INTERNATIONAL MONETARY FUND

IMF Country Report No. 22/361

CANADA

2022 ARTICLE IV CONSULTATION—PRESS RELEASE; AND STAFF REPORT

December 2022

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2022 Article IV consultation with Canada, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its December 5, 2022 consideration of the staff report that concluded the Article IV consultation with Canada.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on December 5, 2022, following discussions that ended on October 7, 2022, with the officials of Canada on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on November 17, 2022.
- An **Informational Annex** prepared by the IMF staff.

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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International Monetary Fund
Washington, D.C.

PRESS RELEASE

PR22/421

IMF Executive Board Concludes 2022 Article IV Consultation with Canada

FOR IMMEDIATE RELEASE

Washington, DC – **December 8, 2022:** The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with Canada.

Canada has come through the pandemic relatively well and, as a commodity exporter, has been hit less hard than many other countries have been by Russia's war on Ukraine. Policymakers nonetheless face a difficult set of issues. High inflation has emerged as the principal near-term macroeconomic challenge in Canada, as it has globally. Housing affordability is a major concern following a long boom that may now have peaked. The pandemic remains a source of risk. And looking further ahead, climate change carries another critical set of challenges.

After contracting by 5.2 percent in 2020, real GDP bounced back by 4.5 percent in 2021 and continued to grow strongly in the first half of 2022. Labor markets tightened substantially, with the unemployment rate hitting a record low of 4.9 percent in June and July. And inflation surged to a 40-year high of 8.1 percent in June, propelled by rising commodity prices, supply-chain bottlenecks, the rapid domestic recovery, and the accompanying tightening of labor markets.

Both monetary and fiscal policies have been tightened substantially, triggering a welcome housing correction and a broader cooling of activity. But with the economy still in excess demand and inflation well above target at 6.9 percent in October, the policy rate will likely need to stay at or above 4 percent for most of 2023. Growth is expected to slow to 3.3 percent in 2022 and 1.5 percent in 2023. Unemployment should continue to rise moderately, reaching its pre-pandemic level of around 6 percent by next year, and inflation should continue declining, returning to the 2-percent target by end-2024. House prices are expected to retrace much of their pandemic run-up, falling 20 percent or more from peak to trough over the next few years, while the financial system is expected to remain resilient. Important risks, however, surround the baseline forecast, and shocks could easily push the economy into a mild recession.

Executive Board Assessment[2]

Executive Directors broadly agreed with the thrust of the staff appraisal. They welcomed Canada's strong economic recovery from the COVID-19 shock but noted the challenges policymakers are facing, including from rising inflationary pressures, vulnerabilities in the

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[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.IMF.org/external/np/sec/misc/qualifiers.htm.

housing market, and the global slowdown. Directors underscored that the key immediate priority is to bring inflation down without triggering a recession. Progress on necessary structural reforms, including to tackle climate change and promote the green transition, is also essential.

Directors concurred that fiscal policy should support the fight against inflation. They noted that support for households in the face of high fuel and food prices should be kept temporary and targeted and encouraged the authorities to save further revenue windfalls and consider accelerating deficit reduction from the next budget onward. Directors welcomed the federal government's commitment to reduce the federal debt ratio and its publication of long-term fiscal projections. Many Directors were open to continued consideration of a specific debt anchor supported by an operational rule and to incorporate rules-based fiscal stimulus into the policy toolkit, but many others did not see a clear need for these measures.

Directors welcomed the Bank of Canada's (BoC) decisive policy tightening. They agreed that the central bank should maintain a tight monetary stance to bring the inflation back to target and avoid de-anchoring of inflation expectations, and that it should continue clearly communicating its policy intentions. A number of Directors shared the BoC's concern that the publication of the monetary policy rate path, as recommended by staff, could be incorrectly interpreted as a commitment.

Directors noted the ongoing housing correction triggered by policy tightening and agreed that the financial system would likely remain resilient. To durably address housing affordability, Directors emphasized the need for further policy measures, particularly to boost the supply of housing.

Directors welcomed progress toward implementing recommendations from the 2019 Financial Sector Assessment Program. They noted that there is scope to enhance some areas of financial regulation, including on crypto assets and AML/CFT issues, and to further strengthen interagency cooperation on financial oversight and address data gaps.

Directors commended Canada's ambitious plans for reducing its currently high CO2 emissions. They agreed that any negative impacts on Canada's competitiveness from countries' differing policy approaches will need to be addressed and suggested that Canada is well placed to catalyze international agreement on a differentiated carbon price floor. Noting the importance of the oil and gas sector, Directors encouraged the authorities to develop a comprehensive strategy to help the economy and workers transition away from carbon-intensive products and processes.

It is recommended that the next Article IV consultation with Canada be held on a standard 12-month cycle.

Canada: Selected Economic Indicators
(Percentage change, unless otherwise indicated)

Nominal GDP (2021): Can$ 2,496 billion (US$ 1,990 billion)
GDP per capita (2021): US$ 52,079
Main exports: Oil and gas, autos and auto parts, gold, lumber, copper.

Quota: SDR 11,023.9 million
Population (2021): 38.0 million

				Projections					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Output and Demand									
Real GDP	1.9	-5.2	4.5	3.3	1.5	1.6	2.3	1.9	1.7
Total domestic demand	1.2	-6.4	6.1	5.5	1.8	1.3	2.6	1.7	1.4
Private consumption	1.4	-6.1	4.9	8.7	3.2	0.8	3.3	1.6	1.3
Total investment	0.2	-7.9	12.3	2.1	-1.1	2.8	2.6	2.1	1.9
Net exports, contribution to growth	0.6	0.5	-2.0	-2.2	-0.4	0.3	-0.3	0.2	0.3
Unemployment and Inflation									
Unemployment rate (average) 2/	5.8	9.6	7.4	5.3	5.9	6.2	6.1	6.0	6.0
CPI inflation (average)	1.9	0.7	3.4	6.9	4.2	2.4	1.9	1.9	2.0
Saving and Investment 1/									
Gross national saving	21.0	20.5	23.8	23.8	22.8	23.1	22.7	22.5	22.3
General government	4.0	-7.2	-1.4	1.1	1.9	2.1	2.3	2.2	2.2
Private	17.1	27.7	25.1	22.7	20.9	21.0	20.5	20.3	20.1
Personal	4.2	33.7	23.2	11.4	7.4	4.5	3.9	5.2	4.6
Business	12.9	-6.0	1.9	11.3	13.5	16.5	16.5	15.0	15.5
Gross domestic investment	23.1	22.3	23.7	23.3	23.0	23.5	23.7	23.9	24.2
General Government Fiscal Indicators 1/ (NA basis)									
Revenue	40.7	41.6	41.0	41.5	41.2	41.2	41.2	41.2	41.3
Expenditures	40.7	53.0	46.0	43.0	42.3	42.0	41.8	41.8	41.7
Overall balance	0.0	-11.4	-5.0	-1.5	-1.1	-0.7	-0.6	-0.6	-0.4
Gross Debt	87.2	117.8	112.9	101.9	99.0	97.1	94.9	93.3	91.9
Net debt	23.1	33.6	31.6	30.6	30.3	30.0	29.5	29.0	28.3
Money and Credit (Annual average)									
Three-month treasury bill 2/	1.7	0.5	0.1	2.0	4.0	3.0	2.4	2.5	2.5
Ten-year government bond yield 2/	1.6	0.8	1.4	3.1	4.0	3.6	3.4	3.3	3.2
Balance of Payments									
Current account balance 1/	-2.0	-1.8	0.0	0.5	-0.2	-0.4	-1.0	-1.5	-1.9
Merchandise Trade balance 1/	-0.8	-1.8	0.2	1.4	0.5	0.1	-0.5	-0.9	-1.3
Export volume (percent change)	0.8	-8.1	2.0	0.5	0.6	1.9	1.9	2.7	2.7
Import volume (percent change)	0.0	-7.3	8.8	7.4	2.0	1.2	3.4	2.0	1.6
Terms of trade	-0.8	-3.3	14.1	9.8	-1.1	-1.7	0.3	0.0	0.0

Sources: Haver Analytics and Fund staff calculations.
1/ Percent of GDP.
2/ In percent.

INTERNATIONAL MONETARY FUND

CANADA

November 17, 2022

STAFF REPORT FOR THE 2022 ARTICLE IV CONSULTATION

KEY ISSUES

Context. Canada has come through the pandemic relatively well and, as a commodity exporter, has been hit less hard than many other countries have been by Russia's war on Ukraine. Nonetheless, inflation is well above target, housing affordability is a major concern following a long boom that may now have peaked, and the pandemic remains a source of risk.

Outlook. Growth has slowed in response to policy tightening and will likely remain subdued over the coming year, with unemployment increasing moderately and inflation returning to target by end-2024. House prices should continue their healthy correction, while the financial system is expected to remain resilient. Important risks, however, surround the baseline forecast, and shocks could easily push the economy into a mild recession.

Macro policy advice. Continued tight monetary policy will be needed to rein in inflation, and the policy rate will likely need to remain at or above 4 percent for most of 2023. Fiscal policy should support the fight against inflation—further revenue windfalls at both federal and provincial levels should be saved, support for households in the face of high fuel and food prices should be kept temporary and targeted, and deficit reduction could be accelerated from the next budget. As for housing, further supply-side policy measures would help to address affordability over time.

Policy reforms. Canada has a history of prudent fiscal policymaking, but the fiscal framework could be better anchored with a specific debt target supported by an operational rule. Separately, rules-based fiscal stimulus could be a useful addition to the toolkit for dealing with future downturns. There is also scope to enhance some areas of financial regulation (e.g., on cryptoassets and on the AML/CFT regime) and to build on existing progress in strengthening interagency cooperation on financial oversight.

Climate priorities. From a challenging starting point of high emissions, Canada has laid out ambitious plans for carbon pricing and would be well placed to help catalyze international agreement on a differentiated carbon price floor. Separately, a comprehensive strategy is needed to help the economy transition away from carbon-intensive products and processes and to assist affected workers, communities, and regions as the world moves toward net-zero emissions.

Approved By
Nigel Chalk (WHD) and Martin Čihák (SPR)

Discussions took place both in Ottawa and remotely via videoconference during September 20–27, 2022 and October 3–7, 2022. The team comprised K. Mathai (head), M. Andrle, T. Kass-Hanna, L. Liu, L. Masterson, Y. Yang (all WHD), and P. Grippa (MCM), supported by C. El Khoury and I. Thomas (both LEG) on AML/CFT issues. Additional administrative and research assistance was provided by L. Azoor, S. Coquillat, and A. Medici (all WHD). P. Jennings, R. Cunningham, and M. Villeneuve (all OED) joined many of the mission's meetings, and I. Goldfajn (WHD) participated in the concluding discussions with Deputy Prime Minister Freeland and Governor Macklem.

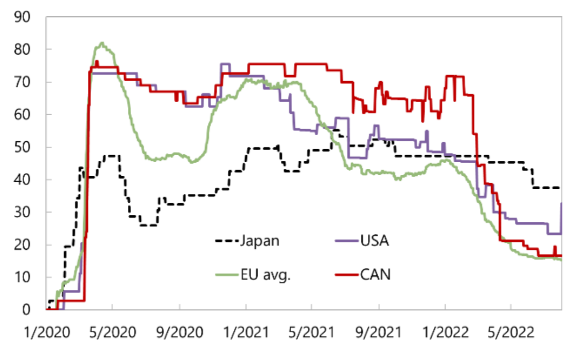
CONTENTS

ANNEXES

CONTEXT

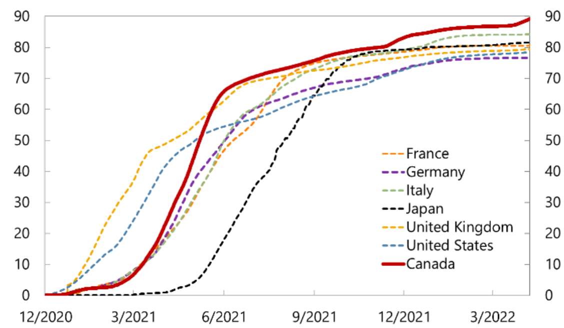
1. Canada has come through the pandemic relatively well. Mobility restrictions, compliance with masking, and, perhaps most importantly, good vaccine uptake (especially for the first two doses) all contributed to hospitalization and death rates consistently below the G7 average, while economic outcomes have been broadly in line with those of other G7 economies. As elsewhere, however, the pandemic may have lasting effects on the economy, including via youth learning losses and labor-force disruptions related to more frequent illness as well as long-COVID.

Canada: Stringency Index
(Index)



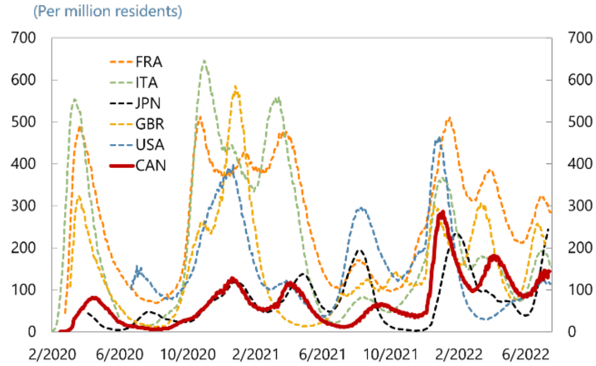
Sources: Oxford COVID-19 Government Response Tracker and IMF staff calculations

Canada: Persons with at Least One Dose of COVID-19 Vax
(Percent)



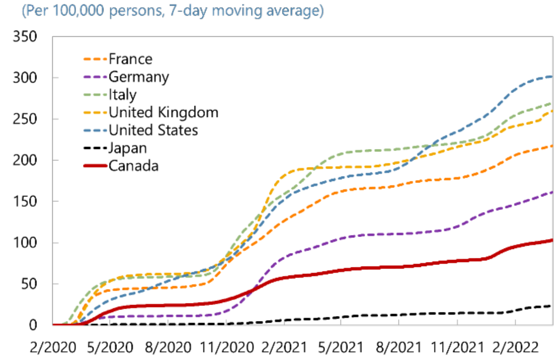
Sources: Johns Hopkins University, World Bank, and IMF staff calculations

Canada: COVID-19 Hospitalizations
(Per million residents)



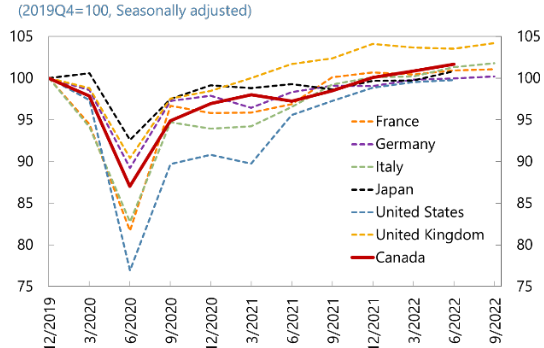
Sources: Our World in Data and IMF staff calculations

Canada: Total Covid-19 Deaths
(Per 100,000 persons, 7-day moving average)



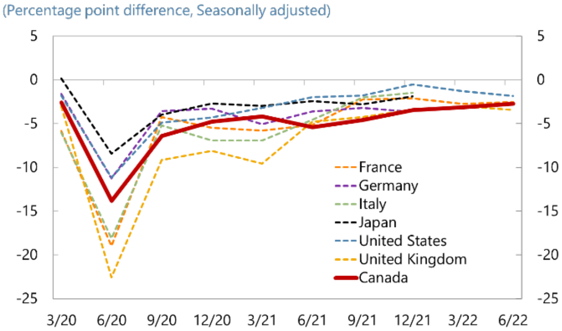
Sources: Johns Hopkins University, World Bank, and IMF staff calculations

Canada: Real GDP
(2019Q4=100, Seasonally adjusted)



Sources: StatCan, BLS, CoJONS, INS, DBB, INS/E, and IMF staff calculations

Canada: Deviation from Prepandemic GDP Forecast
(Percentage point difference, Seasonally adjusted)

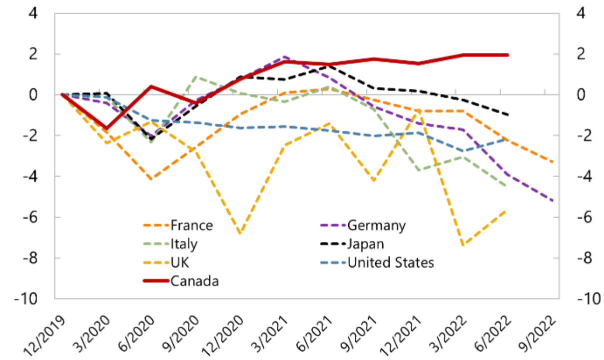


Sources: World Economic Outlook, and IMF staff calculations
Note: Deviation from World Economic Outlook published in January 2020.

2. **As a major commodity exporter, Canada has been hit less hard than many other countries have been by Russia's war on Ukraine**. The global slowdown and tightening of financial conditions triggered by the war have been important headwinds. Also, inflation has risen sharply, which has necessitated a monetary policy response. But at the same time, activity and exports have clearly benefited from the positive terms-of-trade shock, as have government revenues.

Canada: Current Account Balance

(Cumulative change, Percent of GDP, Seasonally adjusted)



Sources: World Economic Outlook and IMF staff calculations

3. **Policymakers nonetheless face a difficult set of issues.** High inflation has emerged as the principal near-term macroeconomic challenge in Canada, as it has globally, and taming inflation while achieving a soft landing for the economy will be complicated, especially given very high levels of household leverage. Over the longer term, key policy issues include bolstering productivity growth and ensuring that housing supply keeps up with the immigration and population growth upon which the economy relies. Climate change carries another critical set of challenges: from an emissions-intensive starting point, Canada has laid out laudably ambitious plans for carbon taxation, but any implications for competitiveness will have to be addressed, and a comprehensive strategy will be needed to transition the economy and its workers away from carbon-intensive products and processes as the world decarbonizes.

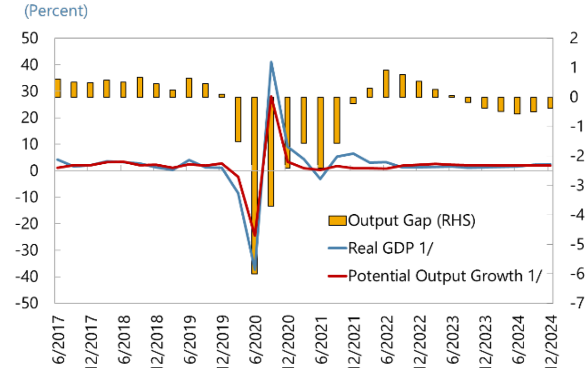
4. **Policy continuity seems likely.** Prime Minister Trudeau's Liberal Party—in power since 2015—lost its parliamentary majority in 2019 and did not regain it in last year's early election; a multiyear agreement with the New Democratic Party, however, has bolstered its ability to legislate. The government's policy agenda remains focused on building a strong middle class, making life more affordable, combating climate change, and promoting investment to drive inclusive and sustainable growth.

RECENT DEVELOPMENTS

5. **The economy has recovered strongly from the pandemic.** After contracting by 5.2 percent in 2020, real GDP bounced back by 4.5 percent in 2021 and reached its pre-pandemic level by the end of the year, while remaining somewhat further below the IMF's pre-pandemic forecast than in some other G7 economies. Decisive government support mitigated the pandemic's fallout on households: average after-tax income actually rose by 7 percent in 2020—the most in the G7—and effective targeting

Canada: Output Gap

(Percent)

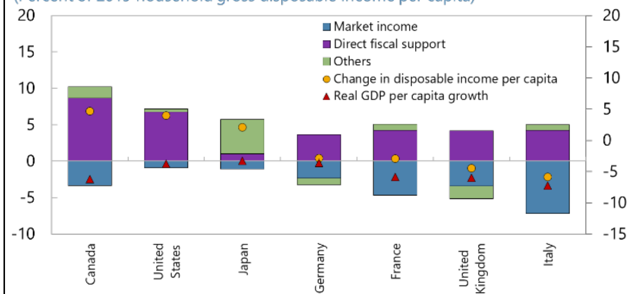


Sources: WEO and IMF staff calculations

1/ Annualized, QoQ Growth

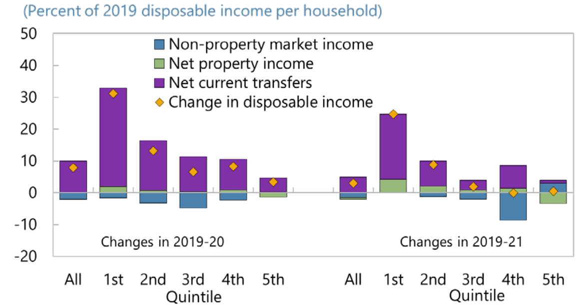
contributed to a decline in poverty and inequality in 2020 that was only partly reversed the following year. Even as peers slowed or contracted after Russia's invasion of Ukraine, the Canadian economy continued to grow rapidly in the first half of 2022—reflecting the easing of pandemic restrictions, which occurred later in Canada than elsewhere, as well as the benefit to the country from higher commodity prices—and demand now exceeds potential output.

Canada: Contributions to Changes in Household Income 2020
(Percent of 2019 household gross disposable income per capita)



Sources: Organization for Economic Co-operation and Development and IMF staff calculations.
Note: Market income includes gross operating surplus, mixed income , compensation of employees, and net property income. Direct fiscal support includes current taxes on income and wealth, social benefits, and social contributions, and does not include support channeled to firms that indirectly supported households such as job retention schemes. Other includes personal current transfers. All quantities are per capita and converted into 2019 prices using the Consumer Price Index.

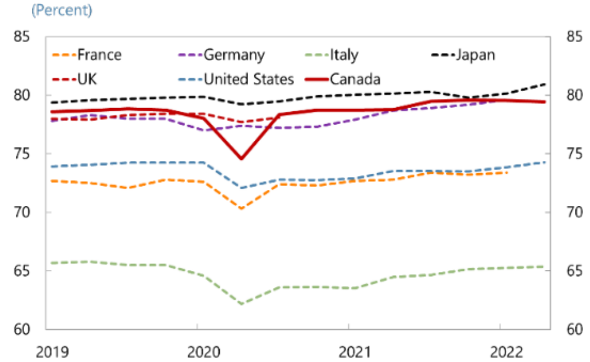
Canada: Contributions to Changes in Household Income
(Percent of 2019 disposable income per household)



Sources: Statcan and IMF staff calculations.
Note: Non-property market income includes compensation of employees and net mixed income. All values are per household and converted into 2019 prices using the Consumer Price Index.

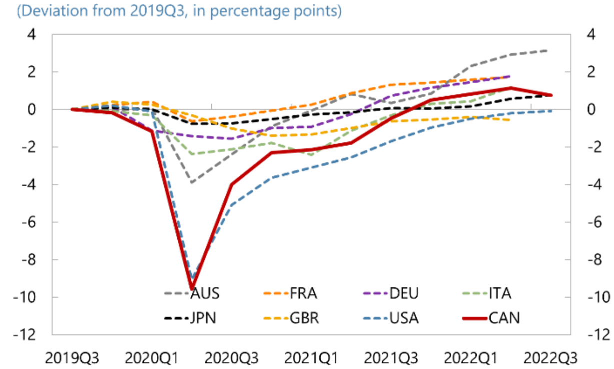
6. The recovery was accompanied by a tightening of labor-market conditions. Labor-force participation rebounded quickly—unlike in the United States—and, following many months of strong job growth, the employment-population ratio returned to its pre-pandemic level by end-2021. Unemployment hit a record low of 4.9 percent this June and July before retreating to 5.2 percent in September and October, still below staff's 6 percent estimate of NAIRU. Despite historically low unemployment, job vacancies remain elevated, and the Beveridge curve appears to have shifted up. Wage inflation is running at 5.6 percent y/y as of October, and ULC growth at 5.9 percent in Q2. The decline in immigration during the pandemic—which has now more than fully reversed—may have contributed to the tightness of labor markets.

