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## **Economic Forecasts Used for the Federal Budget and Adjustment for Risk**

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# **ECONOMIC FORECASTS USED FOR THE FEDERAL BUDGET AND ADJUSTMENT FOR RISK**

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## **1 INTRODUCTION**

Each year, Canada's finance minister sets forth in a budget document the federal government's intentions, presented as projected revenues and expenses for the upcoming fiscal years. These intentions cannot become reality without Parliament's adoption of one or more budget implementation bills or appropriation Acts authorizing departments to spend.

To estimate its revenues and expenses for the years ahead, the federal government consults private sector economists, mainly in the Canadian banking sector.<sup>1</sup> Since 1994, these economists have been providing the Department of Finance Canada with forecasts on the state of the Canadian and U.S. economies for future years.

This document explains how the government uses forecasts from this consultation process, as well as the precautions it takes during the budgetary planning process.

## **2 ECONOMIC FORECASTS**

While economic forecasts from the private sector have been officially considered when preparing the federal budget only since 1994, they were, in fact, unofficially considered before that. For example, the 1993 federal budget reported:

The domestic economy will continue to strengthen as a result of the past easing in interest rates. Growth is expected to average 2.9 per cent this year and 4.6 per cent in 1994. This is in line with the view of private sector forecasters as well as international agencies such as the International Monetary Fund and the Organization for Economic Co-operation and Development.<sup>2</sup>

When preparing the budget, the government takes into account the main economic variables affecting its financial situation. For that reason, the average forecasts of private sector economists for the main economic variables affecting budget planning, such as real gross domestic product (GDP), GDP inflation and interest rates, have been calculated and published four times a year since 1994 and are publicly available.<sup>3</sup>

The Department of Finance Canada uses these forecasts to predict the federal government's revenues and expenses. How these forecasts are used has changed over time. For example, the 1994 federal budget noted:

The Budget Plan is based upon a set of credible economic planning assumptions, chosen to be clearly less optimistic than the average of private sector forecasts.<sup>4</sup>

For the 1994 federal budget, the average private sector forecasts for real GDP growth were 3.5% for 1994 and 3.9% for 1995.<sup>5</sup> Taking a prudent approach, the department set its assumptions for real GDP growth at 3% for 1994 and 3.8% for 1995.<sup>6</sup>

For the 2003 Budget, however, the assumptions corresponded exactly to the average private sector economic forecasts. A precaution (the “Contingency Reserve” – see the next section) was nevertheless included in case of weaker than expected growth.<sup>7</sup>

Of course, there are several reasons why the government cannot rely entirely on economists’ forecasts to accurately predict its revenues and expenses:

- forecasts are made before the budget is tabled;
- by their nature, economic forecasts are uncertain;
- the data forecasters use are subject to revision; and
- the government itself can choose to increase or decrease expenses or taxes during the year.

Table 1 shows the average for the past 12 years of private sector economic forecasts, as well as the actual results of the following three main variables:

- nominal GDP, which represents the federal government’s potential sources of revenue (the tax base);
- real GDP, which takes inflation into account and reflects the economy’s actual growth; and
- GDP inflation.

**Table 1 – Growth in Real and Nominal Gross Domestic Product (GDP) and GDP Inflation Based on Private Sector Forecasts Used in Federal Budgets and Actual Results, 2003–2014 (%)**

Year	Nominal GDP		Real GDP		GDP Inflation	
	Forecast	Actual	Forecast	Actual	Forecast	Actual
2003	5.4	5.3	3.2	1.9	2.2	3.3
2004	4.1	6.5	2.7	3.1	1.4	3.3
2005	4.9	6.5	2.9	3.2	2.0	3.2
2006	6.0	5.4	3.0	2.6	2.9	2.7
2007	3.9	5.3	2.3	2.0	1.5	3.2
2008	3.5	5.1	1.7	1.2	1.8	3.9
2009	-1.2	-4.8	-0.8	-2.7	-0.4	-2.1
2010	4.9	6.1	2.6	3.4	2.2	2.6
2011	5.8	6.5	2.9	3.0	2.8	3.4
2012	4.6	3.5	2.4	1.9	2.1	1.5
2013	3.3	3.4	1.6	2.0	1.7	1.4
2014	3.9	4.4	2.3	2.5	1.6	1.8

Notes: The forecast is for the budget calendar year, not the fiscal year (e.g., forecast for 2014 in the 2014 Budget). There were two budgets in 2011; the most recent one (June 2011), which was passed, is used here. Nominal GDP growth corresponds to real GDP growth multiplied by GDP inflation.

Sources: Table prepared by the author using data obtained from Department of Finance Canada, [Department of Finance Survey of Private Sector Economic Forecasters](#) for the forecasts; and Statistics Canada, Table 380-0064, “[Gross domestic product, expenditure-based, quarterly \(dollars x 1,000,000\)](#),” CANSIM (database), accessed on 3 March 2015, for the actuals.

From 2003 to 2014, the average difference (in absolute value) between forecasts and actuals was 1.2 percentage points (pp) for nominal GDP, 0.6 pp for real GDP and 1.0 pp for GDP inflation.<sup>8</sup> Dividing by the average actual growth rate results in an error of 29% for real GDP and 28% for nominal GDP, but 43% for GDP inflation. This shows that the GDP inflation variable is more difficult to predict, in part due to significant fluctuations in commodities prices.

