



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

# Economic and Fiscal Outlook

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The mandate of the Parliamentary Budget Officer (PBO) is to provide independent analysis to Parliament on the state of the nation's finances, the Government's estimates and trends in the Canadian economy; and, upon request from a committee or parliamentarian, to estimate the financial cost of any proposal for matters over which Parliament has jurisdiction.

This report responds to the 4 February 2016 Standing Committee on Finance motion that "consistent with the Parliamentary Budget Office (PBO) mandate to provide independent analysis about the state of Canada's finances and trends in the national economy (as outlined in section 79.2 of the *Parliament of Canada Act*), the PBO provide an economic and fiscal outlook to the Committee the fourth week of October and April of every calendar year, and be available to appear before the Committee to discuss its findings shortly thereafter."

This report incorporates data available up to and including 14 October 2016. Unless otherwise specified, all rates are reported at annual rates.

This report was prepared by the staff of the Parliamentary Budget Officer. Please contact [pbo-dpb@parl.gc.ca](mailto:pbo-dpb@parl.gc.ca) for further information.

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Parliamentary Budget Officer

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# Executive Summary

This report responds to the 4 February 2016 Standing Committee on Finance motion. It incorporates data available up to and including 14 October 2016.<sup>1</sup> Our outlook reflects the 20 June 2016 agreement in principle on the Canada Pension Plan (CPP) enhancement<sup>2</sup>; however, the report does not incorporate the Government's housing market measures or its proposed approach to pricing carbon pollution that were announced on 3 October 2016.

PBO projects that growth in real gross domestic product (GDP) will rebound from 1.2 per cent in 2016 to 2.3 per cent in 2017 and 2.2 per cent in 2018 as federal fiscal measures and monetary stimulus boost domestic demand. Economic growth is then projected to shift lower over 2019 to 2021 as growth in business investment and exports moderates.

With the recovery in commodity prices, GDP inflation (a measure of economy-wide price increases) is projected to rise from 0.5 per cent in 2016 to 2.5 per cent in 2017 and then average 2.0 per cent annually over the remainder of the projection horizon. Nominal GDP—the broadest single measure of the tax base—is projected to grow at 3.7 per cent annually, on average, over 2016 to 2021.

Summary Table 1

## Economic outlook

%	2016	2017	2018	2019-2021
<b>Real GDP growth</b>	1.2	2.3	2.2	1.7
<b>GDP inflation</b>	0.5	2.5	2.1	2.0
<b>Nominal GDP (\$ billions)</b>	2,017	2,117	2,208	2,379

Sources: Statistics Canada and Parliamentary Budget Officer.

## The term premium

The interest rate term premium is the additional return required for investing in longer-term government bonds instead of investing and then re-investing in shorter-term securities such as treasury bills.

On balance, the outlook for the Canadian economy is unchanged from our April report<sup>3</sup>, as weaker real GDP growth in the near term is offset by stronger growth over the medium term due to increased subnational government spending, as well as additional monetary stimulus and a lower term premium. Over 2016 to 2021, we project real GDP growth to average 1.8 per cent annually, the same average growth rate projected in our April report.

Average annual growth in nominal GDP of 3.7 per cent is only marginally lower than the 3.8 per cent we projected in April. This revision reflects weaker GDP inflation in 2016. Adjusted for historical revisions, the level of nominal GDP is, on average, \$15 billion (0.7 per cent) lower per year over 2016 to 2021 compared to April.

## The neutral rate

The neutral rate is defined as the policy interest rate “consistent with output at its potential level and inflation equal to target after the effects of all cyclical shocks have dissipated” (from *The Neutral Rate of Interest in Canada*, Bank of Canada Staff Discussion Paper 2014-5).

Relative to the Government’s planning assumption for nominal GDP in Budget 2016 our projection is, on average, \$26 billion (1.2 per cent) higher per year over 2016 to 2020. This difference has narrowed somewhat since PBO’s April projection, which was \$40 billion (1.8 per cent) higher per year, on average, over 2016 to 2020.

PBO has revised down its long-term assumptions for 3-month treasury bill and 10-year government bond rates. The downward adjustments reflect the April 2016 change to the Bank of Canada’s estimate of the neutral rate, as well as a lower assumed term premium on the 10-year government bond rate. These revised assumptions contribute to downward revisions to our interest rate outlook relative to our April report.

Our fiscal outlook is largely unchanged from April. We continue to project that the deficit will decline over the medium term, falling from \$22.4 billion in 2016-17 to \$9.4 billion by 2021-22. Compared to our April report, we are now projecting slightly larger deficits in 2016-17 and 2017-18 but smaller deficits thereafter.

## Summary Table 2 Fiscal outlook

\$ billions	Forecast						
	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022
Budgetary revenues	295.5	292.8	304.7	317.2	331.6	346.4	362.0
Program expenses	270.8	291.3	305.2	308.9	314.7	324.2	336.4
Public debt charges	25.6	24.0	24.5	26.4	29.9	32.9	35.0
Total expenses	296.4	315.2	329.7	335.3	344.6	357.0	371.4
<b>Budgetary balance</b>	<b>-1.0</b>	<b>-22.4</b>	<b>-24.9</b>	<b>-18.2</b>	<b>-13.0</b>	<b>-10.6</b>	<b>-9.4</b>
<b>Federal debt (% of GDP)</b>	<b>31.1</b>	<b>31.7</b>	<b>31.3</b>	<b>30.9</b>	<b>30.3</b>	<b>29.7</b>	<b>29.0</b>

Sources: Finance Canada and Parliamentary Budget Officer.

For revenues, weak income tax receipts in 2016-17 should bounce back over the medium term as the economy recovers and corporate profits rebound from temporary declines in the spring of 2016. Downward revisions to our outlook for interest rates result in lower spending on public debt charges, as the Government continues to refinance debt at even lower rates than we previously projected throughout our medium-term horizon.

PBO’s outlook for the budgetary deficit over 2016-17 to 2020-21 is \$4.8 billion lower, on average, than Budget 2016. This difference is roughly in line with the Government’s forecast adjustment, which removed the equivalent of \$6 billion in revenues in each year of its planning horizon.

In Budget 2016, the Government committed to reducing the federal debt-to-GDP ratio to a lower level over a five-year period ending in 2020-21. This translates into a fiscal anchor of 31 per cent debt-to-GDP (or lower) in

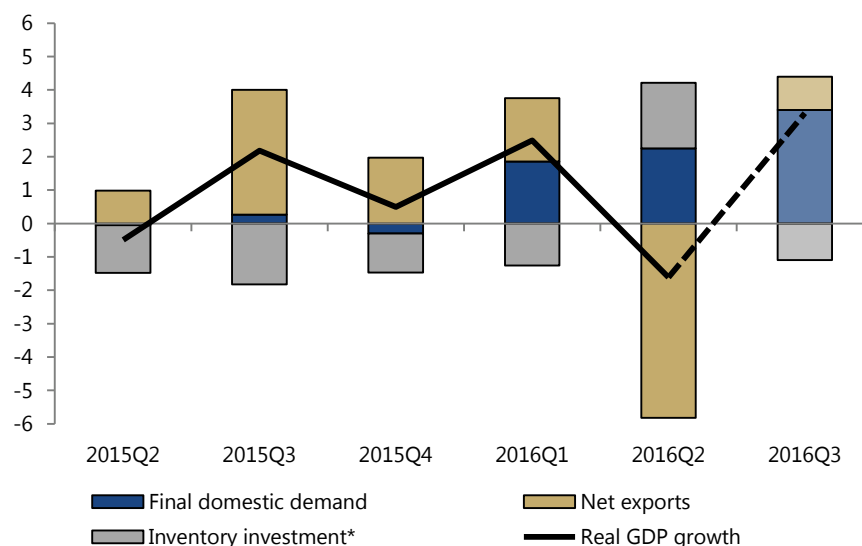
2020-21.<sup>4</sup> Under current tax and spending plans, we project that the federal debt-to-GDP ratio will be 29.7 per cent in 2020-21. Based on PBO's economic and fiscal outlook, the Government is on track to reach its debt-to-GDP target two years ahead of schedule. As such, the Government has flexibility within its current fiscal plan to reach its medium-term debt-to-GDP target.

