



OFFICE OF THE
PARLIAMENTARY BUDGET OFFICER



BUREAU DU
DIRECTEUR PARLEMENTAIRE DU BUDGET

A Comparison of PBO and IMF Projections

Ottawa, Canada

January 20, 2011

www.parl.gc.ca/pbo-dpb

The *Parliament of Canada Act* mandates the Parliamentary Budget Officer (PBO) to provide independent analysis to the Senate and House of Commons on the state of the nation's finances, government estimates and trends in the national economy.

This note provides a comparison of PBO's November 2010 Economic and Fiscal Assessment (EFA) projections and the International Monetary Fund (IMF) staff projections that were presented in the staff report for the 2010 Article IV consultation with Canada published on December 22, 2010.

Prepared by: Russell Barnett, Jeff Danforth and Chris Matier*

* The authors would like to thank Mostafa Askari and Kevin Page for their helpful comments. Any errors or omissions are the responsibility of the authors.

Summary

This note provides a comparison of the economic and fiscal outlooks presented in PBO's November 2010 Economic and Fiscal Assessment and the IMF staff report for Canada's 2010 Article IV consultation that was completed on November 24, 2010 and published on December 22, 2010.

Economic Outlook Comparison

In PBO's view, the IMF staff's projections of key economic indicators are generally in line with the private sector economic forecasts used by PBO and Finance Canada to prepare their most recent medium-term fiscal projections. The IMF staff has also recently updated and released revised estimates of Canada's potential gross domestic product (GDP). PBO and IMF staff estimates of the output gap (real GDP relative to potential GDP) suggest that the Canadian economy was operating above its production capacity heading into the recent recession. Both PBO and the IMF staff estimate that the output gap reached its trough in 2009 and project the output gap to close gradually over the medium term.

Fiscal Outlook Comparison

Based on similar economic outlooks, the IMF staff and PBO project budgetary deficits in every year of the projection. On a cumulative basis, the IMF staff projects budgetary deficits totaling \$143.5 billion over the period 2010-11 to 2015-16 compared to PBO's projection of \$139.0 billion and Finance Canada's projection of \$107.0 billion. For fiscal year 2015-16, the IMF staff projects a budgetary deficit of \$5.4 billion compared to an \$11.0 billion deficit projected by PBO and a \$2.6 billion *surplus* projected by Finance Canada.

Budgetary Balance

	2010- 2011	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016
	(\$ billions)					
PBO November 2010	-40.0	-29.6	-24.5	-19.2	-14.6	-11.0
IMF December 2010	-49.7	-33.6	-26.4	-18.3	-10.1	-5.4
Finance Canada October 2010	-45.4	-29.8	-21.2	-11.5	-1.7	2.6

Structural Balance Comparison

To the best of PBO's knowledge, the IMF is the only other organization that produces and publicly releases estimates of the Government's structural budgetary balance on a Public Accounts basis. Both the IMF staff and PBO project structural deficits in every year of the projection. The IMF staff, however, projects the Government's structural deficit to decline to just under \$5 billion by 2015-16, which is about half the size of PBO's estimate of \$10.2 billion in the same year. Finance Canada has not released publicly its projections of the Government's structural balance over the period 2010-11 to 2015-16.

Structural Balance Estimates

	2010- 2011	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016
	(\$ billions)					
PBO November 2010	-15.0	-16.7	-15.7	-14.4	-12.1	-10.2
IMF December 2010	-37.7	-24.0	-19.9	-14.3	-8.3	-4.9
Finance Canada October 2010	-- not publicly available --					

Background – IMF Article IV Consultations

Article IV of the IMF's Articles of Agreement requires that the IMF review, usually on an annual basis, the economic and fiscal developments in each member country. Following bilateral discussions with members a staff team of the IMF prepares a report.¹ The IMF staff report for the 2010 Article IV consultation with Canada, completed on November 24, 2010 and published on December 22, 2010, presents the IMF staff's updated economic and fiscal projections. The IMF staff report includes projections – on a Public Accounts basis – of the Government of Canada's budgetary balance (including its main components) over the medium term as well as estimates of the Government of Canada's structural balance.

Economic Outlook Comparison

The economic outlook presented in PBO's November 2010 Economic and Fiscal Assessment was based on the economic planning assumptions used by Finance Canada to prepare its October 2010 Update of Economic and Fiscal Projections (*Update*).