For eight of the past 12 years, GDP inflation has been higher than expected, a surprise that had a positive impact on the federal government's public finances, especially in 2004, 2007 and 2008. Higher-than-expected GDP inflation generally has a positive impact on public finances because the impact is greater on the government's revenues than on its expenses.<sup>9</sup>

### 3 ADJUSTMENT FOR RISK

As a precaution and to respond to unforeseen external shocks (falling prices for materials produced in Canada, natural disasters, etc.), the government retains some flexibility in the budget process. This practice is not new.

For example, in the 2005 Budget, the government included under total expenses a "Contingency Reserve" of \$3 billion.<sup>10</sup> It noted that the Contingency Reserve, if not needed to deal with unforeseen circumstances, would "go each and every year to reduce the federal debt."<sup>11</sup> Moreover, for "economic prudence," \$1 billion was set aside under total expenses to "provide greater assurance that the balanced budget targets will be met."<sup>12</sup> If not needed, the amounts set aside for economic prudence are released to fund government priorities.

The surpluses forecast in the 2006, 2007 and 2008 budgets were called "planned debt reduction." It was not until 2009 that the concept of "adjustment for risk" was introduced.<sup>13</sup> It seems to have been abandoned in 2010 and taken up again since 2011. The effect on the fiscal balance is usually mentioned in a table in the last chapter of the budget on planned revenues and expenses.

In the 2014 Budget, the federal government included a \$20-billion downward adjustment to the private sector forecast for average nominal GDP. As nominal GDP is not taxed in full but at a rate of about 15%, the \$20-billion decrease had an impact of \$3 billion on projected revenues. This impact is applied to projected revenues only, not to government expenses. Since the fiscal balance is equal to the difference between revenues and expenses, and revenues were down by \$3 billion with no change in expenses, the projected deficit increased by the same amount.<sup>14</sup> For 2014–2015, the government did not announce a surplus of \$0.1 billion, in line with economists' forecasts, but a deficit of \$2.9 billion.<sup>15</sup>

It should be noted that there is not, strictly speaking, an account where the \$3 billion is placed for unexpected situations. The forecast is simply adjusted.

For example, if the government is aiming for a fiscal balance of zero, and if projected revenues, based on the private sector forecast, are \$253 billion and projected expenses are \$250 billion, projected revenues are decreased by \$3 billion as an adjustment for

risk. The projected fiscal balance is therefore zero. If there have been no unforeseen events by the time that the final results for the fiscal year are known, the federal government records a surplus of \$3 billion, which automatically reduces its accumulated deficit and is used to reduce its net debt or increase its financial assets.<sup>16</sup>

## 4 CONCLUSION

The Department of Finance Canada uses average economic forecasts on various economic variables from a number of economists to forecast its revenues and expenses. It then deducts from its revenues an adjustment for risk – \$3 billion for 2014–2015 – to arrive at a projected fiscal surplus or deficit. This method is recognized by the International Monetary Fund.<sup>17</sup>

Prudence has for a long time led to the adoption of budgetary adjustment measures in economic forecasts not only in Canada but also in other countries. However, this process raises some questions:

- Should the deficit or surplus announced in the federal budget include the risk adjustment? If in the long term there as many negative as positive surprises, then this means there is on average a larger deficit or a smaller surplus than that forecast by the private sector economists.
- What should the value of the adjustment be? Should it be the same from year to year or vary according to certain factors, such as the nominal GDP, which, in the long term, is increasing? Is the adjustment usually sufficient to respond to unforeseen events (natural disasters, wars, etc.)?

These questions warrant further thought and study.

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## NOTES

1. The list of surveyed institutions is usually included in the budget. For example, in the [2014 Budget](#), the 14 institutions that were surveyed are listed on p. 45.
2. Department of Finance Canada [Finance Canada], [The Budget 1993](#), 26 April 1993, p. 21.
3. Finance Canada, [Department of Finance Survey of Private Sector Economic Forecasters](#).
4. Finance Canada, [The Budget Plan](#), 22 February 1994, p. 1.
5. *Ibid.*, p. 5.
6. *Ibid.*, p. 9.
7. Finance Canada, [The Budget Plan 2003](#), 18 February 2003, pp. 60 and 196.
8. For example, the error of 0.5 pp for the nominal GDP in 2014 led to an underestimate of \$8.6 billion for this variable.
9. Finance Canada, [The Road to Balance: Creating Jobs and Opportunities](#), Economic Action Plan 2014, 11 February 2014, p. 288.
10. Finance Canada, “Table 7.6: Summary Statement of Transactions (Including February 2005 Budget Measures),” in [The Budget Plan 2005](#), 23 February 2005, p. 258.

11. Ibid., p. 23.
12. Ibid.
13. Finance Canada, "Table 4.2: Changes in the *Status Quo* Fiscal Outlook Since the November 2008 *Economic and Fiscal Statement*," in [Canada's Economic Action Plan: Budget 2009](#), 27 January 2009, p. 213.
14. Finance Canada (2014), p. 263.
15. Ibid., p. 268.
16. For more information on how fiscal surpluses are used, see Mathieu Frigon, [Fiscal Surplus and Fiscal Deficit: Everything's Quiet on the Monetary Front](#), Publication no. 2010-24-E, Parliamentary Information and Research Service, Library of Parliament, Ottawa, 21 February 2013.
17. Martin Mühleisen et al., [How Do Canadian Budget Forecasts Compare with Those of Other Industrial Countries?](#), IMF Working Paper WP/05/66, International Monetary Fund, 1 March 2005.