varies widely across countries

Shelter price inflation excluding utilities, quarterly and monthly data, year-over-year percentage change



Note: The rate of inflation is calculated based on the Harmonised Index of Consumer Prices for the euro area and the consumer price index for all other countries. Data are quarterly for New Zealand and monthly for all other countries.

Sources: Statistics Canada, US Bureau of Labor Statistics, Eurostat, UK Office for National Statistics, Statistics Sweden, Australian Bureau of Statistics, Stats NZ via Haver Analytics and Bank of Canada calculations

Last observations: Australia, August 2023; New Zealand, 2023Q3; others, September 2023

- Australia and New Zealand use a net acquisitions approach, which is based on the cost of purchasing newly built properties, excluding the value of the land. These countries also do not explicitly include mortgage interest costs in their shelter price indexes.

The weight of shelter costs varies across different CPI baskets. Shelter costs comprise roughly one-quarter of the basket in Canada and range from about one-tenth to one-third in other advanced economies (**Table 2-A**). One major reason for this difference is that OOH is excluded from the CPIs tracked by several major central banks, such as the Bank of England and the European Central Bank.

(*continued…*)

Box 2 (*continued*)

Table 2-A: Weights of shelter components in the consumer price index (CPI)

	Percentage of total CPI basket			
	Rent	Owner-occupied housing (portion of which is mortgage interest costs)	Other	Shelter excluding utilities
Canada	6.8	17.9 (3.8)	1.0	25.7
United States	7.6	25.7	1.6	34.9
United Kingdom	7.9	N/A	1.3	9.2
Euro area	5.6	N/A	3.9	9.5
Australia	5.8	8.6	4.7	19.0
New Zealand	9.6	9.8	5.4	24.7
Sweden	9.8	8.6 (3.2)	1.0	19.3

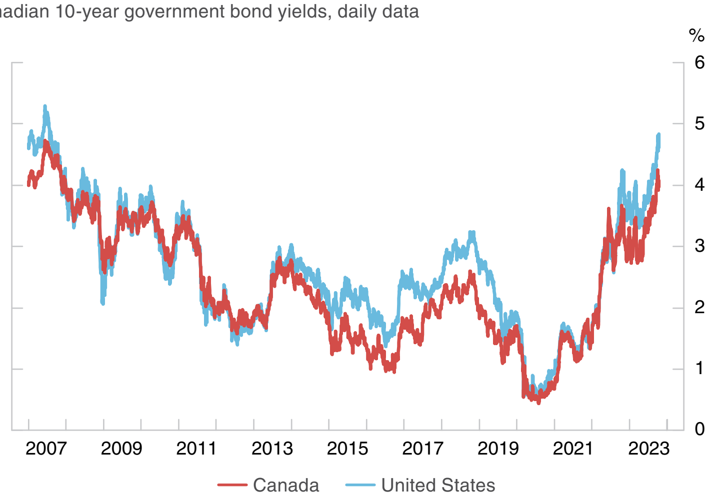
Note: "Other" includes items such as insurance and miscellaneous services connected to the dwelling.
Sources: Statistics Canada, US Bureau of Labor Statistics, Eurostat, Office for National Statistics (United Kingdom), Statistics Sweden, Australian Bureau of Statistics and Stats NZ via Haver Analytics

Tighter financial conditions

Global financial conditions have tightened since the July Report. Most notably, yields on long-term bonds have seen a sharp rise (**Chart 3** and **Box 1**). A number of factors could explain why yields have risen, and separating out their contributions is difficult. First, real yields have increased, due in part to market expectations that policy rates will remain higher for longer. Second, the term premium has risen, reflecting increased market uncertainty about how high policy interest rates may rise and how long they may remain elevated. Third, factors such as the large fiscal deficit in the United States and high issuance of government debt globally, amid soft demand for such assets, may also be playing a role. Finally, the rise in long-term interest rates may reflect the market's reassessment of the neutral rate of interest. The Canadian dollar has been broadly stable against the US dollar this year (**Chart 4**), although it has appreciated against a basket of other currencies.

Chart 3: North American long-term bond yields are at their highest levels since before the 2008–09 global financial crisis

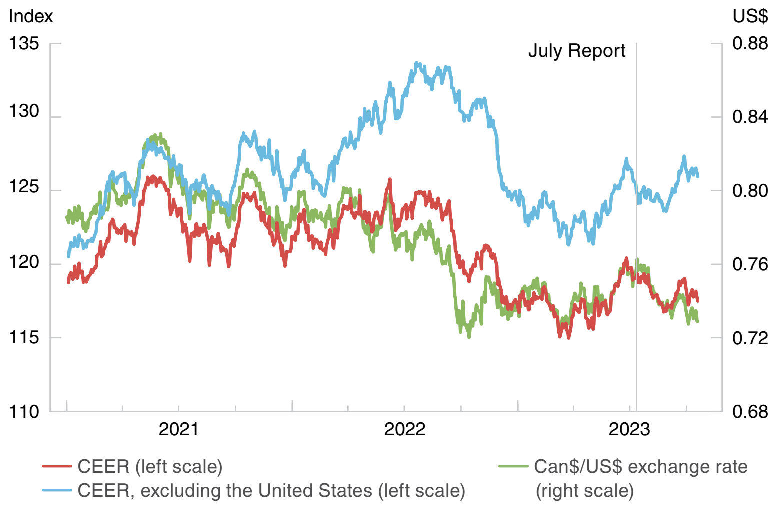
US and Canadian 10-year government bond yields, daily data



Source: Bloomberg Finance L.P.
Last observation: October 19, 2023

Chart 4: The Canadian dollar has been broadly stable against the US dollar in 2023

Canadian exchange rates, daily data



Note: CEER is the Canadian Effective Exchange Rate index—a weighted average of bilateral exchange rates for the Canadian dollar against the currencies of Canada's major trading partners.

Sources: Bloomberg Finance L.P. and Bank of Canada calculations

Last observation: October 19, 2023

Resilient US demand, sluggishness in China

The US economy has grown robustly since mid-2022. Consumption has been supported by strong employment growth and households spending their savings accumulated during the COVID-19 pandemic. Strong consumer demand and an easing of supply constraints have boosted investment. Growth is expected to decelerate over the coming quarters and remain weak in 2024. This is largely due to the impact of past interest rate increases and the recent tightening of overall financial conditions. Growth is projected to pick up in 2025 as the impact of past monetary policy tightening eases.

In contrast, growth in China slowed sharply in the second quarter of 2023 after the strong reopening effects observed in the first quarter dissipated. More recently, problems in China's property sector have intensified anew, leading to increased uncertainty and subdued sentiment. Foreign demand for China's exports is also growing at a slower pace, and export prices have been falling.

In the euro area, growth remains sluggish. Recent data point to a slowdown in the second half of this year as the impact of past interest rate increases and the tightening in financial conditions restrain growth. Growth is projected to pick up gradually over 2024 and 2025 as the effects of past energy shocks and monetary tightening fade.

