Non-profits will report a wide variety of obligations, including accounts payable, accrued salaries and benefits, deferred revenue, long-term debt, and pension obligations. Since these are the result of doing business, they are expected and acceptable.

Although necessary, long-term debt is a drain on future resources. Research has shown that non-profits with long-term debt are less liquid and less profitable. An organization with long-term debt will make principal and interest payments every month (e.g., loans or mortgages) or semi-annually (e.g., bonds) – and, therefore, strain liquid resources and operating costs. Fixed assets frequently add to maintenance costs and depreciation expenses, resulting in lower profitability margins. These factors could inhibit an organization's ability to continue to serve its mission.

The liability-to-asset ratio is an alternative measure of solvency. This ratio allows analysts to assess the scope of non-current liabilities that are not in the form of loans, mortgages, or bonded debt. For example, a significant proportion of liabilities reported by the Bill and Melinda Gates Foundation and the Susan G. Komen Breast Cancer Foundation were non-current grants payable. This reflects the organization's use of multi-year grants to support the operating activities of other non-profits. The Boy Scouts of America, USA Gymnastics, and various Catholic dioceses have sizeable *contingent liabilities* following several recent sexual abuse lawsuits. These obligations are contingent on a court ruling or legal settlement. Accounting rules require organizations to report a contingent liability in the basic financial statements or notes to these financial statements. These disclosures depend upon the degree of certainty and materiality of the court ruling or legal settlement. These organizations will likely need to liquidate their existing assets to meet these obligations (as a side note, these organizations have filed for bankruptcy protection to allow for a negotiated settlement of outstanding obligations). The March of Dimes, Girls Scouts of America, American Civil Liberties Union, and the Metropolitan Opera Association all report an accrued pension liability. If the obligation is unfunded, it represents a drain on the organization's resources.

We, therefore, encourage users to estimate a liability-to-asset ratio, keeping in mind that *all debt is a liability, but not all liabilities are debt*.

SOLVENCY RATIOS

Ratio	What it Tells Us	Non-Profit	Government	For-Profit/Hybrid
Debt to Assets	What percentage of this organization's assets were financed with debt? Rule of Thumb: <0.5	$\frac{Total\ Debt}{Total\ Assets}$		$\frac{Total\ Debt}{Total\ Assets}$
Liability to Assets	What percentage of this organization's assets are owed to third parties? (an alternative to debt-to-asset ratio) Rule of Thumb: <0.5	$\frac{Total\ Liabilities}{Total\ Assets}$		$\frac{Total\ Liabilities}{Total\ Assets}$
Contributions Ratio	How much does this organization depend on donors? Rule of Thumb: >10% but <75%	$\frac{Total\ Contributions}{Total\ Revenue}$		
Government Revenue Ratio	How much does this organization depend on government funding? Rule of Thumb: <25%	$\frac{Government\ Revenue}{Total\ Revenue}$		
Near-Term Solvency	How well can this government meet its near-term obligations with annual revenues? Rule of Thumb: < 150%		$\frac{(Total\ Liabilties - Deferred\ Inflows)_{Primary\ Govt.}}{(Total\ Revenues)_{Primary\ Govt.}}$	
Debt Burden	How much money has this government borrowed so far? Rule of Thumb: Depends		$\frac{(Total\ Long\ Term\ Debt)_{Primary\ Govt.}}{Population}$	
Coverage 1	How easily can this government repay its debts as they come due? Rule of Thumb: < .15		$\frac{(Debt\ Service)_{Governmental\ Funds}}{(Expenditures)_{General\ Fund}}$	
Coverage 2	How easily can this government's business-type activities repay their long-term debt obligations as they come due? Rule of Thumb: > 5		$\frac{(Operating\ Revenue)_{Proprietary\ Funds}}{(Interest\ Expense)_{Proprietary\ Funds}}$	
Capital Asset Condition	Is this government investing in its capital assets? Rule of Thumb: Positive		$\frac{Net\ Investment\ in\ Capital\ Assets_t - Net\ Investment\ in\ Capital\ Assets_{t-1}}{Net\ Investment\ in\ Capital\ Assets_{t-1}}$	

The Internal Revenue Service (IRS) monitors the *contributions ratio* as part of its *public support test* for charitable organizations. According to this test, a non-profit must receive at least 10 percent of its support from contributions from the public or gross receipts from activities related to its tax-exempt purposes. Less than that suggests the public is not invested in that organization's mission. By contrast, non-profit analysts also emphasize the *tipping point* where a non-profit depends too much on individual donors. Different analysts define the tipping point threshold differently, but most agree that 80 percent of total revenues from individual contributions is dangerously high. At that point, a non-profit's ability to serve its mission is far too dependent on unpredictable individual donors and not dependent enough on either earned income (e.g., government contracts or fees-for-services) or gifts from corporations or foundations.

For governments, the solvency ratios are focused entirely on debt and other long-term obligations. Governments can borrow money that won't be paid back for decades. If careless, a government can take on too much *leverage.* That is why solvency ratios for governments focus on how much money a government has borrowed or owes in its governmental and enterprise funds and its ability to meet those obligations as they come due. The latter is known as *coverage*. Bond investors, particularly for public utilities, often stipulate how much coverage a government must always maintain. Coverage ratios are usually expressed as operating revenues as a percentage of interest expenses.

In addition to financial health, financial statements can illuminate how efficiently a non-profit raises money and how much of its resources it devotes to its core mission. These effectiveness measures are related to but separate from the financial position. Fundraising efficiency shows the financial return a non-profit realizes for its investments in its fundraising capacity.

NON-PROFIT EFFECTIVENESS RATIOS

Ratio	What it Tells Us	Formula
Fundraising Efficiency	What is the return on $1.00 in fundraising expenses? Rule of Thumb: > 1	$\frac{Total\ Contributions}{Fundraising\ Expense}$
Program Expense Ratio	What proportion of total expenses are invested in programs and services versus administration and fundraising? Rule of Thumb: > .8	$\frac{Program\ Expenses}{Total\ Expenses}$

The program expense ratio is one of the most closely watched and controversial ratios in non-profit financial management. It tells us how much of a non-profit's total expenses are invested in its programs and services rather than administration, fundraising, and other overhead spending. Many analysts and non-profit monitors recommend a program service ratio of at least 80 percent – though we caution against the use of the program-expense ratio as allocation of expenses into program, administrative, and fundraising is far from clear cut.

RATIOS AND RULES OF THUMB

These rules of thumb are derived from the rich academic literature and industry analysis. To be clear, there is no legal or GAAP-based definition of "financially healthy" or "strong financial position." Every financial institution, foundation, donor, or grantor defines these metrics differently. Measures of financial health will vary by sector and the size of the organization. The rules listed in the ratio tables above represent figures cited by analysts in the public and private sectors. Before going further, let's consider a few key points about financial statement ratios:

- *Ratios are only part of the story.* Ratios are useful because they help us quickly and efficiently focus our attention on the most critical parts of an organization's financial position. In that sense, they are a bit like watching ESPN's 30-second highlight recap of a football game (or whatever sporting event, if any, you find interesting). If we want to know which team won and who made some big plays, we'll watch the highlight reel. If we want to know the full story – the coaches' overall game plan, which players played well throughout the game, when a key mistake changed the course of the game, etc. – we need to watch a lot more than just the highlights. Ratios are the same way. They are fast, interesting, and important. If we want a quick overview and not much more, they are useful. If we don't have the time to dig deeper

into an organization's operations, or if it's not appropriate for us to dig deeper, then they're the best tool we have. But they are never the whole story. Always keep this limitation in mind.

- *Always interpret ratios in context.* Ratios are useful because they help identify trends in an organization's financial behavior. Is its profitability improving? How has its overall liquidity changed over time? Are its revenues growing? And so on. But on their own, ratios don't tell us anything about trends. To reveal a trend, we must put a ratio in context. We need to compare it to that same ratio for that same organization over time. For that reason, we often need multiple years of financial data. It is also essential to put ratios in an industry context. Sometimes, a broader financial trend will affect many organizations in similar ways. A decline in corporate giving will mean lower donor revenues for many non-profits. Increases in overall healthcare costs will impact all organizations' income statements. Reductions in certain federal and state grants will affect particular types of non-profits in similar ways. To understand these trends, we need to compare an organization's financial ratios to the ratios of organizations in similar industries. It is useful, for instance, to compare human services-focused non-profits with less than $2 million in assets to other small, human service-focused non-profits in the same region with less than $2 million in assets. We should compare fee-for-service, revenue-based non-profits to other fee-for-service, revenue-based non-profits. Large non-profits with national or international missions should be compared to each other.
- *Financial statement analysis raises questions.* A good financial statement analysis will almost always reveal some contradictory trends. Why does this organization's profitability look strong, but the current ratio is well below the rule of thumb? Why is this organization less liquid than its peers? Why does this organization not have debt and is far more liquid than similar organizations? A good financial statement analysis raises questions about the organization's financial assumptions, program operations, and overall effectiveness. Sometimes these follow-up questions can be answered from other publicly available information, such as the notes to the financial statements or the annual report. Sometimes they can't. If your analysis concludes with many unanswered questions, that does not mean your analysis is bad. It simply means there are limits to what we can learn from financial statements alone.
- *Ratios are retrospective.* Most organizations release their financial statements three to six months after the close of their fiscal year. As a result, analysis based on those statements relies on information that is at least 12 to 18 months old. A lot can happen in 18 months! Always keep this in mind when doing financial statement analysis.

NON-PROFIT BUSINESS MODEL AND CAPITAL STRUCTURE

A non-profit's financial self-assessment is based on a coherent analysis of the organization's business model and capital structure. What do we mean by business model? It is the nature and distribution of an organization's revenues and expenses. The business model reflects the non-profit's strategic choices to fund operations (e.g., individual donors vs. corporate gifts, contributions vs. earned income, private support vs. government contracts) and resources allocated to programs and administrative services. **A sustainable non-profit business model provides reliable revenues to cover the full cost of doing business.** Sustainable non-profits understand how programs subsidize or are subsidized by others and maintain a specific, actionable plan to respond to unexpected events. Capital structure refers to the nature and distribution of an organization's assets, liabilities, and net assets. **A well-capitalized organization can access the cash necessary to cover its obligations, has the reserves to weather downturns in the external operating environment, and can take advantage of new opportunities to innovate.**

We have modified the Non-profit Financial Assessment Toolkit developed by the Non-profit Finance Fund (NFF) to help non-profits assess their financial health. To contextualize questions included in the survey, let's review the connection between an organization's business model (i.e., Statement of Activities or Income Statement) and capital structure (i.e., Statement of Financial Position or Balance Sheet).

Thus far, we have focused on the idea that the non-profit's revenues must meet or exceed program and overhead costs. However, a broader definition is necessary – one that accounts for the full costs of operations (a term we've also borrowed from NFF). Non-profits that generate enough resources to cover full costs of operations have sufficient reserves to meet unexpected costs or revenue shortfalls; can invest in technology, property, or equipment; and take advantage of new opportunities and are innovative in program or service delivery.

A non-profit's ability to do so will be a function of the type of revenue it earns. Unrestricted contributions provide an organization with the greatest flexibility. Studies show that non-profits that rely on government contracts are more likely to report deficits and are more likely to be insolvent for two reasons. First, governments do not cover overhead costs. Failure to cover overhead costs means the organization has a structural deficit baked in the service agreement with the government agency. On the revenue side, the non-profit will need to raise additional donor support or rely on profitable ventures. On the expense side, the non-profit will likely scale back on administrative functions, including finance, technology, and other back-office staff. Eventually, it will need to draw down on reserves or cut back on critical program staff. Second, governments are more likely to delay payments. As a result, the non-profit will need to draw down on existing reserves, rely on lines of credit, or delay payments to vendors. It will forego investment income, incur an interest expense if it uses a line of credit, incur late payment penalties with vendors or suppliers, or forego pre-payment discounts.