Canada: Labor Force Participation Rate
(Percent)



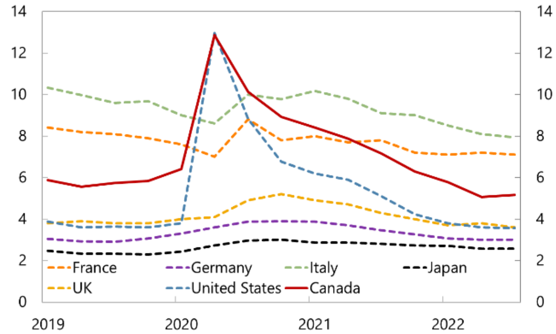
Sources: StatCan, INS/E, SOEC, INS, MIAC, and BLS

Canada: Employment Rates
(Deviation from 2019Q3, in percentage points)



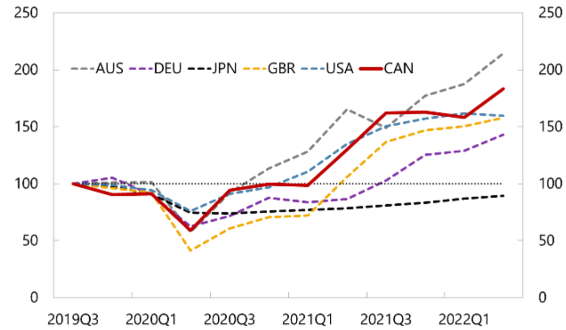
Sources: OECD

Canada: Unemployment Rate
(Percent, Seasonally adjusted)



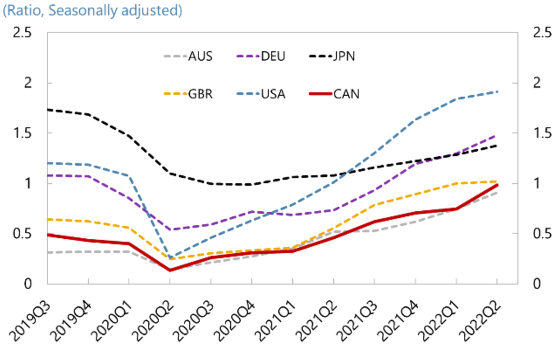
Sources: StatCan, INS/E, StatBun, INS, MoHLW, ONS and BLS

Canada: Vacancies
(Index, 2019Q3=100)



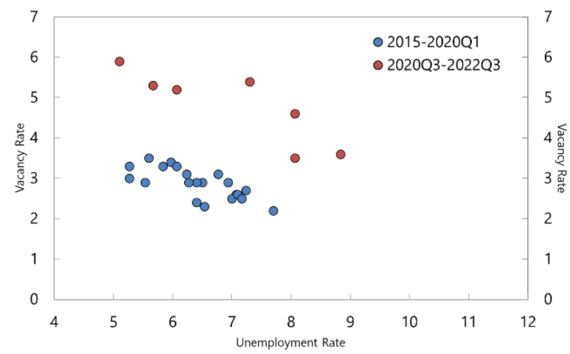
Sources: Haver Analytics and IMF staff calculations

Canada: Job Vacancies per Unemployed Person
(Ratio, Seasonally adjusted)



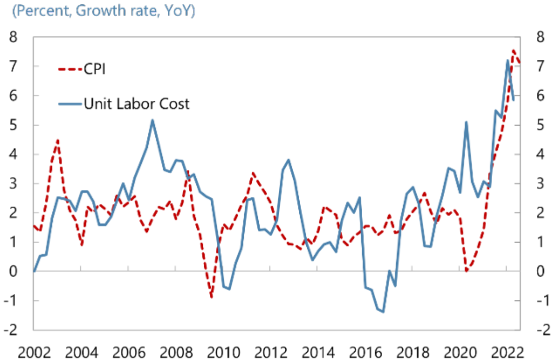
Sources: Haver Analytics and IMF staff calculations

Canada: Beveridge Curve
(Percent, Quarterly, Not seasonally adjusted)



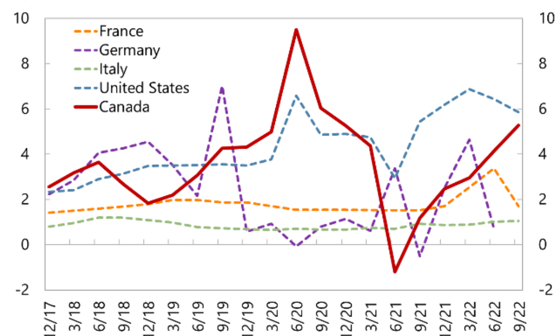
Sources: Statistics Canada and IMF staff calculations

Canada: Unit Labor Cost
(Percent, Growth rate, YoY)



Sources: Statisitics Canada and IMF staff calculations

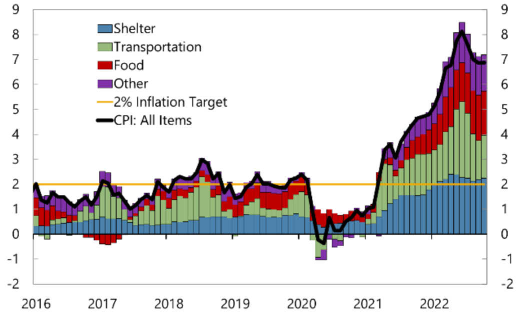
Canada: Average Hourly Earnings
(Percent, Growth YoY)



Sources: StatCan, INSEE, DBB, INS, BLS and IMF staff calculations

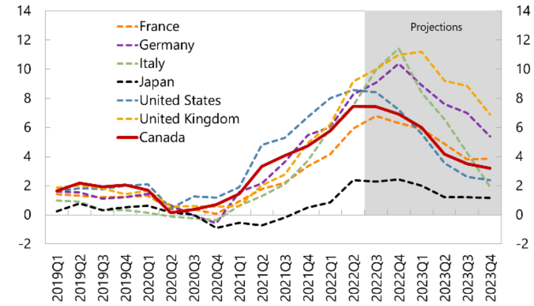
7. **Inflation surged starting in early 2021, outstripping projections of the BoC, the IMF, and others.** Headline CPI inflation reached a 40-year high of 8.1 percent in June, propelled by rising commodity prices, supply-chain bottlenecks, the rapid domestic recovery, and the accompanying tightening of labor markets. A wage-price spiral has not been in evidence so far, but ULC growth and inflation have moved closely together. Longer-term consumer inflation expectations, which have long been well above 2 percent, have been stable, but short-term expectations have moved up noticeably.

Canada: Contributions to Headline Inflation
(Percent)



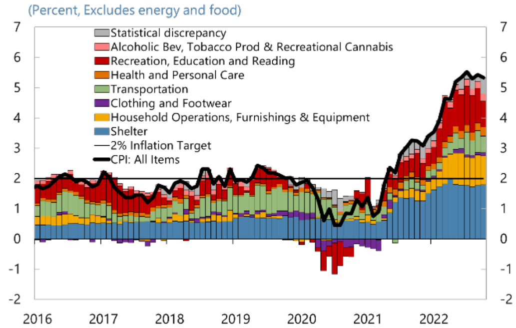
Sources: Statistics Canada and IMF staff calculations

Canada: CPI Inflation
(Average, YoY percent change)



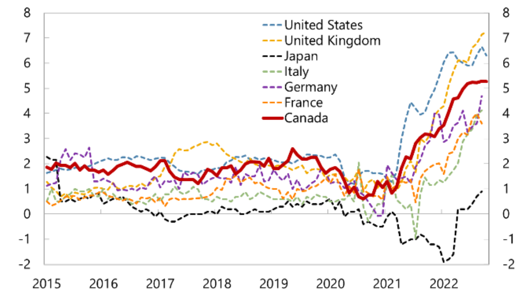
Sources: World Economic Outlooks and IMF staff calculations

Canada: Contributions to Core Inflation
(Percent, Excludes energy and food)



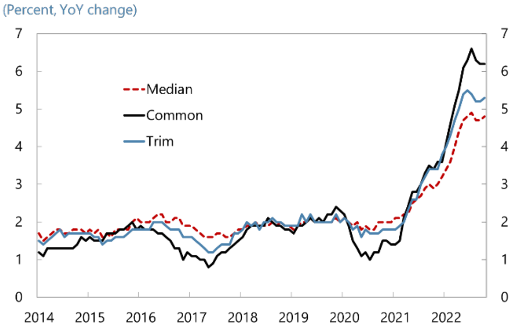
Sources: Statisitics Canada and IMF staff calculations

Canada: Core Inflation
(Percent)



Sources: BLS, ONS, MIACIND, DBB, INS/E, StatCan, and IMF staff calculations

Canada: Alternative Measures of Core Inflation
(Percent, YoY change)

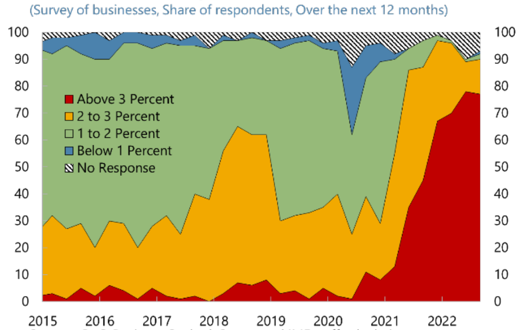


Sources: Statistics Canada and Haver Analytics

Canada: Expected Inflation
(Difference between nominal and real long-term bond yields)

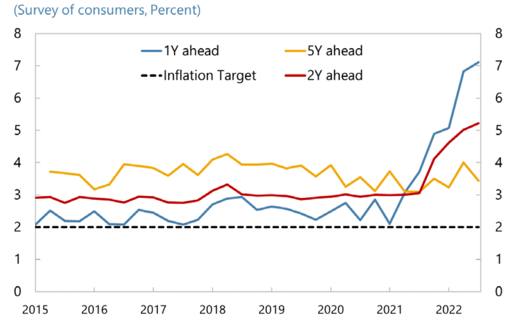
Sources: Bank of Canada

Canada: Inflation Expectations
(Survey of businesses, Share of respondents, Over the next 12 months)



Sources: BoC: Business Outlook Survey and IMF staff calculations

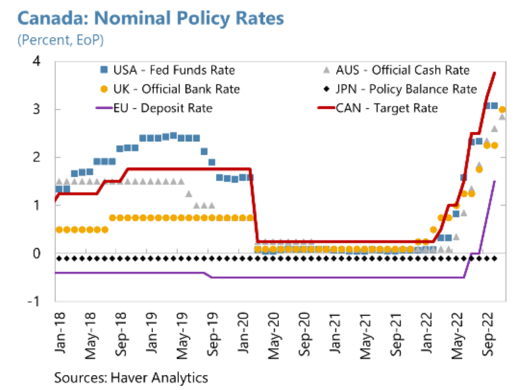
Canada: Inflation Expectations
(Survey of consumers, Percent)

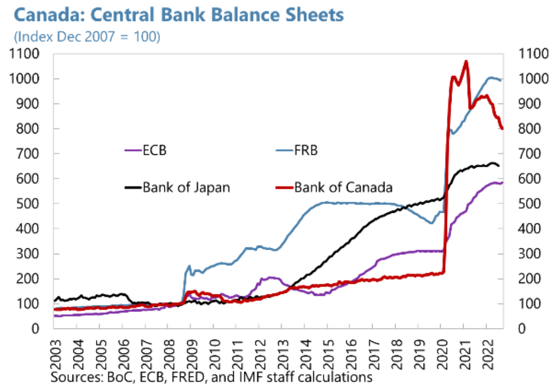


Sources: Canadian Survey of Consumer Expectations

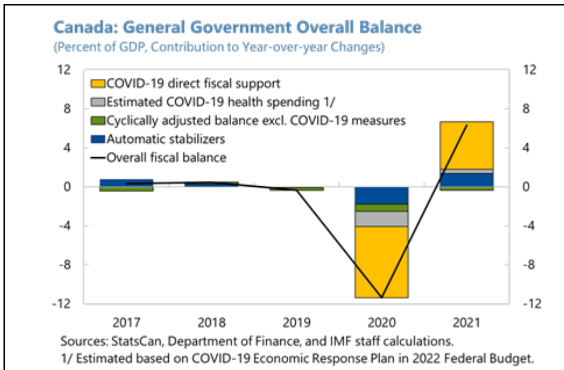
8. **Like other central banks, the BoC has tightened monetary policy substantially.** It began tapering asset purchases in October 2020, and in March 2022 it started reducing the size of its balance sheet and raising policy rates. As of its October meeting, the BoC had hiked by a cumulative

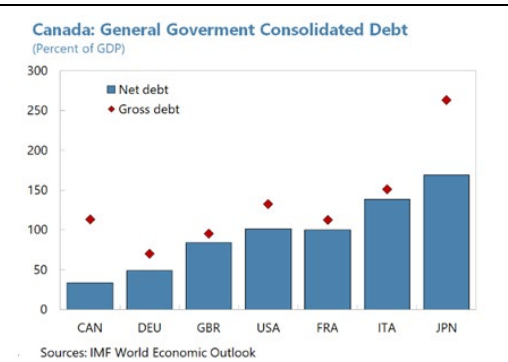
350 bps, leaving the policy rate at 3.75 percent, and had indicated that, while it was near the end of the tightening cycle, further rate increases would be forthcoming.





9. The fiscal stance has also tightened. After reaching a record high in 2020, the general government's cyclically-adjusted deficit narrowed by 5¼ percent of GDP in 2021 and is expected to improve by a further 3½ percentage points during 2022–23. Deficit reduction—which has occurred mostly at the federal level, even as provincial finances have deteriorated slightly in cyclically-adjusted terms—has been driven mostly by the withdrawal of pandemic support, which largely expired by early 2022, as well as by revenue overperformance linked partly to booming commodity prices. The overall risk of sovereign stress in Canada is low (Annex I). Public debt rose sharply during the pandemic but has come off its peak and remains comparatively low among G7 economies, especially when substantial public-pension and other financial assets are taken into account.



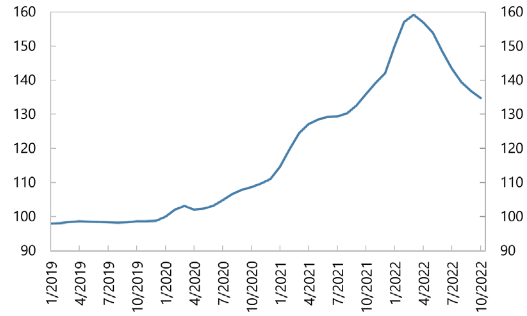


10. The economy has started cooling in response to the turn in monetary and fiscal policies. GDP growth slowed from above 3 percent y/y in the first half of the year to 1.6 percent in the third quarter, according to the flash estimate, and higher-frequency economic indicators, such as retail sales and trade data, confirm a slowing of domestic activity combined with stalling external demand. Labor market conditions remain tight but are easing, with the vacancy/unemployment ratio falling from its record high of 1.0 in June to below 0.9 in August. Consistent with the activity and employment indicators, inflation pressures also seem to be easing—headline inflation fell to 6.9 percent y/y in both September and October, and most measures of core inflation are also down from their peaks and currently range from 4.8 to 6.2 percent.

11. Policy tightening has also triggered a welcome housing correction. Canadian housing markets—which had seen prices increasing nearly fivefold over two decades—were pushed to unsustainable heights during the pandemic. Sales surged and average prices climbed more than 50 percent from April 2020 until February 2022, fueled by low interest rates (notwithstanding the application of a stringent borrower stress test), preference shifts since the start of the pandemic, healthy household incomes, and perhaps also some self-fulfilling investor behavior (e.g., a "fear of missing out"). At the same time, housing affordability worsened significantly and household leverage mounted. With mortgage rates now up sharply, house prices have started to come off their peak even as rents have continued to rise, supported in part by the post-lockdown return of student populations.

Canada: Housing Prices

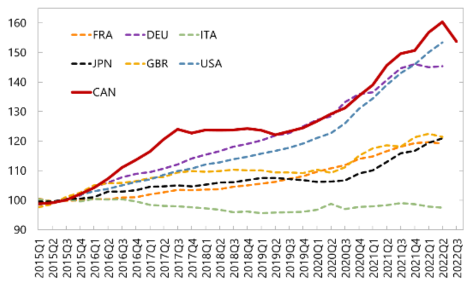
(Index, Jan 2020=100)



Sources: CREA and IMF staff calculations

Canada: Real House Prices

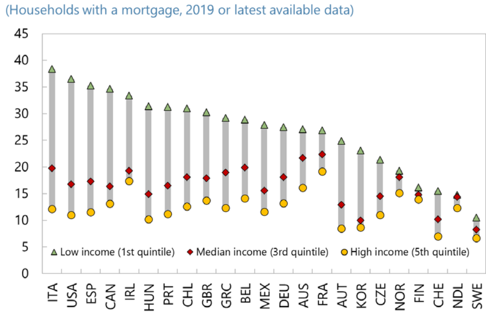
(Index, 2015=100, Seasonally adjusted)



Sources: OECD

Canada: Mortgage Costs as Percent of Household Disposable Income

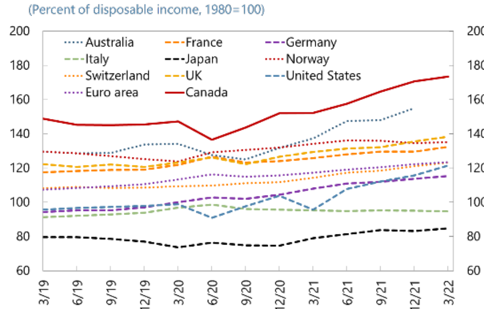
(Households with a mortgage, 2019 or latest available data)



Sources: OECD Affordable Housing Database

Canada: Standardised House Price-Income Ratio

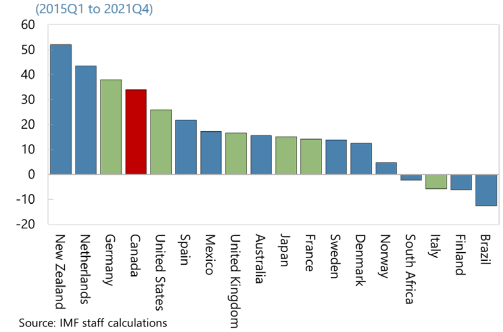
(Percent of disposable income, 1980=100)



Sources: OECD

Canada: Growth in House-Price-to-Income Ratio

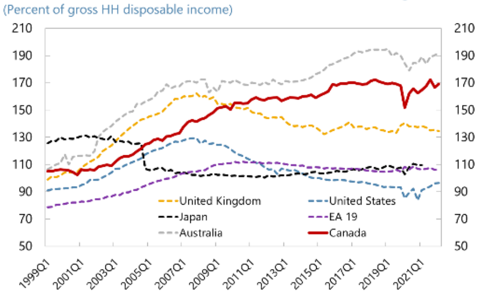
(2015Q1 to 2021Q4)



Source: IMF staff calculations

Canada: Households and NPISHs Debt Outstanding

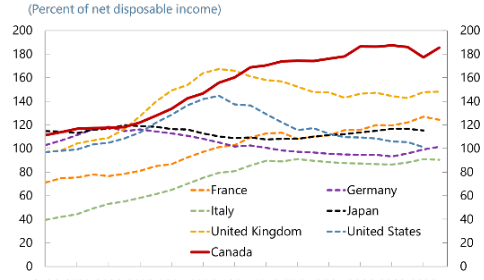
(Percent of gross HH disposable income)



Sources: ONS, FRB, BoJ, SOEC, ABS, StatCan and Haver Analytics

Canada: Household Leverage

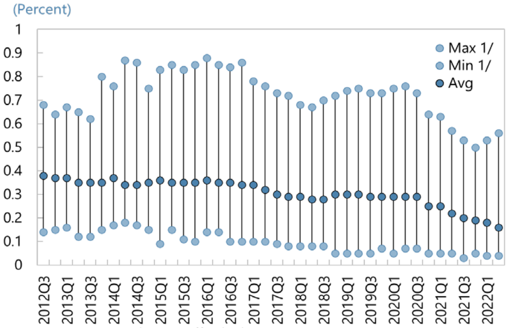
(Percent of net disposable income)



Sources: OECD

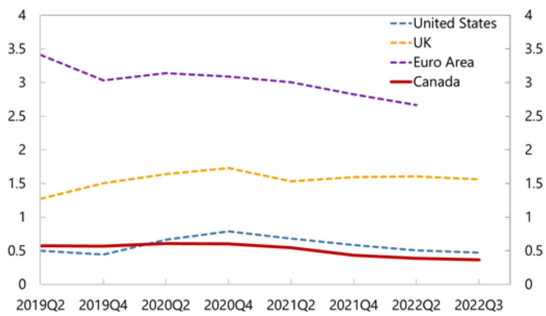
12. Despite the housing boom and increases in household and corporate indebtedness, financial and corporate balance sheets appear resilient. Banks are generally well capitalized and liquid: they managed to weather the real-life stress test of the pandemic with only limited losses. NPL ratios and mortgage-delinquency rates remain historically low. Nonbanks, including Canada's large pension funds and insurers, also appear to be financially healthy, although a full assessment is not possible given the lack of comprehensive, publicly available data. Following their search for yield over the past decade, these institutions are now holding a larger share of riskier and less liquid assets, while making more intense use of derivative and repo transactions, but it appears that the sector generally weathered the "dash for cash" episode in March 2020 relatively well. Listed nonfinancial corporates also appear to be healthier than in the past, although the situation is less clear for SMEs, given data gaps.

