OFFICE OF THE PARLIAMENTARY BUDGET OFFICER
BUREAU DU DIRECTEUR PARLEMENTAIRE DU BUDGET

PBO and Finance Canada Long-term Projection Comparison

Ottawa, Canada
17 January 2019
www.pbo-dpb.gc.ca

The Parliamentary Budget Officer (PBO) supports Parliament by providing economic and financial analysis for the purposes of raising the quality of parliamentary debate and promoting greater budget transparency and accountability.

Consistent with the Parliamentary Budget Officer's legislated mandate, this report provides a comparison of long-term economic and fiscal projections prepared by Finance Canada and PBO in 2018.

Lead Analysts:
Tim Scholz, Economic Analyst-Advisor
Trevor Shaw, Director

This report was prepared under the direction of:
Chris Matier, Senior Director

Nancy Beauchamp and Caroline Bernier assisted with the preparation of the report for publication.

For further information, please contact pbo-dpb@parl.gc.ca.

Yves Giroux
Parliamentary Budget Officer

Table of Contents

Executive Summary

Long-term projections are an essential element of budget transparency and sustainability analysis. This report provides a comparison of long-term economic and fiscal projections prepared by Finance Canada and PBO in 2018.

Key points

- PBO's projection of real GDP growth is slightly lower than Finance Canada over 2018-2023 and 2024-2055 due to our lower projected growth in labour productivity.

- Both PBO and Finance Canada project the federal budgetary balance (relative to the size of the economy) to increase over the long term—rising to a budgetary surplus of more than 1 per cent of GDP—as growth in program expenses lags growth in nominal GDP beyond 2030 while revenues grow broadly in line with nominal GDP.

- Relative to the size of the economy, PBO and Finance Canada project federal government debt to decline over the long term. These projected declines indicate that current federal fiscal policy is sustainable over 2018 to 2055.

- Based on Finance Canada projections, we estimate that over 2018 to 2055 the federal government could increase spending or reduce taxes by 0.7 per cent of GDP per year, while maintaining fiscal sustainability. This corresponds to $17 billion in 2018, increasing in dollar terms over time in line with nominal GDP. By comparison, PBO estimates that over 2018 to 2055 the federal government could increase spending or reduce taxes by 0.8 per cent of GDP per year ($18 billion in 2018 and increasing in dollar terms over time in line with nominal GDP).

- In recent analysis, PBO assessed that current fiscal policy for the consolidated provincial-territorial government sector was not sustainable.[1] We estimated that tax increases or spending reductions amounting to 0.8 per cent of GDP annually would be required to achieve fiscal sustainability over a 75-year horizon.

- Despite a recommendation from the Auditor General in 2012, Finance Canada has not provided long-term projections or a sustainability analysis for the provincial-territorial government sector.

1. Introduction

Long-term economic and fiscal projections are an essential element of budget transparency and sustainability analysis.

PBO publishes an annual Fiscal Sustainability Report (FSR) that assesses whether changes to current fiscal policy are required to avoid unsustainable government debt accumulation and estimates the magnitude of these changes—the "fiscal gap". In our 2018 report, we projected that current fiscal policy at the federal level is sustainable over the long term, but unsustainable for provincial-territorial governments.

In December 2018, Finance Canada released *Update of Long-Term Economic and Fiscal Projections.*[2] Finance Canada's report also provides long-term economic and fiscal projections; however, it does not incorporate the provincial-territorial government sector, nor does it provide an estimate of the fiscal gap.

This report provides a comparison of Finance Canada's and PBO's long-term economic and fiscal projections. In addition, we construct an estimate of the federal fiscal gap based on Finance Canada's long-term projections.

Fiscal sustainability and the fiscal gap

Fiscal sustainability means that government debt does not grow continuously as a share of the economy.

PBO assesses fiscal sustainability using the fiscal gap—the difference between current fiscal policy and a policy that is sustainable over the long term.

The fiscal gap represents the immediate and permanent change in revenues, program spending, or combination of both, that is required to stabilize a government's net debt-to-GDP ratio at its current level over the long term.

A negative gap indicates that net debt is projected to decline as a share of GDP and that there is room available to increase spending or reduce taxes while maintaining fiscal sustainability.

2. Long-term Economic Projections

PBO uses a methodology that is similar to Finance Canada to project real GDP growth over the long term by separating it into labour supply (that is, total hours worked) and labour productivity (that is, GDP per hour worked) components.