Higher oil prices

Global oil prices have fluctuated around a higher level than assumed in the July Report. Prices rose sharply after Saudi Arabia and Russia cut oil production and exports. Subsequently, the war in Israel and Gaza has led to fresh concerns about oil supplies. The per-barrel price of Brent oil is assumed to be US$90 throughout the projection, which is US$10 higher than assumed in the July Report (**Box 3**).

Non-energy commodity prices are modestly lower than assumed in the July Report. The decline primarily reflects agricultural prices, which have broadly fallen because favourable weather has improved harvest forecasts. Lumber prices have also declined because weak housing activity across North America is weighing on demand.

Box 3

Key inputs to the projection

The Bank of Canada's projection is conditional on several key inputs and assumptions about their future path. The Bank regularly reviews these assumptions and adjusts the economic projection accordingly. The key inputs to the Bank's projection are as follows:

- Over the projection horizon, the per-barrel prices for oil in US dollars are assumed to be $90 for Brent, $85 for West Texas Intermediate and $70 for Western Canadian Select. These prices are all $10 higher than in the July Report.
- By convention, the Bank does not forecast the exchange rate in the *Monetary Policy Report*. The Canadian dollar is assumed to remain at 74 cents US over the projection horizon, close to its recent average and 1 cent lower than the assumption in the July Report.
- Potential output growth in Canada is expected to increase from 1.6% in 2022 to about 2% per year over the projection horizon as labour productivity growth picks up from subdued levels.
- Real gross domestic product (GDP) is estimated to have grown by about 0.8% in the third quarter of 2023, below potential output growth. As a result, the Bank estimates that the output gap is between -0.75% and 0.25% in the third quarter.
  - The output gap for the second quarter, estimated to be between 0% and 1% in July, has been revised down in this Report. The range for the second quarter is now between -0.25% and 0.75%, 0.25 percentage points lower, reflecting weaker-than-expected GDP growth in the first half of 2023 (**Table 3** on page 11).
- The projection incorporates information from all provincial and federal budgets available at the time of writing.
- The nominal neutral interest rate in Canada is estimated to be in the range of 2% to 3%. The economic projection assumes that the neutral rate is at the midpoint of this range. The nominal neutral interest rate is defined as the real neutral rate plus 2% for inflation. The real neutral rate is the rate consistent with both output remaining sustainably at its potential and inflation remaining at target on an ongoing basis. It is a medium- to long-term equilibrium concept.

Canadian economy

CPI inflation has dropped significantly from its peak of 8.1% in June 2022. More recently, it has fluctuated between 2.8% and 4.0%. Although price pressures are easing for some goods and services, core inflation is proving to be more stubborn than anticipated.

Past interest rate increases are working through the economy, slowing demand and gradually reducing price pressures. Inflation expectations have eased, but they continue to be above the Bank's forecast for inflation. Moreover, businesses are still able to easily pass on cost increases, and wage growth remains strong. As a result, progress toward the inflation target has been slow.

Inflation is still expected to ease steadily, but uncertainty about the pace toward the 2% target remains elevated.

Past interest rate increases slowing demand

Growing evidence shows that past interest rate increases are working to bring demand and supply back into balance (**Box 4**). GDP growth has averaged 1% over the past year, lower than the rate of potential output growth (**Table 2**,

Box 4

Charting monetary policy's impact on the economy and inflation

The Bank of Canada has raised interest rates significantly since March 2022. The most immediate impact has been an increase in the cost of new or existing debt. Mortgage credit growth slowed from 9.9% on an annualized three-month basis in February 2022 to 3.5% in August 2023. Monetary policy has also slowed demand growth by encouraging households to spend less and save more.[1] Higher interest rates take time to work—they affect demand first and then inflation.

Softer household spending

The rise in interest rates has cooled demand for housing and big-ticket items.[2] Since February 2022, housing resales have declined by 33% and house prices by about 10%.

Consumption per capita has stalled (**Chart 4-A**), mainly due to weakness in spending on goods and services that are sensitive to interest rates (**Chart 4-B**).[3] As the effects of higher interest rates continue to work their way through the economy, spending on other goods and services is also slowing. For 85% of categories of consumer spending, the pace of growth has decelerated. The notable exception is purchases of motor vehicles. Consumers were unable to purchase motor vehicles due to a lack of supply resulting from the semiconductor shortages that began early in the COVID-19 pandemic. The recent increase in purchases likely reflects improved supply combined with pent-up demand.

(*continued…*)

1 For more details, see the *Canadian Survey of Consumer Expectations—Third Quarter of 2023*.

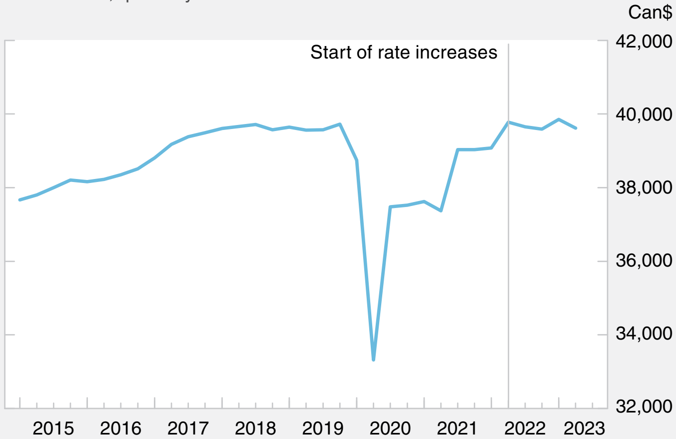
2 Other key factors lowering demand include normalization of spending following the pandemic boom (for example, purchases of furniture and appliances) and adjustments to spending due to high inflation.

3 The main reason for the weakness in per capita consumption has been the slowdown in spending, not the recent population boom.

Box 4 (*continued*)

Chart 4-A: Real consumption per capita has stalled

Real consumption per capita (aged 15 and over), seasonally adjusted at annual rates, quarterly data



Sources: Statistics Canada and Bank of Canada calculations

Last observation: 2023Q2

Since the beginning of 2023, average job gains have also slowed in sectors that are sensitive to changes in interest rates, including construction as well as information, culture and recreation services.

Impact of past tightening on business investment

Since mid-2022, growth in business investment has been modest. This situation masks two opposing forces. On the upside, investment in engineering structures is rising steadily, largely reflecting higher oil prices and major projects related to energy transportation. In contrast, investment in machinery and equipment has fallen by about 10%. According to results from business surveys, many firms mentioned the negative effects of elevated borrowing costs and tight credit conditions as key reasons for their moderate capital expenditures.