Canada: Mortgage Delinquency Rate
(Percent)



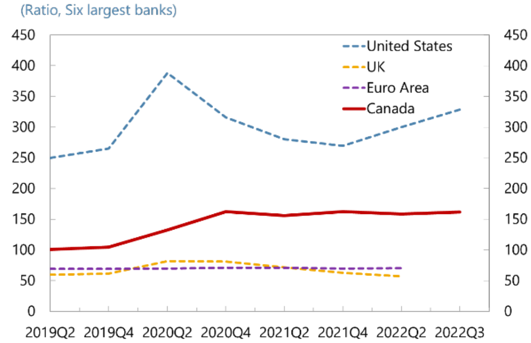
Sources: CMHC and IMF staff calculations
1/Max and min based all cities and provinces

Canada: NPL Ratio
(Percent, Largest six banks)



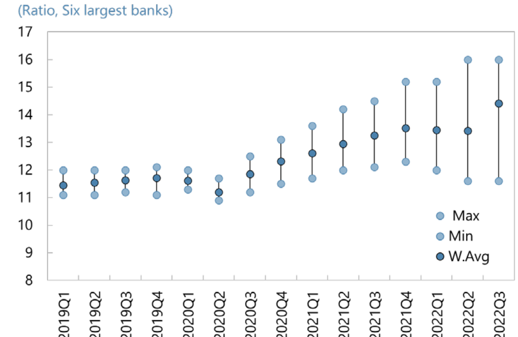
Sources: S&P Capital IQ and IMF staff calculations

Canada: NPL Provisioning Ratio
(Ratio, Six largest banks)



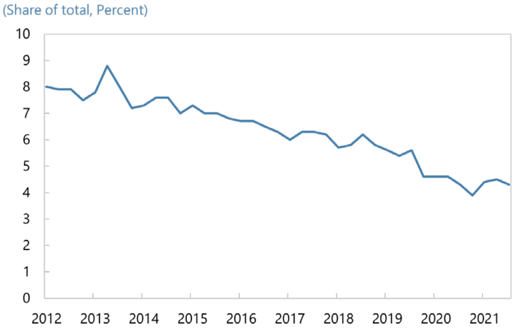
Sources: S&P Capital IQ and IMF staff calculations

Canada: Common Equity Tier 1 Ratio
(Ratio, Six largest banks)



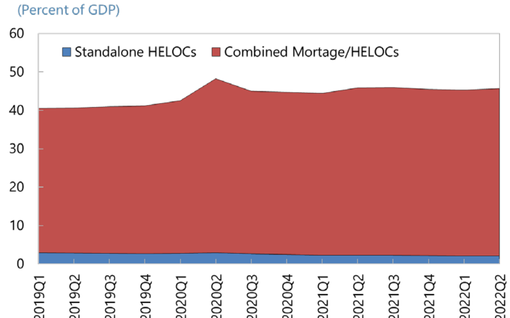
Sources: S&P Capital IQ and IMF staff calculations

Canada: New Mortgage Holders with Credit Score <660
(Share of total, Percent)



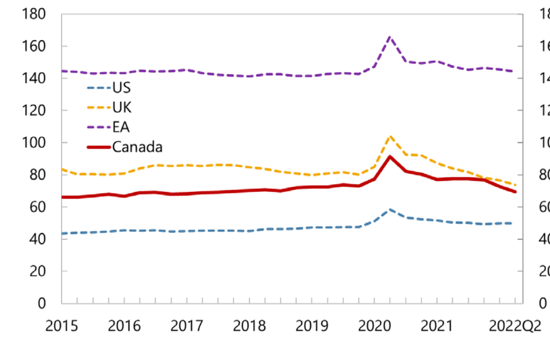
Sources: Equifax Canada and IMF staff calculations

Canada: HELOC Lending
(Percent of GDP)



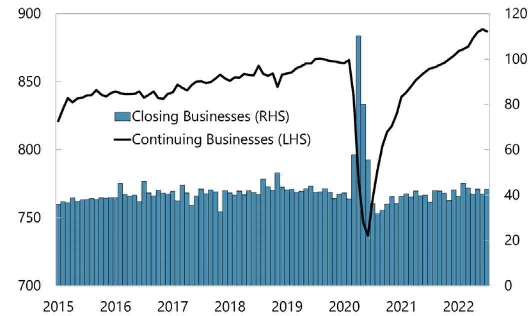
Sources: Bank of Canada and IMF staff calculations

Canada: Nonfinancial Corporations Debt
(Percent of seasonally adjusted GDP)



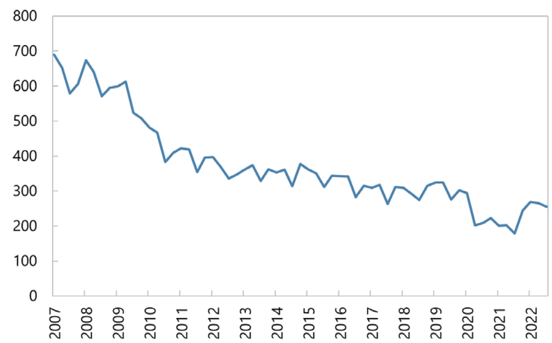
Sources: FRB, ONS,SOEC, StatCan, and IMF staff calculations

Canada: Active and Closing Business
(Thousands of businesses)



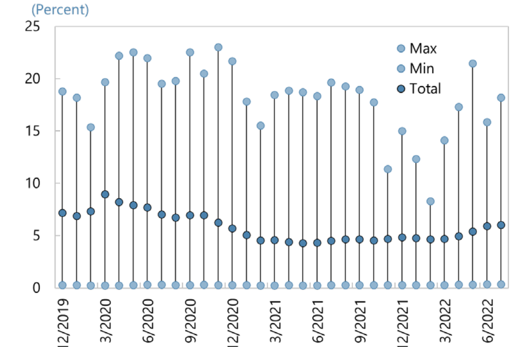
Sources: Statistics Canada

Canada: Business Insolvency Rate
(Percent)



Source: Haver Analytics and Moody's Analytics

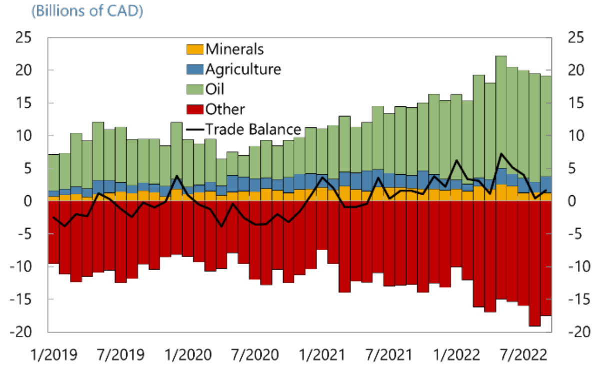
Canada: Average 1-year EDF Across Industries
(Percent)



Sources: Statistics Canada and IMF staff calculations

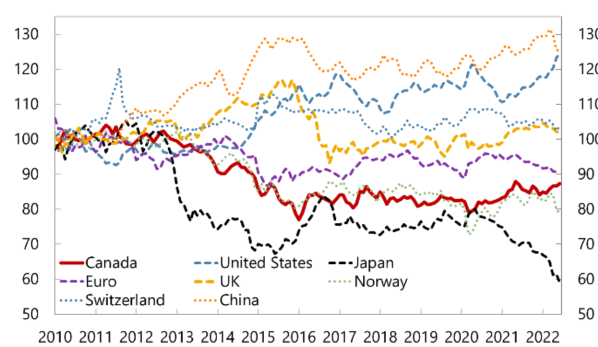
13. **The external current account was marginally in surplus in 2021 and further improved in the first half of 2022 on account of higher commodity prices**. Canada's external position in 2021 is assessed to have been moderately weaker than the level implied by medium-term fundamentals and desirable policies (Annex II). Despite the large terms-of-trade improvement since the beginning of 2022, the Canadian dollar has not appreciated as much as in previous commodity booms—while it has strengthened against most currencies, it has fallen to a two-year low vis-à-vis the US dollar. The net international investment position (NIIP) has improved substantially over time, largely reflecting valuation gains (although these have faded recently).

Canada: Trade Balance of Goods
(Billions of CAD)



Sources: Statistics Canada and IMF staff calculations

Canada: Real Effective Exchange Rate
(Index 100=Jan 2010, CPI based)



Sources: JP Morgan and IMF staff calculations

OUTLOOK AND RISKS

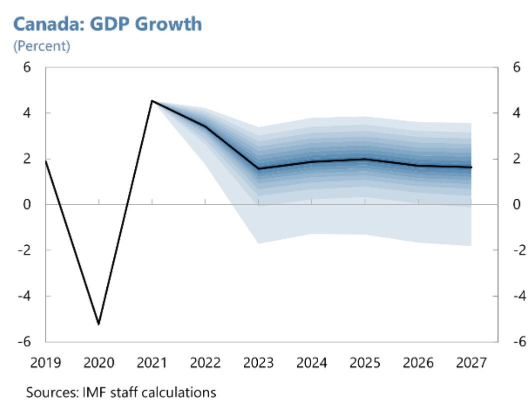
14. Growth is likely to remain subdued over the near term. With the economy in excess demand and inflation well above target, the policy rate will likely need to stay at or above 4 percent for most of 2023. That monetary stance combined with slowing global activity and the ongoing erosion of real incomes—but offset partially by the positive effects of the strong terms of trade—should keep growth relatively anemic in the fourth quarter and into next year, leaving annual growth at 3.3 percent in 2022 and 1.5 percent in 2023. The labor market is expected to cool further, with unemployment returning to its pre-pandemic level of around 6 percent by next year. With rising interest rates and a weaker labor market, house prices are expected to retrace much of their pandemic run-up—in the baseline, a peak-to-trough drop of 20 percent or more is expected over the next few years, although the projected continued return of immigration could cushion the decline (Box 1).

15. Under the assumed policy settings, inflation is expected to return to the 2-percent target by end-2024. Headline inflation should have already peaked in the second quarter and both headline and core are expected to decline in 2023 as the energy-price shock dissipates, supply bottlenecks ease, and excess demand moderates.

16. The outlook could, however, be substantially worse (Box 2):

- *Reining in inflation could prove more challenging than expected.* Inflation could stay higher than in the baseline for longer, and/or expectations could de-anchor, requiring more BoC tightening and, most likely, a longer period before rates could ease. This would result in slower growth as well as a faster housing correction (which could then feedback to growth via wealth effects and a tightening of lending standards as collateral values fall).

- *The global slowdown could be more abrupt,* possibly because of an escalation of the war in Ukraine and the associated further sanctions on Russia,[1] a worsening pandemic with renewed lockdowns, or tighter-than-expected policies by systemic central banks. Given Canada's close links to the U.S., a more pronounced U.S. slowdown would have a particularly important impact through both trade and financial channels.



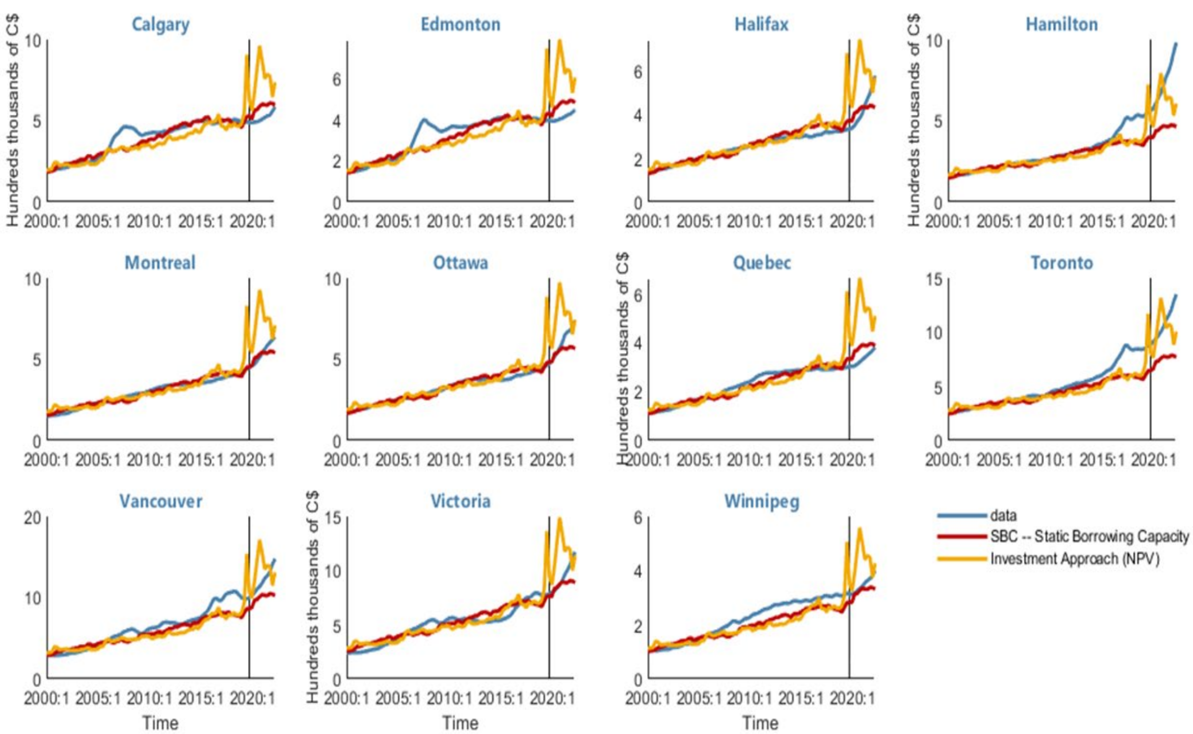
[1] Canada imposed new sanctions on Russian individuals and entities in the aftermath of Russia's invasion of Ukraine, including, *inter alia*, a prohibition on the exports and imports of specific products associated with petroleum and some restricted goods and technologies. The list of Canadian sanctions associated with Russia's invasion of Ukraine is available and updated at https://www.international.gc.ca/world-monde/issues_development-enjeux_developpement/response_conflict-reponse_conflits/crisis-crises/ukraine-sanctions.aspx?lang=eng. An analysis of the global spillovers of sanctions can be found in the April 2022 *World Economic Outlook*. Some of the sanctions would be considered under the Institutional View as capital flow management measures (CFMs) imposed for national and international security reasons.

Box 1. House Price Dynamics in Canada: An Update[1]

The sharp increase in Canadian house prices, particularly during the pandemic, naturally raises the question of whether an asset price bubble was forming, or whether fundamentals explained most or all of the price run-up. Extending the analysis in Andrle and Plašil (2019), standard mortgage affordability formulas were used to link interest rates, income growth, and other household fundamentals to so-called "attainable" house prices in eleven Census Metropolitan Areas (CMAs) across Canada.

Staff analysis shows that in most locations—with the notable exceptions of Toronto and Hamilton—the change in house prices through the first half of 2021 was fully explained by households' expanded borrowing capacity (which was driven by historically low mortgage rates and growing income). From mid-2021 onward, however, the growth in house prices in most CMAs exceeded the growth in attainable prices, suggesting some frothiness.

Even the apparent frothiness of the past eighteen months, however, is explainable if one considers the perspective of investors. For investors, low interest rates, the expectation of economic recovery, and broadly unchanged long-term growth expectations made prospective real estate cash flows more valuable than for the average owner-occupier. The "r-g" differential returned to its 2019 lows, and in most CMAs, the investor-implied valuation of the median house exceeded observed prices. In other words, buying real estate even at prices the median owner-occupier could not afford would still be consistent with achieving the required return on investment.



Looking forward, the projected rise in interest rates from their lows could drag attainable prices down over 20 percent from their peak. And should regional overvaluations shrink at the same time, the drop in actual prices could be substantially higher than this.

[1] See M. Andrle, "House Price Dynamics in Canada: An Update," IMF Working Paper (forthcoming).

Box 2. Risk Assessment Matrix

(Scale—Low, Medium, and High)

Source of Risks	Relative Likelihood	Impact	Policy Response
		• ***Globally-Sourced Risks***	
1. Abrupt global slowdown or recession	**Medium**	**High** Risk factors combine to cause a synchronized, sharp growth slowdown, with an outright recession in some countries, global spillovers, and downward pressures on some commodity prices. The U.S. could see a "hard landing" and a stronger dollar.	Both monetary and fiscal policy would need to respond to a global recession. The strength of the reaction would depend on developments in inflation and commodity prices.
2. Intensifying spillovers from Russia's war on Ukraine	**High**	**Medium** Further sanctions resulting from the war and related uncertainties exacerbate trade and financial disruptions and commodity price volatility.	As a major commodity producer, Canada has been hit less hard than others by the war. Policies should focus on further increasing the resilience of the economy to the conflict and to trade disruptions in the affected region.
3. Deepening geo-economic fragmentation and geopolitical tensions	**High**	**Medium** Broadening of conflicts and reduced international cooperation accelerate deglobalization, resulting in a reconfiguration of trade, supply disruptions, rising input costs, financial instability, a fracturing of the international monetary and financial system, and lower potential growth.	Work actively to strengthen the rules-based multilateral trading system, international economic cooperation, and promote cooperative approaches to climate change mitigation.
4. Cyberthreats	**Medium**	**High** Cyberattacks on critical physical or digital infrastructure (including digital currency platforms) trigger financial instability and disrupt economic activities.	Strengthen defenses (in the financial sector and elsewhere in the economy) to prevent cyberattacks and take steps to build resilience to ensure continuity of operations when attacks occur.
5. Local COVID-19 outbreaks	**Medium**	**Medium** Outbreaks in slow-to-vaccinate countries or the emergence of more contagious vaccine-resistant variants force new lockdowns or inhibit commerce. This results in extended supply chain disruptions and slower growth.	Continue vaccination strategy as recommended by experts, and securing and distributing vaccines. Until a transmission-blocking vaccine is available, limit spread and hospitalizations by considering cost-effective strategies like improving ventilation standards, rapid mass testing, or using N95 grade masks when appropriate.
		• ***Domestically-Sourced Risks***	
6. De-anchoring of inflation expectations and stagflation	**Medium**	**High** Both domestically- and globally-sourced supply shocks to food and energy prices increase headline inflation and pass-through to core inflation, de-anchoring inflation expectations and triggering wage-price spiral in tight labor markets.	To avoid a de-anchoring of inflation expectations, the central bank should continue communicating a strong commitment to the inflation target and resolve to increase the policy rate further if needed.
7. House price correction	**High**	**Medium** Rising mortgage rates will press on house prices to decline. House prices have already started coming down, and further declines are likely. Some households will see their mortgage payments increase.	On account of prudent mortgage underwriting and the nature of prevailing mortgage products, the financial sector should remain resilient. Policies should focus on macro-prudential measures to lower the volatility of house prices and monitoring the financial system's health.

On the upside, a faster normalization of supply chains would help to lower inflation and boost output, as would a continued phase-out of pandemic restrictions in China, and less monetary tightening may be called for. Falling commodity prices would also restrain inflation but would lower growth at the same time. Staff's fan-chart analysis based on historical data suggests that risks around the baseline growth forecast are asymmetrical, with a roughly 10-percent chance that the economy could contract for 2023 as a whole.[2]

17. Financial stability risks are rising, but the financial system should be resilient to the tightening cycle. Canada's well-capitalized banks should be healthy:

- Banks' net interest margins are improving as interest rates move higher.
- The majority of households should generally be able to continue servicing their mortgages given Canada's prudent mortgage-underwriting process and the nature of mortgage structures.[3] Even though 30 to 40 percent of mortgages could face higher payments in the near term,[4] financial stability risks should be mitigated by the facts that: (i) market rates are not far beyond the Minimum Qualifying Rate at which all recent borrowers have already been stress-tested; (ii) although Canadian households have high debt burdens in international comparison, they are also cash rich—at least on average—with substantial excess savings remaining from pandemic support and further bolstered by the strong labor market; (iii) borrowers generally have substantial equity in their homes given conservative lending practices and the sharp price run-up since 2020, while losses for banks are mitigated by mandatory mortgage insurance for loans with LTV above 80 percent;[5] and (iv) most mortgages are full-recourse, bolstering borrowers' incentives to stay current on their obligations.
- Nevertheless, recent home purchasers—who are more likely to have a variable-rate mortgage, face payments that are a higher share of their income, and not have built up equity—will be

[2] The analysis follows the same methodology used in the October 2022 WEO, which compares historical cross-country data with in-sample predictions of the global G20 model to infer the economic shocks—to aggregate demand, supply, or oil prices—that must have materialized. This historical distribution of shocks is then applied to staff's baseline to generate a fan chart of possible future outcomes.

[3] There are few high-LTV loans and few loans to marginal borrowers. Lenders are required to stress-test borrowers against higher rates.

[4] Of the CAD 1.6 trillion in mortgages outstanding as of July 2022, some CAD 1 trillion are fixed-rate products and nearly another CAD 400 billion are variable-rate mortgages featuring fixed payments (with the principal/interest composition changing and the amortization period lengthening when market rates rise). This does not imply, however, that only CAD 200 billion worth of mortgages (i.e., those with variable rates and variable payments) face higher payments each year—in addition, one must account for the roughly 20 percent of fixed-rate mortgages that reset annually plus those variable/fixed loans that have hit negative amortization and whose payments may thus rise. Staff calculations suggest that 30 to 40 percent of outstanding mortgages (in value terms) could be exposed to an increase in payments by end-2023.

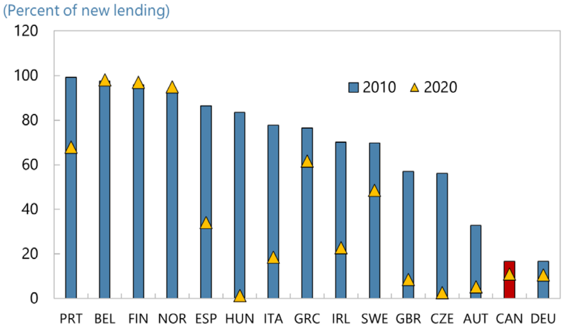
[5] Staff calculations based on a recent dataset of mortgage loans suggest that, even with a further house price correction of 30 percent (far beyond the baseline forecast), the undercollateralization of uninsured loans (on which any losses would be borne entirely by banks) would amount to less than 1 percent of the value of banks' aggregate mortgage loan portfolio as of July 2022.

vulnerable to higher interest rates and should be closely monitored, along with those holding revolving consumer loans and home-equity lines of credit.

- According to analyses conducted by the BoC, in a severe downside scenario—with a significant increase in unemployment, declining real incomes, and a fall in housing prices—NPLs would rise, but the banking system would remain well capitalized.[6]

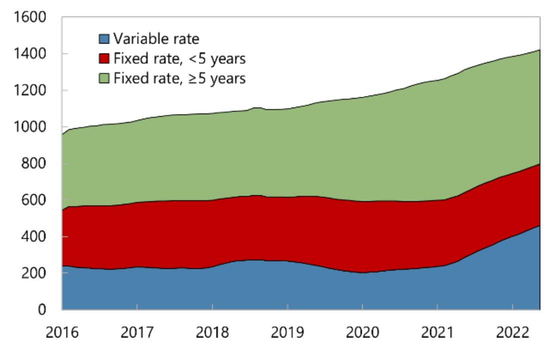
All in all, the banking system appears well-positioned to weather the upcoming deterioration of financial conditions, thanks to both the substantial reinforcement in its capitalization, liquidity management, and credit standards since the Global Financial Crisis, and the boost to net interest margins in the current environment. The situation is less clear for nonbanks. These institutions, including Canada's large pension funds and insurers, may be vulnerable to liquidity pressures, as noted above, although they appear to be financially healthy and have access to the BoC's Contingent Term Repo Facility. Data gaps, however, make a full assessment difficult. Also, notwithstanding some significant progress made by the authorities in interagency cooperation, persistent data fragmentation and legal restrictions to data pooling still limit the scope of systemic risk analyses that can be conducted at the national level. Cyber risks have increased sharply, particularly following Russia's invasion of Ukraine.

Canada: Variable Rate Mortgages
(Percent of new lending)



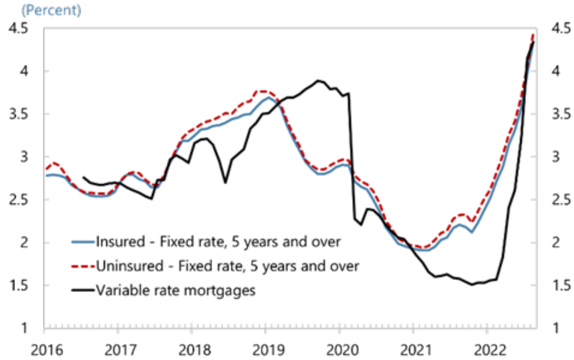
Sources: OECD
Note: Not all countries have data for 2010 and 2020; instead respectivly, Canada (2013 and 2019), Finland (2013 and 2020), Italy (2014 and 2020), and Norway (2014 and 2019).

Canada: Outstanding Balances of Residential Morgages
(Billions of CAD)



Sources: Bank of Canada and IMF staff calculations

Canada: Interest Rates on New Mortgage Loans
(Percent)



Sources: Bank of Canada

[6] A BoC stress test on end-2020 data for the six largest banks shows that even in the face of unprecedented—albeit short-lived—shocks to GDP, employment, and house prices, CET1 ratios decline sharply but all remain above the regulatory minimum. (A. Danaee *et al*, BoC, May 2022.)

18. Looking ahead, Canada also faces important risks related to climate change:

- First, in terms of physical risks, although Canada could see some benefits from rising temperatures, the net effects are likely to be negative because of an increase in weather variability and changing precipitation patterns (Box 3).

- Second, the ambitious mitigation policies that the Canadian government has laid out, with the carbon tax rising to CAD 170/ton by 2030, are welcome and indeed an exemplar for other countries in the global fight against climate change. But insofar as peers lag in their own efforts, Canada may need to take steps—such as implementing a border carbon adjustment—to protect its industrial competitiveness. And in the same vein, the U.S.'s policy approach to mitigation, which includes extensive subsidies for clean technologies, may require a similar Canadian response.[7]

- Finally, as the world decarbonizes, Canada faces important transition risks given its reliance on oil and gas. Stock prices in this sector do not currently appear to be highly sensitive to the likelihood of stronger mitigation policies (Box 4), but this could be because global mitigation efforts are currently so far from what would be needed to achieve the world's climate change goals. A complementary analysis (Box 5) shows that, if investors start to recognize that more ambitious decarbonization will be necessary globally, the NPV of Canadian oil and gas fields could decline by as much as 24 to 36 percent.

19. Authorities' views. Counterparts at both Finance Canada and the BoC broadly shared staff's views on the outlook and risks. They saw the economy as likely to slow and believed that a period of subdued growth remains the most likely outcome, although risks are tilted to the downside. They agreed that housing markets would continue to cool but that the financial sector would remain resilient. And they agreed that Canada faces important physical and transition risks from climate change. In addition, while confirming the government's ongoing commitment to carbon pricing, they also remain focused on addressing possible competitiveness challenges.

[7] This remains true even though some of the local-content rules put Canada in a favorable position relative to competitors outside North America.