Our labour supply projections are constructed using detailed age/sex-group specific employment rate and average hours worked models. The demographic projections underlying our labour supply were produced by Statistics Canada's Demography Division based on their medium-growth assumptions for fertility, mortality (life expectancy) and immigration rates.[3] Finance Canada also uses Statistics Canada's medium demographic projection.

Our projection for labour supply growth over the long term is the same, on average, as Finance Canada over 2024 to 2055. PBO's projection of real GDP growth is slightly lower than Finance Canada over the long term (Table 2-1) owing to lower projections for labour productivity growth.

For labour productivity growth, we assume that it will converge to its steady-state rate over the long term. Finance Canada assumes that over the long term, labour productivity will grow at its historical average. PBO's assumption for long-term trend labour productivity growth is 1.1 per cent, which is also in line with historical average annual growth observed over 1982 to 2017, whereas Finance Canada assumes labour productivity growth of 1.2 per cent annually, the average observed over 1970 to 2017.

PBO's projection for nominal GDP growth is 0.1 percentage points lower, on average, than Finance Canada over 2024 to 2055. Our assumption for the effective interest rate on interest-bearing federal debt is 3.1 per cent in 2022-23, rising to 3.8 per cent by 2055. Finance Canada projects an effective interest rate of 3.0 per cent in 2023-24, rising to 6.8 per cent by 2055-56.

Table 2-1 Comparison of long-term economic projections

Average annual growth (% unless otherwise indicated)	2018-2023	2024-2055
Real GDP growth		
PBO	1.6	1.6
Finance Canada	1.8	1.7
Contributions of (percentage points):		
Labour supply growth		
PBO	0.6	0.5
Finance Canada	0.6	0.5
Working-age population		
PBO	1.0	0.7
Finance Canada	1.0	0.7
Employment rate*		
PBO	-0.3	-0.2
Finance Canada	-0.4	-0.2
Average hours worked		
PBO	-0.1	-0.1
Finance Canada	0.0	0.0
Labour productivity growth		
PBO	1.0	1.1
Finance Canada	1.2	1.2
Nominal GDP growth		
PBO	3.7	3.6
Finance Canada	3.9	3.7
Effective federal interest rate**		
PBO	3.1	3.8
Finance Canada	2.8	4.4

Sources: Finance Canada and Parliamentary Budget Officer.

Note: * For comparability, we combined Finance Canada’s contributions from the labour force participation rate and unemployment rate to calculate their employment rate contribution.

** Effective federal interest rates are calculated as public debt charges divided by interest-bearing debt. For comparability and consistency with Finance Canada’s assumption, PBO has estimated Finance Canada’s effective interest rate using total public debt charges, which include the borrowing costs associated with purchases of financial assets.

3. Long-term Fiscal Projections

PBO prepares its long-term fiscal projections based on Statistics Canada's Government Finance Statistics (GFS) framework, whereas Finance Canada prepares its long-term projections on a Public Accounts basis.[4] Although there are some differences between these accounting frameworks, it is nonetheless useful to compare long-term projections of high-level fiscal aggregates such as the primary (or operating) balance, which helps drive debt-to-GDP dynamics.

The primary balance

A government's primary balance is defined as revenues less program (non-interest) spending. It represents the contribution to debt accumulation that is directly influenced by fiscal policy. Subtracting public debt charges from the primary balance yields net lending/borrowing.

The GFS concepts of the primary balance and net lending/borrowing correspond to the operating balance and budgetary surplus/deficit in the Public Accounts framework.

Assessing fiscal sustainability first involves projecting a government's primary balance (that is, revenues less program spending). The projected path of government debt is then determined by stock-flow accounting assumptions. Budgetary deficits are financed by issuing debt and budgetary surpluses are used to pay down debt.

Broadly speaking, PBO and Finance Canada adopt a similar approach to construct long-term fiscal projections. Beyond the medium term, we assume that revenues generated under current policy grow in line with nominal GDP[5] (the broadest single measure of the tax base) while spending on programs is determined by demographic and economic projections, consistent with current government policy parameters.[6]

Federal government debt

PBO and Finance Canada use somewhat different accounting concepts for federal government debt in their long-term projections. PBO uses "net debt" which is calculated as total liabilities less financial assets. Finance Canada uses "federal debt" (accumulated deficit), which is defined in the Public Accounts as total liabilities less total (financial and non-financial) assets. The main difference between these two concepts is that Finance Canada takes into account the Government's physical assets (such as buildings and equipment), while PBO's measure of net debt excludes physical assets.

