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SCENARIO ANALYSIS UPDATE: COVID-19 PANDEMIC AND OIL PRICE SHOCKS

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

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.

This report provides an updated scenario analysis to help parliamentarians gauge potential economic and fiscal implications of the COVID-19 pandemic and recent oil market developments.

This report incorporates announced federal budgetary measures up to and including 12 June 2020.

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Summary

PBO published its first scenario analysis of COVID-19 pandemic and oil price shocks on March 27 to help parliamentarians gauge potential economic and fiscal implications.

This report provides an updated scenario analysis that incorporates a revised economic scenario and new federal measures announced up to and including June 12, as well as updated estimates of previously announced measures.

The scenario under consideration is one of many possible outcomes. We stress that this scenario is not a forecast of the most likely outcome. It is an illustrative scenario of one possible outcome.

- We now assume that COVID-19 control measures will continue to be gradually relaxed through the third quarter as sectors of the economy are reopened.
- We assume that oil prices will continue to gradually recover from their historic lows over the remainder of the year but remain below pre-crisis levels.

Given the elevated uncertainty surrounding the economic and fiscal outlook, we maintain our focus on the near term exclusively, that is, the quarterly profile through 2020 and fiscal years 2019-20 and 2020-21.

Economic scenario

Taking into consideration Statistics Canada's estimates of monthly GDP in March and April, recent labour market performance, as well as higher oil prices, we have significantly revised our assumption regarding the impact of the COVID-19 pandemic and oil price shocks on the Canadian economy.

In our updated economic scenario, real GDP is assumed to decline by 13.5 per cent in the second quarter and then partially recover in the second half of the year, averaging growth of 7.0 per cent in the third and fourth quarters (both rates not annualized) as sectors of the economy reopen.

- For 2020, real GDP growth is assumed to be -6.8 per cent, which would be the weakest on record since the series started in 1961.
- To put this in historical perspective, the weakest growth in real GDP on record (of -3.2 per cent) was observed in 1982—roughly one half of our assumed decline.

The upward revisions to real GDP growth and GDP inflation combine to increase the level of nominal GDP—the single broadest measure of the Government's tax base—by $179 billion in 2020 compared to our April 30 economic scenario.

- Relative to a counterfactual scenario in which the COVID-19 pandemic and oil price shocks did not occur, the level of nominal GDP in 2020 would be $222 billion (9.3 per cent) lower.
- Following the gain of 290,000 (net) jobs in May, we assume that solid gains will continue over the remainder of the year.
- The employment rate (the share of the population aged 15 years and older that is employed) will reach 56.5 per cent in the fourth quarter—still well below its pre-crisis level of 61.8 per cent in February.

Fiscal scenario

Our fiscal results include $169.2 billion of federal budgetary measures in 2020-21 that has been announced as of June 12 based on Finance Canada and PBO cost estimates.

- Based on Finance Canada's March *Fiscal Monitor*, we estimate that the budget deficit in 2019-20 will amount to $23.8 billion (1.0 per cent of GDP).
- Based on our updated economic scenario and including announced federal measures, the budget deficit would increase to $256.0 billion in 2020-21 (11.8 per cent of GDP).
- The deficit in 2020-21 is only $3.8 billion higher than our previous scenario. This reflects additional measures, as well as revised estimates of previously announced measures, totalling $23.2 billion that are largely offset by the improved economic scenario.

As a share of the economy, the budget deficit in 2020-21 would be the largest on record (since the beginning of the series in 1966-67) and sit well above the historical record of 8.0 per cent of GDP observed in 1984-85.

- The rising budgetary deficit and sharply lower nominal GDP boost the federal debt-to-GDP ratio to 44.4 per cent ($962.1 billion) in 2020-21.
- The last time the federal debt-to-GDP ratio was above 44.4 per cent was in 2001-02. This level, however, still remains well below the peak (since the beginning of the series in 1966-67) of 66.6 per cent of GDP reached in 1995-96.

- Federal debt reflects the Government's "net worth" that is total liabilities less total assets. Under our current scenario, total liabilities reach $1,513.7 billion (69.9 per cent of GDP) in 2020-21 and total assets amount to $551.6 billion (25.5 per cent of GDP).

Additional fiscal measures may be required to support the economy in the coming months, resulting in increased borrowing by the Government. Moreover, after support measures are provided, fiscal *stimulus* measures may be required to ensure that the economy reaches lift-off speed, especially if consumer and business behaviour does not quickly revert back to "normal" conditions.

In the context of fiscal sustainability, it is essential to distinguish between temporary and permanent budgetary measures. To date, budgetary measures announced by the Government are not intended to be made permanent.

Recall that prior to the COVID-19 and oil price shocks, the Government's balance sheet was healthy. Given the temporary nature of budgetary measures, credit market access at historically low rates, and looking to historical experience, indicate that the Government could undertake additional borrowing if required.

Once the budgetary measures expire and the economy recovers, the federal debt-to-GDP ratio should stabilize and then start declining under pre-crisis fiscal policy settings. However, should some of the measures be extended or made permanent, the federal debt ratio could continue to rise sharply, resulting in an unsustainable trajectory over the longer term.

1. Key assumptions and judgements

Our updated scenario analysis includes material revisions to key assumptions and judgements in our previous report.[1]

The scenario under consideration is one of many possible outcomes. We stress that this scenario is not a forecast of the most likely outcome. It is an illustrative scenario of one possible outcome. As more data and information become available, PBO will update its scenario analysis as necessary.