Box 3. Macroeconomic Effects of Climate Change: Evidence from Canadian Provinces[1]

Canada's geographic heterogeneity allows for a disaggregated study of climate change in a within-country context. Using annual data from ten Canadian provinces over the period of 1961–2017, a dynamic panel regression is estimated to examine the long-term impact of climate change on economic growth across Canadian provinces, at both the aggregate and sectoral levels.

Provincial-level regressions find that climate change affects Canadian long-term per-capita growth largely through heavier rainfall and extreme cold. Persistent temperature increases above historical norms have virtually no effect on the growth of real output per capita in Canada.[2] But temperature shortfalls relative to historical norms (i.e., increased cold spells) can harm growth, as can excessive precipitation. Either a persistent 0.1 degree Celsius annual decrease in temperature below historical norms or a one-centimeter annual increase in precipitation above norms can lower growth by 30 bps per year.

Canada: Long-Run Effects of Climate Change on GDP per Capita Growth, 1961-2017

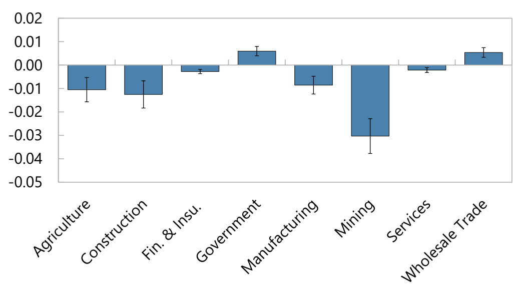
Deviation from historical Norm:	Growth in Real GDP per Capita		
	20 Year MA	30 Year MA	40 Year MA
Temperature above	0.0037	0.0005	-0.0001
	(0.012)	(0.013)	(0.013)
Temperature below	-0.0247	**-0.0334***	**-0.0304***
	(0.016)	(0.018)	(0.017)
Precipitation above	**-0.3153*** **	**-0.3224*** **	**-0.3716*** **
	(0.113)	(0.114)	(0.114)
Precipitation below	0.0068	0.0587	-0.0050
	(0.105)	(0.103)	(0.106)
No. of Provinces (*N*)	10	10	10
T	52	52	52
N × *T*	520	520	520

*** p<0.01, ** p<0.05, * p<0.1

Source: IMF staff calculations.

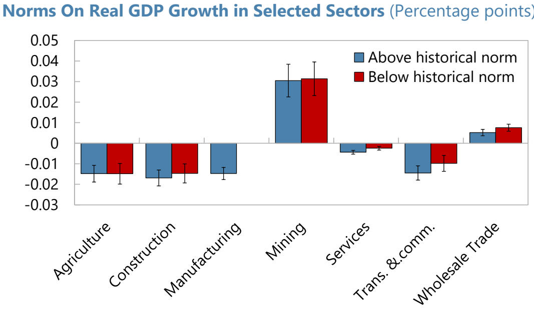
Sector-level results suggest that the effects of climate change on Canadian growth are broad-based. More specifically, output growth in the agriculture, construction, manufacturing, and transport sectors are all negatively affected by extensive periods of rain and snow and unusually cold temperature in Canada, consistent with earlier findings in the literature. Different from the result at the aggregate level, where precipitation below its historical norm does not have statistically significant effects, rain and snow falling below the historical norm tend to lower output growth in agriculture, construction, and transportation.

Canada: Effects of Persistent Temperature Deviations Below Historical Norms On Real GDP Growth in Selected Sectors (Percentage points)



Sources: IMF staff calculations.
Note: Numbers are percentage points change in GDP growth per year in response to a persistent 0.01 °C annual deviation in temperature below its historical norm. Only statistically significant estimates are shown.

Canada: Effects of Persistent Precipitation Deviations From Historical Norms On Real GDP Growth in Selected Sectors (Percentage points)



Sources: IMF staff calculations.
Note: Numbers are percentage points change in GDP growth per year in response to a persistent 1 millemeter annual deviation in precipitation from its historical norms. Only statistically significant estimates are shown.

[1] See L. Liu, D. Pan, and M. Raissi, "Macroeconomic Effects of Climate Change: Evidence from Canadian Provinces," IMF Working Paper (forthcoming).

[2] The general findings on the economic effect of warming in cold countries have been mixed in previous cross-country studies.

Box 4. Decomposing Climate Transition Risk in Canadian Stocks[1]

A novel, machine-learning-based method is used to investigate how market-wide climate transition risks are priced in Canadian stocks. We use a state-of-the-art Natural Language Processing model combined with manual labels to perform a textual analysis of news on climate change that appeared in the *Financial Times* during 2005-2022. Climate transition risks are identified through a detailed narrative analysis and supervised learning algorithms. The frequency of news paragraphs containing mitigation-friendly (unfriendly) news is used as a positive (negative) climate risk factor. A set of asset pricing models are applied to Canadian oil and gas companies listed in the S&P TSX composite index to examine whether model-generated climate transition risk factors are associated with positive/negative risk premia.

Our results provide evidence that stock prices of oil and gas companies incorporate information about climate transition risk. We hypothesize that an increase in the positive (negative) climate factor signals stricter (looser) mitigation policies, and thus should be bad (good) news for oil and gas companies. In response to such a negative (positive) shock, investors would sell (buy) oil and gas stocks, thus decreasing (increasing) their prices and increasing (decreasing) their returns. As a result, the long-short portfolio would yield a positive (negative) alpha. The results in Table 1 confirm our hypothesis, indicating that firms across markets have incentives to manage their climate risk exposure.

The Pricing of Climate Risks in Equities Markets

Panel A: Market Model								
Canada			US			EU		
Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
0.045	-0.745***	-0.882***	0.087	-0.692***	-0.783***	0.131	-0.715***	-0.770***
(0.157)	(0.109)	(0.179)	(0.153)	(0.107)	(0.176)	(0.138)	(0.096)	(0.160)
Panel B: Fama-French three-factor model								
Canada			US			EU		
Positive	Negative	Total	Positive	Negative	Total	Positive	Negative	Total
0.105	-0.769***	-0.875***	0.149	-0.713***	-0.774***	0.120	-0.741***	-0.805***
(0.157)	(0.107)	(0.177)	(0.151)	(0.105)	(0.173)	(0.139)	(0.097)	(0.161)

Sources: Bloomberg and IMF staff calculations.

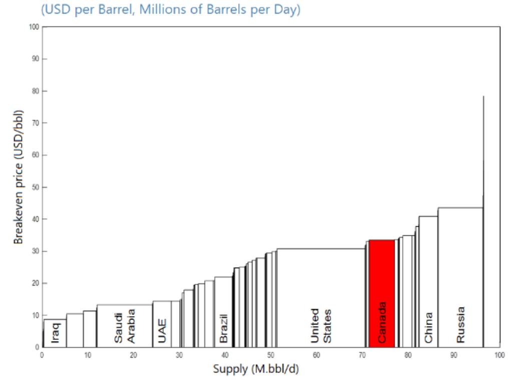
The responses of stocks in the oil and gas sector to positive and negative climate transition risks are asymmetric. While there is a significantly negative risk premium associated with higher climate transition risk among the group of oil and gas companies, the risk premium tied to a fall in climate transition risk is positive but statistically insignificant. In other words, an easing of climate mitigation constitutes a favorable shock to oil and gas companies, but tighter mitigation policies do not necessarily translate into bad news. These results are robust to alternative definitions of climate risk, different sample periods, and various asset pricing models, including a market model, Fama-French 3 factor, Carhart 4 factor, Fama-French 5 factor, and Fama-French 5 plus momentum factor models.

[1] See Y. Yang, "Decomposing Climate Transition Risk in Canadian Stocks," IMF Working Paper (forthcoming).

Box 5. Climate Transition Risk in the Canadian Oil and Gas Sector[1]

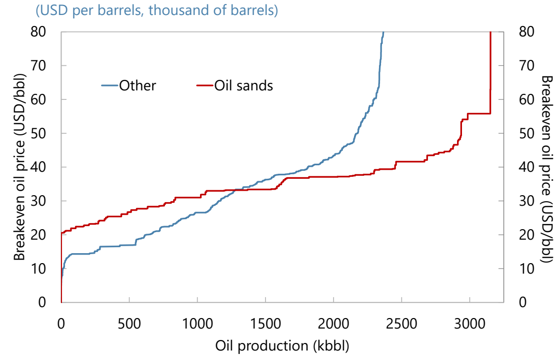
Global climate mitigation policies are likely to affect the outlook for future profitability and the valuation of assets, especially in carbon-intensive industries. Since mid-2021, the oil and gas sector has benefitted from the spike in fossil fuel prices generated by a combination of factors, but this could be fleeting. Should global climate action resume more vigorously in the medium term, oil prices could decline substantially, exposing the Canadian sector (characterized by relatively high average breakeven prices in international comparison) to significant transition risks (including both the risk that some assets will become uneconomic and the prospect of reduced profitability for those assets that remain in production).

Canada: Global Oil Supply Cost Curve
(USD per Barrel, Millions of Barrels per Day)



Sources: Rystad Energy and IMF staff calculations

Canada: Oil Supply Cost Curve
(USD per barrels, thousand of barrels)



Sources: Rystad Energy and IMF staff calculations

A Merton (1974) approach is used to investigate the effect of ambitious global decarbonization policies on the asset values of Canadian oil and gas firms. The NPV over 2022–50 of Canadian companies' oil and gas assets is calculated under different scenarios from the Network for Greening the Financial Sector (NGFS): (i) a business-as-usual (BAU) scenario in which oil and gas prices evolve according to countries' existing National Determined Contributions (NDCs; insufficient to meet Paris goals); and (ii) decarbonization scenarios in which prices evolve according to more ambitious policies that achieve net-zero emissions, viz., the NGFS's Net Zero 2050 (NZ2050) and Divergent Net Zero (DNZ) scenarios. Assuming that oil and gas firms are currently valued according to the carbon and fossil fuel price paths implicit in the BAU scenario, a switch – in economic agents' expectations – to a more ambitious decarbonization scenario could lead to an overall reassessment of their value. The consequent change in the NPV of oil and gas assets is then used to recalculate oil and gas firms' market value of assets (MVA). For this step, the NPV of oil and gas fields whose break-even costs are so high that they would be priced out of the market is set to zero, while all other fields see their margins reduced according to:

$Margin\ Reduction = \frac{newOilPrice - cost}{oldOilPrice - cost}$ (similarly for gas)

In the next step, firms' distance to default (DtD) is recalculated according to:

$$DtD_1 = \frac{MVA_1 - DP}{Vol * MVA_1} < \ DtD_0 = \frac{MVA_0 - DP}{Vol * MVA_0}$$

where DP is the 'default point' (a function of each firm's short-term and long-term debt), Vol is MVA volatility and subscripts denote variables before and after the policy shock. As a simplifying assumption, Vol is modeled as unchanged.

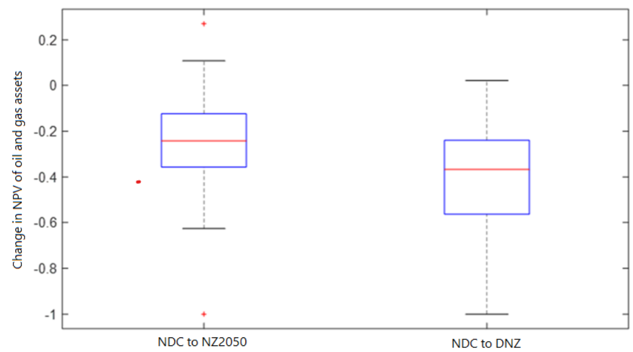
Finally, the calculated change in DtD allows us to estimate potential changes in approximate expected default frequencies (AEDFs). In doing so, the methodology relies on an analytical approximation of the relationship between DtD and AEDFs.

Assuming an abrupt change in economic agents' expectations, many Canadian oil and gas companies would experience a drastic drop in the value of their assets. In particular, for a sample of 22 top Canadian

Box 5. Climate Transition Risk in the Canadian Oil and Gas Sector (concluded)

companies (representing about 75 percent of the crude oil and other liquids production in 2022) the NPV of their oil and gas fields would drop by 24.5 percent, on average, over the horizon up to 2050, in case of a switch in economic agents' expectations between the BAU and NZ2050 scenarios; and by 36.5 percent assuming a switch between the BAU and DNZ scenarios. Companies representing more than 5 percent of oil and other liquids production would have their equity wiped out (i.e., they would be technically in default) in the first case; this figure rises to almost 10 percent in the second case.

Canada: Change in NPV of Oil and Gas Assets



Sources: Rystad Energy and IMF staff calculations

The change in NPV is then translated into a potential change in the companies' DtD and AEDF. A drop in the NPV of oil and gas assets would reduce the residual value available to a company's lenders to satisfy their claims, thus decreasing their DtD and increasing the probability of a further drop sufficient to push the company into technical default, in line with the logic of the Merton model. While not all firms would experience a drop in the NPV of their oil and gas assets, most would: this would determine an increase in the weighted average AEDF from the current value of 0.4 percent to 8.6 percent, assuming an NDC/NZ2050 switch in expectations; and to 16.4 percent, in case of an NDC/DNZ switch.[2]

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[1] See P. Grippa, "Climate Transition Risk in the Canadian Oil and Gas Sector," IMF Working Paper (forthcoming).

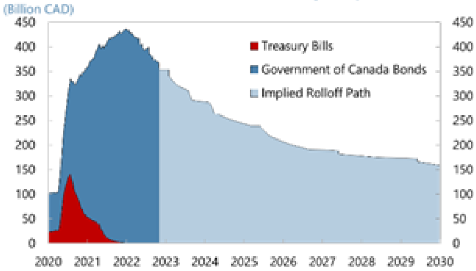
[2] In the weighted average, defaulted firms enter with a 100 percent AEDF.

POLICY DISCUSSIONS

A. Supporting Affordability

20. Both fiscal and monetary policy should remain tight. The chief priority is to bring inflation down quickly and decisively without triggering a recession. Inflation has been higher and more persistent than expected, and there is an urgent need to reverse this dynamic.

Canada: Bank of Canada Federal Holdings Implied Rolloff
(Billion CAD)



Note: Rolloff projection excludes securities purchased under resale agreements, provincial assets, and other securities
Sources: Bank of Canada, Haver Analytics, and IMF staff calculations.

21. The BoC should continue reducing the size of its balance sheet and keep the policy rate high to guide inflation back to target. Under the Bank's quantitative tightening policy, whereby existing assets are allowed to mature without replacement, the balance sheet will shrink steadily, with holdings of government securities falling from around CAD 350 billion currently (17 percent of 2021 GDP) to about half that level by 2028. This continued roll-off is appropriate, but disinflation will also require keeping the policy rate at or above 4 percent—broadly consistent with BoC communications and market expectations—for most of 2023. There are, however, important uncertainties around the current size of the supply-demand imbalance and the extent to which unemployment will need to rise to reduce excess demand in the system. Against this background, clear communication about the BoC's reaction function in line with the evolving inflation outlook will be essential to guide market expectations and avoid unnecessary volatility.

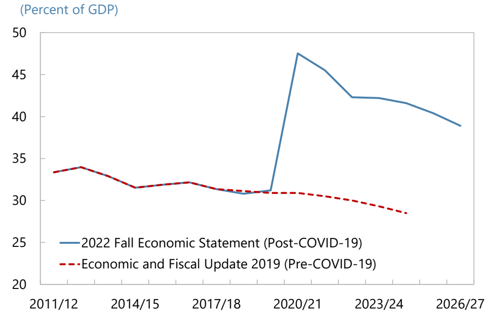
22. Fiscal policy should support the fight against inflation. Some space could be made for temporary and targeted programs to buffer vulnerable households from high fuel and food prices, but more generalized spending increases should be avoided so as not to undercut monetary policy. The 2022 Fall Economic Statement (FES) indeed uses some of the recent excess revenues to finance spending initiatives to help the vulnerable and to further the green transition (including by responding to measures in the U.S. Inflation Reduction Act)—these initiatives amount to some 1 percent of GDP over the medium term.[8] Further revenue windfalls at both federal and provincial levels should be saved. Moreover, deficit reduction could be accelerated from next year's budget onward. The plans laid out in the 2022 FES would compress deficits by nearly 1½ percent of GDP over five years, and this fiscal tightening will lower demand pressures, help to strengthen the external position, and reduce debt. But net federal debt would remain 10 percent of GDP higher in 2027/28 than was expected before the pandemic, suggesting scope for a further improvement in the primary balance, which could be guided by ongoing spending and strategic policy reviews.

Canada: Cumulative Fiscal Impact of New Measures in 2022 Fall Economic Statement (FY2022/23 to FY2027/28)

	$C billion	Percent of GDP
Making Life More Affordable	11.1	0.4
Promoting jobs, growth, and the green transition	11.0	0.4
Of which, investment tax credit for clean technologies	*6.7*	*0.2*
Improving tax revenue and government services	0.1	0.0
Other	8.5	0.3
Total net fiscal impact	**30.7**	**1.0**

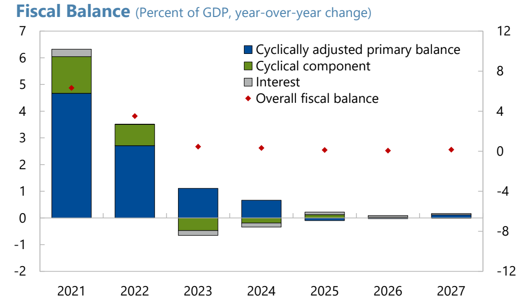
Sources: 2022 Fall Economic Statement and IMF staff calculations.

Canada: Federal Debt
(Percent of GDP)



Sources: Department of Finance Canada.

Canada: Decomposition of Changes in General Government Fiscal Balance (Percent of GDP, year-over-year change)



Sources: StatsCan, Department of Finance, and IMF staff calculations.

[8] Some of the key measures include: a temporary doubling of the quarterly sales tax credit for lower-income households; a one-time payment of a housing benefit for low-income renters; provision of a dental benefit for eligible children; financial support for low-income workers through automatic advance payments on the Canada Workers Benefit; permanent elimination of interest on Canada Student Loans and Canada Apprentice Loans; and a tax credit to support investment in clean technologies. The new spending package comes on top of the 1.1 percent of GDP in spending over the medium term laid out in the April 2022 Budget.

23. Further policy measures are needed to support housing affordability. Rising interest rates will make housing less affordable in the short term, but as they curb demand and reduce prices—and thus required down payments too—homeownership should, over time, become more affordable, especially for younger and cash-constrained households. That said, the problem will not simply correct on its own. Additional policy steps to promote affordability would be useful, particularly on the supply side, which remains the key, long-term constraint:

- The new Housing Accelerator Fund introduced in the 2022 Budget should help boost housing development, but additional measures at the local level to expedite the permitting process and promote densification are needed and could be complemented by additional federal support for critical infrastructure.[9]

- The case for demand-side measures is more nuanced. Since the housing correction is expected to be orderly, the Office of the Superintendent of Financial Institutions' (OSFI's) stated intention not to loosen the stress testing of individual borrowers appears appropriate. Targeted support, as in the 2022 budget, could help first-time homebuyers and other groups but, if scaled up or generalized, could add to demand and ultimately worsen affordability. Measures to disincentivize investors and second homebuyers—e.g., increased stamp duties and capital gains taxes, or lower LTV limits—could be helpful in easing demand (but the implications for the rental market would need to be considered carefully).[10]

24. Authorities' views. The BoC underscored its commitment to restoring price stability. Government counterparts emphasized their determination that fiscal policy not work at cross purposes with monetary policy and, in that connection, underscored their careful targeting of fiscal support toward the neediest as well as their commitment to maintaining carbon pricing. They noted that Canada's fiscal consolidation compares quite well to that in other G7 countries and, while not excluding the possibility of faster deficit reduction, emphasized Canada's substantial investment needs, including in connection with the green transition. On housing policy, while broadly agreeing with staff's assessment, the authorities underscored the challenges involved in promoting housing supply, noted that disincentivizing second homebuyers may have limited effects on affordability, and cautioned that measures targeting investors could have unintended effects on rental markets.

B. Strengthening the Policy Toolkit

25. Canada has a history of prudent fiscal policymaking, but over the medium term, the fiscal framework could benefit from the adoption of an explicit debt anchor and a supporting operational rule. The federal government's commitment to reduce the federal debt ratio and publish long-term projections are welcome steps toward strengthening the fiscal framework, as

[9] See 2019 Canada Article IV and Andrle *et al.* (2019).

[10] The recently approved two-year federal ban and earlier provincial and municipal taxes on nonresidents' purchases of Canadian real estate—which constitute capital flow management measures under the Fund's Institutional View on the Liberalization and Management of Capital Flows—could be eliminated or harmonized into broad-based tax measures that are targeted more generally at speculative activity of residents and nonresidents alike.

recommended in the past Article IVs.[11] Nonetheless, the government's precise debt goals remain unstated. Adopting a specific debt anchor, supported by an operational rule to determine how the fiscal position would return to the debt anchor following shocks, would—as noted in earlier consultations—help to guide market expectations and enhance credibility and accountability.[12] Staff analysis shows that better communication of fiscal plans in this manner would result in better economic outcomes (Box 6).[13] Fiscal rules could be useful at the provincial level as well: oil-rich provinces appear to have been prudent in saving the bulk of their recent revenue windfalls, but codifying this via rules designed to shield provincial budgets from commodity-revenue volatility would be beneficial.

26. Fiscal policy could be further enhanced through the introduction of rules-based automatic stimulus. As staff have recommended in the past, such a mechanism would mandate temporary spending increases based on a pre-set macroeconomic trigger, such as a rise in unemployment above a certain level.[14] By providing a clear signal of government spending (including, possibly, support to households and firms in difficult circumstances), it would reduce their uncertainty and induce them to spend more, thus helping the economy to recover faster. The rapid implementation of such spending is another major advantage. Although it would not replace a discretionary fiscal response—which could be tailored more precisely to the particular nature of the downturn—rules-based automatic stimulus could be a useful addition to the policy toolkit for handling future downturns, particularly when monetary policy is constrained (Box 6).[15]

27. Improved communication enhances the effectiveness of monetary policy. The BoC's recent decision to start publishing summaries of Governing Council deliberations is welcome and brings the BoC in line with global best practice. And the introduction of scenario analysis in the July Monetary Policy Report should help markets appreciate the key risks. To deepen markets' understanding of the BoC's decisions, the Bank could add more quantitative discussion of changes in the policy stance associated with alternative scenarios, to complement its qualitative guidance on the policy rate, and also publish the rate path underpinning the quarterly economic forecast, although it would be important to make clear that this is not a commitment, and that policy would respond to incoming data in order to return to the inflation target.

[11] See the 2019 Article IV report and 2021 Article IV report for detailed discussion of the recommendation to adopt a fiscal rule.

[12] For a recent discussion of fiscal rules, see IMF Staff Discussion Note, "The Return to Fiscal Rules", October 2022.

[13] Feve *et al.* (2016) echo this theme, finding that noise around news on fiscal policy reduces the policy's effectiveness.

[14] This is in contrast to existing programs like employment insurance, where payments are tied to outcomes at the individual level.