In addition, both PBO and Finance Canada assume that there is no feedback from government debt-to-GDP accumulation to the economy (for example, through higher interest rates). This assumption ensures a stable economic backdrop over the long term. Incorporating such feedback would simply accelerate any projected changes in debt-to-GDP ratios and would not affect qualitative assessments of fiscal sustainability.

Both PBO and Finance Canada project the federal primary balance surplus (relative to the size of the economy) to increase over the long term as growth in program expenses lags growth in nominal GDP beyond 2030 while revenues grow broadly in line with nominal GDP (Table 3-1).

Finance Canada projects a larger increase in the primary balance, reflecting a larger decline in program expenses relative to GDP. The projected increase in the primary balance contributes to the improvement in the budgetary balance—rising to a surplus of around 1.2 per cent of GDP—which helps to accelerate the decline in the federal debt-to-GDP ratio. Finance Canada projects a higher effective interest rate, and in turn, higher public debt charges, which roughly offsets their lower long-term program expense projection.

Table 3-1 Comparison of long-term fiscal outlooks

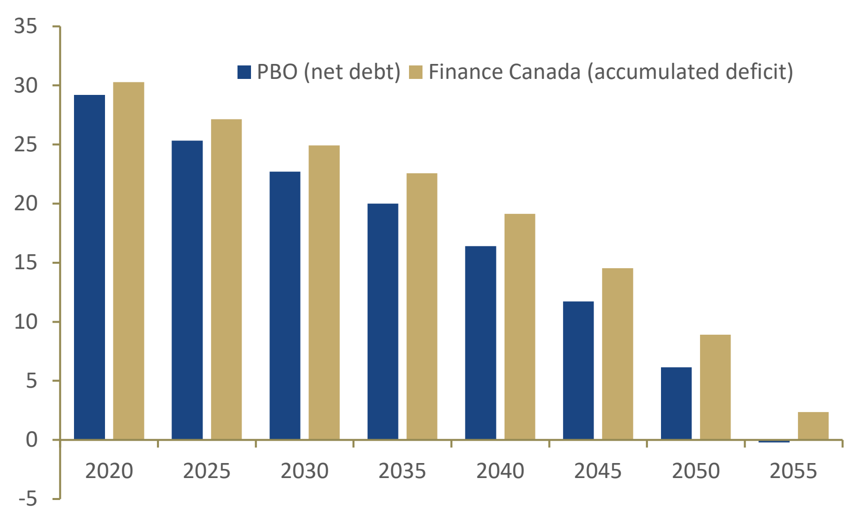
% of GDP	2020	2025	2030	2035	2040	2045	2050	2055
Primary balance								
PBO	0.8	1.0	0.8	0.9	1.0	1.2	1.3	1.5
Finance Canada	0.6	1.0	0.9	1.0	1.2	1.5	1.6	1.8
Budgetary balance								
PBO	-0.3	-0.2	-0.3	-0.1	0.2	0.6	0.9	1.3
Finance Canada	-0.8	-0.3	-0.5	-0.3	0.0	0.4	0.8	1.2
Federal government debt								
PBO (net debt)	29.2	25.3	22.7	20.0	16.4	11.7	6.2	-0.2
Finance Canada (accumulated deficit)	30.3	27.1	24.9	22.6	19.1	14.5	8.9	2.4

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Finance Canada's projections are presented on a fiscal-year basis where 2020 refers to 2020-21.

The projected declines in federal government debt relative to the size of the economy indicate that current federal fiscal policy is sustainable over the long term (Figure 3-1).

Figure 3-1 Long-term federal debt-to-GDP projections



Sources: Finance Canada and Parliamentary Budget Officer.

Note: Finance Canada's projection is presented on a fiscal-year basis where 2020 refers to 2020-21.