In our updated scenario analysis, we assume that COVID-19 control measures will continue to be gradually relaxed through the third quarter as sectors of the economy are reopened. Further, we assume that there will not be a significant second wave of infections during the reopening process.

Crude oil prices have rebounded from their historic lows in April as production cuts from non-OPEC+ countries (that is, countries outside the Organization of the Petroleum Exporting Countries and its partners), as well as OPEC+ efforts to stabilize the oil market, have limited global oil supply. In addition, following the easing of lockdown-related restrictions, stronger-than-expected demand in OECD countries has helped lift oil prices.

Based on recent data and developments in oil markets, we have revised up our oil price assumptions from our April 30 scenario.[2] We now assume that oil prices will continue to rebound over the remainder of the year but remain below pre-crisis levels.

We continue to assume that the Bank of Canada will maintain the policy interest rate target at its current level of 0.25 per cent through 2020. We also maintain our assumption that current[3] and future monetary and financial policy measures will help to prevent widespread personal and business bankruptcies.

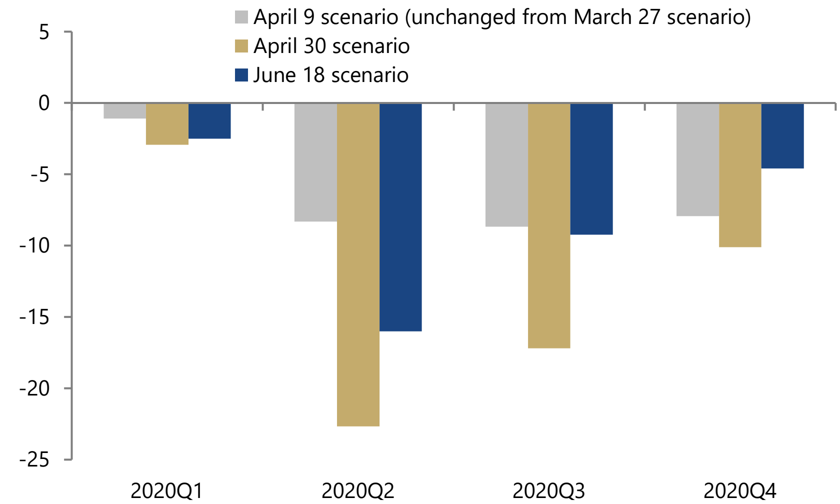
On May 29, Statistics Canada's published its monthly GDP data for March as well as its "flash estimate" for April.[4] Statistics Canada data indicate that GDP declined by 7.2 per cent (month over month) in March. This decline was not as steep as indicated by its flash estimate for March (9 per cent) on which our previous scenario was based. Statistics Canada's flash estimate for April GDP shows a decline of 11 per cent, which is also a significant improvement from our assumption of a 15 per cent decline in our previous scenario.

In addition, labour market data for the month of May published on June 5, showed an increase in total hours worked of 6.3 per cent on a month-over-month basis, following previous consecutive declines of 15 per cent in March and April.[5]

Taking into consideration Statistics Canada's monthly GDP and labour market data, as well as upward revisions to oil price assumptions, we have revised up significantly our assumption regarding the impact of the COVID-19 pandemic and oil price shocks on the Canadian economy relative to our April 30 economic scenario (Figure 1-1).

Figure 1-1 Impact of COVID-19 pandemic and oil price shocks on real GDP

Percentage difference from counterfactual scenario



Source: Parliamentary Budget Officer.

Note: The counterfactual scenario is based on our November 2019 projection, which did not incorporate COVID-19 pandemic and oil price shocks.

2. Economic scenario

Table 2-1 presents a summary of key economic indicators in our updated economic scenario compared to the April 30 scenario, which was based on data up to and including April 24. Appendix A presents our detailed economic scenario.

Table 2-1 Economic scenario: key indicators

	2020Q1	2020Q2	2020Q3	2020Q4	2020
Real GDP growth (%)*					
June 18 scenario	-2.1	-13.5	8.5	5.5	-6.8
April 30 scenario	-2.5	-20.0	7.5	9.0	-12.0
	0.4	6.5	1.0	-3.5	5.2
Nominal GDP level ($ billions)**					
June 18 scenario	2,297	1,952	2,142	2,277	2,167
April 30 scenario	2,266	1,749	1,882	2,055	1,988
	31	203	260	222	179
Employment rate (%)					
June 18 scenario	60.7	53.1	55.3	56.5	56.4
April 30 scenario	60.7	53.8	55.8	57.8	57.0
	0.0	-0.7	-0.4	-1.3	-0.6
WTI oil price ($US)					
June 18 scenario	46	27	39	42	38
April 30 scenario	46	18	28	31	31
	0	10	10	11	8
WCS oil price ($US)					
June 18 scenario	29	20	30	31	27
April 30 scenario	29	7	15	15	16
	0	13	15	15	11

Sources: Statistics Canada and Parliamentary Budget Officer.

Note: * Quarterly real GDP growth rates are expressed as the percentage change in the level of real GDP from one quarter to another (not annualized).
** Quarterly levels of nominal GDP are expressed at annual rates and the April 30 levels are adjusted for historical revisions.
Totals may not add due to rounding.

The decline in real GDP in the first quarter was not as steep as we had assumed in our April 30 scenario, which reflected Statistics Canada's flash estimate of a 9 per cent decline in real GDP in March. Monthly GDP data for March (published on May 29) showed a smaller decline of 7.2 per cent.

