BANK OF CANADA
BANQUE DU CANADA

Monetary Policy Report

July 2020

Canada's Inflation-Control Strategy[1]

Inflation targeting and the economy

- The Bank's mandate is to conduct monetary policy to promote the economic and financial well-being of Canadians.
- Canada's experience with inflation targeting since 1991 has shown that the best way to foster confidence in the value of money and to contribute to sustained economic growth, employment gains and improved living standards is by keeping inflation low, stable and predictable.
- In 2016, the Government and the Bank of Canada renewed Canada's inflation-control target for a further five-year period, ending December 31, 2021. The target, as measured by the consumer price index (CPI), remains at the 2 percent midpoint of the control range of 1 to 3 percent.

The monetary policy instrument

- The Bank carries out monetary policy through changes in the target for the overnight rate of interest.[2] These changes are transmitted to the economy through their influence on market interest rates, domestic asset prices and the exchange rate, which affect total demand for Canadian goods and services. The balance between this demand and the economy's production capacity is, over time, the primary determinant of inflation pressures in the economy.
- Monetary policy actions take time—usually from six to eight quarters—to work their way through the economy and have their full effect on inflation. For this reason, monetary policy must be forward-looking.
- Consistent with its commitment to clear, transparent communications, the Bank regularly reports its perspective on the forces at work on the economy and their implications for inflation. The *Monetary Policy Report* is a key element of this approach. Policy decisions are typically announced on eight pre-set days during the year, and full updates of the Bank's outlook, including risks to the projection, are published four times per year in the *Monetary Policy Report*.

Inflation targeting is *symmetric* and *flexible*

- Canada's inflation-targeting approach is *symmetric*, which means that the Bank is equally concerned about inflation rising above or falling below the 2 percent target.
- Canada's inflation-targeting framework is *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.

Monitoring inflation

- In the short run, the prices of certain CPI components can be particularly volatile. These components, as well as changes in indirect taxes such as GST, can cause sizable fluctuations in CPI.
- In setting monetary policy, the Bank seeks to look through such transitory movements in CPI inflation and focuses on a set of "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 three preferred measures of core inflation are CPI-trim, which excludes CPI components whose rates of change in a given month are the most extreme; CPI-median, which corresponds to the price change located at the 50th percentile (in terms of basket weight) of the distribution of price changes; and CPI-common, which uses a statistical procedure to track common price changes across categories in the CPI basket.

1 See *Joint Statement of the Government of Canada and the Bank of Canada on the Renewal of the Inflation-Control Target* (October 24, 2016) and *Renewal of the Inflation-Control Target: Background Information—October 2016*, which are both available on the Bank's website.

2 When interest rates are at very low levels, the Bank has at its disposal a suite of extraordinary policy measures that could be used to provide additional monetary stimulus and/or improve credit market conditions. The *Framework for Conducting Monetary Policy at Low Interest Rates*, available on the Bank's website, describes these measures and the principles guiding their use.

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

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Monetary Policy Report

July 2020

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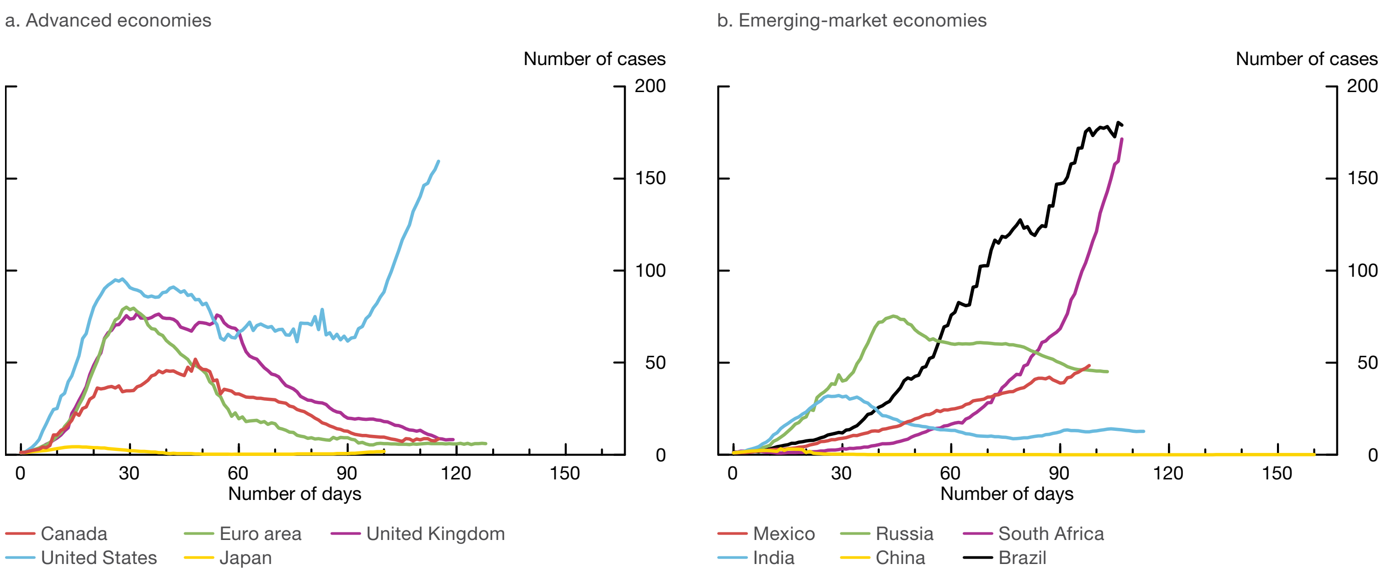
Overview

The COVID-19 pandemic has caused a worldwide health-care emergency as well as an economic calamity. Both are on a scale few have seen in their lifetime. The virus has spread broadly and rapidly, and to contain it, governments introduced public health measures that curtailed economic activity. The virus, combined with these necessary measures, has brought about the steepest and deepest economic decline since the Great Depression. Virtually every aspect of the Canadian and global economies has been affected, causing widespread losses in jobs and business incomes.

The course of the pandemic is inherently unknowable, and its evolution over time and across regions remains highly uncertain. New cases of the virus are now at very low levels in China, but many other emerging-market economies (EMEs) are now seeing their number of new cases increase rapidly (**Chart 1**). Some advanced economies that were hard-hit at the outset have slowed the rise in new cases and are reopening their economies. In the United States, infections have reached new highs. Globally, hundreds of thousands of lives have been lost.

Chart 1: The course of the pandemic remains highly uncertain

Daily new cases per million people, 7-day moving average

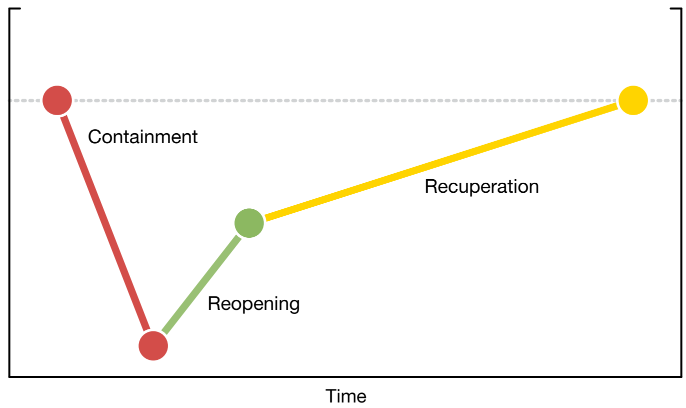


Note: The first occurrence along the bottom axis corresponds to the first day when the number of new cases per million people is greater than one.

Sources: World Health Organization via Haver Analytics, UK Department of Health and Social Care, Public Health England and Bank of Canada calculations

Last observation: July 10, 2020

Figure 1: The recovery in economic activity and household spending follows two phases: reopening and recuperation



In Canada, the number of new COVID-19 cases has fallen sharply from its April high, and the economic recovery has begun in all provinces and territories and across many sectors. Consequently, economic activity is picking up notably as measures to contain the virus are relaxed. This is a welcome sign.

The Bank of Canada expects a sharp rebound in economic activity in the reopening phase of the recovery, followed by a more prolonged recuperation phase, which will be uneven across regions and sectors (**Figure 1**). As a result, Canada's economic output will likely take some time to return to its pre-COVID-19 level. Many workers and businesses can expect to face an extended period of difficulty.

A central scenario is provided rather than a projection

The economic outlook is extremely uncertain, largely because of the unpredictable course of the virus. Reflecting this, the July *Monetary Policy Report* provides a central scenario for the economy rather than the usual economic projection.

The central scenario is informed by the Bank's analysis and tries to balance the likelihood of better and worse scenarios, but it is highly conditional on our assumptions about the virus. In particular, the central scenario assumes the following:

- there will not be a broad-based second wave of the pandemic in Canada or globally;
- most large-scale containment measures will be gradually lifted; and
- the pandemic will have largely run its course by mid-2022, likely because of the widespread availability of a vaccine or effective treatment.

In addition to the fundamental uncertainty about the course of the virus, there is also considerable uncertainty about its impacts. In particular, there is not enough information to estimate how deeply the economy may be scarred from business closures or massive job losses. Further, once supply is restored, it is unclear how quickly demand will recover because people may have changed their priorities, work patterns and social behaviours as a result of the pandemic.

The Bank departed from the usual structure for the *Monetary Policy Report* in April by not including a base-case projection. For this July Report, the Bank moves in the direction of the traditional format by providing a central scenario, but given the unusual level of uncertainty, the information provided is somewhat less precise. For example, **Table 1** and **Table 2** in this Report are based on the Bank's central scenario. Less detail is provided on the breakdown of the projection for global economic growth and on the compositional contributions to the growth of Canada's gross domestic product (GDP).

Global economy

After a historic plunge in the first half of the year, global economic activity is beginning to pick up. The increase in global demand has contributed to a partial rebound in the prices of commodities and some financial assets. The decisive actions taken by many governments and central banks have put households and businesses in a position to resume spending and production as containment measures are relaxed. But there is significant ground to make up, and regional flare-ups of the virus could impede the recovery.