# Economic Outlook

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**Figure 1** Canada's recent economic performance

*Contributions to real GDP growth, percentage points*



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: Inventory investment also includes the contribution from the statistical discrepancy.

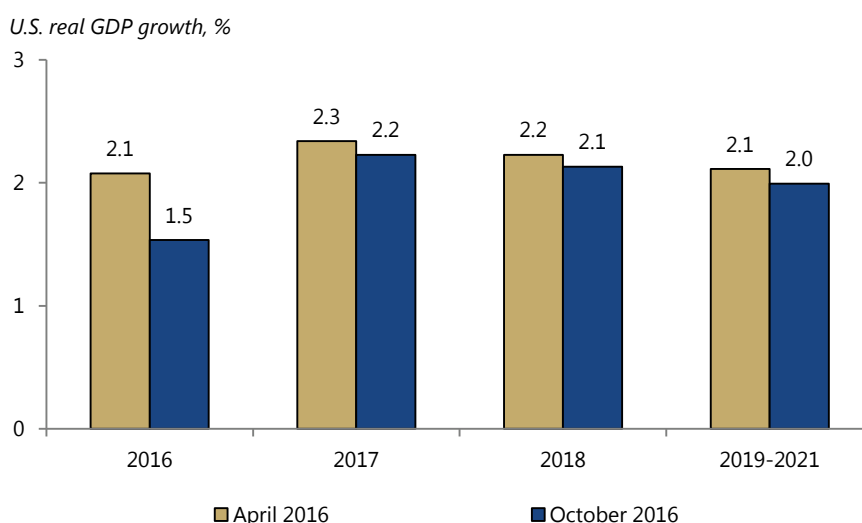
Real gross domestic product (GDP) in Canada fell by 1.6 per cent in the second quarter of 2016 due to steep declines in both energy and non-energy exports. However, final domestic demand provided further support to the economy as growth in government expenditure picked up. According to Statistics Canada, this pick up was due in part to government spending related to the wildfire in Fort McMurray.

The Fort McMurray wildfire and evacuation in May had a significant impact on the economy in the second quarter. PBO estimates that real GDP growth in the second quarter was reduced by 1.4 percentage points as a direct result of the observed 56 per cent decline in non-conventional oil extraction.

Based on recent monthly indicators and the expectation that the impact of the Fort McMurray wildfire and evacuation will be reversed, PBO expects that real GDP will increase by 3.3 per cent in the third quarter as investment and consumer spending boost final domestic demand.

With the exception of the strong monthly gain in September (an increase of 67,000 net jobs) employment growth has been sluggish and generally concentrated in part-time jobs. From April to August, employment gains averaged only 1,200 per month. The unemployment rate fell to 6.8 per cent in June (as people exited the labour force) and has since edged higher, reaching 7.0 per cent in August and September.

**Figure 2** External economic outlook



Sources: Bureau of Economic Analysis and Parliamentary Budget Officer.

Global economic activity is evolving at a lacklustre pace. In its October 2016 World Economic Outlook, the International Monetary Fund (IMF) revised down its forecast of global growth by 0.1 percentage points in 2016 and 2017 from its April outlook, citing a more subdued performance in advanced economies. The IMF also expects interest rates in advanced economies to remain lower for longer, reflecting sluggish growth and low inflation.

The outlook for Canadian exports remains challenging. We project that the U.S. economy will expand by 1.5 per cent in 2016 and 2.2 per cent in 2017 which is lower than projected in April. Lower growth in 2016 is due to weaker exports and a larger energy-related pullback in business investment.

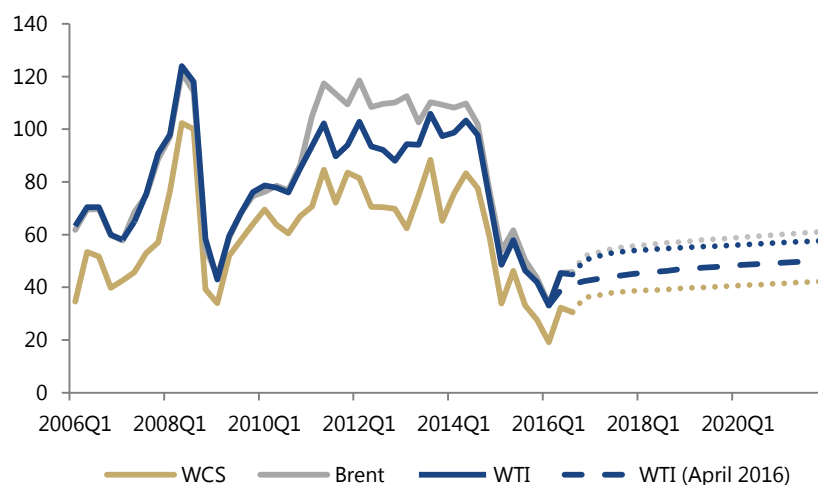
We now assume that the Federal Reserve will delay its next interest rate increase to December 2016 compared to our April assumption of a September increase.

Over 2018 to 2021, we project U.S. growth to average 2.0 per cent annually, which is 0.1 percentage points lower than our April report, reflecting a weaker outlook for exports and labour productivity. We continue to expect consumer spending and residential construction, which have lower import content than business investment, to drive growth over the medium term.

We have revised down our U.S. neutral rate assumption by 25 basis points and our term premium assumption by 30 basis points. Our long-term assumptions for U.S. 3-month treasury bill and ten-year government bond rates are now 3.2 per cent and 4.0 per cent, respectively.<sup>5</sup>

**Figure 3 Oil price projection**

*Crude oil prices, US\$ per barrel*



Sources: Baytex Energy Corp.; Bloomberg L.P.; U.S. Energy Information Administration; and Parliamentary Budget Officer.

Note: WTI refers to West Texas Intermediate; WCS refers to Western Canadian Select. The projection period covers 2016Q4 to 2021Q4. Projected oil prices are based on average futures prices from 3 to 13 October 2016.

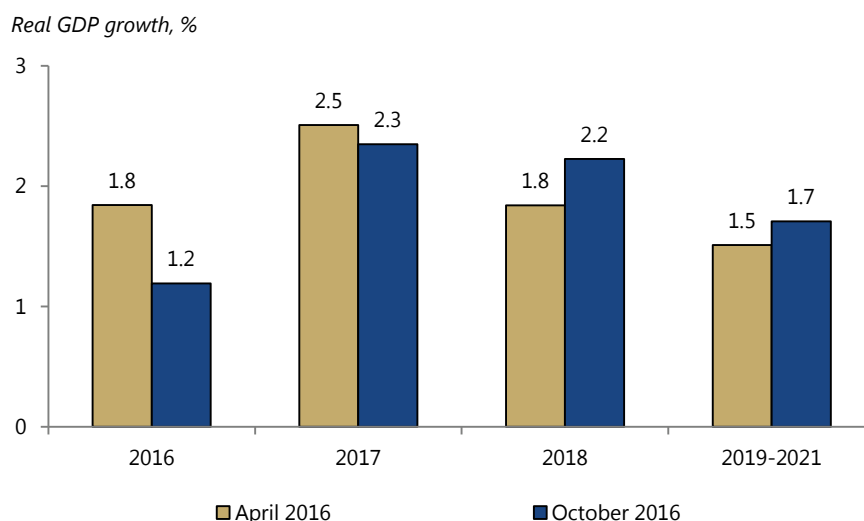
PBO's outlook for crude oil prices has improved since April. After falling below US\$30 per barrel in January and February, West Texas Intermediate (WTI) crude prices recovered to around US\$46 per barrel, on average, since May.