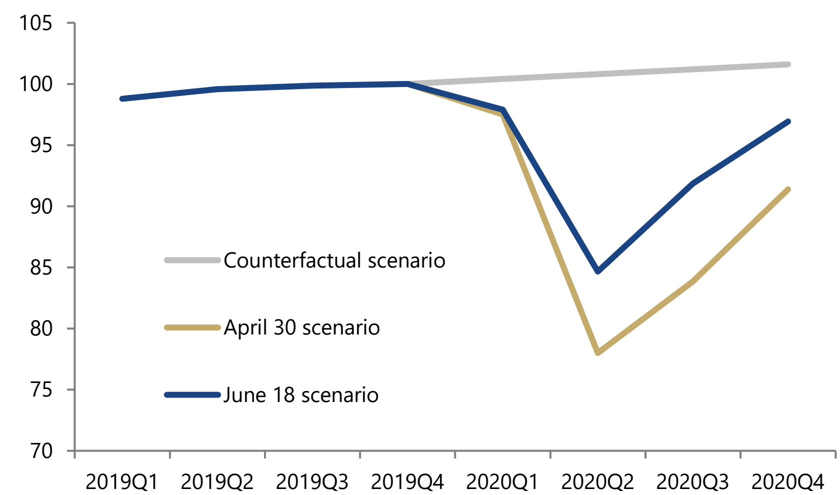
Based on Statistics Canada's flash estimate, we assume that real GDP in April will decline by 11 per cent. Upward revisions to March and April, as well as the rebound in hours worked data for May, result in a smaller decline in real GDP in the second quarter (13.5 per cent) compared to our April 30 scenario (20 per cent).

Real GDP is then assumed to partially recover in the second half of the year, averaging growth of 7.0 per cent in the third and fourth quarters as sectors of the economy reopen. As well, we assume that oil prices will continue to rebound over the remainder of the year but remain below pre-crisis levels.

That said, the level of real GDP is assumed to be 4.6 per cent (10.1 per cent in the previous scenario) lower in the fourth quarter than it would be in the absence of COVID-19 pandemic and oil price shocks (Figure 2-1).

Figure 2-1 **Level of real GDP under PBO economic scenarios**

2019Q4 = 100



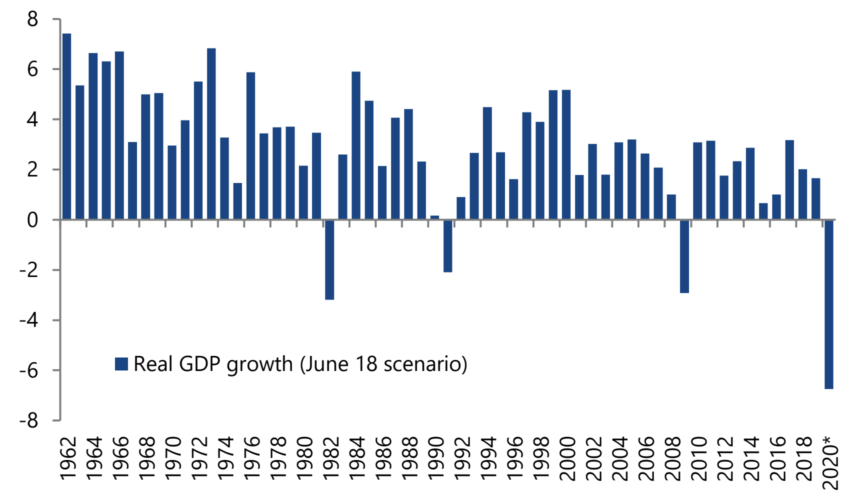
Sources: Statistics Canada and Parliamentary Budget Officer.

Note: The counterfactual scenario is based on our November 2019 projection, which did not incorporate COVID-19 pandemic and oil price shocks.

For the year as a whole, our revised assumption is that real GDP growth would be -6.8 per cent, which would be the weakest on record since the series started in 1961. To put this in historical perspective, the weakest growth in real GDP (of -3.2 per cent) was observed in 1982—roughly one half of our assumed decline (Figure 2-2).[6]

Figure 2-2 **Real GDP growth**

Per cent



Sources: Statistics Canada and Parliamentary Budget Officer.

Note: * Real GDP growth in 2020 is based on the June 18 scenario.

The significant upward revision of 5.2 percentage points to real GDP growth in 2020 primarily reflects better-than-expected monthly GDP data for March and April published by Statistics Canada on May 29.[7] We estimate this data alone accounts for more than 80 per cent of our revision to real GDP growth in 2020.

The upward revisions to real GDP growth and GDP inflation combine to increase the level of nominal GDP—the single broadest measure of the Government's tax base—by $179 billion in 2020 compared to our previous economic scenario. Relative to a counterfactual scenario in which the COVID-19 pandemic and oil price shocks did not occur, nominal GDP in 2020 would be $222 billion (9.3 per cent) lower.