In the Bank's central scenario, global output rebounds in the second half of this year, although the timing and strength of the recovery vary considerably from one region to another. The effects of both ongoing physical distancing and elevated uncertainty are assumed to continue to restrain economic activity over the scenario's time horizon. Global output falls by about 5 percent in 2020 and then grows by around 5 percent on average in 2021 and 2022 (**Table 1**). Despite this strong rebound, global output at the end of 2022 remains about 4 percent below the projected level in the January Report.

Table 1: Central scenario for global economic growth

	Share of real global GDP* (percent)	Projected growth (percent)			
		2019	2020	2021	2022
United States	15	2.3	-8.1	3.4	4.3
Euro area	11	1.2	-9.3	4.2	3.6
Japan	4	0.7	-6.1	3.8	2.6
China	19	6.1	-0.3	8.8	6.3
Oil-importing EMEs‡	33	3.1	-4.8	5.8	6.1
Rest of the world§	17	1.3	-6.9	2.2	6.1
World	100	2.9	-5.2	5.2	5.4

* GDP shares are based on International Monetary Fund (IMF) estimates of the purchasing-power-parity valuation of country GDPs for 2018 from the IMF's October 2019 *World Economic Outlook*. The individual shares may not add up to 100 due to rounding.

‡ The oil-importing emerging-market economies (EMEs) grouping excludes China. It is composed of large EMEs from Asia, Latin America, the Middle East 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 all 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

Uncertainty around this scenario is considerable. There are a multitude of scenarios both stronger and weaker than the central one presented here. Yet overall, the risks appear to be tilted to the downside, largely because of the potential for a second wave of the virus.

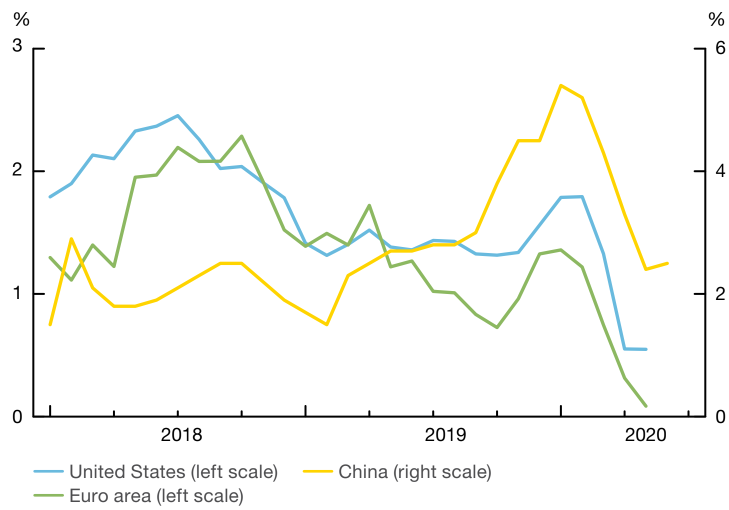
The global economic contraction was sharp and sudden

Measures to control the spread of COVID-19 forced many businesses to reduce or halt their operations, resulting in unprecedented job losses. Global supply chains were disrupted, and global trade fell sharply. The containment measures affected mainly labour-intensive activity, resulting in a sharper decline in services than in manufacturing. In addition, the pandemic and containment measures were accompanied by an abrupt deterioration in business and household confidence and significant changes in behaviour. The Bank estimates that the level of global GDP in the second quarter was about 10 percent below its level in the fourth quarter of 2019.

Inflation also fell in all major economies (**Chart 2**). Prices of gasoline dropped sharply in March and April before partially rebounding in May. The plunge in energy prices reflected the rapid and large fall in global demand. Lower prices for transportation services and at hotels and restaurants also contributed to weak inflation in most regions. In contrast, food prices rose at a faster pace than usual. Overall, the inflationary pressures from supply disruptions were outweighed by the effects of the fall in demand.

Chart 2: Inflation fell across all major economies

Year-over-year inflation, monthly data



Note: Measures for inflation vary across regions. The United States uses the personal consumption expenditure price index; the euro area uses the harmonized index of consumer prices; China uses the consumer price index.

Sources: US Bureau of Economic Analysis, Eurostat and National Bureau of Statistics of China via Haver Analytics

Last observations: United States and euro area, May 2020; China, June 2020

Growth is picking up as economies reopen

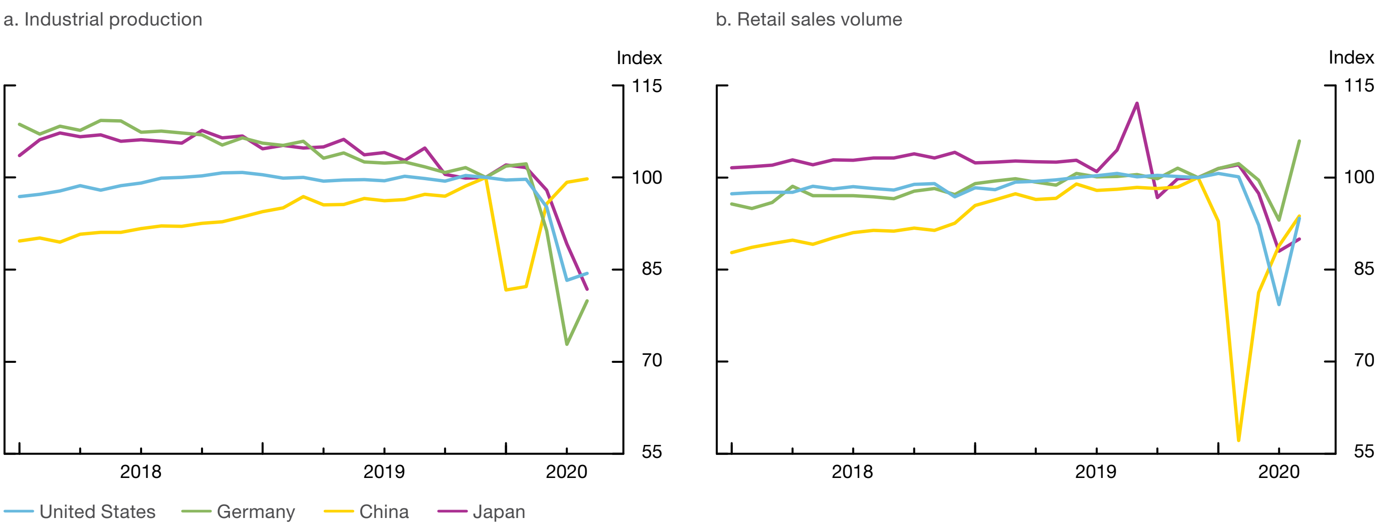
China was the first major country to allow some businesses to restart their operations, with strict infection prevention and control measures in place to rein in any new outbreaks. China's industrial production has rebounded strongly, returning to pre-lockdown levels (**Chart 3**). Demand indicators such as retail sales, however, have risen less than production as consumers remain cautious. As well, manufacturing investment is sluggish, suggesting that businesses are still uncertain about the strength of future demand, given the pandemic and ongoing trade tensions with the United States.

Economic conditions vary considerably across other EMEs. Some East Asian countries have managed to keep the number of COVID-19 cases low and their economies mostly open. Some emerging European countries that had put lockdowns in place have recently allowed businesses to reopen. Meanwhile, many Latin American and African EMEs are still experiencing the first wave of the pandemic, at great human cost. These countries are struggling to contain the virus, which may prolong the negative economic effects and delay their recoveries. This, coupled with high levels of debt, is raising financial stability concerns in some EMEs.

In many advanced economies, activity picked up in May and June. Surveys indicated an increase in activity and confidence in the euro area. Production, employment and household spending also increased in the United States, but the resurgence in new COVID-19 cases since the middle of June is slowing the rebound as many states are scaling back their reopening plans.

Chart 3: Activity has started to pick up in some countries

Index: December 2019 = 100, monthly data



Note: Retail sales in Germany exclude motor vehicles. Retails sales data for China are nominal.

Sources: US Federal Reserve Board, US Bureau of Labor Statistics, US Census Bureau, Deutsche Bundesbank, National Bureau of Statistics of China and Japan Ministry of Economy, Trade and Industry via Haver Analytics, and Bank of Canada calculations

Last observation: May 2020

Demand is expected to remain weak relative to supply

In the second half of this year, the pace of global growth rebounds strongly in the central scenario. The recovery then slows in 2021 and 2022, but growth is still relatively strong. In the central scenario, the level of economic activity reaches its pre-COVID-19 level around the end of 2021. While the impact of the pandemic is negative for both supply and demand, the effects on demand are larger.

On the supply side, production practices in some sectors will need to adjust to include physical distancing measures. As companies evaluate the vulnerability of cross-border trade, supply chains could become shorter, more local and possibly more diversified after the pandemic. On the demand side, even when lockdown restrictions relax fully, precautionary physical distancing will likely continue to restrain household spending. In addition, elevated indebtedness and economic uncertainty are expected to cause some businesses to scale back or cancel large investment projects.

Policy actions continue to provide support

Authorities in many countries were able to quickly implement extraordinary measures to support household incomes and limit the economic damage related to the shutdown. These actions will support the recovery as activity resumes.