On 28 September, the Organization of the Petroleum Exporting Countries (OPEC) announced an agreement to limit production for the first time in eight years. Oil spot prices have since increased US\$4 per barrel in response to the OPEC announcement with futures prices gaining slightly less, on average, out to 2021.

Based on recent futures prices, we project WTI oil prices to gradually increase to US\$58 per barrel by the end of 2021. This is about US\$7 per barrel higher, on average, than our April outlook for WTI crude.

PBO's projection of the Bank of Canada's commodity price index is 5.5 per cent higher, on average, over the projection horizon compared to our April 2016 outlook. This increase is driven by higher oil prices which have offset the recent weakness in agricultural commodity prices.

**Figure 4** Canadian economic outlook



Sources: Statistics Canada and Parliamentary Budget Officer.

We expect real GDP growth to rebound from 1.2 per cent in 2016 to 2.3 per cent in 2017 and 2.2 per cent in 2018 as federal fiscal measures and monetary stimulus boost domestic demand. We assume that the Bank of Canada will maintain its policy rate at ½ per cent until the second quarter of 2018. Economic growth is then projected to shift lower, as growth in business investment and exports moderates.

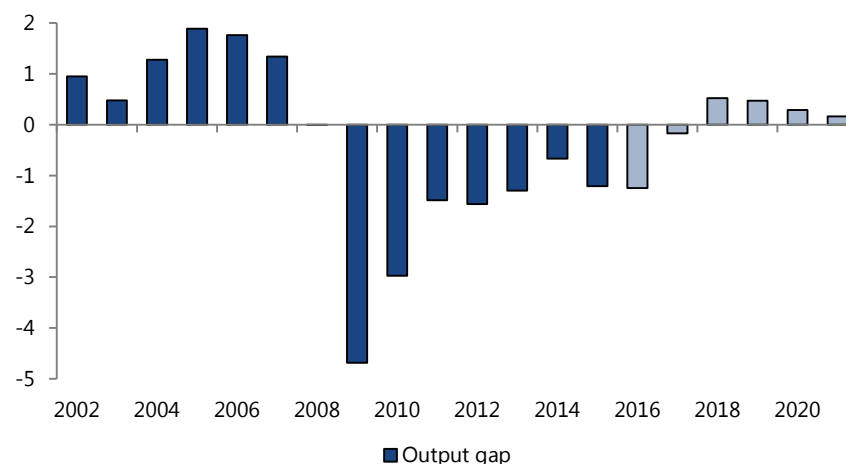
On balance, our outlook for the Canadian economy is unchanged from April, as weaker growth in the near term is offset by stronger growth over the medium term. As a result, real GDP growth is the same, on average, at 1.8 per cent annually over 2016 to 2021. However, compared to our April outlook, we anticipate a more limited shift in real GDP away from consumer spending and housing toward exports and business investment.

Compared to our April outlook, real GDP growth in 2016 has been revised down from 1.8 per cent to 1.2 per cent. This revision is largely unrelated to the Fort McMurray wildfire and reflects significantly weaker-than-expected growth in non-energy exports in the second quarter. However, unlike the direct impact of the Fort McMurray wildfire, we do not expect the weakness in non-energy exports to be reversed over subsequent quarters.

Real GDP growth over 2018 to 2021 has been revised up by 0.2 percentage points annually, on average. This revision stems from increased subnational government spending as well as additional monetary stimulus and a lower term premium.<sup>6</sup> See Appendix A for the detailed summary of the economic outlook.

**Figure 5 The output gap**

*Real GDP relative to potential GDP, % difference*



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The projection period covers 2016 to 2021.

Based on PBO estimates, the Canadian economy has remained below its level of potential GDP since late 2008. With the expected rebound in growth, we project that real GDP will rise above potential in the second half of 2017.

However, this modest overshoot reflects a temporary slowdown in potential GDP growth mainly due to the sharp declines in business investment over 2015 and the first half of 2016. Potential GDP growth is projected to slow temporarily from 1.7 per cent in early 2015 to 1.4 per cent, on average, through 2018. Had potential GDP growth remained at 1.7 per cent over this period, the economy (all else equal) would have remained below its potential through 2018 instead of overshooting.

Although we project real GDP to rise above potential GDP, inflationary pressures remain well contained. Core inflation is projected to remain steady at 2 per cent over 2017 to 2021.

Over the period 2016 to 2021, potential GDP growth is projected to average 1.6 per cent annually, the same as projected in our April outlook.

**Table 1**    **Nominal GDP comparison**

<i>Nominal GDP levels, \$ billions</i>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
PBO October 2016	2,017	2,117	2,208	2,291	2,377	2,467
PBO April 2016	2,041	2,135	2,223	2,305	2,388	2,475
difference	-24	-19	-15	-13	-11	-7
PBO October 2016	2,017	2,117	2,208	2,291	2,377	-
Budget 2016 planning assumption	1,991	2,084	2,176	2,268	2,362	-
difference	26	33	32	24	15	-

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Nominal GDP levels from PBO's April 2016 projection and the Budget 2016 planning assumption have been adjusted for revisions to 2015 levels.

PBO's projection reflects the view that possible upside and downside outcomes are, broadly speaking, equally likely. Our projection therefore takes into account the balance of risks, whether to the upside or downside.

Over the period 2016 to 2021, we project nominal GDP growth (that is, real GDP growth plus GDP inflation) to average 3.7 per cent annually, with real GDP growth averaging 1.8 per cent and GDP inflation averaging 1.9 per cent.

Average annual nominal GDP growth of 3.7 per cent over 2016 to 2021 is only marginally lower than the 3.8 per cent we projected in April. This revision reflects weaker GDP inflation in 2016. Adjusted for historical revisions, the level of nominal GDP is, on average, \$15 billion (0.7 per cent) lower per year over 2016 to 2021 compared to April.

Relative to the Budget 2016 planning assumption for nominal GDP, PBO's projection is, on average, \$26 billion (1.2 per cent) higher per year over 2016 to 2020. This difference has narrowed from \$40 billion (1.8 per cent) per year, on average, projected in our April report. The \$40 billion average difference was equivalent to the Government's annual adjustment to the private sector forecast of nominal GDP in Budget 2016. See Appendix B for a comparison of PBO and Budget 2016 economic outlooks.

In our 6 April 2016 post-budget report, we judged that based on the past performance of the private sector forecast, the Government's \$40 billion adjustment in 2016 and 2017 was "excessive" and actual outcomes—not revised forecasts—for nominal GDP in these two years would likely exceed the levels used for planning purposes. We would caution that, to date, Statistics Canada has released only the first two quarters of nominal GDP data for 2016. That said, despite downward revisions, our projected levels for 2016 and 2017 remain above the Government's planning assumptions.

