Adrift without an Anchor
Federal Fiscal Policy and Canada's Long-Term Debt Ratio

by Bev Dahlby and Ergete Ferede

MAIN CONCLUSIONS

- This research bulletin tests whether the federal government's fiscal policies are consistent with its fiscal anchor—a declining debt ratio over the next 25 years—using a Monte Carlo simulation model with random shocks to the growth rate similar to those experienced by the Canadian economy over the last 40 years.

- Since the pandemic, the federal government has postponed reducing its deficit because it has continually revised program spending upward.

- The deterioration in the federal fiscal position over the past year, with larger projected deficits, interest rates, and debt levels, has increased the likelihood of higher debt ratios in the future.

- Our model indicates that there is a 44% chance that the net debt ratio will be higher in 2036/37 and a 59% chance that it will be higher in 2046/47.

- We conclude that the federal government's claim that its fiscal policies will lead to a downward trend in its debt ratio is not credible because it ignores the likelihood that future recessions will result in larger budget deficits.

1. Introduction

The Canadian federal government, in its *2023 Fall Economic Statement* restated its fiscal policy goals:

- Maintaining the 2023-24 deficit at or below the Budget 2023 projection of $40.1 billion.

- Lowering the debt-to-GDP ratio in 2024-25, relative to this Fall Economic Statement, and keeping it on a declining track thereafter

- Maintaining a declining deficit-to-GDP ratio in 2024-25 and keeping deficits below 1% of GDP in 2026-27 and future years. (Canada, Department of Finance, 2023b: 12)

In reality, the federal government is postponing deficit reductions. Its *2023 Fall Economic Statement (FES)* is projecting a deficit of 1.2% of GDP in 2026/27, instead of the 0.3% that was projected in its *2022 Budget* just 18 months earlier (Canada, Department of Finance, 2022; 2023b). In this research bulletin, we show that the failure to exercise discipline in

program spending is the main reason that reductions in the deficit ratio keep being pushed to future years. We also update our previous study of federal fiscal policies, Dahlby and Ferede, 2023, and conclude that there is a 44% chance that the net debt ratio will be higher in 2036/37 and a 59% chance that it will be higher in 2046/47.