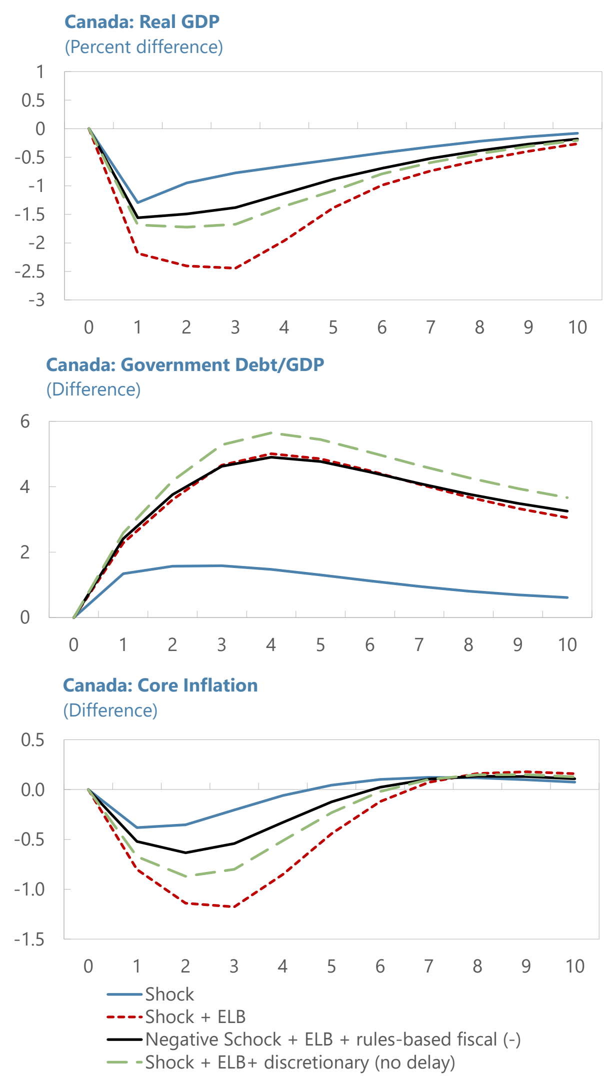
[15] See Box 6 for analysis of the rules-based stimulus for Canada, and the April 2020 *World Economic Outlook* and October 2022 *Fiscal Monitor* for more general analysis.

Box 6. Strengthening the Fiscal Framework in Canada[1]

Canada's fiscal response to the pandemic was decisive, strong, and timely. There was naturally much debate about the size and scope of the package, just as there was in other countries. This is intrinsic to an open, democratic process, but it takes time. Moreover, it can leave households and firms uncertain about the timing and extent of government support, which, in turn, can make them reluctant to spend and thus lead to worse economic outcomes.

Rules-based fiscal stabilization with macro triggers can help avoid delays and make fiscal aid more effective. Such a framework could be debated extensively *ex ante*, allowing full legislative oversight, but once established, it would allow rapid and predictable responses to the business cycle. Staff analysis, building off the April 2020 *WEO*, suggests that automatic stabilizers augmented by rules-based targeted transfers, triggered by a deviation of unemployment from a pre-specified level, can help to stabilize the economy. An automated response is particularly critical in demand-driven recessions if the monetary policy rate is close or at its effective lower bound (ELB) and thus unable to quickly stimulate the economy.

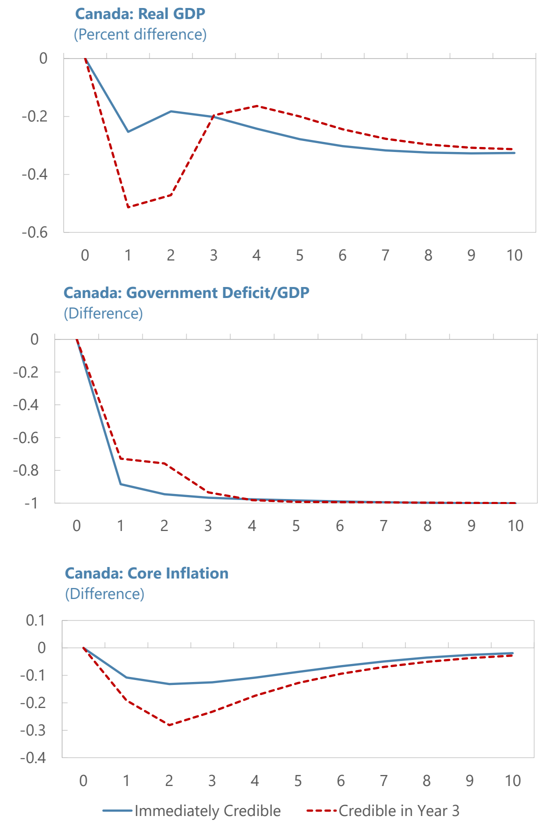
An important lesson is that good communication matters—i.e., there is a price to pure discretion. Aside from the prompt reaction and the direct fiscal stimulus, expectations play an important role as well. Good communication about the timing and the scope of fiscal stabilization matters. A counterfactual analysis to separate the disposable income and expectation channels suggests that there is a price to fiscal discretion. While disposable income is boosted identically in both scenarios, knowing when—or under what conditions—the support will stop is important. Purely discretionary fiscal spending leads to a higher cumulative output loss than better-communicated spending of the same size. Just over the first ten years, the cumulative loss is worse by around 1½ percent GDP—i.e., roughly one-sixth worse purely because of communication. Regarding the debt-to-GDP path, fiscal discretion leads to the worst outcome of all the options considered in this analysis. Should there also be a delay in providing support, the outcome would be even worse.



The expectation channel reinforces the income channel. To separate the two channels, the value of discretionary fiscal transfers is set to the ex-post value of fiscal transfers implied by an operational rules-based policy. With discretionary transfers, households and firms are uncertain whether the current aid will continue beyond the current period. They assume it will not. Each time the fiscal aid continues, however, they replicate the ex-post path from the rule-based scenario. With uncertainty about the policy action, households save more, and firms face lower demand for their goods.[2]

Box 6. Strengthening the Fiscal Framework in Canada (concluded)

The same analytical framework can be used to demonstrate the benefits of credible communication not for business-cycle stabilization, but rather for medium-term fiscal consolidation. Without a clearly communicated and credible target, such as a debt anchor, households save more, firms face lower demand, and economy-wide output is depressed. Using the same analytical framework used above, we simulate government's decision to permanently reduce targeted transfers to households and achieve a deficit of 1 percent of GDP under two different scenarios. In the first, policy is entirely credible, and households and firms do not doubt the government's plan. But in the second, they do have doubts and indeed expect the government to abandon consolidation every year until year three. As shown in the charts, credible communication makes a large difference—at least in the short run, output losses are twice as large when consolidation is not credible. And thus, to the extent that announcement of a debt anchor enhances the credibility of the government's commitment to consolidation, it could help reduce the short-term costs of consolidation.



[1] See M. Andrle, "Strengthening the Fiscal Framework in Canada," IMF Working Paper (forthcoming).

[2] In a model with richer heterogeneity, Reis and McKey (2016) also find that the power of rules-based automatic stabilizers lies in the precautionary saving and social insurance channels, complementing the income channel.

28. Authorities' views:

- **Fiscal reforms**. While agreeing that fiscal rules are used by many countries, the authorities were unconvinced of the need for a quantitative debt anchor in Canada. They saw Canada's strong fiscal track record as giving them credibility to operate a more flexible framework that focuses on debt reduction but can respond to changing circumstances. In addition, today's elevated uncertainties would make it likely that any simple rule would end up being broken, leading to a loss of credibility, while more complicated arrangements with escape clauses would be more difficult to communicate. Determining the appropriate debt level would, in any case, be a controversial undertaking. The authorities found the proposal for rules-based stimulus intriguing but had some concerns that automatically triggered spending could be activated at inappropriate times (e.g., when inflation is too high).

- **Monetary policy communication.** The BoC agreed on the importance of helping the market understand the Bank's reaction function, including through its recently announced Summary of Deliberations, which will be published beginning in January 2023, and through ongoing use of alternative scenarios in its Monetary Policy Report. With respect to publication of the policy rate path, the BoC queried staff's recommendation and sought to determine whether staff had compelling evidence to show that publishing the rate path improves policy effectiveness and how to mitigate the risk that any path would be interpreted as a commitment.

C. Enhancing Financial Regulation and Oversight

29. There is a need to establish a comprehensive regulatory regime for cryptoassets. OSFI's recent publication of an interim advisory on cryptoasset exposures is an important step in this direction. Federal and provincial authorities should step up their collaboration to guide the growth of these instruments—including the full range of stablecoins and unbacked cryptoassets—and ensure they do not pose a threat to financial stability. Given the nature of these instruments, efforts to regulate them should be coordinated closely with international regulatory bodies. Finance Canada is preparing further regulatory initiatives in this domain.

30. The authorities continue to make progress in addressing most of the 2019 FSAP recommendations (Annex III). Interagency cooperation among federal and provincial financial regulators and supervisors continues to improve, although the identification and estimation of vulnerabilities within the financial system at large are constrained by some persistent data gaps (e.g., with respect to some NBFIs as well as to SMEs). The authorities should put initiatives in place—via new legislation, if warranted—to overcome the persistent fragmentation of data sources and legal restrictions that prevent centralized data pooling and limit the scope of systemic risk analysis at the national level. The FSAP's recommendation to strengthen the oversight of large public pension funds and increase the transparency of their financial disclosures is even more relevant in the current context of volatile markets, which could put pressure on the pension funds' liquidity via spikes in margin calls and potential dislocations in government bond markets; a decision on how to strengthen this area of financial oversight should not be deferred.

31. Canada has made progress in strengthening its anti-money-laundering framework to combat the concealment of foreign corrupt proceeds, but further improvements are needed:[16]

- Legal amendments in 2019 and 2020 strengthened the AML/CFT obligations of financial institutions, and particularly those related to customer due diligence, identification of politically exposed persons (PEPs), and reporting of suspicious transactions linked to financial crimes. Solicitor-client privilege, however, prevents such requirements from being placed on legal professionals as well. This is an important shortcoming—given lawyers' involvement with high-risk clients and in sensitive services such as company and trust formation, as well as real-estate- and securities-related transactions—and should be remedied.

[16] In line with the Framework for Enhanced Engagement on Governance, this paragraph and Box 7 update the assessment of frameworks to prevent the concealment of foreign proceeds of corruption in the Canadian economy. Canada's measures to criminalize and prosecute the bribery of foreign public officials (the "supply side of corruption") will be assessed during a future Article IV consultation.

- Separately, a federal beneficial-ownership registry aimed at mitigating the risk of misuse of legal entities for criminal purposes will be operational starting in 2024. This is a welcome step, but only 10 to 15 percent of Canadian companies are registered federally, underscoring the importance of achieving coverage of entities at the provincial level as well. The province of British Columbia has also established a real-property beneficial ownership registry, which should help mitigate the significant money-laundering risks in the real-estate sector; this is an innovative initiative and parallel efforts in other provinces would also be desirable (Box 7).

32. Authorities' views. Counterparts emphasized that the government is preparing a range of initiatives to regulate the markets of stablecoins and cryptoassets. They agreed with the FSAP recommendations and emphasized the continued progress against them. The authorities highlighted their ongoing development of a federal beneficial-ownership registry as a major step forward and acknowledged the need for provinces to adopt a similar approach. They noted that they continue to explore an upgrade of the Integrity Regime for procurement and real estate transactions to publicly render companies ineligible or suspended for wrongdoing, including corruption.

Box 7. Beneficial Ownership Transparency Reforms

The government has fast-tracked the establishment of a federal beneficial ownership registry, now expected to be operational by end-2023. This is in line with the multipronged approach to beneficial ownership transparency in the revised standards of the Financial Action Task Force (FATF), the global AML/CFT standard-setter. The foundational legal framework and structure for the federal registry have been set out in the amendments to the Canada Business Corporations Act (CBCA). Under the CBCA, beneficial ownership information will be collected in the federal corporate registry maintained by Corporations Canada. An upcoming tranche of legal amendments is expected to elaborate and clarify features of the registry, including levels of accessibility and verification mechanisms. Preliminarily, the authorities are considering a tiered-access model, with maximum access afforded to law enforcement and other competent authorities, and only a subset of the information published. Notably, this registry covers only federally incorporated companies—just 10 to 15 percent of legal entities established in Canada—which significantly limits the expected impact of the measure.

Given the limited coverage of the federal registry, provincial cooperation will be of critical importance. The revised FATF standards on beneficial ownership transparency for legal persons allow use of a single or multiple registries/databases across provinces/districts or for different sectors or types of legal persons. The establishment of similar registers is underway in Quebec (targeted for 2023) and in British Columbia (no timeline decided). The federal government should continue to strongly encourage the establishment of a pan-Canadian beneficial ownership registry system to harness the full effects of beneficial ownership transparency reforms and aid provinces in their fight against money laundering. Further, for effectiveness of the pan-Canadian approach, the authorities should put in place mechanisms to ensure ease of access to data across federal and provincial registers, *inter alia* through interlinked platforms and use of the same data format across jurisdictions, or availability of centralized search options.

British Columbia has established a public real-property beneficial-ownership registry to combat cross-border money laundering in the real-estate sector. The Land Owner Transparency Registry is established per the Land Owner Transparency Act and maintained by the Land Title and Survey Authority of British Columbia. Under the Act, corporations, trustees, or partners holding land are required to disclose the ultimate interest holder or holders (a natural person or persons) for inclusion in the registry. Given that the purchase and sale of property using corporations and trusts is a common money-laundering technique, real-

Box 7. Beneficial Ownership Transparency Reforms (concluded)

property beneficial ownership registries could emerge as a useful tool to mitigate these risks, and the federal government should incentivize provinces to establish them. The establishment of similar registers in other provinces could also reduce the potential for regulatory arbitrage.

Canada does not collect and publish information about the beneficial ownership of companies that enter into contracts with government departments. Collection of beneficial ownership information for legal entities participating in public procurement and subsequent publication of beneficial ownership information for entities awarded procurement contracts will aid in the broader efforts to detect any conflicts of interest, collusion, or corruption in public procurement and could be a useful additional source of beneficial ownership information for reporting entities and competent authorities.

D. Transitioning to a Low-Carbon Economy

33. Canada aims, by 2030, to cut emissions to 40-45 percent below 2005 levels. From a challenging starting point as the world's eighth-largest CO_2 emitter, and with among the highest per-capita emissions of any major economy,[17] Canada has laid out ambitious and welcome policy plans including a steady increase in the federal carbon tax to CAD 170/ton by 2030—one of the highest levels proposed internationally. Given its climate ambition, Canada is well placed to catalyze an international agreement on a carbon price floor, a collaborative solution that could be differentiated by development level and could move the world decisively toward meeting its mitigation objectives.[18] Industrial competitiveness issues will also need to be considered carefully in the light of countries' differing policy approaches. Finally, Canada is a role model for other advanced economies in its generous commitments of climate financing for developing nations.

34. A comprehensive strategy to transition the economy and its workers away from carbon-intensive products and processes will be needed for the medium- to long-run. As the world decarbonizes, oil and gas demand will decline, putting pressure on exporting nations. Given the high upfront capital needs but low ongoing operational costs of much of Canada's oil production, many existing projects may remain in production for an extended period—albeit with reduced profitability as global producer prices fall. New developments, however, may become uneconomic, and incentives should not actively be provided for projects that may result in stranded assets.

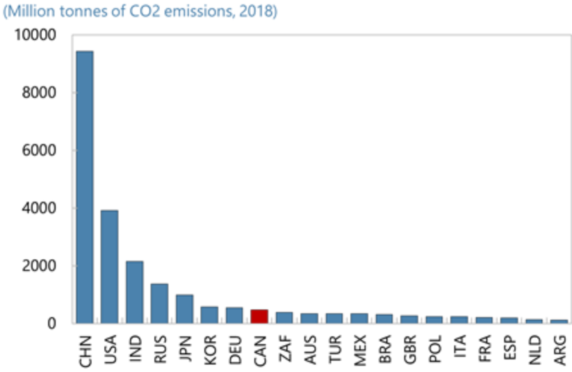
35. The transition to a low-carbon economy also offers important opportunities. Canada stands poised, for example, to play a crucial global role in the mining of the 'critical minerals' increasingly required for many green technologies (such as solar panels, wind turbines, batteries, and electric vehicles) thanks to both its rich natural endowments and its reputation as a reliable trading partner committed to high ESG standards. The development of these and other initiatives

[17] CO_2 emissions (metric tons per capita), https://data.worldbank.org/indicator/EN.ATM.CO2E.PC. In terms of greenhouse gas emissions (including other gases such as methane and nitrous oxide), Canada ranks third among G20 countries in 2019 (after Saudi Arabia and Australia) with 19.6 ton of CO_2 equivalent per capita.

[18] See Parry, I. *et al.*, "Proposal for an International Carbon Price Floor Among Large Emitters," IMF Staff Climate Note, June 18, 2021.

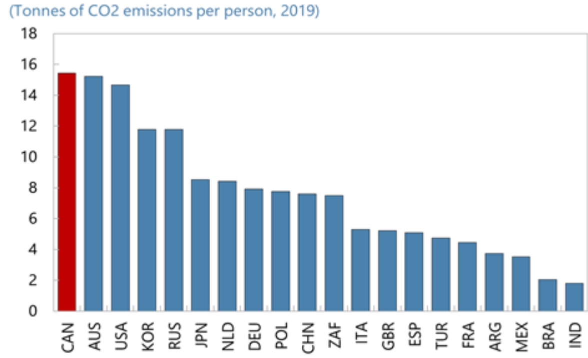
(e.g., improving the efficiency and cost-effectiveness of carbon capture and storage techniques) may require some fiscal support—such as tax credits and other policies to incentivize private green investments, as well as direct funding of public green investments—but it will be important to maintain a prudent overall fiscal stance, especially given that the declining profitability of oil and gas could weigh on government revenue collections.

Canada: CO2 Emissions
(Million tonnes of CO2 emissions, 2018)



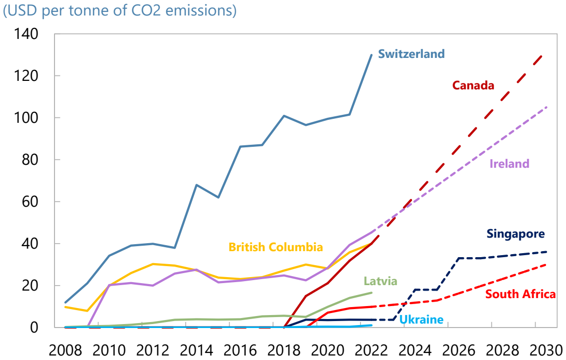
Sources: IMF Climate Change Indicators Dashboard

Canada: CO2 Emissions
(Tonnes of CO2 emissions per person, 2019)



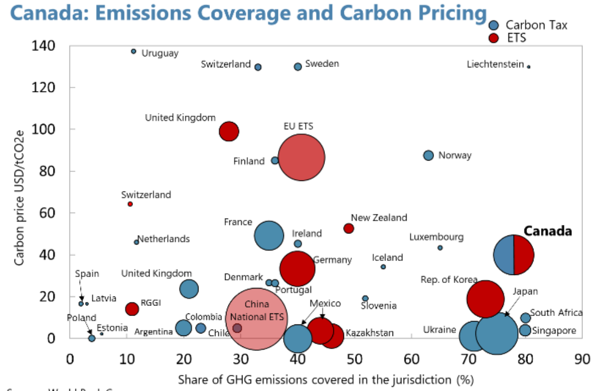
Sources: IMF Climate Change Indicators Dashboard

Canada: Carbon Price
(USD per tonne of CO2 emissions)



Sources: World Bank Group

Canada: Emissions Coverage and Carbon Pricing



Sources: World Bank Group
Note: Bubble size represents share of world GHG emissions covered. Canada represents total emissions covered by carbon pricing instruments under the Pan-Canadian Framework. It includes a combination of ETS-like and carbon tax-like instruments.

36. **Policies should be put in place upfront to protect those, including First Nations, whose livelihoods may be most disrupted by decarbonization.** Policies could focus on helping workers redeploy their existing technical skills in greener activities as well as training them in new skills. Public resources may also be needed to support regional development and diversification initiatives, given that oil and gas are concentrated in certain parts of the country.

37. **The BoC may also be able to play a role in the climate transition.** It could, for example, adjust the eligibility criteria for the collateral pledged by banks in market operations to reduce their implicit carbon intensity, as well as require that an increasing share of collateral in secured transactions be issued by companies complying with international standards for climate-related disclosures.

38. **Authorities' views.** The authorities underscored their commitment to carbon pricing but also recognized the need to avoid any loss of competitiveness. They intend to respond in kind to the

subsidies offered in the U.S. Inflation Reduction Act, so as to remain an attractive destination for potential major new investments in such sectors as electric vehicles and batteries. But even so, the difference in carbon taxation across the two countries creates concerns, and while a border carbon adjustment is under consideration, this may be difficult to implement in practice. The authorities welcome the work of the IMF in exploring an international agreement on a carbon price floor and reconfirmed their commitment to provide climate financing for developing nations. And while they saw a future for Canadian oil and gas—and particularly for LNG, as a bridge fuel and an important component of the world's future energy mix—they agreed on the importance of developing an overarching strategy to manage the green transition. The BoC noted that they are closely studying the implications of climate change for monetary policy and financial stability and are working with OSFI and financial institutions to improve the assessment of climate-related financial risks.

STAFF APPRAISAL

39. During the pandemic, Canada's economic outcomes have been better than in many comparators, but the conjuncture is nonetheless extremely challenging. Inflation is well above target and eroding real incomes, housing affordability is a major concern following a long boom that may now have peaked, and the pandemic remains a source of risk. The external position in 2021 was moderately weaker than the level implied by medium-term fundamentals and desirable policies. Staff expect growth to remain subdued, housing to continue its correction, and the financial sector to remain resilient. But risks to growth are tilted to the downside, and shocks could easily push the economy into a mild recession.

40. Taming inflation is the key priority, and tight macro policies are needed. The BoC should maintain the policy rate at or above 4 percent for most of 2023, keep shrinking its balance sheet, and continue clearly communicating its intentions. Fiscal policy should support the disinflation effort—further revenue windfalls should be saved, fiscal support for the needy should be kept temporary and targeted, and the pace of deficit reduction could be made even more ambitious in the next budget. Further policy measures—particularly on the supply side—would help to address housing affordability over time.

41. Looking ahead, the policy toolkit could be enhanced in several ways. Adoption of a specific debt target, supported by an operational rule to determine how the fiscal position reverts to the debt anchor following shocks, could help to guide market expectations and enhance policy credibility and accountability. Rules-based fiscal stimulus could, by strengthening households' expectations of fiscal support in a downturn and speeding up the process of its delivery, be a useful addition to the policy toolkit. There is scope to enhance some areas of financial regulation, including by establishing a comprehensive regulatory regime for cryptoassets, addressing shortcomings in the AML/CFT framework, where substantial advances have already been made, and building on progress in improving interagency cooperation on financial oversight by removing obstacles to data sharing and cross-sectoral systemic risk analysis at the national level.

42. Canada deserves substantial credit for its ambitious plans to reduce its currently high CO_2 emissions. Given its climate ambition, Canada is well placed to catalyze an international agreement on a carbon price floor, but negative impacts on Canada's competitiveness will need to be addressed. A comprehensive strategy will be needed to help the economy and workers transition away from carbon-intensive products and processes. Canada deserves substantial credit for its large commitments of climate finance for developing nations.

43. Staff recommend that the next Article IV consultation be held on the standard 12-month cycle.

Table 1. Canada: Selected Economic Indicators, 2019–27
(Percentage change, unless otherwise indicated)

Nominal GDP (2021): Can$ 2,496 billion (US$ 1,990 billion)
GDP per capita (2021): US$ 52,079
Main exports: Oil and gas, autos and auto parts, gold, lumber, copper.

