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Fuzzy Finances: Grading the Financial Reports of Canada's Municipalities

Annual budgets in Canada's major municipalities are a mess – they exclude key activities, use inconsistent accounting methods, bury crucial numbers where only experts can find them and often are voted on well after the fiscal year has started. While some have raised their games, they all could improve transparency and accountability by presenting budgets that municipal councils and citizens can more readily understand.

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The Study In Brief

In nearly all larger Canadian municipalities, obscure financial reports – notably inconsistent presentations of key numbers in budgets and end-of-year financial statements – hamper city councillors, ratepayers and voters seeking to hold their municipal governments to account. Simple questions like, "How much does your municipal government plan to spend this year?" or "How does what it plans to spend this year compare to what it spent last year?" are hard or impossible for a non-expert citizen or councillor to answer.

The differences between budget accounting methods and presentations of financial results have real-world consequences. For example, by presenting net rather than gross budget figures, municipalities obscure key activities and understate both their revenue and spending. By using cash rather than accrual accounting, they exaggerate infrastructure investment costs, hide the cost of pension obligations and make it hard to match the costs and benefits of municipal activities. Moreover, many municipalities approve their budgets after significant money has already been committed or spent in the fiscal year, do not publish their financial results in a timely way, and bury key numbers deep in their statements.

This report card grades the financial presentations of major Canadian municipalities in their most recent budgets and financial statements. Calgary registered the largest year-over-year decline in budget clarity: like Durham Region, it provides little information in reader-friendly form. More happily, Vancouver, Surrey, B.C. and Peel Region in Ontario garnered the highest marks for clarity of financial presentation.

Our key recommendations are: (1) that municipal governments should present their annual budgets on the same accounting basis as their year-end financial statements and (2) that budgets should show gross, not net, revenue and spending figures. Budgets should use accrual accounting, recording revenues and expenses as the relevant activities occur. For their part, provincial governments that impede the use of accrual-based budgets – by mandating that cities present separate operating and capital budgets, for example – should stop doing so. Indeed, provinces should mandate cities to present accrual budgets so the fiscal picture of municipalities and the province use the same transparent standard. Even in cases where a province is an impediment, municipalities could release the relevant information on their own – and they should.

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How much does your local government plan to spend this year? How much did it spend last year? How does what it spent last year compare to what it said it would spend?

These should be simple questions for taxpayers, municipal councillors and local media to answer. But in every major Canadian municipality, finding the answers is anything but. The unsatisfactory nature of municipal financial reporting is a serious problem, and not only for accountants. Inconsistent presentations and dense budget books hamper the ability of elected representatives, ratepayers and voters to hold their municipal governments to account.

The differences between the information municipalities present in their budget documents and what they report after the books are closed have real-world consequences. Municipal budgets too often understate the size of their operations, obscure key activities, exaggerate the costs of investments, hide the cost of pension obligations and make unclear the sustainability of municipal finances over time. It used to be the same for higher levels of government. At the beginning of the 2000s, the federal government and all the provincial and territorial governments presented budgets using different accounting and/or aggregation methods than they used in their financial reports. Since then, those differences are disappearing. This review of Canadian municipalities' fiscal reporting shows how local governments can and should also improve their accountability for the money they raise and spend.

One critical recommendation – as we have argued before (Dachis and Robson 2011, 2014, 2015; Dachis, Robson and Tsao 2016) – is that municipal governments should present their annual budgets on the same accounting basis as their financial statements. They should use accrual accounting, matching revenues and expenses to the relevant activities. Provincial governments that impede accrual-based budgets at the municipal level by requiring separate operating and capital budgets should stop doing so, and municipalities that face those impediments should publish supplementary information that gets around them.

In addition, budgets and financial statements should show gross, not net, revenue and spending, aggregated on a consistent basis. Netting in budgets hides revenue and spending that is material to municipal services and to the costs residents must pay – and means that only experts with lots of time on their hands can compare intentions with results.

The accounting and other budgeting practices of Canada's municipalities may sound arcane, but they matter in reality. Presenting capital budgets on a cash basis, recording costs when funds are laid out rather than as the assets deliver their services, likely biases decisions against investing in, and properly paying for, long-lived assets. Accrual-based budgeting would give councillors and voters new insights about how to finance and maintain infrastructure investments. Furthermore, cash budgeting encourages municipalities to neglect future pension liabilities.

Finally, inconsistent budgeting among different levels of government obscures useful comparisons. Provinces facing severe deficits may be increasing grants to municipalities that are fiscally healthier

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than they are. Better accounting would give everyone a clearer picture – especially important if municipalities are to get new taxing powers or direct financial support from other levels of government.

Municipal Budgets and Financial Reports

Accountability in the public sector means monitoring whether public employees are carrying out the will of citizens as expressed through their elected representatives. Accountability examples range from measuring on-time performance of public transit, testing how well students fare in public schools, checking how well patients fare in publicly funded hospitals and auditing spending in government agencies. Annual budgets and financial reports are salient illustrations. A municipality's annual fiscal operations determine the taxes, user fees and other charges that citizens and businesses must pay. Furthermore, they are a critical element in assessing public services and their impact on the local economy.

Like the federal and provincial governments, Canadian municipalities produce two major documents in their annual fiscal cycles: budgets and financial reports. Budgets contain municipalities' fiscal plans at the start of the year. They take months of preparation and are the principal opportunity for elected representatives, the citizenry and the media to learn about and provide input on municipal priorities. In most cases, municipalities present both an operating budget that is subject to a provincial requirement for annual balance and a capital budget for infrastructure and other long-lived assets.

