



COMMENTARY
NO. 611

Trouble on the Bottom Line: Canada's Governments Must Produce More Reliable Budgets

Canada's federal, provincial and territorial governments routinely overshoot their annual budget targets. Since 2000, they have spent almost \$120 billion – some \$3,100 per Canadian – more than they budgeted, and raised \$143 billion – around \$3,800 per Canadian – more than they budgeted.

Containing tax increases post-COVID will require governments to budget better, and meet their budget commitments more reliably.

William B.P. Robson and Miles Wu

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Vice President, Research

THE STUDY IN BRIEF

In theory, management of public funds by Canada's federal, provincial and territorial governments reflects the preferences Canadians express through their elected representatives. In practice, the revenues and expenses that Canada's senior governments report after year-end, and the resulting changes in governments' net worth, are different enough from budget projections to raise questions about accountability for public funds in Canada. These governments routinely miss their targets by meaningful amounts, and the gaps between budgets and results are not random.

One consistent pattern is governments' reporting both expenses and revenues higher than projected in their budgets. Over the 20 fiscal years since 2000/01, Canada's senior governments overshot their expense targets by a cumulative \$119 billion. That means they went into the COVID-19 crisis spending \$3,100 more per Canadian than they would have if they had fulfilled their past budget commitments. Even more startling is the cumulative revenue overshoot since 2000/01: \$143 billion. Canada's senior governments went into the crisis raising \$3,800 per Canadian more than they would have if they had hit their previous revenue targets.

This pattern of revenue overshoots larger than spending overshoots is interesting because it runs against conventional wisdom about the over-optimism of budget forecasts. But the disconnect between projections and results is concerning, and the details of the misses raise important questions about fiscal policy's behaviour over the economic cycle. If the uncontroversial objectives of stabilizing tax rates, programs and the economy shaped governments' responses to economic cycles, slumps would cause overshoots of expenses coincident with undershoots of revenue, and booms would cause undershoots of expenses coincident with overshoots of revenue. But that pattern is the exception among Canada's senior governments. Overshoots on either side of their ledgers tend to coincide, suggesting that governments under-projected revenue and then spent most of the resulting in-year "surprise" or otherwise managed the numbers to achieve a predetermined bottom line.

We also note a recent tendency for governments to report negative adjustments "below the line" in their financial reports, signifying deteriorations in their capacity to deliver services not anticipated in budgets. While these adjustments are not, in principle, inconsistent with public sector accounting standards, they are an obstacle to accountability. Ottawa, the provinces and territories would be better placed to handle current fiscal pressures if their recent results had been closer to their budget projections. Appropriate use of devices such as contingency reserves, including proper scrutiny of their use by legislators, can improve accountability to legislatures and voters.

Although the fiscal response to the COVID-19 pandemic is currently driving an unprecedented wedge between spending commitments and results, we note some encouraging developments over the 20 fiscal years examined in this report. Both the tendency to miss budget targets and the troubling annual patterns of misses were less pronounced over the past seven fiscal years. The size of below-the-line adjustments also tended to shrink.

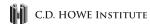
With COVID-19 having prompted increases in expenses that will persist for years and increases in debt that will persist for decades, two threats loom. One is a greater temptation to manage the bottom line. The other is increased upward pressure on taxes and pressure to cut services. Legislators and voters should demand more reliable budget targets and better adherence to those targets in the future.

Policy Area: Fiscal and Tax Policy.

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Canada's federal, provincial and territorial governments raised and spent some \$830 billion in 2020. That is about two of every five dollars of Canadians' incomes, or more than \$21,000 per Canadian – numbers that have risen markedly with the COVID-19 crisis.

The taxes and fees governments levy are top of mind for many people, as are the services and transfers they provide. Control of public funds is fundamental to representative government. It is therefore reasonable to expect that the amounts governments raise and spend reflect the preferences Canadians express through their elected representatives – both prospectively, when legislatures vote budgets and individual programs and tax changes, and retrospectively, when they hold governments to account for their fiscal management.

Budgets, estimates and financial statements in public accounts provide formal frameworks for this accountability. In practice, however, these frameworks do not work reliably. As we detail in a companion report on the timeliness and transparency of governments' financial documents (Robson and Wu 2021), budgets are often late – the federal government failed to produce one at all in 2020 – and contain numbers that are hard to find or misleading. Estimates might not reconcile with budget projections. Financial statements are often not timely or transparent, and might

contain auditors' reservations. Critically, moreover, the revenues and expenses that Canada's senior governments report in their audited financial statements after year-end typically differ from budget projections by amounts that are significant, and in ways that raise questions.

Over the 20 fiscal years since 2000/01, these governments overshot their expense targets by a cumulative \$119 billion, or some \$3,100 per Canadian.¹ Over the same period, their revenues overshot budget targets by an even larger amount: a cumulative \$143 billion, or \$3,800 per Canadian. On average, Canada's senior governments registered better bottom lines than they budgeted, but the cumulative impact of the overshoots means that they are currently spending more and taxing Canadians more heavily than they would have if they had come closer to their annual projections.

The prevalence of overshoots is not the only troubling pattern over the 20 fiscal years. Another is that annual revenue and spending overshoots tend to coincide. That would not happen if governments responded to booms and busts with normal stabilization policies. It suggests, rather, that

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Data are available from budgets and financial statements for senior governments going back to fiscal year 1996/97, but we begin our analysis in 2000/01, the first fiscal year of the newly constituted Northwest Territories and Nunavut.

Key Concept Explainer

Misses that Matter:

The financial statements Canadian governments publish after year-end get less attention than the budgets they deliver near the start of the year. But they contain much valuable information – in particular, how the results compare to the projections made in that year's budget. Overshoots and undershoots of revenue and spending affect how much we have paid in taxes and received in services in the past, and set baselines for how much we will pay and receive in the future. This report tracks those misses over 20 years, rating governments' tendency to overshoot and undershoot, and their accuracy – the absolute size of the misses, regardless of direction. The misses are large enough to matter, and they are not random – which suggests that better fiscal management could reduce them.

governments reacted to accidental or engineered revenue overshoots with in-year spending, or otherwise manipulated their reported numbers to achieve a predetermined bottom line.

Also troubling are the adjustments governments made to their statements of operations below the annual surplus or deficit figure. These adjustments made the change in their accumulated surplus or deficit differ from what the annual surplus or deficit would have produced. While not necessarily inconsistent with public sector accounting standards, adjustments for "other comprehensive income or loss" are not prefigured in budgets, and get less scrutiny by legislators and the public than do revenues and expenses. In recent years, these adjustments have tended to be negative, reflecting developments that increase governments' accumulated deficits and decrease their capacity to deliver services.

Encouragingly, the trends for many of these indicators over the past 20 fiscal years are positive. In recent years, most senior governments missed their budget targets by less, while the absolute size of below-the-line adjustments has fallen. Although

the federal government went into the pandemic spending revenue windfalls, the suspicious positive correlation of in-year revenue and expense surprises among all senior governments was getting less serious. The fiscal response to the pandemic, which resulted in revenues much lower and expenses much higher than budget projections for 2020/21, will reduce this positive correlation further.

There is reason to doubt, however, that the post-COVID fiscal scene will be conducive to other improvements. Re-emergence of debt concerns will tempt governments to massage their budget projections and their reported bottom lines. Persistently higher expenses on transfer payments and healthcare will put upward pressure on taxes and downward pressure on other programs. Legislators and Canadians generally should demand timelier and better information, and ensure that problematic events – such as those that require spending out of "contingency reserves" – misleading or skipped budgets, or sudden spending increases in response to "windfall" revenues, get appropriate scrutiny and corrective action.



MEASURING FISCAL ACCOUNTABILITY

Canada's senior governments observe a number of formal and informal practices that create a framework for fiscal accountability, the oversight of their revenues, expenses and financial position by legislators and voters.

Formal versus Effective Accountability

Governments normally present budgets near the start of the fiscal year, sparking much legislative debate and media interest. Budget implementation bills are votes of confidence. Governments present their main estimates at or around budget time, and the individual spending items in the estimates also require legislative approval. Governments publish financial statements after the end of the fiscal year, which get scrutiny from the relevant legislative auditor and, in most jurisdictions, a public accounts committee of the legislature. The C.D. Howe Institute's most recent report on the quality of these documents (Robson and Wu 2021) awarded grades in the A range to 6 of the 14 governments – Nova Scotia, New Brunswick, Saskatchewan, Alberta, British Columbia and Nunavut – and noted many improvements over time.

Formal oversight, however, is not the same as effective oversight. Budgets and estimates are only useful if they are reliable. Nobody expects a government budget to prefigure results down to the last dollar. If results systematically differ from projections, however, there is a problem with the projections or with fiscal management during the year or both. There is also a problem if legislatures and voters see predictable misses and are unwilling or unable to do anything about them. Persistent differences between the surplus or deficit and the change in the accumulated surplus or deficit – the key measure of a government's net worth intended to capture its capacity to deliver services - represent an obstacle to a legislature's ability to hold the government to account. This report checks the

effectiveness of oversight by looking at results versus projections for revenues and expenses and the bottom lines of these governments.

Comparing Budgeted and Reported Revenues and Expenses

The fiscal year of Canada's senior governments runs from April 1 to March 31. Our investigation focuses on the two primary documents at the start and finish of that cycle: the budget and the audited financial statements in governments' public accounts. Our objective is to compare the projections in budgets to the results in the financial statements.

With respect to revenues and expenses, our concern is with gaps between projections and results: the budget versus the financial statements. Calculating those gaps means addressing a couple of questions.

For most governments and in most years, a budget released before, or shortly after, the start of the fiscal year is the obvious one to use in a comparison. Sometimes, however, the choice is less obvious. Governments occasionally release fiscal updates late in the year that include changes so major – new tax rates, for instance, or restatements of past results – that they amount to a fresh budget. After an election, a new government sometimes tables a new budget. Although a recent exposure draft from the Public Sector Accounting Board argues that those budgets are the appropriate ones to feature in comparisons with results in financial statements, we prefer to use the planned revenues and expenses from the budget closest to the beginning of the fiscal year in our comparisons in order to avoid gaps. An update or new budget in September, for example, would "bake in" whatever had occurred during the first half of the fiscal year. Using the early budgets makes our measures of cumulative over- or undershoots more meaningful and improves our ability to compare like timeperiods among different jurisdictions.

A second wrinkle relates to the inconsistent presentation of revenues and expenses in budgets and financial statements. If all governments had consistently presented consolidated revenues and expenses using public sector accounting standards over the 20 fiscal years we look at, we could compare the dollar amounts in the two documents. The only arithmetic required would be expressing gaps in percentages to compare jurisdictions of different sizes and over time. In actuality, however, most governments did not present numbers that were consistent with public sector accounting standards, and some still do not (Robson and Wu 2021). Suppose either a budget or financial statement nets some revenues against expenses, reducing the level of both, or excludes some activities when the other document does not – such discrepancies distort measures based on dollar amounts. We use percentages to express the projected and actual changes in revenues and expenses, and our gaps are the differences between projected changes and actual changes, expressed in percentages. This approach reduces distortions from inconsistent presentations in the two documents.²

Below-the-Line Adjustments

In budget projections, the annual surplus or deficit is usually equal to the anticipated change in the accumulated surplus or deficit. So, an adjustment "below the line" in the financial statements – a

change in the government's accumulated surplus or deficit beyond what results from the annual surplus or deficit – represents another gap between the commitment the government made to legislators and the public and what actually occurred.

