



BANK OF CANADA
BANQUE DU CANADA

Monetary Policy Report

January 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.² 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).

² See, for example, the [range of indicators](#) that the Bank is using to track the recovery of the labour market from the effects of the COVID-19 pandemic.

The *Monetary Policy Report* is available on the Bank of Canada's website at [bankofcanada.ca](https://www.bankofcanada.ca).

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Monetary Policy Report

January 2023

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Overview

Inflation around the world remains high and broad-based, but in many countries it has receded from its peak, largely due to declines in energy prices. With continued easing in global supply chain disruptions, inflation in durable goods prices is also moderating.

Economic activity in advanced economies has been stronger than expected, labour markets remain tight, and core inflation has yet to show sustained improvement.

With inflation still too high, many central banks have continued to increase their policy rates to slow demand and bring inflation down.

Russia's invasion of Ukraine continues to disrupt commodity markets and affect global economic activity. China's abrupt lifting of COVID-19 restrictions poses an upside risk to commodity prices.

In Canada, higher interest rates are working their way through an overheated economy. It remains in excess demand, and this is putting upward pressure on some domestic prices. The labour market is still tight, and many businesses are finding it difficult to attract workers.

Monetary policy is slowing demand, helping the economy rebalance. Higher interest rates are weighing on household spending, particularly on housing and big-ticket items. As the effects of higher interest rates continue to spread through the economy, spending on consumer services and business investment is also expected to slow further. As well, weaker foreign demand will weigh on exports.

Growth is expected to stall through the middle of 2023, allowing supply to catch up with demand. On an annual average basis, growth of gross domestic product (GDP) is projected to slow to about 1% in 2023.

With the declines in energy prices, improved global supply chains and a slowdown in demand, consumer price index (CPI) inflation is expected to decline significantly this year. CPI inflation is projected to fall to around 3% in the middle of 2023 and reach the 2% target in 2024.

With inflation back to target, sustainable growth in the Canadian economy will resume, picking up to about 2% in 2024.

Global economy

Inflation has peaked and is easing in many countries, mainly because of declines in energy prices, improvements in supply chains and lower demand for traded goods. Core inflation, however, has yet to show a sustained improvement.

In advanced economies, labour markets are tight and consumer spending has been robust, particularly in the United States. Russia’s invasion of Ukraine continues to disrupt commodity markets and economic activity, hitting European economies especially hard.

Major central banks raised policy interest rates sharply over 2022. While the pace of tightening has recently slowed in several countries, some central banks have communicated the need for further policy rate increases. Despite this, global financial conditions have eased modestly since the time of the October Report.

Global economic activity is stronger than expected, led by consumption in many regions. Growth is projected to slow in 2023 to roughly 2% as pent-up demand from the pandemic fades and the rise in interest rates slows activity. Growth is then expected to pick up to about 2½% in 2024, with monetary policy still restraining the level of activity (**Table 1** and **Box 1**).

Table 1: Projection for global economic growth

	Share of real global GDP* (%)	Projected growth† (%)			
		2021	2022	2023	2024
United States	16	5.9 (5.9)	2.0 (1.8)	0.5 (0.2)	1.1 (1.0)
Euro area‡	12	5.3 (5.2)	3.4 (3.1)	0.2 (-0.5)	0.9 (1.6)
Japan	4	2.1 (1.7)	1.2 (1.7)	1.2 (1.6)	1.2 (1.2)
China	19	8.4 (8.1)	3.0 (2.4)	5.4 (4.9)	5.0 (5.0)
Oil-importing EMEs§	33	8.4 (8.7)	5.0 (4.5)	2.2 (1.8)	2.4 (2.6)
Rest of the world¶	17	5.2 (5.1)	3.6 (3.4)	0.3 (0.3)	2.1 (2.3)
World	100	7.1 (7.1)	3.6 (3.2)	1.9 (1.6)	2.4 (2.6)

* GDP shares are based on International Monetary Fund (IMF) estimates of the purchasing-power-parity valuation of country GDPs for 2021 from the IMF’s October 2022 *World Economic Outlook*. The individual shares may not add up to 100 due to rounding.

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

‡ Croatia joined the euro area on January 1, 2023. The current projection and historical data do not include the change in membership.

§ 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).

Source: Bank of Canada

Box 1

Changes to the economic projection since the October Report

Global outlook

The projection for global growth is stronger.

The following factors explain changes to the outlook in regions important for the Canadian economy:

- In the United States, the outlook for 2023 has been revised up, largely because household consumption has been stronger than expected. Financial conditions have also eased.
- In the euro area, growth in 2023 is higher than previously projected, reflecting recent strength in domestic demand. A healthy labour market and still-elevated household savings have supported spending. The outlook for core inflation is revised up, reinforced by the greater-than-expected pass-through of higher costs linked to energy disruptions. European Central Bank policy rates are expected to rise more aggressively and be more persistent than previously anticipated, leading to growth in 2024 being slower than previously assumed.
- The projection accounts for an earlier-than-expected change in China's "zero-COVID" policy. As a result, growth in China in 2023 is now anticipated to be stronger than previously projected.

Canadian outlook

- The labour market has been more resilient than expected, with robust job gains and the unemployment rate returning to near historical lows. Job vacancies have also eased by less than anticipated.
- The level of potential output has been revised up by less than gross domestic product (GDP). The economy is estimated to have been in greater excess demand in the second half of 2022 than previously projected. This is consistent with stronger labour demand. As a result, the projection begins with more excess demand and more domestic price pressures.
- The levels of economic activity and of potential output are both revised up over the projection.¹ **Table 2** and **Table 3** present the revisions to the forecast for GDP growth.
- The outlook for consumer price index inflation is revised down by about ½ a percentage point in 2023, mainly due to lower gasoline prices and a faster improvement in supply chain disruptions. At the same time, the outlook for core inflation is revised up, reflecting stronger demand.

¹ The level of GDP at the end of 2024 is about 0.8% higher than previously expected, while the level of potential output is about 0.5% higher.

The Bank expects that inflation will decline over the projection, moving closer to central bank targets. Previous drops in commodity prices, a further easing of supply challenges and slower demand growth in response to tighter monetary policy will all exert downward pressure on inflation.

Inflation high but declining

Inflation is coming off multi-decade highs in many countries. But core inflation has been more persistent (**Chart 1**).

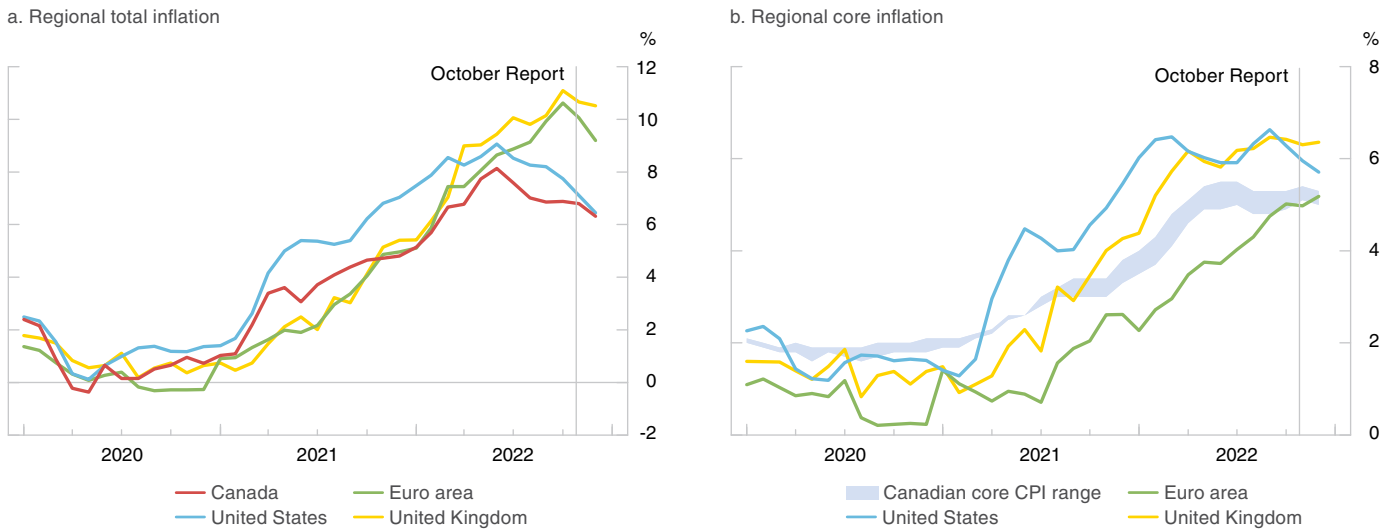
In the United States, inflation is projected to continue easing. Inflation in goods prices is expected to fall further due to past declines in commodity prices, slowing demand and improvements in global supply conditions (**Chart 2**).

Meanwhile, inflation in services prices has remained strong and broad-based. It will take some time for higher interest rates to help bring this down. The labour market is tight, labour costs in the services sector are growing strongly, and near-term inflation expectations are high. Inflation in shelter costs should ease earlier than that of other services, given that inflation in new rental agreements has already started to decline.¹

¹ Inflation in this category adjusts slowly as the stock of leases turns over.

Chart 1: Inflation has eased, but core inflation is more persistent

Year-over-year percentage change, monthly data



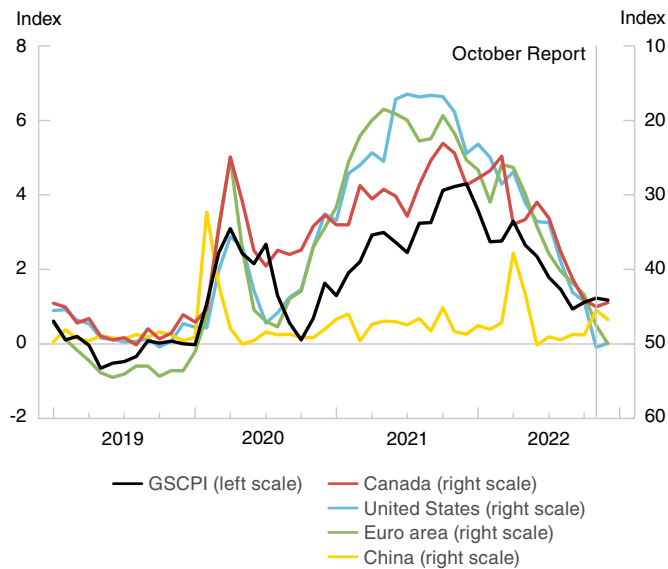
Note: The rate of inflation is calculated based on the Harmonised Index of Consumer Prices inflation for the euro area and CPI inflation for all other countries. The Canadian core CPI is a range of CPI-trim and CPI-median. Croatia joined the euro area on January 1, 2023. The current projection and historical data do not include the change in membership.