Audited financial reports show what municipalities actually raised and spent during the year. Under Public Sector Accounting Board (PSAB) rules, all municipalities must present their financial statements on a standardized basis. This common accounting provides largely comparable measures of municipal finances, with taxpayers, the media and councillors getting additional comfort from certification by external auditors.

Grading Municipal Financial Presentations

To be useful, these documents must allow users who are attentive and motivated, but not necessarily experts, to find and identify key numbers easily, to compare plans to past results and results to past plans. That means that municipal budgets and financial reports need to meet some key criteria. They must be accessible to a lay, time-constrained reader. Cumbersome budgets that do not clearly display government intentions make it hard for councillors to know what they are voting on and for citizens to know what spending promises were made.

The same factors apply to financial reports. Many such statements do not contain plain language that is understandable to non-accountants, making accurate ones less useful and inaccurate ones harder to check. Ideally, both a municipality's revenue and spending intentions – and the resulting expected change in the municipality's net worth – should be accurate, clear and accessible in its financial documents. Unfortunately, most municipal budgets do not present information on revenues – particularly for capital projects – in a meaningful form. For that reason, we focus on spending in this report card, which flatters these municipalities; if our letter grades gave greater weight to defects related to revenue reporting, nearly every one would fare far worse.

To help the non-expert reader quickly compare key totals, municipal financial documents should:

Present Headline Figures Early and Prominently

Even an expert reader will have problems finding and adding multiple figures scattered throughout financial documents. A non-expert will have no chance. Budgets that present the key totals deep in the document do few favours to readers looking to understand the full claim of their city on citizens' resources. Many cities present multiple documents that present different headline figures, confusing citizens and councillors about the true extent of a city's spending. Accordingly, we judge only the merits of the most prominently displayed aggregate figures in the most prominently displayed documents posted on a municipality's website.[1]

Include the Previous Year's Spending

Some municipal budgets present spending estimates without the context of what council approved – or what the municipality is likely to have actually spent – the year before. The lack of previous-year reference points particularly affects capital budgets: municipalities typically do not show intentions or actuals for past capital projects when deciding on future ones.

Show Combined Rate- and Tax-supported Gross Spending

A pervasive problem in municipal financial documents is presenting the spending of a department, certain services or expenses, or of the municipality as whole, net of user fees and other non-property tax revenues. "Tax-supported" services typically attract more attention than "rate-supported" services such as water and sewage or other activities for which municipalities charge user fees. That is partly because homeowners and businesses can control rate-supported services by adjusting their use, unlike property taxes, which are more of an imposition. But while this distinction might justify showing net amounts as supplementary information in budgets and financial reports, highlighting net rather than gross figures – or, worse, not showing gross figures at all – understates a government's fiscal footprint. Municipalities that present multiple bottom lines obscure their claim on the community's resources.

Reconcile Results to Original Budget Projections

Even when accounting and reporting on a gross basis are consistent between budgets and financial reports, it helps to have reconciliation tables that itemize how actual expenses may have deviated from the budget numbers. For their part, Canada's senior governments increasingly show these reconciliations, which help legislators and citizens hold governments to account for their actions and, potentially, take steps to reduce the size of future surprises. When accounting and gross/net reporting are inconsistent, such reconciliation tables are critical.

Present Budgets and Financial Reports on a Timely Basis

Budgets are the cornerstone documents that lay out a municipality's plan over the course of the coming year. A budget presented well into the fiscal year asks councillors to approve spending that has already happened – a clear violation of accountability. Councillors should vote on the budget before – at least no later than – the start of the fiscal year. Timely publication of audited financial statements also matters. The longer it takes to find out what a government actually did, including whether what it did matched what it said it would do at budget time, the harder it is for councillors and voters to correct problems.[2]

1 When the presentation gives equal prominence to different documents – similar fonts and colours on clickable links, for example – we choose the one that appears first in the list or menu.

2 We use the date of the auditor's signature on the financial statements. Unfortunately, the lag between the auditor's signature and the posting of financial statements for the public to see varies from municipality to municipality. Since the posting date is not typically recorded, however, we have to use the signing date in our grading, which risks flattering municipalities that let time elapse between signing and posting.

Present Budgets and Financial Reports on the Same Accounting Basis

If an organization uses inconsistent accounting in preparing its budgets and its audited financial reports, people will not be able to tell whether its revenue and spending were close to budget, or far from it – or in which direction. The same goes for individual categories of revenue and spending: simple questions such as whether property-tax revenue came in above or below target, or whether the municipality over- or under-shot its budget for, say, policing, are often impossible for councillors, media, taxpayers or citizens to answer.

How Good are Your Municipality's Practices?

Ideally, our look at the quality of municipal budgets and financial reports would cover both their revenues and their spending. Unfortunately, the accounting on the revenue side of municipal capital budgets is an utter mess, with borrowing combined with tax and other revenues. We anticipate – indeed, it is a key recommendation of this report – that municipalities will soon prepare their budgets on an accrual basis, which would eliminate the distinction between current and capital budgets and allow sensible comparisons of revenue projections and results. Until such figures are available, we limit our investigation to spending.