As we discuss in our report card on these governments' financial documents (Robson and Wu 2021), there are arguments for these adjustments. Public sector accounting standards sanction or even mandate them in some circumstances – for example, to show gains or losses related to a Crown corporation that the government owns but controls less directly than it would a government department. The purpose of showing the adjustment below the surplus or deficit is to separate its impact on the government's financial position from the revenues and expenses the government was able to control during the year. Businesses often highlight "extraordinary items" in their earnings for such reasons.

But, as when businesses use "extraordinary items" to distract users of their financial statements, it might be a stretch to imply that the relevant gains or losses do not reflect the underlying health of the operation. Discrete adjustments in single years sometimes reveal information that should have been disclosed earlier, and would have enhanced understanding of the operation's true viability if it had been. Carrying on an uneconomic activity through a Crown corporation, and showing the resulting loss below the line, removes an expense

In the case of budgets, we calculate percentage changes in revenues and expenses for the reference year – the upcoming fiscal year –relative to the counterpart preliminary figures shown in the same budget for the prior year. In the case of financial statements, we calculate percentage changes in revenues and expenses for the reference year – the year just ended – relative to the counterpart amounts shown in the same financial statements for the prior year. We then contrast the percentage changes for the reference year in the two documents to arrive at our measure of under- and overshoots. This method is not perfect, since inaccuracies in a budget's preliminary figures for the prior fiscal year affect the percentage changes calculated from the budget. Notably, if the preliminary figures for the fiscal year about to end in the budget turn out to be too low, the changes we calculate from the budget's figures for the upcoming year will be too high, which will reduce a calculated overshoot. We nevertheless prefer to compare percentage changes rather than dollar amounts in budgets and financial statements that use inconsistent accounting. Mixing differences in dollar amounts that reflect items included, excluded or expensed differently with genuine over- and undershoots would yield much more erratic results.



that would otherwise receive legislative scrutiny from the budget, and reveals it only after the fact in a relatively opaque reconciliation item.

We also use percentages to make these below-the-line adjustments comparable across jurisdictions, expressing them relative to expenses in the relevant fiscal year.

THE NUMBERS

We begin our comparisons of budget projections and results over the past 20 fiscal years with projected versus actual expenses, then move on to projected versus actual revenues and close with below-the-line adjustments.

Expenses

The key expense numbers for the past 20 fiscal years appear in Table 1. Budgeted changes in expenses are in the top panel, actual changes in expenses are in the middle panel and the differences between them are in the bottom panel. Few governments have released their 2020/21 financial statements, so we cannot compare budgeted to actual changes in expenses for that year for most. For reference, Table 1 shows budgeted changes in 2021 budgets, using the federal government's fall 2019 Economic and Fiscal Update as a proxy for the 2020 budget it did not present.

Table 2 summarizes the reliability of the projected expenses in each government's budgets over the entire period. Two measures, bias and accuracy, capture key characteristics of their performance.

Bias is the average difference between budgeted and actual changes in expenses – the arithmetic mean of the differences in the third panel of Table 1 – over the period. Bias indicates whether a government tended to overshoot or undershoot its budget targets. From the point of view of fiscal accountability, a smaller number – less tendency either way – is better. In calculating the consequences of misses over time, overshoots and

undershoots cancel each other, so the sign of the difference is relevant. We also care about closeness to targets regardless of sign, so the absolute value of the bias ("Absolute Mean Error" in Table 2) is also a useful measure when comparing performance across governments. The ranking of governments in column 3 of the table reflects the absolute values.

Accuracy is the differences between annual budgeted and actual changes, regardless of direction – the arithmetic mean of the absolute differences in the third panel of Table 1. Unlike the bias measure, in which overshoots and undershoots cancel each other, the accuracy measure treats them as equally problematic, thereby penalizing governments with more erratic records. Suppose two governments alternately overshot and undershot, so that their biases over the period were similar, but one had consistently larger misses in both directions. The accuracy measure would award the government with smaller misses a smaller number – a better score – and the one with larger misses a larger number – a worse score.

On the key question of overshooting versus undershooting, the bias measures in Table 2 deliver a clear verdict. Over the past 20 fiscal years, Canada's senior governments tended to spend more than they budgeted. The average annual expense overshoot across all governments was 2 percent. Over those 20 fiscal years, 13 of the 14 governments overshot on average; Newfoundland and Labrador was the only exception.

As for the best and worst biases, Ontario's average overshoot of 0.8 percent gives it the best – that is, the smallest – bias score among the 14 governments. The federal government, Nova Scotia, Quebec and New Brunswick also had absolute bias scores of less than 1 percent. Saskatchewan and Alberta had the largest average expense overshoots – 2.4 and 3.4 percent, respectively – among the provinces. Yukon and Nunavut – with average overshoots of 5.0 and 5.4 percent – had the worst records of all.

The accuracy scores tell a slightly different story. Quebec, Ontario, New Brunswick and