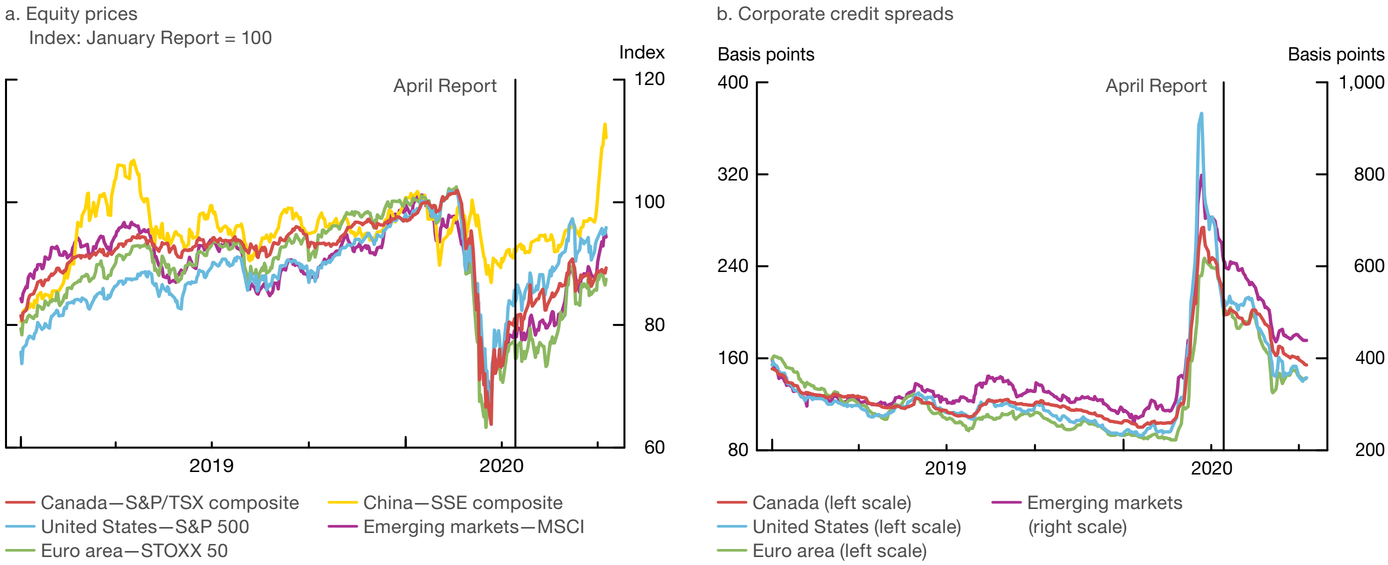
Governments in advanced economies and some large EMEs, such as China and Brazil, have significantly increased resources to fight the pandemic and soften its economic blow. These resources include transfers to households and businesses to replace a portion of their lost income. Many countries have also implemented loan guarantees and direct funding programs to help businesses facing liquidity shortages. Authorities in some of these countries are considering additional fiscal support. In many other EMEs, fiscal support has generally been more modest due to already elevated debt levels.

Central banks around the world have taken decisive measures to stabilize the financial system and support credit flows to businesses and households. These include measures to ease short-term funding strains and to improve liquidity. Major central banks have reduced their policy rates or eased through other measures. In the United States, the US Federal Reserve lowered the federal funds rate, significantly increased its purchase of US Treasuries and mortgage-backed securities and introduced a series of other programs to support the flow of credit. In addition, it extended its network of US-dollar swap arrangements in response to the increased stress in the offshore US dollar market.

Global financial conditions have improved substantially since the April Report, and this is helping support the recovery. Markets have reacted positively to the fiscal and monetary measures, the pickup in global demand and signs of receding negative tail risks. Since the April Report, equity prices have recovered a significant portion of their losses, credit spreads have narrowed, and volatility has declined across all markets (**Chart 4**). Financial market indicators for EMEs have also generally improved, although by less in hard-hit economies such as Brazil, South Africa and Mexico, where the pandemic is still spreading rapidly.

Chart 4: Financial conditions have improved significantly

Daily data



Note: The spreads for the United States and emerging markets are the option-adjusted spreads between US-dollar-denominated bonds and US Treasuries. Those of Canada and the euro area are relative to Canadian and German sovereign yields, respectively. All corporate yields are based on investment-grade bonds, except for those of emerging markets, which include a number of high-yield bonds.

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

Last observation: July 10, 2020

The US dollar has depreciated somewhat against major currencies since April, including the Canadian dollar. Safe-haven flows into assets denominated in US dollars declined, and some flows reverted to assets denominated in other currencies. The increase in commodity prices has also supported the Canadian dollar. Government bond yields in advanced economies remain close to their historical lows due to central bank asset purchases and financial market expectations that central banks will keep their policy rates low for an extended period.

Commodity prices have partially rebounded

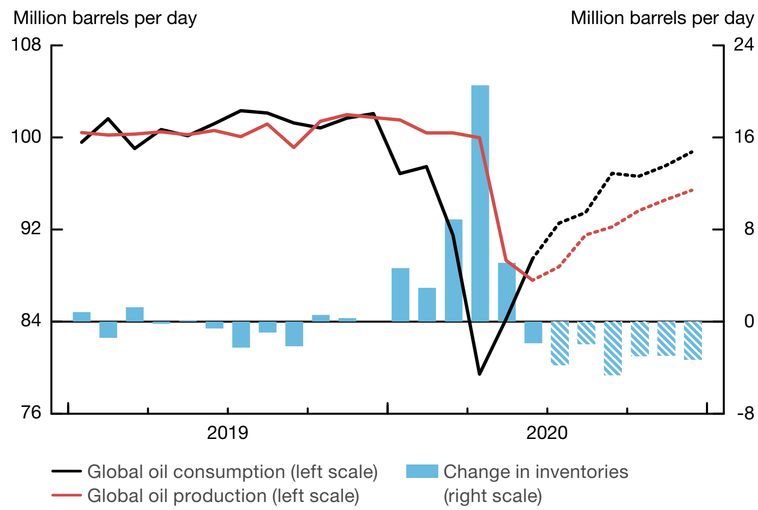
Global oil prices have increased since the April Report but remain about 30 percent below pre-pandemic levels. The recent rise reflects both an increase in global oil consumption as economies reopen and reduced production (**Chart 5**). Low oil prices led members of the Organization of the Petroleum Exporting Countries (OPEC) and some other non-OPEC oil producers to agree to reduce output by 9.7 million barrels per day compared with their October 2018 levels.[1] North American producers also cut output by about 4 million barrels per day.

In its central scenario, the Bank assumes that the prices of Brent and West Texas Intermediate (WTI) oil will remain close to their recent average levels, about US$40 per barrel. Risks around this assumption are tilted to the upside over the medium term because prices could continue to increase as global growth recovers and oil consumption picks up.

1 This corresponds roughly to a production cut of 8 million barrels per day relative to their March 2020 levels.

Chart 5: Oil consumption is rebounding and production has been cut

Monthly data



Sources: US Energy Information Administration and Bank of Canada calculations

Last data plotted: December 2020

The price of Western Canadian Select (WCS) has also risen and was recently hovering around US$30 per barrel. The spread between the prices of WTI and WCS has narrowed to about US$10, due in part to the cuts in Canadian output. Moreover, the decline in demand was more pronounced for light oil such as WTI, which is used more in jet fuel and gasoline, than for heavy oils such as WCS.

The Bank's non-energy commodity price index has recovered its decline from February to April. The rise in the price of base metals is consistent with the gradual recovery in industrial production and the increases in infrastructure spending in China and some advanced economies. Prices for lumber have risen, reflecting the closures of sawmills due to COVID-19.

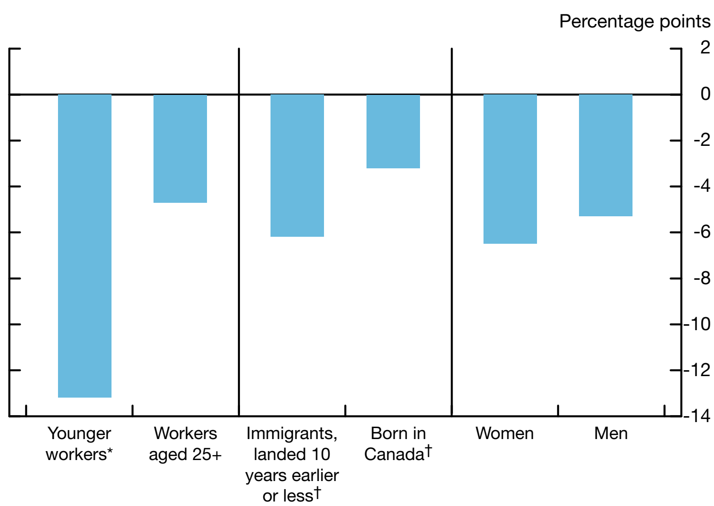
Canadian economy

The Canadian economy is starting to recover from the tragic and devastating effects of the pandemic. The human and economic costs would be considerably worse if the containment measures had not succeeded in flattening the curve. In the second quarter, when containment measures were at their most restrictive, economic activity is estimated to have fallen about 15 percent below its level at the end of 2019. The economy appears to have hit bottom in April, with about 3 million jobs lost.

The economic contraction and subsequent recovery will look very different from those of a typical business cycle. The impact of the containment measures varied substantially across industries and types of jobs. Some jobs continued with little disruption because of the availability of online tools and the ability to work remotely. Others were hit very hard, particularly within the service sector, including jobs in travel, hospitality and personal care services. In addition, the burden has been falling disproportionately on some segments of the workforce, including lower-income earners, younger workers, recent immigrants and women (**Chart 6**).

Chart 6: Employment losses have been larger for younger workers, recent immigrants and women

Change in employment rate between February and June 2020, seasonally adjusted



* 15 to 24 years old

† Data for these two categories are not seasonally adjusted and, as a result, are not directly comparable with the data for the gender and age groups.

Sources: Statistics Canada and Bank of Canada calculations

Last observation: June 2020

Box 1

Key inputs to the central scenario

The Bank's central scenario is conditional on several key assumptions that affect the outlook for the Canadian economy. In addition to the assumptions about the progression of the pandemic and public health measures described in the Overview section, the key inputs into the Bank's central scenario are as follows:

- Oil prices are assumed to remain near recent levels. The per-barrel prices in US dollars are assumed to be $40 for Brent and West Texas Intermediate and $30 for Western Canadian Select.
- By convention, the Bank does not forecast the exchange rate in the *Monetary Policy Report*. In the central scenario, the Canadian dollar is assumed to remain close to recent levels, at about 74 cents US.
- The neutral nominal policy rate is defined as the real rate consistent with output remaining sustainably at its potential and with inflation at target, on an ongoing basis, plus 2 percent for inflation. It is a medium- to long-term equilibrium concept. The central scenario assumes the neutral rate is 2.5 percent, in the lower half of the previously estimated range. The neutral rate will be reassessed more fully in the October Report.
- The pandemic and the related containment measures are significantly affecting both supply and demand in the Canadian economy. In the central scenario, the Bank assumes that the impact on supply in the first half of 2020 is roughly 60 percent of the size of the impact on GDP. The level of output is estimated to have fallen to about 15 percent below its level in the fourth quarter of 2019. This would imply a gap between demand and supply of roughly 6 to 7 percent in the second quarter.
- The degree of uncertainty around these estimates is unusually high due to the extraordinary nature and size of the economic shocks caused by COVID-19. For additional details about the Bank's assumptions for supply and potential output in the central scenario, see **Box 3** on page 24. The Bank will provide a more detailed analysis of its long-run assumptions in the October Report.