In assessing municipal financial accountability, we use letter grades based on the above six criteria. These letter grades reflect scores for each factor, some of which, such as page of presentation or date of publication, are straightforwardly quantitative while others, such as the quality of reconciliation tables, are qualitative. Both are graded on numeric scales from zero for utter failure to a top grade of two, three or four for ideal presentation. Box 1 explains the grading scheme we follow in our report card in further detail.

Canada's Best and Worst Municipalities for Financial Reporting

Our 2017 report card covers 28 of Canada's most populous municipalities. Among the 28 are the 20 largest municipalities by population, which brings the cities of Gatineau, Laval and Longueuil into our report for the first time. We also include the six most populous regional municipalities in Ontario,[3] and two cities we included in previous years: Sudbury and Windsor. In our evaluations, we examined the municipality's 2017 budget and its 2016 financial statements (including their comparison, if applicable, to the municipality's 2016 budget).

We found a dramatic divergence in the quality of financial reporting among municipalities (Table 1).

Sadly, this year's report card highlights some marked declines in municipal fiscal accountability. Calgary earned an A- in our 2016 report, partly on the strength of its 2015-2018 fiscal plan. However, the city's major mid-cycle review of that multi-year plan substantially modified it, and the mid-cycle report prominently displayed on the city's website now amounts to a new budget document – one that is less complete and accessible than the previous one. Among other defects, the mid-cycle update buries key information, does not provide updated historical results and nets non-property tax revenues against spending. For these reasons, we award Calgary a D+ in our 2017 report card. It joins Durham Region in the category of the least clear financial documents. These two cities mix their presentation of gross versus net figures, while Durham Region waits until late in the year to approve its budget.

3 Regional municipalities, also referred to as upper-tier municipalities, provide much of the large-scale infrastructure in their areas while supplying fewer direct services than lower-tier municipal counterparts. Notwithstanding these differences, we can evaluate their budgets and financial reports by the same criteria as other municipalities.

Box 1: Grading Scheme

For our quantitative judgments:

- We give a zero score if a municipality publishes its budget later than eight weeks from the beginning of the fiscal year. We give a score of 1 for publishing the budget within four to eight weeks into the fiscal year. We give a score of 2 for publishing the budget fewer than four weeks late. We award the municipality a score of 3 if it publishes the budget early – before the start of the fiscal year.
- We give a zero score to municipalities who present headline figures fifty-one pages, or more, deep into the budget. We give a score of 1 when the headline figures are presented within thirty-one to fifty pages into the budget document, and a score of 2 if within sixteen to thirty pages. We give the municipality a score of 3 if it presents the operating budget total within the first fifteen pages of its budget document. We award an extra point if both capital and operating totals are on the same page of the budget document.
- We give a zero score to municipalities if it has signed financial statements seven months after their fiscal year-end. We give a score of 1 to municipalities if they have signed financial statements five to six months after their fiscal year-end. We give a score of 2 to municipalities if they have signed financial statements within four months after their fiscal year-end.
- We give a zero score if the budget and the audited statements in the financial report are on different accounting basis. We award the municipality 2 points if it provides consistent accounting of both financial documents in supplementary fashion. We give the municipality a full score of 4 if both the budget and the audited statements are on the same accounting budgets throughout the whole document.

As for our qualitative judgments:

- We give a zero score if municipalities do not present the previous year's spending for either operating or capital. We give a score of 1 for presenting the totals of the previous year's operating budget and a 2 for presenting the previous year's total spending on either a consolidated basis or separately.
- We give zero to a municipality that shows only net expenditures in its headline presentation, or does not consolidate utilities with tax-supported operating expenses in its headline expense. We give 1 for a budget that presents net and gross expenditures with equal prominence as the bottom-line spending of the municipality and 2 for a municipality that presents gross expenditures as the headline measure.
- With regard to reconciling actual results with budgets, we give zero if the financial report contains no such table. We give 1 for a table that attempts to reconcile the financial statements to the budget, even when the budget figures in the reconciliation table are different from those that appeared in the budget itself. We award 2 for a reconciliation table that has at least one of the capital or operating amounts from the budget replicated in a reconciliation table, even if the reconciliation has only limited information on the reasons for deviations. We give 3 for a consistent table with meaningful descriptions of reasons for spending deviations.

Weighting one criterion over another is inherent in any grading system. We use more gradations in the scales for criteria that we judge are more important to the overall outcome of fiscal clarity. The scoring is out of twenty. Municipalities receive an A+ if they score sixteen or above, A for fifteen, A- for fourteen, B+ for thirteen, B for twelve, B- for eleven, C+ for ten, C for nine, C- for eight, D+ for seven, D for six, D- for five, and F for less than five.