Table 1	: Budgete	d and A	Actual	Expens	ses of C	anada'	Senio	r Gove	rnmen	ts, Fisc	al Year	s 2000	/01-201	9/20
						Budge	et Chan	ge (<i>perce</i>	ent)					
	Federal	BC	AB	SK	MB	ON	QC	NB	NL	NS	PEI	YK	NWT	NU
2000/01	0.6	-1.3	1.8	3.6	-0.6	-1.2	2.8	-2.3	3.1	-0.6	1.5	-1.9	4.8	3.2
2001/02	5.1	7.4	12.5	5.8	1.7	2.2	3.4	6.6	5.4	0.5	-0.2	-1.1	4.5	1.8
2002/03	3.3	-0.3	-8.1	-0.8	2.2	3.5	2.0	4.4	1.5	0.9	1.3	-4.4	5.1	2.0
2003/04	2.8	-2.4	0.2	3.4	4.1	7.1	4.3	4.3	5.5	3.8	4.7	-6.8	5.7	3.2
2004/05	2.3	-2.6	2.9	0.9	1.1	6.9	3.1	2.3	0.4	4.9	-3.6	5.1	2.7	-6.5
2005/06	1.9	4.7	5.7	1.1	3.5	4.2	3.3	3.2	5.5	4.2	1.4	5.0	1.5	-2.3
2006/07	5.0	3.7	4.0	0.1	3.4	2.1	4.1	1.7	3.7	6.3	2.6	-3.1	0.8	2.6
2007/08	4.6	3.9	11.7	1.6	5.8	2.6	4.0	2.9	8.8	5.1	8.0	-0.6	4.7	2.8
2008/09	2.3	1.1	9.7	4.6	3.3	0.2	3.6	2.7	11.1	2.5	6.4	-0.9	-1.5	4.0
2009/10	8.9	4.9	-1.8	-0.9	1.8	6.9	3.3	5.9	12.2	6.7	9.2	-0.8	1.0	1.3
2010/11 2011/12	3.6	2.3	0.5	-2.5	2.3	1.0	3.9	1.6 -1.6	14.4	6.2	1.3	-3.4	5.6 2.9	-7.5 -2.5
2011/12	1.2	-1.2	3.3	1.6	-3.9	1.5	2.8	1.3	2.1	3.7	1.0	4.1	0.8	-7.8
2012/13	0.9	0.8	-1.1	1.4	3.1	2.9	3.0	2.5	1.9	-0.9	1.9	2.0	1.8	6.6
2014/15	-0.5	1.7	-4.5	1.5	1.5	2.7	1.9	1.9	3.3	1.1	0.8	-1.6	7.2	0.6
2015/16	2.7	2.3	3.1	0.5	1.9	1.9	1.5	1.5	2.3	1.3	-0.4	4.7	-2.7	2.2
2016/17	6.9	2.3	3.6	2.0	3.2	1.4	2.5	3.5	4.8	1.9	2.3	2.8	-3.9	1.4
2017/18	4.8	2.3	2.1	2.4	3.3	4.7	3.6	3.6	-3.4	3.6	3.5	1.7	-7.3	4.1
2018/19	2.9	3.5	0.4	0.5	3.7	6.0	4.5	2.5	2.5	1.8	4.6	5.4	-0.1	4.7
2019/20	2.4	4.5	4.2	1.9	1.8	0.6	4.7	1.3	1.8	2.2	8.3	5.9	6.4	-4.7
2020/21	7.1	2.1	13.6	7.2	2.7	13.5	5.1	3.5	6.2	1.2	12.0	2.9	2.5	6.5
						Actua	l Chang	ge (perce	nt)					
	Federal	ВС	AB	SK	MB	Actua ON	l Chang QC	ge (perce NB	nt) NL	NS	PEI	YK	NWT	NU
2000/01	Federal 5.7	BC 1.1	AB 9.5	SK 2.5	MB 2.8					NS 0.2	PEI 10.4	YK 4.4	NWT 5.8	NU 10.3
2000/01 2001/02						ON	QC	NB	NL					
	5.7	1.1	9.5	2.5	2.8	ON -0.5	QC 4.8	NB -2.3	NL 6.1	0.2	10.4	4.4	5.8	10.3
2001/02	5.7 1.9	1.1	9.5 10.0	2.5 7.0	2.8 1.8	ON -0.5 3.0	QC 4.8 3.2	NB -2.3 7.5	NL 6.1 5.2	0.2 5.2	10.4 3.6	4.4 6.0	5.8 8.9	10.3 7.9
2001/02 2002/03	5.7 1.9 3.7	1.1 10.2 1.1	9.5 10.0 -1.5	2.5 7.0 0.6	2.8 1.8 3.1	ON -0.5 3.0 4.0	QC 4.8 3.2 3.7	NB -2.3 7.5 4.3	NL 6.1 5.2 6.2	0.2 5.2 1.9	10.4 3.6 2.2	4.4 6.0 3.4	5.8 8.9 5.4	10.3 7.9 5.0
2001/02 2002/03 2003/04	5.7 1.9 3.7 3.4	1.1 10.2 1.1 1.1	9.5 10.0 -1.5 6.0	2.5 7.0 0.6 6.2	2.8 1.8 3.1 7.2	ON -0.5 3.0 4.0 7.4	4.8 3.2 3.7 3.6	NB -2.3 7.5 4.3 3.9	NL 6.1 5.2 6.2 8.2	0.2 5.2 1.9 6.2	10.4 3.6 2.2 12.0	4.4 6.0 3.4 9.6	5.8 8.9 5.4 5.5	10.3 7.9 5.0 7.2
2001/02 2002/03 2003/04 2004/05	5.7 1.9 3.7 3.4 10.9	1.1 10.2 1.1 1.1 1.5	9.5 10.0 -1.5 6.0 11.2	2.5 7.0 0.6 6.2 3.8	2.8 1.8 3.1 7.2 2.6	ON -0.5 3.0 4.0 7.4 7.5	4.8 3.2 3.7 3.6 4.8	NB -2.3 7.5 4.3 3.9 2.1	NL 6.1 5.2 6.2 8.2 -3.1	0.2 5.2 1.9 6.2 6.6	10.4 3.6 2.2 12.0 0.3	4.4 6.0 3.4 9.6 11.5	5.8 8.9 5.4 5.5 5.4	10.3 7.9 5.0 7.2 3.0
2001/02 2002/03 2003/04 2004/05 2005/06	5.7 1.9 3.7 3.4 10.9 -0.7	1.1 10.2 1.1 1.1 1.5 7.2	9.5 10.0 -1.5 6.0 11.2 11.8	2.5 7.0 0.6 6.2 3.8 9.3	2.8 1.8 3.1 7.2 2.6 7.3	ON -0.5 3.0 4.0 7.4 7.5 5.7	QC 4.8 3.2 3.7 3.6 4.8 4.3	NB -2.3 7.5 4.3 3.9 2.1 5.9	NL 6.1 5.2 6.2 8.2 -3.1 7.7	0.2 5.2 1.9 6.2 6.6 6.2	10.4 3.6 2.2 12.0 0.3 1.7	4.4 6.0 3.4 9.6 11.5 1.7	5.8 8.9 5.4 5.5 5.4 7.0	10.3 7.9 5.0 7.2 3.0 8.8
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07	5.7 1.9 3.7 3.4 10.9 -0.7 6.3	1.1 10.2 1.1 1.1 1.5 7.2 4.8	9.5 10.0 -1.5 6.0 11.2 11.8 9.1	2.5 7.0 0.6 6.2 3.8 9.3 7.4	2.8 1.8 3.1 7.2 2.6 7.3 5.4	ON -0.5 3.0 4.0 7.4 7.5 5.7	4.8 3.2 3.7 3.6 4.8 4.3 5.4	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2	0.2 5.2 1.9 6.2 6.6 6.2 6.2	10.4 3.6 2.2 12.0 0.3 1.7 3.2	4.4 6.0 3.4 9.6 11.5 1.7 8.0	5.8 8.9 5.4 5.5 5.4 7.0 4.1	10.3 7.9 5.0 7.2 3.0 8.8 5.4
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5	QC 4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3	0.2 5.2 1.9 6.2 6.6 6.2 6.2 8.9	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8	0.2 5.2 1.9 6.2 6.6 6.2 6.2 8.9 3.8	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2009/10	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7	0.2 5.2 1.9 6.2 6.6 6.2 6.2 8.9 3.8 3.7	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2009/10 2010/11	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8 -1.4	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8 2.3	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5 8.6	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4 5.1	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3 4.9	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9 4.6	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8 4.6	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7 3.5	0.2 5.2 1.9 6.2 6.6 6.2 8.9 3.8 3.7 -1.8	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3 1.1	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3 5.6	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9 2.8	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1 3.3
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2009/10 2010/11 2011/12	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8 -1.4 0.4	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8 2.3 6.6	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0 2.7 5.2	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5 8.6 0.9	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4 5.1 10.7	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3 4.9 1.3	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9 4.6 3.7	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8 4.6 -1.6	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7 3.5 3.2	0.2 5.2 1.9 6.2 6.6 6.2 6.2 8.9 3.8 3.7 -1.8 6.3	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3 1.1 3.5	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3 5.6 2.3	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9 2.8 3.3	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1 3.3 6.9
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2009/10 2010/11 2011/12 2012/13 2013/14 2014/15	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8 -1.4 0.4 0.1 0.6 1.3	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8 2.3 6.6 -1.0 0.4 2.4	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0 2.7 5.2 4.7 9.1 -2.8	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5 8.6 0.9 3.1 -3.2 1.2	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4 5.1 10.7 -2.2 4.0 3.1	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3 4.9 1.3 -0.1 3.1 2.0	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9 4.6 3.7 2.7	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8 4.6 -1.6 3.0	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7 3.5 3.2 -1.7 2.3 0.4	0.2 5.2 1.9 6.2 6.6 6.2 8.9 3.8 3.7 -1.8 6.3 3.8 2.9 0.4	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3 1.1 3.5 0.3	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3 5.6 2.3 5.3	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9 2.8 3.3 5.9	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1 3.3 6.9 5.7
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2010/11 2011/12 2012/13 2013/14 2014/15 2015/16	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8 -1.4 0.4 0.1 0.6 1.3 5.7	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8 2.3 6.6 -1.0 0.4	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0 2.7 5.2 4.7 9.1	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5 8.6 0.9 3.1 -3.2	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4 5.1 10.7 -2.2 4.0	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3 4.9 1.3 -0.1 3.1	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9 4.6 3.7 2.7 5.1	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8 4.6 -1.6 3.0 -0.4	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7 3.5 3.2 -1.7 2.3	0.2 5.2 1.9 6.2 6.6 6.2 8.9 3.8 3.7 -1.8 6.3 3.8 2.9	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3 1.1 3.5 0.3 3.6	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3 5.6 2.3 5.3	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9 2.8 3.3 5.9 4.5 13.6 -1.4	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1 3.3 6.9 5.7 5.6
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2009/10 2010/11 2011/12 2012/13 2013/14 2014/15 2015/16 2016/17	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8 -1.4 0.4 0.1 0.6 1.3	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8 2.3 6.6 -1.0 0.4 2.4 5.5 4.1	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0 2.7 5.2 4.7 9.1 -2.8 1.2 8.4	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5 8.6 0.9 3.1 -3.2 1.2	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4 5.1 10.7 -2.2 4.0 3.1 3.3 3.7	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3 4.9 1.3 -0.1 3.1 2.0 3.5 1.5	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9 4.6 3.7 2.7 5.1 0.9 0.7 2.1	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8 4.6 -1.6 3.0 -0.4 4.2	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7 3.5 3.2 -1.7 2.3 0.4	0.2 5.2 1.9 6.2 6.6 6.2 8.9 3.8 3.7 -1.8 6.3 3.8 2.9 0.4	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3 1.1 3.5 0.3 3.6 0.5	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3 5.6 2.3 5.3 6.2 2.0 5.4 3.3	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9 2.8 3.3 5.9 4.5 13.6	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1 3.3 6.9 5.7 5.6 4.1
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2010/11 2011/12 2012/13 2013/14 2014/15 2015/16 2016/17 2017/18	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8 -1.4 0.4 0.1 0.6 1.3 5.7 5.0 6.4	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8 2.3 6.6 -1.0 0.4 2.4 5.5 4.1 6.2	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0 2.7 5.2 4.7 9.1 -2.8 1.2 8.4 4.2	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5 8.6 0.9 3.1 -3.2 1.2 8.3 -2.0 -3.5	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4 5.1 10.7 -2.2 4.0 3.1 3.3	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3 4.9 1.3 -0.1 3.1 2.0 3.5 7.8	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9 4.6 3.7 2.7 5.1 0.9 0.7	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8 4.6 -1.6 3.0 -0.4 4.2 -1.7 4.2 2.8	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7 3.5 3.2 -1.7 2.3 0.4 3.2 1.5 -1.4	0.2 5.2 1.9 6.2 6.6 6.2 8.9 3.8 3.7 -1.8 6.3 3.8 2.9 0.4 1.3	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3 1.1 3.5 0.3 3.6 0.5 1.4	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3 5.6 2.3 5.3 6.2 2.0 5.4	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9 2.8 3.3 5.9 4.5 13.6 -1.4 0.0 -0.1	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1 3.3 6.9 5.7 5.6 4.1 4.7
2001/02 2002/03 2003/04 2004/05 2005/06 2006/07 2007/08 2008/09 2009/10 2010/11 2011/12 2012/13 2013/14 2014/15 2015/16 2016/17	5.7 1.9 3.7 3.4 10.9 -0.7 6.3 4.8 2.6 14.8 -1.4 0.4 0.1 0.6 1.3 5.7 5.0	1.1 10.2 1.1 1.1 1.5 7.2 4.8 7.3 3.5 2.8 2.3 6.6 -1.0 0.4 2.4 5.5 4.1	9.5 10.0 -1.5 6.0 11.2 11.8 9.1 20.4 7.8 -1.0 2.7 5.2 4.7 9.1 -2.8 1.2 8.4	2.5 7.0 0.6 6.2 3.8 9.3 7.4 3.9 20.6 -2.5 8.6 0.9 3.1 -3.2 1.2 8.3 -2.0	2.8 1.8 3.1 7.2 2.6 7.3 5.4 8.8 4.2 4.4 5.1 10.7 -2.2 4.0 3.1 3.3 3.7	ON -0.5 3.0 4.0 7.4 7.5 5.7 5.0 9.5 0.4 11.3 4.9 1.3 -0.1 3.1 2.0 3.5 1.5	4.8 3.2 3.7 3.6 4.8 4.3 5.4 5.9 4.0 9.9 4.6 3.7 2.7 5.1 0.9 0.7 2.1	NB -2.3 7.5 4.3 3.9 2.1 5.9 5.3 7.4 6.4 5.8 4.6 -1.6 3.0 -0.4 4.2 -1.7 4.2	NL 6.1 5.2 6.2 8.2 -3.1 7.7 0.2 6.3 9.8 16.7 3.5 3.2 -1.7 2.3 0.4 3.2 1.5	0.2 5.2 1.9 6.2 6.6 6.2 8.9 3.8 3.7 -1.8 6.3 3.8 2.9 0.4 1.3 1.2	10.4 3.6 2.2 12.0 0.3 1.7 3.2 8.1 7.9 11.3 1.1 3.5 0.3 3.6 0.5 1.4 3.8	4.4 6.0 3.4 9.6 11.5 1.7 8.0 7.4 6.6 10.3 5.6 2.3 5.3 6.2 2.0 5.4 3.3	5.8 8.9 5.4 5.5 5.4 7.0 4.1 10.6 4.6 2.9 2.8 3.3 5.9 4.5 13.6 -1.4 0.0	10.3 7.9 5.0 7.2 3.0 8.8 5.4 7.5 11.0 4.1 3.3 6.9 5.7 5.6 4.1 4.7 2.3