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

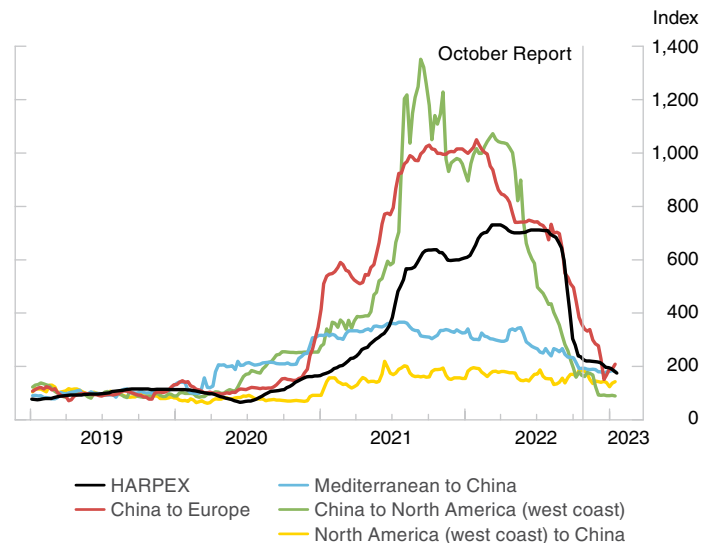
Last observation: December 2022

Chart 2: Global supply bottlenecks are resolving

a. GSCPI and PMI: Manufacturing suppliers' delivery times, monthly data



b. Transportation costs, index: 2019 = 100, weekly data



Note: The Global Supply Chain Pressure Index (GSCPI) provides a comprehensive summary of potential supply chain disruptions that controls for demand-side factors. The Purchasing Managers' Index (PMI) is a diffusion index of business conditions. For suppliers' delivery times, an inverted index is used to show that a reading less than (greater than) 50 indicates an increase (decrease) in delivery times compared with the previous month. All series in panel b are from the Freightos Baltic Index except the HARPEX (Harper Petersen Charter Rates Index). The Freightos Baltic Index provides market ocean freight rates for different trade lanes. The HARPEX reflects the worldwide price development on the charter market for container ships. Croatia joined the euro area on January 1, 2023. The current projection and historical data do not include the change in membership.

Sources: S&P Global and HARPEX via Haver Analytics, Freightos Baltic Index via Bloomberg Finance L.P., Federal Reserve Bank of New York and Bank of Canada calculations

Last observations: PMI and GSCPI, December 2022; HARPEX, January 20, 2023; Freightos Baltic Index, January 15, 2023

In contrast, the key drivers of higher inflation in Europe have been more heavily influenced by increases in energy costs linked to Russia’s invasion of Ukraine and the past depreciation of the euro. Tight labour markets are also adding to labour costs. Services price inflation has risen and become increasingly broad-based with the reopening of economies in the region. Inflation is expected to decline over the projection horizon as the war’s effects on food and energy price inflation dissipate, past effects of supply chain disruptions fade, and higher interest rates reduce demand growth.

Continued monetary policy tightening

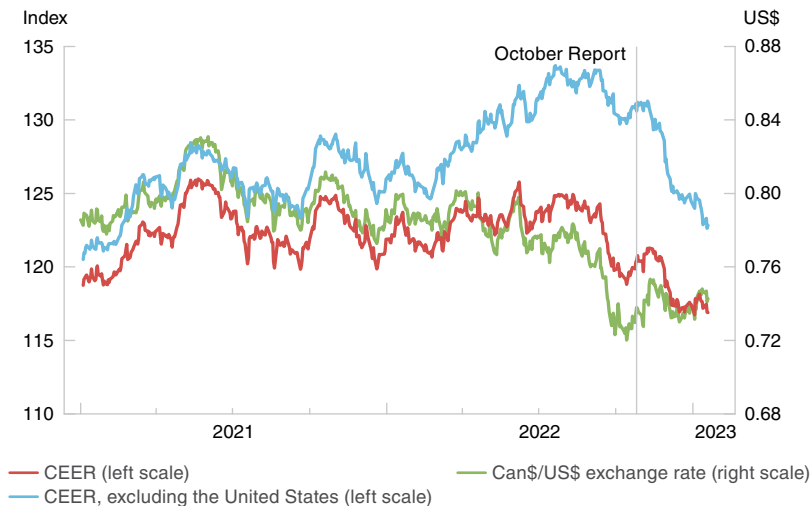
With major central banks rapidly tightening monetary policy to address persistent inflationary pressures, financial conditions are restrictive. Nominal and real yields on long-term government bonds have risen substantially since the start of 2022. In particular, the yield on inflation-indexed 10-year US Treasury bonds has averaged 1.4% since the October Report—near its highest level in the past decade.

Nonetheless, financial conditions have eased somewhat since the October Report. This largely reflects a decline in risk premiums across asset classes because headline inflation has edged down from its peak and the perceived risk of an overtightening of monetary policy has decreased.

The Can\$/US\$ exchange rate has been reasonably stable at around 74 cents since the October Report (**Chart 3** and **Box 2**). In contrast, the Canadian dollar has substantially depreciated against the currencies of other key trading partners, reversing the appreciation that took place through much of 2022.

Chart 3: The Canadian dollar has remained stable against the US dollar

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: January 19, 2023

Box 2

Key inputs to the projection

The Bank of Canada's projection is conditional on several key assumptions. Any changes to these will affect the outlook for the Canadian economy. The Bank regularly reviews these assumptions and how they may impact the economic projection. The key inputs into the Bank's projection are as follows:

- Oil prices have fallen. Over the projection horizon, the per-barrel prices in US dollars are assumed to be \$85 for Brent and \$80 for West Texas Intermediate, both \$10 lower than assumed in the October Report. The per-barrel price of Western Canadian Select is assumed to be \$60, which is \$15 lower.
- 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 in line with the assumption in the October Report.
- Potential output growth in Canada is expected to increase from about 1% in 2022 to roughly 2¼% on average over 2023 and 2024.
- Real gross domestic product is estimated to have grown at a slower pace than potential output in the fourth quarter of 2022. As a result, the Bank estimates that the output gap is between 0.50% and 1.50% in the fourth quarter, down from an upwardly revised estimate of 0.75% to 1.75% in the third quarter.
- The projection incorporates information from all provincial and federal budgets available at the time of writing. Relative to the October Report, this includes about \$6.5 billion in additional special federal and provincial transfers for the fourth quarter of 2022 and the first quarter of 2023 related to inflation and affordability.
- The nominal neutral policy interest rate is defined as the real neutral rate plus 2% for inflation. The real neutral rate is defined as 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. For Canada, the projection assumes that the nominal neutral rate is at the midpoint of the estimated range of 2% to 3%. This range was last reassessed in the April 2022 Report.

Weakening US activity

The Bank projects US activity to remain generally flat through 2023, mostly because of the rise in interest rates. Growth is then expected to pick up gradually over the course of 2024, as the effects on growth of monetary policy tightening fade.

The outlook for Canadian exports largely depends on three components of US demand:

- The recent strength in consumption spending is anticipated to slow in early 2023. The boost to growth coming from high demand for in-person services and a catch-up in motor vehicle sales should diminish over time. Consumption spending is expected to pick up again in 2024 as the impact of higher interest rates on growth dissipates.
- US residential investment has fallen sharply in response to the rise in mortgage interest rates. This weakness is projected to continue through the first half of 2023. New household formation and growth in disposable income are expected to contribute to a rebound in residential investment growth in the second half of the year.
- Business investment is projected to contract over 2023 and 2024 due to weak demand and the high cost of capital.

Slow activity in the euro area

The impact of the Russian invasion of Ukraine has weighed heavily on economic activity in the euro area. Elevated natural gas prices have constrained industrial production, and high inflation has eroded purchasing power. Recent increases in interest rates are also starting to weigh on demand. Business and consumer confidence has weakened considerably.

Warmer-than-normal weather this winter has helped bring down natural gas prices, and economic activity has been stronger than expected. The impacts of the war and higher interest rates will continue to impede growth in 2023, but it is expected to pick up in 2024 as global demand recovers.

Near-term volatility in China

China abruptly lifted many of its COVID-19 restrictions late in 2022, leading to considerable uncertainty about its economic outlook. The virus has spread rapidly, weighing on economic activity. Yet, with the reopened economy, growth is projected to rebound strongly as case numbers subside from their currently high level.

The property sector will continue to show slow activity. Past regulatory tightening—aimed at reducing speculation and excess leverage among developers—continues to cause the sector to contract sharply. While some recently announced policy measures should help stabilize activity, the outlook for the property market remains uncertain.

Overall, growth in China is expected to strengthen in 2023 as in-person activity rebounds, then to moderate in 2024 as activity normalizes.

Lower energy prices

Oil prices have fallen since the October Report (**Chart 4**), partly because of an improved outlook for global oil supply. Markets now seem to expect that Western sanctions will have less of an effect on Russian oil production. In the Bank's projection, the price for Brent oil is assumed to be US\$85 per barrel, while the price for West Texas Intermediate (WTI) is assumed to be US\$5 below the Brent price.