Table 1: 2017 Municipal Financial Documents Report Card

Municipality	Latest budget approval date	Budget approval date: late or early?	Page number of headline operating and capital total	Reconciliation table explaining differences in gross operating total	Comparison of budget projections to previous year's totals	Does budget present municipality-wide gross or net expenditures or both as a headline expenditure?	How long after fiscal year-end are financial reports published?	Budget on same basis of accounting as financial report? (Y/N)	Overall grade (Score) in 2017	Memo: Grade (Score) in 2016
Brampton	14-Dec-16	Two weeks early	Operating: p.32 out of 720 Capital: p. 61 out of 720	1	1	Gross	Five months (May 24)	Supplemental	**B- (11)**	A- (14)
Calgary	24-Nov-16	Five weeks early	Operating: p.77 out of 101 Capital: p. 78 out of 101	1	0	Net	Four months (April 24)	No	**D+ (7)**	A- (14)
Durham	01-Feb-17	Five weeks late	Operating: p.3 out of 296 Capital: p.4 out of 296	1	1	Net	Five months (May 30)	No	**D+ (7)**	D+ (7)
Edmonton	13-Dec-16	Two weeks early	Operating: p.6 out of 143 Capital: p.77 out of 143	1	2	Net	Four months (April 25)	No	**B-(11)**	C- (8)
Gatineau	06-Dec-16	Three weeks early	Operating: p.5 out of 50 Capital: p.6 out of 50	0	1	Net	Four months (April 27)	No	**C (9)**	N/A
Greater Sudbury	14-Dec-16	Two weeks early	Operating and Capital Both: p. 2 out of 318	1	2	Both	Seven months (July 11)	No	**B- (11)**	B- (11)
Halifax	11-Apr-17	One week late	Operating: p.11 out of 527 Capital: p.18 out of 527	3	2	Net	Four months (July 18)	No	**B+(13)**	A- (14)
Halton	14-Dec-16	Two weeks early	Operating and Capital Both: p. 31 out of 607	3	2	Gross	Five months (May 17)	No	**B+ (13)**	A- (14)
Hamilton	20-Apr-17	Fifteen weeks late	Operating and Capital Both: p. 8 out of 82	3	1	Gross	Six months (June 12)	No	**B- (11)**	B- (11)
Laval	05-Dec-16	Four weeks early	Operating: p.10 out of 100 Capital: p.68 out of 100	0	1	Net	Four months (April 24)	No	**C (9)**	N/A
London	06-Dec-16	Three weeks early	Operating: p.17 out of 39 Capital: p.28 out of 39	1	2	Both	Six months (June 26)	No	**C+ (10)**	C- (8)
Longueuil	01-Dec-16	Four weeks early	Operating: p.7 out of 28 Capital: p.7 out of 28 (Separate Documents)	0	1	Net	Five months (May 19)	No	**C- (8)**	N/A
Markham	13-Dec-16	Two weeks early	Operating and Capital Both: p.8 out of 365	1	2	Gross	Four months (April 25)	No	**A- (14)**	B (12)
Mississauga	14-Dec-16	Two weeks early	Operating: p.17 out of 858 Capital: p.70 out of 858	1	1	Both	Four months (April 7)	Supplemental	**B (12)**	B (12)

Table 1: Continued

Municipality	Latest budget approval date	Budget approval date: late or early?	Page number of headline operating and capital total	Reconciliation table explaining differences in gross operating total	Comparison of budget projections to previous year's totals	Does budget present municipality-wide gross or net expenditures or both as a headline expenditure?	How long after fiscal year-end are financial reports published?	Budget on same basis of accounting as financial report? (Y/N)	Overall grade (Score) in 2017	Memo: Grade (Score) in 2016
Montreal	01-Dec-16	Four weeks early	Operating: p.37 out of 350 Capital: p. 22 out of 142	0	1	Gross	Four months (April 3)	No	**C (9)**	B- (11)
Niagara	08-Dec-16	Three weeks early	Operating and Capital Both: p. 3 out of 78	3	1	Both	Five months (May 18)	Supplemental	**A- (14)**	B- (11)
Ottawa	14-Dec-16	Two weeks early	Operating: p. 11 out of 185 Capital: p. 22 out of 185	3	2	Both	Six months (June 14)	No	**C+ (10)**	B+ (13)
Peel	08-Dec-16	Three weeks early	Operating and Capital Both: p.13 out of 479	3	2	Gross	Four months (April 27)	No	**A+ (16)**	B (12)
Quebec City	05-Dec-16	Three weeks early	Operating and Capital Both: p.15 out of 186	0	1	Net	Four months (April 26)	No	**C+ (10)**	C (9)
Saskatoon	01-Dec-17	Three weeks early	Operating and Capital Both: p.2 out of 84	0	1	Gross	Seven months (July 17)	No	**C+ (10)**	D+ (7)
Surrey	21-Dec-16	One week early	Operating and Capital Both: p.15 out of 377	1	2	Gross	Five months (May 8)	Yes	**A+ (17)**	B- (11)
Toronto	16-Feb-17	Six weeks late	Operating and Capital Both: p.9 out of 979	1	1	Gross	Seven months (July 4)	No	**C (9)**	F (4)
Vancouver	13-Dec-16	Two weeks early	Operating and Capital Both: p.2 out of 436	3	1	Gross	Three months (March 31)	No	**A (15)**	A- (14)
Vaughan	13-Dec-16	Two weeks early	Operating: p.7 out of 420 Capital: p.8 out of 420	2	1	Both	Six months (June 27)	No	**B-(11)**	B- (11)
Waterloo	11-Jan-17	Two weeks late	Operating and Capital Both: p.10 out of 263	1	0	Gross	Five months (May 15)	No	**C+(10)**	C+ (10)
Windsor	23-Jan-17	Three weeks late	Operating: p.9 of 219 Capital: p.4 of 583	0	1	Gross	Eight months (Aug 8)	No	**C-(8)**	D+ (7)
Winnipeg	13-Dec-16	Two weeks early	Operating and Capital Both: p.6 out of 266	1	1	Net	Five months (May 10)	No	**C (10)**	F (3)
York	15-Dec-16	Two weeks early	Operating and Capital Both: p.5 out of 385	1	1	Gross	Five months (May 16)	Supplemental	**A- (14)**	B+ (13)

Source: Authors' calculations from municipal financial documents. Note: Grade is for 2017 budget and 2016 financial statements in comparison to 2016 budget.