2. Fiscal discipline postponed, yet again

Since the pandemic, the federal government has continually postponed reducing its budget deficit.[1] **Figures 1a** and **1b** show the federal government's projected budget deficits as a percentage of GDP and in billions of dollars, in its 2022 and 2023 budgets and the November 2023 FES. The 2022 budget projected a deficit of $8.4 billion in 2026/27. This was revised up to $15.8 billion one year later in the 2023 budget, and then, seven months later in the November 2023 FES, it was ramped up to $27.1 billion. Last November's FES flat lines deficits from 2023/24 to 2025/26 and pushes deficit reductions to 2026/27.
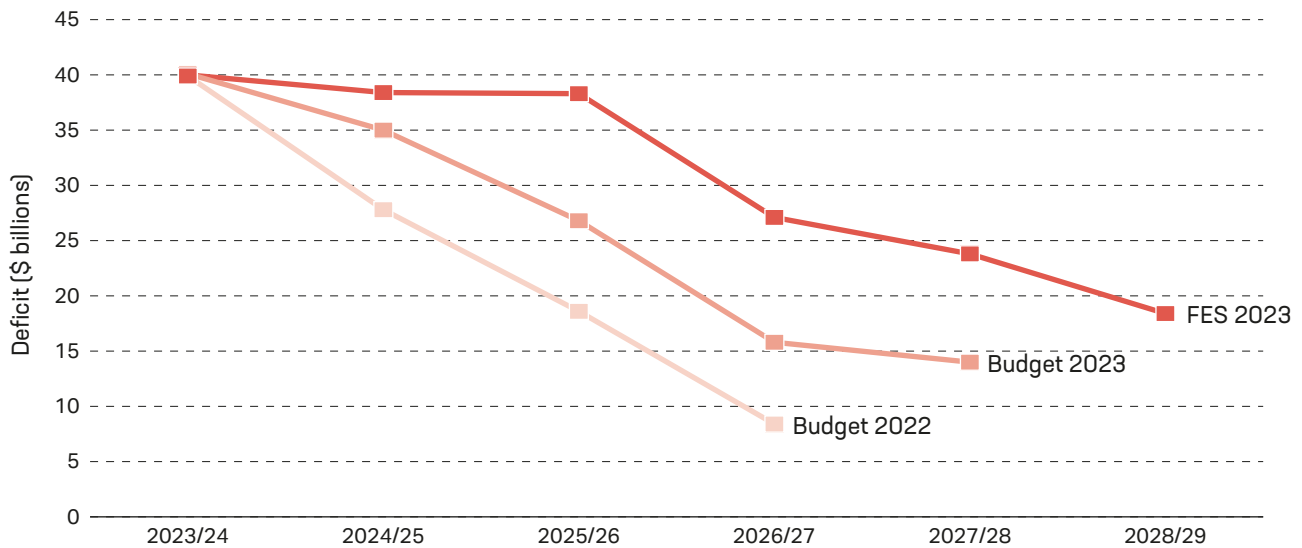
Figure 1a: Projected federal deficits as percentage of GDP, 2023/24–2028/29
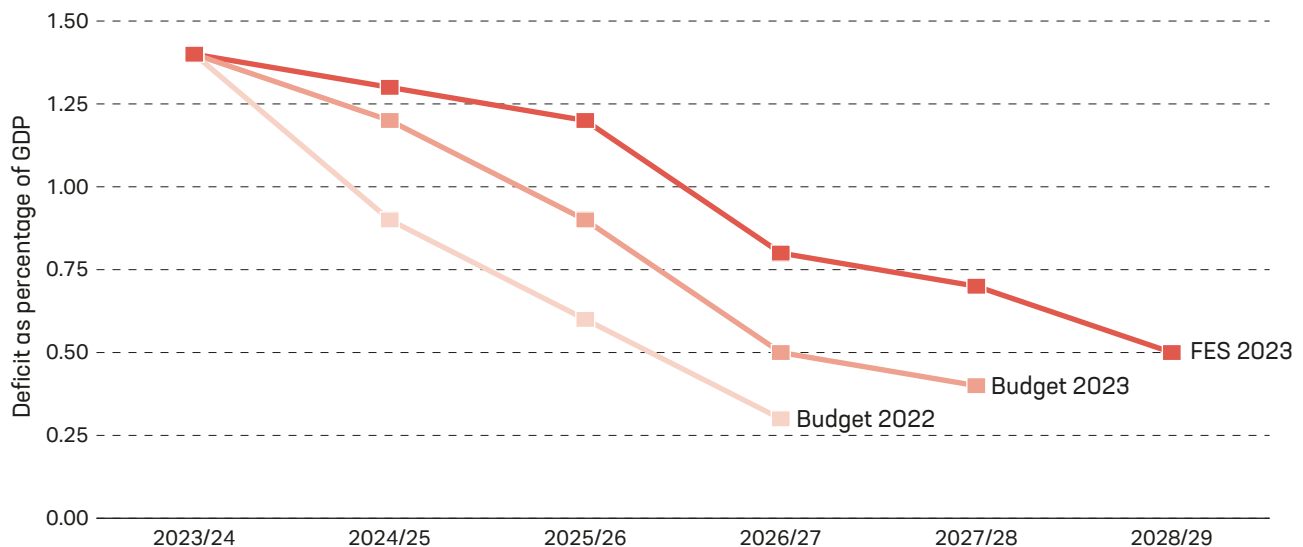
Sources: Canada, Department of Finance, 2022a, 2023a, 2023b.

1 See Fuss and Munro, 2023 on the federal government's history of violating its fiscal anchors since 2015.

**Figure 1b: Projected federal deficits in $ billions, 2023/24–2028/29**

Sources: Canada, Department of Finance, 2022a, 2023a, 2023b.

Why has the federal government failed to reduce its deficit since the economy emerged from the pandemic? One possible reason is that it is spending more on interest payments because of higher debt levels and higher interest rates on the federal debt. While public debt charges are projected in the 2023 FES to be $55.1 billion in 2026/27, up from $42.9 billion projected in *Budget 2022*, projected program expenditures increased by $36.1 billion, and the increase in debt charges accounts for less than one third of the increase in the projected deficit in that fiscal year.

Could the delays in bringing down the deficit be due to declines or slower growth in projected revenues? **Figure 2** shows this is not the case with projected