The strong, well-targeted and complementary fiscal and monetary policy actions provide a solid foundation for the recovery. Still, as reopening progresses, many people will probably continue to fear contracting the virus, and uncertainty about job security is likely to persist. Both consumer and business confidence are therefore expected to remain subdued, restraining spending and employment, particularly in activities that involve in-person interaction. In addition, the pandemic has led to changes in preferences and behaviours. Some of these shifts are expected to endure, with lasting effects that could lead to structural changes in the economy over the longer term.

Despite the significant hardships that Canadians continue to face, the economy has so far avoided the most severe scenarios presented in the April Report. There are already signs that the reopening of businesses will lead to an initial strong bounce back in economic growth (**Table 2**). However, this is expected to give way to a recuperation phase during which the pace of the recovery will moderate as the pandemic continues to affect confidence and the economy undergoes widespread adjustments, including in the energy sector. Consumer price index (CPI) inflation is expected to remain weak before gradually strengthening toward the 2 percent target, as the drag from low gasoline prices and other temporary effects dissipate and demand recovers, reducing economic slack (**Box 1**).

Table 2: Summary of the projection for Canada
Year-over-year percentage change*

	2019	2020			2019	2020	2021	2022	2019	2020	2021	2022
	Q4	Q1	Q2	Q3	Q4	Q4	Q4	Q4				
CPI inflation	2.1	1.8	-0.1	0.4	2.1	0.4	1.3	1.8	1.9	0.6	1.2	1.7
Real GDP	1.5	-0.9	-14.6	-8.8	1.5	-6.8	4.9	3.2	1.7	-7.8	5.1	3.7
Quarter-over-quarter percentage change†	0.1	-2.1	-13.1	7.1								

* Details on the key inputs to the central scenario are provided in the Overview as well as in **Box 1** and **Box 3**.

† At annual rates, quarter-over-quarter percentage changes are 0.6 for 2019Q4, -8.2 for 2020Q1, -43.0 for 2020Q2 and 31.3 for 2020Q3. For longer horizons, fourth-quarter-over-fourth-quarter percentage changes are presented.

Fiscal and monetary authorities responded swiftly

The labour market impact of the containment measures has been severe. Between February and April, some 3 million people were suddenly out of work. In May, the unemployment rate reached a peak of 13.7 percent. An additional 1.4 million people reported that they wanted to work but did not look for a job, suggesting an adjusted unemployment rate of nearly 20 percent. Broader measures of underemployment, which include people who were employed but worked less than half their usual hours, suggest that roughly one-third of the labour force was underutilized.

The federal government quickly launched unprecedented fiscal policy actions to help households and businesses during the lockdown. Policies were introduced to replace lost income and encourage businesses to retain workers.[2] The Canada Emergency Response Benefit (CERB) and other transfers have offset lost employment income for many workers. In addition, the Canada Emergency Wage Subsidy (CEWS) has helped businesses maintain relationships with their workers and should reduce longer-term scarring effects of unemployment on the economy. Nearly one-quarter of the respondents to the Bank's summer Business Outlook Survey reported that this subsidy had enabled them to either avoid or reduce the scale of potential layoffs.

Businesses also have access to loans through federal programs. The Canada Emergency Business Account in particular has been widely used. It provides up to $40,000 in funding to existing small businesses and will forgive up to $10,000 if the loan is repaid before the end of 2022.

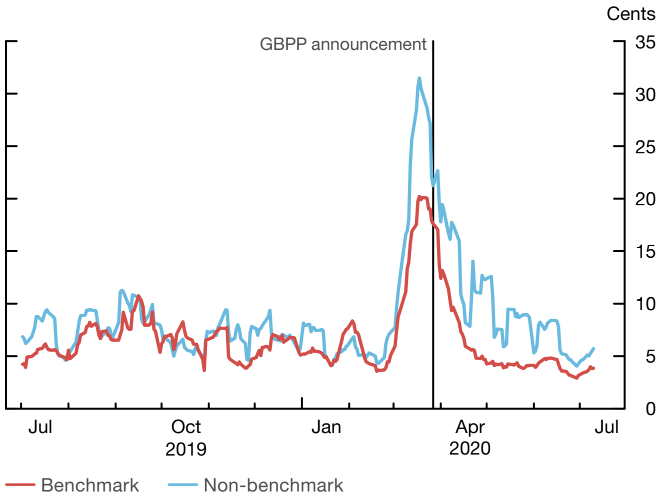
In addition, federal, provincial and territorial governments have granted deferrals on more than $123 billion in taxes, fees and customs duties. While temporary, these measures have been an important source of relief for many businesses and households facing cash-flow pressures. As well, commercial lenders implemented processes for households to defer mortgage and other debt payments.

The Bank also responded swiftly to the effects of the pandemic. Starting in late February, uncertainty about how bad things could get and how long the downturn might last prompted a widespread flight to cash and made it difficult for investors to sell assets. In response to the seizing up in financial markets and the economic contraction, the Bank rapidly reduced the policy interest rate to its effective lower bound of 0.25 percent and introduced a range of liquidity facilities and asset purchase programs to help ease

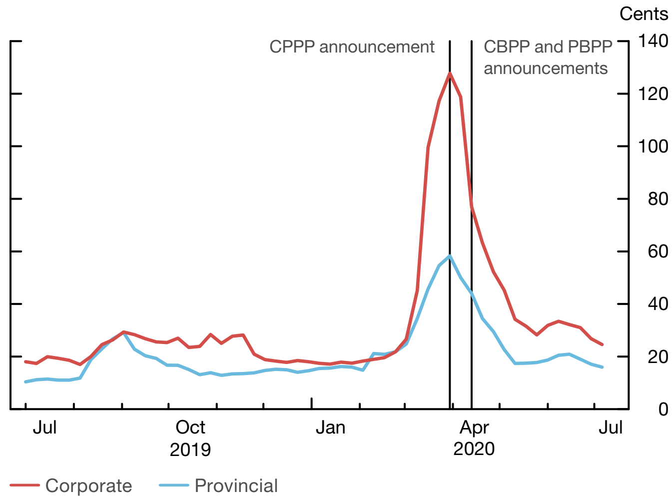
2 For more details, see the April 2020 *Monetary Policy Report*, the Bank of Canada website and the Government of Canada website.

Chart 7: Bank of Canada programs helped improve market liquidity

a. 5-year Government of Canada bond bid-ask spread, 10-day moving average, daily data



b. Canadian bond bid-ask spread, 4-week moving average, weekly data



Note: GBPP is Government of Canada Bond Purchase Program; CPPP is Commercial Paper Purchase Program; CBPP is Corporate Bond Purchase Program; and PBPP is Provincial Bond Purchase Program.

Sources: Canadian Depository for Securities and Bank of Canada calculations

Last observations: Government of Canada bonds, July 10, 2020; Canadian bonds, July 6, 2020

problems with market functioning. These programs include purchases of Canada Mortgage Bonds, bankers' acceptances, commercial paper, corporate bonds and provincial and federal government debt.

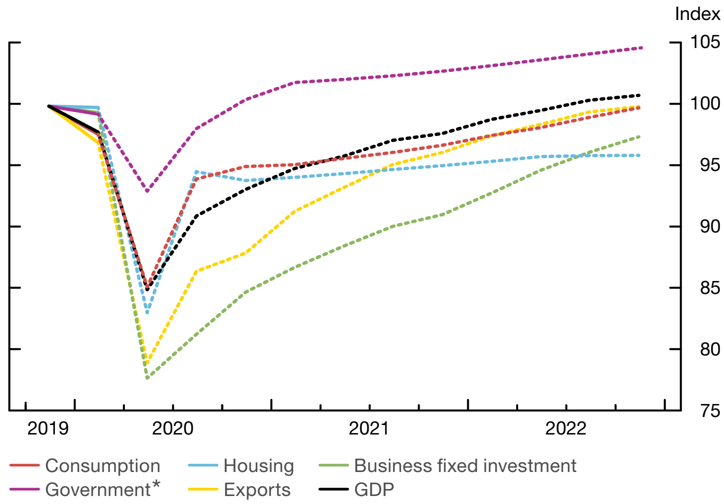
Financial markets are now functioning considerably better and, consequently, the use of some facilities has declined (**Chart 7**). The Bank's large-scale asset purchases of Government of Canada bonds initially improved liquidity and confidence. Now, with market functioning improved and the economy reopening, these purchases are providing considerable monetary stimulus. The lowering of the policy interest rate to its effective lower bound, the bond purchases and the easing of global financial conditions have all contributed to lower domestic interest rates and made it easier for households and businesses to borrow. For example, the lower yields on five-year Government of Canada bonds are being reflected in cheaper fixed-rate mortgages. These actions have reduced debt-service costs and will contribute to spending that should support the recovery.

The reopening phase of the recovery is underway

GDP is estimated to have contracted sharply in the second quarter (**Table 2** and **Chart 8**). Timely high-frequency data suggest that the economic fallout was at its worst in April. In May and June, as the number of new COVID-19 cases stabilized and began to decrease, governments started easing the containment restrictions. Labour market indicators suggest that economic activity began expanding in May and accelerated in June. About 1 ¼ million jobs were added in these two months, with broad-based, but uneven, increases across sectors (**Chart 9**).

Chart 8: Output contracted sharply in the second quarter

Index: 2019Q4 = 100, real quarterly data

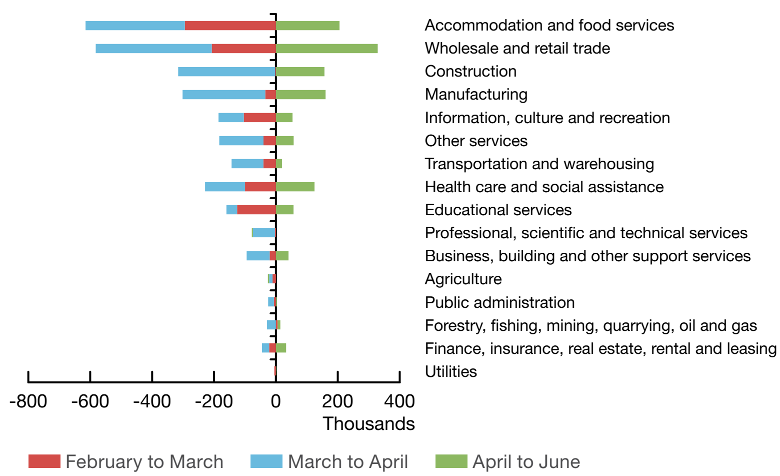


* Government includes government consumption and gross fixed capital investment.