The best performers are Surrey and Vancouver in British Columbia, and Peel Region in Ontario. All these municipalities approve their budgets and financial statements early, and they clearly present the overall fiscal footprint of the municipality near the front of their budgets. Surrey earns the top score in this year's report card mainly because it is the only major municipality that reports its headline budgetary spending and revenues on the same accounting basis as its financial statements. We also note that Surrey's 2017 grade is a major improvement from its B- in 2016. Similar to Winnipeg, which also improved its grade in 2017, the earlier budget approval and more prominent presentation of total spending were key in Surrey's advance.

The major Quebec cities that we added to this year's report card share a common budget-clarity problem of not presenting the full scope of municipal spending in their headline figures. For example, they often do not include the full cost of their public transport organizations in their gross spending. Instead, their budgets report only the tax-supported element of the transit budget, whereas the financial statements consolidate the total expenses of transit services, regardless of revenue source, with the rest of municipal operations.

Understanding Municipal Accounting

A major reason for poor marks in nearly every city on the criterion of consistent accounting in budgets and financial reports is that Canada's municipalities typically use cash accounting in their budgets. Because this budgeting practice is so widespread, in contrast to how they and all Canadian governments report their year-end results, the differences from how most senior governments budget and how we think municipalities should budget are worth some additional comments.

Accounting for Infrastructure and Other Capital Assets

Preparing financial documents for prospective budgeting and retrospective reporting should represent economic reality in ways that will help people make sound decisions. A key principle in designing such useful documents is accrual accounting, which tries to match revenues and expenditures with the activities to which they relate.

A salient example, highly relevant to municipalities, is buying a long-lived asset such as a building. While the cash outlays involved need to be tracked and validated, it makes no sense to record those outlays as expenses as though the building was being consumed as it was built. A building is an asset: a more sensible approach is to amortize the expense, writing it off as the building delivers its services. This approach aligns the cost of the building with its useful life.[4]

Municipal governments have large capital assets – buildings, as well as equipment and infrastructure such as roads, bridges, and water and sewage facilities. Their end-of-year financial reports do not record the entire cost of these items as expenses in the year of the cash outlay, but apply annual amortization over their useful lives. Matching the period during which taxpayers cover the cost of long-lived assets with the period during which the assets provide services is a straightforward tool to achieve fairness among taxpayers over time. The PSAB has required accrual accounting by Canadian governments since 2009.

4 In addition to statements of operations, which show annual flows, and statements of financial position, which show assets and liabilities at a point in time, modern financial reports include a third presentation showing changes in cash, which allows a user to reconcile accrual-based concepts with in-and-out cash flows. For a fuller description of the mechanical differences between cash- and accrual-based budgets as they relate to municipalities, see Dachis, Robson and Tsao (2016).

Outside of capital assets, a notable gap in public-sector accounting – a deviation from the accrual principles that apply in the private sector – is delayed recognition (and often inappropriately high discounting) of the cost of employee benefits earned but not yet paid, especially pension obligations.[5] Such gaps reduce the value of annual statements of operations and associated statements of financial position in determining how well a government is matching its revenues to its expenditures. Because current public-sector accounting, notwithstanding these defects, is better than alternatives such as cash accounting, we accept the PSAB methodology as definitive for this evaluation.

Prevalence of Cash Budgeting in Canada's Municipalities

Most municipalities use accrual accounting only in parts of their budgets, such as accounts receivable. They use cash accounting elsewhere, most notably for capital items. A common practice is to show expected cash outlays in a "capital" budget alongside an "operating" budget for items to be consumed and expensed during the year. Some municipalities present and vote capital and operating budgets together; others do so separately. Either way, the resulting amounts are not comparable to what will appear in financial reports. This discrepancy complicates comparisons of spending in budgets and financial reports, and undermines any effort to make a meaningful revenue comparison in the two documents. Box 2 explains this challenge further, noting the superior situation in Quebec, the one province for which reasonably similar budget and actual performance data exist.

How the Numbers Affect Decisions

Poor budget design has real world consequences. To begin with, an inability to make meaningful comparisons between intentions and results almost certainly reduces the attention which councillors, the media and the public generally pay to budgets: why look at something you know you won't understand? In a similar vein, those who do try may reasonably conclude that municipal budgeting is a farce. Consider what would happen if a diligent but non-expert councillor delved into his or her municipality's operating and capital budgets and did what a motivated but naïve person might do to calculate spending: add up the totals from each. The numbers this person would have calculated from 2016 budgets appear in Table 2, where we compare them to the spending published in each city's financial reports for that year.

For example, in 2016, Calgary approved a budget – on a cash basis – showing $5.79 billion in spending. Its end-of-year financial report– on an accrual basis – by contrast, showed $3.69 billion in spending. This gap is so large that an expert would hesitate to attribute it to under-spending relative to budget targets – but a non-expert might draw that conclusion.

Durham offers another example. Its main budget presentation focuses only on net property-tax-supported spending. The spending it reports in its financial report is almost twice as big. Other municipalities – such as York, Waterloo and Halton Regions and Markham in Ontario – also have discrepancies between budgets and results that would lead our idealized reader to conclude that their results were off by one-third or more.