**Figure 6 Interest rate projection**



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The projection period covers 2016Q4 to 2021Q4.

In the near term, we expect short-term interest rates to remain close to current levels as the Bank of Canada maintains its policy rate at  $\frac{1}{2}$  per cent until the second quarter of 2018. The 3-month treasury bill rate is then expected to track the increase in the Bank of Canada's policy rate, rising from near-historic lows to 3.1 per cent by the end of 2021.

Similar to the experience in the U.S., long-term interest rates in Canada declined over the first three quarters of 2016. Over the projection horizon, we expect the 10-year Government of Canada benchmark bond rate to rise—from its historic low—in step with U.S. long-term rates and the Canadian 3-month treasury bill rate, reaching 3.8 per cent by the end of 2021.

Compared to our April outlook, short- and long-term interest rates in Canada are lower. The downward revision to our projection of the 3-month treasury bill rate reflects a delay in the Bank of Canada's "lift off" (from 2017Q4 in our April outlook to 2018Q2), as well as a 25-basis point reduction in our neutral rate assumption from  $3\frac{1}{2}$  per cent to  $3\frac{1}{4}$  per cent.<sup>7</sup> By the end of 2021, the 3-month treasury bill rate is 35 basis points lower than our April projection.

The downward revision to our projection of the 10-year government bond rate also reflects the 25-basis point reduction in our neutral rate assumption as well as a 30-basis point reduction in our term premium assumption, bringing it into line with our assumptions for U.S. interest rates.<sup>8</sup> By the end of 2021, the 10-year government bond rate is 65 basis points lower than our April projection.

# Fiscal Outlook

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**Table 2** 2015-16 financial results

<i>\$ billions</i>	<b>Actual</b>	<b>PBO</b>	<b>Finance Canada</b>
Revenues	295.5	294.8	291.2
Program expenses	270.8	268.7	270.9
Public debt charges	25.6	25.4	25.7
<b>Budgetary balance</b>	<b>-1.0</b>	<b>0.7</b>	<b>-5.4</b>
<b>Federal debt (% of GDP)</b>	<b>31.1</b>	<b>30.9</b>	<b>31.2</b>

Sources: Finance Canada and Parliamentary Budget Officer.

The deficit in 2015-16 was \$1.0 billion. PBO's April 2016 Economic and Fiscal Outlook projected a \$0.7 billion surplus for 2015-16, \$1.7 billion higher than the actual deficit.

Compared to projected results, actual revenues, program expenses and public debt charges were slightly higher than PBO's forecast (\$0.7 billion, \$2.1 billion and \$0.2 billion, respectively). Revenues were principally higher due to personal income tax receipts, \$3.1 billion greater than projected. In our January 2016 report, PBO flagged the upside risk of high-income individuals choosing to "pull forward" income and pay tax at the 2015 rate of 29 per cent, before the Government introduced its new 33 per cent bracket on income above \$200,000.<sup>9</sup> Program expenses were higher because of direct program expenses, \$2.1 billion greater than forecast.

Budget 2016 forecast a \$5.4 billion deficit in 2015-16. The \$4.4 billion difference is primarily explained by higher-than-projected revenues, which were \$4.3 billion greater than originally forecast. This is attributable to higher corporate income tax (\$2.6 billion) and personal income tax (\$2.2 billion) revenues, partially offset by lower Crown corporation receipts. Program expenses and public debt charges were also marginally lower than forecast (\$0.1 billion each).

In April, the Government estimated that its new tax and spending measures would cost \$3.9 billion in 2015-16. This was primarily attributable to the Government's decisions to enrich Veteran's Benefits (\$3.7 billion) and roll-back public sector sick leave reforms (\$0.9 billion). Absent these new initiatives, the Government would have reported a \$2.9 billion surplus in 2015-16.

**Table 3** Summary of the fiscal outlook

<i>\$ billions</i>	<b>Forecast</b>						
	<b>2015- 2016</b>	<b>2016- 2017</b>	<b>2017- 2018</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>
Budgetary revenues	295.5	292.8	304.7	317.2	331.6	346.4	362.0
Program expenses	270.8	291.3	305.2	308.9	314.7	324.2	336.4
Public debt charges	25.6	24.0	24.5	26.4	29.9	32.9	35.0
Total expenses	296.4	315.2	329.7	335.3	344.6	357.0	371.4
<b>Budgetary balance</b>	<b>-1.0</b>	<b>-22.4</b>	<b>-24.9</b>	<b>-18.2</b>	<b>-13.0</b>	<b>-10.6</b>	<b>-9.4</b>
<b>Federal debt (% of GDP)</b>	<b>31.1</b>	<b>31.7</b>	<b>31.3</b>	<b>30.9</b>	<b>30.3</b>	<b>29.7</b>	<b>29.0</b>

Sources: Finance Canada and Parliamentary Budget Officer.

PBO projects that the budgetary deficit will be \$22.4 billion in 2016-17. This is a \$1.9 billion larger deficit than we projected in April. The larger deficit is mainly attributable to lower projected income tax revenues, especially from corporations.

Over the medium term, we forecast a sequence of shrinking deficits. Currently weak income tax revenue growth should strengthen over the medium term as the economy recovers and corporate profits rebound from temporary declines in the spring of 2016.

We have also revised down our outlook for short- and long-term interest rates. This translates into lower spending on public debt charges, as the Government continues to refinance debt at even lower rates than we previously projected throughout the medium-term horizon. We continue to assume that federal fiscal measures are fully implemented as announced in Budget 2016.

Altogether, we forecast slightly smaller deficits in 2018-19 and beyond compared to our April outlook. By 2021-22, our deficit forecast reaches \$9.4 billion (0.4 per cent of GDP).

See Appendices C and D for the detailed summary of the fiscal outlook and Appendix E for the comparison to our April 2016 fiscal outlook.

**Table 4 Outlook for revenues**

<i>\$ billions</i>	<b>Forecast</b>						
	<b>2015- 2016</b>	<b>2016- 2017</b>	<b>2017- 2018</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>
<b>Income taxes</b>							
Personal income tax	144.9	146.0	153.6	160.9	169.2	177.8	186.2
Corporate income tax	41.4	37.9	40.4	41.9	43.7	45.6	47.7
Non-resident income tax	6.5	6.3	6.6	6.9	7.2	7.6	7.9
Total income tax	192.8	190.2	200.5	209.7	220.1	231.0	241.8
<b>Excise taxes/duties</b>							
Goods and Services Tax	33.0	34.0	35.4	36.5	38.1	39.6	41.3
Custom import duties	5.4	5.2	5.2	5.2	5.4	5.6	5.9
Other excise taxes/duties	11.5	11.1	11.3	11.2	11.2	11.2	11.4
Total excise taxes/duties	49.8	50.3	51.9	53.0	54.7	56.4	58.5
<b>EI premium revenues</b>	23.1	23.7	21.8	22.0	22.7	23.4	24.3
<b>Other revenues</b>	29.7	28.7	30.5	32.5	34.0	35.6	37.3
<b>Total budgetary revenues</b>	295.5	292.8	304.7	317.2	331.6	346.4	362.0

Sources: Finance Canada and Parliamentary Budget Officer.