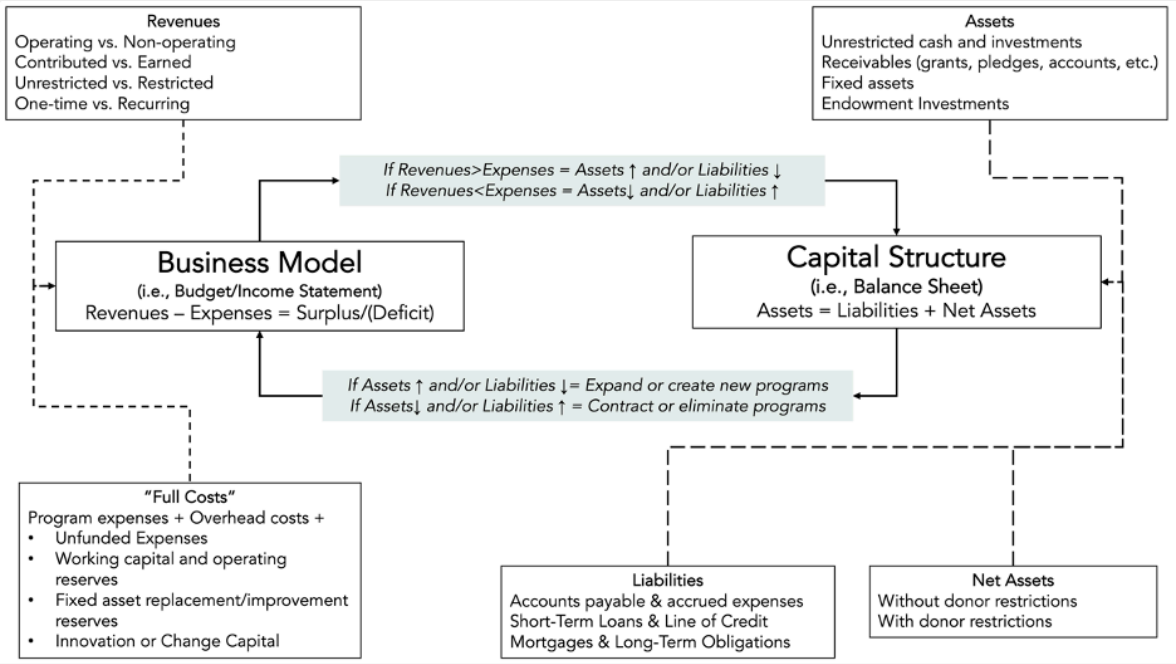
A non-profit that consistently reports a surplus will see continued and sustained growth in assets. We'll likely find that a significant proportion of its long-term obligations are used to acquire fixed assets (i.e., a mortgage or long-term debt). Those reporting a greater share of unrestricted public support are more likely to report a larger share of net assets without donor restrictions. That organization has a greater ability to expand programs. It can invest in new equipment, and excess funds can be transferred to a long-term investment portfolio that would generate investment income.

Non-profits reporting deficits are more likely to report fewer assets, and their liabilities are likely to grow over time. How does this happen? In the short term, it will draw on reserves, but persistent deficits will likely result in increased reliance on lines of credit and delayed payments to suppliers and vendors. Deficits will demand cuts to critical program and administrative staff. The deficits may incentivize the organization to pursue profitable but non-essential programs to subsidize essential programs, resulting in mission drift. Over the long term, the organization could become vulnerable to after-the-fact audits and claw-backs for disallowed expenses as a result of significant cuts in grant administration and finance staff. These create unexpected and sizeable contingent liabilities. The non-profit could also report a growing pension liability if it fails to fund employee benefit programs adequately. Growth in liabilities reflects the organization's inability to generate revenues sufficient to cover full costs.

The figure below shows the connections between the non-profit's business model (i.e., revenues, program expenses, and overhead costs) and capital structure (i.e., assets, liabilities, and net assets). As we noted in Chapter 2, non-profits need to budget for reserves. We, therefore, reflect not just program expenses and overhead costs in "Full Costs" but also reserve needs for the organization. Practically speaking, a non-profit would need to report a surplus equal to five percent of operating revenues for 10 consecutive years to accumulate reserves equal to six months of operating expenses. Given the evidence that most non-profits report deficits, a mix of budget surplus and capital campaigns would be necessary to create meaningful levels of reserves.

The more revenues (and, correspondingly, surpluses) a non-profit generates, the more assets it will report. Those will appear first in receivables and then in cash. Over time, these are invested in property and equipment or used to create informal or formal reserves.

Non-profits that are profitable can invest in or expand programs. Those that are not profitable will need to tap into reserves (i.e., cash and investments) in the short term or cut spending or sell assets over the long term to balance budgets and make payments on obligations as they come due. Selling assets and eliminating programs may be the only way the non-profit can maneuver out of a financial crisis.



Recommended readings include Morris, G., et al. (2018). The Financial Health of the United States Non-profit Sector: Facts and Observations, MacIntosh, J., et al. (2016). Understanding Overhead: A Governance Challenge for Non-profit Trustees and Nonprofit Finance Fund (2011) "Case for Change Capital in the Arts"

NON-PROFIT FINANCIAL SELF-ASSESSMENT WORKSHEET

This worksheet reveals some of your non-profit's financial strengths and weaknesses. If you answer ***YES*** to many questions, you have a good grasp of your financial dynamics and will likely weather an economic crisis. If you answer ***NO,*** you may want to review what actions you could be making to mitigate risk.

CRITERIA	YES	NO
– Our revenue portfolio is diverse and predictable. To assess diversity, identify unique sources of revenue. To assess predictability, compare actual revenues to budgeted revenues.		
– Our donors are reliable. To assess donor support, consider donor recruitment, retention, attrition, and changes in average gift size.		
– We can count on funding agencies for continued support at current levels. To assess continued support, a careful review of the organization's history of corporate gifts, government contracts, and foundation grants is required. For example, what proportion of gifts, grants, or contracts are multi-year? How long has the donor, foundation, or government supported the organization?		
– Our earned income services are competitively priced. Our organization maintains competitive advantage in the community or region. To assess competitive advantage, a market analysis of the organization's services should be completed as part of the strategic planning process (at least once every three to five years).		
– Government contracts and foundation grants sufficiently fund overhead costs. Covering indirect and non-program costs associated with general operations, capacity-building, and innovation is crucial to the long-term success of the non-profit. Otherwise, government contracts and foundation grants create a structural deficit for the organization that would require donor support or a draw on reserves.		
– Foundation support is unrestricted and remitted in advance. Government contracts and all other accounts receivable are collected 60 days from invoice date. Unrestricted funding gives management the flexibility to direct resources to highest need. Foundations should remit funds upfront to limit non-profit draws on reserve funds or use of lines of credit. Government contracts should be paid in a timely fashion to limit non-profit draws on reserve funds or use of lines of credit.		
– We have a demonstrated history of consistently reporting operating surpluses. To objectively assess operating surpluses, review audited financial statements for the last five years. The three-year moving average of operating margin should be positive, and the non-profit should have reported an operating surplus (i.e., operating revenues without donor restrictions>expenses) in three of the last five years.		
– Our operating surpluses are sufficiently large. Sustainable non-profits should have a target surplus based on current and future needs, including creating and maintaining rainy-day reserves, fixed-asset replacement reserves, and/or board-designated innovation reserves.		
– We have policies in place to respond to a rapidly changing operating environment. The board and management should identify which costs they would need to cut without delay or harming core programs.		

Adopted with modifications from "*Financial Self-Assessment Worksheet – Know Your Strengths and Weaknesses*" published by the Non-profit Finance Fund

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	CRITERIA	YES	NO
–	**The Board receives and reviews monthly financials.** This includes monthly budget versus actuals comparison schedules, monthly cash flow projections, notification use of reserve funds or lines of credit, and pro-forma balance sheet.		
–	**We adopt balanced budgets.** Budget assumptions should reflect current operating environment. Scenario analysis (i.e., best, probable, and worst budget options) is part of the budget preparation process.		
–	**We have enough cash on hand to manage the cyclicality of our daily operations.** Non-profits should have in place working capital policy with recommendation for days of cash on hand.		
–	**We have reserves that we can draw on to manage revenue shortfalls or meet unexpected expenses.** There are procedures for when the non-profit can draw down on reserves. An unexpected draw on reserves is included in the report to the Board or requires Board approval.		
–	**We have access to line(s) of credit.** Non-profits, particularly those with less than six months of reserves, should negotiate for access to secured and unsecured line(s) of credit (the latter being more expensive).		
–	**We have procedures to replenish reserves.** This may include diverting a proportion of donations without restrictions or profits from earned income activities to a reserve fund.		
–	**Our investments are safe and stable.** Non-profits should adopt an investment policy for short-term investments that outlines allowable liquid and safe investments. A separate investment policy should be in place to guide asset allocation for all long-term investments (i.e., board-designated and donor-restricted investments). Use of investment advisory services should be at competitive rates.		
–	**We pay our vendors on time and take advantage of pre-payment discounts.** Management should have a purchasing review process that allows the Director of Finance to pre-pay for goods or services where there are potential costs savings (e.g., bulk purchases with pre-payment discounts).		
–	**We are making payments on outstanding long-term debt.** Non-profits should make timely payments on long-term debt. The Director of Finance should report on a monthly or semi-annual basis that all loan covenants (e.g., debt service coverage ratio and debt service reserve funds) are met. They should also provide all lenders with timely, accurate reporting and analysis of financial results, and submit to lenders audited financial statements at the end of each fiscal year.		
–	**We maintain a capital improvement plan.** To adequately maintain, replace, or expand existing property and equipment, a capital improvement plan is in place and is reviewed and amended on an annual basis. Fixed asset replacement reserves are planned based on current and future needs of the organization.		

Adopted with modifications from *"Financial Self-Assessment Worksheet – Know Your Strengths and Weaknesses"* published by the Non-profit Finance Fund

Download Non-Profit Financial Self-Assessment Worksheet: https://bit.ly/3rbVKUR

NON-PROFIT FINANCIAL RATIOS – AN ILLUSTRATION

To see these ratios in action, let us return to Treehouse. We use FY 2022 data to illustrate how each ratio is estimated and include FY 2021 ratios for comparative purposes. We highlight the key findings below. Note that our discussion below does not focus on how one should interpret each ratio. Instead, we tell a story about the organization's financial position and operating performance. That story – not the ratios – helps formulate questions and additional lines of inquiry. Notwithstanding, we've included comments in the tables to help you understand how to interpret each ratio.

FINANCIAL RATIOS – TREEHOUSE

RATIO	WHAT IT TELLS US	FORMULA	2022 RATIOS	2021
Current Ratio	Will near-term assets cover near-term obligations? Rule of Thumb: >2	$\frac{Current\ Assets}{Current\ Liabilties}$	$\frac{13,095,728}{1,239,911} = 10.56$ For every $1 in current liabilities, Treehouse reported $10.56 in current assets.	12.16
Quick Ratio	Will the most liquid assets cover near-term obligations? Rule of Thumb: >1	$\frac{Cash + Investments\ + Receivables}{Current\ Liabilties}$	$\frac{4,430,208 + 3,162,683 + 970,433 + 195,182 + 3,528,538}{1,239,911} = 9.91$ For every $1 in current liabilities, Treehouse reported $9.91 in cash and receivables.	11.42
Cash Ratio	Will cash and investments cover near-term obligations? Rule of Thumb: >1	$Cash + Investments/Current\ Liabilities$	$\frac{4,430,208 + 3,162,683}{1,239,911} = 6.12$ For every $1 in current liabilities, Treehouse reported $6.12 in cash and investments.	9.67
Days of Cash on Hand	How many days of cash do we have? Rule of Thumb: >90 days	$\frac{Cash + Investments}{\left(\frac{Total\ Expenses - Depreciation}{-Bad\ Debt\ Expense}/365\ Days\right)}$	$\frac{4,430,208 + 3,162,683}{(23,499,527 - 286,274 - 33,567/365\ \text{Days})} =$ 119.56 days Treehouse reported $7.6 million in cash and unrestricted investments sufficient to meet 119 days of operating expenses.	255.24 days
Days of Liquid Net Assets	How many days of liquid net resources do we have? Rule of Thumb: >180 days	$\frac{\left(\frac{Net\ Assets\ Without\ Restrictions -}{Fixed\ Assets, Net\ of\ Depreciation}\right)}{\left(\frac{Total\ Expenses - Depreciation}{-Bad\ Debt\ Expense}/365\ Days\right)}$	$\frac{(19,743,171 - 7,097,000 - 1,228,420)}{(23,499,527 - 286,274 - 33,567/365\ \text{Days})} =$ 179.79 days Treehouse reported unrestricted liquid assets of 179 days. This is a very strong unrestricted liquid net asset position even though it reported $8.3 million in fixed assets.	298.41 days
Receivables Turnover	How long does it take us collect receivables? Rule of Thumb: <60 days	$\frac{Receivables}{(Revenues/365\ days)}$	$\frac{970,433 + 195,182 + 3,528,538}{\left(\frac{23,385,623}{365\ days}\right)} = 73.2$ days In FY 2022, Treehouse reported a significant increase in receivables. As a result, the receivables turnover period is higher than in previous years.	35.65 days

What do the financial statements and estimated ratios tell us about Treehouse's financial position and performance? Treehouse reported a strong financial position. At the end of FY 2022, the non-profit reported $27 million in assets, including $7.6 million in cash and investments, $5 million in receivables ($4.7 million are due in the next 12 months), $8.3 million in fixed assets (net of depreciation), and $5.2 million in endowment investments. That said, the non-profit reported a

$2.1 million drop in cash and investments. While the drop in cash and investments has a negative impact on the non-profit's liquidity position, the liquidity ratios remain at or above recommended benchmarks.