Table 1 compares the IMF staff's economic projections to the outlook presented in PBO's EFA. Recall that in order to incorporate the Government's adjustment for risk in the *Update*, PBO adjusted the average private sector forecast of real GDP growth such that the level of nominal GDP matched the Government's assumptions in the *Update*. The IMF staff projects real GDP growth in 2011 that is somewhat higher than PBO's risk-adjusted projection. However, over the remainder of the projection horizon, the IMF projects real GDP growth that is 0.3 percentage points lower, on average, than PBO's risk-adjusted projection. As a result of these differences, the level of real GDP in 2015 in the IMF staff projection is only 1.0 per cent lower than the level of real GDP in PBO's November EFA.

¹ According to the IMF, the views expressed in the staff report are those of the staff team and do not necessarily reflect the views of the Executive Board of the IMF.

Table 1

Economic Outlook Comparison

	2010	2011	2012	2013	2014	2015
Real GDP growth (%)						
PBO (risk-adjusted)	2.9	2.0	2.8	3.1	2.7	2.4
IMF December 2010	3.0	2.3	2.7	2.4	2.4	2.2
<i>difference from PBO</i>	0.1	0.3	-0.1	-0.7	-0.3	-0.2
Nominal GDP level (\$ billions)						
PBO/Finance Canada	1,616	1,682	1,770	1,861	1,949	2,034
IMF December 2010	1,618	1,694	1,780	1,863	1,949	2,035
<i>difference from PBO/Finance Canada</i>	2	12	10	2	0	1
3-month treasury bill rate (%)						
PBO/Finance Canada	0.6	1.6	2.7	3.5	4.0	4.0
IMF December 2010	0.6	1.4	2.7	3.6	4.2	4.3
<i>difference from PBO/Finance Canada</i>	0.0	-0.2	0.0	0.1	0.2	0.3
10-year government bond rate (%)						
PBO/Finance Canada	3.2	3.3	4.0	4.6	4.8	4.9
IMF December 2010	3.3	4.2	5.2	5.7	5.7	5.7
<i>difference from PBO/Finance Canada</i>	0.1	0.9	1.2	1.1	0.9	0.8
Unemployment rate (%)						
PBO/Finance Canada	8.0	7.7	7.4	7.0	6.8	6.6
IMF December 2010	8.1	7.9	7.4	7.0	6.6	6.1
<i>difference from PBO/Finance Canada</i>	0.1	0.2	0.0	0.0	-0.2	-0.5
Total CPI inflation (%)						
PBO/Finance Canada	1.7	2.2	2.1	2.1	2.0	2.0
IMF December 2010	1.7	2.0	1.9	2.0	2.0	2.0
<i>difference from PBO/Finance Canada</i>	0.0	-0.2	-0.2	-0.1	0.0	0.0

Source: Office of the Parliamentary Budget Officer; IMF Staff Report; Finance Canada.

Note: Differences shown above are calculated using data rounded to the nearest decimal point.

The IMF staff, however, projects higher GDP inflation, which offsets a weaker outlook for real GDP and results in projected nominal GDP – the broadest measure of the Government's tax base – that is almost identical to the Government's planning assumptions over the period 2013 to 2015. The IMF staff's outlook for nominal GDP in 2011 and 2012 is slightly higher than the Government's planning assumptions (0.7 per cent and 0.5 per cent higher respectively), which is similar in magnitude to the risk adjustment made to the private sector projection.

The IMF staff's outlook for short-term interest rates closely tracks the projection in PBO's November EFA. The IMF staff projects 3-month Treasury bill rates that are only 0.1 percentage points higher, on average, over the period 2011-2015 than PBO's November EFA. Despite the similar outlooks for short-term rates, the IMF staff projects long-term interest rates that are higher

compared to PBO's EFA. Over the period 2011 to 2015, the IMF staff projects 10-year government bond rates that are 1.0 percentage points higher, on average, than PBO's November EFA.

The IMF staff's outlook for the unemployment rate also closely tracks the projection in PBO's November EFA. The IMF staff projects the unemployment rate to be only 0.1 percentage points lower, on average, over the period 2011 to 2015 than PBO's November EFA.