Figure 2: Projected federal revenues in $ billions, 2023/24–2028/29
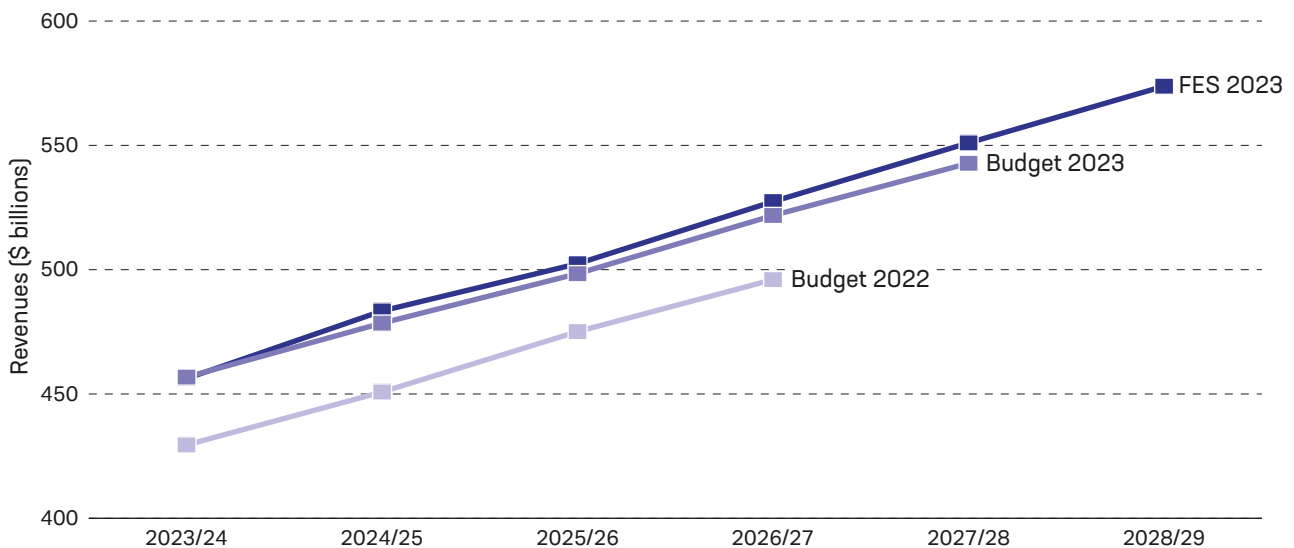
Sources: Canada, Department of Finance, 2022a, 2023a, 2023b.

federal revenues increasing from *Budget 2022* to *Budget 2023*. The *2023 FES* projects revenues in 2026/27 that are $31.4 billion more than projected in *Budget 2022*.

Since higher debt charges and slower revenue growth do not account for the higher deficits, the main reason must be the ratcheting up of program spending, a process that has been going since the first budgets of the current Liberal government. **Figure 3** compares the initial projections of program spending in federal budgets from 2017 to 2023 and the *2023 FES* with the actual or most recent projections of program spending. The figure shows, for example, that the 2017 federal budget projected $338.5 billion in program spending in 2021/22, while actual program spending in 2021/22 was $468 billion, 36.5% higher than projected. Similarly, actual program spending in 2022/23 exceeded the spending projected in *Budget 2018* by $88.5 billion or 22.5%.

This trend has continued, with the most recent projections of program spending consistently higher than the initial projections. For example, the federal budget in March 2023 projected program spending of $505.4 billion in 2027/28, but this was raised to $515.5 billion only seven months later in the FES in November (Canada, Department of Finance, 2023a; 2023b).

Some of the increase in projected spending could be the result of inflation rates that were higher in 2022 and 2023 than were anticipated when those projections were made in the 2018 and 2019 budgets. However, **figure 4** shows that unanticipated inflation was only a significant factor in explaining the increases in projected spending in 2022/23 and 2023/24 and, even then, it accounted for less than half of the increase in projected spending. In all the other fiscal years, the increase in spending is almost entirely the result of introducing new expenditure programs or enhancing existing programs. The federal government's failure to exercise fiscal discipline in program spending has been the main reason for rising projected deficits.