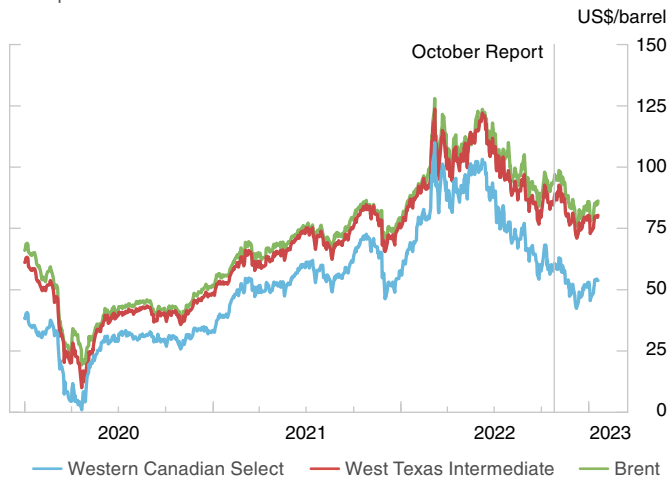
Since the October Report, the price for Western Canadian Select (WCS) has traded, on average, close to US\$30 per barrel lower than the price for WTI. Refinery outages and heavily discounted barrels of Russian heavy oil on the global market have led to a wider-than-normal spread. The spread is anticipated to narrow as refineries come back online in early 2023 and with the completion of the new Trans Mountain pipeline expansion in 2024. Given this dynamic, the Bank assumes a constant spread between WCS and WTI of US\$20 over the projection.

Natural gas prices have fallen sharply, with benchmark prices for both the United States and Europe below their levels at the time of the October Report. Price movements have tended to track weather conditions in the northern hemisphere. European prices continue to trade well above US prices, given concerns about shortages caused by Russia's decision to restrict gas exports to the continent.

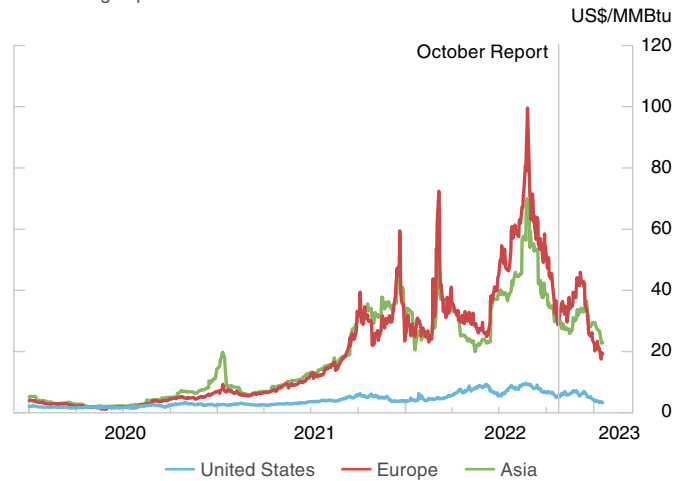
Chart 4: Prices for oil and natural gas have declined since the October Report

Daily data

a. Oil prices



b. Natural gas prices



Note: Oil price data for April 20, 2020, are excluded because disruptions in the oil futures market led to negative values of around -US\$48 for Western Canadian Select and -US\$38 for West Texas Intermediate on that day. European natural gas prices are converted from euros per megawatt hour to US dollars per metric million British thermal units (MMBtu). Prices in the United States are based on the Henry Hub benchmark, European prices are based on the Dutch Title Transfer Facility gas benchmark, and Asian prices are based on the Japan–Korea Marker for liquefied natural gas.

Sources: NYMEX, Intercontinental Exchange, Kalibrate Canada, Inc. and *Financial Times* via Haver Analytics and Bank of Canada calculations

Last observation: January 19, 2023

The Bank’s non-energy commodity price index is roughly unchanged and is expected to remain near current levels over the projection. Base metal prices rose after China announced additional support for its property sector, while lumber prices have fallen as North American housing demand continues to weaken. Agricultural prices are largely the same as in October.

Canadian economy

CPI inflation in Canada is still too high but has declined from its recent peak. Ongoing excess demand in the economy continues to exert upward pressure on prices. But, with lower energy prices, improvements in global supply chains and the effects of higher interest rates moving through the economy, inflation has started to ease.

CPI inflation is forecast to fall to 3% in mid-2023 and return to the 2% target in 2024. Inflation in 2023 is anticipated to be lower than projected in the October Report. This is mainly due to gasoline prices dropping more than expected and global supply chains improving more quickly than anticipated (**Box 1**).

Economic growth is projected to slow at the end of 2022 and to stall through the middle of 2023. The tightening of monetary policy initially slowed housing activity followed by consumer demand for durables in the middle of 2022. The effects of the rise in interest rates are expected to broaden and moderate consumer spending on services as well as investment spending in 2023. Growth is then projected to pick up in late 2023 (**Table 2**).

Table 2: Contributions to average annual real GDP growth

Percentage points*†

	2021	2022	2023	2024
Consumption	2.8 (2.8)	2.7 (3.0)	0.7 (0.6)	0.9 (0.9)
Housing	1.3 (1.3)	-1.0 (-0.9)	-0.7 (-0.6)	0.3 (0.2)
Government	1.4 (1.5)	0.3 (0.4)	0.4 (0.3)	0.4 (0.5)
Business fixed investment	0.4 (0.2)	0.9 (0.7)	0.2 (0.2)	0.1 (0.2)
Subtotal: final domestic demand	6.0 (5.8)	2.9 (3.2)	0.6 (0.5)	1.7 (1.8)
Exports	0.4 (0.4)	0.9 (1.0)	1.0 (1.1)	1.0 (0.7)
Imports	-2.3 (-2.3)	-2.4 (-2.4)	0.4 (0.1)	-0.7 (-0.5)
Inventories	1.0 (0.7)	2.3 (1.5)	-1.0 (-0.8)	-0.2 (0.0)
GDP	5.0 (4.5)	3.6 (3.3)	1.0 (0.9)	1.8 (2.0)
Memo items (percentage change):				
Range for potential output	2.1–2.5 (2.1–2.5)	0.5–2.0 (0.5–2.0)	1.4–3.3 (1.4–3.3)	1.4–3.5 (1.4–3.5)
Real gross domestic income (GDI)	9.4 (8.8)	5.3 (5.2)	-1.5 (-1.4)	1.2 (1.1)
CPI inflation	3.4 (3.4)	6.8 (6.9)	3.6 (4.1)	2.3 (2.2)

* 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

High and broad-based inflation

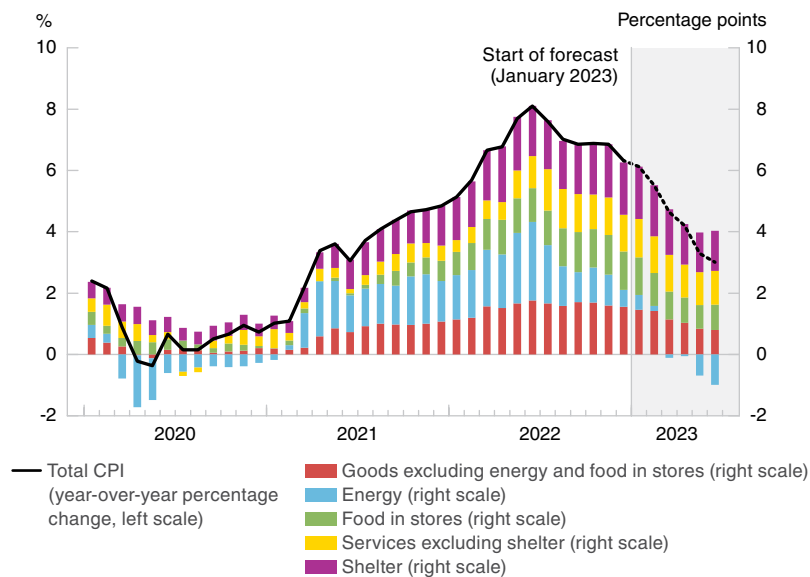
At 6.3% in December, CPI inflation remains high and broad-based, with core inflation at about 5%.² CPI inflation has, however, declined in recent months (**Chart 5**), and the large price increases that were prominent during the rise in inflation are now a little less widespread (**Chart 6**).

- Most of the decline is due to lower gasoline prices, which fell from about \$2 per litre in June 2022 to about \$1.50 per litre in January 2023.
- Inflation for prices of goods excluding energy and food in stores has declined. This is because of reduced demand for goods in Canada and abroad, combined with improving global supply conditions and falling costs for international shipping (**Box 3**).
- However, inflation for prices of services excluding shelter is more persistent.
- For food and shelter services, inflation remains particularly high. This is because ongoing cost pressures are boosting food prices, while falling house prices are being offset by rising mortgage interest costs.

Three-month CPI inflation has fallen to about 3½%, suggesting a significant slowdown in inflation in coming months (**Chart 5** and **Chart 7**). But a further drop will be required for inflation to reach the 2% target.

Chart 5: CPI inflation has declined in recent months

Contribution to CPI inflation, monthly data



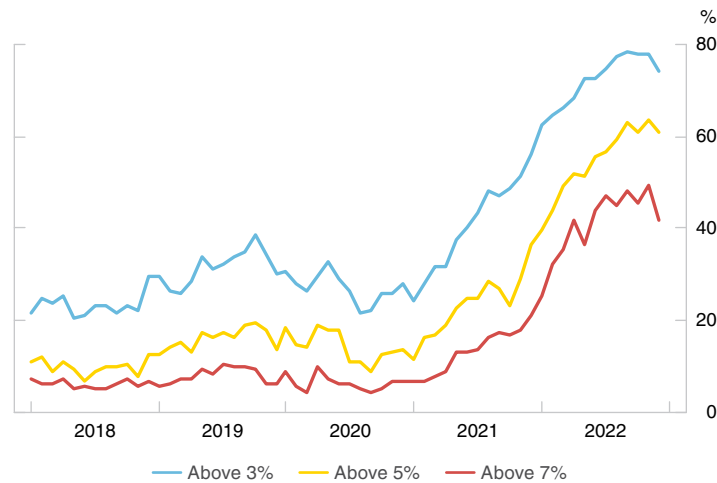
Sources: Statistics Canada and Bank of Canada calculations, estimates and projections

Last data plotted: June 2023

² With the release of the January 2023 CPI, Statistics Canada will implement its routine revision policy. As a result, CPI-trim and CPI-median will be revised back 84 months. As of now, partial revisions would leave CPI-trim inflation relatively unchanged, but CPI-median inflation would be up by around 0.35 percentage points over recent months. The broad trends in both core inflation measures will remain intact. The All-items CPI, which is what the Bank targets, is not affected by these revisions. In addition, Statistics Canada will start publishing index-level data series for both core inflation measures. For further details, see the [recent announcement](#) by Statistics Canada.