Table 1	: Continu	ed												
						Dif	ference	(percent	·)					
	Federal	BC	AB	SK	MB	ON	QC	NB	NL	NS	PEI	YK	NWT	NU
2000/01	5.1	2.4	7.7	-1.1	3.4	0.7	2.1	0.0	3.0	0.8	8.9	6.3	1.0	7.1
2001/02	-3.2	2.8	-2.5	1.2	0.1	0.8	-0.2	0.9	-0.1	4.7	3.9	7.1	4.4	6.1
2002/03	0.4	1.4	6.5	1.3	0.9	0.5	1.7	-0.1	4.7	1.0	0.9	7.8	0.3	3.0
2003/04	0.6	3.5	5.7	2.8	3.0	0.4	-0.7	-0.4	2.7	2.4	7.3	16.5	-0.2	4.0
2004/05	8.6	4.1	8.3	2.9	1.5	0.6	1.7	-0.2	-3.6	1.6	3.9	6.4	2.7	9.5
2005/06	-2.6	2.5	6.1	8.1	3.8	1.5	0.9	2.8	2.2	2.1	0.3	-3.3	5.4	11.1
2006/07	1.3	1.1	5.1	7.3	2.0	2.9	1.3	3.7	-3.5	0.0	0.6	11.1	3.2	2.8
2007/08	0.2	3.4	8.7	2.3	3.0	6.9	1.9	4.5	-2.5	3.9	0.1	7.9	5.9	4.7
2008/09	0.3	2.4	-1.9	16.0	0.9	0.2	0.4	3.7	-1.2	1.3	1.5	7.5	6.1	7.0
2009/10	5.9	-2.1	0.9	-1.5	2.5	-0.5	6.6	-0.1	4.4	-3.0	2.2	5.9	1.8	2.9
2010/11	-6.1	0.0	-1.5	8.5	3.5	-2.0	0.7	3.1	-10.9	-2.2	0.3	6.4	-2.8	10.9
2011/12	-3.2	4.4	4.7	3.4	8.4	0.3	0.2	0.0	-8.6	0.1	2.3	5.7	0.4	9.4
2012/13	-1.1	0.2	1.4	1.5	1.7	-1.6	-0.1	1.7	-3.8	0.2	-0.7	1.2	5.2	13.4
2013/14	-0.2	-0.4	10.2	-4.6	0.9	0.2	2.1	-2.9	0.4	3.8	1.8	4.2	2.7	-1.0
2014/15	1.8	0.7	1.8	-0.2	1.6	-0.7	-1.0	2.3	-2.9	-0.7	-0.2	3.6	6.4	3.5
2015/16	3.0	3.2	-1.9	7.8	1.4	1.6	-0.8	-3.2	0.9	0.0	1.8	0.7	1.3	2.5
2016/17	-1.9	1.8	4.8	-4.0	0.5	0.1	-0.4	0.7	-3.3	-0.7	1.5	0.6	3.9	0.9
2017/18	1.6	3.9	2.1	-6.0	-0.6	3.1	1.2	-0.8	2.0	2.5	0.5	-0.1	7.2	2.3
2018/19	2.0	4.0	1.4	2.3	-2.0	-1.5	-1.6	1.3	-0.2	-1.7	1.2	4.2	5.3	1.3
2019/20	5.0	1.6	-0.5	1.1	0.8	1.7	2.7	1.0	-0.8	2.8	-1.2	0.0	1.8	6.7
Sources: I	Gederal/provin	cial/terri	torial buc	lget and 1	oublic acc	ounts do	cuments;	authors'	calculatio	ns.				

Nova Scotia had relatively small mean absolute deviations: between 1.4 and 1.8 percent. The federal government's accuracy score of 2.7 percent puts it in the middle of the pack: its relatively good bias measure was in part a product of offsetting errors rather than consistent accuracy. Alberta's and Saskatchewan's expense targets were the least reliable among the provinces, while those of Nunavut and Yukon were the worst of all. Although expense overshoots reflect circumstances such as disaster spending – which was relatively high in Alberta in fiscal years 2013/14 and 2016/17, for example – calculating the averages over the entire period for which we have data provides an overall

picture of the reliability of the budget targets of Canada's senior governments.

Because comparing annual actual and budgeted changes resets the baseline every year, it is reasonable to think of these misses as cumulative: each year's miss adds to previous years' misses. The final panel of Table 2 provides a snapshot of these cumulative misses: the cumulative difference between actual and budgeted changes over the period. Over the 20 fiscal years, these cumulative misses added up to almost \$120 billion more spending – or, to give a sense of scale, more than \$3,100 extra per Canadian – than governments committed to in their budgets.

Table 2: Bias and Accuracy in Budgeted Expenses of Canada's Senior Governments, Fiscal Years 2000/01-2019/20 Bias **Cumulative Misses** Accuracy Absolute Mean Ratio to Mean Mean Absolute 2020/21 Amount Error Rank Rank Error Error (\$millions) Expense (percent) (percent) (percent) (percent) Federal 0.9 0.9 2.7 41,761 12 British Columbia 2.0 2.0 7 15,092 25 2.3 Alberta 3.4 12 4.2 12 19,962 35 3.4 Saskatchewan 2.4 2.4 10 4.2 11 3,844 24 Manitoba 1.9 8 3,984 22 1.9 2.1 Ontario 0.8 1 1.4 1 15,081 8 0.8 0.9 0.9 4 1.4 2 12 Quebec 14,167 3 3 New Brunswick 0.9 0.9 1.7 1,142 11 Newfoundland & Labrador -1.11.1 6 3.1 9 -1,337-15 Nova Scotia 0.9 0.9 5 1.8 4 1,796 15 7 Prince Edward Island 1.8 1.8 2.0 5 447 19 Yukon 5.0 13 13 735 48 5.0 5.3 Northwest Territories 3.1 3.1 11 3.4 10 979 52 14 Nunavut 5.4 5.4 5.5 14 1,439 56 2.0 2.9 23 National Average Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.

For another perspective on scale, the final column of Table 2 compares each government's cumulative misses over the 20-year period to budgeted expenses for fiscal year 2020/21. Our focus is not the wisdom of the budgeted amounts: we do not mark a government up or down according to the size of its projected increases or decreases. A government that budgeted big increases and achieved them, and a government that budgeted big decreases and achieved them, would both have zero in this column. But the column contains few numbers close to zero. The cumulative impact of overshoots over the period raised expenses by almost one-

quarter on average across all governments. A typical senior government would have framed its 2020 budget from a markedly lower expense baseline if it had hit its budget targets since 2000/01.

Revenues

Revenues are less straightforwardly under governments' control than are expenses. Major changes in taxation belong in budgets, so mid-year changes are rare. Ups and downs in the economy affect revenue with a lag, and information about those impacts takes additional time to come to

light. A parallel review of budgeted and actual revenues nevertheless yields useful information, including context for understanding misses on the expense side.

Table 3 presents the budgeted revenue changes of Canada's senior governments over the past 20 fiscal years. The format is the same as in Table 1's for expenses: budgeted changes in the top panel (including 2020/21 budgets for reference), actual changes in the middle panel, and differences between them in the bottom panel.

Also in parallel fashion, Table 4 summarizes each government's performance on the revenue side. We determine scores for bias and accuracy, and cumulative misses in revenues, the same way we did for expenses. That is, bias is the average difference between budgeted and actual changes; accuracy is the average of the annual absolute differences, penalizing larger misses either way.

The bias scores show that revenue overshoots were typical over the entire period, and larger than their expense counterparts; Ontario is the only exception. This is a notable result because many commentators on fiscal projections find or expect over-confidence in revenue projections – and, consequently, a record of smaller surpluses or larger deficits than projected in budgets (Frankel 2011; Jochimsen and Lehmann 2015). Across all governments, actual revenues exceeded budgeted revenues by an average of 2.3 percent annually over the 20 fiscal years.

It makes less sense to treat revenue overshoots as cumulative the way we treated expenses, since governments adjust taxes with budgets, and a key determinant of their tax decisions is how much spending they need to cover. For what it is worth, however, we note that, over the 20 fiscal years, cumulative revenue misses added up to \$143 billion of unanticipated revenue, or \$3,800 per Canadian.

Ontario, as just noted, is unique in recording almost no revenue bias over the period. The federal government, Nova Scotia, New Brunswick, Prince Edward Island and Quebec were also among the better performers, with annual overshoots (bias scores) in the 1.1–1.2 percent range. Not surprisingly, provinces with economies more oriented toward natural resource industries, which are more cyclical, volatile and benefited from better-than-expected demand and prices during most years in this period, recorded the largest overshoots: Alberta with an annual average of 6.9 percent, Saskatchewan with 5.0 percent and Newfoundland and Labrador with 3.3 percent.

Turning to accuracy, the federal government's average absolute misses of 2.0 percent give it the best – that is, the lowest – score among the 14 governments. Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia and Prince Edward Island had accuracy scores of 2.5 percent or less. Consistent with the bias scores, natural resource-dependent jurisdictions, more affected by commodity price swings, did worse.

As Table 2 does for expenses, Table 4 shows in its final column the size of each jurisdiction's cumulative revenue misses relative to budgeted revenues in its latest budget. If we treat revenue overshoots as cumulative, their average impact over the past 20 fiscal years left budgeted revenues for 2020/21 more than one-quarter higher than would have been the case if governments had hit their annual budget targets.

Below-the-Line Adjustments

Since below-the-line adjustments in financial statements have no budget counterpart, the size of the adjustments is itself a measure of the gap between what a government's budget led legislators and voters to expect and what got revealed after year-end. Table 5 shows the below-the-line adjustments for each government year by year, and provides two summary measures of performance over the period analogous to those we used for expenses and revenues. It also provides two "prevalence" measures, showing how frequently these adjustments occurred and the share of adjustments that were negative.