Figure 3: The ratcheting up of federal program expenditures ($ billions), 2021/22–2027/28
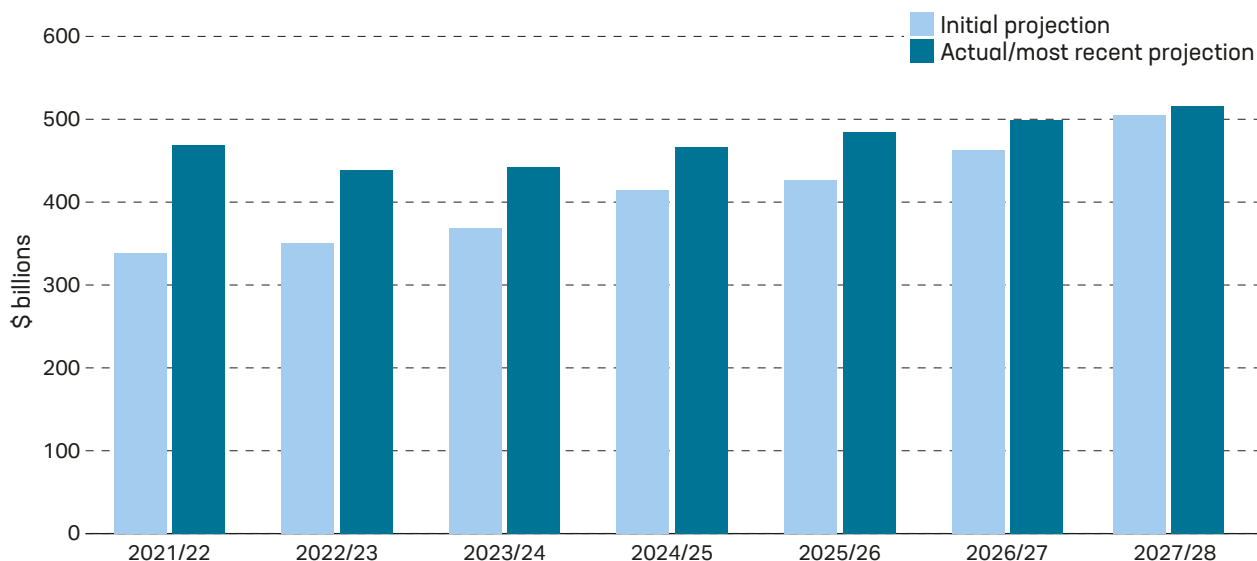
Sources: Canada, Department of Finance, 2017, 2018, 2019, 2021, 2022a, 2023b.

Figure 4: Decomposition of the percentage increase in projected program expenses into unanticipated inflation and real spending, 2021/22–2027/28
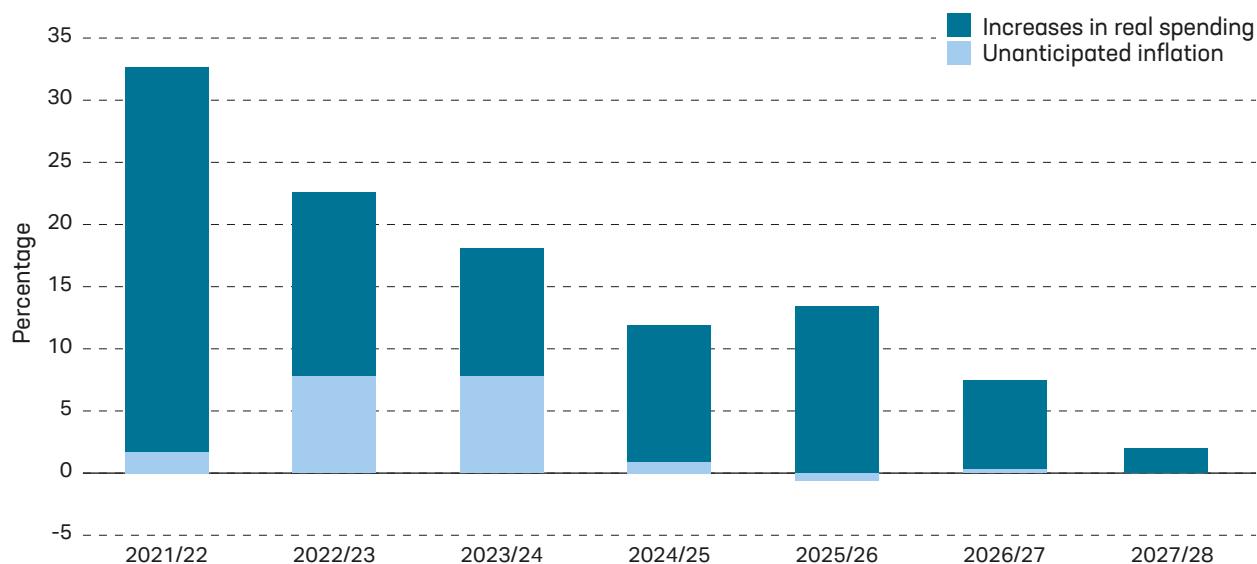
Sources: Canada, Department of Finance, 2017, 2018, 2019, 2021, 2022a, 2023b; calculations by authors.

3. Are federal fiscal policies consistent with a declining debt ratio?

The federal government, in the *2023 Fall Economic Statement* (Canada, Department of Finance, 2023b: chart A1.4, p.93), projects a steadily declining debt-to-GDP ratio to 2055/56, assuming a constant annual economic growth rate of 1.6%, based on an annual growth rate of 0.6% for labour supply and 1.0% labour productivity growth.[2] The assumption that the economy will grow at a constant rate ignores the risks of major economic downturns posed by new pandemics, geopolitical conflicts, and other unknown risks.