Sources: Statistics Canada and Bank of Canada calculations and projections

Chart 9: Workers are being recalled in sectors that are reopening

Change in employment, monthly data



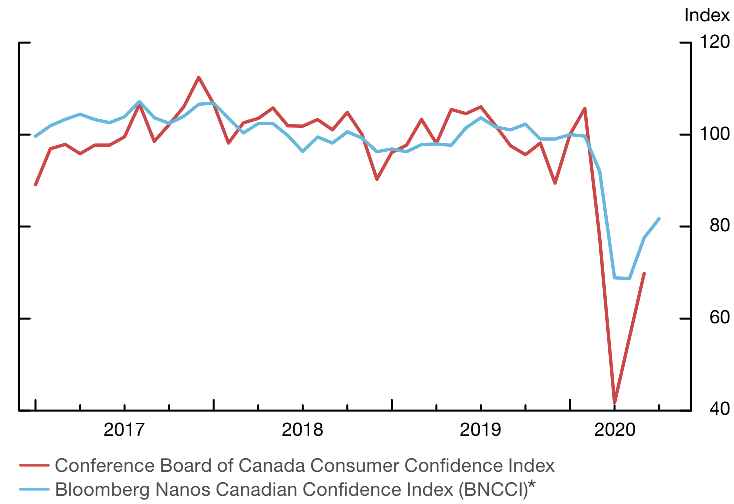
Sources: Statistics Canada and Bank of Canada calculations

Last observation: June 2020

The effects of containment measures differ across businesses, and public health protocols vary across provinces, territories and municipalities. Together, these mean that the process of reopening will be gradual and uneven. Some activities, including motor vehicle sales, have already seen a strong pickup since April. Likewise, housing activity fell sharply during the lockdown but is beginning to recover quickly. In contrast, some of the hardest-hit businesses, such as restaurants, travel and personal care services, have only just started to see improvements in recent weeks and are expected to continue to face significant challenges.

Chart 10: Consumer confidence has improved but remains subdued

Index: January 2020 = 100, monthly data



* The July figure for the BNCCI is based on weekly data for the two weeks ending July 3 and July 10.

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

Last observations: Conference Board of Canada, June 2020; Bloomberg Nanos, July 2020

These developments are consistent with measures of consumer and business confidence, which have improved but remain subdued (**Chart 10**). Despite the programs that have been introduced, some households and businesses are suffering severe financial hardship.

In the central scenario, about 40 percent of the drop in output in the first half of 2020 is reversed in the third quarter. This reflects the lifting of most containment measures and some associated improvement in confidence. The strength of growth in the third quarter is largely driven by the initial boost from the reopening of businesses and the resulting partial rebound in spending. The pace of growth is therefore unlikely to persist. Overall, the economy has thus far avoided the most severe scenarios presented in the April Report, but considerable economic slack remains.

CPI inflation has fallen sharply

Demand for some goods and services has fallen sharply because of the pandemic and related containment measures, triggering sharp declines in prices for gasoline, travel services, and clothing and footwear. In the calculation of inflation, these price declines have heavily outweighed the increase in prices for products that saw a surge in demand, such as household cleaning supplies and non-perishable food, or that suffered from supply disruptions, such as meat (**Chart 11**).

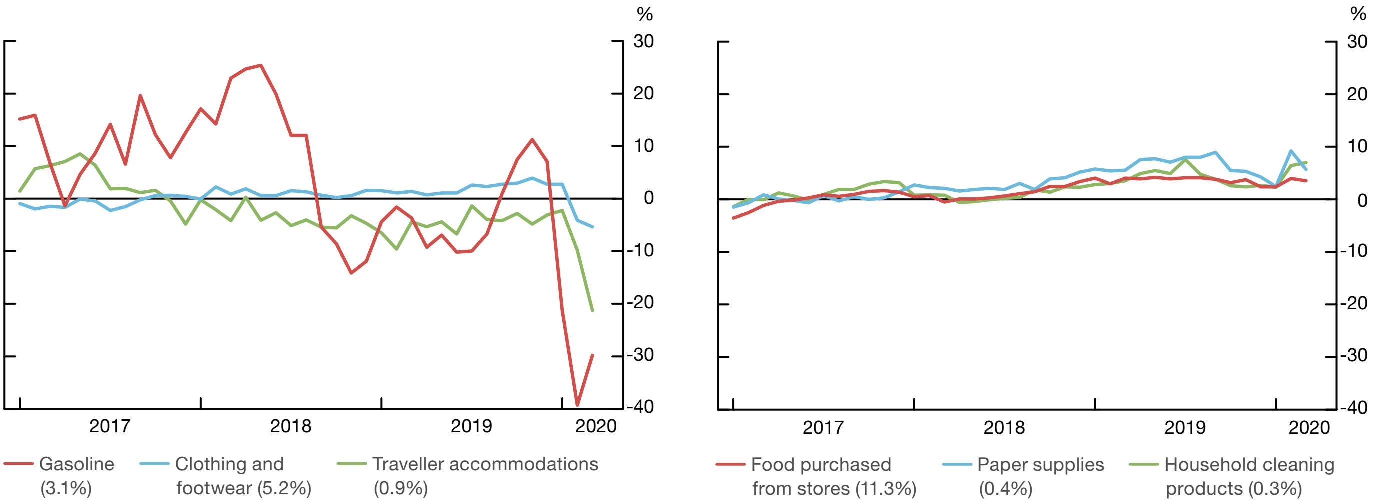
The direct and indirect effects of the crisis have been pulling down CPI inflation. As anticipated in the April Report, CPI inflation fell close to zero in April and May. The Bank's measures of core inflation have also declined, although by far less because they tend to filter out more volatile price movements such as those for gasoline. Core inflation measures ranged from 1.4 to 1.9 percent (**Chart 12**).

Chart 11: Price responses due to the pandemic have differed

Year-over-year percentage change, monthly data

a. CPI components affected by lower demand

b. CPI components affected by higher demand



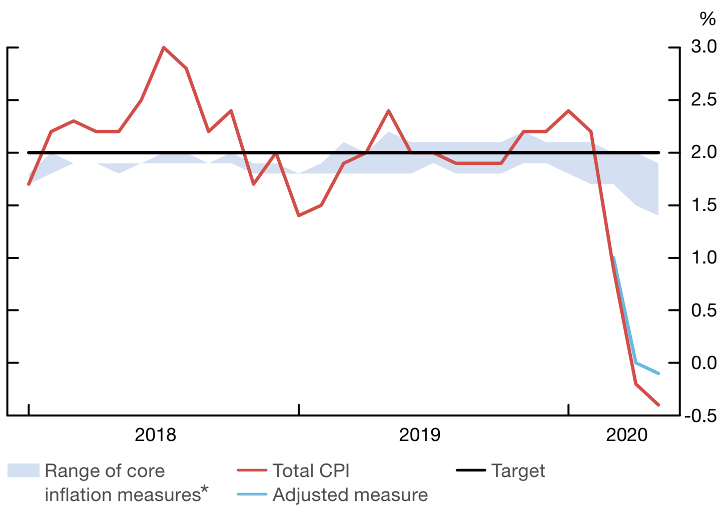
Note: The numbers in parentheses represent basket weights of CPI components.

Sources: Statistics Canada and Bank of Canada calculations

Last observation: May 2020

Chart 12: CPI inflation has declined to near zero

Year-over-year percentage change, monthly data



* The measures are CPI-common, CPI-median and CPI-trim.

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

Last observation: May 2020

The consumption patterns of Canadians have changed dramatically since the start of the pandemic. CPI inflation is calculated using fixed pre-pandemic consumption weights and thus may not accurately capture the inflation rate households are currently facing. **Box 2** outlines a new adjusted price index that captures the effects of the change in consumption patterns. The new price index is based on recent monthly transaction and survey data. It also shows a sizable decline in inflation, albeit one that is slightly smaller than in the official CPI (**Chart 12**).[3]

3 See K. P. Huynh, H. Lao, P. Sabourin and A. Welte, “What Do High-Frequency Expenditure Network Data Reveal About Spending and Inflation During COVID-19?” Bank of Canada Staff Analytical Note (forthcoming).

Box 2

Adjusted CPI inflation shows only slightly less decline than CPI inflation

Abrupt, large shifts in consumer spending occurred with the onset of the pandemic. These shifts imply that the consumer price index (CPI), which is a fixed basket of goods and services, may not reflect the actual level of inflation Canadians experienced during the containment period. The responses to the Bank of Canada's most recent Canadian Survey of Consumer Expectations illustrate this potential discrepancy. Respondents indicated that, in their experience, year-over-year inflation had remained close to 2 percent in the second quarter of 2020. However, in fact, inflation as measured by the CPI is estimated to have declined sharply.[1]

To better understand consumers' current inflation experiences, the Bank and Statistics Canada developed an adjusted price index, also referred to as the Analytical price index. This index updates weights based on high-frequency expenditure data, adjusting them to shifts in consumption patterns.[2] New monthly weights are calculated using anonymized aggregated payment data, Statistics Canada's monthly retail trade survey, and transaction data from Canadian grocery retailers as well as subject matter expertise.[3]

The new index shows how much consumption patterns have changed. For instance, the adjusted weights for food, medicine and other pharmaceutical products (health and personal care) are higher than in the CPI. In contrast, the weights for transportation (travel, motor vehicles), clothing and recreation are significantly lower than CPI weights (**Table 2-A**).

Overall, this adjusted index suggests slightly less downward pressure on inflation than CPI does, by about 0.3 percentage points in May (**Chart 12**).[4] These results show that although consumption patterns shifted through the containment period (and by quite a bit in areas such as travel services), shifts in the weights did not have a large impact on overall inflation.[5] Thus, both the adjusted index and the CPI indicate that the impacts of COVID-19 containment measures and behavioural changes have been strongly disinflationary.

Statistics Canada and the Bank will continue to update this new index to calculate an adjusted CPI inflation measure through the recovery period. The difference between the two measures of inflation may dissipate if the changes in consumption patterns reverse.