RATIO	WHAT IT TELLS US	FORMULA	2022 RATIOS	2021
Operating Margin	Do operating revenues cover operating expenses? Rule of Thumb: Positive	$\frac{\textit{Change in Net Assets Without Donor Restrictions}}{\textit{Revenues Without Donor Restrictions}}$	$\frac{516{,}298}{24{,}015{,}825} = 2\%$ Treehouse reported $516,662 in operating surplus (or 2 percent of operating revenues).	22%
Total Margin	Do total revenues exceed total expenses? Rule of Thumb: Positive	$(\textit{Change in Net Assets})/(\textit{Total Revenue})$	$\frac{5{,}622{,}029}{23{,}385{,}623} = 24\%$ Including non-operating and restricted income, Treehouse reported a $5.6 million total surplus equal to 24 percent of total revenues.	31%
Return on Assets	How well does management leverage its assets to generate profits? Rule of Thumb: Positive	$\frac{\textit{Change in Net Assets}}{\textit{Total Assets}}$	$\frac{5{,}622{,}029}{26{,}966{,}259} = 21\%$ Including non-operating and restricted income, Treehouse reported a $5.6 million surplus equal to 21 percent of assets.	20%
Return on Investments	How well does management leverage its investments to generate income? Rule of Thumb: Positive	$\frac{\textit{Investment Gain (Loss)}}{\textit{Total Investments}}$	$\frac{-1{,}361{,}592}{3{,}162{,}683 + 5{,}189{,}663} = -16\%$ Treehouse reported $1.4 million in losses from investments equal to 16 percent of the value of the investments, including endowment investments.	13%
Return on Equity	What is the return on shareholders' investments? Rule of Thumb: Positive	$\frac{\textit{Change in Net Assets Without Donor Restricitons}}{\textit{Net Assets Without Donor Restrictions}_{t-1}}$	$\frac{7{,}108{,}483}{12{,}634{,}688} = 56\%$ There was an increase in equity because of the in-kind donation of an interest in the building resulting in a 56 percent increase in net assets without restrictions (or $7.1 million).	34%

Treehouse reported $516,298 in income at the end of FY 2022 – approximately 2 percent of operating revenues. Operating revenues in FY 2022 ($24 million) were up 75 percent. Much of the growth in revenues was driven by contracts, most of which were with the State of Washington. Contributions, grants, and in-kind donations increased 14 percent. The nonprofit's expenses ($23.5 million) were also higher, particularly in program services. Changes notwithstanding, the non-profit had a program-expense ratio of 83 percent. Total Change in Net Assets for FY 2022 was $5.7 million, including $1.4 million in losses from investments – which mirrors outcomes in the broader financial markets and in-kind donation of an interest in the building ($7.1 million).

Unlike most health and human services organizations, Treehouse has no long-term debt, and its liabilities are modest ($1.2 million).

RATIO	WHAT IT TELLS US	FORMULA	2022 RATIOS	2021
Liability to Assets	What percentage of this organization's assets are owed to third parties? (an alternative to debt-to-asset ratio) Rule of Thumb: <0.5	$\frac{Total\ Liabilities}{Total\ Assets}$	$\frac{1,239,911}{26,966,259} = \$0.05$ Treehouse reported a negligible amount in payables and other obligations (five cents for every dollar in assets held). Keep in mind Treehouse does not report any long-term debt. We, therefore, estimate a liability-to-asset ratio instead of a debt-to-asset ratio.	$0.05
Contributions Ratio	How much does this organization depend on donors? Rule of Thumb: >10% but <75%	$\frac{Total\ Contributions}{Total\ Revenue}$	$\frac{9,400,113 + 662,156}{23,385,623} = 46\%$ Forty-six percent of revenues are from grants and contributions (including in-kind contributions).	70%
Government Revenue Ratio	How much does this organization depend on government funding? Rule of Thumb: <25%	$\frac{Government\ Revenue}{Total\ Revenue}$	$\frac{12,659,996}{23,385,623} = 54\%$ The remainder of the revenues are from government contracts (54 percent).	29%
Fundraising Efficiency	What is the return on $1.00 in fundraising expenses? Rule of Thumb: > 1	$\frac{Total\ Contributions}{Fundraising\ Expenses}$	$\frac{10,040,113 + 662,156}{2,262,043} = \$4.73$ For every $1 in fundraising expenses, the non-profit raised $4.73 in grants and contributions.	$5.96
Program Expense Ratio	What proportion of total expenses are invested in programs and services versus administration and fundraising? Rule of Thumb: > .8	$\frac{Program\ Expenses}{Total\ Expenses}$	$\frac{19,577,929}{23,499,527} = 83\%$ For every $1 in expenses, 83 cents are invested in providing services to the non-profit's clients.	76%

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Treehouse's investments in fundraising are productive. For every $1 in fundraising expenses, the non-profit raised at least $5.00 in contributions and grants over the last five years. What's more, our analysis shows it collected those receivables in 60 days or less. This ratio is critical to non-profits that rely on government contracts. If payments are late, the non-profit will need to draw down on its cash reserves and investments to meet operating expenses until the next payment is received. Non-profits that rely on monthly contributions, particularly from small donors, report a collection period that is less than 30 days. The financial statements show a significant increase in contracts in FY 2022 (up from $3.9 million in FY 2021 to $12.7 million in FY 2022) that led to a 204 percent increase in contract receivables ($3.5 million). This increase in receivables could negatively impact cash flows.

THE FINANCIAL HEALTH OF THE NON-PROFIT SECTOR

Unless specified, non-profit financial statements are prepared in accordance with GAAP. They are not, however, the only source of financial data. The IRS Form 990 provides the public with financial information comparable to that reported in the financial statements.

Form 990 is a unique blend of GAAP and tax-basis of accounting. For various reasons, the assets, liabilities, revenues, and expenses reported in the tax form 990 will differ from those reported in the financial statements. Limitations notwithstanding, the IRS maintains an electronic database that can be used to assess the financial health of the non-profit sector. Using 990 data reported by more than 200,000 non-profits reporting $2.45 trillion in expenses, Morris, Roberts, MacIntosh, and Bordone (2018) found the non-profit sector in the U.S. to be **financially fragile, with non-profits in every sector frequently reporting deficits.**

MEDIAN RATIOS USING 2014 IRS 990 DATA

	Count	Expenses (Size of Sector)	Current Ratio	Months of Cash + Investments	Debt-to-Asset Ratio	3yr. Net Income Margin	Operating Reserve	Contribution Ratio*	Administration Ratio*	Fundraising Ratio*	Fundraising Efficiency*
Arts, Culture, & Humanities	9%	2%	3.6	5.3	0.04	2.5%	0.1	43%	13.7%	6.5%	$5.56
Community Capacity	9%	2%	2.5	5.5	0.08	2.2%	1.6	24%	14.9%	5.3%	$7.14
Educational Institutions	16%	25%	2.2	5.4	0.07	3.1%	0.1	17%	13.4%	2.7%	$5.26
Environment and Animal-Related	4%	1%	7.2	6.9	0.02	5.0%	1.0	60%	10.8%	6.7%	$7.14
Health & Human Services	27%	9%	1.3	2.9	0.16	1.0%	1.2	9%	12.1%	3.1%	$5.56
Hospitals & Care Organizations	9%	46%	1.7	3.7	0.18	2.4%	1.1	3%	13.0%	3.1%	$5.56
Other	5%	3%	4.3	5.0	0.03	2.3%	0.8	69%	10.6%	6.1%	$10.00
Philanthropy	5%	3%	6.3	12.4	0.01	4.4%	0.0	61%	8.1%	7.4%	$6.25
Religious Institutions	5%	1%	2.7	3.6	0.02	3.1%	0.0	85%	12.3%	5.3%	$16.67
Science & Technology	2%	4%	4.5	8.6	0.05	2.8%	1.0	38%	12.4%	7.3%	$7.69
Youth Development	8%	1%	4.0	4.0	0.02	2.3%	0.4	30%	9.9%	5.8%	$4.76
Very Small (<$1MM)	66%	2%	3.4	5.2	0.02	2.7%	0.3	41%	14.0%	5.8%	$6.67
Small ($1MM - $5MM)	21%	4%	2.1	3.3	0.16	1.7%	1.1	15%	12.3%	5.5%	$5.88
Mid-Sized ($5MM-$10MM)	5%	3%	1.5	3.1	0.25	1.6%	1.2	6%	11.6%	3.2%	$5.26
Large ($10MM - $50MM)	6%	11%	1.2	3.0	0.33	1.7%	1.2	3%	11.5%	2.3%	$4.76
Very Large ($50MM - $5BN)	2%	58%	1.0	4.1	0.38	2.9%	0.3	1%	10.6%	1.5%	$5.26
Supersized (>$5BN)	0%	21%	1.1	8.1	0.38	2.7%	2.8	2%			

That research found:

- **Operating margins were largest for small non-profits (<$1 million), but there is significant variation in the data**. For example, small non-profits were more likely to report large deficits or surpluses (the operating margin range was -21 percent to 32 percent). Large non-profits (>$10 million) were more likely to report a surplus. The distribution of operating margins was tighter (between -5.9 percent and 12.9 percent) and the largest non-profits (>$5 billion in expenses) did not report deficits.

- **Smaller organizations (<$5 million) are more likely to be liquid**. While larger organizations (>$50 million) reported low current ratios, they maintain sizeable long-term investment portfolios, making them more resilient to an economic downturn. There was significant variation in liquidity by sector, with hospitals and human service organizations reporting low current ratios and reserve balances (and the lowest operating margins). Remember that these two sectors accounted for 55 percent of expenses and 36 percent of organizations. They represent organizations that underserved communities rely on.

- **Large non-profits (>$10 million in expenses) were more likely to report long-term debt**. Not surprisingly, hospitals and health and human service organizations were more likely to report debt, as their business model mandates investment in property and equipment to meet the needs of the communities they serve. Philanthropic and environmental organizations reported the lowest debt burdens. These sectors were also the most profitable – 4.4 percent and 5.0 percent, respectively.

- **There are economies of scale with overhead costs**, with larger non-profits reporting a lower share of overhead costs (i.e., administration and fundraising ratio). There were notable differences in fundraising ratios, with non-profits

relying less on contributions reporting the lowest fundraising efficiency ratios and vice versa.

For detailed distributions of financial ratios, see Morris, G., et al. (2018). The Financial Health of the United States Non-profit Sector: Facts and Observations, Oliver Wyman, SeaChange Capital Partners, GuideStar and MacIntosh, J., et al. (2016). Understanding Overhead: A Governance Challenge for Non-profit Trustees, Oliver Wyman, SeaChange Capital Partners.

**Sample was limited to 10,754 non-profits in New York City. We believe the sample is sufficiently large and the results are representative of all non-profits. We transpose the author's original estimate of fundraising efficiency ratio to estimate fundraising efficiency.*

ASSESSING THE FINANCIAL HEALTH OF GOVERNMENTS USING THE TEN-POINT TEST

Throughout the past few decades, analysts have developed a popular framework to evaluate a local government's financial condition. It is known as the "*Ten Point Test*." It's comprised of 10 key ratios that, when taken together, summarize a government's liquidity, profitability, and solvency. In the Ten Point Test framework, a government earns "points" based on how its ratios compare to its peer governments. If its ratios are consistently better than its peers, it earns a higher score. If its ratios are consistently worse than its peers, its scores are lower and, in some instances, negative.

To see the *Ten Point Test* at work, let's return to the City of Bothell. The table below shows the city's ratios and their computations based on information in its 2021 Annual Comprehensive Financial Reports (ACFRs). Bothell's 10-point ratios are a mixed bag. The government's General Fund liquidity position is relatively strong. The city's General Fund unassigned balance at the end of FY 2021 was $18 million (a historical high), approximately equal to 30 percent of the revenues reported in the General Fund. The government also reported $18.8 million in cash and investments (approximately 584 percent of its General Fund liabilities).