Quota: SDR 11,023.9 million
Population (2021): 38.0 million

				Projections					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Output and Demand									
Real GDP	1.9	-5.2	4.5	3.3	1.5	1.6	2.3	1.9	1.7
Total domestic demand	1.2	-6.4	6.1	5.5	1.8	1.3	2.6	1.7	1.4
Private consumption	1.4	-6.1	4.9	8.7	3.2	0.8	3.3	1.6	1.3
Total investment	0.2	-7.9	12.3	2.1	-1.1	2.8	2.6	2.1	1.9
Net exports, contribution to growth	0.6	0.5	-2.0	-2.2	-0.4	0.3	-0.3	0.2	0.3
Unemployment and Inflation									
Unemployment rate (average) 2/	5.8	9.6	7.4	5.3	5.9	6.2	6.1	6.0	6.0
CPI inflation (average)	1.9	0.7	3.4	6.9	4.2	2.4	1.9	1.9	2.0
Saving and Investment 1/									
Gross national saving	21.0	20.5	23.8	23.8	22.8	23.1	22.7	22.5	22.3
General government	4.0	-7.2	-1.4	1.1	1.9	2.1	2.3	2.2	2.2
Private	17.1	27.7	25.1	22.7	20.9	21.0	20.5	20.3	20.1
Personal	4.2	33.7	23.2	11.4	7.4	4.5	3.9	5.2	4.6
Business	12.9	-6.0	1.9	11.3	13.5	16.5	16.5	15.0	15.5
Gross domestic investment	23.1	22.3	23.7	23.3	23.0	23.5	23.7	23.9	24.2
General Government Fiscal Indicators 1/ (NA basis)									
Revenue	40.7	41.6	41.0	41.5	41.2	41.2	41.2	41.2	41.3
Expenditures	40.7	53.0	46.0	43.0	42.3	42.0	41.8	41.8	41.7
Overall balance	0.0	-11.4	-5.0	-1.5	-1.1	-0.7	-0.6	-0.6	-0.4
Gross Debt	87.2	117.8	112.9	101.9	99.0	97.1	94.9	93.3	91.9
Net debt	23.1	33.6	31.6	30.6	30.3	30.0	29.5	29.0	28.3
Money and Credit (Annual average)									
Three-month treasury bill 2/	1.7	0.5	0.1	2.0	4.0	3.0	2.4	2.5	2.5
Ten-year government bond yield 2/	1.6	0.8	1.4	3.1	4.0	3.6	3.4	3.3	3.2
Balance of Payments									
Current account balance 1/	-2.0	-1.8	0.0	0.5	-0.2	-0.4	-1.0	-1.5	-1.9
Merchandise Trade balance 1/	-0.8	-1.8	0.2	1.4	0.5	0.1	-0.5	-0.9	-1.3
Export volume (percent change)	0.8	-8.1	2.0	0.5	0.6	1.9	1.9	2.7	2.7
Import volume (percent change)	0.0	-7.3	8.8	7.4	2.0	1.2	3.4	2.0	1.6
Terms of trade	-0.8	-3.3	14.1	9.8	-1.1	-1.7	0.3	0.0	0.0

Sources: Haver Analytics and Fund staff calculations.
1/ Percent of GDP.
2/ In percent.

Table 2. Canada: Balance of Payments, 2019–27

(Percent of GDP)

				Projections					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Current Account									
Current account balance	-2.0	-1.8	0.0	0.5	-0.2	-0.4	-1.0	-1.5	-1.9
Merchandise trade balance	-0.8	-1.8	0.2	1.4	0.5	0.1	-0.5	-0.9	-1.3
Exports, goods	25.8	23.7	25.5	28.3	26.7	25.8	25.1	24.4	23.6
Export volume growth (percentage change)	0.8	-8.1	2.0	0.5	0.6	1.9	1.9	2.7	2.7
Imports, goods	26.6	25.5	25.3	26.9	26.2	25.7	25.5	25.2	24.9
Import volume growth (percentage change)	0.0	-7.3	8.8	7.4	2.0	1.2	3.4	2.0	1.6
Services balance	-0.8	-0.3	-0.1	-0.4	-0.3	-0.2	-0.1	-0.1	-0.1
Primary Income Balance	-0.3	0.5	0.1	-0.3	-0.3	-0.2	-0.2	-0.4	-0.4
Secondary Income Balance	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Capital and Financial Accounts									
Financial account balance	2.2	1.8	-0.2	-0.5	0.2	0.4	1.0	1.5	1.9
Direct investment, net	-1.7	-1.4	-1.9	-1.7	-1.7	-0.7	-1.5	-1.0	-0.9
Portfolio investment, net	0.1	4.1	2.1	1.3	1.9	1.5	2.0	1.9	1.9
Other investment, net 1/	3.8	-0.8	0.6	-0.2	0.1	-0.4	0.4	0.6	1.0
Capital account balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
International reserves	0.0	-0.1	-1.0	0.0	0.0	0.0	0.0	0.0	0.0
Statistical discrepancy	-0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Memorandum Items									
Terms of trade (percent change)	-0.8	-3.3	14.1	9.8	-1.1	-1.7	0.3	0.0	0.0
Net international investment position 2/	34.3	53.3	60.3	54.2	51.0	48.9	46.0	42.9	39.6
Assets	254.4	298.6	310.6	288.3	282.1	279.6	276.1	272.9	269.9
FDI	98.4	118.1	121.6	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Portfolio 2/	112.0	131.3	141.3	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Other	39.2	44.0	42.3	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Reserves	4.8	5.2	5.4	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Liabilities	220.1	245.3	250.3	234.1	231.1	230.7	230.2	230.0	230.3
FDI	69.6	76.7	84.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Portfolio 2/	102.8	115.4	114.4	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Other	47.7	53.2	51.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Gross external debt	125.3	142.5	135.9	129.9	129.3	129.7	130.6	131.4	132.7
Real effective exchange rate 3/	-0.9	-1.1	4.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Sources: Haver Analytics and Fund staff calculations.

1/ Includes bank, nonbank, and official transactions other than reserve transactions.

2/ Based on market valuation of portfolio stocks and official international reserves.

3/ Percentage change.

Table 3. Canada: General Government Fiscal Indicators, 2019–27 1/

(Percent of GDP, unless otherwise indicated)

				Projections					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Federal Government									
Revenue	14.7	15.1	15.2	15.6	15.4	15.5	15.5	15.6	15.6
Income taxes	9.5	10.1	9.8	10.3	10.2	10.1	10.1	10.1	10.2
Expenditures	15.1	25.9	19.6	17.4	17.2	16.9	16.7	16.7	16.4
Program spending	14.1	24.9	18.6	16.3	15.7	15.4	15.3	15.2	14.9
Transfers	9.7	16.4	12.5	10.4	10.2	10.3	10.3	10.4	10.2
Interest payments	1.1	1.0	0.9	1.1	1.4	1.4	1.4	1.5	1.5
Budgetary balance	-0.4	-10.8	-4.4	-1.8	-1.8	-1.4	-1.2	-1.1	-0.9
Cyclically-adjusted balance 2/	-0.4	-10.0	-4.2	-1.9	-1.8	-1.3	-1.2	-1.1	-0.9
Net federal debt	17.6	29.1	30.4	30.4	31.0	30.9	29.4	28.6	27.7
Gross federal debt	33.8	56.0	53.3	49.1	48.2	48.0	46.5	45.7	44.8
Provincial and Local Governments									
Revenue	27.0	28.8	27.1	27.0	27.0	26.9	26.9	26.9	26.8
Income taxes	6.3	6.8	6.5	6.6	6.6	6.6	6.6	6.5	6.6
Expenditures	27.3	29.9	28.5	27.4	27.0	27.0	26.9	26.9	26.9
Interest payments	1.9	1.9	1.7	1.5	1.4	1.5	1.5	1.4	1.2
Budgetary balance	-0.3	-1.1	-1.4	-0.4	0.0	0.0	0.0	-0.1	-0.1
Canada/Quebec Pension Plans									
Revenue	3.6	3.8	3.8	3.6	3.6	3.6	3.6	3.6	3.6
Total spending	2.9	3.2	3.0	2.9	2.8	2.9	2.9	3.0	3.0
Budgetary balance	0.7	0.6	0.8	0.7	0.7	0.7	0.6	0.6	0.6
Consolidated General Government 3/									
Revenue	40.7	41.6	41.0	41.5	41.2	41.2	41.2	41.2	41.3
Expenditure	40.7	53.0	46.0	43.0	42.3	42.0	41.8	41.8	41.7
Overall balance	0.0	-11.4	-5.0	-1.5	-1.1	-0.7	-0.6	-0.6	-0.4
Primary balance	0.1	-10.9	-5.5	-2.0	-1.2	-0.7	-0.6	-0.6	-0.5
Cyclically-adjusted balance 2/	-0.1	-9.6	-4.4	-1.8	-1.0	-0.5	-0.6	-0.6	-0.4
Fiscal impulse	0.3	9.5	-5.3	-2.6	-0.8	-0.5	0.0	0.0	-0.2
Net public debt	23.1	33.6	31.6	30.6	30.3	30.0	29.5	29.0	28.3
Gross public debt	87.2	117.8	112.9	101.9	99.0	97.1	94.9	93.3	91.9
Memorandum Items									
Real GDP growth (percentage change)	1.9	-5.2	4.5	3.3	1.5	1.6	2.3	1.9	1.7
Nominal GDP growth (percentage change)	3.4	-4.5	13.0	12.8	4.7	3.4	3.9	3.2	3.0
Three-month treasury bill (percent)	1.7	0.5	0.1	2.0	4.0	3.0	2.4	2.5	2.5
Ten-year government bond (percent)	1.6	0.8	1.4	3.1	4.0	3.6	3.4	3.3	3.2

Sources: Statistics Canada; DoF Canada; provincial budget reports; Haver Analytics; and IMF staff estimates.

1/ National Accounts basis.

2/ Percent of potential GDP.

3/ Includes federal, provincial, territorial, and local governments; and Canada and Quebec pension plans.

Table 4. Canada: Statement of General Government Operations and Balance Sheet, 2013–21 1/

(Percent of GDP, unless otherwise indicated)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Government Operations									
Revenue	38.5	38.6	40.0	40.4	40.4	41.1	40.7	41.7	41.0
Taxes	26.6	26.8	28.2	28.5	28.6	29.0	28.7	29.7	28.8
Social contributions	4.7	4.6	4.8	4.8	4.6	4.6	4.6	4.8	4.7
Grants	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other revenue	7.2	7.2	7.0	6.9	7.2	7.4	7.4	7.1	7.5
Total expenditure	40.0	38.4	40.0	40.8	40.5	40.7	40.7	53.0	46.0
Expense	39.3	38.2	39.6	40.3	39.8	40.0	40.4	52.4	45.6
Compensation of employees	12.1	11.9	12.1	12.2	12.0	12.0	12.0	12.9	12.4
Use of goods and services	8.4	8.2	8.5	8.6	8.6	8.6	8.6	9.4	8.9
Consumption of fixed capital	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.5	3.3
Interest	3.4	3.2	3.1	3.0	2.9	3.0	3.0	3.0	2.7
Subsidies	0.9	0.9	0.9	1.0	0.9	1.0	1.1	4.9	3.0
Grants	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.3
Social benefits	9.2	9.0	9.7	10.0	10.0	9.9	10.1	15.9	12.6
Other expense	1.8	1.7	1.7	1.9	2.0	2.0	2.1	2.5	2.5
Net acquisition of nonfinancial assets	0.7	0.2	0.4	0.5	0.6	0.6	0.3	0.6	0.4
Gross operating balance	2.4	3.6	3.7	3.4	3.8	4.3	3.6	-7.1	-1.3
Net operating balance	-0.8	0.4	0.4	0.1	0.6	1.1	0.3	-10.7	-4.6
Net lending or borrowing	-1.4	0.2	0.0	-0.4	-0.1	0.4	0.1	-11.3	-5.0
Balance Sheet (Market Value)									
Net worth	1.3	-0.5	-4.1	2.2	9.4	11.2	13.1	2.1	15.6
Nonfinancial assets	49.6	46.6	42.4	46.7	47.2	47.5	45.9	46.9	52.0
Net financial worth	-48.3	-47.1	-46.5	-44.5	-37.8	-36.3	-32.8	-44.8	-36.4
Financial assets	67.8	69.4	76.1	77.7	78.8	78.8	82.2	106.1	103.4
Currency and deposits	4.5	4.7	5.0	5.4	5.5	5.5	5.6	9.8	8.1
Securities other than shares	15.3	15.0	16.4	15.5	15.3	15.7	16.8	19.1	18.0
Loans	15.8	15.5	18.6	18.2	18.1	18.3	18.8	22.6	22.8
Shares and other equity	20.2	21.8	25.1	27.0	29.1	29.4	30.7	36.0	36.2
Insurance technical reserves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts receivable	11.9	12.5	11.0	11.6	10.7	9.8	10.4	18.6	18.2
Financial liabilities 2/	116.1	116.5	122.7	122.1	116.5	115.0	115.0	150.9	139.8
Currency and deposits	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Securities other than shares	78.2	78.4	82.6	84.0	80.0	78.6	80.0	109.6	101.0
Loans	5.1	5.5	6.5	5.3	6.0	5.9	6.6	6.6	6.5
Shares and other equity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Insurance technical reserves	17.5	16.5	17.2	16.3	15.3	15.1	14.5	15.5	13.7
Other accounts payable	15.1	15.9	16.1	16.2	14.9	15.1	13.7	18.9	18.4
Memorandum Items:									
Nominal GDP (in billions of Can$)	1,902	1,995	1,990	2,026	2,141	2,236	2,311	2,207	2,493

Sources: Statistics Canada; and Haver Analytics.
1/ Government Finance Statistics basis.
2/ Includes unfunded public sector pension liabilities.

Table 5. Canada: Financial Soundness Indicators, 2013–21
(Percent, unless otherwise indicated)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Assets									
Total assets 1/	3,854	4,179	4,666	5,014	5,277	5,675	6,116	6,116	6,116
Percent of GDP	202.6	209.5	234.4	247.5	246.5	253.8	264.6	277.1	245.3
Nominal GDP	1,902	1,995	1,990	2,026	2,141	2,236	2,311	2,207	2,493
Capital Adequacy									
Total capital ratio	14.3	14.2	14.2	14.8	14.8	15.2	15.3	16.1	17.1
Tier 1 ratio	11.7	11.9	12.1	12.5	12.9	13.2	13.2	13.9	15.1
Capital to assets	4.3	4.5	4.6	4.7	4.8	4.8	4.7	4.6	4.8
Credit Risk									
NPLs net of provisions to capital	5.8	5.1	5.0	5.7	4.5	4.8	4.5	4.3	2.9
NPLs to Gross Loans	0.6	0.5	0.5	0.6	0.4	0.5	0.5	0.5	0.4
Provisions (Individual) to NPL	16.3	17.5	17.3	16.7	15.1	19.8	25.7	25.7	25.7
Profitability									
Return on assets	1.1	1.1	1.0	1.0	1.1	1.2	1.1	0.8	1.1
Return on equity	18.1	18.0	16.7	16.0	17.1	17.3	16.2	13.2	17.3
Interest margin on gross income	52.5	51.2	51.1	50.7	50.8	50.8	52.1	49.0	53.6
Trading income to gross income	4.3	3.5	3.5	3.9	3.9	5.0	4.1	5.0	3.5
Non-interest expenses to gross inco	62.6	62.8	63.8	63.6	61.0	59.7	61.5	65.7	57.0
Liquidity									
Liquid assets to total assets	11.3	10.9	11.4	10.9	10.7	10.6	9.8	15.4	15.1
Liquid assets to short-term liabilitie	47.8	50.5	45.4	54.6	49.4	48.5	44.1	78.0	79.5
Customer deposits to loans	99.8	102.1	104.1	104.3	102.7	101.4	100.7	109.5	113.1
FX and Derivative Risk									
FX Assets to Total Assets	42.8	49.2	56.6	51.6	46.6	60.4	47.5	50.1	60.1
FX loans to total loans	27.7	30.1	33.4	34.3	35.5	37.2	38.5	37.8	35.8
FX liabilities to total liabilities	42.6	49.0	48.3	54.9	53.8	54.3	49.0	52.9	42.9

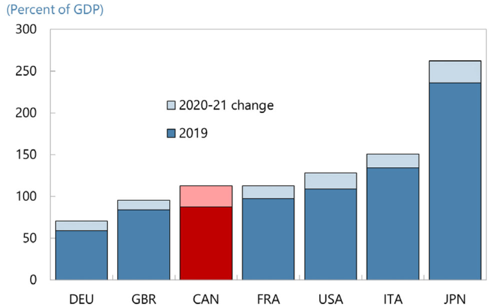
Sources: IMF FSI database; and IMF staff calculations.
1/ Billions of Canadian dollars.

Annex I. Sovereign Risk and Debt Sustainability Assessment

Staff assess the overall risk of sovereign stress in Canada to be low. Following a sharp increase due to sizable fiscal support in response to the COVID-19 pandemic, Canada's gross debt declined moderately from about 118 percent of GDP in 2020 to 113 percent in 2021. Under the baseline scenario, the gross debt-to-GDP ratio is projected to fall further to about 102 percent of GDP in 2022 and continue declining over the medium term, reflecting fiscal consolidation and favorable growth-interest rate differentials. The medium-term risk assessment indicates moderate debt stress and liquidity risk, but the government's holdings of large financial assets (about 81 percent of GDP at end-2021) would provide a comfortable buffer. The net debt-to-GDP ratio is projected to fall from its peak of 33½ percent in 2020 to 30½ percent in 2022, before declining to 28¼ percent by the end of the projection horizon.

1. Background. General government consolidated gross debt stood at 113 percent of GDP at end-2021, about 25 percentage points above the pre-pandemic level.[19] Excluding accounts payable (in line with common international practice), gross debt was 94½ percent of GDP in 2021, among the lowest in the G7. It is also important to note that Canada's general government holds sizable financial assets (about 81 percent of GDP at end-2021), which include a broad range of assets (currency and deposits, debt securities, loans, and equity holdings, etc.).[20] Nearly one-third of these assets are highly liquid (currency, deposits, and bonds) and about one quarter of the total financial assets relate to pension fund investments. Canada's net debt stood at 31½ percent of GDP at end-2021, the lowest in the G7.

Canada: General Government Gross Debt
(Percent of GDP)



Sources: IMF World Economic Outlook.

2. Market perceptions. Confidence in Canada's sovereign debt remains high. Canada had AAA ratings from all 3 major ratings agencies from 2002 to June 2020, when Fitch downgraded it to AA+. As of early November 2022, Canada's benchmark 10-year bond yields were around 3.6 percent, about 60 basis points below U.S. 10-year Treasury yields.

3. Baseline. Fiscal consolidation is expected over the projection horizon. The primary deficit at the consolidated general government level is projected to decline from 5½ percent of GDP in 2021 to ½ percent by 2027.

- *Gross debt dynamics*. The gross debt-to-GDP ratio is projected to decline steadily from its peak of around 118 percent in 2020 to just below 92 percent by 2027, reflecting fiscal consolidation and favorable growth-interest rate differentials.

[19] Gross debt at the general government consolidated level includes debt held by the federal government, provincial and territorial governments, local governments, and social security funds.

[20] General government holdings of financial assets rose sharply during the pandemic, from 64 percent of GDP in 2019 to 84 percent in 2020 before falling modestly to 81 percent of GDP in 2021. Part of the sharp increase was driven by implementation of COVID-19 emergency support measures—such as loans to business and tax deferral (account receivable) —and front-loading government borrowing, which are expected to wind down over the medium term.

- *Net debt dynamics*. The general government has sizable financial assets, with nearly one third being highly liquid. The net debt ratio is expected to decline to 28¼ percent by 2027 from its peak of 33½ percent in 2020.

- *Gross financing needs*. Gross financing needs were about 22 percent of GDP in 2021. Government borrowing costs should increase as monetary policy continues to tighten, but nevertheless, gross financing needs are expected to remain within the range of 19–21 percent of GDP through the projection horizon—higher than the recent historical average but similar to levels in 2009–13.

4. Realism. Projection errors in recent years for real GDP growth, the primary balance, and inflation were moderate and broadly in line with those in other economies.[21] There is no evidence of a systematic projection bias in the baseline assumptions that could undermine the SRDSA. Projected fiscal adjustment in the near term is very large in historical, cross-country comparison but nonetheless understandable as it is driven largely by the withdrawal of unprecedented fiscal support during the pandemic.

5. Accounting issues for international comparisons:

- Canada's general government gross debt includes sizable accounts payable (about 18 percent of GDP at end-2021), which many advanced economies do not report.

- Canada reports general government net debt as total liabilities less total assets and equity, including equity assets. Most other advanced economies remove both accounts payable and receivable as well as equity holdings.

- Public debt increased in recent years (prior the COVID-19 crisis), reflecting the government's policy to fund public sector employee pension plans by issuing new debt. General government debt as reported here, however, does not include unfunded pension liabilities, so as to maintain comparability with other countries.

[21] That said, there were large errors in forecasting the primary balance in 2020 and inflation in 2021, when uncertainty was particularly large

Annex I. Figure 1. Canada: Risk of Sovereign Stress

Horizon	Mechanical signal	Final assessment	Comments
Overall	...	**Low**	Staff's assessment of the overall risk of sovereign stress is low, as risks in the near and medium terms are mitigated by the government's sizeable holdings of financial assets (about 81 percent of GDP at end-2021) and the strength of institutions.
Near term 1/			
Medium term	**Low**	**Low**	Medium-term risks are assessed as low, aligned with the aggregate mechanical signals. While the debt fanchart and the GFN modules point to mechanical moderate risk signals, risks are migitated by the government's large liquid asset holdings.
Fanchart	**Moderate**	...	
GFN	**Moderate**	...	
Stress test	...	...	
Long term	...	n.a.	
Sustainability assessment 2/	...	n.a.	Not required for surveillance-only countries
Debt stabilization in the baseline			No

DSA Summary Assessment

Staff commentary: This SRDSA finds that the overall risk of sovereign stress in Canada is low. Following a sharp increase due to sizable COVID-19 emergency support, public debt has come down off its peak in 2020. Under the baseline scenario, the gross debt-to-GDP ratio is projected to continue declining over the medium term, reflecting fiscal consolidation and favorable growth-interest rate differentials. While the debt fanchart module indicates a moderate risk signal, the government's sizable financial assets would provide a comforable buffer. Medium-term liquidity risks as analyzed by the GFN Financeability Module are moderate.

Source: Fund staff.

Note: The risk of sovereign stress is a broader concept than debt sustainability. Unsustainable debt can only be resolved through exceptional measures (such as debt restructuring). In contrast, a sovereign can face stress without its debt necessarily being unsustainable, and there can be various measures—that do not involve a debt restructuring—to remedy such a situation, such as fiscal adjustment and new financing.

1/ The near-term assessment is not applicable in cases where there is a disbursing IMF arrangement. In surveillance-only cases or in cases with precautionary IMF arrangements, the near-term assessment is performed but not published.

2/ A debt sustainability assessment is optional for surveillance-only cases and mandatory in cases where there is a Fund arrangement. The mechanical signal of the debt sustainability assessment is deleted before publication. In surveillance-only cases or cases with IMF arrangements with normal access, the qualifier indicating probability of sustainable debt ("with high probability" or "but not with high probability") is deleted before publication.

Annex I. Figure 2. Canada: Debt Coverage and Disclosures

						Comments
1. Debt coverage in the DSA: 1/	CG	GG	NFPS	CPS	Other	
1a. If central government, are non-central government entities insignificant?					n.a.	