Disinflation in some categories of the consumer price index

Tighter monetary policy is softening demand and has thus contributed to slowing inflation over the past year. Despite considerable volatility in the data, several categories have seen drops in inflation rates:

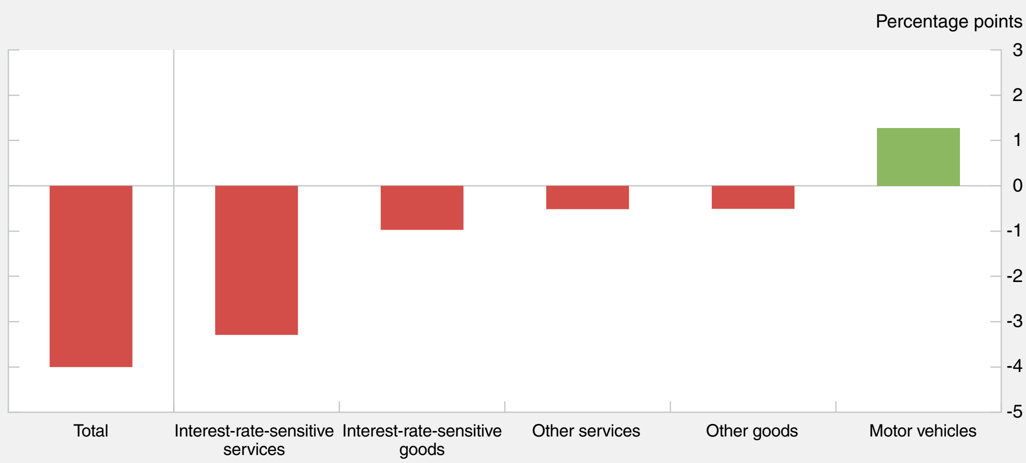
- Durable goods price inflation excluding purchases of vehicles has fallen from 5.4% to -0.4%, and semi-durable goods inflation has dropped from 4.3% to 2.1%.[4] The easing of supply chain issues has also contributed to slower inflation of goods prices.
- Homeowners' replacement cost inflation has fallen from a peak of 14.4% at the height of housing demand to -1.1%.
- Inflation in services prices excluding shelter has slowed from 5.1% to 1.5%.

An exception is inflation in prices of non-durable goods (excluding food in stores and energy). This category includes items such as personal care goods, cleaning products and paper supplies. Despite the slowdown in demand, inflation in this category remains close to 6%.

4 The annualized rate of growth in per capita consumption of semi-durable goods has dropped from over 6% before the start of the tightening cycle to -2% since the second quarter of 2022. As well, per capita consumption of durable goods was already falling before the rate increases, but the pace of the decline has accelerated since the increases began. Consumption of furniture and household appliances are good examples of this dynamic.

Chart 4-B: Interest-rate-sensitive categories are experiencing the greatest slowdown in consumption per capita

Contribution to change in average growth for real consumption per capita (aged 15 and over), seasonally adjusted at annual rates, quarterly data



Note: Average growth is calculated over 2020Q4–22Q2 and 2022Q3–23Q2. For more information about what is included in the consumption categories, see T. Chernis and C. Luu, "Disaggregating Household Sensitivity to Monetary Policy by Expenditure Category," Bank of Canada Staff Analytical Note No. 2018-32 (October 2018).

Sources: Statistics Canada and Bank of Canada calculations

Last observation: 2023Q2

Table 3 and **Chart 5**). Economic activity was flat in the second quarter of 2023, with some of this weakness due to temporary factors such as wildfires and the strikes in the public sector.

Higher interest rates have contributed to softening demand for housing and many durable goods as well as slowing household credit growth. Demand growth has also moderated for many services, such as recreation, restaurants and accommodation. Overall, per capita GDP growth has been negative, falling by 1.6% over the past year.

As interest rates have increased, measures of household financial stress have risen from the lows observed during the height of the pandemic. To date, indicators of financial stress point mainly to non-mortgage holders. For example, although delinquency rates for mortgage products have remained close to their all-time lows, the share of borrowers falling behind on payments by 60 days or more has continued to increase for most credit products. In particular, delinquency rates for motor vehicle loans have surpassed pre-pandemic levels.

Table 2: Contributions to average annual real GDP growth
Percentage points*†

	2022	2023	2024	2025
Consumption	2.5 (2.5)	1.3 (1.5)	0.4 (0.7)	0.9 (1.1)
Housing	-1.1 (-1.1)	-1.1 (-0.8)	0.2 (0.5)	0.7 (0.6)
Government	0.5 (0.5)	0.3 (0.5)	0.6 (0.6)	0.5 (0.4)
Business fixed investment	0.7 (0.7)	0.2 (0.0)	0.0 (0.1)	0.5 (0.4)
Subtotal: final domestic demand	2.6 (2.6)	0.7 (1.2)	1.2 (1.9)	2.6 (2.5)
Exports	0.9 (0.9)	1.6 (1.6)	0.3 (0.0)	0.8 (0.7)
Imports	-2.4 (-2.4)	0.4 (0.4)	-0.6 (-0.7)	-0.8 (-0.7)
Inventories	2.3 (2.3)	-1.5 (-1.4)	0.0 (0.0)	-0.1 (-0.1)
GDP	3.4 (3.4)	1.2 (1.8)	0.9 (1.2)	2.5 (2.4)
Memo items (percentage change):				
Range for potential output	0.5–2.0 (0.5–2.0)	1.4–3.2 (1.4–3.2)	1.0–3.2 (1.0–3.2)	1.0–3.2 (1.2–2.8)
Real gross domestic income (GDI)	5.1 (5.1)	-1.7 (-1.2)	0.7 (1.0)	2.3 (2.1)
CPI inflation	6.8 (6.8)	3.9 (3.7)	3.0 (2.5)	2.2 (2.1)

* Numbers in parentheses are from the projection in the previous Report.
† Numbers may not add to total due to rounding.
Sources: Statistics Canada and Bank of Canada calculations and projections

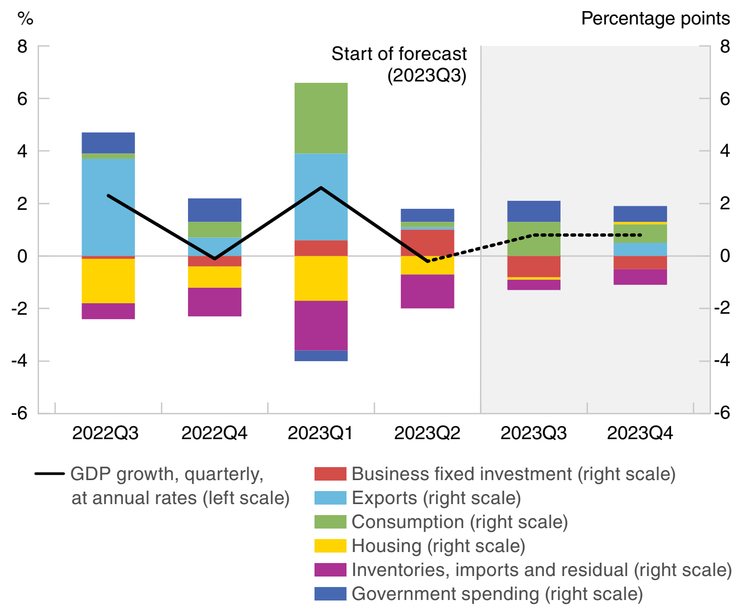
Table 3: Summary of the quarterly projection for Canada*