Table 3	: Budgeted	d and A	Actual	Revenu	es of C	anada'	s Senio	r Gove	ernmen	its, Fisc	cal Year	s 2000	/01-20	19/20
						Budget	ed Chai	nge (<i>per</i>	cent)					
	Federal	BC	AB	SK	MB	ON	QC	NB	NL	NS	PEI	YK	NT	NU
2000/01	1.3	0.5	-1.6	9.8	1.3	-0.7	2.8	-1.5	3.9	0.2	-1.7	1.7	4.9	3.1
2001/02	-4.1	2.3	-10.7	-11.1	0.6	-1.0	0.5	4.4	5.7	1.8	0.6	0.9	1.6	5.5
2002/03	0.3	-3.6	-5.6	2.3	0.6	4.9	2.0	1.2	0.7	3.1	-0.4	-2.4	-13.1	-2.5
2003/04	3.4	4.1	-2.9	-2.8	4.6	7.8	4.3	4.4	1.8	3.8	4.6	1.1	10.3	10.4
2004/05	3.4	3.2	-9.4	1.8	4.0	14.8	3.1	4.6	-3.8	4.2	3.1	2.1	6.9	2.7
2005/06	2.3	1.1	-4.9	-9.2	-0.3	5.9	3.3	2.8	3.5	4.4	3.1	5.0	1.9	5.4
2006/07	2.8	-0.3	-6.3	-3.5	3.4	2.1	4.4	0.1	2.3	5.1	3.1	1.1	2.0	2.5
2007/08	1.9	-1.7	-4.7	-6.2	5.8	2.6	1.3	2.8	12.2	5.8	8.0	-3.3	4.3	2.9
2008/09	-1.1	-2.3	2.2	-0.3	1.3	0.4	0.1	2.7	-3.4	2.3	6.8	1.0	-4.5	4.5
2009/10	-4.9	-1.9	-11.1	-12.4	-0.4	2.7	-0.4	-0.6	-29.5	-1.0	6.7	5.3	3.4	5.6
2010/11	8.0	5.8	1.3	-0.8	1.7	10.8	2.9	1.8	5.6	3.7	3.0	7.9	5.0	5.9
2011/12	5.7	3.6	4.7	-1.8	2.0	2.1	4.8	2.1	-1.1	-3.1	2.1	5.6	3.0	7.0
2012/13	2.8	2.8	4.6	1.9	0.3	2.7	5.1	5.2	-10.9	4.3	1.3	7.3	9.5	9.5
2013/14	3.8	4.6	-1.5	1.9	3.0	2.3	10.2	4.3	0.1	3.3	2.8	3.7	2.5	2.5
2014/15	4.7	1.9		-2.2	1.1	5.0	2.9		0.3	3.7	1.6		-0.6	0.8
2015/16 2016/17	3.9 -1.2	2.3	-11.5 -3.6	0.9	3.1	3.0	3.2	5.1	15.0	3.8	3.3	2.1	-0.6	1.4
2017/18	4.3	-0.1	4.8	3.4	2.9	6.3	3.7	4.1	0.3	3.0	4.6	2.7	0.7	5.1
2017/18	4.5	2.8	2.1	2.2	4.1	1.5	2.2	1.8	4.5	0.6	4.6	3.8	-2.9	5.5
2019/20	2.0	4.3	0.8	4.8	2.0	2.2	1.8	1.5	33.5	1.4	7.6	5.7	8.0	-1.7
2020/21	3.6	2.1	14.8	-9.2	4.2	-3.2	2.8	3.4	-25.4	1.6	6.5	4.5	18.0	7.6
2020/21							1 Chang			1.0			10.0	7.10
		D.C.	4 D	CIZ	MD			•		NIC	DEI	3777	N T/T	NILI
	Federal	BC	AB	SK	MB	ON	QC	NB	NL	NS	PEI	YK	NT	NU
2000/01	8.1	10.2	26.9	15.3	6.5	2.8	7.7	1.3	6.7	6.4	4.4	13.6	20.9	9.3
2001/02	-3.0	-5.5	-13.9	-10.3	-0.1	-1.2	-1.4	7.9	-1.3	1.0	4.2	-4.2	9.1	-4.2
2002/03 2003/04	3.6	-3.3 8.2	3.4	1.6	3.3 4.7	-0.7	4.2	-1.3 4.2	2.9	0.5 6.8	-2.7 5.4	6.7	-11.2 2.6	10.5 5.2
2003/04	6.6	14.4	13.3	18.8	11.5	13.8	4.3	9.8	6.3	8.7	9.3	12.5	12.4	9.7
2005/06	4.8	7.7	21.4	5.5	2.3	8.2	5.5	5.7	23.9	5.6	4.8	9.8	11.3	12.5
2006/07	6.2	7.0	7.4	5.2	6.0	7.3	8.6	5.2	-0.6	5.3	5.2	5.6	8.0	17.1
2007/08	2.7	3.4	0.0	13.9	9.2	7.4	5.2	4.8	29.3	11.6	5.7	2.2	11.9	-5.1
2008/09	-3.8	-3.7	-6.2	24.9	3.4	-6.8	-0.3	2.1	20.9	-0.7	5.7	5.4	-5.3	7.7
2009/10	-6.2	-2.0	0.2	-16.7	-0.9	-1.2	7.6	-1.7	-15.5	0.8	8.4	7.3	3.0	3.4
2010/11	8.5	6.6	-1.8	7.7	4.4	11.3	5.5	6.4	11.5	7.2	2.6	7.8	1.8	6.4
2011/12	3.5	2.6	11.1	0.5	4.6	2.4	4.6	3.6	6.5	-2.5	2.7	9.3	3.9	7.2
2012/13	3.0	0.5	-2.4	2.7	0.7	3.3	2.0	-0.3	-14.8	3.5	0.6	8.9	16.7	6.6
2013/14	5.9	4.0	16.9	0.7	4.4	2.2	6.1	-0.3	-0.2	-0.7	5.9	3.1	-0.9	6.9
2014/15	3.9	5.5	0.1	-2.5	3.7	2.3	2.9	7.2	-7.5	5.7	2.1	2.3	14.4	5.2
2015/16	4.6	3.2	-14.1	-3.0	0.6	8.3	4.4	-0.6	-13.7	2.6	1.9	-0.4	-0.1	2.6
2016/17	-0.7	8.1	-0.5	-0.1	4.4	3.4	2.8	6.2	19.7	2.7	4.4	3.5	2.3	-0.6
2017/18	6.9	1.1	11.8	2.9	3.4	7.0	5.2	4.9	7.5	6.7	8.2	3.4	-0.8	9.7
2018/19	6.7	9.8	4.9	3.1	5.1	2.1	5.9	3.8	7.5	-0.8	4.6	5.5	-2.6	2.8
2019/20	0.6	2.7	-6.8	2.7	3.6	1.6	1.9	2.0	22.4	4.0	5.2	5.4	4.2	1.4



					I	Differen	ce (perce	entage p	oints)					
	Federal	BC	AB	SK	MB	ON	QC	NB	NL	NS	PEI	YK	NT	NU
2000/01	6.8	9.6	28.6	5.5	5.3	3.4	5.0	2.8	2.8	6.2	6.1	11.9	16.0	6.2
2001/02	1.0	-7.8	-3.2	0.8	-0.7	-0.2	-1.9	3.5	-7.0	-0.8	3.5	-5.1	7.5	-9.6
2002/03	3.2	0.3	8.9	4.3	2.7	-1.3	2.2	-2.5	0.7	-2.5	-2.3	9.1	1.9	13.0
2003/04	1.0	4.1	17.1	4.3	0.1	-8.5	0.1	-0.2	1.1	3.0	0.8	10.3	-7.7	-5.2
2004/05	3.2	11.2	22.7	17.0	7.5	-1.0	1.1	5.2	10.1	4.5	6.2	10.4	5.5	7.0
2005/06	2.5	6.7	26.3	14.6	2.6	2.3	2.3	2.9	20.4	1.2	1.7	4.8	9.3	7.0
2006/07	3.4	7.4	13.8	8.7	2.6	5.2	4.2	5.0	-2.9	0.2	2.0	4.5	6.0	14.6
2007/08	0.8	5.2	4.6	20.1	3.4	4.8	3.9	2.0	17.1	5.8	-2.3	5.5	7.6	-8.0
2008/09	-2.8	-1.4	-8.4	25.2	2.0	-7.2	-0.4	-0.6	24.3	-3.0	-1.1	4.4	-0.8	3.2
2009/10	-1.4	-0.2	11.3	-4.3	-0.5	-3.9	8.1	-1.2	14.0	1.8	1.7	2.0	-0.3	-2.2
2010/11	0.4	0.8	-3.1	8.5	2.7	0.5	2.6	4.6	5.9	3.5	-0.4	-0.2	-3.2	0.5
2011/12	-2.3	-1.0	6.4	2.3	2.6	0.3	-0.2	1.4	7.5	0.6	0.7	3.6	1.0	0.2
2012/13	0.2	-2.2	-7.0	0.8	0.4	0.6	-3.1	-5.5	-3.9	-0.8	-0.7	1.6	7.2	-2.9
2013/14	2.0	-0.6	15.5	-1.2	1.4	-0.1	-4.0	-2.1	-0.3	-4.0	3.2	0.7	-3.4	4.4
2014/15	-0.7	3.5	1.6	-0.3	2.5	-0.5	-0.1	3.0	-8.0	2.0	0.5	-1.4	3.6	4.3
2015/16	0.7	1.9	-2.6	-4.0	-0.6	3.3	0.0	-1.3	-13.9	1.0	1.4	-2.5	0.4	1.2
2016/17	0.5	5.8	3.1	-1.2	1.3	0.2	-0.4	1.1	4.8	-1.1	1.1	0.9	3.2	-2.0
2017/18	2.5	1.2	7.0	-0.6	0.4	0.7	1.4	0.8	1.5	3.7	3.6	0.7	-1.5	4.7
2018/19	2.3	7.0	2.8	0.9	1.0	0.5	3.6	2.1	3.0	-1.5	0.0	1.7	0.3	-2.7
2019/20	-1.4	-1.6	-7.5	-2.2	1.6	-0.7	0.1	0.6	-11.1	2.6	-2.4	-0.3	-3.8	3.0

Happily, the direction indicators average to about zero in all governments over the period. A negative average would have indicated that below-the-line adjustments tend to be adverse, suggesting that governments use them to obscure bad news. Looking jurisdiction by jurisdiction, Ontario had the most notable propensity for adjustments that improved its net worth, and Quebec had the most notable propensity for adjustments that lowered its net worth.

Turning to the sizes of adjustments, Ontario, Quebec and the Northwest Territories are at the high end, with average absolute adjustments greater than 1.8 percent; Prince Edward Island, Yukon, the federal government, British Columbia and New Brunswick are at the low end, with average absolute adjustments of 0.2 percent or less.

In addition to the direction and size scores, we can examine the prevalence of below-the-line adjustments by looking at the number of years with adjustments as a share of the total. We can also check for any proclivity toward negative adjustments by comparing the number of years with negative adjustments to the number of years with adjustments either way.

Table 4: Bias and Accuracy in Budgeted Revenues of Canada's Senior Governments, Fiscal Years 2000/01-2019/20 **Bias Cumulative Misses** Accuracy Absolute Mean Ratio to Mean Mean Absolute Amount 2020/21 Rank Error Rank Error Error (\$millions) Expense (percent) (percent) (percent) (percent) **Federal** 1.1 1.1 4 2.0 1 48,454 14 British Columbia 2.5 10 8 18,040 30 2.5 4.0 Alberta 6.9 6.9 14 10.1 14 37,713 64 Saskatchewan 5.0 5.0 13 6.3 12 7,618 56 Manitoba 1.9 1.9 8 2.1 3 3,979 22 Ontario -0.1 0.1 1 2.3 5 1,289 1 6 4 14 Quebec 1.2 1.2 2.2 17,137 2 New Brunswick 1.1 1.1 2.4 6 1,329 13 Newfoundland & Labrador 12 3.3 3.3 8.0 13 3,800 53 Nova Scotia 1.1 1.1 3 2.5 7 2,159 19 5 2 Prince Edward Island 1.2 1.2 2.1 311 14 Yukon 3.1 3.1 11 4.1 395 26 Northwest Territories 9 10 26 2.4 2.4 4.5 560 Nunavut 1.8 1.8 7 5.1 11 622 24 2.3 4.1 27 National Average Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.