2. Subsectors included in the chosen coverage in (1) above:

Sector groups		Subsectors captured in the baseline	Inclusion	Comments
CPS / NFPS / GG: expected / CG	1	Budgetary central government	Yes	
CPS / NFPS / GG: expected / CG	2	Extra budgetary funds (EBFs)	No	Not applicable
CPS / NFPS / GG: expected	3	Social security funds (SSFs)	Yes	
CPS / NFPS / GG: expected	4	State governments	Yes	
CPS / NFPS / GG: expected	5	Local governments	Yes	
CPS / NFPS	6	Public nonfinancial corporations	Yes	
CPS	7	Central bank	Yes	
CPS	8	Other public financial corporations	Yes	

3. Instrument coverage:	Currency & deposits	Loans	Debt securities	Oth acct. payable 2/	IPSGSs 3/

4. Accounting principles:	Basis of recording		Valuation of debt stock		
	Non-cash basis 4/	Cash basis	Nominal value 5/	Face value 6/	Market value 7/

5. Debt consolidation across sectors: 8/	Consolidated	Non-consolidated

Color code: chosen coverage; Missing from recommended coverage; Not applicable

Reporting on Intra-Government Debt Holdings

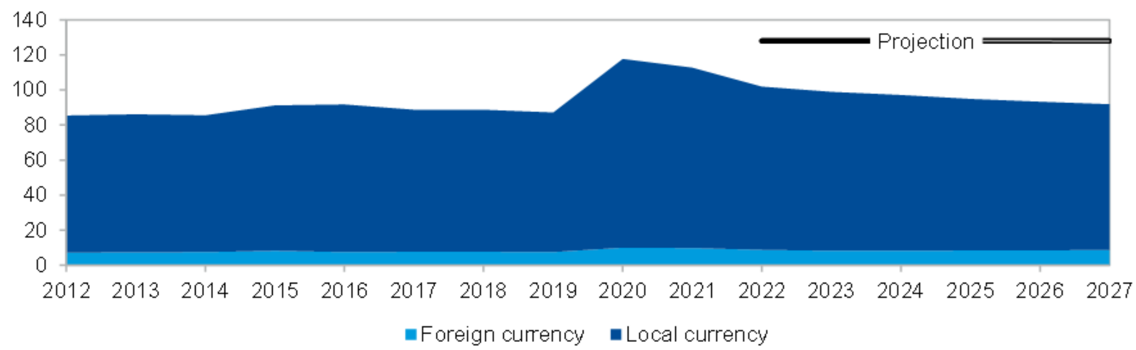
Sector groups		Issuer \ Holder	Budget. central govt	Extra-budget. funds (EBFs)	Social security funds (SSFs)	State govt.	Local govt.	Nonfin. pub. corp.	Central bank	Oth. pub. fin corp	Total
CPS / NFPS / GG: expected / CG	1	Budget. central govt									0
CPS / NFPS / GG: expected / CG	2	Extra-budget. funds									0
CPS / NFPS / GG: expected	3	Social security funds									0
CPS / NFPS / GG: expected	4	State govt.									0
CPS / NFPS / GG: expected	5	Local govt.									0
CPS / NFPS	6	Nonfin pub. corp.									0
CPS	7	Central bank									0
CPS	8	Oth. pub. fin. corp									0
		Total	0	0	0	0	0	0	0	0	0

1/ CG=Central government; GG=General government; NFPS=Nonfinancial public sector; PS=Public sector.
2/ Stock of arrears could be used as a proxy in the absence of accrual data on other accounts payable.
3/ Insurance, Pension, and Standardized Guarantee Schemes, typically including government employee pension liabilities.
4/ Includes accrual recording, commitment basis, due for payment, etc.
5/ Nominal value at any moment in time is the amount the debtor owes to the creditor. It reflects the value of the instrument at creation and subsequent economic flows (such as transactions, exchange rate, and other valuation changes other than market price changes, and other volume changes).
6/ The face value of a debt instrument is the undiscounted amount of principal to be paid at (or before) maturity.
7/ Market value of debt instruments is the value as if they were acquired in market transactions on the balance sheet reporting date (reference date). Only traded debt securities have observed market values.
8/ Data in this section are unavailable.

Staff commentary: The coverage in this SRDSA is at the general government consolidated level, which includes the federal government, provincial and territorial governments, local governments, and social security funds.

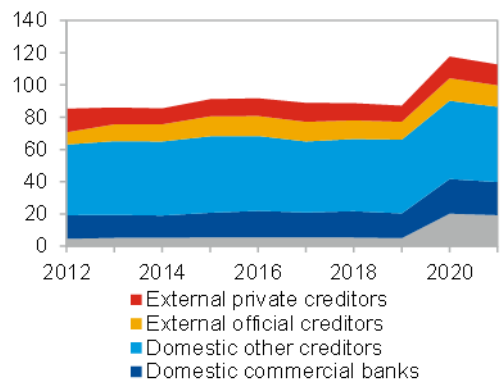
Annex I. Figure 3. Canada: Public Debt Structure Indicators

Debt By Currency
(Percent of GDP)



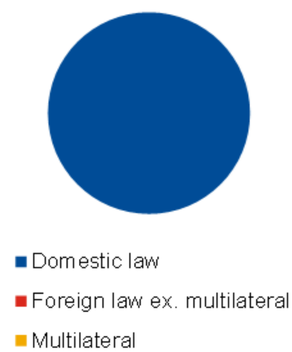
Note: The perimeter shown is general government.

Public Debt By Holder
(Percent of GDP)



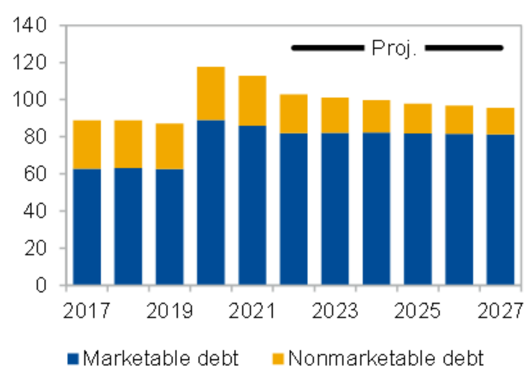
Note: The perimeter shown is general government.

Public Debt By Governing Law, 2021
(Percent)



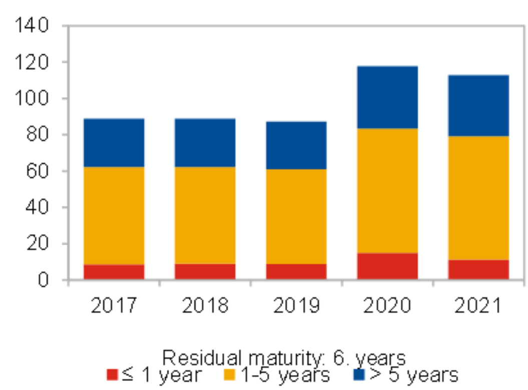
Note: The perimeter shown is general government.

Debt By Instruments
(Percent of GDP)



Note: The perimeter shown is general government.

Public Debt By Maturity
(Percent of GDP)



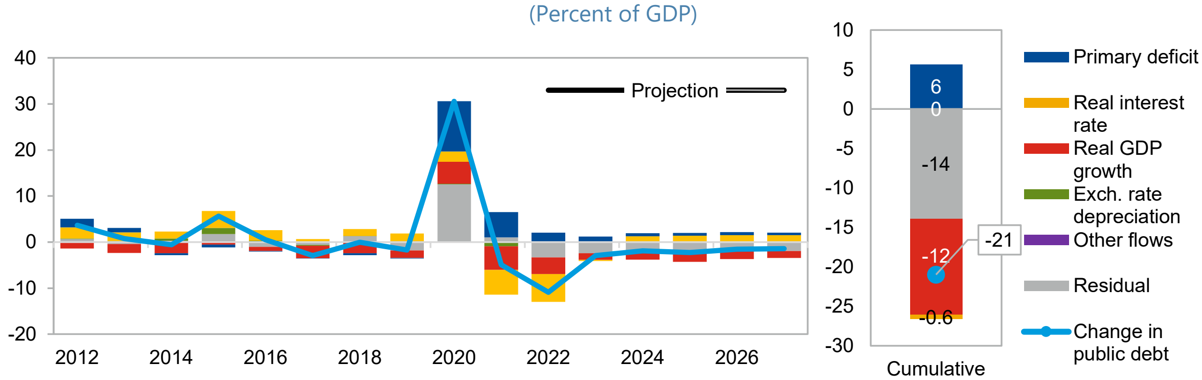
Note: The perimeter shown is general government.

Staff commentary: Gross public debt includes sizable accounts payable (about 18 percent of GDP at end-2021).

Annex I. Figure 4. Canada: Baseline Scenario
(Percent of GDP unless indicated otherwise)

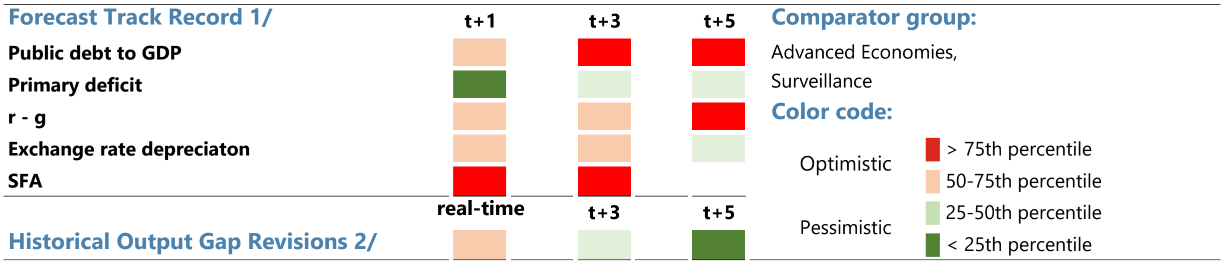
	Actual	Medium-term projection					
	2021	2022	2023	2024	2025	2026	2027
Public debt	112.9	101.9	99.0	97.1	94.9	93.3	91.9
Change in public debt	-4.9	-10.9	-2.9	-1.9	-2.3	-1.6	-1.4
Contribution of identified flows	-5.9	-7.6	-0.5	0.4	-0.2	0.4	0.5
Primary deficit	5.5	2.0	1.2	0.7	0.6	0.6	0.5
Noninterest revenues	37.9	38.4	38.3	38.3	38.3	38.4	38.5
Noninterest expenditures	43.4	40.4	39.5	39.0	38.9	39.0	39.0
Automatic debt dynamics	-11.4	-9.6	-1.7	-0.3	-0.8	-0.2	0.0
Real interest rate and relative inflation	-5.4	-6.0	-0.2	1.2	1.4	1.5	1.5
Real interest rate	-5.8	-6.6	-0.3	1.3	1.4	1.6	1.6
Relative inflation	0.4	0.5	0.1	0.0	0.0	-0.1	-0.1
Real growth rate	-5.1	-3.6	-1.5	-1.6	-2.2	-1.8	-1.6 .
Real exchange rate	-0.9	…	…	…	…	…	… .
Other identified flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other transactions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Contribution of residual	1.0	-3.3	-2.4	-2.3	-2.1	-1.9	-1.9
Gross financing needs	22.4	20.1	21.0	20.5	20.6	20.5	19.7
of which: debt service	20.0	21.2	22.8	22.8	22.8	22.8	22.0
Local currency	n.a.	19.9	21.6	21.8	22.0	22.0	21.4
Foreign currency	n.a.	1.3	1.2	0.9	0.9	0.8	0.6
Memo:							
Real GDP growth (percent)	4.5	3.3	1.5	1.6	2.3	1.9	1.7
Inflation (GDP deflator; percent)	8.1	9.2	3.2	1.8	1.5	1.3	1.3
Nominal GDP growth (percent)	13.0	12.8	4.7	3.4	3.9	3.2	3.0
Effective interest rate (percent)	2.5	2.6	2.9	3.1	3.1	3.1	3.0

Contribution to Change In Public Debt
(Percent of GDP)



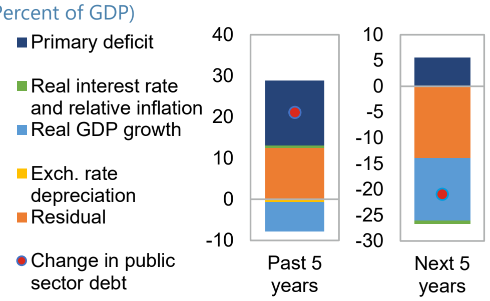
Staff commentary: Canada has sizable interest revenue (around 2-3 percent of GDP per year), which is counted as a residual in the contributions to debt dynamics. Taking into account the large holdings of financial assets, the net debt-to-GDP ratio stood at 31½ percent of GDP at end-2021, and is projected to fall to 28¼ percent of GDP by the end of the projection horizon.

Annex I. Figure 5. Canada: Realism of Baseline Assumptions

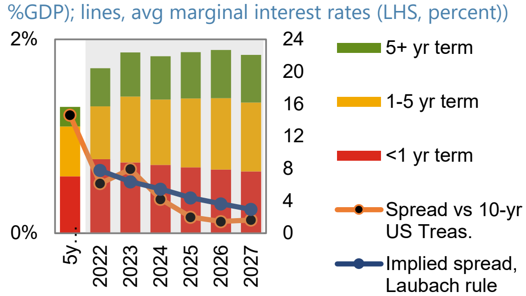


Public Debt Creating Flows

(Percent of GDP)

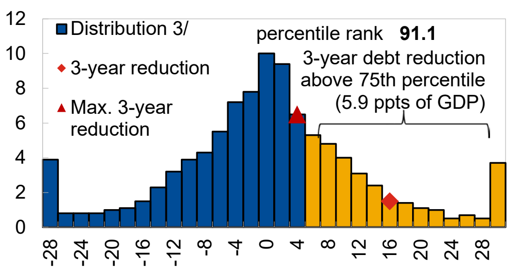


Bond Issuances (bars, debt issuances (RHS, %GDP); lines, avg marginal interest rates (LHS, percent))

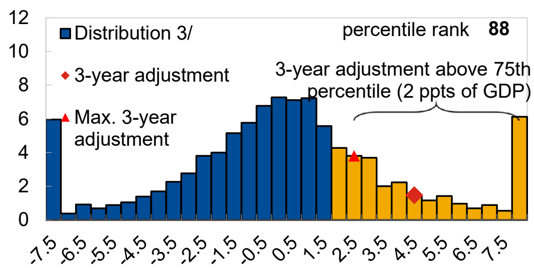


3-Year Debt Reduction

(Percent of GDP)

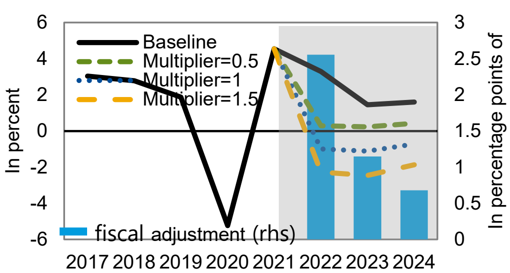


3-Year Adjustment in Cyclically-Adjusted Primary Balance (Percent of GDP)



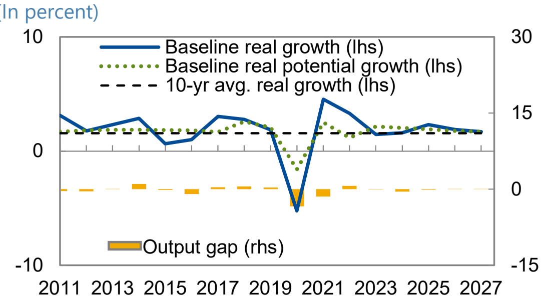
Fiscal Adjustment and Possible Growth Paths

(lines, real growth using multiplier (LHS); bars, fiscal adj. (RHS)



Real GDP Growth

(In percent)



Staff commentary: The recovery from COVID-19 will impart complicated effects on the growth path. However, realism analysis does not point to major concerns: past forecast errors do not reveal any systematic biases. The projected fiscal adjustment and debt reduction reflect largely the withdrawal of sizable fiscal support implemented during the COVID-19 pandemic. The large contribution of the residual to debt accumulation in the past five years was driven mostly by unprecedented liquidity support measures implemented in 2020, such as funding for emergency loans, tax deferral, and purchase of assets, notably mortgages. These loans and deferrals are expected to paid off in the next five years, resulting in large negative contribution of the residual to debt accumulation.

Source : IMF Staff.

1/ Projections made in the October and April WEO vintage.

2/ Calculated as the percentile rank of the country's output gap revisions (defined as the difference between real time/period ahead estimates and final estimates in the latest October WEO) in the total distribution of revisions across the data sample.

3/ Data cover annual obervations from 1990 to 2019 for MAC advanced and emerging economies. Percent of sample on vertical axis.

Annex I. Figure 6. Canada: Medium-Term Risk Analysis

Debt Fanchart and GFN Financeability Indexes

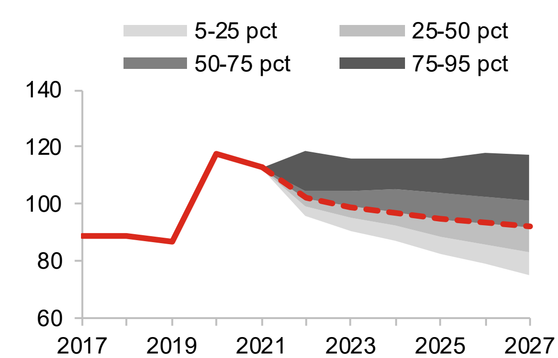
(Percent of GDP unless otherwise indicated)

Module	Indicator	Value	Risk index	Risk signal	Adv. Econ., Non-Com. Exp, Program (0 / 25 / 50 / 75 / 100)
Debt fanchart module	Fanchart width	41.9	0.6	...	
	Probability of debt not stabilizing (pct)	68.3	0.6	...	
	Terminal debt level x institutions index	15.3	0.3	...	
	Debt fanchart index	**...**	**1.5**	**Moderate**	
GFN finance-ability module	Average GFN in baseline	20.4	7.0	...	
	Bank claims on government (pct bank assets)	6.1	2.0	...	
	Chg. in claims on govt. in stress (pct bank asse	0.3	0.1	...	
	GFN financeability index	**...**	**9.1**	**Moderate**	

Legend: Interquartile range; Canada

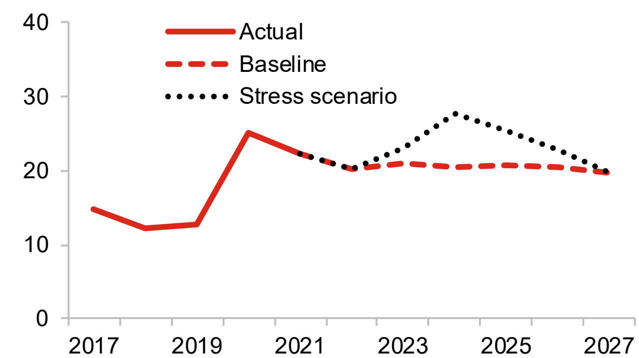
Final Fanchart

(Percent of GDP)



Gross Financing Needs

(Percent of GDP)



Triggered stress tests (stress tests not activated in gray)

Banking crisis | Commodity prices | Exchange rate | Contingent liab. | Natural disaster

Medium-Term Risk Analysis

	Low risk threshold	High risk threhsold	Weight in MTI	Normalized level
Debt fanchart index	1.1	2.1	0.5	0.3
GFN finaceability index	7.6	17.9	0.5	0.2
Medium-term index (MTI)	0.3	0.4	...	0.3, Low

Prob. of missed crisis, 2022-2027 (if stress not predicted): 9.1 pct.

Prob. of false alarm, 2022-2027 (if stress predicted): 42.0 pct.

Staff commentary: Both the debt fanchart and the GFN Modules point to moderate level of risk. The overall risk, however, is mitigated by the government's large financial asset holdings.

Annex II. External Sector Assessment

<table>
<tr><td colspan="8">Overall Assessment: The external position in 2021 was moderately weaker than the level implied by medium-term fundamentals and desirable policies. The current account (CA) balance turned marginally positive, driven largely by the recovery of global demand and higher prices of major exporting goods, notably energy products. With commodity prices surging further in the aftermath of Russia’s invasion of Ukraine, the CA surplus is expected to widen in 2022. Over the medium term, the CA is projected to revert to a moderate deficit as export prices normalize and domestic demand continues to recover.

Potential Policy Responses: Policies should aim to boost Canada’s competitiveness to raise the potential of non-fuel goods and services exports and diversify Canada’s export markets. These policies include: (i) introducing measures to improve labor productivity; (ii) removing nontariff trade barriers; (iii) investing in R&D and physical capital; (iv) investing in the green transformation; and (v) promoting FDI. A medium-term fiscal consolidation plan underpinned by sustainable policy measures would also help in stabilizing debt and supporting external rebalancing.</td></tr>
<tr><td>Foreign Asset and Liability Position and Trajectory</td><td colspan="7">Background. Canada’s NIIP has improved since 2011, reaching 60.3 percent of GDP in 2021, up from 53.3 percent in 2020, 20.2 percent in 2016 and –17.1 percent in 2011. This largely reflects valuation gains on external portfolio assets that have since faded substantially amid tightening financial conditions and increased economic and geopolitical uncertainties. By end-2022, the NIIP is expected to revert to around its 2020 level. Gross external debt decreased to 135.9 percent of GDP at the end of 2021, of which around 51.5 percent of GDP is short-term debt.
Assessment. Canada’s foreign assets have a higher foreign-currency component than do its liabilities, which provides a hedge against currency depreciation. The NIIP level and trajectory are sustainable.</td></tr>
<tr><td>2021 (% GDP)</td><td colspan="2">NIIP: 60.3</td><td colspan="2">Gross Assets: 310.6</td><td>Debt Assets: 77.1</td><td>Gross Liab.: 250.3</td><td>Debt Liab.: 135.9</td></tr>
<tr><td>Current Account</td><td colspan="7">Background. The CA balance was at 0 percent of GDP in 2021, up from –1.8 percent of GDP in 2020, reflecting the recovery of global demand and the improvement in the terms of trade. In the first half of 2022, the CA moved into surplus, driven by the improved terms of trade in the aftermath of Russia’s invasion of Ukraine, and is expected to end the year at 0.5 percent of GDP.
Assessment. The EBA estimates a CA norm of 2.6 percent of GDP, but the cyclically adjusted CA was -0.4 percent of GDP, implying a gap of –3.0 percent of GDP for 2021. IMF staff assess the CA gap to be narrower after considering (i) the temporary impact of the COVID-19 crisis on travel, transport, household consumption composition, and trade in medical products;[1] and (ii) the biases in measuring inflation and retained earnings.[2] Taking these factors into account, the IMF staff assesses the CA gap to be in the range between –1.8 and –1.0 percent of GDP, with a midpoint of –1.4 percent of GDP.</td></tr>
<tr><td>2021 (% GDP)</td><td>CA: 0.0</td><td>Cycl. Adj. CA: –0.4</td><td>EBA Norm: 2.6</td><td>EBA Gap: –3.0</td><td>COVID-19 Adj.: 0.1</td><td>Other Adj.: 1.5</td><td>Staff Gap: –1.4</td></tr>
<tr><td>Real Exchange Rate</td><td colspan="7">Background. Relative to the 2020 average, the REER appreciated by 4.9 percent on average in 2021. As of September 2022, the REER was on average 0.2 percent above the 2021 average.
Assessment. The EBA REER index model points to an overvaluation of 6.7 percent in 2021, while the REER level model suggests an undervaluation of 7.4 percent. Consistent with the staff CA gap, staff assess the REER to be overvalued in the range of 4.2 to 7.4 percent, with a midpoint of 5.8 percent.[3]</td></tr>
<tr><td>Capital and Financial Accounts: Flows and Policy Measures</td><td colspan="7">Background. FDI saw net outflows of 1.9 percent of GDP in 2021 (comparable with levels in 2020 and 2019) and should stabilize at 1.7 percent of GDP in 2022. Portfolio investments recorded net inflows of 2.1 percent of GDP in 2021, down from 4.1 percent in 2020, and should further decrease to 1.3 percent of GDP in 2022. Other investments recorded inflows of 0.6 percent of GDP in 2021 (as compared to net outflows in 2020 of around 0.8 percent of GDP) and net outflows are expected again in 2022 (on the order of 0.2 percent of GDP). Errors and omissions recorded a net inflow of 0.2 percent of GDP in 2021.
Assessment. Canada has an open capital account. Vulnerabilities are limited by a credible commitment to a floating exchange rate.</td></tr>
<tr><td>FX Intervention and Reserves Level</td><td colspan="7">Background. Canada has a free-floating exchange rate regime and has not intervened in the FX market since September 1998 (except for participating in joint interventions with other central banks). Canada has limited reserves, but its central bank has standing swap arrangements with the U.S. Federal Reserve and four other major central banks (it has not drawn on these swap lines).
Assessment. Policies in this area are appropriate to the circumstances of Canada. The authorities are strongly committed to a floating regime which, together with the swap arrangement, reduces the need for reserve holdings.</td></tr>
<tr><td>Notes</td><td colspan="7">1/ The estimates of the temporary impact of the COVID-19 crisis on travel, transport, household consumption composition, and trade in medical products are -0.4, 0.1, 0.2, and 0.2 percent of GDP, respectively, with the net impact of 0.1 percent of GDP.
2/ The statistical treatment of retained earnings on portfolio equity and inflation is estimated to generate a downward bias in the income balance of the current account of the order of 0.7 and 0.8 percent of GDP, respectively, totaling 1.5 percent of GDP.
3/ The semi-elasticity of the CA with respect to the REER is set to 0.25.</td></tr>
</table>

Annex III. State of Progress in the Implementation of 2019 FSAP Key Recommendations[1]

Recommendations	Timeframe	Progress by October 2022
Raise required capital for mortgage exposures at both banks and mortgage insurers to fully account for through-the-cycle risks; increase risk-based differentiation in mortgage pricing (OSFI, AMF; DOF)	NT; MT *	OSFI: OSFI's CAR Guideline has been updated to include a more risk sensitive approach for risk weighting mortgages under the Standardized Approach (SA) whereby more granularity with respect to LTV ratios has been included. In addition, higher risk mortgages (e.g. those that rely on rental income) will be subject to higher capital requirements. The updated CAR Guideline (effective Q2/2023) includes a new requirement that all IRB bank PD models be based on data samples that include a minimum of 10% of data from stress periods. In addition, a project is underway to review capital requirements for multi-unit properties within the Mortgage Insurer Capital Adequacy Test (MICAT) that is applicable to all Canadian mortgage insurance companies. AMF: The AMF revised its two approaches (Standard Approach (SA) and Internal Ratings Based (IRB) Approach) used to determine risk-weighted assets for mortgage exposures in its Capital Adequacy Requirements Guideline. For the SA approach, a new loan-to-value (LTV) bucket has been introduced for uninsured mortgage loans and more conservative risk-weights must be applied. On the IRB approach, a new "Loss Given Default (LGD) downturn" has been introduced to account for through-the-cycle risks. This new LGD account for possible real estate bubbles in the determination of risk weighted assets on mortgage exposures. All these changes are in the process of being published and will be effective in January 2023.
Develop the policy framework for managing a housing market downturn (BOC, AMF, BCSC, OSC)	NT *	OSFI: OSFI has introduced a crisis preparedness framework to improve internal preparedness of idiosyncratic events at a DTI. Training was provided in spring 2022 and work continues on the framework to incorporate systemic concerns and overall governance. AMF: In that regard, the AMF has updated its Residential Hypothecary Lending Guideline twice in the last two years. In June 2021, the rate to be used in the calculation of debt service for uninsured mortgages was changed to the greater of the contractual mortgage rate plus 2 % and a fixed floor rate initially established at 5.25 %. An annual review of the proposed rates, or as needed, was also introduced. In June 2022, to quickly adapt to market volatility, the reference to fixed rates in the formula for calculating the qualifying rate for uninsured mortgages was removed. The reserve and the floor rate, which until then were fixed values, will now be determined by the AMF in the guideline and should allow for quick adjustments if needed. An expectation was also added to require updates to the residential property value used for the purposes of calculating the loan-to-value ratio (LTV) and determining lending thresholds within the limits of the LTV.