Chart 6: Large price increases are now a little less widespread

Share of CPI components growing above 3%, 5% and 7% over the past 12 months, monthly data



Sources: Statistics Canada and Bank of Canada calculations

Last observation: December 2022

Box 3

Explaining the dynamics of goods and services prices

A broad-based easing in price growth must occur to sustainably return inflation to the 2% target. Recent developments in food and shelter inflation were discussed in **Box 3** of the October Report. This current Report focuses on goods excluding energy and food in stores and on services excluding shelter. Together, these components make up just over half of the CPI basket.

Distinguishing between prices for goods—which have an international dimension—and prices for services—which are more closely linked to domestic conditions—is important.

Further slowing of inflation in goods excluding food and energy

Items in the goods excluding energy and food in stores component account for 30% of the CPI basket, and they include many internationally traded goods. Prices for goods tend to be among the most flexible and are highly sensitive to changes in economic conditions.

Inflation in this component has been high since mid-2021, reflecting strong global and domestic demand combined with disrupted supply chains. Domestic conditions matter because the strength of domestic demand influences how much firms can mark up their prices above their costs. Several factors have pushed production costs up, including supply chain disruptions, high energy prices and elevated shipping costs. But these forces have become less intense in recent months.

- Growth in demand for goods has slowed in Canada and abroad. This softening has been most notable for durable goods, such as appliances and furniture. Demand for these goods is more sensitive to interest rates.
- Supply chain disruptions are easing. Support for this view comes from business reports, data on trade flows and inventories, and indicators of supply bottlenecks, such as the [Global Supply Chain Pressure Index](#).
- Shipping costs and oil prices have declined significantly from their 2022 peaks. In fact, shipping costs have almost returned to their pre-pandemic levels.
- Consequently, monthly increases in the prices of goods have slowed notably in the last few months. This trend is expected to continue as supply conditions improve and demand for durable goods moderates further (**Chart 3-A**, red line). As a result, inflation in this component will likely continue to decline.

Steady inflation in services prices in the near term

The services excluding shelter component accounts for 24% of the CPI basket. This component includes a broad range of activities, such as personal care, transportation, food in restaurants, recreation, car repairs and education.

(continued...)

Box 3 (continued)

Some prices for services do not adjust quickly. These prices more closely reflect domestic conditions, including overall demand pressures, labour costs and expectations about future inflation. Labour market conditions and productivity growth are also important because labour costs make up a relatively large part of the total cost of delivering services.

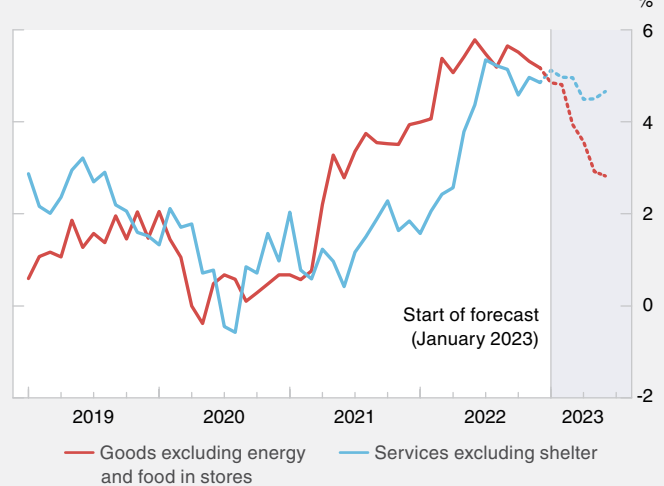
As the economy fully reopened in spring 2022, demand rose sharply for hard-to-distance services. Consequently, in summer 2022, monthly price increases were large for air transportation, travel services and food in restaurants. More modest price gains followed in the last few months of 2022 as the boost in demand diminished. However, the large price gains earlier in 2022 will likely keep inflation in prices for services excluding shelter high through the first half of 2023 (Chart 3-A, blue line).

Unit labour cost has been growing well above what would be consistent with reaching the 2% inflation target.¹ But growth in unit labour cost is expected to slow. Higher interest rates are projected to slow demand for services, and wage growth is expected to ease. At the same time, growth in labour productivity is assumed to gradually improve.

¹ Unit labour cost is the ratio of labour compensation per worker to labour productivity.

Chart 3-A: Near-term inflation is declining for some goods but will likely remain high for services

Year-over-year percentage change, monthly data



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

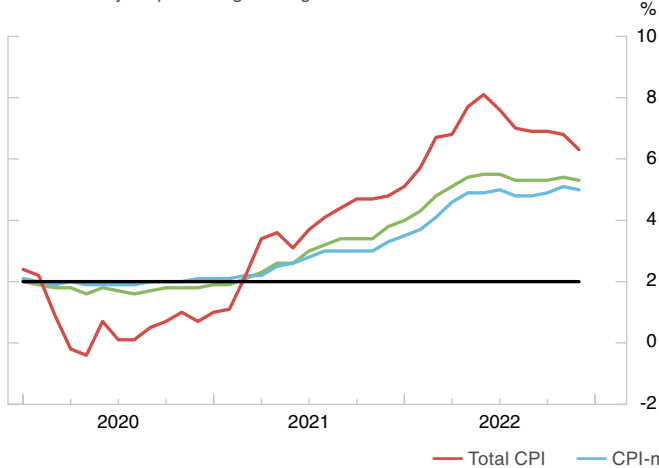
Last data plotted: June 2023

A risk remains, however, that inflation for services prices will not adjust as quickly as anticipated. Labour cost growth may be higher and more persistent than projected. This could happen if productivity growth rebounds more slowly than expected; for instance, if business investment is weaker than anticipated. The labour market could also remain tight for longer than projected.

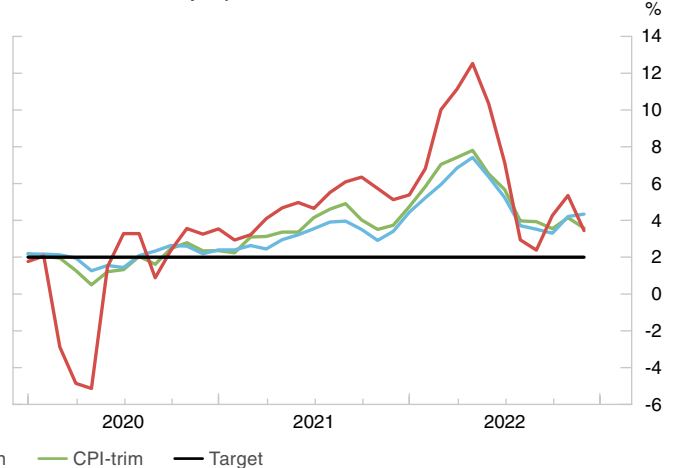
Chart 7: Year-over-year inflation remains high, but 3-month inflation has declined significantly

Measures of total and core inflation, monthly data

a. Year-over-year percentage change



b. 3-month seasonally adjusted annual rate



Note: To construct the 3-month annualized series for CPI-median and CPI-trim, the Bank of Canada internally generates price level indexes of these core inflation measures. This is done by cumulating their monthly changes, which are computed using seasonally adjusted data for 55 CPI components. With the release of the January 2023 Consumer Price Index on February 21, Statistics Canada will publish index-level data series for CPI-trim and CPI-median, alongside the year-over-year figures. See the announcement on Statistics Canada's [website](#).

Sources: Statistics Canada and Bank of Canada calculations

Last observation: December 2022

Elevated inflation expectations

Most respondents to consumer and business surveys still expect that, over the next two years, CPI inflation will be well above 2% and higher than the Bank’s inflation forecast (**Chart 8**). For the fourth quarter of 2022, many respondents to both the Business Outlook Survey (BOS) and the Canadian Survey of Consumer Expectations (CSCE) identified supply-side issues as the main factors behind high inflation. These include the effects of supply chain disruptions, Russia’s invasion of Ukraine, high energy prices and labour shortages.

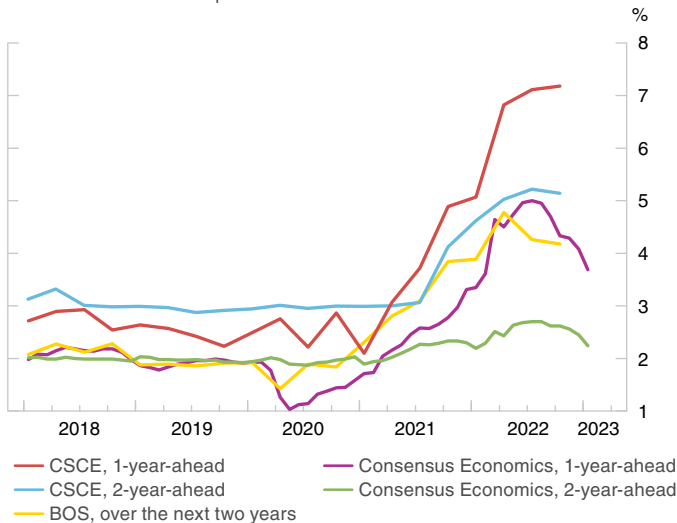
Short-term inflation expectations in the BOS have declined from their peak in the second quarter of 2022. At the same time, the share of firms expecting significant price increases has continued to decrease (**Chart 9**). However, the distribution of inflation expectations remains markedly wider than it was before the pandemic, suggesting that the level of uncertainty about inflation over the next few years remains high.

Long-term expectations for CPI inflation, in contrast, remain consistent with the 2% target. This signals respondents’ ongoing confidence that the Bank will return inflation to 2%.