	2023					2022	2023	2024	2025
	Q1	Q2	Q3	Q4		Q4	Q4	Q4	Q4
CPI inflation (year-over-year percentage change)	5.2 (5.2)	3.6 (3.6)	3.7 (3.3)	3.3		6.7 (6.7)	3.3 (2.9)	2.5 (2.2)	2.1 (2.1)
Real GDP (year-over-year percentage change)	2.1 (2.2)	1.1 (1.7)	0.7 (1.5)	1.0		2.1 (2.1)	1.0 (1.8)	1.3 (1.5)	3.0 (2.5)
Real GDP (quarter-over-quarter percentage change at annual rates)†	2.6 (3.1)	-0.2 (1.5)	0.8 (1.5)	0.8					

* Details on the key inputs to the base-case projection are provided in **Box 3**. Numbers in parentheses are from the projection in the previous Report.
† Over the projection horizon, 2023Q3 and 2023Q4 are the only quarters for which some information about real GDP growth was available at the time the projection was conducted. For longer horizons, fourth-quarter-over-fourth-quarter percentage changes are presented. They show the Bank's projected growth rates of CPI and real GDP within a given year. As such, they can differ from the growth rates of annual averages shown in **Table 2**.
Sources: Statistics Canada and Bank of Canada calculations and projections

Chart 5: Real GDP growth has averaged 1% over the past year

Contribution to real GDP growth, quarterly data



Sources: Statistics Canada and Bank of Canada calculations, estimates and projections

Rebalancing of supply and demand

With slowing demand growth and rising supply, a variety of indicators suggest that the economy is approaching balance.

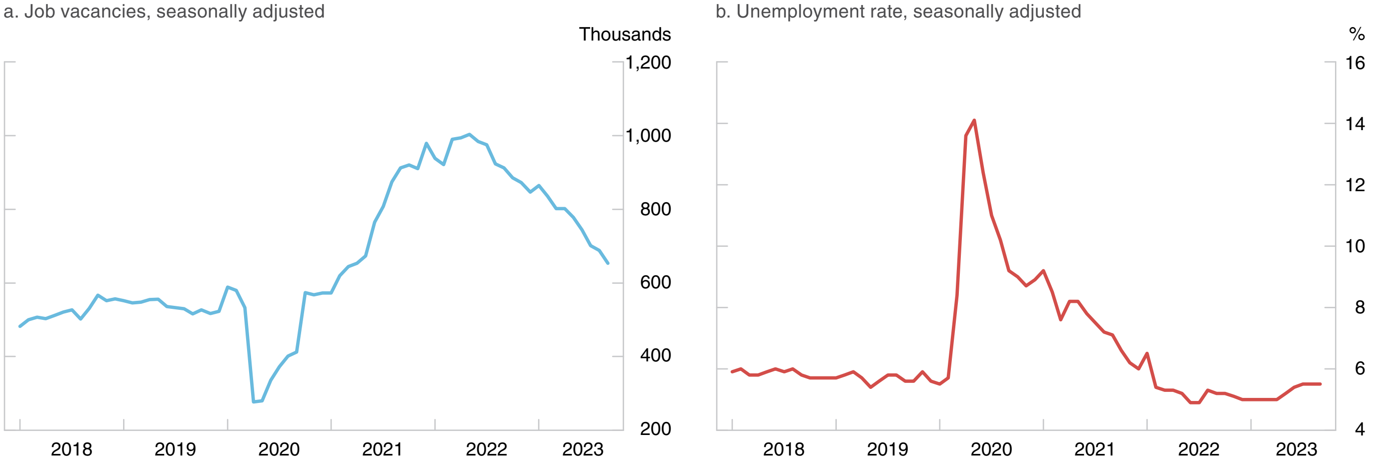
Excess demand pressures have been easing. The output gap is now estimated to be between -0.75% and 0.25% in the third quarter of 2023. As is typical at this point in the business cycle, there are mixed signals about the balance of supply and demand. Moreover, the recovery from the pandemic shock makes it harder than usual to assess the level of excess demand in the economy, so uncertainty is greater than normal.

In the labour market, job gains slowed to an average of around 32,000 per month in the third quarter, below the pace consistent with labour force growth. The Bank's business surveys also suggest that the economy is moving closer to balance. Businesses have seen indicators of capacity pressures fall from high levels, and their hiring and investment plans have been trending down. In the Business Outlook Survey (BOS) for the third quarter of 2023, the share of businesses reporting binding labour shortages has returned close to its historical average.

Other labour market indicators, however, point to modest excess demand. While job vacancies have eased significantly over the past year, they have not yet returned to pre-pandemic levels. The unemployment rate has risen in recent months but remains low (**Chart 6**). Consistent with a tight labour market, wage pressures are elevated and reports of shortages of skilled workers are widespread (**Chart 7**).

Chart 6: The labour market has eased substantially but remains tight

Monthly data



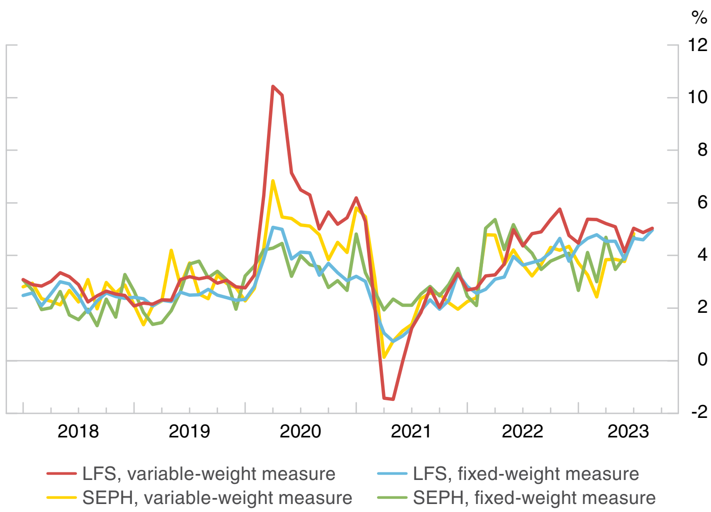
Note: Due to data limitations at the onset of the pandemic, official job vacancy statistics from the Job Vacancy and Wage Survey are unavailable from April to September 2020. These missing values as well as the values for August and September 2023 are estimated using Indeed online job postings data.

Sources: Statistics Canada, Indeed and Bank of Canada calculations

Last observation: September 2023

Chart 7: Measures of wage growth have been in the 4% to 5% range

Year-over-year percentage change, monthly data



Note: LFS is the Labour Force Survey; SEPH is the Survey of Employment, Payrolls and Hours. The LFS fixed-weight measure is constructed using 2019 employment weights.