4. Fiscal Gap Estimates

PBO quantifies the degree to which current fiscal policy needs to be adjusted to achieve fiscal sustainability using the "fiscal gap". Specifically, PBO's fiscal gap is calculated as the immediate and permanent change in revenues, program spending, or combination of both (expressed as a share of GDP) that is required to stabilize a government's net debt-to-GDP ratio at its current level after 75 years.[7]

In our 2018 FSR, we estimated the federal fiscal gap to be -1.4 per cent of GDP. That is, the federal government could permanently increase spending or reduce taxes by 1.4 per cent of GDP while maintaining fiscal sustainability over a 75-year horizon (2018 to 2092).

Finance Canada does not publish an estimate of the federal fiscal gap. However, there is sufficient data provided in Finance Canada's *Update of Long-Term Economic and Fiscal Projections* to construct an estimate of the federal fiscal gap over a shorter horizon (2018-19 to 2055-56).

Based on Finance Canada's long-term projections, the federal fiscal gap over 2018-19 to 2055-56 would be -0.7 per cent of GDP. Finance Canada's projections suggest that the federal government could permanently increase spending or reduce taxes by 0.7 per cent of GDP while maintaining fiscal sustainability over 2018-19 to 2055-56. This amounts to $17 billion in 2018, increasing in dollar terms over time in line with nominal GDP.

Over the same time horizon (that is, 2018 to 2055), PBO's long-term economic and fiscal projections indicate a federal fiscal gap of -0.8 per cent of GDP. This amounts to $18 billion in 2018, increasing in dollar terms over time in line with nominal GDP, and is similar to the estimate based on Finance Canada's projections.

PBO's federal fiscal gap of -0.8 per cent of GDP estimated over 2018 to 2055 is close to half the size of our 75-year federal fiscal gap (-1.4 per cent of GDP, from 2018 to 2092). The federal fiscal gap decreases in (absolute) size as the projection horizon is reduced given that it excludes the period where demographic spending pressures associated with the baby-boom cohorts have dissipated.

In our 2018 FSR, we assessed that current fiscal policy for the consolidated provincial-territorial government sector was not sustainable over the long term. PBO estimated that permanent tax increases or spending reductions amounting to 0.8 per cent of GDP would be required to stabilize the consolidated provincial-territorial government net debt-to-GDP ratio at its current level (25.7 per cent of GDP) over a 75-year horizon (2018 to 2092).

Finance Canada's 2018 *Update of Long-term Economic and Fiscal Projections* did not include projections for the provincial-territorial government sector. In 2012, the Auditor General of Canada recommended that Finance Canada periodically provide "analysis for all governments combined, including the federal, provincial, and territorial governments, to give a total Canada perspective".[8] To date, Finance Canada has not provided analysis in line with this recommendation.

Notes

1. The provincial-territorial sector of government includes: provincial, territorial, municipal and aboriginal governments, as well as public sector entities such as school boards, hospitals and universities.
2. See: https://www.fin.gc.ca/pub/ltefp-peblt/2018/pdf/ltefp-peblt-eng.pdf.
3. See Statistics Canada's *Population Projections for Canada (2013 to 2063), Provinces and Territories (2013 to 2038)*. Catalogue no. 91-520-X. Ottawa: Retrieved from: http://www.statcan.gc.ca/pub/91-520-x/91-520-x2014001-eng.htm.
4. The internationally consistent GFS framework supports comparative fiscal analysis by overcoming definitional and accounting differences between public entities. In Canada and elsewhere, governments' financial statements and reports are based on unique organizational structures and on the accounting and reporting practices of individual governments, so there is a lack of consistency across jurisdictions and over time. The GFS framework provides the consistency necessary for a coherent view of the current and future financial prospects of all government sectors in Canada.
5. Finance Canada assumes that all federal revenues except for Employment Insurance (EI) premiums grow in line with nominal GDP beginning in 2024-25. Finance Canada assumes that EI revenues grow proportionate with EI expenditures to break even over time. This modeling difference leads to Finance having slightly slower revenue growth than PBO over the long term.
6. For example, Old Age Security program benefits grow with the targeted population (65 and over) and inflation; children's benefits grow with the targeted population (18 and under) and inflation. Direct program expenses are linked to nominal GDP growth.
7. PBO uses a 75-year time horizon for our fiscal gap estimates in order to fully capture the demographic transition in Canada. Moreover, long-term projection horizons are typically used to assess the adequacy of funding social security systems such as public pension plans.
8. See http://www.oag-bvg.gc.ca/internet/English/parl_oag_201210_07_e_37351.html#hd3c.