Since 1980, the Canada economy has suffered four recessions—1982, 1991, 2009, 2020—in which real GDP declined by, on average, 3.0%. If the future is like the past, Canada will likely experience one or

more recessions over the next 10 to 20 years that will put major strains on governments' budgets and debt levels. In this research bulletin, we update our previous study, Dahlby and Ferede, 2023, to consider whether federal fiscal policies are consistent with a declining debt ratio given the likelihood of major economic shocks over the next 25 years.

We use a Monte Carlo simulation model to investigate how the federal government's debt might evolve if the Canadian economy is subject to random growth-rate shocks similar to those experienced over the last 40 years.[3] (See **Box 1** for a brief description of the simulation model.) Using a Monte Carlo simulation model to project the trend in government debt is consistent with Olivier Blanchard's recommendation (2023: ch. 1) that the evaluation of fiscal policies should be conducted with random fiscal and economic shocks.[4]

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2 The Parliamentary Budget Officer's *Fiscal Sustainability Report 2023* (PBO, 2023: figure 1, p.3) also projects a steadily declining net debt ratio for the federal government based on similar economic and demographic assumptions.

3 Lester and Laurin (2023, 2024) also evaluate the trend in the federal debt ratio in a model with fiscal shocks.

4 Olivier Blanchard is one of the world's most influential economists in advising governments and the international agencies on deficit and debt policies.

Box 1. The Monte Carlo simulation model

There is a detailed description of the model and its parameters in Dahlby and Ferede (2023). The key equation of the model is the public-sector debt dynamics identity shown below:

$$b_{t+1} = \frac{(1 + v_t) \times b_t - pb_t}{(1 + i) \times (1 + g_t)}$$

where b_t is the government's net debt-to-GDP ratio, v_t is the average or effective rate of interest on government debt, pb_t is the ratio of the government's primary budget balance to GDP, i is the annual rate of inflation (assumed to be constant), and g_t is the real GDP growth rate in year t. The random shock to the growth rate is the sum of an annual shock, drawn from a normal distribution with a zero mean, and a negative recession shock that occurs on average roughly once every 10 years. The growth-rate shocks act on the federal government's primary balance, which evolves according to the partial adjustment model shown in Dahlby and Ferede, 2023: Appendix 2, table A2.2, p.21. The effective interest rate on government debt evolves over time as the existing debt is refinanced at the current nominal interest rate on 10-year Government of Canada bonds. The real interest rate on its bonds is positively related to both the net debt ratio and the growth rate based on the results in the econometric model in Dahlby and Ferede, 2023: Appendix 2, table A2.3, p.24.

Our Monte Carlo model generates a probability distribution for the federal debt ratio in the future based on assumptions about the likelihood of future economic shocks. With such models, there is no hard and fast rule for concluding whether a fiscal policy is consistent with a declining debt ratio. However, Blanchard, Sapir, and Zettelmeyer (2022) suggest that a "plausibly declining" debt ratio should mean that there is an "80% or 90% probability that debt will remain on a declining path for 10 years". The Blanchard-Sapir-Zettelmeyer (BSZ) criterion seems reasonable, and we will adopt it in assessing whether the federal government's fiscal policies are consistent with a declining debt ratio.

The starting point for the simulations is the projected fiscal situation in 2026/27 in the *2023 FES*, with a net debt-to-GDP ratio of 45.2%, a primary budget surplus of 0.90% of GDP, an effective interest rate on existing debt of 2.2%, and a 10-year bond rate on new federal debt of 3.2%. These starting values for key variables reflect the deterioration in the federal government's fiscal position since *Fall Economic Statement 2022*, which had projected a net debt ratio of 42.75%, a primary surplus of 1.41%, and an interest rate on federal debt of 3.0% (Canada, Department of Finance, 2022b). The higher initial debt ratio, lower primary surplus, and higher interest rate mean that it is less likely that the federal debt ratio will be lower in the future than in our previous analysis, Dahlby and Ferede, 2023.

We use a Mathcad® program to calculate the evolution of the federal net debt ratio over a 20-year time horizon with the economy subject to annual random growth rate shocks and random but rare recession shocks. We record the net debt ratio after 10 years (2036/37) and 20 years (2046/47). The model was run 1,000 times to generate the probability distribution of the federal net debt ratio in 2036/37 shown in **figure 5**. The solid vertical line is the debt ratio that was projected for 2026/27 in *Fall Economic Statement 2022*, 43%. Debt ratios in excess of 43% are inconsistent with the federal fiscal anchor enunciated in the government's *Fall Economic Statement 2022*. Figure 5 shows that distribution of debt ratios is skewed to the right, indicating significant risks of large increases in the debt ratio. Overall, there is a 44% chance that the net debt ratio in 2036/37 will exceed 43% and a 59% chance that it will exceed 43% in 2046/47.