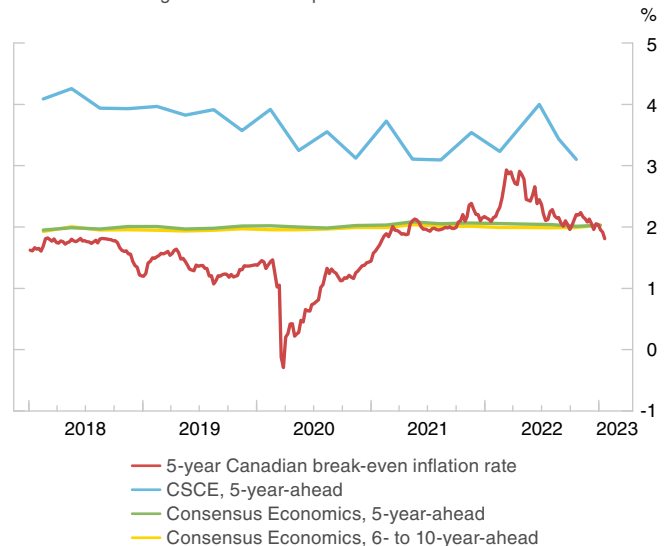
Chart 8: Short-term inflation expectations remain elevated

Quarterly, monthly and weekly data

a. Short-term inflation expectations



b. Medium- to long-term inflation expectations



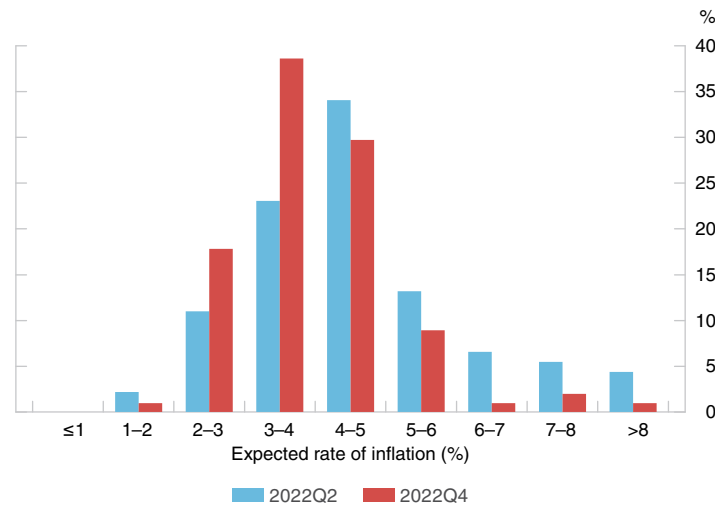
Note: CSCE is the Canadian Survey of Consumer Expectations; BOS is the Business Outlook Survey. The 5-year Canadian break-even inflation rate is the difference between the yields of a nominal bond and a real return bond of the same maturity, both issued by the Government of Canada. Consensus Economics’ forecasts for the next 2 years (released monthly), the next 5 years and the next 6 to 10 years (released quarterly) are transformed into fixed-horizon forecasts by weighted average. While the 1-year-ahead indicator is monthly and the 5-year-ahead indicator is quarterly, the 2-year-ahead indicator is derived using a combination of monthly and quarterly reports.

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

Last observations: Consensus Economics, January 2023; BOS and CSCE, 2022Q4; break-even inflation rate, January 20, 2023

Chart 9: Firms' inflation expectations have shifted lower

Share of firms responding to the Business Outlook Survey with 2-year inflation expectations in each range, quarterly data



Note: The estimates are based on firms' responses to the [Business Outlook Survey](#) question, "Over the next two years, what do you expect the annual rate of inflation to be, based on the consumer price index?" Buckets exclude the lower bound and include the upper bound.

Sources: Bank of Canada and Bank of Canada calculations

Last observation: 2022Q4

Economy in excess demand

The pace of economic growth in Canada is slowing, but demand continues to exceed supply.

The labour market is still tight across a broad range of measures, suggesting that it remains above maximum sustainable employment (**Chart 10**).

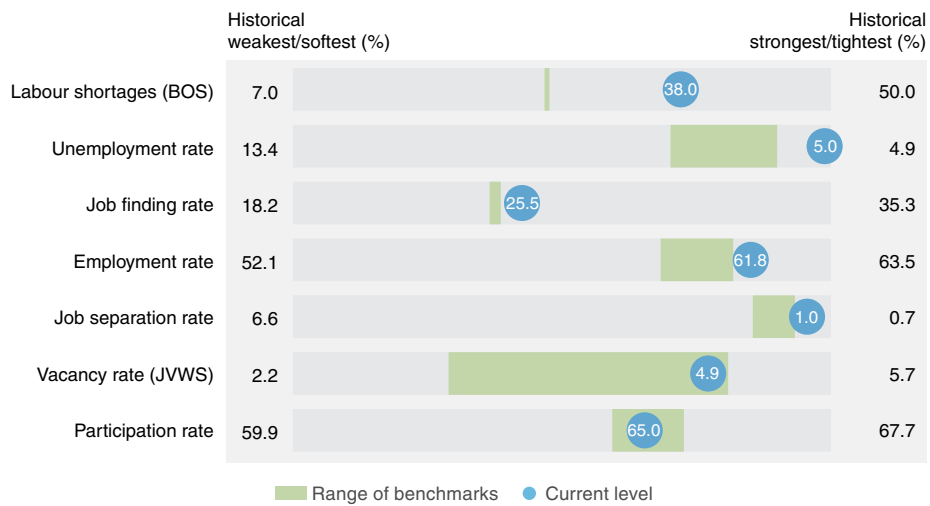
Employment gains were robust in the fourth quarter of 2022. More than 220,000 net jobs were created, and the unemployment rate, at 5%, is near an all-time low. The number of job vacancies also remains high despite recent declines (**Chart 11**). Firms continue to have difficulties finding workers, which reflects strong labour demand, the impacts of an aging population and shortages of available workers with the desired skills (**Box 4**).

Wage growth remains broad-based and appears to have plateaued in the 4% to 5% range (**Chart 12**). With the pace of wage growth no longer increasing, the risk of a wage-price spiral has declined. However, unless a surprisingly strong pickup in productivity growth occurs, sustained 4% to 5% wage growth is not consistent with achieving the 2% inflation target.

Monetary policy appears to be slowing the demand for labour. Employment growth has been weaker in sectors that are sensitive to changes in the interest rate, including manufacturing, construction and trade. Overall, employment growth in the second half of 2022 moderated compared with that in the first half of the year. The full effects of high interest rates on the labour market are expected to play out over an extended period.

Chart 10: The labour market is still tight

Selected labour market measures compared with their historical strongest/tightest and historical weakest/softest



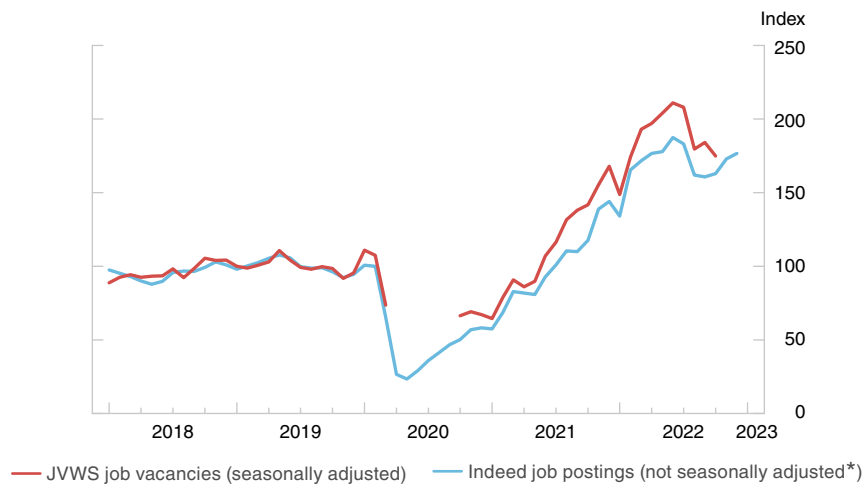
Note: BOS is the Business Outlook Survey; JVWS is the Job Vacancy and Wage Survey. Data for all series are from Statistics Canada's Labour Force Survey (LFS) unless otherwise noted. LFS data are seasonally adjusted. For details on the benchmarks included, see E. Ens, C. Luu, K. G. See and S. L. Wee, "Benchmarks for assessing labour market health," Bank of Canada Staff Analytical Note No. 2022-2 (April 2022).

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

Last observations: BOS, 2022Q4; JVWS, October 2022; LFS, December 2022

Chart 11: Job vacancies and postings have declined from their peaks but remain high

Ratios of JVWS job vacancies and Indeed online job postings to unemployment, index: 2019 average = 100, monthly data



* To control for monthly seasonal variations in the ratio of Indeed job postings to unemployment, the ratio for a given month (for example, the ratio in January) is divided by the average of the ratio for the same month in 2018 and 2019 (for example, the average of the ratio in January 2018 and January 2019). Unemployment data are seasonally adjusted.

Note: JVWS is the Job Vacancy and Wage Survey. Due to data limitations at the onset of the pandemic, JVWS job vacancies data are unavailable from April to September 2020.

Sources: Statistics Canada, Indeed and Bank of Canada calculations

Last observations: JVWS, October 2022; Indeed, December 2022

Box 4

Labour supply challenges

Canadian firms continue to face challenges hiring workers with the desired skills and experience. Amid strong growth in labour demand, the slow rise in the number of workers has contributed to a tight labour market.

The annual growth of the labour force moderated from an average of about 1.4% over 2017–19 to about 0.9% over 2020–22. The labour force would have an additional 320,000 workers if it had maintained its 1.4% growth pace between 2020 and 2022.

This easing of growth in the labour force is because of population aging and the interruption of immigration flows in 2020. The recent increase in immigration and the rise in the participation rate of prime-age women have mitigated this decline.¹

Growth in labour supply has not kept pace with growth in labour demand since the end of 2019, when the Canadian labour market was already judged to be tight. As a result, the number of job vacancies has risen, and businesses continue to face labour shortages.

Aging workforce

Population aging has pushed down the overall participation rate by about 0.9 percentage points since February 2020. This has weighed on growth of labour supply and exacerbated labour market challenges.

The increase in the share of older workers plays an important role in the slow growth seen in the labour force in recent years. Workers aged 55 and over have been the fastest-growing age group, and they have the lowest participation rate. The participation rate for these older workers has declined from 38.1% in February 2020 to 36.2% in December 2022 (**Chart 4-A**), largely due to aging within the group.