Lastly, the outlook for total CPI (Consumer Price Index) inflation over the period 2011 to 2013 in the IMF staff projection is slightly weaker compared to PBO's November EFA. This weaker near-term projection results in CPI levels that are 0.5 per cent lower in each year over the period 2013 to 2015.

In PBO's view, the IMF staff's projections of key economic indicators are generally in line with the private sector economic forecasts used by PBO and Finance Canada to prepare their medium-term fiscal projections. Further, the differences in the economic projections could, to some extent, be offsetting in terms of their fiscal implications. For example, higher interest rates in the IMF staff projection could be offset to some degree by the lower projected unemployment rate and CPI inflation.

Risks to the Economic Outlook

IMF staff judge that the risks to the economic outlook are tilted to the downside, which is consistent with PBO's risk assessment presented in the November 2010 EFA. Specifically, PBO and IMF staff both see the high level of household debt in Canada as the key domestic risk to the economic outlook. PBO and the IMF staff also both highlight the outlook for the U.S. economy and global financial conditions as key external risks.

While the IMF staff report did not provide estimates of the uncertainty surrounding the outlook for the Canadian economy, the IMF does provide fan charts for world GDP growth projections in its *World Economic Outlook* reports.

Following the International Monetary Fund (IMF) and the Office for Budget Responsibility (OBR) in the United Kingdom, PBO provided estimates of the uncertainty surrounding the economic outlook and quantified the balance of risks to its fiscal outlook in its November EFA.

Potential GDP and Output Gap Comparison

In previous analyses, PBO highlighted the importance of examining the level of potential GDP, a measure of the economy's productive capacity. Because potential GDP is not directly observable and given the uncertainty surrounding its estimates, it is useful to compare estimates produced by different organizations. The IMF staff has recently updated and released revised estimates of Canada's potential GDP. Despite differences in the dynamics of potential GDP growth over recent history, both PBO and the IMF staff estimate that potential GDP growth averaged 1.9 per cent over the 2007 to 2010 period (Table 2). Over the 2011 to 2015 period, PBO projects potential GDP growth averaging 2.1 per cent, 0.2 percentage points higher than the IMF staff projection of 1.9 per cent.

Table 2

Potential GDP growth

(Per cent)

	2007	2008	2009	2010	2011	2012	2013	2014	2015
PBO November 2010	1.8	1.8	2.0	2.2	2.2	2.2	2.2	2.1	2.0
IMF December 2010	2.3	2.1	1.5	1.6	1.8	1.9	1.9	1.9	2.0
<i>difference from PBO</i>	<i>0.4</i>	<i>0.4</i>	<i>-0.5</i>	<i>-0.6</i>	<i>-0.4</i>	<i>-0.3</i>	<i>-0.3</i>	<i>-0.1</i>	<i>0.0</i>

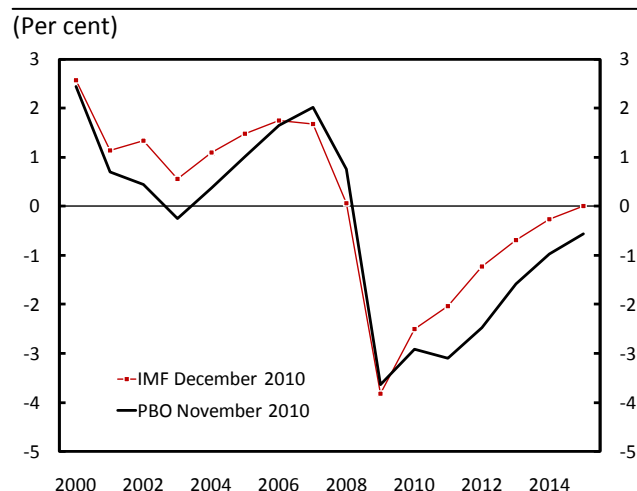
Source: Office of the Parliamentary Budget Officer; IMF Staff Report.
Note: Differences shown above are calculated using unrounded data.