Adjustments are common: across all governments and all years, they occurred 92 percent of the time. At the federal level, almost exactly half the fiscal years had adjustments that featured negative adjustments, reinforcing the neutral story from the federal government's score for average direction. Negative adjustments were rarest in the Northwest Territories, while Nova Scotia, Prince Edward Island and Saskatchewan also recorded negative adjustments well under half the time. By contrast, Quebec had negative adjustments

three-quarters of the time and about two-thirds of Alberta's and Yukon's adjustments were negative.

UNDERSTANDING BUDGET HITS AND MISSES

Having considered the differences between budgeted and actual revenues and expenses separately, we look at them together for potential insights into why governments miss their targets.



-0.2

-0.1

-2.0

0.1

0.5

-0.4

0.0

0.5

0.5

2017/18

2018/19

2019/20

Table 5	a: Annu	al Belo	w-the-	Line A	djustn	nents as	s a Perc	entage	of Exp	enses,	Fiscal`	Years 2	2000/01	_
	Federal	ВС	AB	SK	MB	ON	QC	NB	NL	NS	PEI	YK	NWT	NU
2000/01	0.0	-0.5	-1.0	-13.1	3.7	-	0.1	-	-	-	-	-	_	-16.7
2001/02	0.0	3.5	-1.7	4.4	-4.1	-	-4.2	-	-	1.1	-	0.6	22.7	0.7
2002/03	0.0	-1.2	-1.5	-1.3	-4.9	19.4	-1.8	-	-	5.7	-	0.7	0.9	0.1
2003/04	0.0	-0.4	-0.6	2.4	-15.2	0.0	-0.3	0.0	1.0	5.4	0.0	2.5	0.8	-0.7
2004/05	0.0	0.0	0.0	17.7	1.5	0.0	-0.5	0.0	0.9	0.0	0.2	-4.1	0.6	2.0
2005/06	0.0	0.0	-0.7	2.4	3.2	19.4	-7.5	0.0	3.0	5.8	0.1	0.0	1.4	0.0
2006/07	0.2	1.3	0.3	-0.9	3.1	0.1	-9.6	0.0	0.0	0.0	0.0	0.0	0.7	0.1
2007/08	0.0	-0.2	0.9	-7.5	2.8	0.6	0.5	0.1	0.9	0.0	-0.4	0.0	0.6	0.0
2008/09	-0.2	-1.1	0.0	6.2	-6.3	-1.3	-3.7	-1.8	-0.9	0.0	0.0	0.0	0.3	0.0
2009/10	0.1	1.2	0.0	12.6	5.5	1.3	-8.7	0.1	0.3	0.0	0.0	0.0	9.0	0.0
2010/11	0.8	0.1	0.0	0.3	1.3	0.3	-2.4	1.4	0.5	0.0	1.8	0.0	4.5	0.0
2011/12	-2.1	-0.8	-0.1	-3.6	-0.5	-0.7	-0.5	-0.1	-1.0	0.0	0.0	0.0	0.2	0.0
2012/13	0.0	0.1	-5.5	-1.6	-0.1	0.4	-1.6	1.5	0.2	0.0	0.0	0.0	0.4	0.0
2013/14	1.0	0.8	-6.2	3.1	-1.1	0.8	-0.1	0.4	-1.5	0.0	0.0	0.0	0.3	0.0
2014/15	-0.8	-0.6	0.5	-3.3	-2.5	-0.4	-1.5	-1.7	-0.7	0.0	0.0	0.0	0.0	0.0
2015/16	-0.9	-1.4	-0.5	-0.4	-0.3	-7.6	-0.4	-1.7	0.2	0.0	0.0	-0.4	0.0	0.0
2016/17	0.6	0.5	-0.1	0.6	0.7	-0.3	0.7	1.0	0.3	0.0	0.0	-0.1	0.0	0.0

0.0

0.0

0.1

0.0

-0.4

-0.8

0.0

0.0

-0.1

0.0

0.0

0.0

0.0

0.0

0.0

Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.

0.7

0.8

2.3

-0.1

-1.4

0.4

0.4

-0.1

-0.3

0.4

-1.2

2.3

-0.1

0.2

-0.7

-1.0

-0.4

-26.4

Table 5b: Direction, Size and Prevalence of Below-the-Line Adjustments, Fiscal Years 2000/01–2019/20

Bias Prevalence

		Bias		Preva	lence
	Mean Error (percent of expense)	Absolute of Mean Error (percent of expense)	Rank	Share of Years with Adjustments	Share of Adjustments that were Negative
Federal	-0.2	0.2	5	70	50
British Columbia	0.1	0.1	3	90	50
Alberta	-0.8	0.8	8	95	68
Saskatchewan	1.1	1.1	10	100	40
Manitoba	-0.7	0.7	6	100	55
Ontario	1.8	1.8	12	89	44
Quebec	-2.0	2.0	13	100	75
New Brunswick	-0.1	0.1	4	94	50
Newfoundland & Labrador	-1.4	1.4	11	100	47
Nova Scotia	1.0	1.0	9	95	28
Prince Edward Island	0.0	0.0	1	100	35
Yukon	0.0	0.0	2	89	65
Northwest Territories	2.2	2.2	14	89	6
Nunavut	-0.7	0.7	7	70	64
National Average	0.0	0.9		92	48

Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.

Odd Patterns of Revenue and Expense Surprises

Students of fiscal policy in a macroeconomic context would not expect governments to chronically overshoot both their revenue targets and their expense targets. The standard prescription for macro fiscal management is that, in booms, governments should let revenues rise and expenses fall relative to plan, as both naturally will tend to do. In busts, they should let revenues fall and expenses rise relative to plan, as both will naturally tend to do. That kind of countercyclical policy can stabilize aggregate demand, and limits disruptive changes in tax rates

and programs. There is nothing controversial in a government's bottom line moving toward surpluses in booms and toward deficits in busts.

In our comparisons, such an approach would produce annual overshoots in revenues that would coincide with undershoots in expenses, and annual undershoots in revenues that would coincide with overshoots in expenses. The correlation between annual overshoots and undershoots in revenues and expenses would be negative. As Table 6 indicates, however, this is not what we see.

Over the 20 fiscal years, the correlation between annual overshoots and undershoots in revenues and expenses (the coefficient of correlation) is positive. Governments reporting higher-than-projected revenues in a given year typically reported higher-than-expected expenses in the same year, and larger revenue surprises tended to coincide with larger expense surprises. The positive correlation coefficient for five of the governments exceeded the 0.46 figure that standard statistical tests say is significant for this number of observations. Only Nunavut and Newfoundland and Labrador recorded negative correlations.

Governments sometimes justify extra spending during booms on the basis that economic growth attracts people and generates unexpectedly high demand for public infrastructure and services. But those impacts affect capital spending more than current spending. Approving and building a hospital or a road takes years, and governments amortize their capital costs – meaning that the associated expenses appear in budgets and financial statements not when the outlays occur, but over the period the investments are expected to yield services. Capital projects are not a plausible reason for persistent in-year surprises.

Why Might Revenue and Expense Surprises Coincide?

Although other analysis of budget projections and results (Frankel 2011) has concluded that governments tend to anticipate more revenue – and larger surpluses or smaller deficits – than they actually achieve, an explanation more consistent with our findings for Canada's senior governments is that they underpredicted revenues. When revenues came in ahead of target as the year unfolded, they reacted to an emerging better-than-budgeted bottom line by spending more or by trying to pre-book spending expected in future years.³

Table 6: Correlation of Revenue and Expense Surprises, Canada's Senior Governments, Fiscal Years 2000/01–2019/20

	Coefficient of Correlation	Rank
Federal	0.24	4
British Columbia	0.29	7
Alberta	0.76	14
Saskatchewan	0.64	13
Manitoba	0.28	5
Ontario	0.44	9
Québec	0.53	11
New Brunswick	0.39	8
Newfoundland & Labrador	-0.02	2
Nova Scotia	0.03	3
Prince Edward Island	0.61	12
Yukon	0.47	10
Northwest Territories	0.29	6
Nunavut	-0.05	1
National Average	0.35	

Note: The 20-year period yields the statistically significant correlation coefficient 0.458 with a two-tailed 10-percent significance level.

Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.

Another possible explanation for the positive correlation is that governments have a desired bottom-line number, and manage their reported numbers to achieve it. A government headed for a surplus that is bigger than it wants might defer revenue to a subsequent year or book an expense in

Prominent examples of pre-booking occurred at the federal level in the late 1990s and early 2000s. It included transfers to foundations that did not even exist at the end of the relevant fiscal years, prompting a series of complaints from the auditor general (see, especially, Canada 2001, 1.29–1.34).

Table 7: Improvements and Deteriorations in Fiscal Accountability, Canada's Senior Governments, by Period, Fiscal Years 2000/01–2019/20

				Expenses	(percent)			
		Bi	ias			Accı	ıracy	
	First 7 years	Middle 6 years	Last 7 years	Absolute Difference, Last vs. First 7 years	First 7 years	Middle 6 years	Last 7 years	Absolute Difference, Last vs. First 7 years
Federal	1.4	-0.7	1.6	0.2	4.4	3.5	2.8	-1.6
British Columbia	2.5	1.4	2.1	-0.4	2.9	2.4	2.8	-0.1
Alberta	5.3	2.0	2.6	-2.7	6.4	3.9	4.9	-1.6
Saskatchewan	3.2	5.0	-0.5	-2.7	3.8	7.1	4.8	1.0
Manitoba	2.1	3.3	0.4	-1.7	2.5	3.8	1.3	-1.2
Ontario	1.1	0.5	0.6	-0.4	0.8	2.8	1.7	0.9
Québec	1.0	1.6	0.3	-0.6	1.4	2.6	1.7	0.3
New Brunswick	0.9	2.1	-0.2	-0.7	1.2	2.6	2.1	0.9
Newfoundland & Labrador	0.8	-3.8	-0.6	-0.2	3.1	5.8	2.0	-1.0
Nova Scotia	1.8	0.0	0.8	-1.0	2.5	2.1	2.3	-0.1
Prince Edward Island	3.7	0.9	0.8	-2.9	5.2	1.3	1.4	-3.8
Yukon	7.4	5.8	1.9	-5.5	8.9	5.7	2.9	-6.0
Northwest Territories	2.4	2.8	4.1	1.7	3.1	4.0	5.0	1.9
Nunavut	6.2	8.0	2.3	-3.9	7.4	8.2	3.5	-3.9
National Average	2.8	2.1	1.2	-1.7	3.8	4.0	2.8	-1.0

Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.

the current year even when the transaction will not occur until later. A government headed for a deficit when it has committed to balance might do the opposite: recognize revenue earlier than it should or defer an expense.

Since the standard stabilizing prescription dictates a negative correlation between revenue and expense surprises, and since a positive correlation suggests problematic behaviour, we rank the results in Nunavut and Newfoundland and Labrador as relatively good, and those in Alberta, Quebec,

Saskatchewan, Prince Edward Island, Yukon and Ontario as relatively bad.