Sources: Statistics Canada and Bank of Canada calculations

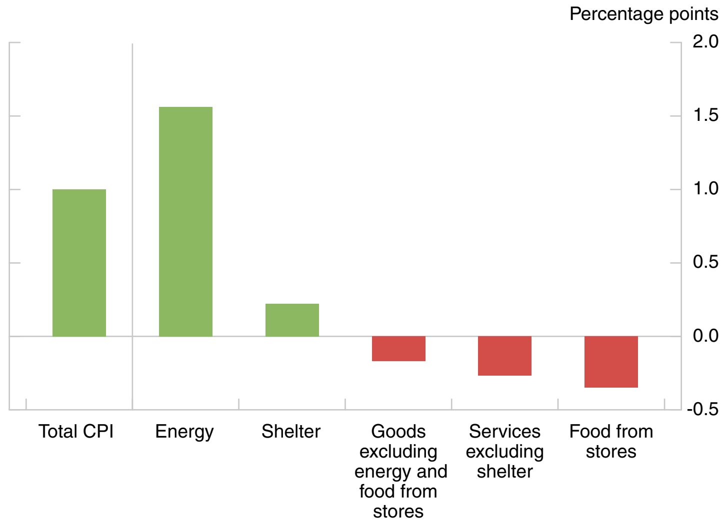
Last observations: LFS, September 2023; SEPH, July 2023

Persistent inflationary pressures

CPI inflation in Canada declined from a peak of 8.1% in 2022 and has been volatile in recent months, ranging from 2.8% to 4.0%. Initially, the decline was due to falling energy prices and improvements in global supply chains. More recently, higher interest rates have led to a better balance between supply and demand. The impact on inflation is materializing, albeit more slowly than expected.

Chart 8: Energy prices have largely driven inflation dynamics since June

Contribution to change in year-over-year CPI inflation from June to September 2023, monthly data

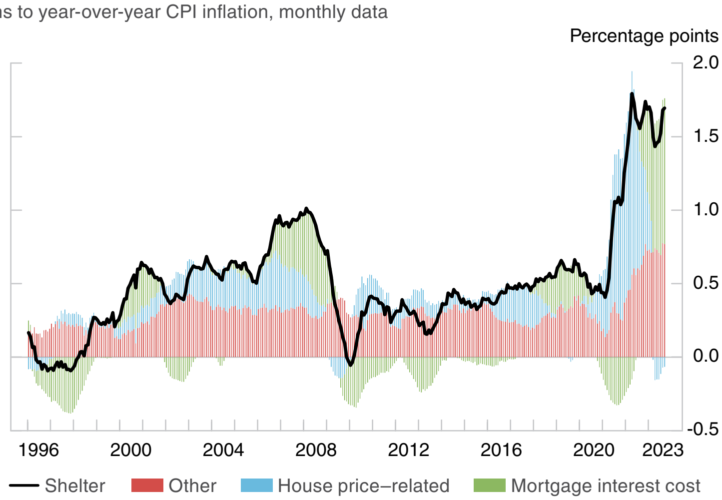


Sources: Statistics Canada and Bank of Canada calculations

Last observation: September 2023

Chart 9: Shelter price inflation is high, reflecting increases in mortgage interest and other housing costs

Contributions to year-over-year CPI inflation, monthly data



Note: "House price–related" includes homeowners' replacement cost and other owned accomodation expenses. "Other" includes rent, homeowners' home and mortgage insurance, homeowners' maintenance and repairs and property taxes and other special charges.

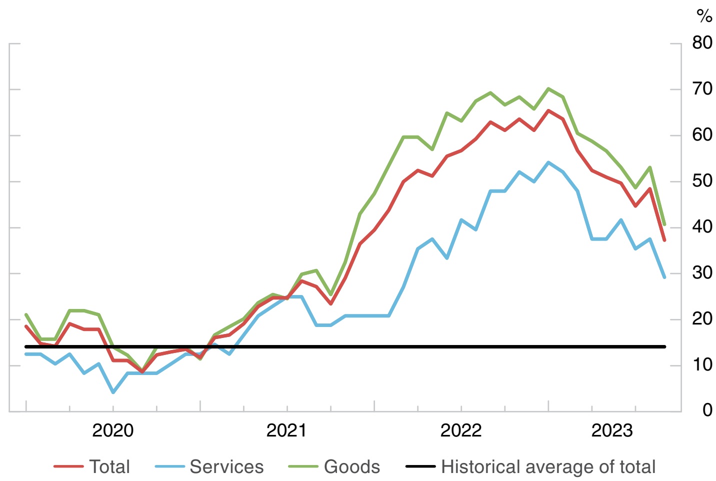
Sources: Statistics Canada and Bank of Canada calculations

Last observation: September 2023

In recent months, higher oil prices have boosted energy price inflation, especially for gasoline (**Chart 8**). Shelter price inflation has also picked up, with a three-month rate of 8.0%. It has also become more broad-based, with rent and other accommodation expenses increasing in addition to the ongoing rise in mortgage interest costs (**Box 2**). In previous cycles, when the contribution from mortgage interest costs has gone up, the impact on shelter inflation has been mitigated by lower inflation in house price–related components. However, recently, structural supply challenges have limited this offset and put upward pressure on other shelter components (**Chart 9**).

Chart 10: Price growth across goods and services remains widespread but is clearly easing

Share of CPI components with growth above 5% over the past 12 months, monthly data



Note: The historical average is calculated using data from January 1995 to December 2019.
Sources: Statistics Canada and Bank of Canada calculations
Last observation: September 2023

At the same time, progress toward lower inflation continues for other subcomponents of the CPI. Three-month inflation for food purchased from stores has fallen to 3.9%, and growth in input costs has eased. Inflation for goods excluding energy and food from stores has also moderated because demand for these goods has diminished. Likewise, inflation for services excluding shelter has declined as the economy has slowed. Moreover, while larger-than-normal price increases remain widespread across goods and services, the breadth has narrowed considerably (**Chart 10**).

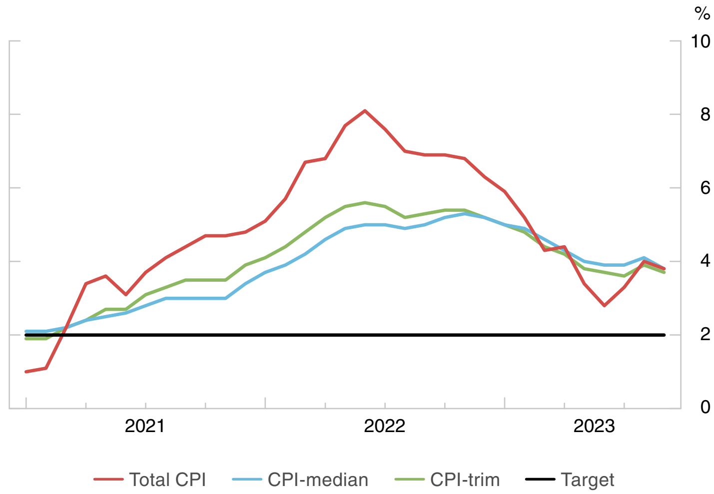
Some of the subcomponents of the CPI show indications of improvement, but overall progress toward lower inflation has been slower than anticipated.