5 Governments in Canada – and elsewhere – tend to discount their pension liabilities, using assumed rates of return on assets that are higher than yields on retirement-grade securities, even when plans are underfunded or entirely unfunded, and smooth differences between expected and actual results over long periods. The resulting discrepancies can be large enough to matter for credit quality and future tax burdens – see, for example, Robson and Laurin (2016) on the federal government's pension obligations.

Box 2: Measuring Municipal Fiscal Accountability in Quebec

Because they use cash accounting and reporting separate capital and operating budgets, most Canadian municipalities do not report a single, comprehensive revenue figure. Instead, they report how they will finance their annual expenses: a mix of debt financing, grants and own-source revenues. This intermingles revenues that, if not spent, will increase an entity's net worth with borrowed funds, which do not increase net worth – a nonsense that has no counterpart in municipal financial reports. Hence, neither our idealized reader, nor we, can compare budget revenue figures with end-of-year actuals, as the annual C.D. Howe Institute fiscal accountability report does for provincial and federal governments (Busby and Robson 2017). The accounting differences in reporting budgets and financial statements also means that any measure of bias or accuracy in either revenue or spending will conflate accounting differences with actual misses of budget targets.

Although we cannot compute meaningful bias or accuracy scores for Canadian municipalities because of these accounting issues, we can for the cities in Quebec. Quebec requires all its cities to submit versions of their budgets on an accrual basis to the province. This results in measures of budget bias and accuracy that reflect actual performance differences.

We produce two measures of municipal accountability in Quebec using the year-over-year percentage change of both expenses and revenues. Our measure of bias is the average of the difference between projected and actual changes. It shows whether cities tend to overshoot or undershoot their budget targets. Our accuracy score is also a standard statistical measure: the square root of the sum of the squared differences. That provides an indicator of how far actuals are from projections regardless of the direction of misses.

Municipal spending and revenue in Quebec do not appear to have any bias. Both the revenue and expense bias scores are not statistically different from zero. In contrast, most senior governments have historically seen both revenues and expenses come in over budget by more than two percentage points annually (Busby and Robson 2017).

Quebec's municipal accuracy scores tell a different story. The overall average spending accuracy score is more than 15 percentage points, revealing a tendency to miss budget projections by economically meaningful amounts. That is a much worse score than the equivalent for Canada's senior governments (Busby and Robson 2017). Focusing on larger cities tells a more cheerful story: the average spending accuracy score for Quebec's 10 largest cities is 4.1.

On revenues, the accuracy numbers are even worse: 36 percentage points for all cities and about seven points for the 10 largest.[a]

Box Table 1: Accuracy and Bias Measures of Quebec Municipal Expenses and Revenues, 2010-2015

Expenses			
Bias		**Accuracy**	
All cities	Large cities	All cities	Large cities
-0.9	0.4	15.2	4.1
Revenues			
Bias		**Accuracy**	
All cities	Large cities	All cities	Large cities
-0.6	-0.2	36.0	7.0

Note: Large cities are those with populations greater than 100,000: Gatineau, Laval, Levis, Longueuil, Montreal, Quebec, Saguenay, Sherbrooke, Terrebonne and Trois-Rivieres.

a The poorer scores for small cities likely reflects in part the relatively greater importance of "lumpy" events – broken backhoes, bankrupt businesses not paying taxes or capital grants – in smaller budgets. Reconciliation tables in financial reports are a key tool for governments to explain to voters and taxpayers why results differed from intentions.

Source: Authors' calculations from Ministry of Municipal Affairs, Regions and Land Occupancy.

Table 2: Total Spending, Budget Versus Annual Report, 2016

Municipality	Spending in Budget *($billions)*	Spending in Annual Report *($billions)*	Difference *(percent)*
Toronto	14.94	10.95	-27
Montreal	6.53	6.26	-4
Calgary	5.79	3.69	-36
Ottawa	3.70	3.31	-10
Edmonton	3.81	2.84	-26
Peel	2.63	2.15	-18
York	2.77	1.85	-33
Hamilton	2.05	1.66	-19
Winnipeg	2.23	1.57	-30
Vancouver	1.59	1.44	-9
Quebec City	1.94	1.37	-29
Durham	0.64	1.14	77
London	1.04	1.02	-2
Waterloo	1.49	0.97	-35
Halifax	1.07	0.92	-14
Laval	0.94	0.85	-10
Niagara	1.05	0.84	-19
Mississauga	0.94	0.83	-12
Halton	1.17	0.77	-34
Windsor	0.89	0.74	-16
Brampton	0.72	0.73	2
Surrey	0.99	0.70	-29
Saskatoon	0.69	0.69	0
Longueuil	0.53	0.67	28
Gatineau	0.68	0.62	-9
Sudbury	0.63	0.54	-14
Vaughan	0.35	0.44	26
Markham	0.47	0.30	-35

Source: Authors' calculations from municipal financial documents.

To be clear, the differences in Table 2 are not necessarily a reflection of municipal governments over- or underspending relative to their budget commitments. However the numerate councillor, told that these gaps between apparent intentions and results reflect both missed targets and inconsistent accounting, could be forgiven for throwing up his or her hands and telling constituents that their municipality's finances are out of control.

The almost universal practice of cash budgeting for capital expenditures not only messes up comparisons of budgets and financial results, it likely also affects decisions about infrastructure and other capital projects. Councillors face an inevitable tension between the desires and interests of current taxpayers and users of municipal services and those of future taxpayers and service users. Accrual accounting helps councillors think about a situation where a government borrows, say, $1 billion to finance an asset that will produce services for 20 years and amortizes the loan over the same 20-year period – an expense of $50 million annually – over which it writes off the asset. That approach straightforwardly tries to match costs and benefits over time.