FINANCIAL RATIOS – CITY OF BOTHELL

RATIO	WHAT IT TELLS US	FORMULA	FY 2021
Short-Run Financial Position	How much in unrestricted resources do we have as a percent of our revenues? Rule of Thumb: >5%	$\frac{\text{Unassigned General Fund Balance}}{\text{General Fund Revenues}}$	$\frac{18{,}021{,}012}{61{,}009{,}245} = 30\%$ The City's reported $18 million in unassigned General Fund balance at the end of FY 2021, approximately 30 percent of revenues reported in the General Fund – a historical high.
Liquidity	Will cash and investments cover near-term obligations? Rule of Thumb: >100%	$\frac{\text{General Fund Cash + General Fund Investments}}{\text{General Fund Liabilties (excluding Deferred Inflows)}}$	$\frac{12{,}863{,}100 + 5{,}974{,}970}{3{,}228{,}070} = 584\%$ The City reported $18.8 million in cash and investments, nearly six times the recommended liquidity position (584%) and the strongest liquidity position in more than five years.

That said, the ACFRs show that the City's net position declined $2.1 million or 0.4 percent of the net position. The $2.1 million deficit was a fraction of what the city reported prior to the COVID-19

pandemic. A quick review of the financial statements shows that depreciation expense has increased over the years – reflecting the city's investment in infrastructure. This is also evident in the ratio measuring capital asset improvement, which continues to be negative (-7 percent).

The city relies on general revenues – specifically property and excise taxes – to cover operating expenses. The city reported $4.1 million in operating grants and contributions, approximately 3.12 percent of primary government revenues. Intergovernmental transfers were higher in FY 2020 and FY 2021, reflecting the infusion of federal stimulus funds in the city's operations. The city's operating margin for governmental activities was 61 percent. This ratio is larger because the city reported a deficit. The ratio would be lower if expenses were lower or if the government had reported more in either program revenues or general revenues. Notwithstanding, strong revenue growth and effective management of the city's expenses have allowed the city to improve its net position.

RATIO	WHAT IT TELLS US	FORMULA	FY 2021
Net Asset Growth	What is the return on shareholders' investments? Rule of Thumb: Positive	$\frac{\text{Change in Governmental Activities Net Position}}{\text{Net Position, Governmental Activities}_{t-1}}$	$\frac{-2,095,559}{589,097,828} = -0.4\%$ The city's net position for core operations (or governmental activities) decreased by $2.1 million or 0.4 percent, the lowest deficit in five years. The biggest driver for the city's negative change in Net Position has been depreciation expense.
Operating Margin	Do operating revenues cover operating expenses? Rule of Thumb: Positive	$\left(\frac{\text{Net Revenue (Expense)}_{\text{Governmental Activities}}}{\text{Total Revenues}_{\text{Governmental Activities}}}\right) x - 1$	$\left(\frac{-65,848,816}{107,267,488}\right) x - 1 = 61\%$ 61 percent of the City's operating expenses are supported by general revenues - primary property and excise taxes. As noted earlier, the city reported a deficit. That also means the city did not raise sufficient taxes to cover the full costs of operations.
Own Source Revenues	How much does this organization depend on government? Rule of Thumb: < 10%	$\frac{\text{Primary Govt. Operating Contributions}}{\text{Primary Govt. Revenues}}$	$\frac{4,093,535}{131,011,403} = 3\%$ Primary government operating grants and contributions were 3 percent of total revenues, significantly higher relative to prior to the COVID pandemic reflecting the infusion of federal support to the core functions of the city.

The city of Bothell reports a high debt burden ($2,637 per capita). The rapid growth in population and the city's planned expansion in capital improvements have resulted in the growth in the debt per capita. The government's capital improvements make the city more attractive, which would lead to a growth in residents, resulting in a growth in revenues. Notwithstanding, its near-term solvency ratio (120 percent) is below the benchmark – reflecting growth in economic activity and, as a result, revenues. More importantly, the city's pension and OPEB obligations are a modest share of the city's non-current liabilities ($8.1 million, or 6 percent of non-current liabilities).

Moody's upgraded the city from Aa2 to Aa1 on October 11, 2019. The rating agency noted that the city "benefited from its inclusion in the Puget Sound area." Factors that could lead to a rating downgrade include "deterioration in the city's financial position" because of "material contractions of the city's taxable base." The COVID-19 pandemic did not have a material negative effect on the government's revenues. The city's revenue portfolio is inelastic. Property values have not changed significantly since the start of the COVID-19 recession, and the housing market remains competitive.

RATIO	WHAT IT TELLS US	FORMULA	FY 2022
Near-Term Solvency	How well can this government meet its near-term obligations with annual revenues? Rule of Thumb: < 150%	$\frac{\left(\text{Total Liabilties}\ (\text{Excluding Deferred Inflows})\right)_{\text{Primary Govt.}}}{(\text{Total Revenues})_{\text{Primary Govt.}}}$	$\frac{157{,}206{,}831}{131{,}011{,}403} = 120\%$ Primary government long-term obligations are 120 percent of primary government revenues. The ratio declined as a result of an increase in tax revenues and federal support. Liabilities of the city ($157 million) were at a historical high.
Debt Burden	How much more money has this government borrowed so far? Rule of Thumb: It depends!	$\frac{(\text{Total Long Term Debt})_{\text{Primary Govt.}}}{\text{Population}}$	$\frac{129{,}018{,}696}{48{,}920} = \$2{,}637$ Outstanding long-term debt obligations of the city (i.e., general obligation and revenue debt, excluding pension and OPEB obligations) were $2,637 per capita. Growth in long-term debt obligations reflects the City's investments in infrastructure.
Coverage 1	How easily can this government repay its debts as they come due? Rule of Thumb: <25%	$\frac{(\text{Debt Service})_{\text{Governmental Funds}}}{(\text{Expenditures})_{\text{General Fund}}}$	$\frac{8{,}221{,}959}{55{,}379{,}086} = 15\%$ Debt service (i.e., principal and interest payments on long-term debt) were 15 percent of General Fund expenditures. Note, we estimate the ratio using debt service from governmental funds as the city reports debt service in a separate debt service fund.
Coverage 2	How easily can this government's business-type activities repay their long-term debt obligations as they come due? Rule of Thumb: >1	$\frac{(\text{Operating Revenue})_{\text{Proprietary Funds}}}{(\text{Interest Expense})_{\text{Proprietary Funds}}}$	$\frac{21{,}101{,}687}{469{,}803} = 47\text{x}$ Revenues from business-type activities (water, sewer, and stormwater) can cover interest costs 47 times over.
Capital Asset Condition	Is this government investing in its capital assets? Rule of Thumb: Positive	$\frac{\text{Net Investment in Capital Assets}_t - \text{Net Investment in Capital Assets}_{t-1}}{\text{Net Investment in Capital Assets}_{t-1}}$	$\frac{558{,}338{,}328 - 602{,}305{,}433}{602{,}305{,}433} = -7\%$ The City's Net Investment in Capital declined 7 percent. Said differently, the City's investment in capital improvements was less than the rate of depreciation of existing assets.

Download Bothell Ten-Point Test: https://bit.ly/4684Kcj

Fortunately, the Ten-Point Test framework allows us to go a step further. Instead of asking how Bothell compares to generic benchmarks (or rules of thumb), we have the tools to compare Bothell to peer local governments. This allows us to make much more precise statements about the City's financial position and operating performance.

Analysts typically make these peer comparisons by computing the Ten Point Test ratios for various local governments and assigning point values based on relative rankings. For example, to calculate Bothell's Ten Point test score for FY 2017 – 2021, refer to the Ten-Point Test Scores table. This table shows national trends for these same ratios. These trends are based on data from the financial statements of 3,721 city governments and 1,282 county governments from FY 2005 to FY 2015.

The ratios are presented in quartiles. Recall that a quartile is a group of percentiles, and a percentile identifies a point in the distribution of that ratio. The table is organized by population groups. So, for instance, for cities with populations between 25,000 and 50,000 (Bothell's peer group), the 25th percentile for the short-run financial position was eight percent. That means one-quarter of Bothell's peer cities had short-run financial positions of less than nine percent, and three-quarters had short-run financial positions equal to or greater than nine percent. For all the ratios shown here, the first quartile starts at the lowest ratio and ends at the 25th percentile, the second quartile covers the 25th

percentile through the 50th percentile, and the third quartile covers the 50th percentile through the 75th percentile. The fourth quartile includes all observations above the 75th percentile.

INSOLVENCY AND MUNICIPAL BANKRUPTCY

Extreme instances of fiscal distress could lead a municipal government to file for Chapter 9 bankruptcy protection. Having satisfied state-specific eligibility requirements, a municipality's petition in federal bankruptcy court must demonstrate the municipality (a) is insolvent, (b) desires to implement a plan to adjust, satisfy, or discharge debts, (c) has either negotiated in good faith, attempted but failed to negotiate with creditors, or negotiations are impracticable prior to bankruptcy protection application, and (d) has filed for bankruptcy protection in good faith.

The burden of demonstrating insolvency is extremely difficult. It requires the municipality to demonstrate that it is unable to pay its obligations as they come due or provide an adequate level of services. In recent years, the courts have sought an expansive definition of insolvency. Municipalities must demonstrate

- an inability to generate and maintain cash balances to pay all its obligations as they come due (i.e., cash insolvency),
- an inability to create a balanced budget that provides enough revenues to cover expenditures that occur in the budget period (i.e., budget insolvency),
- an inability to pay for its long-term obligations given its current taxing or revenue authority (i.e., long-run insolvency), and
- an inability to provide services at the level and quality that are required for the health, safety, and welfare of the community (i.e., service-level insolvency).

There are no financial ratios to assess service-level insolvency. Rather, service-level insolvency is a qualitative assessment of a government's ability to deliver essential services. Service-level insolvency is characterized by longer fire and emergency services response rates, high rates of violent crimes and low rates of clearance, abandoned and blighted structures and lots, and poor service delivery (e.g., polluted water systems, broken streetlights, closed parks, etc.). In other words, governments that are service-level insolvent are struggling to deliver essential services.

In ruling on a government's eligibility, federal courts have said the government's insolvency position cannot be temporary. Rather, insolvency is the result of a fundamental change in the socioeconomic environment that has, over time, resulted in persistent operating deficits and growth in long-term obligations. For that reason, courts have dismissed bankruptcy applications resulting from lawsuits (see, for example, the County of Boise, ID – 2011) or onerous labor contracts (see, for example, the City of Bridgeport, CT – 1991).

Municipalities like Stockton (CA), Jefferson County (AL), and Detroit (MI) successfully petitioned federal courts for Chapter 9 bankruptcy protections. They demonstrated insolvency would not be resolved with higher taxes, as levying additional taxes or collecting more in fees would be at the detriment of the entire community and would not necessarily generate sufficient funds to balance budgets, pay obligations as they come due, or resolve constraints on cash flows. The bankruptcy processes allowed these governments to get back on track, having won concessions from a wide variety of constituents (e.g., taxpayers, employees, retirees, and creditors) in an organized and fair manner.

Recommended readings include Moldogaziev, Tima T., Sharon N. Kioko, and W. Bart Hildreth. 2017. "Bankruptcy Risk Premium in the Municipal Securities Market" 37(4):47-73. Public Budgeting & Finance and Moody's (2012) "Key Considerations for Municipal Governments in Bankruptcy"

These quartiles are the basis for assigning scores for all ratios. If a local government is in the second quartile for a ratio, its score for that ratio is zero. It is not qualitatively better or worse than its peers, so that ratio does not help or hurt its relative score. If a ratio is in the third quartile, it earns one point. The logic here is that a ratio above the median (i.e., the 50th percentile) is a financial positive for that government. If a ratio is in the fourth quartile, it earns two points. To land in the fourth quartile, a government is better than most of its peers on that ratio, and that indicates a source of financial

strength. By contrast, a ratio in the first quartile means that government is comparatively weak in that dimension of financial health. To reflect that weakness, we subtract one point.

A local government's overall Ten Point Test score is easy to interpret. Analysts generally use the following categories:

- *A score of 10 or greater* suggests a government's financial position is "among the best." It can easily meet its immediate spending needs; it has more-than-adequate reserves to mitigate the effects of recessions, natural disasters, or other unexpected events; and it can generate adequate resources to cover its long-term spending needs. Most of its ratios must be as good as or better than its peers to earn that score.
- *A score between 5 and 9* means the government is "better than most." Most of its ratios are better than its peer governments.
- *A score between 1 to 4* means the government is "average." Most of its ratios are equal to, or weaker than, its peer governments.
- *A score between 0 and -4* means the government is "worse than most." Most of its ratios are weaker
  than its peer governments.
- *Scores less than -5* mean the government is "among the worst." It has major financial problems and may be insolvent. Scores this low are quite rare.

Let's return to Bothell's Ten Point Test Score. Recall that the city's population in FY 2021 was 48,920, so we will use the "Population 25,000 to 50,000" quartiles to assign points to the city.