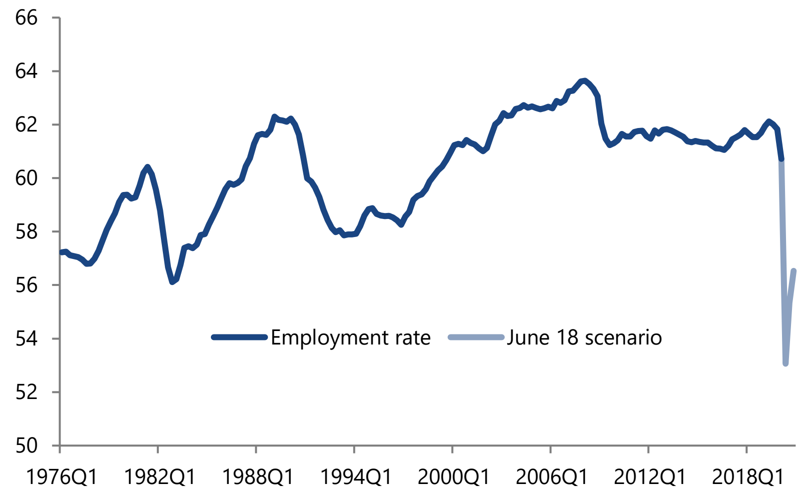
Prior to the onset of the COVID-19 pandemic and oil price shocks, the employment rate, that is the share of the population aged 15 years and older that is employed, stood at 61.8 per cent in February. With record net job losses of 1 million in March and 2 million in April, the employment rate fell sharply to 52.1 per cent in April—its lowest level since the series started in 1976.

With net job gains of 290,000 in May, the employment rate edged higher to 52.9 per cent but remained below our assumed level in the April 30 scenario. Moreover, average weekly hours worked increased by 4.5 per cent (month over month) in May—2½ times the size of the percentage increase in employment. These increases resulted in total actual hours worked, which figures directly into GDP, increasing by 6.3 per cent in May.

We assume that solid job gains will continue over the remainder of the year. That said, the employment rate will reach 56.5 per cent in the fourth quarter—still well below its pre-crisis level of 61.8 per cent in February. The last time that the employment rate was close to 56.5 per cent was in April 1983 (Figure 2-3).

Figure 2-3 Employment rate, 1976Q1 to 2020Q4

Share of the population aged 15 years and older that is employed, per cent

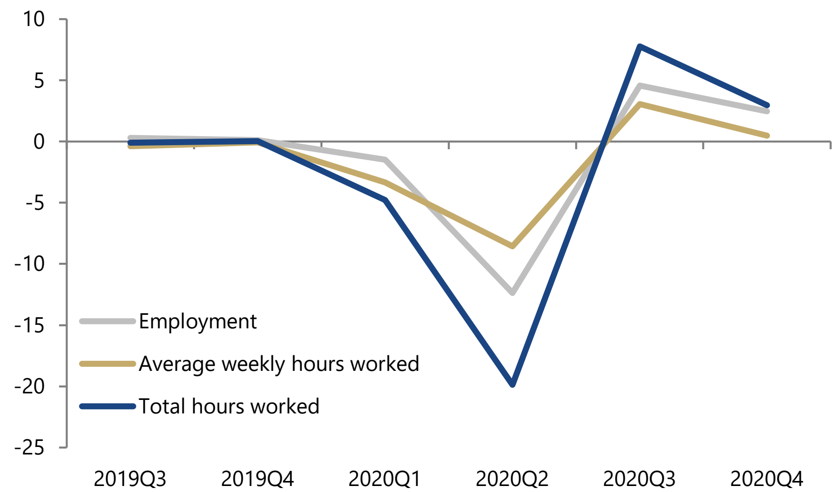


Sources: Statistics Canada and Parliamentary Budget Officer.

Average weekly hours worked are also assumed to continue to increase in the second half of the year (Figure 2-4). Compared to our previous economic scenario, total hours worked in 2020 are 3.0 per cent higher.

Figure 2-4 Growth in aggregate labour market indicators

Per cent, quarter over quarter



Sources: Statistics Canada and Parliamentary Budget Officer.

3. Fiscal scenario

To generate our fiscal scenario, we simulated our projection model using the updated economic scenario. As before, we applied judgement in some cases to better capture the fiscal impact of the economic downturn on certain revenue and spending components.

Our fiscal scenario includes $169.2 billion in federal budgetary measures that has been announced as of June 12 (Table 3-1).[8] The value of these measures is based on Finance Canada and PBO estimates. Measures that include "up to" amounts are assumed to be fully spent in their respective fiscal years.[9] The Government is also providing credit and liquidity support through the Business Credit Availability Program (BCAP) and other programs.[10]

Table 3-1 COVID-19 federal budgetary measures as of June 12

$ billions	2019-20	2020-21
Canada Emergency Wage Subsidy*	–	55.6
Canada Emergency Response Benefit*	–	53.4
Transfer to provinces and territories	–	14.0
Canada Emergency Business Account*	–	9.1
Canada Student Emergency Benefit*	–	5.9
Enhanced GST credit*	–	5.7
Essential workers wage top-up	–	3.0
Elderly benefits one-time payment*	–	2.5
Enhanced Canada Child Benefit*	–	1.9
Other**	0.8	18.1
Total	**0.8**	**169.2**

Sources: Finance Canada and Parliamentary Budget Officer.

Note: * Indicates a PBO cost estimate. ** Estimates of the budgetary impact of all COVID-19 response measures are available at: https://www.pbo-dpb.gc.ca/en/covid-19. Totals may not add due to rounding.

In our April 30 fiscal scenario, we estimated that the budgetary deficit would amount to $252.1 billion in 2020-21. This estimate included $146.0 billion in federal budgetary measures that were announced as of April 24.

Based on our updated scenario, economic and fiscal developments since our April 30 report decrease the budgetary deficit by $1.2 billion in 2019-20 and by $19.5 billion in 2020-21 (Table 3-2). Federal budgetary measures and their impact on public debt charges combine to increase the budget deficit by $0.8 billion in 2019-20 and by $170.4 billion in 2020-21.

The budgetary deficit in 2020-21 is only $3.8 billion higher than our previous scenario. This reflects additional measures, as well as revised estimates of previously announced measures, totalling $23.2 billion that are largely offset by the improved economic scenario.