Presenting councillors with capital budgets that show outlays on such assets as in-year expenses (as cash budgeting does), rather than amortizing them as they deliver their services (as accrual accounting does), likely leads municipalities to delay or reject some capital projects they would otherwise approve. It also likely leads them to finance the projects they do approve by raising revenues up front, rather than by borrowing and servicing the debt over the period the project yields its benefits.

One prominent example of inappropriate up-front financing is the infrastructure charges municipalities impose on developers. Development charges are a key financing mechanism for municipal capital assets. The largest single element in these development charges in most municipalities is to pay for drinking water, sewerage or wastewater construction. From 2010 to 2016, Ontario municipalities collected $11.9 billion in total development charges, $4.3 billion of which was dedicated to infrastructure for these services.[6] These charges might make sense if they allocated costs across people and over time in proportion to the enjoyment of the related benefits (see Bird, Slack and Tassonyi 2012). But cash-based budgeting biases municipalities toward levying them up front – hitting new homebuyers with substantial costs, much of which will pay for public services that benefit other users far into the future.

Development charges range from about $80,000 for a single-family house in a new development area in some Greater Toronto Area municipalities to $30,000 in Surrey and $20,000 in Calgary. To the extent these fees are higher because cash budgeting encourages up-front financing, they make new homes less affordable.

Canadians Pay Too Much Up-Front, and Too Little Later On

Charging homebuyers for vital infrastructure capital costs up front also means users underpay for services such as water once they start using the service. Only if municipalities charge the full cost of both annual operations and construction through gradual depreciation of assets will consumers pay the full cost of water. Undercharging after the initial front-loaded expenditure encourages waste. Similar arguments apply to other infrastructure such as roads: charging drivers for their use and servicing debt from the proceeds would discourage congestion, which front-loaded financing and free use do not.

We emphasize these points because aggregate data on the financial position of Canadian municipalities reveals a situation quite different from what people familiar with the annual panic over balancing the local government's budget and the need for more grants to finance infrastructure

6 Data from Schedule 61 from the Ontario Financial Information Return (see Dachis forthcoming).

might expect. Canada's municipalities are, on average, in better fiscal shape than the federal and provincial governments. They are major investors in capital assets, but unlike nearly all senior governments, whose chronic deficits have resulted in financial liabilities that vastly exceed their financial and non-financial assets, municipalities have positive net worth. They have borrowed to finance some capital assets, but the value of their assets exceeds their debt by a substantial margin.

Over the decade to the second quarter of 2017, local governments improved their net worth by some $128 billion – by almost 90 percent – including an increase of some $50 billion in their financial assets. If municipal leaders had seen numbers like these in their annual budgets, they might have devoted less effort to raising development charges and lobbying senior governments for more money. Not only do they have more fiscal capacity to borrow for capital projects than the annual panic over budgets would suggest, but they have actually amassed a war-chest of liquid funds – funds that are available for capital projects right now.[7]

From 2008 through 2016, the 28 municipal governments profiled in this report ran an aggregate cumulative surplus of $60 billion (Table 3). The 2016 surplus, nearly $8 billion, was 11 percent of their revenues that year. The municipalities with the largest surpluses as a share of revenues in 2016 – Calgary, Saskatoon, Surrey, Edmonton, Vaughan, and the Ontario regional municipalities of Halton, Waterloo and York – had surpluses exceeding 20 percent of their revenues. A robust balance sheet is not objectionable in principle. The trouble is that hardly anyone, including the elected representatives in those municipalities, anticipated this outcome at budget time. If they had, many decisions about tax rates, development charges and infrastructure investments might have been different.

Recommendations for Better Municipal Financial Reports

In seeking to improve municipal fiscal accountability, we refer again to that overriding requirement that a smart and motivated, but non-expert, user – who could be a municipal councillor, taxpayer or concerned citizen – should be able to pick up his or her municipality's budget and financial report for a given year, start at Page One, find the key aggregate revenue and spending figures early and easily, and compare them to see how close the results are to the plan. The majority of Canada's senior governments now publish budgets and financial reports in a way that make this exercise possible (Busby and Robson 2016), and other public-sector entities are following suit. Several steps could bring Canada's municipalities up to the same mark.

Adopt Accrual Accounting in Budgets

A key first step is preparing and presenting municipal budgets using the same accounting conventions municipalities already use in their financial reports. Ideally, provinces that directly or indirectly mandate cash accounting would change their rules to permit accrual accounting instead of, or alongside, cash. Even absent provincial requirements, municipalities could on their own present budget numbers consistent with their financial statements.