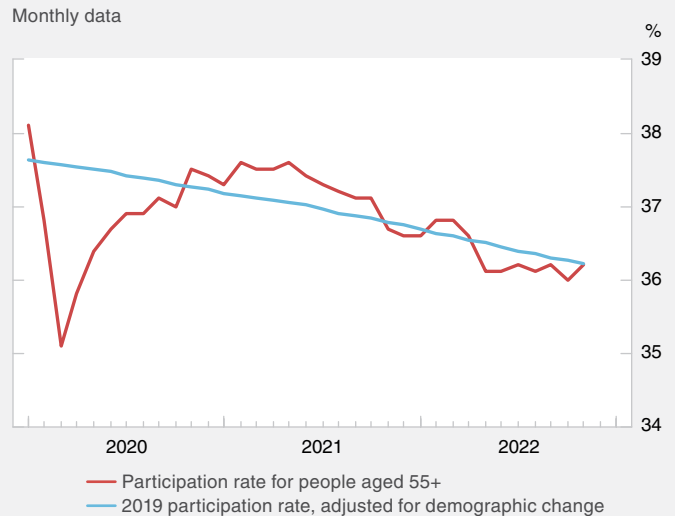
Skills mismatch

Another labour supply challenge that businesses face is hiring and retaining workers with the right set of skills and experience. Available workers may have different skills than what employers are looking for. Firms responding to the Business Outlook Survey often cited shortages in a broad range of occupations across industries.

Participation rate of women

The recent rise in the participation rate of prime-age Canadians, especially women, has somewhat offset

Chart 4-A: The participation rate for older workers has declined in line with population aging



Note: The blue line shows how the participation rate in 2019 would have evolved based only on updated population shares by age group and gender.

Sources: Statistics Canada and Bank of Canada calculations

Last observation: December 2022

the effect of aging on the overall participation rate. The participation rate for prime-age women stands near record highs. It increased from 83.6% in February 2020 to 84.9% in December 2022, and this increase has been notable for women with young children (**Chart 4-B**).

This rise in the participation rate of women could be due to lower average fees for child care since April 2022, as measured by the consumer price index. The decrease in the cost of child care stems from the early learning and child care agreements signed between the federal and provincial governments. More flexible work arrangements, including remote work, may have also encouraged many women to join the workforce. This increase in the participation rate of prime-age women has expanded the labour force by almost 100,000 people, helping ease firms' labour shortages and hiring challenges.

Rising immigration

Newcomers to Canada have been an important source of labour supply growth. In the five years before the pandemic, progressively higher immigration boosted population growth. But the pandemic disrupted the flow of immigrants, contributing to a decrease in labour supply in 2020.

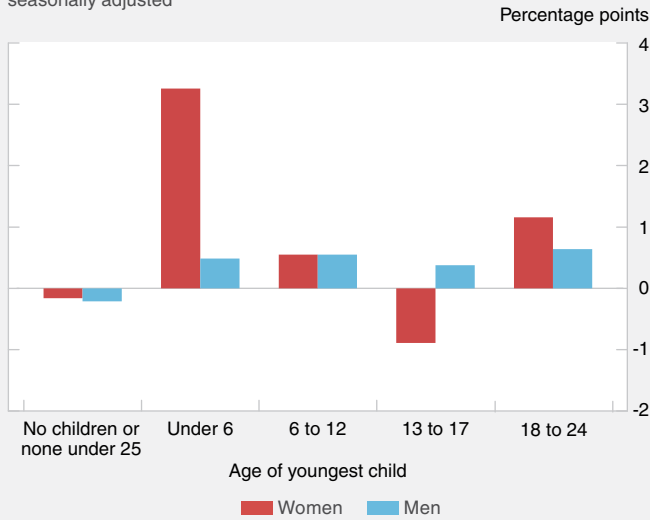
¹ Prime-age workers are individuals aged 25 to 54.

(continued...)

Box 4 (continued)

Chart 4-B: Participation rates have increased for women with young children

Change in participation rate, December 2022 relative to 2019 average, seasonally adjusted



Sources: Statistics Canada and Bank of Canada calculations

Immigration levels have since bounced back because borders have reopened. About 480,000 newcomers joined the Canadian labour force between December 2020 and December 2022. This rebound in labour supply has mostly made up for the pandemic shortfall, partly

reflecting higher inflows of economic-class permanent residents and temporary foreign workers.²

Immigration increases Canada’s labour supply and rate of potential output growth.³ It can alleviate labour shortages in constrained sectors. Despite these benefits, increased immigration alone cannot eliminate an economy-wide imbalance between labour supply and demand. This is because the increase in immigration pushes up labour supply and increases the number of consumers.

Short supply of labour

The Canadian labour force has increased by about 560,000 people since the end of 2019, representing an increase of about 2.8%. Continued growth in the working-age population fuelled this expansion in the number of workers over the last three years, despite the decline in the overall participation rate due to population aging.

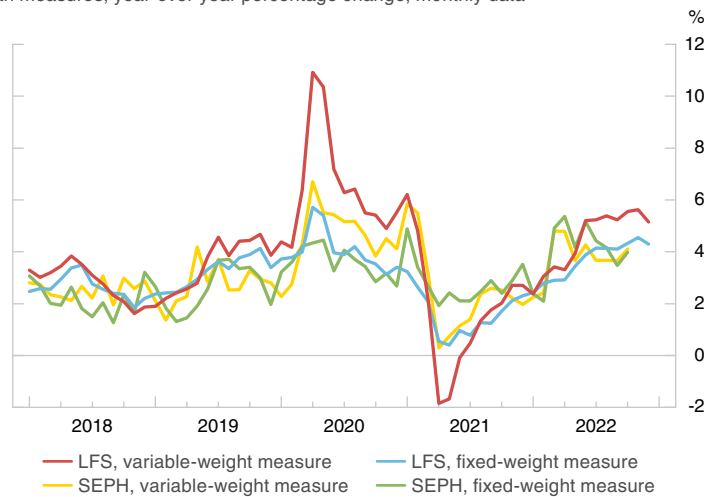
However, this increase in labour supply did not match the strong growth in labour demand over the past two years. As a result, labour markets remain tight.

² For more details on the classification of permanent residents, see Immigration, Refugees and Citizenship Canada’s [website](#).

³ For more details on how immigration affects potential growth, see **Box 4** of the [October Report](#).

Chart 12: Wage growth is around 4% to 5%

Wage growth measures, year-over-year percentage change, monthly data



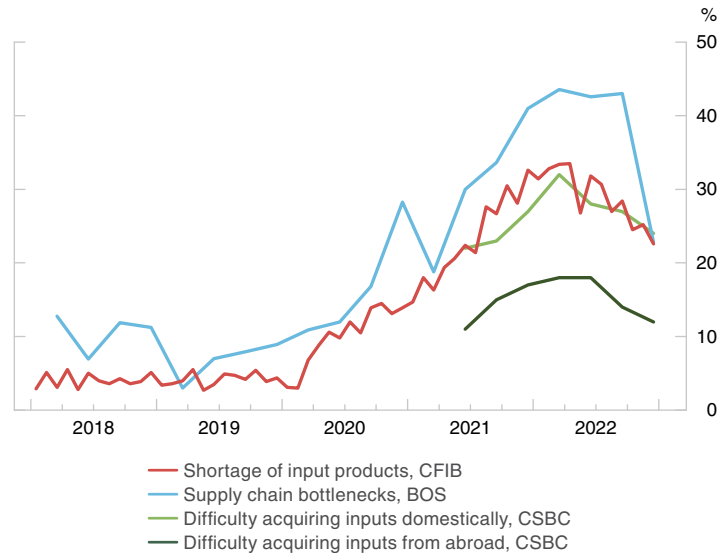
Note: LFS is the Labour Force Survey; SEPH is the Survey of Employment, Payrolls and Hours. The LFS fixed-weight measure is constructed using 2019 employment weights.

Sources: Statistics Canada and Bank of Canada calculations

Last observations: SEPH, October 2022; LFS, December 2022

Chart 13: Supply chain bottlenecks have eased for Canadian firms, but some challenges remain

Percentage of business survey respondents, quarterly and monthly data



Note: Business Outlook Survey (BOS) respondents were asked, “What would be the most important obstacles or bottlenecks to being able to meet an unexpected increase in demand?” Respondents to the Canadian Federation of Independent Business (CFIB) Business Barometer were asked, “What factors are limiting your ability to increase sales or production?” In the Canadian Survey of Business Conditions (CSBC), firms were asked, “Over the next three months, which of the following are expected to be obstacles for this business or organization?”

Sources: CFIB, Statistics Canada and Bank of Canada

Last observations: BOS and CSBC, 2022Q4; CFIB, December 2022

Improvements can already be seen on the supply side. In the most recent BOS, the number of Canadian firms reporting obstacles due to supply chain bottlenecks was cut in half (**Chart 13**). With fewer supply chain bottlenecks constraining activity, goods imports and inventory investment remained high in the third quarter of 2022.

Despite this improvement, many Canadian firms continue to face supply-side difficulties. Businesses continue to report challenges sourcing a wide range of inputs, including building materials, restaurant supplies and food products. Labour shortages are also restricting firms’ ability to meet demand from their customers.

The estimate of the output gap—the difference between GDP and potential output—is between 0.5% and 1.5% in the fourth quarter of 2022. This is more excess demand than was projected in the October Report.

Stalling demand growth and rising supply

Growth is estimated to have slowed in the fourth quarter of 2022, with activity expected to stall through the middle of 2023 (**Table 3** and **Chart 14**). In this context, the likelihood of a couple of quarters with slightly negative growth is roughly the same as that of a couple of quarters with slightly positive growth.

The rise in interest rates started to slow demand for housing and big-ticket items in 2022, although motor vehicle sales likely ended the year strong because deliveries started to catch up with orders. The tightening of monetary policy in Canada and abroad is expected to have broader effects in 2023. Spending on consumer services and business investment is expected to slow, while weaker foreign demand weighs on exports.