Table 3-2 Revisions to the budgetary balance

$ billions	2019-20	2020-21
Budgetary balance (April 30 scenario)	**-24.9**	**-252.1**
COVID-19 budgetary measures in April 30 scenario	0.8	146.0
Impact of measures on public debt charges	0.0	1.1
Impact of economic and fiscal developments	1.2	19.5
Revised budgetary balance before measures	**-23.0**	**-85.6**
COVID-19 budgetary measures as of June 12	-0.8	-169.2
Impact of measures on public debt charges	0.0	-1.2
Budgetary balance (June 18 scenario)	**-23.8**	**-256.0**

Source: Parliamentary Budget Officer.

Note: A negative (positive) number reduces (increases) the budgetary balance. Totals may not add due to rounding.

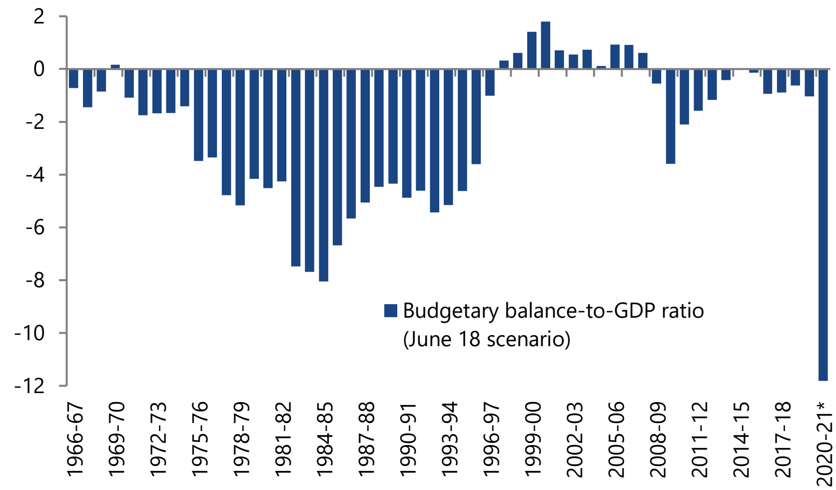
Table 3-3 below presents the fiscal results for key aggregates. Appendix B presents the detailed fiscal scenario. Appendix C compares the fiscal scenario to our April 30 results.

Based on our updated economic scenario and including $169.2 billion in federal budgetary measures, the budget deficit would reach $256.0 billion in 2020-21.[11] Relative to the size of the Canadian economy, the deficit would be 11.8 per cent of GDP in 2020-21.

As a share of the economy, this would be the largest budgetary deficit on record (since the beginning of the series in 1966-67) and sit well above the record of 8.0 per cent of GDP observed in 1984-85 (Figure 3-1).[12]

Figure 3-1 **Budgetary balance-to-GDP ratio**

Per cent of GDP



Sources: Finance Canada and Parliamentary Budget Officer.

Note: * The budgetary balance-to-GDP ratio in 2019-20 and 2020-21 is based on the June 18 scenario.

Budgetary revenues would be $19.5 billion higher in 2020-21 compared to our April 30 scenario. Upward revisions to nominal household incomes and corporate profits (before taxes) boost income tax revenues higher, accounting for $14.6 billion of the increase. Revenue from the Goods and Services Tax is also higher, up $4.0 billion in 2020-21 compared to our previous report.[13]

Program spending is $24.5 billion higher in 2020-21 compared to our previous scenario. This reflects increased spending on the Canada Emergency Response Benefit and an additional $14 billion in transfers to provinces and territories announced on June 5, as well as $1.2 billion in fiscal stabilization payments to several provinces.[14]

Public debt charges are $1.1 billion lower in 2020-21. This primarily reflects lower assumed uptake of the Insured Mortgage Purchase Program.[15]

Table 3-3 Fiscal scenario: key indicators

$ billions	2018-19	2019-20	2020-21
Budgetary revenues			
June 18 scenario	332.2	339.2	300.4
April 30 scenario	332.2	340.6	280.8
		-1.5	19.5
Program spending			
June 18 scenario	322.9	339.2	534.1
April 30 scenario	322.9	341.9	509.7
		-2.7	24.5
Public debt charges			
June 18 scenario	23.3	23.7	22.2
April 30 scenario	23.3	23.7	23.3
		0.1	-1.1
Budgetary balance			
June 18 scenario	-14.0	-23.8	-256.0
April 30 scenario	-14.0	-24.9	-252.1
		1.2	-3.8
Federal debt-to-GDP ratio (%)			
June 18 scenario	30.8	30.6	44.4
April 30 scenario	30.8	30.8	48.4
		-0.2	-4.0

Sources: Finance Canada and Parliamentary Budget Officer.

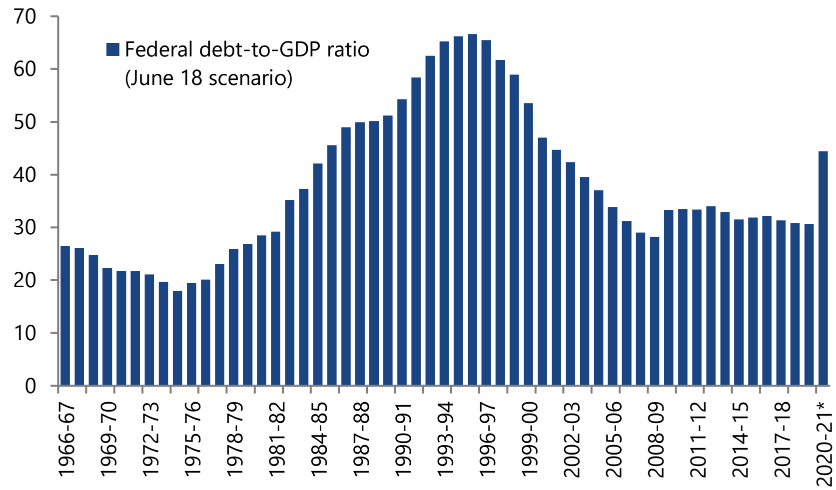
Note: Totals may not add due to rounding.