Since municipalities have been presenting accrual-based financial reports for almost a decade, also presenting accrual-based budgets should not present any major challenge. (As we noted in Box 2, Quebec's municipalities must already provide the provincial government with such budgets.) Accrual-based budgeting would also make the multi-year capital budgets produced by all large municipalities easier to understand by showing the amortization of capital. Accrual accounting would inform

7 This is from CANSIM table Table 378-0121.

Table 3: Surpluses of Canadian Municipalities Relative to Revenues, 2016

Municipality	2016 surplus		2008-2016 surplus
	As share of 2016 revenues *(percent)*	Total *($millions)*	Cumulative *($millions)*
Toronto	10	1,248	7,724
Montreal	6	403	4,281
Calgary	25	1,237	8,875
Ottawa	13	503	3,529
Edmonton	23	836	5,528
Peel	15	388	2,812
York	22	509	3,715
Hamilton	10	181	1,488
Winnipeg	9	162	1,833
Vancouver	18	315	1,523
Quebec City	-3	(37)	358
Durham	16	253	1,391
London	14	167	1,342
Waterloo	23	282	965
Halifax	6	63	688
Laval	13	130	1,044
Niagara	8	72	540
Mississauga	7	59	754
Halton	34	398	2,307
Windsor	4	33	492
Brampton	6	46	1,203
Surrey	24	216	1,671
Saskatoon	22	198	1,840
Longueuil	2	16	225
Gatineau	12	88	832
Sudbury	3	17	324
Vaughan	23	128	1,384
Markham	15	52	1,010
Total	**11**	**7,963**	**59,928**

Source: Authors' calculations from municipal financial documents.

municipal councillors and taxpayers – whether they are looking at the financing of long-lived infrastructure assets, for example, or wondering how future obligations, such as the pension entitlements of municipal employees or landfill decommissioning and other environmental liabilities, affect their municipality's net worth. Municipalities may want to continue their practice of paying for capital assets up front, but accrual budgets would make clearer the intergenerational impacts of the funding choice they are making.

As in the private sector, public-sector accounting standards evolve as opinions about the best ways to represent economic reality evolve, and current public-sector standards are open to criticism.[8] Regardless, it would nevertheless be a big step forward for municipalities to move, in both their budgets and their financial reports, to the standards currently followed by the federal government and most provinces and territories.

Many people like the requirement that municipalities present balanced operating budgets because they fear that, without it, municipalities would be fiscally irresponsible. That fear is understandable, but responding to it by focusing on, and constraining, the operating budget alone distorts capital spending and its financing as we have just described. Since accrual accounting consolidates all items affecting net worth into common revenue and expense totals, it gives a more complete picture of an entity's financial position, and makes the concept of a separate operating budget irrelevant. Provinces that wish to constrain their municipalities in this manner should change their balanced-budget requirement to refer to the *overall* bottom line: the change in the municipality's net worth.

Municipalities could also adopt other measures related to fiscal prudence and sustainability, such as prescribing limits on interest costs relative to revenues. Indeed, this debate about the appropriate public-sector fiscal anchor, whether it is balanced budgets or a debt-to-GDP ratio, applies as well to federal and provincial budgets. The key point is that provincial legislation should not mandate budget targets that are inconsistent with the accrual accounting municipalities already use in their financial reports. When they do, municipalities should present an operating budget as supplementary information, with the accrual-based budget being the central one for debate by the public and approval by council.

Present Headline Figures Early and Prominently in Budgets and Financial Reports

A time-constrained non-expert should not have to dig through dozens or even hundreds of pages in a document or a slide deck – or, worse, more than one document or slide deck – to find a municipality's total budgeted or actual spending. Similarly, this person should not come across more than one candidate for each total and wonder which is correct. Some senior governments put their definite consolidated figures close to the front of their budgets and financial reports: there is no reason why municipalities cannot do the same. More accessible display of the key numbers would also help municipalities explain their content and importance to councillors, the media and taxpayers.

Show Gross, Consolidated, Municipality-wide Spending

Municipal budgets should also show gross spending and revenue so that users of financial statements have a comprehensive overview of a government's fiscal footprint. Presenting numerous versions of the overall footprint, such as the degree property taxes cover spending or by excluding fully rate-supported

8 For example, valuing pension obligations by using arbitrary, rather than market-based, discount rates, which typically make those obligations look smaller than the cost to pay them off at the valuation date (Laurin and Robson 2016).

municipal departments, muddles the understanding of how much taxpayers, who pay both property taxes and user fees, actually pay for their services.

Explain Deviations from Budget Plans

Accounting differences aside, municipalities should prominently display tables reconciling year-end results with budget promises. Another valuable practice, followed by the federal and many provincial governments, is in-year reports showing results relative to plan. Many municipalities do produce regular reports that show the difference between budgeted and actual spending, but the inconsistent accounting in budgets and financial reports reduces their value.

Publish Budgets and Financial Reports in a Timely Manner

Another important feature of accountability is ensuring that municipalities have formally approved expenditures before that spending happens. Many municipal governments are slow in providing their final approval for government spending and looking retrospectively at last year's figures. Those municipalities that delay budget and financial report approval many months into their fiscal years really need to approve them much sooner.

Conclusion – The Need to Improve Municipal Fiscal Accountability

As their leaders and advocates frequently remind us, Canada's municipalities are vitally important to the lives of most people. They provide key services, and directly or indirectly impose major taxes. It is high time that they adopted budgeting practices more appropriate to their importance and their cost.

Whether mandated by their provinces or not, municipalities should present accrual-based budgets consistent with their financial statements, thereby avoiding the baffling discrepancies and potentially biased decisions about revenue and spending created by inconsistent cash budgeting. The confusion created by different accounting methods in municipal budgets and financial reports might not be intentional, but it clouds transparency and accountability and almost certainly adversely affects decisionmaking. Proposals to give municipalities more taxing power are common, and pressure for more transfers to municipalities from senior governments is constant. Cleaner financial presentations from municipalities should precede both. Clearer, more consistent figures and better accountability for hitting or missing budget targets would bring the financial management of municipalities better into line with their fiscal impact and their importance in Canadians' lives.

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