Compared to our April outlook, total revenues are projected to be lower over the medium-term horizon. This reflects downward revisions to personal and corporate income tax bases, as well as lower "other" revenues.<sup>10</sup>

We have revised down our outlook for personal income tax revenues primarily due to our weaker outlook for nominal incomes. Lower tax yield forecasts in 2016-17 and a smaller tax base owing to new tax exemptions on children's benefits also contribute to lower personal income tax revenues.<sup>11</sup>

Corporate income tax revenues are projected to decline by \$3.5 billion in 2016-17, reflecting a weaker corporate profit outlook in early 2016. We do not expect these revenue losses to persist. Our profit outlook rebounds over the medium term, as we anticipate even higher corporate tax yields than shown in previous forecasts.

We have revised our customs revenue forecast upward by roughly \$400 million per year. Customs import duties yields are stronger than initially anticipated following the withdrawal of Canada's General Preferential Tariff with major trading partners.

Employment Insurance (EI) premium revenues are projected to decline in 2017 when premium rates are lowered from \$1.88 (per \$100 of insurable earnings) to the new break-even rate of \$1.63.

Our forecast of other revenues is \$1.2 billion lower per year compared to our April outlook. This reflects Crown corporations' lower profit projections and lower interest related returns over the medium term.

**Table 5 Outlook for expenses**

<i>\$ billions</i>	<b>Forecast</b>						
	<b>2015- 2016</b>	<b>2016- 2017</b>	<b>2017- 2018</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>
<b>Major transfers to persons</b>							
Elderly benefits	45.5	47.8	50.8	53.7	56.8	60.1	63.6
Employment Insurance	19.4	21.0	21.7	21.3	21.5	22.4	23.3
Children's benefits	18.0	21.5	22.6	22.2	21.9	21.6	21.3
<b>Total</b>	<b>82.9</b>	<b>90.4</b>	<b>95.1</b>	<b>97.2</b>	<b>100.3</b>	<b>104.1</b>	<b>108.2</b>
<b>Major transfers to other levels of government</b>	65.9	68.7	70.6	72.6	75.0	77.9	80.7
<b>Direct program expenses</b>	122.1	132.1	139.5	139.1	139.4	142.2	147.5
<b>Public debt charges</b>	25.6	24.0	24.5	26.4	29.9	32.9	35.0
<b>Total expenses</b>	<b>296.4</b>	<b>315.2</b>	<b>329.7</b>	<b>335.3</b>	<b>344.6</b>	<b>357.0</b>	<b>371.4</b>

Sources: Finance Canada and Parliamentary Budget Officer.

Compared to our April forecast, total expenses are lower throughout the medium-term forecast by roughly 0.1 per cent of GDP, or \$1.7 billion per year. We expect that total expenses will decline from 15.6 per cent of GDP in 2016-17 to 15.1 per cent by 2021-22.

A lower medium-term interest rate forecast leads to lower public debt charges over the projection period. Our lower interest rate forecast also results in a higher provision for personnel pension benefits, translating to a roughly \$800 million annual increase in direct program expenses.<sup>12</sup>

The remainder of our spending forecast is nearly unchanged from April. Slightly revised spending projections reflect new program data and our updated economic outlook.

Specifically, we project that elderly benefits will be \$600 million lower per year. This revision reflects fewer program beneficiaries, as well as lower maximum payments over the medium term, consistent with a lower inflation outlook.

Our projection for Employment Insurance benefits is relatively unchanged since April. Minor revisions mainly reflect recent outturn data.

Similarly, our forecast of children's benefits is unchanged except for minor economic data updates. Spending on children's benefits is projected to decline in nominal terms over 2018-19 to 2021-22 because benefits are not indexed to inflation.<sup>13</sup>

**Table 6 Outlook for EI premiums and the EI Operating Account**

\$ billions	Forecast						
	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022
<b>Revenues</b>							
Premium revenues	23.1	23.7	21.8	22.0	22.7	23.4	24.3
Contributions for federal employees	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Total	23.5	24.1	22.2	22.4	23.1	23.9	24.8
<b>Expenses</b>							
Benefits	19.4	21.0	21.7	21.3	21.5	22.4	23.3
Administration expenses	1.7	1.7	1.7	1.7	1.8	1.9	1.9
Total	21.1	22.7	23.4	23.0	23.3	24.2	25.1
<b>Annual balance</b>	<b>2.4</b>	<b>1.3</b>	<b>-1.2</b>	<b>-0.6</b>	<b>-0.2</b>	<b>-0.3</b>	<b>-0.4</b>
Cumulative balance	1.6	2.9	1.7	1.1	0.9	0.5	0.2
	Legislated			Forecast			
(per \$100 of insurable earnings)	2015	2016	2017	2018	2019	2020	2021
Premium rate (PBO)	1.88	1.88	1.63	1.58	1.58	1.58	1.58
Premium rate (Chief Actuary)	1.88	1.88	1.63	1.63	1.63	1.63	1.63

Sources: Office of the Chief Actuary; Finance Canada; and Parliamentary Budget Officer.

Employment Insurance program revenues and expenses are consolidated and managed within the EI Operating Account.

Starting in 2017, EI premium rates will be set using a new mechanism. The EI premium rate will be chosen each year to generate just enough premium revenue to balance the EI Operating Account over a seven-year period. We forecast that the EI Operating Account will have a \$3.2 billion surplus at the beginning of 2017.

Under law, the break-even rate must be set such that this accumulated surplus will be exhausted over the 7-year forward horizon.

PBO estimates that the 7-year break-even rate would be \$1.59 in 2017 through 2023. The 2017 Actuarial Report on the Employment Insurance Premium Rate forecasts a 7-year break-even rate of \$1.63.<sup>14</sup>

The Government has set the 2017 rate at \$1.63. PBO estimates this rate generates \$600 million in excess EI premium revenue in 2017, requiring a subsequent \$1.58 rate to balance the EI Operating Account by 2023.

Our estimate of the break-even rate differs from the Chief Actuary's estimate. This is principally due to different projections of the number of unemployed, the number of program beneficiaries and estimated operational parameters of EI program administration.

**Table 7** Outlook for the budgetary balance compared to  
Budget 2016

<i>\$ billions</i>	Forecast						
	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021	2021- 2022
<b>Budgetary balance</b>							
PBO (October 2016)	-1.0	-22.4	-24.9	-18.2	-13.0	-10.6	-9.4
Budget (April 2016)	-5.4	-29.4	-29.0	-22.8	-17.7	-14.3	N/A
Difference	4.4	7.0	4.1	4.6	4.7	3.7	N/A

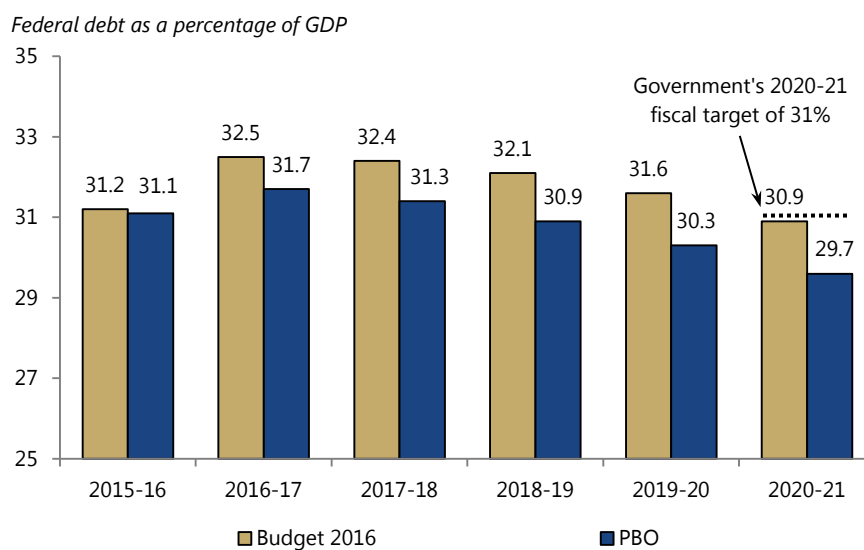
Sources: Finance Canada and Parliamentary Budget Officer.