Core inflation has not declined as much as expected. It has made little progress after falling on a year-over-year basis from just over 5% in 2022 to just under 4% in mid-2023 (**Chart 11**). This is consistent with the three-month rates (**Chart 12**):

- CPI-trim and CPI-median have hovered mostly in the 3½% to 4% range over the past year.
- Alternative measures of core inflation—such as CPI excluding food and energy and CPIX, which excludes eight of the most volatile components—have eased slightly but have shown more volatility.

Chart 11: Underlying inflation is still elevated

Measures of total and core inflation, year-over-year percentage change, monthly data



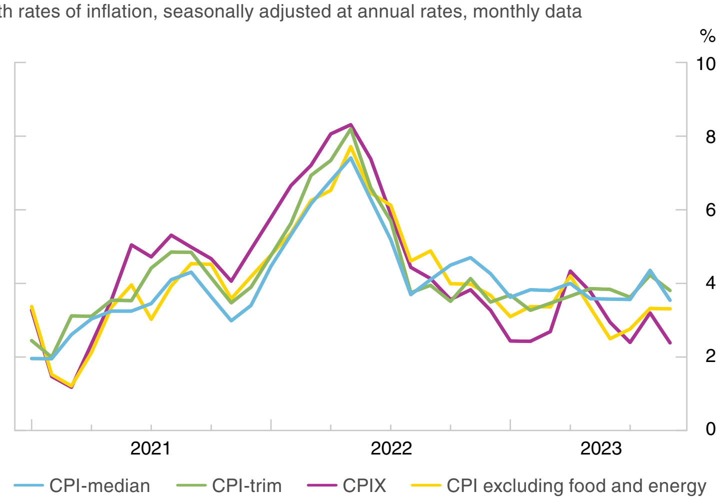
Note: More information about the CPI measures the Bank of Canada uses can be found on the Bank's website.

Sources: Statistics Canada and Bank of Canada calculations

Last observation: September 2023

Chart 12: Three-month core inflation rates remain elevated

Three-month rates of inflation, seasonally adjusted at annual rates, monthly data



Note: More information about the CPI measures the Bank of Canada uses can be found on the Bank's website.

Sources: Statistics Canada and Bank of Canada calculations

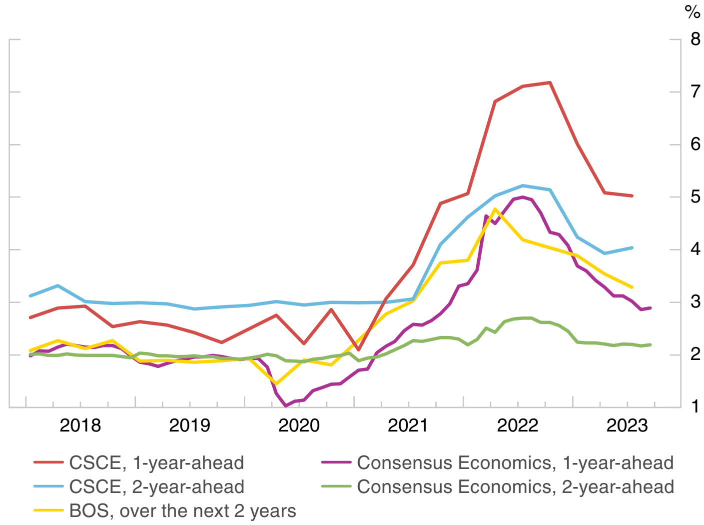
Last observation: September 2023

Inflation expectations, corporate pricing behaviour and wage growth yet to normalize

As excess demand eases, inflation is expected to slow. At the same time, inflation expectations should also fall, businesses' pricing behaviour should normalize, and wage growth should moderate. So far, progress has occurred but somewhat more slowly than anticipated. Many indicators remain elevated or have yet to normalize.

Chart 13: Near-term inflation expectations are high

Quarterly and monthly data



Note: CSCE is the Canadian Survey of Consumer Expectations; BOS is the Business Outlook Survey. Consensus Economics' forecasts for the next year (based on monthly data) and the next two years (based on a combination of monthly and quarterly data releases) are transformed into fixed-horizon forecasts by the weighted average of fixed-date forecasts. "1-year-ahead" refers to inflation expectations over the next 12 months. "2-year-ahead" refers to inflation expectations for the period 13 to 24 months from now.

Sources: Consensus Economics, Bank of Canada and Bank of Canada calculations

Last observations: Consensus Economics, September 2023; CSCE and BOS, 2022Q3

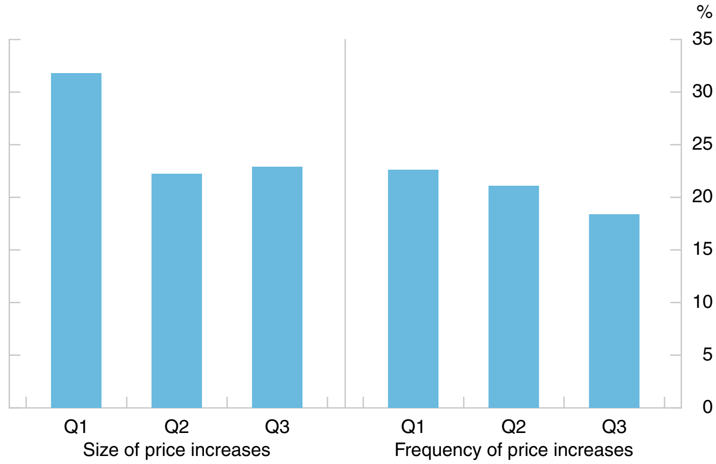
Near-term inflation expectations have eased, but they remain elevated and above the Bank's inflation forecast (**Chart 13**). Results from the BOS for the third quarter of 2023 show that businesses expect the annual rate of inflation to average between 3% and 3.5% over the next two years. Consumers' inflation expectations also remain higher than they were before the pandemic, averaging 5% over the next year and 4% for the year beyond that.[2] Long-term expectations remain consistent with the 2% target.

Corporate pricing behaviour has yet to normalize. Businesses continue to increase prices more frequently and by a larger amount than normal (**Chart 14**). This may indicate that households and businesses are, respectively, expecting to pay more and charge more for goods and services. High inflation expectations could also feed into wages.

2 Consumers' perceptions of current inflation, as reported in the *Canadian Survey of Consumer Expectations—Third Quarter of 2023*, are on average about 0.5 percentage points higher than actual CPI inflation. This gap has grown unusually wide in recent quarters. Even as CPI inflation has declined by 4.3 percentage points from its peak in mid-2022, consumers' perceptions of current inflation have fallen by only 1.4 percentage points. This could be related to consumers' sensitivity to components such as food and shelter.