Figure 6 compares the probability distributions for the net debt ratios in 2036/37 our results in Dahlby and Ferede, 2023. The deterioration in the federal fiscal position from the 2022 FES to the 2023 FES is reflected in the rightward shift in the probability distribution of the debt ratios. The probability

Figure 5: The probability distribution of the federal net debt ratio, 2036/37
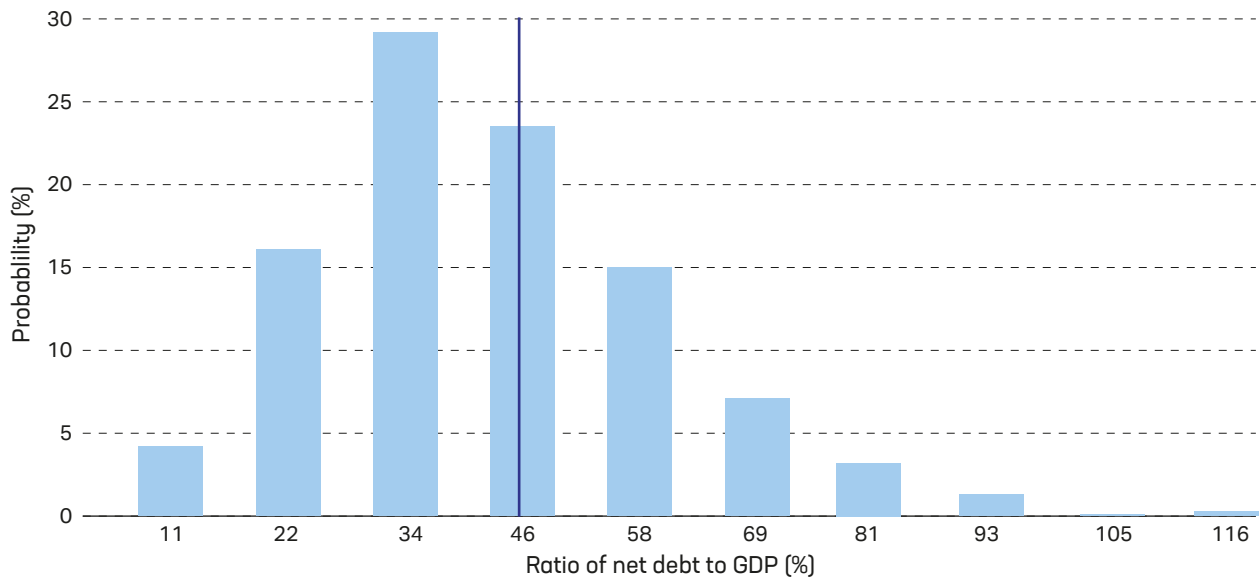
Notes: The approximate mid-points of the bins are shown on the horiztonal axis. The vertical line is at 43%.
Source: output from the Monte Carlo model.

Figure 6: Comparison of the 2023 and current results for the probability distribution of the federal net debt ratio, 2036/37
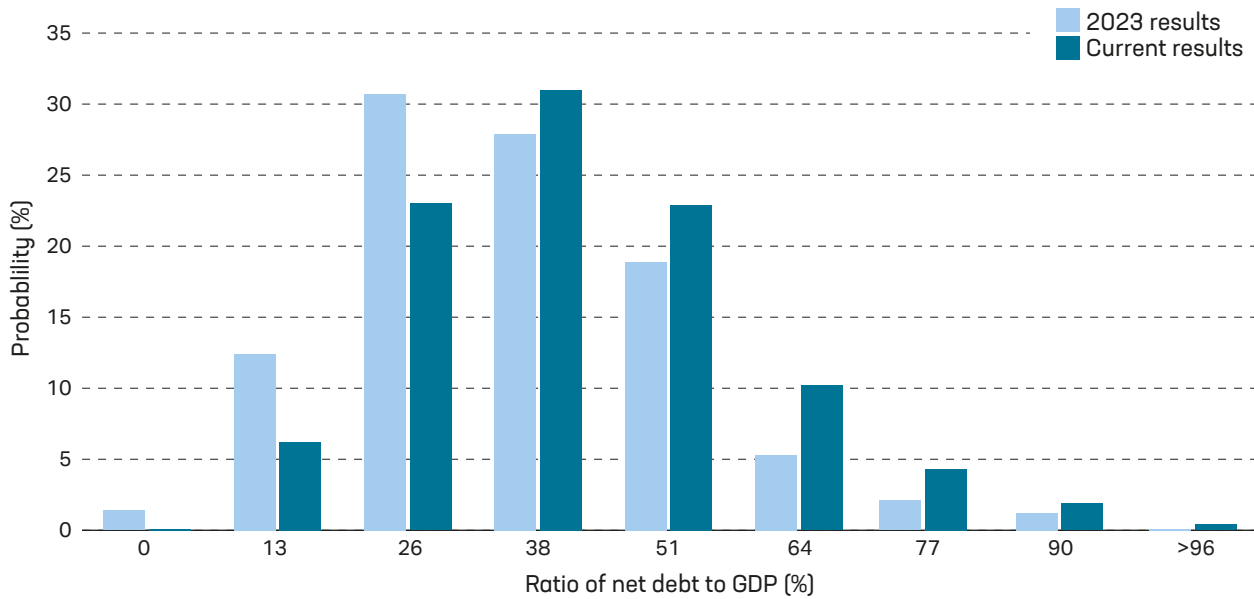
Note: The approximate mid-points of the bins are shown on the horiztonal axis.
Source: output from the Monte Carlo model.