PBO's forecast of the budgetary deficit is \$4.8 billion lower, on average, than Budget 2016 over 2016-17 to 2020-21. This difference is roughly in line with the Budget 2016 forecast adjustment, which removed \$40 billion from GDP—equivalent to \$6 billion in revenues—in each year of the Government's planning horizon.

Absent the Government's forecast adjustment, PBO's outlook for the budgetary balance would be roughly in line with the projection in Budget 2016 over 2016-17 to 2020-21.

See Appendix F for a comparison of PBO and Budget 2016 fiscal outlooks.

**Figure 7** Federal debt-to-GDP projection



Sources: Finance Canada and Parliamentary Budget Officer.

In Budget 2016, the Government committed to reducing the federal debt to-GDP ratio to a lower level over a five-year period ending in 2020-21. This translates into a fiscal anchor of 31 per cent debt-to-GDP (or lower) in 2020-21. Based on PBO's economic and fiscal outlook, the Government is on track to reach its target two years ahead of schedule.

Under current tax and spending plans, we project that the federal debt-to-GDP ratio will be 29.7 per cent in 2020-21, 1.3 percentage points of GDP lower than the Government's medium-term fiscal target. The last time the federal debt-to-GDP ratio was below 31 per cent was in 2007-08 and 2008-09.

Our projection indicates that the Government has flexibility within its current fiscal plan to reach its medium-term debt-to-GDP target.

# Appendices

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## A: Detailed economic outlook

<i>% unless otherwise indicated</i>	2016	2017	2018	2019	2020	2021
<b>Real GDP growth</b>						
April 2016	1.8	2.5	1.8	1.5	1.5	1.6
October 2016	1.2	2.3	2.2	1.7	1.7	1.7
<b>Potential GDP growth</b>						
April 2016	1.3	1.3	1.6	1.7	1.8	1.8
October 2016	1.2	1.2	1.5	1.7	1.9	1.9
<b>GDP inflation</b>						
April 2016	1.0	2.1	2.2	2.2	2.1	2.0
October 2016	0.5	2.5	2.1	2.0	2.0	2.0
<b>Nominal GDP growth</b>						
April 2016	2.9	4.6	4.1	3.7	3.6	3.6
October 2016	1.7	4.9	4.3	3.8	3.8	3.8
<b>Nominal GDP (\$ billions)</b>						
April 2016	2,041	2,135	2,223	2,305	2,388	2,475
October 2016	2,017	2,117	2,208	2,291	2,377	2,467
<b>3-month treasury rate</b>						
April 2016	0.5	0.6	2.0	3.0	3.3	3.4
October 2016	0.5	0.5	1.1	2.3	2.8	3.1
<b>10-year government bond rate</b>						
April 2016	1.6	2.2	3.1	3.8	4.1	4.4
October 2016	1.3	1.7	2.3	3.0	3.5	3.7
<b>Exchange rate (US\$/C\$)</b>						
April 2016	75.3	75.1	75.1	75.6	76.0	76.3
October 2016	75.9	77.2	77.2	77.1	77.2	77.3
<b>Unemployment rate</b>						
April 2016	7.1	6.6	6.3	6.2	6.2	6.2
October 2016	7.0	6.8	6.4	6.3	6.2	6.1
<b>CPI inflation</b>						
April 2016	1.8	2.2	2.2	2.1	2.1	2.0
October 2016	1.5	2.0	2.0	2.1	2.1	2.0
<b>U.S. real GDP growth</b>						
April 2016	2.1	2.3	2.2	2.1	2.1	2.1
October 2016	1.5	2.2	2.1	2.0	2.0	1.9
<b>WTI oil price (\$US)</b>						
April 2016	39	44	46	48	49	50
October 2016	43	53	55	56	56	57

Sources: Statistics Canada; Bureau of Economic Analysis; Department of Energy; and Parliamentary Budget Officer.

Note: April nominal GDP levels have been adjusted for historical revisions.

## B: PBO and Budget 2016 economic outlook comparison

<i>% unless otherwise indicated</i>	2015	2016	2017	2018	2019	2020
<b>Real GDP growth</b>						
Budget 2016	1.2	1.4	2.2	2.2	2.0	1.9
PBO October 2016	1.1	1.2	2.3	2.2	1.7	1.7
<b>GDP inflation</b>						
Budget 2016	-0.4	1.0	2.4	2.1	2.1	2.1
PBO October 2016	-0.6	0.5	2.5	2.1	2.0	2.0
<b>Nominal GDP growth</b>						
Budget 2016	0.7	2.4	4.6	4.3	4.2	4.1
PBO October 2016	0.5	1.7	4.9	4.3	3.8	3.8
<b>Nominal GDP (\$ billions)</b>						
Budget 2016 (survey)*	1,983	2,031	2,124	2,216	2,308	2,402
PBO October 2016	1,983	2,017	2,117	2,208	2,291	2,377
<b>3-month treasury rate</b>						
Budget 2016	0.5	0.5	0.7	1.6	2.4	2.7
PBO October 2016	0.5	0.5	0.5	1.1	2.3	2.8
<b>10-year government bond rate</b>						
Budget 2016	1.5	1.6	2.3	3.0	3.4	3.6
PBO October 2016	1.5	1.3	1.7	2.3	3.0	3.5
<b>Exchange rate (US\$/C\$)</b>						
Budget 2016	78.3	72.1	75.9	79.1	81.5	83.1
PBO October 2016	78.2	75.9	77.2	77.2	77.1	77.2
<b>Unemployment rate</b>						
Budget 2016	6.9	7.1	6.9	6.5	6.4	6.3
PBO October 2016	6.9	7.0	6.8	6.4	6.3	6.2
<b>CPI inflation</b>						
Budget 2016	1.1	1.6	2.0	2.0	2.0	2.0
PBO October 2016	1.1	1.5	2.0	2.0	2.1	2.1
<b>U.S. real GDP growth</b>						
Budget 2016	2.4	2.3	2.4	2.4	2.2	2.1
PBO October 2016	2.6	1.5	2.2	2.1	2.0	2.0
<b>WTI oil price (\$US)</b>						
Budget 2016	49	40	52	59	63	63
PBO October 2016	49	43	53	55	56	56

Sources: Finance Canada; Statistics Canada; Bureau of Economic Analysis; Department of Energy; and Parliamentary Budget Officer.

Note: Budget 2016 nominal GDP levels from the February 2016 private sector survey have been adjusted for revisions to 2015 levels.