Table 2-A: CPI component weights based on high-frequency data
Percent

CPI component	CPI basket weight	March adjusted weight	April adjusted weight	May adjusted weight
Food (in stores and at restaurants)	16.48	16.54	20.68	20.84
Shelter	27.36	27.70	31.23	37.12
Household operations and furnishings	12.80	12.66	13.04	13.99
Clothing and footwear	5.17	5.00	3.30	2.22
Transportation	19.95	19.04	15.01	12.14
Health and personal care	4.79	4.85	5.61	4.96
Recreation, education and reading	10.24	11.62	7.97	5.18
Alcoholic beverages and tobacco products	3.21	2.60	3.15	3.55
Difference between adjusted and official CPI inflation (percentage points)		0.10	0.20	0.30

Note: The adjusted measure is calculated based on the chained Laspeyres method and uses one-month lagged weights as inputs. For example, the adjusted measure for May 2020 uses the real-time weights from April 2020.

1 For more details, see the most recent Canadian Survey of Consumer Expectations.

2 Actual CPI weights are based on Statistics Canada's 2017 Survey of Household Expenditures.

3 For more details, see T. Mitchell, G. O'Donnell, R. Taves, Z. Weselake-George and A. Xu, "Consumer Expenditures During COVID-19: An Exploratory Analysis of the Effects of Changing Consumption Patterns on Consumer Price Indexes," Statistics Canada Prices Analytical Series No. 2020010 (July 2020).

4 The differences between the adjusted measure and the CPI apply to only 3 months (March through May 2020) out of the 12 used to calculate CPI inflation on a year-over-year basis. Before March 2020, the adjusted measure assumes that spending patterns, and thus monthly growth rates, are the same as those measured by CPI.

5 Consumer perceptions of price changes may suggest a bigger difference because they are more likely to be influenced by items purchased frequently, like food. The prices of these frequently purchased items have risen during the containment period.

Firms have been heavily discounting some products to clear out undesired inventories that built up at the height of the pandemic. At the same time, there is only limited evidence to date of firms marking up their prices to cover the increased costs of doing business during the pandemic. Despite these additional costs, respondents to the summer Business Outlook Survey stated that they intend to raise prices less than last year and operate with smaller margins to remain competitive. Combined with low energy prices, these forces are expected to keep inflation weak in the near term.

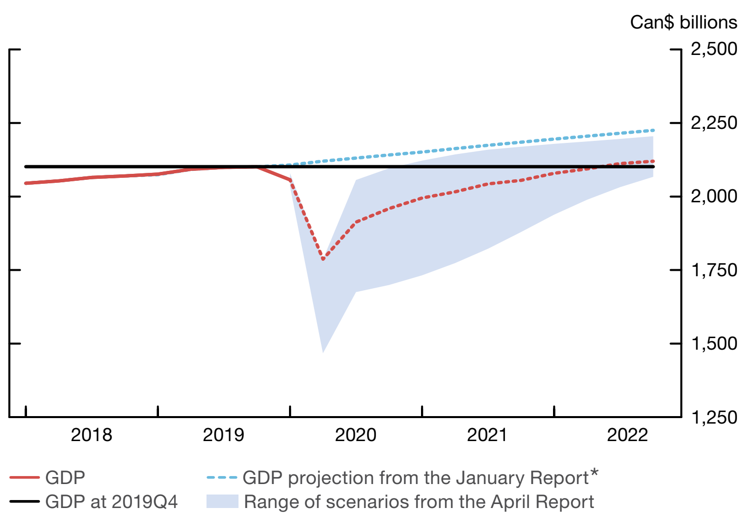
Growth moderates in the recuperation phase

After the initial bounce back in GDP growth, the economy is expected to enter a more protracted and gradual recovery (**Chart 13**). This reflects persistent effects of ongoing physical distancing measures, a slow rebound in foreign demand and subdued confidence on the part of households and firms resulting from elevated uncertainty about both the pandemic and the pace of the recovery.

Ongoing restructuring is an additional factor that restrains activity during recuperation. Some businesses will not reopen, others will go bankrupt, and new firms will require more time to form and scale. The service sector is usually more resilient in recessions, providing a buffering role for the economy. This time, however, the sector was also hit hard during containment and will face ongoing challenges adjusting to a world where physical distancing remains necessary.

Chart 13: The central scenario shows a gradual recovery in GDP

Real gross domestic product (GDP), chained 2012 dollars, quarterly data



* In this chart, the January projection for real GDP is extended by one year to 2022 using the potential output growth estimate for 2021 provided in the January Report.

Sources: Statistics Canada and Bank of Canada calculations and projections

In the central scenario, fiscal and monetary policies together provide substantial support to the Canadian economy. Fiscal measures are scaled to the impacts of the pandemic and respond to evolving economic conditions. Since the April Report, the CERB and CEWS have both been extended. Moreover, other programs have been introduced or expanded, including commercial rent assistance and additional supports for students and new graduates, seniors, essential workers, and the oil and gas sector.[4] Monetary stimulus has reduced borrowing costs for both households and businesses.

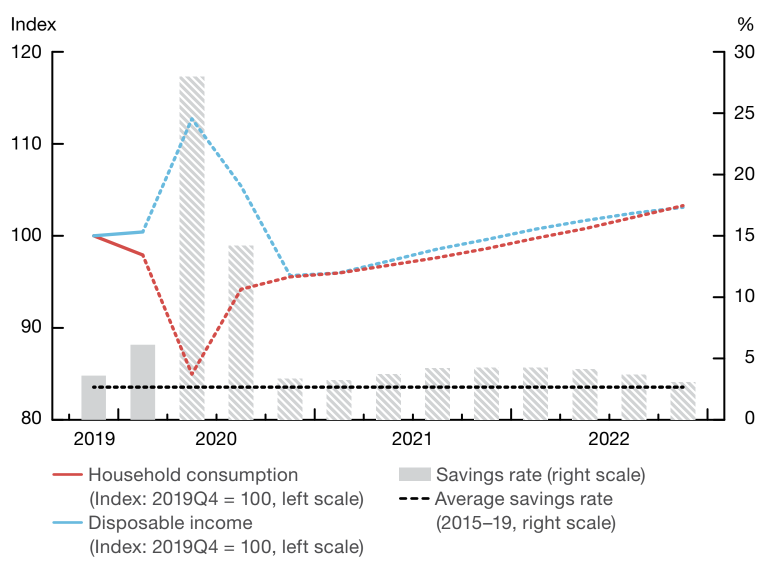
Several forces contribute to closing the gap between supply and demand over time in the central scenario. Supply initially recovers in line with the easing of containment measures. Demand benefits only gradually from improvements in foreign demand and confidence as well as support from fiscal and monetary policies, but eventually foreign and domestic demand increase faster than supply, absorbing excess capacity.

Household spending will rise, but caution may linger

In the central scenario, household spending picks up gradually as containment measures are eventually lifted and confidence in the economy improves. However, caution persists. Thus, while the savings rate declines from its peak in the second quarter, it remains higher than in recent years (Chart 14).[5]

Chart 14: The savings rate is expected to remain above its recent average

Nominal quarterly data



Sources: Statistics Canada and Bank of Canada calculations and projections

4 For more details, see the Government of Canada website.

5 The large jump in the savings rate in the second quarter reflects the combined impact of the income support payments and the income tax deferrals on disposable income as well as the constrained spending due to the containment measures. The effects on disposable income are expected to unwind in the third quarter.

Underlying the central scenario, the consumption patterns of households differ greatly depending on households' individual financial situations and the impact of the pandemic on their incomes.[6] Lower-income workers have been disproportionately affected by the efforts to contain the spread of the virus, either through layoffs or reduced hours. Many have seen their lost incomes replaced by CERB payments or other income-support measures and have benefited temporarily from deferred debt payments. Nonetheless, some of these households will face prolonged income losses, which could push up the number of financially stressed households, restraining the recovery of consumption.

At the same time, the incomes of other households have held up through this period. They are more likely to include people who earn higher incomes and who work in professions with few barriers to remote work. These households have been accumulating savings, mainly because there has been less to spend money on during the containment period. This suggests pent-up demand could help boost spending of some consumers.

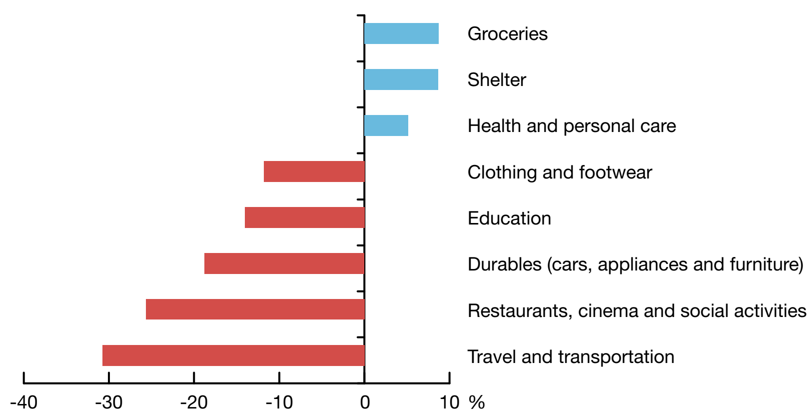
Overall, the central scenario for consumption incorporates a degree of caution, as some households prioritize paying down debts or increasing precautionary savings given the uncertain economic environment. Insolvencies increase but do not derail the recovery.

More broadly, household spending patterns have shifted since the onset of the pandemic, and some of these changes may last (**Chart 15**). As a result, there is heightened uncertainty regarding the composition of consumption and housing demand in the central scenario and what that might imply for the retail and travel sectors as well as for residential construction.

In the central scenario, the effects of the downturn and lower immigration hold down housing activity over the next few years. After a near-term boost from pent-up demand, residential investment slowly increases as income and confidence recover.

Chart 15: Household spending patterns are changing

Balance of opinion,* percent



* Responses to the following question in the Canadian Survey of Consumer Expectations (CSCE) are shown: "After the situation normalizes, relative to your spending before the COVID-19 outbreak, do you expect that your spending on the following will be higher, similar or lower?" Balance of opinion represents the percentage of consumers expecting higher spending minus the percentage expecting lower spending. See the 2020Q2 CSCE for more details.