[1] As reported by the Canadian authorities.

Recommendations	Timeframe	Progress by October 2022
Modernize the systemic risk oversight framework, underpinned by a federal-provincial platform (potentially, HOA) to discuss systemic issues and formulate policy responses, supported by enhanced transparency (HOA, BOC)	NT *	BOC: The Systemic Risk Surveillance Committee (SRSC) continues to meet at a regular frequency to facilitate information sharing and collaboration on the assessment of vulnerabilities and risks to the Canadian financial system. This recently included the formation of an SRSC subgroup on liquidity mismatch in open-ended investment funds and SRSC subgroup on investor demand for housing. The Bank of Canada continues to include a box in its FSR on the activities of the HoA during the prior year.
Develop a comprehensive systemic risk surveillance framework, supported by a more unified approach to data collection; address data gaps, particularly related to cross-sectoral exposures, unregulated nonbank financial intermediation, and funding market activities (BOC, competent authorities, governments)	NT/MT *	BOC: The Bank continues to focus SRSC discussion on vulnerabilities or potential vulnerabilities that can be informed by members' data. The current cooperative approach through SRSC delivers some value but faces limitations. In some instances, no SRSC member has access to data required to assess a vulnerability (e.g. high frequency holdings data for some NBFI). Having data distributed across agencies limits cross market analysis and forming a complete view of vulnerabilities (e.g. risk taking may cross cash and derivatives markets). Not all agencies have the same expertise to perform analysis of this data with a view to identifying vulnerabilities. OSFI: OSFI has worked with industry to developing and expanding data sets for key portfolios (including granular reporting on RESL exposures and leveraged lending exposures). Further where other FISC agencies have also expanded or acquired data sets, there is discussion and information sharing between agencies
Enhance risk monitoring of banks' funding, risk-taking by nonbanks, housing finance- related vulnerabilities, and cross-border and intra-system interconnectedness; carry out Canada-wide surveillance in key sectors such as banking and insurance (BOC lead; HOA, SAC; OSFI, AMF)	NT *	AMF: The AMF ensures that the D-SIFI cooperative under its supervision regularly participates in the BOC's macro stress-test (MST) exercises. The feedback received from the BOC following the MST is a valuable input to the AMF's supervision. The AMF actively participates at the semi-annual SRSC meetings. In addition to these initiatives, the AMF is an active member of CUPSA (Credit Union Prudential Supervisory Association), which is working on an effective risk data sharing mechanism with its members. CSA: The CSA actively participates in the semi-annual SRSC meetings
Strengthen oversight of large public pension funds, and increase transparency of their financial disclosures (DOF, provincial governments)	NT	There continue to be plans to consider whether enhanced oversight of large public pension funds and increased transparency of their financial disclosures is necessary. There is no timeline for this initiative to date.

Recommendations	Timeframe	Progress by October 2022
Strengthen autonomy and governance of financial sector authorities, including BOC and OSFI (powers), and FICOM (overall); clarify the roles and responsibilities of the authorities in charge of overseeing systemically important FMIs (DOF, provincial governments; BOC; AMF, BCSC, OSC)	MT	DOF: OSFI has the required autonomy and governance to carry out its mandate. OSFI's guidelines are enforceable in practice as regulated entities recognize that OSFI has intervention powers that are legally enforceable. BoC: The BOC and provincial authorities (AMF, BCSC, OSC) continue to co-operate effectively in oversight of systemically important FMIs. The current arrangements, with overlapping responsibilities, reflect the federal-provincial division of powers. Therefore, no changes were made in response to the FSAP recommendation. AMF: The MoUs with BoC and CDIC signed in 2018 are fully operational and effective. The AMF is holding technical and quarterly meetings with both organizations to exchange on different subjects of interest. The AMF is in discussions with the Québec Minister of Finance (MFQ) to formalize the Resolution Board. The AMF and the MFQ are drafting the Resolution Board's internal regulations and a governance charter as well as a coordination framework to surround or guide the coordination of actions between the AMF and the Resolution Board during the resolution planning and managing. CSA: The CSA and BoC continue to coordinate and cooperate with each other to ensure at the Provincial level (CSA) and Federal level (BoC) each continues to meet its mandate. This coordination and cooperation were documented through the establishment of an MOU "Respecting the Oversight of Certain Clearing and Settlement Systems" between certain CSA jurisdictions (AMF, BCSC & OSC) and the BoC in 2014, with a main objective to ensure we promote the safety and efficiency of the clearing and settlement systems in a consistent and coordinated fashion. Further to the existing MOU, the BOC and the CSA entered into a Memorandum of Understanding Respecting the Resolution of Certain Clearing and Settlement Systems among the BOC, OSC, AMF, BCSC (the MoU), effective January 13, 2022. The CSA and BOC met as frequently as needed at the onset of the covid-19 pandemic to effectively identify and address emerging issues and continue to meet frequently (at least bi-weekly) to discuss all oversight matters for those FMIs we mutually oversee in an effort to ensure consistency in approach to regulation wherever possible.
Complete the Cooperative Capital Markets Regulatory System initiative (DOF, provincial governments)	MT	CSA: Work has ceased on the Capital Markets Regulatory Authority and no future progress is expected. The CSA continues its work harmonizing the regulation of Canadian financial markets. In its 2022-2025 Business Plan, the CSA undertook to continue enhancing its collaboration with federal and provincial agencies on the monitoring of systemic risks, in support of the development of mitigation strategies, as well as on enforcement matters to strengthen the detection, prosecution and deterrence of white-collar crime and securities law violations.

Recommendations	Timeframe	Progress by October 2022
Enhance inter-agency cooperation, particularly between federal and provincial authorities, with additional MoUs (OSFI, AMF, other relevant provincial authorities)	NT *	OSFI: The Heads of Agencies Committee (HoA) meets regularly to share information and perspectives on emerging issues, trends and market developments. Terms of Reference for the HoA are at https://www.bankofcanada.ca/core-functions/financial-system/financial-system-committees/heads-regulatory-agencies-terms-of-reference/ The committee is supported by sub Heads of Agencies (sub HoA) and Systemic Risk Surveillance Committee (SRSC). AMF: The AMF participates in the Heads of Agencies (HoA) quarterly meetings. The AMF also meets regularly with other relevant provincial authorities though its membership in the Credit Union Prudential Supervisors Association (CUPSA), and in the Canadian Consumer Protection for Financial Institution Failures. As part of the MoUs signed in 2018, the AMF holds technical and quarterly meetings with both federal organizations, BoC and CDIC. Regarding the potential MoU with OSFI, discussions are still ongoing even though the pandemic has put this on hold for the past two years. Nevertheless, informal mutual sharing of information has increased since the pandemic. The two organisations, through their respective legal departments, are reviewing Québec's legislation on the protection of information that could be shared by OSFI to the AMF. CSA: In spring of 2022, the HoA members signed an MoU for the protection of confidential information shared among the HoA.
Address shortcomings in the regulatory and supervisory frameworks related to credit risk of mortgage exposures; adopt a common loan forbearance framework in all jurisdictions (OSFI, AMF, other provincial credit union supervisors)	NT	OSFI: On June 28, 2022, OSFI issued a supplementary Advisory to Guideline B-20 that clarified treatment of certain innovative real estate secured lending products. Among other things, this guidance reinforced LTV limits for combined mortgage-HELOC loan plans (CLPs) and reverse mortgages. AMF: The AMF has been working on a Non-Performing Loans and Forbearance Guideline. It is expected to come into effect in April 2023.
Strengthen legal foundation underpinning insurance group-wide supervision; apply the regulatory framework more consistently to group-side supervision (OSFI, AMF; DOF, Québec government)	NT	AMF: Legislative amendments are required to meet this recommendation. The discussions with the Québec Ministry of Finance are still ongoing about possible legislative amendments to address AMF's lack of legal powers over unregulated holding companies and to enhance its group-wide supervision capability.
Complete reforms in the areas of OTC derivatives and duties towards clients; increasethe focus of oversight on high-impact firms; ensure the capacity to handle market-wide stress (CSA, relevant provincial governments)	NT	Derivatives The CSA (Canadian Securities Administrators, Canada's umbrella organization of provincial and territorial securities regulators) has developed a Business Conduct Rule and published it for a third comment period in January 2022, and in April 2018 published for consultation a Registration Rule to help protect participants in the OTC derivatives markets. The CSA is focusing on

Recommendations	Timeframe	Progress by October 2022
		completing the Business Conduct rule, which is scheduled for the first half of 2023. The Registration rule will be the next priority. Amendments to the Trade Reporting Rules are proposed to update trade repository governance, risk and operational requirements and to better align with Principles for Financial Market Infrastructures. The CSA will work to finalize the rule in the first half of 2024. Mandatory Clearing Rules have been in effect since September 1, 2022. <u>Client Focused Reform (CFR)</u> The reforms demonstrate a shared commitment by the CSA and the SROs to changes that require registrants to promote the best interests of clients and put clients' interests first. CFRs are relevant to all categories of registered dealers and registered advisers, with some application to investment fund managers, and require that registrants establish a process for identifying material conflicts of interest and implement the KYC, KYP, suitability, and relationship disclosure reforms. The CFR conflicts of interest requirements came into force on June 30, 2021, and the remaining requirements came into force on December 31, 2021. <u>Oversight of high-impact firms</u> The CSA stated that their oversight of impact firms is sufficient, but they will continue to consider ways to improve their processes and oversight of these firms. Some jurisdictions (Ontario) already have a formal process for determining which are high impact firms while other jurisdictions have informal processes that the Committee is finalizing. <u>Market Disruption Coordination</u> The reforms on the capacity to handle market-wide stress and market disruption are complete. The CSA Market Disruption Plan was first tested by CSA staff on September 18, 2019, and more recently on October 26, 2021. The September 2019 test focused on the dissemination of information and responses amongst applicable CSA staff, while the October 2021 test also facilitated testing of communication and coordination with other regulators and financial market infrastructures. Both tests were successful: CSA participants executed the Plan as expected and coordination and communication were efficient and effective. From a global perspective, a number of CSA jurisdictions as well as the Bank of Canada participated in the Quantum Dawn V cybersecurity exercise, which is the biennial drill held by the Securities Industry and Financial Markets Association (SIFMA). SIFMA's 2019 test invited Canadian capital market

Recommendations	Timeframe	Progress by October 2022
		stakeholders to participate. CSA staff participated as observers in SIFMA's November 2021 exercise.
Task the SAC with responsibility of overseeing Canada-wide crisis preparedness, thus performing the roles of the coordination body at the federal level and the federal coordinatorwith key provincial authorities; strengthen CDIC's operational independence (MoF; SAC; DOF)	NT *	DOF: The agencies continue to develop and maintain inter-agency contingency planning and crisis management frameworks. Conducting regular tabletop exercises to test implement coordinated crisis preparedness measures aimed at addressing stress events under different scenarios.
Expand recovery planning to all deposit-taking institutions and resolution planning to those performing critical functions; further develop the valuation framework for compensation; adopt depositor preference; strengthen resolution powers (OSFI; AMF and CDIC; DOF and Québec government)	NT *	OSFI: All D-SIBs must have recovery plans, and OSFI uses a range of criteriato determine which other banks must prepare recovery plans. AMF: Recovery and resolution plans for Desjardins Group, the only Québec-chartered financial institution performing critical functions, are continually updated by Desjardins Group and the AMF. Regarding the implementation of a valuation framework, the AMF is assisted by an external firm. To date, one of the five deliverables planned over a two-year period (summer 2021/23) has been completed, namely a technical report on approaches and methods. Work on the second deliverable has begun. The introduction of the depositor preference is under the federal purview. As part of the MoU with CDIC, the AMF intends to suggest discussing this topic during a technical meeting to find out the federal government's intentions. With respect to strengthening resolution powers, a legislative inventory was shared with the Québec Ministry of Finance in the summer 2022. A formal power to require changes to improve the financial institution's resolvability is part of the request. Given the absence of this power and as an alternative only, the AMF could benefit from its integrated structure and issue written instructions to the Federation (Desjardins) if it believes there may be issues in implementing the recovery plan that could also be considered as impediments in resolution. As a result of a legislative amendment passed in December 2021 to harmonize the AMF's powers with those applicable at the federal level, the AMF no longer has the power to write down shares and liabilities. The Resolution Board still has to be formalized. Despite this situation, the operating rules of the Board, its governance charter as well as a framework for coordination between the AMF and the Board during resolution planning and management are being developed. Discussions are still underway with the Québec ministry of Finance to formalize backstop funding arrangements.

Recommendations	Timeframe	Progress by October 2022
Operationalize emergency lending assistance (ELA) with key provinces; improve testing to ensure smooth ELA operations (BOC; British Columbia, Ontario and Québec governments)	NT *	The Bank has recently completed its first ELA test draw with a provincially regulated financial institution. The test focused on the institution's legal and operational preparedness to provide collateral and receive/repay the funds. Building on information-sharing MoUs set up previously (QC: 2018; BC and ON: 2020), the Bank has maintained ongoing engagement with provincial regulators to help ensure we can make informed lending decisions should the need for ELA arise. (#) The Bank is engaged with ON and BC to negotiate indemnity agreements with these provinces, a condition for PRFIs to be eligible for ELA. AMF: The third iteration of the Resolution plan for Desjardins Group and the 2022/26 work plan were submitted to the BOC in June 2022. Among other things, the work plan calls for meetings between the AMF and the BOC to identify the work that needs to be done to operationalize the ELA, such as setting up an effective process and obtaining or establishing the legal and financial documentation for the ELA. A simulation exercise of ELA payment to Desjardins Group is planned in October 2022 by the BOC. The outcomes will be discussed with the AMF. (#): Similar engagement also continues with other provinces with whom we have information-sharing MoUs (i.e., AB, SK, MB, NS, NB).
Further develop contingency plans for market-wide liquidity provision, particularly intervention in securities markets and foreign-currency liquidity provision (BOC; DOF, provincial governments)	NT *	BOC: The BOC is routinely involved in testing Swapline facilities for foreign vs domestic currency liquidity with several major central banks. These tests include trade confirmation, settlement, and reversal of foreign vs domestic currency flows at small nominal amounts. The Bank has also drafted program terms and conditions for a US dollar repo facility should such a facility need to be implemented.
Note: Institutions in the parenthesis are the agencies with leading responsibilities. The * denotes macro-critical. In terms of the timeframe, NT and MT stand for near-term (within one year) and medium-term (within 2–3 years).		

INTERNATIONAL MONETARY FUND

CANADA

November 17, 2022

STAFF REPORT FOR THE 2022 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By

The Western Hemisphere Department
(in consultation with other departments)

CONTENTS

FUND RELATIONS

(As of November 7, 2022)

Membership Status: Joined 12/27/1945; Article VIII

General Resources Account:	**SDR Million**	**Percent of Quota**
Quota	11,023.90	100.00
Fund holdings of currency	7,867.19	71.36
Reserve Tranche Position	3,167.32	28.73
Lending to the Fund		
New Arrangements to Borrow	51.70	

SDR Department:	**SDR Million**	**Percent of Allocation**
Net cumulative allocation	16,553.99	100.00
Holdings	17,376.78	104.97

Outstanding Purchases and Loans: None.

Latest Financial Arrangements: None.

Projected Obligations to Fund:

(SDR Million; based on existing use of resources and present holdings of SDRs):

Forthcoming

	2022	2023	2024	2025	2026
Principal					
Charges/Interest		0.21	0.21	0.21	0.21
Total		0.21	0.21	0.21	0.21

Implementation of HIPC Initiative: Not Applicable.

Implementation of Multilateral Debt Relief Initiative (MDRI): Not Applicable.

Implementation of Post-Catastrophe Debt Relief (PCDR): Not Applicable.

Exchange Rate Arrangements: The authorities maintain a "free floating" exchange rate regime. The Canadian authorities do not maintain margins with respect to exchange transactions. However, the authorities may intervene to maintain orderly conditions in the exchange market. There are no taxes or subsidies on purchases or sales of foreign exchange. Canada has accepted the obligations of Article VIII, Sections 2, 3, and 4 (a), and maintains an exchange system that is free of restrictions on the making of payments and transfers for current international transactions and multiple currency practices. Canada maintains exchange restrictions for security reasons, based on UN Security Council Resolutions, that have been notified to the Fund for approval (most recently in June 10, 2014) under the procedures set forth in Executive Board Decision No. 144–(52/51).

Last Article IV Consultation: The Staff Report for the 2021 consultation with Canada was considered by the Executive Board on Friday, March 12, 2021 (IMF Country Report No. 19/175). Canada is on a 12-month consultation cycle. The Financial Sector Assessment Program (FSAP) took place in 2000, and was updated in 2008, 2014, and 2019.

2022 Article IV Consultation: Discussions took place in Ottawa and by video conference during September 20-27 and October 3-7. The team comprised K. Mathai (head), M. Andrle, T. Kass-Hanna, L. Liu, L. Masterson, Y. Yang (all WHD), P. Grippa (MCM), and C. El Khoury and I. Thomas (both LEG). Additional research and administrative assistance were provided by L. Azoor, S. Coquillat, and A. Medici. The team was supervised by N. Chalk and L. Cubeddu (both WHD). P. Jennings, R. Cunningham, and M. Villeneuve (all OED) joined many of the mission's meetings, and I. Goldfajn (WHD) participated in the concluding discussions. The mission met with Deputy Prime Minister and Minister of Finance Freeland, Governor Macklem, Deputy Minister Sabia, Senior Deputy Governor Rogers, Deputy Governors Beaudry, Gravelle, and Kozicki, Superintendent Routledge, and other senior officials from the federal government, provincial governments, the Bank of Canada, and regulatory bodies. The mission also met representatives from the financial and business sectors, academics, and think-tank experts. The concluding statement was issued on October 12, 2022.

Technical Assistance: Not Applicable.

Resident Representative: Not Applicable.

STATISTICAL ISSUES

General. Data provision is adequate for surveillance.

Real Sector. Statistics Canada provides timely and adequate data in monthly, quarterly, and annual frequency, thereby facilitating the analyses of economic developments and policy assessments within a quantitative macroeconomic framework. The CPI is disseminated monthly. The weights are based on 2020 expenditure data from the Household Final Consumption Expenditure (HFCE) series. Statistics Canada is working toward updating the CPI weights on an annual basis in the future. A range of producer price indices are disseminated on a monthly and quarterly basis covering raw materials, industrial products, and services. In terms of residential property, Statistics Canada disseminates a monthly price index for new houses and a quarterly price index for new condominium apartments. In addition, the CSNA use a Residential Property Price Index (RPPI), compiled by a commercial data source, that covers both new and second-hand dwellings.

Fiscal Sector. Statistics Canada provides timely quarterly and annual data (a Statement of Government Operations along with a Balance Sheet) on the general government and its subsectors, following the *Government Finance Statistics Manual 2014* (*GFSM 2014*). It also compiles data on the functional classification of expenditure. In addition, the Department of Finance Canada provides monthly and annual data on the federal government's budget (according to the national presentation) and tax policies. The provided data enable adequate assessment of the impact of fiscal policy measures on Canada's economic performance.

Financial Sector. The Bank of Canada disseminates on its website balance sheet data for the central bank and chartered banks on a weekly and monthly basis, respectively. It also reports data on some key series of the Financial Access Survey (FAS), including the two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the UN to monitor Target 8.10 of the Sustainable Development Goals (SDGs).

Financial Soundness Indicators. Canada reports all core financial soundness indicators (FSIs) and some additional FSIs for all sectors.

External Sector. Statistics Canada provides timely information on a quarterly frequency on the balance of payments, external debt, and the international investment position. Canada provides data for the Coordinated Portfolio Investment Survey, Coordinated Direct Investment Survey, Data Template on International Reserves and Foreign Currency Liquidity, and Currency Composition of Official Foreign Exchange Reserves.

Data Standards and Quality. Canada is an adherent to the Special Data Dissemination Standard Plus (SDDS Plus) since April 11, 2017, and publishes the data on its National Summary Data Page. Canada's latest SDDS Plus Annual Observance Report is available on the Dissemination Standards Bulletin Board. Canada completed the transition plan under the SDDS Plus for the residential real estate price index and debt securities data categories in 2022 and uses timeliness flexibility options for central government operations and debt. A data module Report on the Observance of Standards and Codes (ROSC) for Canada was published in May 2002.

Table 1. Canada: Table of Common Indicators Required for Surveillance
(as of November 10, 2022)

	Date of latest observation	Date received	Frequency of Data[6]	Frequency of Reporting[6]	Frequency of Publication[6]
Exchange Rates	Same day	Same day	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	October 23, 2022	November 7, 2022	W	W	W
Reserve/Base Money	September, 2022	November 7, 2022	M	M	M
Broad Money	September, 2022	November 7, 2022	M	M	M
Central Bank Balance Sheet	November 2, 2022	November 7, 2022	W	W	W
Consolidated Balance Sheet of the Banking System	August 31, 2022	October 21, 2022	M	M	M
Interest Rates[2]	Same day	Same day	D	D	D
Consumer Price Index	October 2022	November 7, 2022	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[3] – General Government[4]	2022 Q2	November 7, 2022	Q	Q	Q
Revenue, Expenditure, Balance and Composition of Financing[3]– Central Government	August 2022	October 27, 2022	M	M	M
Stock of Central Government and Central Government-Guaranteed Debt	2022 Q2	November 7, 2022	Q	Q	
External Current Account Balance	2022 Q2	November 7, 2022	Q	Q	Q
Exports and Imports of Goods and Services	2022 Q2	November 7, 2022	Q	Q	Q
GDP/GNP	2022 Q2	November 7, 2022	Q	Q	Q
Gross External Debt	2022 Q2	November 7, 2022	Q	Q	Q
International Investment Position[5]	2022 Q2	November 7, 2022	Q	Q	Q

[1] Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.
[2] Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[3] Foreign, domestic bank, and domestic nonbank financing.
[4] The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[5] Includes external gross financial asset and liability positions vis-à-vis nonresidents.
[6] Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); and not available (NA).