Table 3: Summary of the quarterly projection for Canada*

	2022			2023		2021	2022	2023	2024
	Q2	Q3	Q4	Q1		Q4	Q4	Q4	Q4
CPI inflation (year-over-year percentage change)	7.5 (7.5)	7.2 (7.2)	6.7 (7.1)	5.4		4.7 (4.7)	6.7 (7.1)	2.6 (2.8)	2.0 (2.0)
Real GDP (year-over-year percentage change)	4.7 (4.6)	3.9 (3.6)	2.5 (2.1)	2.0		3.9 (3.2)	2.5 (2.1)	0.5 (1.0)	2.4 (2.3)
Real GDP (quarter-over-quarter percentage change at annual rates)†	3.2 (3.3)	2.9 (1.5)	1.3 (0.5)	0.5					

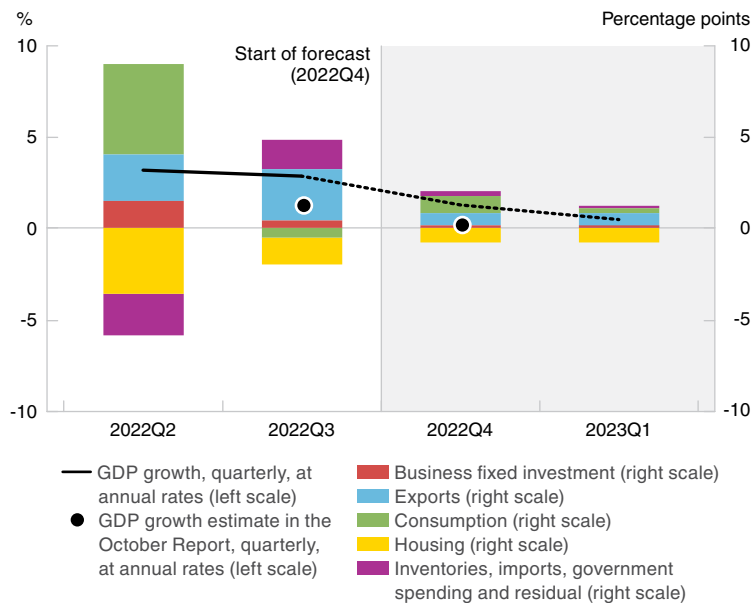
* Details on the key inputs to the base-case projection are provided in **Box 2**. Numbers in parentheses are from the projection in the previous Report.

† Over the projection horizon, 2022Q4 and 2023Q1 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 14: Growth is expected to slow

Contribution to real GDP growth, quarterly data



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

Last data plotted: 2023Q1

Slower demand growth, combined with improvements in the supply chain, lead the economy into modest excess supply in 2023.

Growth is projected to pick up later in 2023, reaching 2½% in the second half of 2024 as the effects of interest rate increases fade. Strong population growth due to immigration provides important underlying support to real economic growth. Potential output growth settles just above 2% in 2023 and 2024.

Slow growth in household spending

Consumer spending is projected to remain subdued through much of 2023. Responses to the CSCE indicate that consumers are cutting spending and delaying purchases across a broad range of goods and services because of high interest rates and elevated inflation (**Chart 15**).

The rise in borrowing costs is expected to continue to strain many household budgets. Interest payments on household mortgages are estimated to be about 4.5% of disposable income at the beginning of 2023, up from 3.2% at the beginning of 2022.³ The share of income going to mortgage interest payments is anticipated to continue rising as more homeowners renew their mortgages at higher rates.

Elevated interest rates are also increasing the costs of financing big-ticket items such as furniture and appliances. Spending on these items has decreased and is expected to remain subdued throughout 2023. As the effects of higher interest rates continue to work their way through the economy, spending on services will also be affected. Experience suggests that the demand for communications services, travel, hotels and meals at restaurants will be the most affected services components.⁴ Low consumer confidence and reduced household wealth due to falling house prices will also restrain household spending (**Chart 16**).

Chart 15: Consumers have reduced spending across a range of goods and services

Share of respondents to the Canadian Survey of Consumer Expectations reporting that they have reduced spending over the past 6 months on selected products and services due to higher inflation or recent rate increases, quarterly data



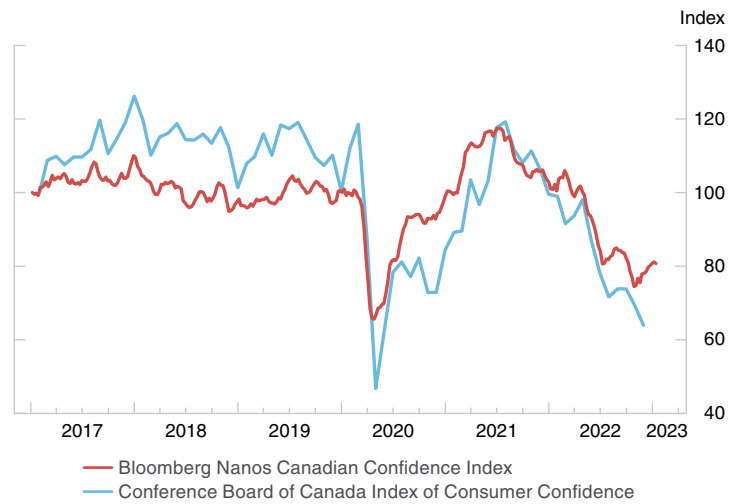
Sources: Bank of Canada and Bank of Canada calculations

Last observation: 2022Q4

- 3 Interest payments are one component of mortgage payments. Payments against mortgage principal are another.
- 4 Communications services include internet access, wireless telecommunications and landlines.

Chart 16: Low consumer confidence is expected to restrain household spending

Index: week ending on January 6, 2017 = 100 for Bloomberg Nanos, weekly data;
index: January 2017 = 100 for Conference Board, monthly data

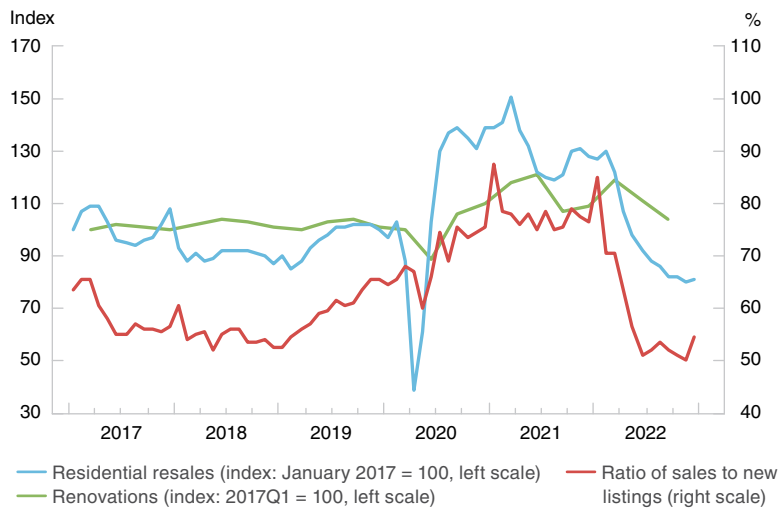


Sources: Nanos Research Corporation,
Conference Board of Canada and
Bank of Canada calculations

Last observations:
Bloomberg Nanos, January 13, 2023;
Conference Board of Canada, November 2022

Chart 17: Housing activity has weakened

Seasonally adjusted, monthly and quarterly data



Sources: Statistics Canada, Canadian Real Estate
Association and Bank of Canada calculations

Last observations: residential resales and ratio of sales
to new listings, December 2022; renovations, 2022Q3

Consumption growth is expected to increase at the end of 2023 and continue to strengthen through 2024. This is because the restraining effects on spending associated with higher interest rates should stabilize. Strong population growth supports consumer spending over the projection horizon. The savings rate is expected to remain above its long-run average due to elevated interest rates and precautionary savings.

The pullback in housing activity that began in 2022 is expected to continue over the near term (**Chart 17**). House prices are projected to decline further, particularly in markets that saw significant increases during the pandemic. Growth in new construction and housing resales will likely pick up by the second half of 2023, supported by low inventories and strong demand from immigration.

Moderate export growth

Soft foreign demand weighs on export growth over the near term. Growth strengthens in 2024 as the global recovery takes hold (**Chart 18**).

Growth of non-commodity exports is modest in 2023 before increasing in 2024. The easing of supply chain disruptions and the ongoing recovery in international travel are anticipated to support growth this year.

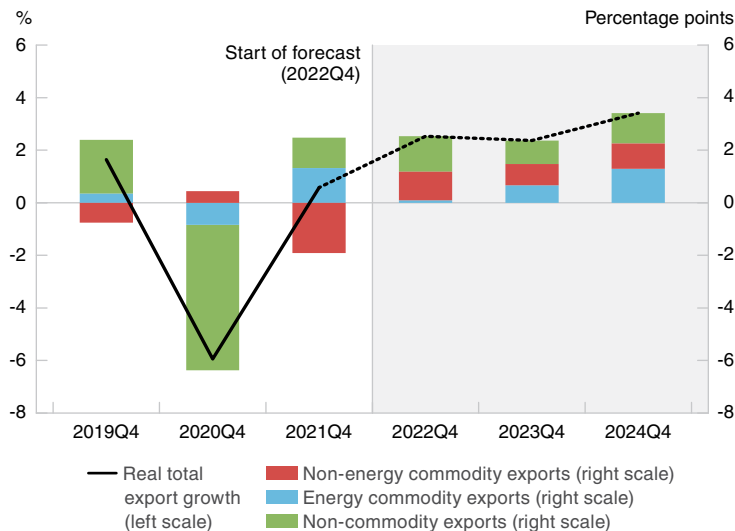
Non-energy commodity exports are expected to continue to grow at a solid pace in 2023, boosted by shipments of the abundant 2022 harvest. In 2024, growth in this sector should remain robust as global growth strengthens.

Growth in energy exports is anticipated to be moderate in 2023, and then pick up strongly in 2024 with the completion of the Trans Mountain Expansion project.

Imports are projected to decline in the near term, largely due to the slowdown in inventory investment from currently elevated levels. Imports increase later in the projection horizon because of strengthening domestic demand and the growing number of Canadians travelling abroad.