Chart 14: Firms have not yet returned to their normal pricing behaviour

Balance of opinion, quarterly data



Note: Size of price increases—Balance of opinion is the percentage of firms responding to the Business Leaders' Pulse that are experiencing or expecting larger-than-normal price increases minus the percentage that are experiencing or expecting smaller-than-normal price increases. Frequency of price increases—Balance of opinion is the percentage of firms responding to the Business Leaders' Pulse that are experiencing or expecting more-frequent-than-normal price increases minus the percentage that are experiencing or expecting less-frequent-than-normal price increases. Firms without regular pricing frequency were excluded.

Source: Bank of Canada

Last observation: September 30, 2023

Slow demand growth and rising supply

Economic growth is expected to remain muted, averaging less than 1.0% over the next several quarters. The effects of past increases in interest rates and, more recently, tighter global financial conditions are expected to continue to weigh on consumption and business investment spending. Results from the BOS for the third quarter point to weakening sales growth in the next year (**Chart 15**), particularly for those businesses that are the most sensitive to interest rates. In addition, slowing foreign demand is anticipated to dampen Canadian export growth over this period. However, spending by government contributes materially to growth, averaging 2.5% through 2024, somewhat above potential output growth.

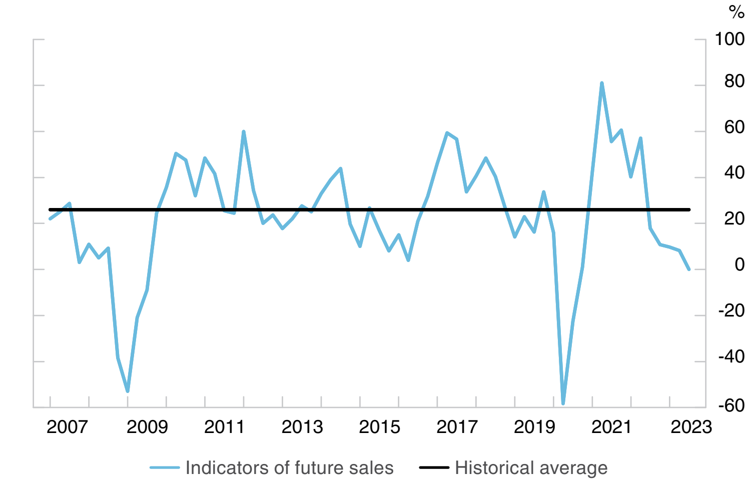
With demand continuing to grow more slowly than potential output, the economy is projected to move into modest excess supply in the fourth quarter of 2023, and excess supply increases through most of 2024.

GDP growth is expected to pick up at the end of 2024, rising to around 2.5% in 2025 (**Chart 16**) and this begins to reduce excess supply in the economy. Household spending on a per capita basis is weak in 2024. It then strengthens as the effects of monetary policy tightening on growth fades. Exports and business investment are supported by the recovery in foreign demand.

Potential output growth is estimated to average about 2% over the projection horizon. This estimate reflects solid population growth due to strong immigration and the ongoing arrival of large numbers of temporary residents. It also reflects an expected pickup in labour productivity from its current weakness.

Chart 15: Firms' sales outlooks have weakened further

Balance of opinion, quarterly data



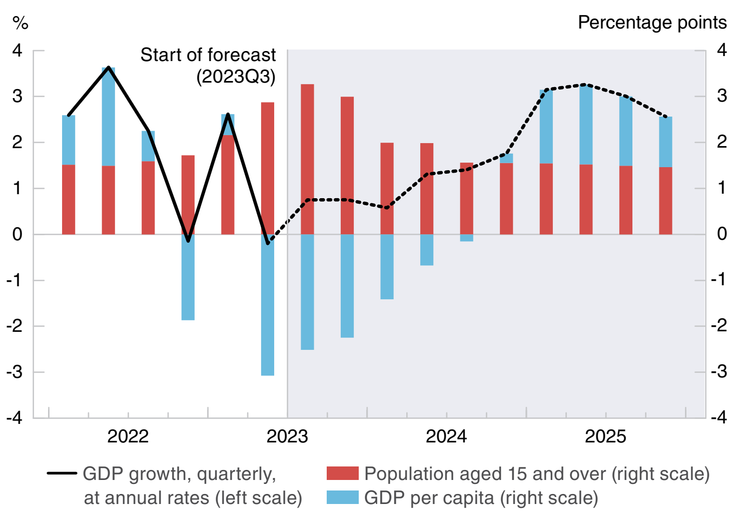
Note: Balance of opinion is the percentage of respondents to the Business Outlook Survey that report their recent indicators (order books, advance bookings, sales inquiries, etc.) have improved minus the percentage reporting that indicators have deteriorated. The historical average is calculated using data from the third quarter of 2003 to the third quarter of 2023.

Source: Bank of Canada

Last observation: 2023Q3

Chart 16: GDP growth per capita is expected to be subdued in 2024

Contribution to real GDP growth, quarterly data



Note: Data for the population aged 15 and over are from the Labour Force Survey.

Sources: Statistics Canada and Bank of Canada calculations, estimates and projections

Muted household spending growth

Consumer spending is expected to be subdued through 2024. While consumption is supported by strong population growth, on a per capita basis it is projected to continue declining through most of 2024. Responses to the Canadian Survey of Consumer Expectations for the third quarter of 2023 indicate that households are cutting back on their spending, delaying purchases and shifting their savings to higher-rate accounts in response to the ongoing effects of higher interest rates and the rising cost of living. Income growth is also projected to slow as the labour market eases further, weighing on the growth in consumption spending.

In contrast, residential investment is expected to start recovering in late 2023 from its recent lows as the boost to construction from strong demand outweighs the waning effects of higher interest rates.

Soft business investment and export growth

Business investment is expected to remain weak for the rest of 2023 before picking up gradually in 2024. Investment is being held back by elevated borrowing costs, tight credit conditions, the prospect of slowing economic activity and the winding down of large infrastructure projects. It begins to pick up in the second half of 2024 as demand improves and the drag from higher interest rates fades.

After a strong start to 2023, export growth is expected to stall over the rest of 2023 and 2024 due to softening foreign demand for non-commodity exports. Exports are anticipated to pick up in 2025, with the recovery in foreign demand and increased energy transportation capacity following the completion of the Trans Mountain Pipeline Expansion project.