Potential GDP projections are then combined with the respective projections of real GDP to construct estimates of the output gap (i.e., real GDP relative to potential GDP). The output gap is a comprehensive measure of the economic cycle and a key input into PBO and IMF staff estimates of the structural budget balance. Both PBO and the IMF staff estimates of the output gap (2.0 per cent and

1.7 per cent respectively) suggest that the Canadian economy was operating above its production capacity heading into the recent recession (Figure 1). PBO and IMF staff estimate that the output gap reached its trough in 2009 and project a gradual improvement over the projection horizon, although the IMF staff projects that the output gap will close a year earlier than PBO (2015 versus 2016).²

Figure 1

Output Gap



Source: Office of the Parliamentary Budget Officer; IMF Staff Report.
Note: The output gap is measured as the percentage difference between real and potential GDP.

Fiscal Outlook Comparison

The fiscal outlook presented in PBO's November 2010 EFA was based on the results of Finance Canada's survey of economic forecasts produced by private sector organizations.³ Both PBO and Finance Canada translate the same private sector

economic forecasts into a fiscal projection based on their own assumptions.

Table 3 compares the IMF staff's fiscal projections to the outlook presented in PBO's November EFA. The IMF staff projects budgetary revenues that are lower throughout the projection. For 2010-11, IMF staff projects budgetary revenues that are \$6.0 billion lower than PBO's projection. However, by 2015-16 the difference between IMF staff projection and those of PBO narrows somewhat to \$2.8 billion. The IMF staff's budgetary revenue projection is lower than PBO's despite projections of higher nominal GDP (see Table 1). This could be a result of various factors including a different allocation of nominal GDP into its component parts, lower effective tax rate projections and/or lower projected revenues from components not tied to nominal GDP.

Table 3

Fiscal Outlook Comparison

(\$ billions)	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Budgetary revenues						
PBO November 2010	235.4	248.9	262.2	277.0	289.8	303.8
IMF December 2010	229.4	242.6	256.3	271.7	286.5	301.0
<i>difference from PBO</i>	-6.0	-6.3	-5.9	-5.3	-3.3	-2.8
Program expenses						
PBO November 2010	243.9	244.6	250.3	257.4	263.6	272.6
IMF December 2010	247.7	243.1	246.7	252.7	258.5	266.9
<i>difference from PBO</i>	3.8	-1.5	-3.6	-4.7	-5.0	-5.7
Public debt charges						
PBO November 2010	31.6	33.9	36.5	38.9	40.8	42.2
IMF December 2010	31.4	33.1	36.0	37.3	38.1	39.5
<i>difference from PBO</i>	-0.2	-0.8	-0.5	-1.6	-2.7	-2.7
Budgetary balance						
PBO November 2010	-40.0	-29.6	-24.5	-19.2	-14.6	-11.0
IMF December 2010	-49.7	-33.6	-26.4	-18.3	-10.1	-5.4
<i>difference from PBO</i>	-9.6	-4.0	-1.8	0.9	4.5	5.6

Source: Office of the Parliamentary Budget Officer; IMF Staff Report.
Note: Differences shown above are calculated using unrounded data. For a comparison of PBO and Finance Canada's fiscal projections see PBO (2010a).

The IMF staff projection of program expenses is also lower than PBO's November EFA. This could reflect differences in projected operating expenses

² Although the IMF projects that the level of real GDP will be 1.0 per cent lower than PBO's outlook in 2015 the output gap closes a year earlier due to a lower projected level of potential GDP (-1.5 per cent) in 2015.

³ PBO based its economic assumptions on the Government's risk-adjusted forecast of nominal GDP and Finance Canada's September survey of private sector forecasters. As a result, the source of the difference between PBO's fiscal projections and those in the *Update* is limited to the assumptions used to translate the economic forecast into fiscal projections.

subject to freeze – a significant component of total expenditures. While PBO projected operating expenses subject to freeze to grow in line with population and inflation, it is not clear whether IMF staff have incorporated the Government’s assumptions regarding the operating spending freeze.

Public debt charges in the IMF staff outlook are lower than PBO, on average, even in periods where the amount of debt that is being accumulated is greater (2010-11 to 2012-13) and despite the fact that the IMF staff’s projection for interest rates on 10-year government bonds and 3-month Treasury bills are *higher*, on average, than PBO (see Table 1). Possible explanations for this discrepancy could be the translation of market interest rates into effective interest rates on government debt and/or different views on the non-market portion of federal debt.