Chart 18: Export growth is expected to pick up in 2024

Contribution to real total export fourth-quarter-over-fourth-quarter growth, quarterly data



Sources: Statistics Canada and Bank of Canada calculations and projections

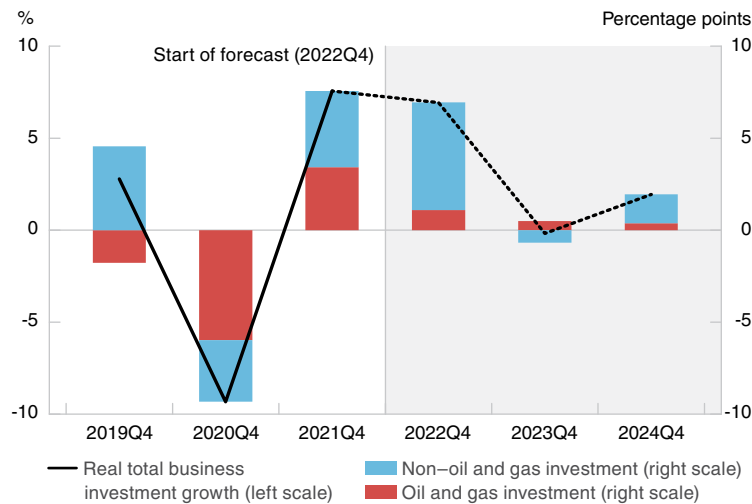
Soft business investment

Growth in business investment is expected to be slow over the projection horizon, strengthening only toward the end of 2024 (**Chart 19**). Ongoing digital transformation is expected to continue to support business investment throughout the period.

Slowing demand, elevated borrowing costs and increased uncertainty about future economic conditions weaken investment outside the oil and gas sector in 2023. BOS respondents frequently cited high borrowing costs as a key factor weighing on investment intentions. Investment picks up modestly in 2024 as demand strengthens.

Chart 19: Business investment growth is expected to be slow over the projection horizon

Contribution to real total business investment fourth-quarter-over-fourth-quarter growth, quarterly data



Sources: Statistics Canada and Bank of Canada calculations and projections

After solid gains in 2021 and 2022, growth in investment in the oil and gas sector is projected to moderate. This is partly due to uncertainty about long-term demand around the transition to a low-carbon economy.

Although firms are expected to continue to rebuild their stocks as supply chain bottlenecks ease further, they are projected to accumulate inventory more slowly.

Declining inflation in 2023, return to target in 2024

CPI inflation is forecast to decline from 6.7% in the fourth quarter of 2022 to 3% in the middle of 2023 and to reach the 2% target in 2024 (Chart 5 and Chart 20). In 2023, it is anticipated to be somewhat lower than projected in the October Report due to weaker gasoline prices and a quicker improvement in supply chain disruptions (Box 1).

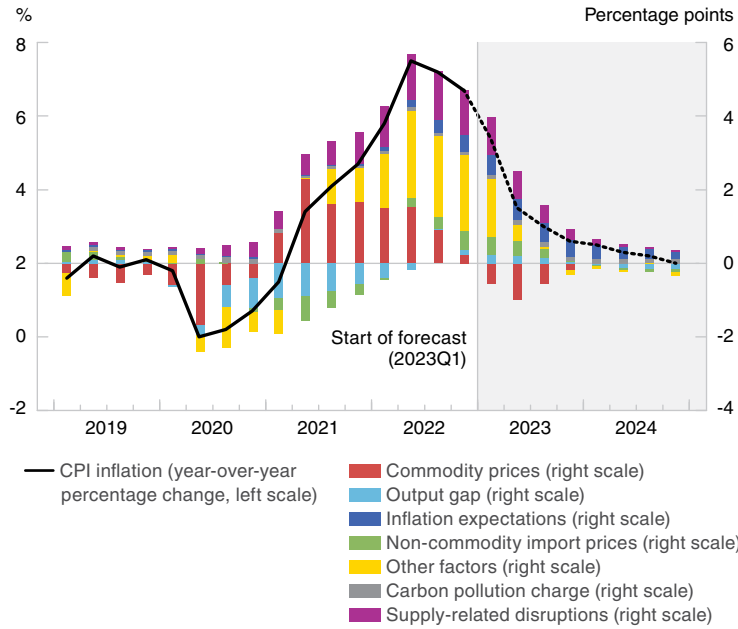
A large share of firms that responded to the BOS continue to expect that pressures on their input costs and output prices will be less intense going forward than they were over the past 12 months. Moreover, many businesses report that they are gradually returning to price-setting practices they used before the pandemic. These include reducing the size and frequency of price changes, tracking competitors’ pricing more closely and waiting for cost increases to materialize before considering altering prices.⁵ This could result in some narrowing of pricing margins.

Inflation is projected to reach 3.5% in the second quarter of 2023. The slowdown reflects the sharp decline in quarter-over-quarter price growth that occurred in the second half of 2022 (Chart 21). The decline results from a sharp fall in energy prices and weaker inflation in goods excluding food and energy (Box 3). The weaker inflation in goods comes about from slower global demand for goods, an improvement in supply chains, a decline in the costs of some materials and a return to more normal pricing behaviour.

5 R. Asghar, J. Fudurich and J. Voll, “Firms’ inflation expectations and price-setting behaviour in Canada: Evidence from a business survey,” Bank of Canada Staff Analytical Note (forthcoming).

Chart 20: CPI inflation is forecast to return to target in 2024

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

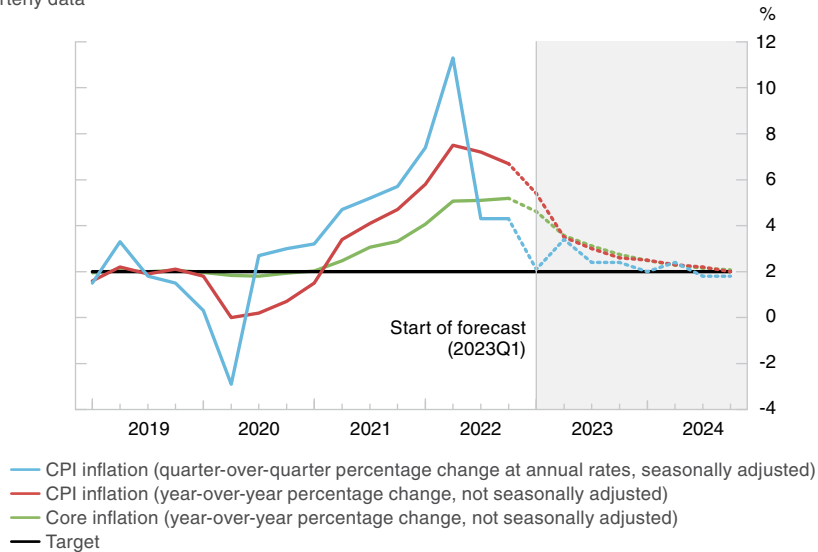


Note: Other factors could be due to underestimated demand pressures, such as from large imbalances in the housing market, or to previously unobserved factors, such as greater pass-through from oil or import prices. Non-commodity import prices include the impact of the Can\$/US\$ exchange rate. Numbers may not add to total due to rounding.

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

Chart 21: Momentum in inflation is easing

Quarterly data



Note: Core inflation is the average of CPI-trim and CPI-median.

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

In contrast, inflation in the prices of services excluding shelter is projected to remain elevated through the first half of 2023. This is consistent with robust demand and continued strong growth in unit labour costs. Inflation for prices of shelter and food in stores ease but remain elevated and above CPI inflation.

Inflation is projected to continue to decline toward the target through 2024. This reflects more normal global supply conditions and the effects of higher interest rates on demand for services (**Chart 20**). However, considerable uncertainty surrounds the outlook. In particular, it could take longer than expected for the rise in interest rates to weaken both demand and labour costs enough to push services price inflation down significantly (see **Risks to the inflation outlook**).

Risks to the inflation outlook

The risks identified in the October Report remain important for the inflation outlook. Although the Bank views these risks as roughly balanced, the upside risks are of greater concern because inflation is still too high.

Main upside risk: Stickier services price inflation

The main upside risk is that services price inflation in Canada could be stickier than projected if elevated inflation expectations or increased labour costs prove more persistent than expected. There is also risk of a resurgence in global energy prices related to a faster rebound in the Chinese economy and ongoing uncertainty about Russia's invasion of Ukraine. These risks were identified in the October Report and remain a concern.

Although short-term inflation expectations in Canada have declined and fewer firms expect large price increases, short-term inflation expectations remain above the Bank's inflation forecast. Survey responses indicate that the distribution of expectations is wider than normal. As a result, the risk remains that inflation expectations and therefore inflation could be higher than expected. This risk is most pronounced for inflation in services (**Box 3**).

Services price inflation could also remain elevated if labour costs rise more than projected. Growth in labour costs is about 5% on a year-over-year basis. In the projection, growth in overall labour costs moderates to fall in line with the 2% inflation target. Services price inflation could be more persistent than projected if productivity growth rebounds more slowly than expected or if the labour market remains tighter for longer than anticipated.

Global factors such as improved supply chains and lower energy prices have eased pressure on inflation more than anticipated at the time of the October Report. But China's lifting of COVID-19 restrictions could lead to stronger-than-projected global growth and higher commodity prices, especially for oil. The ability of the world's energy supply to respond to shocks is weaker than in the past, exacerbating this risk. An intensification of the supply disruptions related to Russia's invasion of Ukraine could also trigger spikes in the prices of oil, natural gas and agricultural products. More broadly, an increase in geopolitical tensions could prolong disruptions to supply chains, risking higher prices on internationally traded goods.

An additional upside risk to the inflation outlook identified in October was that households could draw on their accumulated wealth and savings more than expected. This would lead to increased household spending and greater upward pressure on inflation. Since then, however, consumption spending has been weaker than expected, so this risk to the inflation outlook is somewhat reduced.

Main downside risk: Severe global slowdown

Similar to that noted in the October Report, a severe global slowdown is the key downside risk to inflation. As monetary policy tightens in key economies, long-standing global financial vulnerabilities, such as high levels of debt, could amplify the impacts of slowing global growth.

The Canadian economy could be affected through weaker foreign demand, lower terms of trade and spillovers into Canada's financial system. The resulting tighter financial conditions and higher unemployment could undermine homebuyer sentiment and lead to a larger-than-expected drop in house prices. This in turn could reduce household wealth, access to credit and consumer confidence.

The risk of a severe global downturn remains but appears to have lessened since the October Report. The outlook for growth has improved, financial conditions have eased, and the US dollar has weakened. The weaker US dollar has reduced pressure on some emerging-market economies.

The October Report also outlined the risk that the spike in some goods prices since the beginning of the pandemic could be reversed. While energy and transportation costs have fallen and inflation in some goods prices has eased, widespread price reversals have not yet occurred.