## C: Detailed fiscal outlook

<i>\$ billions</i>	<b>2015- 2016</b>	<b>2016- 2017</b>	<b>2017- 2018</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>
<b>Income taxes</b>							
Personal income tax	144.9	146.0	153.6	160.9	169.2	177.8	186.2
Corporate income tax	41.4	37.9	40.4	41.9	43.7	45.6	47.7
Non-resident income tax	6.5	6.3	6.6	6.9	7.2	7.6	7.9
Total income tax	192.8	190.2	200.5	209.7	220.1	231.0	241.8
<b>Excise taxes/duties</b>							
Goods and Services Tax	33.0	34.0	35.4	36.5	38.1	39.6	41.3
Custom import duties	5.4	5.2	5.2	5.2	5.4	5.6	5.9
Other excise taxes/duties	11.5	11.1	11.3	11.2	11.2	11.2	11.4
Total excise taxes/duties	49.8	50.3	51.9	53.0	54.7	56.4	58.5
<b>EI premium revenues</b>	23.1	23.7	21.8	22.0	22.7	23.4	24.3
<b>Other revenues</b>	29.7	28.7	30.5	32.5	34.0	35.6	37.3
<b>Total budgetary revenues</b>	295.5	292.8	304.7	317.2	331.6	346.4	362.0
<b>Major transfers to persons</b>							
Elderly benefits	45.5	47.8	50.8	53.7	56.8	60.1	63.6
Employment Insurance benefits	19.4	21.0	21.7	21.3	21.5	22.4	23.3
Children's benefits	18.0	21.5	22.6	22.2	21.9	21.6	21.3
Total	82.9	90.4	95.1	97.2	100.3	104.1	108.2
<b>Major transfers to other levels of government</b>							
Canada Health Transfer	34.0	36.1	37.2	38.3	39.7	41.4	43.0
Canada Social Transfer	13.0	13.3	13.7	14.2	14.6	15.0	15.5
Equalization	17.3	17.8	18.3	18.9	19.6	20.4	21.2
Territorial Formula Financing	3.6	3.7	3.8	3.9	4.1	4.3	4.4
Gas Tax Fund	2.0	2.1	2.1	2.2	2.2	2.3	2.3
Other fiscal arrangements	-4.0	-4.3	-4.6	-4.8	-5.1	-5.5	-5.8
Total	65.9	68.7	70.6	72.6	75.0	77.9	80.7
<b>Direct program expenses</b>	122.1	132.1	139.5	139.1	139.4	142.2	147.5
<b>Public debt charges</b>	25.6	24.0	24.5	26.4	29.9	32.9	35.0
<b>Total expenses</b>	296.4	315.2	329.7	335.3	344.6	357.0	371.4
<b>Budgetary balance</b>	-1.0	-22.4	-24.9	-18.2	-13.0	-10.6	-9.4
<b>Structural budgetary balance</b>	8.6	-12.1	-25.0	-21.4	-15.9	-12.6	-10.5
<b>Federal debt</b>	616.0	638.4	663.3	681.5	694.5	705.1	714.5

Sources: Finance Canada and Parliamentary Budget Officer.

## D: Detailed fiscal outlook (per cent of GDP)

<i>% of GDP</i>	<b>2015- 2016</b>	<b>2016- 2017</b>	<b>2017- 2018</b>	<b>2018- 2019</b>	<b>2019- 2020</b>	<b>2020- 2021</b>	<b>2021- 2022</b>
<b>Income taxes</b>							
Personal income tax	7.3	7.2	7.3	7.3	7.4	7.5	7.5
Corporate income tax	2.1	1.9	1.9	1.9	1.9	1.9	1.9
Non-resident income tax	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Total income tax	9.7	9.4	9.5	9.5	9.6	9.7	9.8
<b>Excise taxes/duties</b>							
Goods and Services Tax	1.7	1.7	1.7	1.7	1.7	1.7	1.7
Custom import duties	0.3	0.3	0.2	0.2	0.2	0.2	0.2
Other excise taxes/duties	0.6	0.6	0.5	0.5	0.5	0.5	0.5
Total excise taxes/duties	2.5	2.5	2.5	2.4	2.4	2.4	2.4
<b>EI premium revenues</b>	1.2	1.2	1.0	1.0	1.0	1.0	1.0
<b>Other revenues</b>	1.5	1.4	1.4	1.5	1.5	1.5	1.5
<b>Total budgetary revenues</b>	14.9	14.5	14.4	14.4	14.5	14.6	14.7
<b>Major transfers to persons</b>							
Elderly benefits	2.3	2.4	2.4	2.4	2.5	2.5	2.6
Employment Insurance benefits	1.0	1.0	1.0	1.0	0.9	0.9	0.9
Children's benefits	0.9	1.1	1.1	1.0	1.0	0.9	0.9
Total	4.2	4.5	4.5	4.4	4.4	4.4	4.4
<b>Major transfers to other levels of government</b>							
Canada Health Transfer	1.7	1.8	1.8	1.7	1.7	1.7	1.7
Canada Social Transfer	0.7	0.7	0.6	0.6	0.6	0.6	0.6
Equalization	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Territorial Formula Financing	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Gas Tax Fund	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Other fiscal arrangements	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Total	3.3	3.4	3.3	3.3	3.3	3.3	3.3
<b>Direct program expenses</b>	6.2	6.6	6.6	6.3	6.1	6.0	6.0
<b>Public debt charges</b>	1.3	1.2	1.2	1.2	1.3	1.4	1.4
<b>Total expenses</b>	14.9	15.6	15.6	15.2	15.0	15.0	15.1
<b>Budgetary balance</b>	0.0	-1.1	-1.2	-0.8	-0.6	-0.4	-0.4
<b>Federal debt</b>	31.1	31.7	31.3	30.9	30.3	29.7	29.0

Sources: Finance Canada and Parliamentary Budget Officer.

## E: Comparison to PBO's April fiscal outlook

<i>\$ billions</i> (October 2016 – April 2016)	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021
<b>Income taxes</b>						
Personal income tax	3.1	-1.0	-0.6	-0.6	-0.4	0.0
Corporate income tax	-0.2	-1.4	-0.5	0.5	0.6	0.7
Non-resident income tax	0.0	-0.2	0.0	0.0	0.0	0.0
Total income tax	2.9	-2.5	-1.2	0.0	0.2	0.7
<b>Excise taxes/duties</b>						
Goods and Services Tax	-1.0	-0.1	0.0	-0.1	-0.2	-0.2
Custom import duties	0.0	0.2	0.6	0.4	0.3	0.4
Other excise taxes/duties	-0.2	-0.1	-0.1	-0.1	0.0	0.0
Total excise taxes/duties	-1.2	0.0	0.5	0.2	0.1	0.1
<b>EI premium revenues</b>	-0.2	0.1	0.3	-0.2	0.4	0.5
<b>Other revenues</b>	-0.9	-0.5	-1.4	-1.5	-1.5	-1.2
<b>Total budgetary revenues</b>	0.6	-2.9	-1.7	-1.5	-0.8	0.2
<b>Major transfers to persons</b>						
Elderly benefits	-0.2	-0.6	-0.4	-0.5	-0.6	-0.6
Employment Insurance benefits	0.3	-0.6	-0.1	-0.2	0.0	0.7
Children's benefits	-0.1	0.1	0.2	0.2	0.2	0.3
Total	-0.1	-1.0	-0.3	-0.6	-0.4	0.4
<b>Major transfers to other levels of government</b>	0.0	0.0	0.0	0.0	-0.1	0.0
<b>Direct program expenses</b>	2.1	0.7	0.7	0.8	1.0	1.0
<b>Public debt charges</b>	0.1	-0.8	-1.4	-2.4	-3.1	-3.0
<b>Total expenses</b>	2.3	-1.0	-1.0	-2.2	-2.7	-1.7
<b>Budgetary balance</b>	-1.7	-1.9	-0.8	0.7	1.8	1.8
<b>Federal debt</b>	2.8	4.7	5.5	4.8	2.9	2.1

Source: Parliamentary Budget Officer.