Bothell's liquidity is strong and improved significantly over the last five years. The city scores in the second (0 points) or third quartile (1 point) for its short-run financial position and third (1 point) or fourth (2 points) quartile on its liquidity position. The city's profitability ratios are below average. The city was in the lowest quartile for net asset growth (-1 point) and operating margin (-1 point). Its dependency on operating grants was limited before the COVID-19 pandemic. The infusion of federal funds resulted in a higher ratio (and correspondingly a lower score); this should revert to historical trends now that federal funds have been disbursed.

As we noted earlier, Bothell's solvency profile is mixed. It has virtually no current liabilities in the General Fund but reports $157 million in liabilities, including $129 million in long-term debt and $8.1 million in pension and OPEB obligations. However, given the City's revenue profile, its near-term solvency ratio puts it in the third quartile (1 point). Its high debt burden and substantial debt service, particularly on core operations (i.e., Coverage Ratio), put it in the lowest quartile for both metrics. Finally, the rate of depreciation of capital assets far exceeds the rate of investment in capital improvements, far below its peers (-1 point each).

TEN-POINT TEST SCORES

CITY & COUNTY GOVERNMENTS

	Cities				Counties			
	First Quartile -1 Point	Second Quartile 0 Points	Third Quartile +1 Point	Fourth Quartile +2 Points	First Quartile -1 Point	Second Quartile 0 Points	Third Quartile +1 Point	Fourth Quartile +2 Points
Population less than 25,000								
Short-Run Financial Position	< 15%	15% to 31.9%	32% to 53.9%	> 53.9%	< 21%	21% to 36.9%	37% to 54.9%	> 54.9%
Liquidity	< 77%	77% to 194.9%	195% to 523.9%	> 523.9%	< 62%	62% to 185.9%	186% to 682.9%	> 682.9%
Net Asset Growth	< -0.39%	-0.39% to 3.11%	3.12% to 7.95%	> 7.95%	< 0.26%	0.26% to 4.26%	4.27% to 10.07%	> 10.07%
Operating Margin	> 66%	50.9% to 66%	36.9% to 51%	< 36.9%	> 144%	86.9% to 144%	43.9% to 87%	< 43.9%
Own-Source Revenues	>12%	5.9% to 12%	2.9% to 6%	< 2.9%	> 32%	20.9% to 32%	7.9% to 21%	< 7.9%
Near-Term Solvency	> 328%	197.9% to 328%	105.9% to 198%	< 105.9%	> 72%	42.9% to 72%	20.9% to 43%	< 20.9%
Debt Burden Per Capita	> $2,497	$1,354 to $2,497	$614 to $1,353	< $614	> $534	$201 to $534	$59 to $200	< $59
Coverage 1	> 13.82%	6.95% to 13.82%	3.09% to 6.94%	< 3.09%	> 2.74%	1.06% to 2.74%	0.30% to 1.05%	< 0.30%
Coverage 2	< 4.11	4.11 to 6.99	6.70 to 11.48	> 11.48	< 3.56	3.56 to 5.56	5.57 to 9.46	>9.46
Capital Asset Condition	< -1.87%	-1.87% to 1.27%	1.28% to 7.00%	> 7.00%	< -1.45%	-1.45% to 2.54%	2.55% to 9.43%	>9.43%
Population 25,000 to 49,999								
Short-Run Financial Position	< 9%	9% to 23.9%	24% to 38.9%	> 38.9%	< 16%	16% to 33.9%	34% to 49.9%	> 49.9%
Liquidity	< 67%	67% to 131.9%	132% to 286.9%	> 286.9%	< 66%	66% to 149.9%	150% to 498.9%	> 498.9%
Net Asset Growth	< -0.12%	-0.12% to 2.65%	2.66% to 5.95%	> 5.95%	< -0.44%	-0.44% to 3.29%	3.30% to 6.97%	> 6.97%
Operating Margin	> 55%	45% to 55%	33.9% to 45%	< 33.9%	> 154%	91.9% to 154%	47.9% to 92%	< 47.9%
Own-Source Revenues	>10%	6.9% to 10%	2.9% to 7%	< 2.9%	> 32%	18.9% to 32%	5.9% to 19%	< 5.9%
Near-Term Solvency	> 254%	173.9% to 254%	108.9% to 174%	< 108.9%	> 79%	47.9% to 79%	26.9% to 48%	< 26.9%
Debt Burden Per Capita	> $2,001	$1,276 to $2,001	$715 to $1,275	< $715	> $381	$204 to $381	$83 to $203	< $83
Coverage 1	> 11.05%	6.76% to 11.05%	3.09% to 6.77%	< 3.09%	> 1.45%	0.73% to 1.45%	0.15% to 0.72%	< 0.15%
Coverage 2	< 3.41	3.41 to 5.54	5.55 to 8.54	> 8.54	< 4.67	4.67 to 6.93	6.94 to 10.45	> 10.45
Capital Asset Condition	< -0.31%	-0.31% to 2.03%	2.04% to 6.50%	> 6.50%	< -1.94%	-1.94% to 1.59%	1.60% to 6.05%	> 6.05%
Population 50,000 to 99,999								
Short-Run Financial Position	< 8%	8% to 19.9%	20% to 32.9%	> 32.9%	< 15%	15% to 28.9%	29% to 43.9%	> 43.9%
Liquidity	< 49%	49% to 108.9%	109% to 280.9%	> 280.9%	< 58%	58% to 123.9%	124% to 395.9%	> 395.9%
Net Asset Growth	< -0.29%	-0.29% to 2.81%	2.82% to 5.81%	> 5.81%	< -1.06%	-1.06% to 2.82%	2.83% to 7.65%	> 7.65%
Operating Margin	> 55%	47.9% to 55%	36.9% to 48%	< 36.9%	> 105%	72.9% to 105%	54.9% to 73%	< 54.9%
Own-Source Revenues	>14%	8.9% to 14%	3.9% to 9%	< 3.9%	> 33%	22.9% to 33%	7.9% to 23%	< 7.9%
Near-Term Solvency	> 263%	176.9% to 263%	116.9% to 177%	< 116.9%	> 88%	56.9% to 88%	32.9% to 57%	< 32.9%
Debt Burden Per Capita	> $2,115	$1,490 to $2,115	$844 to $1,489	< $844	> $386	$180 to $386	$82 to $179	< $82
Coverage 1	> 11.88%	7.09% to 11.88%	3.89% to 7.08%	< 3.89%	> 1.43%	0.51% to 1.43%	0.13% to 0.52%	< 0.13%
Coverage 2	< 4.28	4.28 to 7.19	7.20 to 11.69	> 11.69	< 6.43	6.43 to 8.22	8.23 to 12.15	> 12.15
Capital Asset Condition	< -0.38%	-0.38% to 2.54%	2.55% to 5.95%	> 5.95%	< -1.28%	-1.28% to 1.82%	1.83% to 7.48%	> 7.48%
Population 100,000 to 249,999								
Short-Run Financial Position	< 8%	8% to 15.9%	16% to 24.9%	> 24.9%	< 16%	16% to 27.9%	28% to 41.9%	> 41.9%
Liquidity	< 43%	43% to 116.9%	117% to 280.9%	> 280.9%	< 40%	40% to 95.9%	96% to 263.9%	> 263.9%
Net Asset Growth	< 0.27%	0.27% to 2.38%	2.39% to 5.39%	> 5.39%	< -1.40%	-1.40% to 2.95%	2.96% to 7.75%	> 7.75%
Operating Margin	> 54%	44.9% to 54%	36.9% to 45%	< 36.9%	> 159%	95.9% to 159%	58.9% to 96%	< 58.9%
Own-Source Revenues	>11%	7.9% to 11%	3.9% to 8%	< 3.9%	> 33%	15.9% to 33%	6.9% to 16%	< 6.9%
Near-Term Solvency	> 274%	199.9% to 274%	139.9% to 200%	< 139.9%	> 100%	68.9% to 100%	42.9% to 69%	< 42.9%
Debt Burden Per Capita	> $2,641	$1,613 to $2,641	$1,064 to $1,612	< $1,064	> $428	$240 to $428	$102 to $239	< $102
Coverage 1	> 10.11%	6.13% to 10.11%	3.62% to 6.12%	< 3.62%	> 2.00%	0.72% to 2.00%	0.08% to 0.71%	< 0.08%
Coverage 2	< 4.10	4.10 to 6.73	6.74 to 11.61	> 11.61	< 5.33	5.33 to 7.90	7.91 to 12.04	> 12.04
Capital Asset Condition	<-0.32%	-0.32% to 2.24%	2.25% to 4.86%	> 4.86%	<-1.44%	-1.44% to 1.56%	1.57% to 7.63%	> 7.63%
Population 250,000 or more								
Short-Run Financial Position	< -1%	-1% to 6.9%	7% to 9.9%	> 9.9%	< 10%	10% to 19.9%	20% to 32.9%	> 32.9%
Liquidity	< 28%	28% to 62.9%	63% to 192.9%	> 192.9%	< 72%	72% to 155.9%	156% to 313.9%	> 313.9%
Net Asset Growth	< -3.80%	-3.80% to 2.28%	2.29% to 5.91%	> 5.91%	< -2.33%	-2.33% to 2.11%	2.12% to 6.17%	> 6.17%
Operating Margin	> 60%	47.9% to 60%	35.9% to 48%	< 35.9%	> 210%	129.9% to 210%	74.9% to 130%	< 74.9%
Own-Source Revenues	>16%	12.9% to 16%	7.9% to 13%	< 7.9%	> 46%	31.9% to 46%	12.9% to 32%	< 12.9%
Near-Term Solvency	> 445%	330.9% to 445%	229.9% to 331%	< 229.9%	> 105%	87.9% to 105%	62.9% to 88%	< 62.9%
Debt Burden Per Capita	> $5,684	$3,368 to $5,684	$2,273 to $3,367	< $2,273	> $563	$315 to $563	$158 to $314	< $158
Coverage 1	> 13.30%	9.52% to 13.30%	5.84% to 9.51%	< 5.84%	> 8.02%	1.33% to 8.02%	0.33% to 1.32%	< 0.33%
Coverage 2	< 4.40	4.40 to 6.43	6.44 to 10.31	> 10.31	< 3.35	3.35 to 5.98	5.99 to 8.32	> 8.32
Capital Asset Condition	< 1.85%	1.85% to 3.78%	3.79% to 5.65%	> 5.65%	< -0.60%	-0.60% to 2.53%	2.54% to 7.15%	> 7.15%

Trends are based on data from the financial statements of 3,721 city governments and 1,282 county governments from FY 2005 to FY 2015. Source: Merritt Financial Services and authors' estimates.

Download the Ten-Point Test: https://bit.ly/3r4ydFo

Bothell's ratios add up to an overall Ten-Point Test score of 2. Its main financial strengths are its liquidity and its near-term solvency. At the same time, its higher-than-average debt load and operating deficits lower the city's score. Recall that a score of 2 suggests Bothell is "average" relative to similarly sized local governments. With this framework, you can compute and interpret a Ten Point Test score for virtually city or county government.

TEN-POINT TEST, CITY OF BOTHELL (2017 -2021)

	Financial Ratios	2021 Ratio	2021 10-Point Test Score	2020 Ratio	2020 10-Point Test Score	2019 Ratio	2019 10-Point Test Score	2018 Ratio	2018 10-Point Test Score	2017 Ratio	2017 10-Point Test Score
Liquidity	Short-Run Financial Position	30%	1	20%	0	13%	0	14%	0	13%	0
	Liquidity	584%	2	388%	2	249%	1	280%	1	149%	1
Profitability	Net Asset Growth	-0.4%	-1	-1.8%	-1	-3.1%	-1	-3.8%	-1	-3.3%	-1
	Operating Margin	61%	-1	68%	-1	83%	-1	88%	-1	87%	-1
	Own Sources Revenues	3%	1	5%	1	1%	2	1%	2	1%	2
Solvency	Near-Term Solvency	120%	1	124%	1	137%	1	129%	1	138%	1
	Debt Burden	$2,637	-1	$2,565	-1	$2,761	-1	$2,368	-1	$2,503	-1
	Coverage Ratio 1	15%	-1	15%	-1	12%	-1	10%	0	12%	-1
	Coverage Ratio 2	47x	2	40x	2	41x	2	43x	2	34x	2
	Capital Asset Condition	-7%	-1	-2%	-1	-4%	-1	-4%	-1	-3%	-1
	Total Score		**2**		**1**		**1**		**2**		**1**

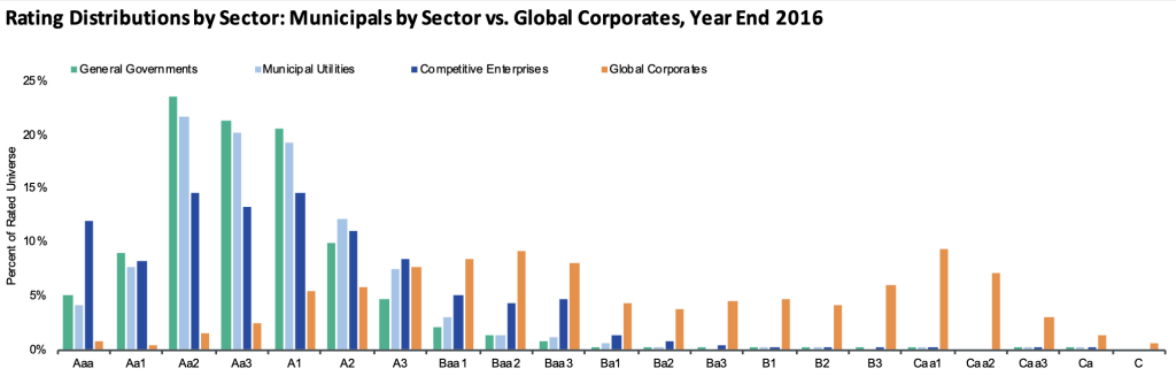
There are several versions of the Ten Point Test. The version presented here is based on the version recommended by Dean Mead, Research Manager at the Governmental Accounting Standards Board. A few of the ratios have been changed slightly to reflect the data available to compute national trends. For the original version, see Dean Mead's "A Manageable System of Economic Condition Analysis for Governments" in Public Financial Management, ed. Howard Frank (Boca Raton, FL: Taylor and Francis, 2006); pp.383-419.