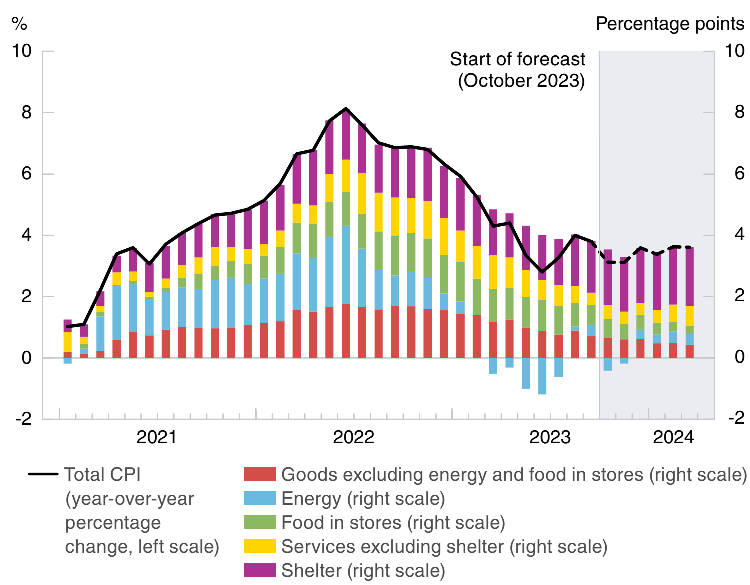
Growth in imports is projected to remain modest through the first half of 2024. It is expected to pick up over the second half of 2024 and 2025 due to strengthening domestic demand.

Inflation high in the near term, easing in 2025

CPI inflation is projected to remain persistently high, at roughly 3½%, until the middle of 2024. Energy prices no longer pull inflation down and instead add some upward pressure (**Chart 17**). Shelter price inflation will continue to be elevated because of higher mortgage interest costs, rent and other housing costs. The strength in rent and other housing costs is partly due to strong housing demand, which is supported by rapid population growth, and a structural lack of housing supply. Unlike in previous cycles, rising mortgage interest costs are not mitigated significantly by weakness in other shelter components.

Chart 17: CPI inflation is expected to remain elevated, reflecting higher energy price inflation and shelter price inflation

Contribution to CPI inflation, monthly data



Sources: Statistics Canada and Bank of Canada calculations, estimates and projections

Last data plotted: March 2024

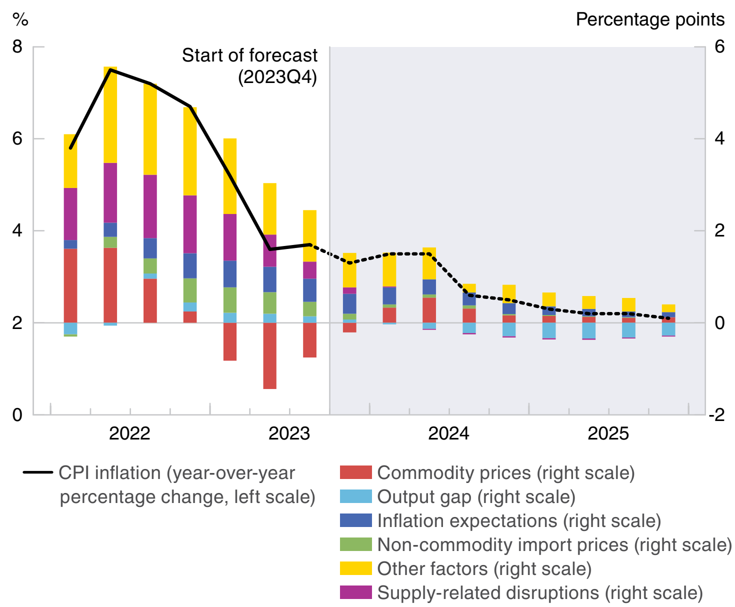
These upward pressures on inflation are anticipated to be partially offset by the easing of excess demand, weaker pressure from input costs and further disinflation in globally traded goods.

Slower growth in input costs is expected to result in further easing in food price inflation. The three-month rate for food price inflation has slowed and is well below the latest year-over-year number. This is a signal that food price inflation will likely ease further in the coming months.

Inflation is projected to fall to around 2.5% in the second half of 2024 (**Chart 18**). It then continues to decline, returning to the 2% target in 2025. Although shelter prices add upward pressure on inflation over the projection horizon, shelter price inflation is expected to slow from its current pace. Ongoing excess supply in the economy moderates price inflation, helps ease inflation expectations and encourages businesses to gradually return to more normal pricing behaviour.

Chart 18: CPI inflation is forecast to return to target by the end of 2025

Contribution to the deviation of year-over-year inflation from 2%, quarterly data



Note: Non-commodity import prices include the impact of the Can$/US$ exchange rate. Other factors could include underestimated demand pressures, such as from large imbalances in the housing market, or previously unobserved factors, such as greater pass-through from oil or import prices and atypical pricing behaviour by firms. The impact of the carbon price on year-over-year inflation is roughly 0.1 percentage point over the projection horizon and is included in commodity prices. Numbers may not add to total due to rounding.

Sources: Statistics Canada and Bank of Canada calculations, estimates and projections

Risks to the inflation outlook

As in the July Report, the outlook in the base-case scenario is the most likely outcome for inflation. Although the Bank sees both upside and downside risks to this outlook, with inflation above target for two years and expected to stay slightly above 3% for an additional year, the Bank is more concerned about upside risks to inflation. Moreover, with progress toward the 2% target slow and increased global risks of higher inflation, the risk that disinflation could stall or that inflation even could rise again has increased.

Main upside risks

As noted in past reports, several upside risks to inflation exist. The inflation expectations of households and businesses remain elevated. If these expectations do not decline as anticipated, inflation is likely to remain higher than in the base case. Furthermore, businesses may be slower to adjust their pricing behaviour. In addition, if the labour market remains tight or if productivity growth remains weak, cost pressures could be higher and more persistent than projected. Other risks, such as a growing number of extreme weather events affecting harvests and supply chains, could also put upward pressure on inflation.

Some risks have increased since the July Report. Notably, oil prices are higher than expected. So far, the war in Israel and Gaza has not impacted the supply of oil. However, if it were to spread further into a broader regional conflict, global oil supplies could be disrupted and oil prices would rise. Price increases could be amplified because current global inventories of oil are low. If such a rise in oil prices materializes and is sustained, pass-through to other prices may occur. Inflation could climb sharply, particularly in a context in which businesses change prices frequently. Heightened geopolitical uncertainties may also create new cost pressures by affecting the global supply chains for goods and raw materials.

Main downside risks

A faster-than-expected slowdown in the Canadian economy is the main downside risk to inflation. Such a slowing could occur through two main channels.

First, the effects of monetary policy could be larger than what is in the base case. With record-high levels of household debt, Canadians could cut back consumption spending more than projected. Lower house prices could exacerbate this decline. Business activities such as investment and hiring could also slow by more than the Bank expects.

Second, global activity could be weaker than in the base case. Monetary policy is tight in most advanced economies, and bond yields have risen sharply in recent weeks, reaching levels not seen since before the 2008–09 global financial crisis. If the increase in yields proves to be larger or more persistent than expected, equity and other asset prices could be negatively impacted further. This, in turn, would weigh on investment and consumption both abroad and in Canada. Moreover, previous episodes of monetary policy tightening have occasionally triggered market volatility and capital outflows from vulnerable and highly indebted countries, leading to sharp slowdowns in global growth. Weaker global demand could reduce prices for commodities and tradable goods.

Canadian economic growth and inflation would be pulled down if these risks were to materialize.