HAVE FISCAL CONTROLS IMPROVED?

The economic climate has changed in many ways over the past 20 fiscal years. Breaking the period roughly into thirds, the first seven years featured robust growth, the middle six saw a financial crisis and slump and the last seven were characterized by

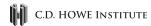


Table 7: Continued								
				Revenues	(percent)			
		Bi	as			Accı	ıracy	
	First 7 years	Middle 6 years	Last 7 years	Absolute Difference, Last vs. First 7 years	First 7 years	Middle 6 years	Last 7 years	Absolute Difference, Last vs. First 7 years
Federal	3.0	-0.8	0.9	-2.2	3.8	1.7	1.8	-2.0
British Columbia	4.5	0.2	2.5	-2.0	8.1	2.2	4.1	-4.0
Alberta	16.3	0.7	2.8	-13.5	20.8	8.9	7.9	-12.9
Saskatchewan	7.9	8.8	-1.2	-6.7	10.4	12.8	2.0	-8.4
Manitoba	2.9	1.8	1.1	-1.8	4.2	2.1	1.5	-2.6
Ontario	0.0	-0.8	0.5	0.5	4.5	3.6	1.5	-3.0
Québec	1.8	1.8	0.1	-1.7	3.1	4.0	2.3	-0.8
New Brunswick	2.4	0.1	0.6	-1.8	3.8	3.0	1.9	-1.9
Newfoundland & Labrador	3.6	10.8	-3.4	-0.1	9.9	13.0	8.3	-1.6
Nova Scotia	1.7	1.3	0.4	-1.3	3.6	3.3	2.7	-0.9
Prince Edward Island	2.6	-0.4	1.1	-1.5	4.1	1.7	2.3	-1.8
Yukon	6.6	2.8	0.0	-6.5	9.2	3.2	1.5	-7.7
Northwest Territories	5.5	1.9	-0.2	-5.3	9.4	4.4	3.0	-6.4
Nunavut	4.7	-1.5	1.8	-2.9	10.3	3.9	3.7	-6.6
National Average	4.5	1.9	0.5	-4.0	7.5	4.8	3.2	-4.3

sluggish growth. Meanwhile, the quality of fiscal reporting has generally improved (Robson and Wu 2021). What do our measures during these three periods suggest about progress or slippage?

Results versus Intentions

At a high level, the story with respect to biases and accuracy is positive. We summarize the bias and accuracy scores for each government over each of the three periods in Table 7. Most indicators of

fiscal management registered better during the most recent seven years than during the first seven.

On the expense side, the bias scores show that fewer governments over the last seven years spent more than they budgeted, and those that did, did so by smaller amounts. Only Ottawa and the Northwest Territories recorded larger absolute biases in the last seven years than in the first seven. Yukon, followed by Nunavut and Prince Edward Island, recorded substantially smaller absolute biases in the last seven years. Notably, Saskatchewan,

Table 8: Correlation of Revenue and Expense Surprises, Canada's Senior Governments, by Period, Fiscal Years 2000/01–2019/20

		Co	orrelation of Surpr	ises	
	First 7 years	Middle 6 years	Last 7 years	Difference (last – first 7 years)	Rank (Based on Last 7 Years)
Federal	0.58	-0.25	-0.42	-1.00	3
British Columbia	0.17	0.26	0.41	0.24	11
Alberta	0.84	0.52	0.88	0.04	13
Saskatchewan	0.56	0.75	-0.49	-1.05	2
Manitoba	0.21	0.37	0.17	-0.03	6
Ontario	0.70	0.52	0.30	-0.40	9
Québec	0.77	0.91	-0.53	-1.30	1
New Brunswick	0.47	0.31	0.94	0.47	14
Newfoundland & Labrador	0.09	0.45	-0.08	-0.17	4
Nova Scotia	-0.19	0.13	0.03	0.22	5
Prince Edward Island	0.51	0.67	0.63	0.13	12
Yukon	0.19	0.48	0.24	0.05	8
Northwest Territories	0.46	0.68	0.39	-0.07	10
Nunavut	-0.10	0.28	0.22	0.32	7
National Average	0.37	0.43	0.19	-0.18	

Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.

with one of the largest 20-year average expense overshoots, undershot its budget during the last seven years with a bias score of -0.5 percent. The unweighted national average of the 14 governments' absolute biases for expenses dropped from 2.8 percent in the first seven years to 2.1 percent in the middle six and to 1.2 percent in the last seven.

Accuracy improved less over the 20 years, suggesting that some of the improvement in biases reflects better luck with offsetting errors. Accuracy was better in 9 of the 14 jurisdictions in the last seven years than in the first seven, again with Yukon, followed by Nunavut and Prince

Edward Island, recording the largest improvements (reductions). Over the last seven years, Manitoba and Prince Edward Island, with accuracy scores around 1.2 percent, were the top performers. The average of the 14 governments' accuracy scores was 3.8 percent in the first seven years, rose to 4.0 percent in the middle six years – the years that included the global financial crisis and slump – and dropped to 2.8 percent in the last seven years.

Our revenue measures show bigger improvements. The absolute size of biases was smaller in the last seven years than in the first seven for every government except Ontario, which had a bias score of zero – impossible to improve on – in the first seven years. Alberta improved most, followed by Yukon and Saskatchewan. The average across all governments dropped from 4.5 percent in the first seven years to 1.9 percent in the middle six and to 0.5 percent in the last seven.

Accuracy scores for revenues improved everywhere, with Alberta again showing the biggest improvement, followed by Saskatchewan and Yukon. In the last seven years, Manitoba, Ontario and Yukon, each with scores around 1.5 percent, ranked highest – replacing the federal government and Prince Edward Island, which had the best (lowest) accuracy scores over the 20-year period – while Yukon and New Brunswick joined governments with accuracy scores less than 2 percent. The average of the 14 governments fell from 7.5 percent in the first seven years to 4.8 percent in the middle six and 3.2 percent in the last seven.

Correlations between Revenue and Expense Surprises

As we have noted, negative correlations between in-year revenue and expense surprises are consistent with good fiscal management, while positive correlations suggest problems. The differences in coefficients of correlations between the first and last seven-year periods during the 20-year span (Table 8) suggest that a bad situation became slightly better. These coefficients were better – that is, more negative – in the last seven years for seven of the 14 governments, lowering the overall national coefficient by 0.18 of a percentage point between the first and last seven-year periods. However, the continued prevalence of positive correlations –10 of the 14 governments show them in the last seven years – is disappointing.

The Record on Below-the-Line Adjustments

Table 9 summarizes the record of Canada's senior governments' below-the-line adjustments over the past 20 fiscal years. It compares the annual

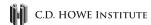
surplus or deficit to the change in the governments' accumulated surplus or deficit during that same year, expressed relative to expenses in order to facilitate comparison. Like its counterpart for expense and revenue overshoots, and for correlations between overshoots, Table 9 breaks the period roughly into thirds. The first panel shows the average adjustment over the three periods – similarly to our bias scores earlier, the figures in the panel treat positive and negative adjustments as offsets – and the difference between the first and last periods. The second panel shows the governments' average absolute adjustments, treating adjustments upward or downward as equally objectionable.

On this front, there is good news and bad news. Taking the bad news first, negative adjustments have become more common over time. During the first seven years, governments' accumulated surpluses or deficits tended to improve more than the annual surplus or deficit indicated. The average national adjustment was a positive figure of about 0.8 percent of expenses, and fewer than two in five adjustments were negative. In the middle six years, both the overall direction figure and the share of adjustments that were negative were close to neutral. In the most recent seven years, accumulated surpluses or deficits tended to deteriorate more than annual surpluses or deficits indicated. The average national adjustment was a negative figure of about 0.5 percent of expenses, and three in five adjustments were negative.

The good news is that below-the-line adjustments tended to shrink. Their absolute size dropped from 2.7 percent of expenses on average in the first seven years, to 1.3 percent in the middle six years and to less than 1 percent in the last seven. An optimistic reading of this trend would be that these adjustments were more important when public sector accounting standards were in their earlier stages of application, and that improvements in reporting have made large adjustments less necessary with time.

Table 9: Below-the-Line Adjustments, Canada's Senior Governments, by Period, Fiscal Years 2000/01-2019/20

		Average Adjustments	ljustments		Ave	Average Absolute Adjustments	te Adjustm	ents	Share of	Share of Adjustments that Were Negative	s that Were	Negative
	First 7 years	Middle 6 years	Last 7 years	Absolute Difference, Last vs. First 7 years	First 7 years	Middle 6 years	Last 7 years	Absolute Difference, Last vs. First 7 years	First 7 years	Middle 6 years	Last 7 years	Difference, Last vs. First 7 years
Federal	0.0	-0.2	-0.3	-0.4	0.0	0.5	8.0	8.0	0	33	71	71
British Columbia	0.4	-0.1	-0.1	-0.5	1.0	9.0	9.0	-0.4	09	25	43	-17
Alberta	-0.8	-0.8	8.0-	0.0	8.0	1.1	1.2	0.4	83	29	57	-26
Saskatchewan	1.7	1.1	9.0	-1.1	0.9	5.3	1.6	4.4-	43	50	29	-14
Manitoba	-1.8	0.5	9.0-	1.2	5.1	2.7	6.0	-4.2	43	50	71	29
Ontario	7.8	0.1	-1.1	-8.9	7.8	8.0	1.4	-6.4	0	33	71	71
Québec	-3.4	-2.7	0.0	3.4	3.4	2.9	1.0	-2.5	98	83	57	-29
New Brunswick	0.0	0.2	-0.4	-0.4	0.0	8.0	8.0	8.0	29	33	57	-10
Newfoundland & Labrador	1.2	0.0	-4.2	-5.4	1.2	9.0	4.3	3.1	25	33	71	46
Nova Scotia	3.0	0.0	0.0	-3.0	3.0	0.0	0.0	-3.0	0	50	33	33
Prince Edward Island	0.1	0.2	-0.2	-0.2	0.1	0.4	0.2	0.1	0	33	57	57
Yukon	0.0	0.0	-0.1	0.0	1.3	0.0	0.1	-1.2	25	83	71	46
Northwest Territories	4.5	2.5	0.0	4.4-	4.5	2.5	0.1	4.4-	0	0	20	20
Nunavut	-2.1	0.0	0.0	2.1	2.9	0.0	0.0	-2.9	43	29	100	57
National Average	8.0	0.1	-0.5	-1.3	2.7	1.3	6.0	-1.7	34	46	58	24
Sources: Federal/provincial/territorial budget and public accounts documents; authors' calculations.	ritorial budg	et and public a	ccounts docu	ments; authors' c	alculations.							



IMPROVING FISCAL ACCOUNTABILITY IN CANADA

To summarize, we note a tendency in more recent years for the end-of-year results of Canada's senior governments to match their budget targets more closely. More tentatively, we also note less tendency for governments' revenue over- and undershoots to coincide with their expense over- and undershoots. But these improvements, if they are real, are relative to a poor baseline of chronic overshoots and suspicious positive correlations between in-year revenue and expense surprises. While below-the-line adjustments have tended to get smaller over the years, they are chronic, and most recent ones have tended to be negative.