Download Bothell Ten-Point Test: https://bit.ly/4684Kcj

CREDIT RATINGS

A credit rating is an independent assessment by a nationally recognized statistical rating organization (NRSRO) of the issuer's ability to make payments on time and in full. Currently, there are four NRSROs in the municipal bond market. They include Moody's Investor Service (or Moody's), Standard and Poor's (or S&P), Fitch Ratings (or Fitch), and Kroll Bond Rating Agency (or Kroll).

Ratings range from Aaa (highest possible rating) to D (lowest rating, typically in default). The municipal sector is highly rated. The median rating in the U.S. municipal securities market was Aa3 – with more than 98 percent of municipalities rated Baa3 or above. This is in sharp contrast to global corporates – the median rating is Baa3, and more than 49 percent of global corporate credits have a rating below investment grade. Defaults in the municipal securities market are exceedingly rare. The 10-year average of default rates is 0.18 percent. The 10-year average default rate for global corporates is 1.78 percent.



Source: Moody's (2018) "US Municipal Bond Defaults and Recoveries 1970 – 2018."

For a fee paid by the issuer, NRSROs gather and process information about the issuer – or in the case of revenue bonds, individually issue and provide investors with an assessment of the risk of default associated with an issuer or a specific bond issue. In assigning ratings for general obligation bonds, NRSROs focus on the following key criteria:

- The economic base, including per capita income or median household income (relative to the U.S. average), the total taxable value of property and full value per capita, and diversity of economic activity (e.g., regional economic centers with a diversified taxpayer base and the presence of large institutional actors like universities or military bases).
- The government's operating budget, including revenue or taxing authority, whether the operating budget is structurally balanced, expenditure reduction flexibility, and five-year trends in changes in cash or fund balances. Fund balances are a proxy measure of budget outcomes – any growth (reduction) in fund balances means revenues in prior budget periods were greater (lower) than expenses. Cash balances are equally important. They are a proxy measure of the government's ability to pay obligations as they come due.
- Management and governance structures, including legal and constitutional restrictions (e.g., tax limits and legislative supermajority requirements) or the adoption of prudent financial management practices into law (e.g., balanced budget requirements, mandatory contributions to pension programs, mandatory contributions to rainy-day or similar reserve funds, executive authority to make mid-year budget adjustments)
- Outstanding debt and pension obligations, including total outstanding debt (as a percentage of full value or revenue) and the three-year average net pension liability (as a percentage of full value or revenue)

In assigning a rating for a revenue bond, NRSROs focus on the net operating revenues of the issuer (e.g., utility revenues, tuition fees, or patient revenues – net of operating expenses) or pledged revenues (e.g., gasoline taxes, toll revenues). The issuer's economic base, management and governance structures, and outstanding long-term obligations remain equally relevant.

For a detailed history of defaults in the U.S., see Moody's (2018) "US Municipal Bond Defaults and Recoveries 1970 – 2018."

FINANCIAL STRATEGY

Financial statement analysis can tell us a lot about an organization's financial position. The question, then, is what to do about it. As mentioned, sometimes financial statement analysis offers clear follow-up questions about an organization's financial operations and overall performance. Ideally, it also suggests some steps management can take to improve that financial position and performance.

The table below identifies some of those potential steps. It is organized around liquidity, profitability, and solvency. "+" signs identify that part of the organization's financial position that is strong. "-" signs suggest a potential weakness. There is no "textbook" definition of financial strength or weakness. However, most public sector analysts define ratios above the benchmark rule of thumb or the median within a peer group as strong and ratios below the rule of thumb or the median within a peer group as weak. **This is not a comprehensive list**. That said, it illustrates some strategies management can initiate to address the organization's financial challenges.

For example, non-profits reporting positive trends in liquidity, solvency, and profitability should prioritize reviewing and amending finance policies, invest in process improvements and innovation, and engage in a strategic planning process (including financial self-assessment). This is especially important to recognize the organization's resiliency to future threats in operations. Those threats could be the result of an economic crisis or changes in policy or technology that fundamentally alter the organization's business model.

LIQUIDITY	PROFITABILITY	SOLVENCY	STRATEGY
+	+	+	- Review financial management policies (e.g., working capital, reserves, and investments) to ensure they are up-to-date and adhered to. - Engage in strategic planning processes, including financial self-assessment, to evaluate programming and engage stakeholders. - Complete donor landscape analysis. Identify strategies to bolster donor retention and average gift. Explore new funding opportunities or earned income ventures. - Tap reserve funds and invest in process improvements, innovation, and capital improvements. - Shift excess cash from short-term liquid investments to long-term investments. Where appropriate, refinance long-term debt to lower borrowing costs.
+	+	−	- Refinance long-term debt to lower borrowing costs. (Re)Negotiate lines-of-credit to ensure easy access to cash at affordable rates. - Dispose of excess property and equipment. Use proceeds to pay outstanding obligations or transfer proceeds to long-term investments.
+	−	+	- "Scrub" operating expense items. Explore partnerships to manage overhead costs (e.g., technology and accounting services). - Reassess operations. Expand profitable mission-relevant and eliminate unprofitable non-essential programs. Grow programs to achieve economies of scale. - Shift excess cash from short-term liquid investments to long-term investments to generate investment income. Refinance long-term debt to lower borrowing costs. - (Re)Negotiate contracts to ensure appropriate indirect or overhead cost recovery. - Complete donor landscape analysis. Identify strategies to bolster donor retention and average donation.

Non-profits that are liquid and profitable but not solvent need only consider strategies that alter the makeup of their long-term obligations. That said, changes in long-term obligations will impact liquidity and profitability. Refinancing existing long-term debt obligations has the benefit of lowering interest expenses, thereby increasing profitability and improving liquidity. However, refinancing long-term debt should not extend the loan's maturity beyond the asset's useful life. Refinancing strategies should prioritize savings due to lower interest rates over savings due to a longer maturity period, especially if the organization does not have a capital improvement planning process.

Non-profits that are profitable and solvent but not liquid would likely prioritize moving investments from their diversified equity mutual fund accounts to a money-market mutual fund. While this has the benefit of providing access to cash, the returns from the money-market mutual fund are significantly lower. So, while improving the organization's liquidity position is necessary, that strategy would likely result in a lower profit margin due to changes in investment income. The organization will therefore need to weigh the cost associated with using a line of credit with foregone revenues from long-term investments.

We must also recognize that there are strategies that the non-profit has little or no control over. The sale of surplus property and equipment could take a long time – a reason why we do not suggest this strategy to address liquidity and do not prioritize this strategy if the organization is not liquid or

solvent. Funders may not be willing to renegotiate indirect cost recovery rates on existing contracts. We also know governments are more likely to delay payments in an economic downturn, as they delay payments to suppliers and vendors as a strategy to manage their cash flows.

Of course, organizations with concerns about all three aspects of financial position might consider more drastic measures like a merger with another non-profit.

LIQUIDITY	PROFITABILITY	SOLVENCY	STRATEGY
+	–	–	- "Scrub" operating expense items. Explore partnerships to manage overhead costs (e.g., technology and accounting services). - Shift excess cash from short-term liquid investments to long-term investments to generate investment income. Refinance long-term debt to lower borrowing costs. - Dispose of excess property and equipment. Use proceeds to pay outstanding obligations or transfer proceeds to long-term investments. - Reassess operations. Expand profitable mission-relevant and eliminate unprofitable non-essential programs. Grow programs to achieve economies of scale. (Re)Negotiate contracts to ensure appropriate indirect or overhead cost recovery. - Complete donor landscape analysis. Identify strategies to bolster donor retention and average donation.
–	+	+	- Shift long-term investments to cash (this could lead to lower-than-expected investment income). - (Re)Negotiate lines-of-credit to ensure easy access to cash at affordable rates. - Negotiate with governments for timely payments on contracts. Negotiate with foundations for advanced payment on grants.
–	+	–	- Shift long-term investments to cash (this could lead to lower-than-expected investment income). - Refinance long-term debt to lower borrowing costs and improve short-term solvency. (Re)Negotiate lines-of-credit to ensure easy access to cash at affordable rates. - Dispose of excess property and equipment. Use proceeds to pay outstanding obligations or transfer proceeds to long-term investments. - Negotiate with governments for timely payments on contracts. Negotiate with foundations for advanced payment on grants.
–	–	+	- "Scrub" operating expense items. Explore partnerships to manage overhead costs (e.g., technology and accounting services). - Reassess operations. Expand profitable mission-relevant and eliminate unprofitable non-essential programs. Grow programs to achieve economies of scale. - Negotiate with governments for timely payments on contracts. Negotiate with foundations for advanced payment on grants. - (Re)Negotiate contracts to ensure appropriate indirect or overhead cost recovery. - Complete donor landscape analysis. Identify strategies to bolster donor and retention average donation. Target donors for an endowment or reserve fund. - Dispose excess property and equipment. Use proceeds to pay outstanding obligations or transfer proceeds to long-term investments.
–	–	–	- Non-profits that are insolvent have probably attempted all the above. The only feasible solution would likely be dissolution. - The organization should explore opportunities to merge with other organizations while mitigating risk of limited or no available services to stakeholders.

"SCRUBBING" YOUR EXPENSES

To "scrub" expenses is to carefully review all current major spending items for potential cost savings. Some contemporary examples include:

- Transition bills to online payments, saving on transaction costs and timing delays associated with processing paper bills.
- Move employee reimbursements from checks to direct payroll deposits.
- Renegotiate premiums with your health insurance provider. Bundle different insurance policies with one carrier to improve economies of scale.
- Hire a human resources consultant to identify appropriate salary ranges for future salary negotiations and collective bargaining.
- Shift from traditional phone service to a "voice over internet" (VOI) system. VOI generally offers more lines and better reliability at a lower cost.
- Move to a "multi-platform" plan with your wireless/cellular communications provider. Save money by running phones, iPads, and other wireless devices on one plan.
- Negotiate with credit card providers for lower annual percentage rates and transaction fees.
- Consider opening a line of credit with your existing financial institution. Some institutions offer discounts for bundling banking with credit services.
- Negotiate better terms with your credit card payment processing company. Consider investing in an online processing system that does not require you to lease or purchase credit card terminals.
- Move from local servers to a cloud-based, server-less computing environment.
- Explore "software as a service" for typical business applications.

In short, these strategies are some of the most typical for organizations with different financial position profiles.

CHAPTER 4.

ACCRUAL ACCOUNTING

ACCRUAL ACCOUNTING: GETTING TO THE NUMBERS

Information from financial statements helps managers answer many crucial strategic questions:

- How have this organization's past decisions about fundraising, investing in new property and equipment, and launching new programs shaped its current financial position?
- How might the timing of a key management decision – such as selling a building or hiring a new staff member – affect this organization's financial position?
- How do accounting policy choices regarding depreciation methods, allowances for uncollectable, expense recognition, and other areas affect this organization's financial position?
- How should this organization recognize in-kind contributions of goods and services and volunteer time?
- Why is a government's government-wide financial position different from the position in its governmental funds? Or its enterprise funds?
- Why are this organization's long-term liabilities portrayed differently in its financial statements compared to its fund statements?