that the debt ratio in 2036/37 will exceed 43% has increased from 30% to 44% as a result of the higher initial debt ratios, lower primary balances, and higher interest rates.

We conclude, based on the BSZ criterion, that the federal government's claim that its fiscal policies will lead to a downward trend in its debt ratio is not plausible because it ignores the likelihood that future recessions will result in larger primary deficits.

Our simulations indicate that there is a high probability of an increasing debt ratio in the future because of the impact of recessions on federal finances. It is, therefore, worthwhile examining in more detail the impact of recessions on the federal debt ratio. In our simulations, the average number of recessions over a 20-year period is 1.77, that is, less than the "historical average" of one recession every 10 years. As shown in **table 1**, in our simulations the likelihood of no recessions occurring over a 20-year time horizon is only 15.1%. The average debt ratio after 20 years in the simulations in which no recessions occurred is 19.4%, slightly lower than the federal government's projection of its debt ratio for 2046/47. (See Canada, Department of Finance, 2023b: chart A1.4, p.93.) Thus, our model, in the absence of recessions, is consistent with the projected downward trend in the federal debt ratio in *2023 Fall Economic Statement*. In our simulations, the probabilities of one, two, and three or more recessions over a 20-year time horizon are 31.8%, 26.8%, and 26.3%, respectively. In the episodes where two recessions occur over a 20-year time horizon, the expected debt ratio after 20 years is 71%, up from 59% in our previous analysis because of the deterioration in the federal government's fiscal position over the last year.

To lower the probability of an increase in the debt ratio to between 10% to 20% means that the federal government would have to run larger primary

Table 1: Likelihood of recessions and expected debt ratios

Number of recessions over a 20-year time horizon	Probability (%)	Expected debt ratio after 20 years (%)
0	15.1	19.4
1	31.8	43.4
2	26.8	71.0
3 or more	26.3	118.2

surpluses than those assumed in *2023 FES*. Our model indicates that, if the federal government runs a primary surplus of 2.5% of GDP, in the absence of economic shocks, rather than the primary surplus of 0.90% in our base case, the likelihood of a higher debt ratio after 10 years would drop to 16.5%. Roughly speaking, this implies that an increase of one percentage point in the ratio of the primary surplus to GDP, which is about $30 billion, reduces the probability of an increase in the debt ratio after 10 years by about 17 percentage points.

4. Concluding remarks

The continued postponement of deficit reductions by the federal government has raised the likelihood of higher future debt ratios in the event of economic downturns. To mitigate this risk, increasing the primary budget balances through reduced program spending as a percentage of GDP is crucial. This strategy will enable the federal government to finance larger deficits from recessionary shocks without triggering an unsustainable increase in the debt. Furthermore, it is also important to note that the current federal fiscal policy is at odds with the Bank of Canada's monetary policy. Financing increased spending by running deficits boosts aggregate demand, which means that the Bank of Canada has to maintain interest rates higher for longer to bring

inflation back to the 2% to 3% target range.[5] But most importantly, Canadians want better government, not just bigger government. Donald Savoie, the dean of Canadian public administration studies, has observed that:

> the size of the federal public service has grown by 24% over the last eight years and spending on outside consultants has increased by a third over the past five years. But growth in the size of the federal government and the scale of government spending has not

improved access to government programs and services. Public-opinion surveys report a growing frustration over the deteriorating level of federal government services: Nearly 50% of Canadians report that they are "very unsatisfied" or "unsatisfied" with the services the federal government provides. (Savoie, 2023)

Fiscal restraint that prioritizes spending on core public services—a social safety net, national defence and personal security, and public infrastructure that enhances private-sector productivity—is badly needed.