The COVID-19 crisis has been so severe that it will produce at least one fiscal year when revenues are markedly below, and expenses spectacularly above, what governments budgeted. Accordingly, future iterations of this analysis are likely to report positively on revenue and expense surprises in opposite directions. But this improvement, like the one that followed the 2008–09 financial crisis, might be a blip. Upcoming fiscal pressures might increase the temptation for governments to mislead with their targets, "manage" their bottom lines and use below-the-line adjustments to obscure information they wish to hide. We close with some thoughts about how to ensure that Canadians can have more confidence in the budget commitments of their federal, provincial and territorial governments.

Healthy Finances and Sound Fiscal Plans

Two chronic problems we have identified – major overshoots of revenues relative to budget targets,

and in-year spending or aggressive accounting to reduce the resulting better-than-projected bottom line – likely arise more often when governments are under fiscal pressure and the focus on the end-of-year surplus or deficit is intense. As Ottawa did so conspicuously in the late 1990s and as most provinces have done most of the time, Canada's senior governments project revenues conservatively in their budgets, which betrays concern about a credible and achievable bottom-line target, and indicates possible efforts by finance officials to restrain spending departments.⁴

However well this tactic works around budget time, its defects emerge as revenues come in above projections during the year. Positive in-year revenue surprises undercut the finance minister's ability to hold the line. If a larger-than-projected surplus threatens the minister's ability to hold the line in the future, the temptation to reduce it with last-minute spending — or booking future spending in the current year — increases.

This pressure is likely less severe when a government's fiscal health is not in doubt. When the 2008-09 financial crisis hit, the federal government's finances were in much better shape than they had been in the 1990s. Less need to show specific bottom-line results gave Ottawa latitude to respond to the crisis with traditional countercyclical policies. Its positive (bad) correlations between in-year surprises on the revenue and expense sides turned to negative (good) ones later on.

An alternative for a government under scrutiny for its borrowing and debt is to use a more middle-of-the-road revenue projection and aim for a surplus large enough that some adverse development will not produce a deficit. Including a contingency reserve in spending to further protect the budget balance against adverse developments

We emphasize that this pattern is not what observers of budget projections typically expect. Kahneman, Sibony and Sunstein (2021, p. 259) cite the conclusion of Frankel (2011) that governments over-predict revenue and anticipate larger surpluses or smaller deficits than they achieve as a typical example of bias in forecasting.

is open to objections that it legitimates a spending surprise in advance. But a contingency reserve is more transparent than a low-balled revenue forecast, and is less likely to produce problematic positively correlated revenue and expense surprises.

As for below-the-line adjustments, readers of corporate or not-for-profit financial statements will react to persistent differences between highlighted bottom lines and changes in the organization's net worth. For example, if a government has a Crown corporation that is routinely running large losses, it should either mitigate its exposure or ensure that the required subsidy shows up in expenses and, therefore, in the budgeted and actual surplus or deficit. Governments in better fiscal shape will have less incentive to massage their numbers. For both businesses and not-for-profits, a solid foundation for transparency is having nothing to hide.

Fiscal Transparency and Accountability

Legislators and voters should do more to hold governments to account for the revenue and expense targets they set, for their record in hitting them and for consistency between their reported bottom lines and changes in their net worth. Here are four examples of holding government to account, in the order in which various events occur during the government's annual fiscal cycle.

A critical update on the current fiscal year comes when the government presents its budget for the following year. The preliminary outcomes for total consolidated revenues and expenses for the fiscal year about to end provide vital information about what the government has done and expects to do. If the government is on track to overshoot revenue and/or expense targets from the prior budget, those projected outcomes are a timely and important indication of problems. Yet it is the budget targets for the upcoming year – which, as we have documented, are far from reliable – that get all the attention. The interim numbers for the prior year deserve much more scrutiny from legislators, analysts and the public.

Second, legislative and public scrutiny of spending estimates should be stronger. In many jurisdictions, legislators cannot easily see if what they are authorizing when they vote on the estimates is consistent with the fiscal plan. In some cases, governments present estimates using cash accounting, which is incompatible with the accrual accounting now typical in budgets and financial statements. Another discrepancy arises when the estimates classify aggregate spending in different categories than the budget, without reconciliation between them. Accountability also breaks down when legislators are asked to authorize spending before they have seen the budget, or to authorize spending that is no longer consistent with the fiscal plan.

All senior governments should release their main estimates simultaneously with their budgets, using the same accounting in both. That would let legislators see how each item they vote on aligns with the overall fiscal plan. The need for legislatures to consider the estimates in the context of the overall fiscal plan applies with equal force to supplementary estimates that authorize spending later in the fiscal year. These, coming at irregular intervals when legislatures are occupied with other matters, get less scrutiny than the main estimates, yet they are no less critical to determining if the government will hit its budget targets. Scrutiny of supplementary estimates is the principal tool to ensure that contingency reserves are not slush funds to cover spending that would not otherwise pass inspection.

Timely publication of interim and final results also matters for accountability. Like any organization, a government trying to hit fiscal targets in the face of unexpected developments needs timely information to adjust course. Speed in assembling the information that appears in periodic financial updates and in the audited financial statements would improve the prospects for a realistic budget plan – including the critical but typically neglected figures for the current year.

Financial results for a fiscal year ending on March 31 should not still be a mystery more than three months later. Some governments release their financial statements quickly - Alberta requires financial statements before the end of June – but most receive their auditor's approvals and produce their reports far later (Robson and Wu 2021). With modern information technology, there is no reason all senior governments could not publish quarterly or even monthly reports and release their audited financial statements by June 30, and certainly no later than August 30. Timely updates and publication of audited numbers would give legislators, commentators and voters better opportunities to spot deviations between budget targets and results while it was still early enough to do something about them, and to insist on budgets that address problems such as the chronic underbudgeting of revenues that our scrutiny reveals.

Finally, public accounts committees, legislators generally and other readers of government financial statements need to focus harder on below-the-line adjustments. The deterioration in governments' service capacity in recent years has been worse than indicated by the annual surpluses and deficits that get most of the attention. When these adjustments are large, persistent and negative, it is reasonable to ask if they are truly the result of circumstances beyond governments' control. Legislators and commentators need to watch not just the bottom line but what happens below it.

CANADA'S SENIOR GOVERNMENTS MUST DO BETTER

Canadians need more transparency and accountability in the fiscal policies of the governments that tax much of their income and provide important transfers and services. Our investigation reveals that, although Canada's senior governments have improved their stewardship of

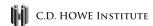
public money over the past 20 fiscal years, chronic overshooting of both revenues and expenses continues. The suspicious positive correlation of inyear revenue and expense surprises, and the tendency for governments to show negative below-the-line adjustments in recent years, suggest that control of public funds still leaves much to be desired.

Most governments, most of the time, seem more intent on managing their annual bottom line than on stabilizing their economy, tax rates and programs. For all the attention budgets receive and the formal legislative accountability that surrounds budgets and estimates, governments' budget targets are less reliable than they should be. For all the scrutiny they receive from legislative auditors and public accounts committees, financial statements are often published later and are less informative than they should be. In contrast to budgets, with their attendant fanfare, examination of governments' financial results tends to be a low-profile affair. The value-for-money work undertaken by auditors general generates more headlines. Legislators need to take their responsibility for examining governments' financial statements more seriously.

If legislators do not react to late, missing or misleading numbers from governments, or fail to exercise their authority to discipline governments whose actions do not match their commitments, and if voters do not support legislators who do call governments out, then fiscal accountability is a fiction. The COVID-19 crisis has accelerated a trend for the executive branch of government to act without legislative authority. If voters do not demand accountability, elected representatives lose their power to enforce it. At the same time, COVID's fiscal impact has raised the stakes. More than ever, legislators and voters should demand that Canada's federal, provincial and territorial governments improve their budgeting processes and their transparency about how well, or badly, they fulfill their budget commitments.

APPENDIX:
BUDGETS AND PUBLIC ACCOUNTS DOCUMENTS, LATEST YEAR

2019/20 Budget Docur	nents	
Jurisdiction	Budget Document Used for Rating	Accessible at
Federal	2019 Budget Plan	https://www.budget.gc.ca/2019/docs/plan/budget-2019-en.pdf
Newfoundland and Labrador	Budget 2019 – Budget Speech	https://www.gov.nl.ca/budget/2019/wp-content/uploads/ sites/2/2019/04/Budget-Speech-2019.pdf
Prince Edward Island	2019 Budget Estimates of Revenue and Expenditures	https://www.princeedwardisland.ca/sites/default/files/publications/estimates_2019.pdf
Nova Scotia	Budget 2019-2020	https://beta.novascotia.ca/sites/default/files/documents/6-1692/ftb-bfi-039-en-budget-2019-2020.pdf
New Brunswick	2019-2020 Main Estimates	https://www2.gnb.ca/content/dam/gnb/Departments/fin/pdf/Budget/2019-2020/MainEstimates2019-2020BudgetPrincipal.pdf
Quebec	Quebec Budget Plan 2019-2020	http://www.budget.finances.gouv.qc.ca/budget/2019-2020/en/documents/BudgetPlan 1920.pdf
Ontario	2019 Ontario Budget	https://budget.ontario.ca/pdf/2019/2019-ontario-budget-en.pdf
Manitoba	Budget 2019	https://www.gov.mb.ca/asset_library/en/budget2019/budget.pdf
Saskatchewan	2019-20 Saskatchewan Provincial Budget	http://publications.saskatchewan.ca/api/v1/products/100137/formats/110485/download#:~:text=The%202019%2D20%20 Budget%20includes,billion%20outlined%20in%20 this%20plan.&text=In%20addition%20to%20the%20 Saskatchewan,%241.6%20billion%20in%202019%2D20.
Alberta	2019-23 Fiscal Plan	https://open.alberta.ca/dataset/3d732c88-68b0-4328-9e52- 5d3273527204/resource/2b82a075-f8c2-4586-a2d8-3ce8528a24e1/ download/budget-2019-fiscal-plan-2019-23.pdf
British Columbia	Budget and Fiscal Plan 2019/20- 2021/22	https://www.bcbudget.gov.bc.ca/2019/pdf/2019 budget and fiscal plan.pdf
Northwest Territories	2019-2020 Budget Address and Papers	https://www.fin.gov.nt.ca/sites/fin/files/resources/2019-2020 budget_address_and_papers_0.pdf
Yukon	2019-20 Fiscal and Economic Outlook	https://yukon.ca/sites/yukon.ca/files/fin/fin-budget-2019-20-fiscal-economic-outlook.pdf
Nunavut	2019-2020 Fiscal and Economic Indicators	https://www.gov.nu.ca/sites/default/files/2019-20_fei-eng.pdf



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