The City of Rochester, NY, is like most "Rust Belt" cities. It was once a global center of manufacturing, but since the mid-1980s, it has shed thousands of manufacturing jobs. Tax revenues have lagged, and the City's overall financial position has slowly eroded. The mayor and other local leaders have invested substantial public resources in local programs for the past two decades to promote economic and community development.

Communities like Rochester face a financial dilemma. Some local leaders believe the city should do much more to promote economic and community development. Despite its financial problems, Rochester does have one key financial strength: a comparatively low debt burden ($775/capita). Unlike many of its peers, it has not issued a lot of bonds or other long-term debt that it will need to repay over time. Some leaders believe it could borrow money to invest in infrastructure projects that would spur economic growth, grow the tax base and, in effect, pay for themselves. Or at least that's the theory.

Others disagree. They concur that the city has carefully managed its borrowing and does not owe investors much money. However, they point out that Rochester has an enormous amount of "other" long-term debts ($3,927/capita). Principal among them is "other post-employment benefits" or OPEB. Like many of its peers, Rochester allows its retired city workers to remain on its health insurance

plan. Moreover, it pays most of the insurance premiums for those retirees and their families. Many thousands of retired City workers are expected to take advantage of this benefit for years to come.

Under governmental accounting rules, the money Rochester expects to spend on OPEB benefits over the next 30 years must be recognized as a long-term liability today. Those rules follow from the idea that employees earn OPEB benefits as part of their salary. Once earned, those benefits become a liability that appears on the City's balance sheet. Rochester can change those benefits at any time, but until they do, they remain a long-term obligation of the government.

This anecdote highlights one of the key points of this chapter: How we account for – or "recognize" – financial activity can have a major impact on how an organization perceives its financial strengths and weaknesses and how it might choose to manage its finances in response. That is why all public managers must not only know how to analyze financial statements but also understand the origins of the numbers that appear in those statements. In other words, they need to know a bit of accounting. That is the focus of this chapter.

LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- Understand how typical financial transactions affect the fundamental equation of accounting.
- Recognize revenues and expenses on the accrual basis of accounting.
- Contrast an organization's assets and liabilities with its revenues and expenses.
- Prepare rudimentary versions of the three basic financial statements.
- Understand how routine financial transactions shape an organization's basic financial statements.
- Contrast the recognition concepts in accrual accounting with cash accounting and fund accounting.

CORE CONCEPTS OF ACCOUNTING

Now that we've toured the basic financial statements let's take a step back and review how we produce those statements. Financial statements are useful because they're prepared according to generally accepted accounting principles (GAAP). To understand financial statements, you must know a few of those principles and how typical financial transactions shape the numbers you see in those statements. This section covers both these topics.

THE ACCRUAL CONCEPT

Most of us organize our personal finances around the *cash basis* of accounting. When we pay for something, we reduce our bank account balance by that amount. When we receive a paycheck, we increase our bank account balance by that amount. In other words, we recognize financial activity when we receive or spend cash.

Many small organizations also use cash basis accounting. Many small non-profits and governmental

entities (e.g., irrigation districts and mosquito abatement districts) keep separate books to track revenues received and other operating expenses paid.

But for larger and more complex organizations, cash basis accounting tells an incomplete story. For instance, imagine that Treehouse (the organization in our previous examples) plans to purchase $20,000 of furniture for its main office. Treehouse will purchase that equipment *on credit*. That is, they will order the equipment, the supplier will deliver that equipment and send an *invoice* requesting payment, and a few weeks later, Treehouse will write the supplier a check and pay off that invoice.

This transaction will have an impact on Treehouse's balance sheet. It will draw down its cash and report a fixed asset that will stay on the organization's balance sheet for several years. Treehouse's stakeholders should know about this transaction sooner rather than later.

But on a cash basis, those stakeholders will not know about this transaction until Treehouse pays off the invoice. That might be several weeks away. If it is toward the end of the fiscal year – and several large purchases happen toward the end of the fiscal year – those transactions will not appear on Treehouse's financial statements until the following year. That is a problem.

That is why most public organizations use the *accrual basis* of accounting. On an accrual basis, an organization records an expense when it receives a good or service, whether or not cash changes hands. In this case, as soon as Treehouse signs the purchase order for the equipment, that purchase will appear as a $20,000 increase in non-current assets on its balance sheet. It will also record – or *recognize*, in accounting speak – an account payable for $20,000. On the accrual basis of accounting, we can see how this transaction will affect Treehouse's financial position now and in the future.

Keep in mind that accrual accounting assumes the organization is a *going concern*. That is, it assumes the organization will continue to deliver services indefinitely. If we are not willing to make that assumption, then accrual accounting does not add value. In some rare cases, the audit report will suggest that the auditor believes the organization is not a going concern. In other words, the auditor believes the organization's financial position is so tenuous that it might cease operations before the close of the next fiscal year.

We can apply similar logic to the revenue side. Imagine that Treehouse staff run a day-long outreach program at a local school. The program sensitizes public school teachers about the unique challenges facing children in the foster care system. They typically charge $2,500 for this type of event. Assume that Treehouse staff deliver the program and then send the school district a bill for their services. Treehouse used a lot of staff time, supplies, travel, and other expenses to produce this program, but they might not get paid for it for several weeks.

On a cash basis, it will be several weeks before we know about expenses incurred and that Treehouse has earned $2,500 in revenue. But on an accrual basis, Treehouse would recognize expenses incurred and the revenue earned immediately after delivering the program.

In accrual accounting, revenues are recorded when entitled, irrespective of receipt of payment, and expenses are recorded when resources are used, irrespective of when payment is made.

These two simple transactions illustrate a key point: If the goal of accounting and financial reporting

is to help stakeholders understand an organization's ability to achieve its mission, then accrual accounting is far better than cash accounting. That's why the accrual concept is a central principle of GAAP. From this point forward, we will focus exclusively on how to apply accrual accounting to public organizations.

THE GENERAL LEDGER AND CHART OF ACCOUNTS

A chart of accounts lists all the organization's financial accounts, along with definitions that clarify how to classify or place financial activity within those accounts. When accountants record a transaction, they record it in the organization's general ledger. The general ledger is a listing of all the organization's financial accounts. When the organization produces its financial statements, it combines its general ledger into aggregated account categories. Generally accepted accounting principles (GAAP) produced by FASB and GASB do not specify a uniform chart of accounts, so account titles and definitions will vary across organizations. Some state governments require non-profits and governments to follow such a chart, but for the most part, public organizations are free to define their chart of accounts on their own.

RECOGNITION AND THE FUNDAMENTAL EQUATION

Accountants spend much of their time on revenue and expense *recognition*. When accountants recognize a transaction, they identify how it affects the organization's financial position. We recognize transactions relative to the fundamental equation of accounting.

The fundamental accounting equation, **Assets = Liabilities + Net Assets**, must remain balanced following every transaction. In other words, the net effect of any transaction on the fundamental equation must be zero. This is also known as *double-entry bookkeeping*. Consider the previous example:

Transaction 1a: Treehouse signs a purchase agreement with Furniture Superstores, Inc. for $20,000 in office furniture and equipment. It agreed to pay for the purchase within 30 days.

Assets		= Liabilities	+ Net Assets
Equipment	+ $20,000	Accounts Payable	+ $20,000

Here, we recognize (or "*book*") the purchase of furniture and equipment on the asset side of the accounting equation. We also need to book an equivalent amount on the liability side to recognize that we've received a good, but payment has not been made. The liability account – Accounts Payable – recognizes monies owed to Furniture Superstores. This transaction adds to both sides of the fundamental equation, so the net effect on the equation is zero.

The purchase of furniture and equipment results in an increase in a non-current asset (equipment). Amounts due to Furniture Superstores are a current liability, as Treehouse expects to pay it off within the fiscal year (in this case, 30 days). As a result of this transaction, the non-profit is less liquid. Note that the impact of a transaction depends on the size of the organization's current or non-current assets. The transaction will be meaningful if the organization is small but insignificant if the organization is large.

What happens three weeks later when Treehouse pays for the equipment?

Transaction 2: Treehouse pays the invoice for equipment received in Transaction 1.

Assets		= Liabilities		+ Net Assets
Equipment	– $20,000	Accounts Payable	– $20,000	

This transaction decreases both sides of the equation. The decrease in cash balances represents payments to the supplier (accounts payable).

Organizations execute a wide variety of transactions in their day-to-day operations. For most transactions, you can identify the correct accounting recognition by asking a few simple questions:

1. Did the organization deliver a good or service?
2. Did the organization receive a good or service?
3. Did the organization make a payment?
4. Did the organization receive a payment?

If the organization delivers or receives a service, the transaction affects revenues and expenses. Note that revenues will increase net assets, and expenses will decrease in net assets. If the organization delivered or received a good, the transaction likely affects assets, liabilities, or net assets (as either revenues or expenses). More importantly, whether or not the transaction affects a liability has to do with whether a payment was made or a payment was received.

The chart below presents these concepts as a flow chart. Take *Transaction 1* as an example. Recall that Treehouse agreed to purchase furniture and equipment and pay for it later. Has it received a good or service? Yes, it has received a good, but it has yet to make payment; as a result, we report an increase in equipment and a corresponding increase in accounts payable.

To reference the flow chart, identify whether the organization was *receiving* or *delivering* a good or service and whether payment has been made. We know Treehouse received the equipment order, but payment has yet to be made. Therefore, this transaction starts on the bottom left corner of the chart at "Receive a Good." We know goods have been received, but payment has not been made. We, therefore, follow the "Payment Not Delivered" line of the flow chart. We would recognize this transaction as an increase in equipment and accounts payable since Treehouse will pay for this equipment later.

TRANSACTION FLOW CHART

With this framework, we can do accounting recognition for most basic transactions. That said, governments and non-profit organizations have unique rules that apply just in those contexts. We will cover nuanced accounting rules in the discussion that follows. That said, always remember:

The fundamental accounting equation, Assets = Liabilities + Net Assets, must remain balanced following every transaction.

TRANSACTIONS THAT AFFECT THE BALANCE SHEET

Transaction 1 and *Transaction 2* are good examples of financial activity that affects the balance sheet. You should be aware of a few others. Some transactions affect only the asset side of the equation. For instance, imagine if Treehouse had purchased the equipment with cash rather than on credit.

Transaction 1b: Treehouse pays for the purchase of $20,000 in furniture and equipment in cash.

Assets		= Liabilities	+ Net Assets
Equipment	+ $20,000		
Cash	– $20,000		

In Transaction 1a, Treehouse purchased office furniture on credit, so we recognized in that transaction an increase in a liability account – accounts payable. In Transaction 1b, Treehouse paid for the purchase of equipment in cash. The transaction resulted in a decrease in cash and an increase in equipment. As we noted earlier, the net effect of any transaction on the fundamental equation must be zero, even when no liability account or net asset account was affected. Now assume the transaction was as follows:

Treehouse signs a purchase agreement with Furniture Superstores, Inc. for $20,000 in office furniture and equipment. It paid for the purchase of equipment upon delivery.

Assets		= Liabilities	+ Net Assets
Equipment	+ $20,000	Accounts Payable	+ $20,000
Cash	– $20,000	Accounts Payable	– $20,000

While we report two separate transactions here – the first being the purchase of equipment on credit and the second being the payment to the supplier – the net effect of this transaction would be an increase in equipment and a decrease in cash – the same as what we reported in Transaction 1b.

Like most organizations, Treehouse likely purchases a wide variety of services that it uses later. Examples include insurance, certifications, subscriptions, and professional association memberships. Treehouse will purchase these services in advance and then use or "*expense*" them throughout the fiscal year. These are known as *pre-paid expenses*. For example:

Transaction 3: Treehouse pays $1,500 for three of its staff to renew their annual memberships to the National Association for Social Workers.

Assets		= Liabilities	+ Net Assets
Cash	– $1,500		
Pre-paid Expense	+ $1,500		

Organizations like Treehouse almost always have *financial assets*. Assets like buildings and equipment are *tangible*; they have physical substance. *Intangible assets* include intellectual property, copyrights,

patents, trademarks, goodwill, and software. While rare, public organizations do report intangible assets.

Financial assets are in between tangible assets and intangible assets. While they are not physical assets, they are a claim of ownership or a contractual right to payment. If Treehouse holds Boeing stock, they have a right to dividends the corporation distributes to shareholders. Treehouse can also sell some or all of its Boeing stock, invest proceeds in the organization, or purchase alternative financial investments. So even though Boeing stock is not a tangible asset, it is valuable.