## F: PBO and Budget 2016 fiscal outlook comparison

<i>\$ billions</i> (PBO – Budget 2016)	2015- 2016	2016- 2017	2017- 2018	2018- 2019	2019- 2020	2020- 2021
<b>Income taxes</b>						
Personal income tax	2.2	2.1	-0.1	0.0	0.7	0.8
Corporate income tax	2.6	0.0	0.5	1.5	1.6	1.1
Non-resident income tax	0.2	0.0	0.3	0.3	0.3	0.4
Total income tax	5.0	2.2	0.6	1.7	2.6	2.3
<b>Excise taxes/duties</b>						
Goods and Services Tax	-0.1	0.5	0.2	-0.2	-0.2	-0.4
Custom import duties	0.2	0.2	0.7	0.5	0.6	0.7
Other excise taxes/duties	0.0	0.0	0.1	0.0	0.0	0.0
Total excise taxes/duties	0.0	0.7	1.0	0.4	0.4	0.2
<b>EI premium revenues</b>	0.1	1.3	0.8	0.2	0.0	-0.1
<b>Other revenues</b>	-0.9	1.0	0.3	-0.4	-0.9	-0.4
<b>Total budgetary revenues</b>	4.3	5.1	2.7	1.9	2.3	2.0
<b>Major transfers to persons</b>						
Elderly benefits	-0.1	-0.6	-0.3	-0.2	-0.1	0.0
Employment Insurance benefits	0.0	-0.1	0.1	0.0	0.0	0.3
Children's benefits	-0.1	-0.4	-0.2	-0.2	-0.2	-0.2
Total	-0.2	-1.0	-0.4	-0.5	-0.2	0.1
<b>Major transfers to other levels of government</b>						
Canada Health Transfer	0.0	0.0	0.1	-0.2	-0.5	-0.5
Canada Social Transfer	0.0	0.0	0.0	0.0	0.0	0.0
Equalization	0.0	-0.1	0.0	-0.1	-0.3	-0.3
Territorial Formula Financing	0.0	0.1	0.1	0.1	0.3	0.4
Gas Tax Fund	0.0	0.0	0.0	0.0	0.0	0.1
Other fiscal arrangements	0.0	0.1	0.1	0.2	0.2	0.1
Total	0.0	0.1	0.3	-0.1	-0.4	-0.2
<b>Direct program expenses</b>	0.1	0.8	0.7	0.8	1.1	1.1
<b>Public debt charges</b>	-0.1	-1.7	-1.9	-3.0	-2.9	-2.6
<b>Total expenses</b>	-0.2	-1.9	-1.3	-2.7	-2.4	-1.6
<b>Budgetary balance</b>	4.4	7.0	4.1	4.6	4.7	3.7
<b>Federal debt</b>	-3.3	-10.3	-14.4	-19.0	-23.7	-27.4

Sources: Finance Canada and Parliamentary Budget Officer.

# Notes

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1. Unless otherwise specified, all rates are reported at annual rates.
2. Available at: [http://www.fin.gc.ca/n16/data/16-081\\_1-eng.asp](http://www.fin.gc.ca/n16/data/16-081_1-eng.asp).
3. PBO's April 2016 *Economic and Fiscal Outlook* is available at: [http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/EFO%20April%202016/EFO\\_April\\_2016\\_EN.pdf](http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/EFO%20April%202016/EFO_April_2016_EN.pdf).
4. See pages 26 and 50 of Budget 2016. Available at: <http://www.budget.gc.ca/2016/docs/plan/budget2016-en.pdf>.
5. PBO's assumption for the U.S. neutral rate is guided by the Federal Reserve's long-run interest rate projections that were published in September 2016. Our U.S. term premium assumption of 80 basis points is based on the Congressional Budget Office's August 2016 economic projections.
6. The term premium is the additional return required for investing in longer-term government bonds instead of investing and then re-investing in shorter-term securities such as treasury bills.
7. The neutral rate is the policy interest rate "consistent with output at its potential level and inflation equal to target after the effects of all cyclical shocks have dissipated". See *The Neutral Rate of Interest in Canada*, Bank of Canada Staff Discussion Paper 2014-5: <http://www.bankofcanada.ca/wp-content/uploads/2014/09/dp2014-5.pdf>.

In April 2016, the Bank of Canada revised down its estimate of the (nominal) neutral rate in Canada from 3½ per cent to 3¼ per cent, with a range of 2¾ per cent to 3¾ per cent. See footnote 5 in the Bank of Canada's April 2016 Monetary Policy Report: <http://www.bankofcanada.ca/wp-content/uploads/2016/04/mpr-2016-04-13.pdf>.

Consistent with historical averages, PBO's long-term assumption for the 3-month treasury bill rate is set 5 basis points lower than the neutral rate at 3.2 per cent.

8. In our April 2016 report, the long-term assumption for the 10-year Government of Canada bond rate was set 110 basis points above the 3-month treasury bill rate at 4.55 per cent.

Consistent with our U.S. term premium assumption, which is based on the Congressional Budget Office's projection, and in light of recent experience, we have revised down our ultimate term premium assumption from 110 basis points to 80 basis points. Combined with the downward revision to the long-term assumption for the 3-month treasury bill rate (from 3.45 per cent to 3.20 per cent), this lowers our long-term assumption for the 10-year bond rate from 4.55 per cent to 4.0 per cent.

9. More details pertaining to tax forestalling are provided in PBO's 21 January 2016 report *The Fiscal and Distributional Impact of Changes to the Federal Personal Income Tax Regime*. Available at: [http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/PIT/PIT\\_EN.pdf](http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/PIT/PIT_EN.pdf).
10. Other revenues include items such as revenues/net incomes from Crown corporations; returns on investment; proceeds from the sales of goods and services; and, foreign exchange revenues.
11. Our revenue forecast accounts for proposed changes to the Canada Pension Plan (CPP). Altogether, we estimate that these policy changes would reduce personal income tax revenues by: \$25 million in 2018-19, \$200 million in 2019-20, \$350 million in 2020-21 and \$600 million in 2021-22.

We have also incorporated the projected increase in CPP contribution rates over 2019 to 2021. We estimate that the increase in contribution rates, rising from 9.9 per cent in 2018 to 10.9 per cent in 2021, will increase CPP revenues by: \$1.6 billion in 2019, \$3.4 billion in 2020 and \$5.9 billion in 2021.

The enhanced CPP retirement benefits paid over this period are not financially material given that workers retiring between 2020 and 2021 will have only accrued partial benefits. As Finance Canada notes, "Full enhanced CPP benefits will be available after about 40 years of making contributions. Partial benefits will be available sooner and will be based on years of contributions." Available at: [http://www.fin.gc.ca/n16/data/16-113\\_3-eng.asp](http://www.fin.gc.ca/n16/data/16-113_3-eng.asp).

12. Our forecast of direct program expenses also accounts for recent changes to the Working Income Tax Benefit, as well as the consequential increase to the Government's contributions to the CPP on behalf of its employees. We estimate that the WITB enhancement will increase direct program spending by \$50 million in 2018-19 and \$225 million per year from 2019-20 to 2021-22. Available at: [http://www.fin.gc.ca/n16/data/16-113\\_3-eng.asp#a8](http://www.fin.gc.ca/n16/data/16-113_3-eng.asp#a8).
13. See PBO's 1 September 2016 report *Fiscal Analysis of Federal Children's Benefits* for detailed analysis. Available at: [http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/CCB/CCB\\_EN.pdf](http://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/2016/CCB/CCB_EN.pdf).
14. Office of the Chief Actuary, *2017 Actuarial Report on the Employment Insurance Premium Rate*. Available at: <http://www.osfi-bsif.gc.ca/Eng/Docs/EI2017.pdf>.