Source: Bank of Canada Last observation: 2020Q2

6 See J. C. MacGee, T. M. Pugh and K. G. See, "The Heterogeneous Effects of COVID-19 on Household Consumption, Debt and Savings," Bank of Canada Staff Analytical Note (forthcoming).

Business investment is likely to remain weak

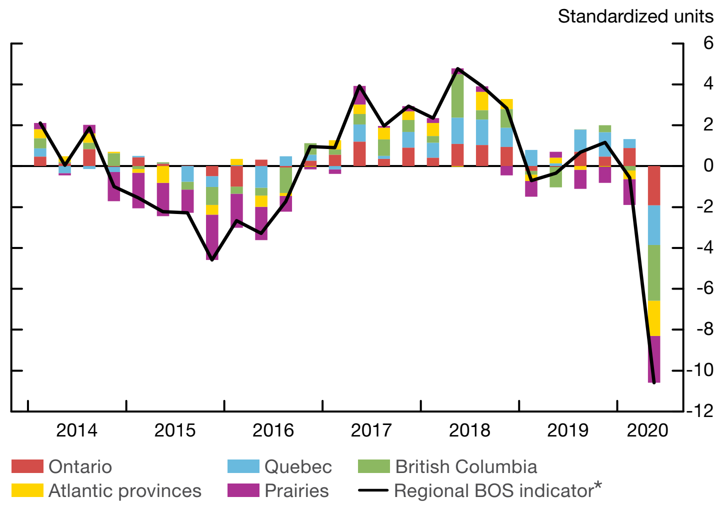
In the Bank's central scenario, uncertainty about the composition and strength of future demand, elevated debt levels and lingering financial stress significantly dampen business investment. Across all regions and sectors, respondents to the summer Business Outlook Survey reported that uncertainty is weighing heavily on investment plans and suggested that their investment will remain weak over the next 12 months (**Chart 16**).

Business investment recovers slowly in the central scenario, even as elevated uncertainty recedes. This reflects that capacity pressures are quite limited overall and that some firms are scaling back or abandoning their investment plans, while other businesses are closing their doors permanently. In addition, it will take some time for businesses to reposition themselves and adjust their investment to reflect new demand patterns.

A lower investment path is also likely to have persistent effects on potential output by reducing the future capital stock. One area of relative strength, however, is investment in digital technology. The pandemic has already accelerated digitalization in some sectors. In the Business Outlook Survey, retailers often cited plans to further invest in online offerings, and providers of financial and other professional services reported spending more on digital technology so that staff can work from home efficiently.

Chart 16: Business sentiment has plummeted across regions

Regional BOS indicator and regional contributions, quarterly data



* This indicator may differ from the overall Business Outlook Survey (BOS) indicator because the common variations are extracted from more variables. These variables are more volatile because they are based on responses from smaller samples of firms.

Source: Bank of Canada

Last observation: 2020Q2

The energy sector is expected to remain subdued

The current environment of low energy prices arrived just as the sector was beginning to emerge from a lengthy period of challenging adjustments.

Acute liquidity concerns have eased as oil prices have increased from their April lows and the spread between the prices of WTI and WCS has narrowed. Nevertheless, the sector remains under pressure, with smaller firms facing greater challenges than the larger, more-integrated producers.

Restructuring within the industry, ongoing since the 2014–15 oil price shock, is expected to continue. Oil production has been reduced and capital expenditure plans have been significantly curtailed. In addition, there are renewed questions about the likelihood of pipelines being developed. The central scenario anticipates that, with weaker investment in the face of reduced demand and low prices, oil production is now on a considerably lower path than before the COVID-19 crisis.

Exports will recover at a moderate pace

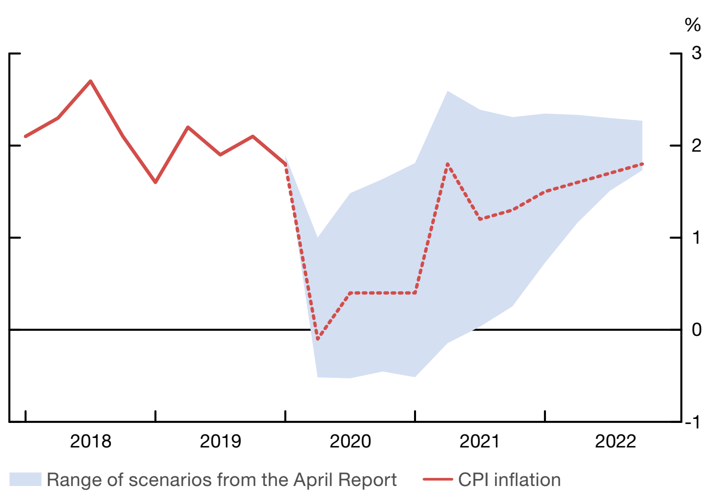
Exports in the central scenario recover gradually as borders reopen further, international supply chains are re-established and foreign demand picks up. However, travel and exports of motor vehicles and energy continue to weigh on growth, given weaker demand for these products during the recuperation phase.

The current crisis could amplify pressures to relocate supply chains domestically, a global trend that started before the pandemic due to rising protectionism. In addition, in the current environment of disrupted trade, some of the declines in exports may be offset by substitution away from some imports and toward domestic goods and services.

A slow rebound in demand weighs on inflation

In the central scenario, the path for CPI inflation over the next year largely reflects the influence of energy prices. The dramatic decline in these prices in March and April will hold inflation down until early 2021 (**Chart 17**). After that, the inflation outlook depends primarily on the speed and strength at which demand and supply recover. Firms report that capacity could return quickly as the economy reopens and containment measures are lifted. They expect the recovery in demand to be more muted, especially in the services and energy sectors (**Chart 18**). The scenario assumes that the impact on supply is about 60 percent of the decline in GDP over the first half of 2020 (**Box 3**).

Chart 17: CPI inflation gradually increases toward 2 percent in the central scenario
Quarterly data



Sources: Statistics Canada and Bank of Canada projections

Box 3

Estimating the economy's supply in the wake of COVID-19

The pandemic has had large and pervasive impacts on the supply of goods and services in the Canadian economy. The nature of the supply effects is very different than in past recessions. Supply fell dramatically when governments told some firms to shut down their operations temporarily.

While certain sectors may continue to face restrictions for some time, many businesses are already reopening. Thus, much of the initial decline in supply is likely to be relatively short-lived and therefore not as damaging to the economy's underlying productive capacity (i.e., potential output) as it could have been. Intuitively, this productive capacity continues to exist and would have remained in use if not for COVID-19. This reasoning explains this Report's distinction between supply and potential output in the near term. Through the recuperation phase, the difference between the concepts goes away. Thus, the longer-term outlook for supply becomes the new outlook for potential output. Over the longer term, both incorporate the persistent scarring effects of the pandemic on investment and the working-age population.

The extraordinary nature of the COVID-19 pandemic

The Bank of Canada estimates that total supply was about 9 percent lower in the second quarter of 2020 than in the fourth quarter of 2019, largely due to the impact of containment measures. This sharp contraction in supply amounts to about 60 percent of the decline in gross domestic product (GDP) over the same period.

In the Bank's central scenario, the short-term contraction in supply is assumed to be attributable to hours lost due to firm shutdowns, stay-at-home orders, disruptions to work routines, caring for relatives at home and, to a lesser extent, sickness. These effects are expected to dissipate as containment measures are relaxed. Some effects are anticipated to persist through the first half of 2021 to account for the pandemic and ongoing challenges in some industries.

In addition, both consumer and business confidence have been severely shaken by the pandemic and continuing uncertainty about its course and economic impacts. Low confidence has negative effects on demand as well as on supply, and these effects last well beyond the initial easing of containment measures. Overall, in the Bank's central scenario, demand takes longer than supply to recover in the near term.

A long-term perspective on potential output

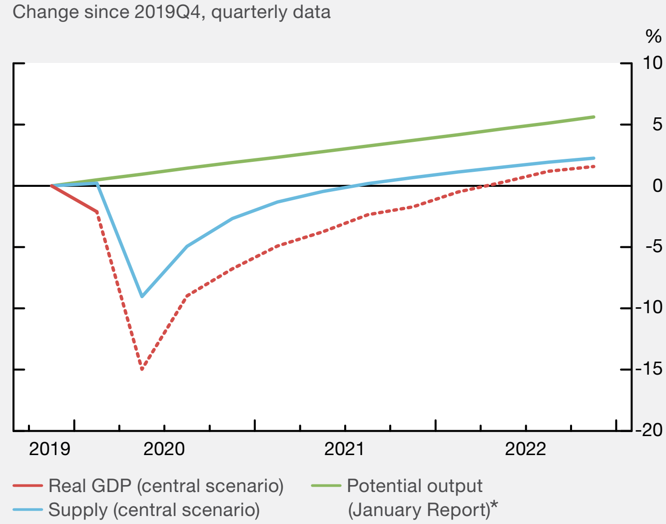
The level of potential output by 2022 in the central scenario is almost 4 percent lower than in the January Report (**Chart 3-A**). Population, business investment and labour productivity are all expected to follow lower trajectories.

In the near term, fewer immigrants and international students are expected to come to Canada because of travel restrictions and delays in processing new visas. As a result, the Canadian working-age population is expected to contract slightly through the middle of the year before returning to growth at the end of 2020. Looking further ahead, the Bank assumes that the pace of people arriving in Canada as permanent and non-permanent residents will gradually return to its pre-COVID-19 rate by 2022.

The current crisis is also assumed to have long-lasting adverse effects on the productive capacity of the economy: changes in business and consumer behaviour, combined with bankruptcies and layoffs, may lead to important structural adjustments. The reallocation of labour and capital across sectors will likely result in some mismatches of skills and obsolescence of capital, which in turn could weigh on investment and labour productivity.