Rising budgetary deficits and sharply lower nominal GDP boost the federal debt-to-GDP ratio to 44.4 per cent in 2020-21, which is 4.0 percentage points lower compared to our April 30 scenario.

Figure 3-2 puts the increase in the federal debt-to-GDP ratio to 44.4 per cent in 2020-21 into historical perspective. The last time the federal debt-to-GDP ratio was above 44.4 per cent was in 2001-02. This level, however, still remains well below the peak (since the beginning of the series in 1966-67) of 66.6 per cent of GDP reached in 1995-96.

Figure 3-2 Federal debt-to-GDP ratio

Per cent of GDP



Sources: Finance Canada and Parliamentary Budget Officer.

Note: * The federal debt-to-GDP ratio in 2019-20 and 2020-21 is based on the June 18 scenario.

Additional measures may be required to support the economy in the coming months, resulting in increased borrowing by the Government. Moreover, after support measures are provided, fiscal *stimulus* measures may be required to ensure that the economy reaches lift-off speed, especially if consumer and business behaviour does not quickly revert back to "normal" conditions.

In the context of fiscal sustainability, it is essential to distinguish between temporary and permanent budgetary measures. To date, budgetary measures announced by the Government are not intended to be made permanent.

Recall that prior to the COVID-19 and oil price shocks, the Government's balance sheet was healthy.[16] Given the temporary nature of budgetary measures, credit market access at historically low rates, and looking to historical experience, indicate that the Government could undertake additional borrowing if required.[17]

Once the budgetary measures expire and the economy recovers, the federal debt-to-GDP ratio should stabilize and then start declining under pre-crisis fiscal policy settings. However, should some of the measures be extended or made permanent, the federal debt ratio could continue to rise sharply, resulting in an unsustainable trajectory over the longer term.

4. The Government's balance sheet

Federal debt reflects the Government's "net worth" that is, total liabilities less total assets, which together make up the Government's balance sheet—referred to as the Consolidated Statement of Financial Position in the *Public Accounts of Canada* (Table 4-1). Recall that changes in federal debt from one year to another are effectively determined by annual budgetary surpluses or deficits.[18]

Under our current scenario, the Government's total liabilities reach $1,513.7 billion (69.9 per cent of GDP) in 2020-21. With total assets of $551.6 billion (25.5 per cent of GDP), federal debt rises to $962.1 billion (44.4 per cent of GDP) in 2020-21.

Table 4-1 Summary of the Government's balance sheet

$ billions	2018-19	2019-20	2020-21
Accounts payable and accrued liabilities	159.7	148.4	155.7
Interest-bearing debt:			
Unmatured debt	736.9	779.7	1,050.5
Pensions and other liabilities	288.5	299.1	307.6
Total interest-bearing debt	1,025.5	1,078.7	1,358.1
Total liabilities	1,185.2	1,227.1	1,513.7
Financial assets	413.0	430.7	458.2
Non-financial assets	86.7	90.3	93.5
Total assets	499.7	521.0	551.6
Federal debt (total liabilities less total assets)	685.5	706.1	962.1

Sources: Receiver General, Finance Canada and Parliamentary Budget Officer.

The Government's largest liability is unmatured debt, which consists mainly of treasury bills and bonds that are traded in financial markets.[19] Other major liabilities include pension and benefit obligations for federal employees and tax liabilities payable. Major financial assets include taxes owed and financial interest in Crown corporations. Non-financial assets are mainly real property.

The inclusion of Crown corporations' assets and liabilities on the Government's balance sheet (within total assets and total liabilities) depends on corporation type.

Consolidated Crown corporations and some not-for-profit organizations rely on the Government for a portion of their financing. The financial activities of

all these entities (including their balance sheet items) are consolidated in these financial statements on a line-by-line and uniform basis of accounting after eliminating significant inter-governmental balances and transactions.

Enterprise Crown corporations are government business enterprises that can raise substantial portions of their revenues through commercial business activity and are therefore considered self-sustaining. They are accounted for using the modified equity method, where the Government records its equity as a financial asset but excludes the corporations' assets and liabilities.

In general, enterprise Crown corporations' gross debt is excluded from consolidation with debts of the Government because enterprise Crown corporations are expected repay their debt from their own revenues, not appropriations.

However, some enterprise Crown corporations borrow directly from the Government of Canada under the Crown Borrowing Program.[20] The borrowing under this program appears as a liability on the Government's balance sheet as unmatured debt and then the corresponding loans to enterprise Crown corporations are recorded as assets on the Government's balance sheet.[21]

Prior to the start of each fiscal year, the *Financial Administration Act* requires that the Government table a report on its expected borrowing in financial markets for the upcoming fiscal year.