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5 See Cross, 2023 on how federal fiscal policy is undermining the Bank of Canada's effort to bring inflation under control.

References

Blanchard, Olivier (2023). *Fiscal Policy under Low Interest Rates*. MIT Press. <https://mitpress.mit.edu/9780262544870/fiscal-policy-under-low-interest-rates/>, as of January 16, 2024.

Blanchard, Olivier, André Sapir, and Jeromin Zettelmeyer (2022). *The European Commission's Fiscal Rules Proposal: A Bold Plan with Flaws That Can Be Fixed*. Blog post, November 30, 2022. Bruegel. <https://www.bruegel.org/blog-post/european-commissions-fiscal-rules-proposal-bold-plan-flaws-can-be-fixed>, as of January 16, 2024.

Canada, Department of Finance (2017). *Budget 2017*. Government of Canada. <https://www.budget.canada.ca/2017/home-accueil-en.html>, as of January 16, 2024.

Canada, Department of Finance (2018). *Budget 2018*. Government of Canada. <https://www.budget.canada.ca/2018/home-accueil-en.html>, as of January 16, 2024.

Canada, Department of Finance (2019). *Budget 2019*. Government of Canada. <https://www.budget.canada.ca/2019/home-accueil-en.html>, as of January 16, 2024.

Canada, Department of Finance (2021). *Budget 2021*. Government of Canada. <https://www.budget.canada.ca/2021/home-accueil-en.html>, as of January 16, 2024.

Canada, Department of Finance (2022a). *Budget 2022*. Government of Canada. <https://www.budget.canada.ca/2022/home-accueil-en.html>, as of January 16, 2024.

Canada, Department of Finance (2022b). *Fall Economic Statement 2022.* Government of Canada. <https://www.budget.canada.ca/fes-eea/2022/home-accueil-en.html>, as of January 16, 2024.

Canada, Department of Finance (2023a). *Budget 2023*. Government of Canada. <https://www.budget.canada.ca/2023/home-accueil-en.html>, as of January 16, 2024.

Canada, Department of Finance (2023b). *2023 Fall Economic Statement*. Government of Canada. <https://www.budget.canada.ca/fes-eea/2023/report-rapport/FES-EEA-2023-en.pdf>, as of January 16, 2024.

Cross, Philip (2023). *Canada's Fiscal Policy Has Undermined Efforts to Tackle Inflation*. Fraser Institute. <https://www.fraserinstitute.org/studies/canadas-fiscal-policy-has-undermined-efforts-to-tackle-inflation>, as of January 22, 2024.

Dahlby, Bev, and Ergete Ferede (2023). *Stress Testing the Federal Fiscal Anchor*. Fraser Institute. <https://www.fraserinstitute.org/studies/stress-testing-the-federal-fiscal-anchor>, as of January 16, 2024.

Fuss, Jake, and Grady Munro (2023). The Federal Government Keeps Violating Self-Imposed Fiscal Rules. Op. ed. Fraser Institute. <https://www.fraserinstitute.org/article/federal-government-keeps-violating-self-imposed-fiscal-rules>, as of January 16, 2024.

Lester, John, and Alex Laurin (2023). *Ottawa Needs a New Approach to Fiscal Policy*. CD Howe Institute. <https://www.cdhowe.org/public-policy-research/ottawa-needs-new-approach-fiscal-policy>, as of January 16, 2024.

Lester, John and Alex Laurin (2024). *The Federal Debt Is Not Sustainable*. CD Howe Institute. <https://www.cdhowe.org/intelligence-memos/lester-laurin-federal-debt-not-sustainable>, as of January 22, 2024.

Parliamentary Budget Officer [PBO] (2023). *Fiscal Sustainability Report 2023*. July. <https://www.pbo-dpb.ca/en/publications/RP-2324-011-S--fiscal-sustainability-report-2023--rapport-viabilite-financiere-2023>, as of January 16, 2024.

Savoie, Donald (2023). Ottawa, we have a problem: the federal public service. *Globe and Mail* (December 27). <https://www.theglobeandmail.com/opinion/article-ottawa-we-have-a-problem-the-federal-public-service/>, as of January 16, 2024.

Acknowledgments

About this Publication

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