Chart 3-A: Demand falls more than supply in the central scenario

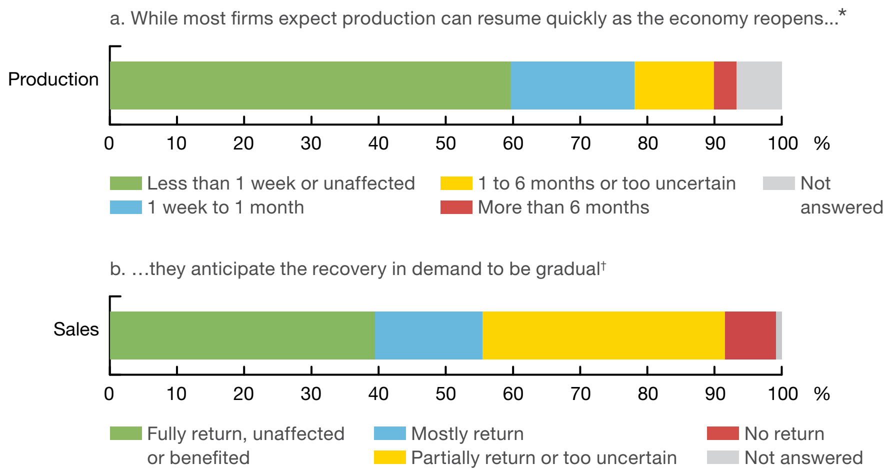
Change since 2019Q4, quarterly data



* In this chart, the January projection for potential output is extended by one year to 2022 using the potential output growth estimate for 2021 provided in the January Report.

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

Chart 18: Supply recovers sooner than demand



* Percentage of firms responding to the Business Outlook Survey question, "Once restrictions are lifted, how long would it take for production to return to normal?"

† Percentage of firms responding to the Business Outlook Survey question, "To what extent do you think your sales will be back to pre-COVID-19 levels in the next 12 months?"

Source: Bank of Canada Last observation: 2020Q2

Even as establishments reopen, many consumers are expected to be hesitant to resume their previous spending patterns, partly due to fears of contracting the virus. In addition, even those who did not lose their job, or those whose lost income was fully offset by government programs, may re-evaluate their need for precautionary savings. Foreign demand may be even slower to rebound because some trade partners are taking longer than Canada to contain the spread of the virus. Faced with uncertainty about demand, businesses are likely to cancel or postpone investment plans. Overall, this implies that demand will take some time to recover in line with supply.

In this context, weak demand explains why firms are reluctant to pass along cost increases associated with the pandemic. However, it is possible that customers will be sympathetic when price increases are clearly linked to these costs. This could lead to higher inflation than in the central scenario.

So far, consumer expectations of inflation over the next one to two years have remained firm despite the large decline in CPI inflation. In the central scenario, downward pressure on inflation gradually fades as demand recovers and economic slack diminishes. However, uncertainty is far greater than usual. The large declines in both demand and supply are extraordinary. Over a longer horizon, the pandemic could cause large and lasting changes in consumer preferences and other sources of demand. Similarly, the scope of possible structural changes to a post-pandemic economy is vast, and the timing of adjustments will remain unknowable as long as COVID-19 continues to be a threat.

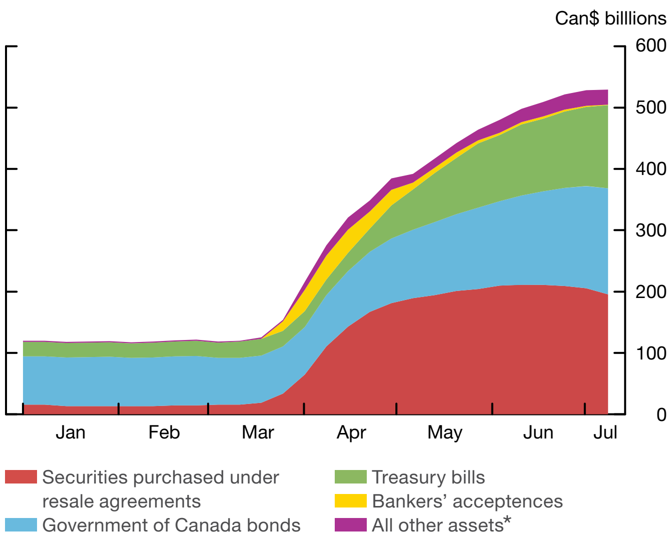
Monetary policy tools

The Bank of Canada responded quickly and forcefully to market disruptions as well as to the anticipated economic consequences of the COVID-19 pandemic and related containment measures. The Bank reduced the policy interest rate by 150 basis points to 25 basis points, its effective lower bound, and launched a number of liquidity facilities and asset purchase programs. The cumulative impact of these facilities and purchase programs since March has resulted in an exceptional increase in the size of the Bank's balance sheet (**Chart 19a**).

While the initial intent of the facilities and programs was to restore market functioning, the programs all play a role in the conduct of monetary policy. This is because, when markets are not functioning properly, the chain of lending and borrowing stops working, and the ability of monetary policy to provide stimulus breaks down. During a crisis, central banks must ensure that credit can continue to flow to households and businesses. Although the Bank has reduced the frequency of its short-term liquidity operations since the improvement in market functioning, the facilities are still in place as an important backstop while uncertainty remains elevated.

Chart 19: Central banks acted swiftly to support markets

a. Bank of Canada total assets, weekly data



b. Central bank total assets as a percentage of 2019Q4 GDP, monthly data

* Other assets include provincial bonds, corporate bonds and commercial paper. A full list of assets can be found on the Bank of Canada's website on assets and liabilities.

Sources: Bloomberg Finance L.P., national sources via Haver Analytics, and Bank of Canada calculations

Last observations: Bank of Canada total assets, July 8, 2020; central bank total assets, June 2020

Large-scale secondary market purchases of Government of Canada bonds provide monetary stimulus through several channels and can be described as quantitative easing (QE).[7] When markets are not functioning well, QE improves liquidity in the government bond market (liquidity channel). QE can also lower borrowing costs for businesses and households by putting downward pressure on government yields (interest-rate channel).[8] Through the purchase of a large quantity of government bonds held by the private sector, QE reduces the relative supply of bonds and thus lowers their relative yields, leading investors to reallocate their portfolio to riskier assets (portfolio balance channel). In addition, some investors will adjust their portfolios to include more assets priced in other currencies, placing downward pressure on the Canadian dollar (foreign exchange channel). Markets generally interpret QE as a signal that rates will likely be at the lower bound for an extended period (signalling channel).[9]

The Bank has committed to continue buying at least $5 billion of Canadian government bonds each week until the recovery is well underway. The current level of purchases is likely working to varying degrees through all these channels, which helps make borrowing more accessible and more affordable for households and businesses. Initially, the purchases were improving liquidity. With improved market functioning and the reopening of the economy, other channels are becoming more important. While the Bank's balance sheet is not large compared with those of other major central banks, the increase in its size has been particularly rapid (**Chart 19b**).

The Bank's corporate bond purchase program, through purchases of corporate bonds in secondary markets, has helped improve liquidity conditions in this market, even though purchases have been limited to date. As market functioning improved globally and in Canada, Canadian corporations became better able to access markets directly for new borrowing that will support continued operations. Credit easing programs like this one can deliver stimulus by narrowing the difference between yields of corporate and government bonds, bringing down borrowing costs for businesses.

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7 For more details, see the April 2020 *Monetary Policy Report*; the May 2020 *Financial System Review*; T. Gravelle, "Economic Progress Report: Keeping Markets Working" (speech to the Greater Sudbury Chamber of Commerce, Sudbury, June 4, 2020); T. Macklem, "Monetary Policy in the Context of COVID-19" (speech to the Canadian Clubs and cercles canadiens, Ottawa, June 22, 2020); and the Bank of Canada website.

8 The interest-rate channel is also referred to in the academic literature as the credit channel or bank-lending channel.

9 There is a large literature examining QE, although a standard nomenclature for the channels does not exist. For more details, see Committee on the Global Financial System, "Unconventional Monetary Policy Tools: A Cross-Country Analysis," CGFS Papers No. 63 (October 2019); I. Goldstein, J. Witmer and J. Yang, "Following the Money: Evidence for the Portfolio Balance Channel of Quantitative Easing," Bank of Canada Staff Working Paper No. 2018-33 (July 2018); J.-S. Fontaine, L. Suchanek and J. Yang, "Unconventional Monetary Policy: The Perspective of a Small Open Economy," *Bank of Canada Review* (Spring 2017): 19–30; A. Reza, E. Santor and L. Suchanek, "Quantitative Easing as a Policy Tool Under the Effective Lower Bound," Bank of Canada Staff Discussion Paper No. 2015-14 (November 2015).

Alternative scenarios and risks

The central scenario for output and inflation described in this Report is highly conditional on the course of the pandemic, and there are many scenarios above and below this one in which the evolution of the pandemic is more or less favourable. There are also a number of economic upside and downside risks even if the virus evolves as assumed in the central scenario. In practice, public health and economic health are closely intertwined, with many of the economic risks likely to break to the upside (downside) if the virus evolves more (less) favourably than in the central scenario.

On the downside, there are a series of increasingly dire scenarios in which COVID-19 outbreaks increase as the economy reopens, forcing the reintroduction of containment measures. The broader the shutdowns, the bigger the economic impact. This includes the possibility of a widespread and possibly more severe second wave of the virus, requiring a complete lockdown.

Tighter global financial conditions could result if, for instance, there were widespread household, corporate and sovereign defaults given elevated debt levels. Such an outcome would threaten financial stability and likely cause a rapid adjustment of market prices and risk premiums. Emerging markets, particularly those that have not yet contained the virus, would be especially vulnerable and could face greater stress and a marked increase in capital outflows. If the pandemic takes a more dire path, trade tensions could be exacerbated, and global fragmentation could worsen. In Canada, a much weaker scenario could crystalize the risks associated with high household indebtedness.

On the upside, a stronger economic scenario could unfold if, for instance, economies reopen with minimal spread of the virus, or if a vaccine or effective treatment is available earlier than assumed in the central scenario. Such an improved scenario could lead to and in turn be bolstered by higher commodity prices and greater business and consumer confidence. These factors would likely lead to a stronger profile in exports and business investment, most notably in the energy and commodity sectors. If consumer confidence were more robust and enduring, a stronger rebound in household spending than the subdued recovery in the central scenario would be anticipated. A more positive outlook could prompt households that built up savings during the containment period to pick up the spending they had put on hold, releasing pent-up demand.

Even if the course of the pandemic is as assumed in the central scenario, the economic factors mentioned above could lead to stronger or weaker outcomes for the economic outlook, with dynamics similar to what is discussed here.