Moreover, as required by the *Borrowing Authority Act*, parliamentarians have an aggregate debt measure on which to vote, which is not explicitly shown on the Government's balance sheet although its components are presented in the Public Accounts of Canada.[22]

Appendix A: Detailed economic scenario

% unless otherwise indicated	19Q4	20Q1	20Q2	20Q3	20Q4	2020
Real GDP growth*						
June 18 scenario	0.1	-2.1	-13.5	8.5	5.5	-6.8
April 30 scenario	0.1	-2.5	-20.0	7.5	9.0	-12.0
Nominal GDP growth*						
June 18 scenario	1.0	-1.7	-15.0	9.8	6.3	-5.9
April 30 scenario	1.1	-3.0	-22.8	7.6	9.2	-13.6
Nominal GDP ($ billions)**						
June 18 scenario	2,336	2,297	1,952	2,142	2,277	2,167
April 30 scenario	2,336	2,266	1,749	1,882	2,055	1,988
3-month treasury rate						
June 18 scenario	1.7	1.2	0.3	0.2	0.2	0.5
April 30 scenario	1.7	1.2	0.2	0.2	0.2	0.4
10-year government bond rate						
June 18 scenario	1.5	1.1	0.6	0.6	0.6	0.7
April 30 scenario	1.5	1.1	0.8	0.8	0.9	0.9
Unemployment rate						
June 18 scenario	5.7	6.3	13.2	11.9	10.6	10.5
April 30 scenario	5.7	6.3	13.4	11.1	8.9	9.9
Employment rate						
June 18 scenario	61.8	60.7	53.1	55.3	56.5	56.4
April 30 scenario	61.8	60.7	53.8	55.8	57.8	57.0
CPI inflation (year/year)						
June 18 scenario	2.1	1.8	0.3	0.8	1.1	1.0
April 30 scenario	2.1	1.8	0.0	0.3	0.7	0.7
WTI oil price ($US)						
June 18 scenario	57	46	27	39	42	38
April 30 scenario	57	46	18	28	31	31
WCS oil price ($US)						
June 18 scenario	38	29	20	30	31	27
April 30 scenario	38	29	7	15	15	16
U.S. real GDP growth						
June 18 scenario	0.5	-1.3	-11.2	6.8	3.6	-5.0
April 30 scenario	0.5	-1.8	-19.0	8.5	11.0	-9.3

Sources: Statistics Canada and Parliamentary Budget Officer.

Note: * Quarterly GDP growth rates are expressed as the percentage change in the level of GDP from one quarter to another (not annualized).
** Quarterly levels of nominal GDP are expressed at annual rates and the April 30 levels are adjusted for historical revisions.

Appendix B: Detailed fiscal scenario

$ billions	2018-19	2019-20	2020-21
Personal income taxes	163.9	171.3	155.8
Corporate income taxes	50.4	48.9	38.3
Non-resident income taxes	9.4	9.3	8.1
Excise taxes/duties	57.2	55.2	44.9
Fuel charge proceeds	0.0	2.8	4.8
Employment Insurance premium revenues	22.3	22.7	21.2
Other revenues	29.1	29.0	27.1
Total budgetary revenues	332.2	339.2	300.4
Elderly benefits	53.4	56.1	61.5
Employment Insurance benefits	18.9	20.3	37.8
Children's benefits	23.9	24.3	26.6
Major transfers to other levels of government	75.9	78.8	94.9
Fuel charge proceeds returned	0.7	3.4	5.2
Other transfer payments	51.8	52.0	197.2
Operating and capital expenses	98.4	104.2	110.9
Total program expenses	322.9	339.2	534.1
Public debt charges	23.3	23.7	22.2
Budgetary balance	-14.0	-23.8	-256.0
Federal debt	685.5	706.1	962.1
Per cent of GDP			
Budgetary revenues	14.9	14.7	13.9
Program expenses	14.5	14.7	24.6
Public debt charges	1.0	1.0	1.0
Budgetary balance	-0.6	-1.0	-11.8
Federal debt	30.8	30.6	44.4

Sources: Finance Canada and Parliamentary Budget Officer.

Note: Totals may not add due to rounding.

Appendix C: Comparison to April 30 scenario

$ billions	2019-20	2020-21
Personal income taxes	-0.5	13.7
Corporate income taxes	0.0	0.4
Non-resident income taxes	-0.3	0.6
Excise taxes/duties	-0.2	4.3
Fuel charge proceeds	–	0.4
Employment Insurance premium revenues	0.0	1.4
Other revenues	-0.5	-1.1
Total budgetary revenues	-1.5	19.5
Elderly benefits	–	2.3
Employment Insurance benefits	0.8	3.3
Children's benefits	–	–
Major transfers to other levels of government	0.0	14.1
Fuel charge proceeds returned	–	0.4
Other transfer payments	-2.7	4.2
Operating and capital expenses	-0.8	0.3
Total program expenses	-2.7	24.5
Public debt charges	0.1	-1.1
Budgetary balance	1.2	-3.8
Federal debt	-4.1	-0.2
Per cent of GDP		
Budgetary revenues	-0.1	-0.3
Program expenses	-0.1	-1.0
Public debt charges	0.0	-0.1
Budgetary balance	0.1	0.9
Federal debt	-0.2	-4.0

Source: Parliamentary Budget Officer.

Note: Totals may not add due to rounding.

Notes

1. Our previous reports are available at:

   April 30 report: https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/RP-2021-005-S/RP-2021-005-S_en.pdf.

   April 9 report: https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/RP-2021-004-S/RP-2021-004-S_en.pdf.

   March 27 report: https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/RP-1920-033-S/RP-1920-033-S_en.pdf.