Lastly, both the IMF staff and PBO project budgetary deficits in every year of the projection. On average, the budgetary deficits projected by the IMF are larger than those projected by PBO due to higher deficits in the first three years of the projection. By 2015-16 the IMF staff projects a budgetary deficit of \$5.4 billion, compared to a deficit of \$11.0 billion projected by PBO.

Structural Balance Comparison

To the best of PBO’s knowledge, the IMF is the only other organization that produces and publicly releases estimates of the Government’s structural budgetary balance on a Public Accounts basis. As such, and given the uncertainty surrounding estimates of structural balances, it is useful to compare estimates.

Table 4 presents a comparison of the IMF staff’s estimates of the Government’s structural balance and PBO’s estimates presented in its November 2010 EFA.

Table 4

Structural Balance Comparison

(\$ billions)	2010- 2011	2011- 2012	2012- 2013	2013- 2014	2014- 2015	2015- 2016
PBO November 2010	-15.0	-16.7	-15.7	-14.4	-12.1	-10.2
IMF December 2010	-37.7	-24.0	-19.9	-14.3	-8.3	-4.9
<i>difference from PBO</i>	<i>-22.8</i>	<i>-7.4</i>	<i>-4.1</i>	<i>0.0</i>	<i>3.8</i>	<i>5.3</i>

Source: Office of the Parliamentary Budget Officer; IMF Staff Report.
Note: Differences shown above are calculated using unrounded data.

The IMF staff estimates the Government’s structural deficit to be \$37.7 billion in 2010-11, significantly higher than PBO’s estimate of \$15.0 billion. This discrepancy likely reflects differences in the treatment of \$11.6 billion in temporary stimulus spending measures (which PBO allocates to the cyclical balance) as well as differences in the methodological approaches used to construct structural balance estimates.

Both the IMF staff and PBO project the Government’s structural balance to remain in deficit over the rest of the projection horizon. The IMF staff, however, projects the Government’s structural deficit to decline to just under \$5 billion by 2015-16, which is about half the size of PBO’s estimate of \$10.2 billion in the same year.

Fiscal Sustainability

Although the IMF staff report did not provide long-term economic and fiscal projections or estimates of the degree to which the Government’s current fiscal structure is not sustainable (e.g., fiscal gaps), the report did note that there are “significant risks to long-term fiscal sustainability from the budgetary impact of population ageing and health-care inflation”. Further, the IMF mission stressed “the importance of increasing transparency and communication about these challenges and their long-run implications, to increase public awareness and contribute to a debate about possible solutions”.⁴

⁴ Recall that in Budget 2007 the Government committed to “publish a comprehensive fiscal sustainability and intergenerational report with

Indeed, as noted in its 2010 Fiscal Sustainability Report (FSR), PBO believes that “long-term economic and fiscal projections are an essential element of budget transparency and sustainability analysis” and PBO committed to “preparing long-term economic and fiscal projections and to providing a Fiscal Sustainability Report on a regular basis”. PBO’s 2010 FSR concluded that the Government’s current fiscal structure is not sustainable over the long term and that achieving sustainability would require permanent fiscal actions – either through increased taxes or reduced program spending, or some combination of both – amounting to 1.0 and 1.9 per cent of GDP under a baseline and an alternative scenario.

PBO will be providing an update of its assessment of the Government’s finances over the long term in its forthcoming Fiscal Sustainability Report.

References

Finance Canada. 2010. “Update of Economic and Fiscal Projections.” Available at: <http://www.fin.gc.ca/ec2010/pdf/efp-pef-eng.pdf>

International Monetary Fund. 2010. “Staff Report for the 2010 Article IV Consultation.” Available at: <http://www.imf.org/external/pubs/ft/scr/2010/cr10377.pdf>

Parliamentary Budget Officer. 2010a. “Fiscal Sustainability Report.” Available at: http://www2.parl.gc.ca/sites/pbo-dpb/documents/FSR_2010.pdf

Parliamentary Budget Officer. 2010b. “Economic and Fiscal Assessment 2010.” Available at: http://www2.parl.gc.ca/sites/pbo-dpb/documents/EFA_2010.pdf

the 2007 Economic and Fiscal Update”. This report would “provide a broad analysis of current and future demographic changes and the implication of these changes for Canada’s long-run economic and fiscal outlook”. The Government’s report is yet to be published.