2. At the June 6 OPEC and non-OPEC Ministerial Meeting, OPEC+ countries agreed to extend their production cuts through July. See: https://www.opec.org/opec_web/en/press_room/5966.htm.

3. For a description of monetary and financial measures to support the economy and financial system, see: https://www.bankofcanada.ca/markets/market-operations-liquidity-provision/covid-19-actions-support-economy-financial-system/.

4. See: https://www150.statcan.gc.ca/n1/daily-quotidien/200529/dq200529b-eng.htm.

5. See: https://www150.statcan.gc.ca/n1/daily-quotidien/200605/dq200605a-eng.htm.

6. For nominal GDP, the largest annual decline was observed in 2009 (5.1 per cent), which is not as steep as our assumed decline of 5.9 per cent in 2020.

7. Recall that in our April 30 scenario, our assumed real GDP growth rate of -12.0 per cent in 2020 was well within the range of growth rates implied by the illustrative scenarios considered by the Bank of Canada in its April 2020 *Monetary Policy Report*. Available at: https://www.bankofcanada.ca/wp-content/uploads/2020/04/mpr-2020-04-15.pdf.

8. See: https://www.pbo-dpb.gc.ca/en/covid-19 (retrieved 12 June 2020).

9. On April 8, the Government announced changes to the Canada Summer Jobs Program. Based on guidance from Employment and Social Development Canada, PBO expects that these changes will be funded from existing 2020-21 budget allocations. No funding is incremental.

10. For additional detail, please consult: https://www.canada.ca/en/department-finance/economic-response-plan/covid19-businesses.html#Increasing_credit_available.

11. PBO estimated that compensation to First Nations children and caregivers who were affected by the on-reserve child welfare system could range from $0.9 billion to $2.9 billion, if payments were made by the end of 2020 (see:

https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/RP-2021-001-M/RP-2021-001-M_en.pdf). However, given the uncertainty regarding the resolution of these claims and their timing, we have not included a cost estimate in our current scenario.

12. See Finance Canada's *Fiscal Reference Tables 2019* available at: https://www.canada.ca/content/dam/fin/publications/frt-trf/2019/frt-trf-19-eng.pdf. To express fiscal aggregates relative to GDP over history, we use the current vintage of GDP from Statistics Canada (for the series beginning in 1961). The same series in Finance Canada's tables were calculated using an older vintage of GDP, which results in minor discrepancies in our calculations.

13. The deferral of personal and corporate income tax payments does not have a direct budgetary impact in 2020-21.

14. To receive fiscal stabilization payments provinces can apply if they have experienced a year-over-year decline in non-resource revenues due to an economic downturn greater than 5 per cent. Details available at: https://www.canada.ca/en/department-finance/news/2016/02/backgrounder-the-fiscal-stabilization-program.html.

15. Assumed lower IMPP uptake results in both lower gross public debt charges and offsetting reductions to other revenues. Overall, PBO's revised IMPP estimate assumes a $2 million budgetary gain in 2020-21 ($428 million in April 30 scenario). Details of past IMPP Purchase Operations are available at: https://www.cmhc-schl.gc.ca/en/finance-and-investing/insured-mortgage-purchase-program

16. See PBO's Fiscal Sustainability Report 2020: https://www.pbo-dpb.gc.ca/web/default/files/Documents/Reports/RP-1920-029-S/RP-1920-029-S_en.pdf.

17. See PBO's March 20 blogpost for additional details: https://www.pbo-dpb.gc.ca/en/blog/news/pbo-estimate-federal-fiscal-room-in-fiscal-sustainability-report-2020--pbo-estimate-federal-fiscal-room-in-fiscal-sustainability-report-2020.

18. By construction, the evolution of the federal debt in our scenario is based on the path for revenues, expenses and the resulting budgetary balance. Any accumulation of federal debt must be reflected in the budgetary balance or other comprehensive income.

    Other comprehensive income (loss) is the sole other component that subtracts (adds) to the federal debt, but these amounts historically are immaterial relative to movements in the annual budgetary balance. Accounting changes also impact the measurement of federal debt but should not alter the annual stock-flow relationship between the budgetary balance and the federal debt.

19. See the PBO's June 4 follow up to the Senate Committee on National Finance for additional details: https://www.pbo-dpb.gc.ca/web/default/files/Documents/General/2020-05-26-NFFN/PBO_NFFN_2020-05-26_Responses_EN.pdf.

20. Beginning in 2008, the Government directed lending to the Business Development Bank of Canada, the Canada Mortgage and Housing Corporation and Farm Credit Canada, under the Crown Borrowing Program. Export Development Canada was excluded at that time because the majority

of its borrowing is in foreign denominations. Borrowing undertaken by the Government of Canada on behalf of enterprise Crown corporations generates loans receivable for the Government, which are recorded as assets. The Treasury bills and bonds issued to fund these loans appear as part of unmatured debt, a liability on the Government's balance sheet.

21. Detailed information on enterprise Crown corporations is included in Public Accounts Volume 1, Section 9.

22. The *Borrowing Authority Act* requires the Government of Canada to seek parliamentary approval to borrow in financial markets by setting a maximum amount that may be borrowed. The maximum amount defined in the Act, combines two debt aggregates: 1) unmatured debt of the Government of Canada; and 2) outside of the Crown Borrowing Program, borrowings of enterprise Crown corporations designated as agents of Her Majesty. See Table 6.11 Volume 1, Section 6 of *Public Accounts of Canada 2019*. Available at: https://www.tpsgc-pwgsc.gc.ca/recgen/cpc-pac/2019/vol1/s6/dne-ud-eng.html#sh10.