We account for financial assets differently. If Treehouse purchases supplies or equipment, it will record those supplies at *historical cost.* Supplies or the equipment purchased are valuable because they help Treehouse deliver programs and services. They are not, however, as valuable as a financial investment. That is, we do not purchase inventory in the hope that it would appreciate in value. That is why the historical cost is the appropriate way to value most of Treehouse's non-financial assets.

Financial assets are different because they are, by definition, purchased to generate income. Treehouse purchased Boeing stock because it expects Boeing to pay dividends to shareholders and the value of the stock to increase over time. If we want to know if investments added value to Treehouse's mission, the organization's accounting records need to reflect *the market value* of those investments at the end of each financial period. If those investments became more valuable, they are contributing to the mission. If they have lost value, they are taking resources away from the mission.

That is why we record financial assets at *fair value* rather than historical cost. Fair value means the current, observed market price. Investments the organization intends to hold for less than a year that can be converted to cash are known as *marketable securities*. Investments the organization plans to hold longer than one year or those that are less liquid are known simply as *investments.* Marketable securities are current assets. Investments can be classified as either a current or a non-current asset.

When an organization puts money into an investment, we record that investment at the purchase price. In that sense, at the time of the initial investment, fair value is the same as historical cost. For example:

Transaction 4a: Treehouse purchased 500 shares of Boeing stock on July 1, 2019, at $350.11 per share.

Assets	= Liabilities	+ Net Assets
Cash	– $175,055	
Investments (Boeing)	+ $175,055	

The value of any investment portfolio will change unpredictably throughout the financial period. Since these assets generate investment income, we need to reflect the change in the investment value in our accounting records.

An increase in value would be reported as a gain, whereas a decrease in value would be reported as a loss. If Treehouse decided to sell the stock, the gain or loss in the investment value would be reported as a *realized gain or loss*. If Treehouse still owns its interest in the stock but the value of that stock has changed, that gain or loss in value of the investment would be reported as an *unrealized gain or loss*. **The increase or decrease in value is recorded as a change in net assets.** For example:

Transaction 5a: Treehouse sold its 500 shares of Boeing stock on June 30, 2020, at $194.49 per share.

Assets	= Liabilities	+ Net Assets	
Cash	+ $97,245	Net Asset *(Realized Loss)*	– $77,810
Investments (Boeing)	– $175,055		

In Investments, we record the sale of these assets at historical cost ($175,055) and deposit the proceeds from the sale in Cash ($97,245). On the Net Asset column, we report realized loss from the sale of the stock (i.e., $175,055 – $97,245 =$77,810).

A realized loss has roughly the same effect on the organization's financial position as an unprofitable program. Both result in a decrease in Treehouse's overall net assets and available resources or assets. In contrast, if:

Transaction 4b: Treehouse purchased 100 shares of Amazon stock on July 1, 2019, at $1,922.19 per share.

Assets	= Liabilities	+ Net Assets
Cash	– $192,219	
Investments (Amazon)	+ $192,219	

and

Transaction 5b: Treehouse sold its 100 shares of Amazon stock on June 30, 2020, at $2,680.38 per share.

Assets	= Liabilities	+ Net Assets	
Cash	+ $268,038	Net Asset *(Realized Gain)*	+ $75,819
Investments (Amazon)	– $192,219		

In Investments, we record the sale of these assets at historical cost ($192,219) and deposit the proceeds from the sale of the asset in Cash ($268,0385). On the Net Asset column, we report realized gain from the sale of the stock (i.e., $268,038 – $192,219=$75,810).

DIVERSIFIED INVESTMENT PORTFOLIO

Boeing and Amazon stock are included in this discussion for illustrative purposes only. In practice, Treehouse, like most other non-profits, does not hold individual stocks or bonds but instead invests in mutual funds. Mutual funds pool money from multiple investors and invest in a diversified portfolio of financial instruments.

Mutual funds diversify on the basis of sector (e.g., technology, financial, retail, consumer, materials, healthcare, utilities), geography (e.g., domestic, emerging markets, developed markets), size of firm (large – >$10 billion – versus small – <$2 billion), and investment type (e.g., public equity, private equity, corporate bonds, municipal bonds, and treasury bonds) to name a few. Investing in mutual funds has the benefit of maximizing returns while mitigating risk at significantly lower investment management fees.

Fair value accounting is a bit more complex – and interesting! – than historical cost because it requires organizations to *restate* the value of their financial assets at the end of every fiscal period. For Treehouse, this means it would restate the value of all financial investments at the end of each year, even if it did not sell these investments.

If the stock's price at the time of the re-statement is higher than the previously recorded price, Treehouse will record an increase in investments on the balance sheet and an *unrealized gain* on the income statement. If the stock's price at the time of re-statement is lower than the previously recorded price, Treehouse will need to record a decrease in investments on the balance sheet and an unrealized loss in the income statement.

Transaction 6: Treehouse recognizes unrealized gains and losses in Amazon and Boeing stock at the end of FY 2020.

Assets		= Liabilities	+ Net Assets	
Investments (Amazon)	+ $75,819		Net Asset *(Unrealized Gain)*	+ $75,819
Investments (Boeing)	– $77,810		Net Asset *(Unrealized Loss)*	– $77,810

Unrealized gains and losses do not directly affect the amount of cash reported – hence why they are euphemistically referred to as *paper gains* and *paper losses*. Notwithstanding, unrealized gains or losses matter, as they represent a real change in the value of financial assets and the resources in an organization. If Treehouse's holdings of Amazon stock contribute substantial unrealized gains for several years, management might consider selling its holdings to realize gains and invest in programs, equipment, or facilities.

PRACTICE PROBLEM: REALIZED AND UNREALIZED GAINS ON INVESTMENTS

The **National Breast Cancer Foundation (NBCF)** has a large investment portfolio whose income is used to subsidize the non-profit's operations. At the start of FY 2020 (i.e., July 1, 2019), NBCF reported $14,780,000 in investments. Over the next 12 months, NBCF transferred $1,650,000 from cash to investments. It received $450,000 in investment income (i.e., dividend and interest income).

At the end of the year, the investment manager reported realized losses of $175,000 and unrealized gains of $1,250,000.

The investment manager invoiced NBCF $135,000 for investment management services rendered in the year. NBCF paid these in full.

Assets		= Liabilities		+ Net Assets	
Cash	-$1,650,000				
Investments	+$1,650,000				
Transfer of funds from Cash to Investments.					
Cash	+$450,000			Net Asset Without Donor Restriction *(Investment Income)*	+$450,000
Assuming the non-profit received direct payment of interest and dividends, that would be reported in Cash. If the investment manager receives payment on behalf of the organization, that income would be reported under Investments. For simplicity, we assume NBCF received payments directly.					
Investments	-$175,000			Net Asset Without Donor Restriction *(Realized Loss – Investments)*	-$175,000
Investments	+$1,250,000			Net Asset Without Donor Restriction *(Unrealized Gain – Investments)*	+$1,250,000
Realized loss lowers the balance in the investment account and unrealized gains increase the balance in the investment account.					
		Investment Manager	+$135,000	Investment Manager Fee	-$135,000
Cash	-$135,000	Investment Manager	-$135,000		
Investment managers invoiced NBCF for services provided. The non-profit would report the fee as an expense and make a payment. The investment manager's fees would not be recorded as a payment from investments.					

Assuming there were no restrictions on investment income, how much did NBCF report in investment income (net of expenses) at the end of FY 2020?

= Dividend & Interest Income + Unrealized Gain (or Loss) + Realized Gain (or Loss) – Management Fee
=$450,000 + $1,250,000 – $175,000 – $135,000
=$1,390,000

How much did NBCF report in investments at the end of FY 2020?

= Beginning Balance + Additions – Withdrawals + Unrealized Gain (Loss) + Realized Gain (Loss)
= $14,780,000 + $1,650,000 – $0 + $1,250,000 – $175,000
= $17,505,000

RELIABILITY AND FAIR VALUE ESTIMATES

GAAP (specifically, FASB Statement 157) classifies investments by a three-level scheme according to the availability of market prices. *Level 1* assets have a quoted price on a public exchange. This includes stocks of public companies and money market funds, among others. Level 2 assets are primarily sold "over-the-counter," like corporate bonds, futures contracts, stock options, etc. Here the owner must report an estimated price based on prices of comparable assets that have traded recently. Level 3 assets are not bought and sold and therefore do not have a market price. This includes more exotic investments like venture capital funds, hedge funds, and private equity. For Level 2 and Level 3 assets, the owner must discount the reported asset value to account for uncertainty in that valuation.

Public organizations frequently borrow money to finance the purchase of equipment, pay for renovations to property, purchase new property, or cover operating expenses. Loans include *lines of credit, notes payable*, *mortgages*, and *municipal bonds*. A line of credit is an agreement between an organization and a bank that allows that organization to borrow money on short notice at a pre-determined interest rate. A line of credit can be especially useful if an organization has unpredictable cash flows. Notes payable are short-term loans with maturities ranging from 18 months up to 60 months. A mortgage is a loan secured with real estate. Unlike mortgages, municipal bonds and notes are unsecured or secured with pledged revenues, not property. Like mortgages, municipal bonds have a longer *maturity* of up to 30 years.

Borrowers have to pay interest on the loans at a fixed rate. There are exceptions. Interest rates on lines of credit and some municipal bonds are *variable* or *floating* rates (e.g., prime rate + 4.00%).

The initial accounting recognition of a loan is simple. The borrowed money, or loan *principal*, is recognized as a liability that offsets the cash received from the loan:

Transaction 7: Treehouse borrows $30,000 from a local bank to finance the purchase of a van. The loan is for five years at seven percent annual interest, and interest is paid annually. Treehouse purchased the van immediately after the loan closed.

Assets		= Liabilities	+ Net Assets
Cash	+ $30,000	Loan Payable *(current)*	+ $6,000
Cash	– $30,000	Loan Payable *(non-current)*	+ $24,000
Equipment	+ $30,000		

The purchase of a van results in an increase in a non-current asset (equipment). However, the full loan amount is not a current liability – only the amount due in the next 12 months is reported as a current liability – and the remainder is a non-current liability. As a result, the non-profit is not less liquid, as only the current portion of the loan is considered a current liability. On the asset side, cash remains unaffected, as all the proceeds from the loan were used to purchase the equipment.

Transactions related to repaying debt present some special accounting considerations. Consider the previous example. Treehouse has agreed to pay interest on the loan each year the loan is active. The $30,000 loan principal is a liability; the interest on that loan principal is not. Payment of interest on

the loan is an expense. Treehouse will be paying the bank (or lender) for access to credit, which in essence, is a "service." For that reason:

Transaction 8: Treehouse makes its first annual principal and interest payment on the loan described in Transaction 7.

Assets		= Liabilities		+ Net Assets	
Cash	– $8,100	Loan Payable *(current)*	– $6,000	Interest Expense	-$2,100

Since the $30,000 loan is paid off annually over five years, the annual payment on the principal is $6,000, or *$30,000/five years*). The interest rate on the loan is seven percent, so interest expense is equal to *$2,100, or $30,000 X 0.07*.

In year 2, the current portion of the loan would be $6,000, and the non-current portion would be $18,000. The total loan outstanding would be $24,000 (i.e., *$30,000 – $6,000* or *$6,000 + $18,000*).

Treehouse would pay $7,680 to cover a $6,000 payment on the loan principal and $1,680 of interest expense *(i.e., $24,000 X 7%).*

If Treehouse did not make its interest payments on time, the expense would be recognized as a liability. The non-profit would also need to recognize as an expense (if paid) or liability (if unpaid) if the lender imposes additional fines or penalties as a result of non-payment.

TRANSACTIONS THAT AFFECT THE INCOME STATEMENT

Treehouse's mission demands that it focus most of its efforts on delivering services. As a result, most of its day-to-day financial activity will involve revenues and expenses. Revenues and expenses affect the income statement.

For instance, recall from the earlier discussion that Treehouse delivers outreach programs at local schools. When one of those programs is delivered, it records revenue.

Transaction 9a: Treehouse delivers an outreach program at a local school and sends that school district an invoice for $2,500.

Assets		= Liabilities	+ Net Assets	
Accounts Receivable	+ $2,500		Program Revenue	+ $2,500

Here Treehouse has earned revenue because it delivered a program. It recognizes those earned revenues as "program revenue." Program revenues represent an increase in net assets *"without donor restrictions*." Restrictions would apply for public support, including donations, in-kind contributions, and foundation grants—more on this below.

Did it receive a payment? No. We, therefore, need to recognize a receivable on the asset side. The receivable is an *accounts receivable* since revenue is earned. For donations, the receivable would be *pledges receivable;* for grants, the receivable would be *grants receivable*.

Three weeks later, when Treehouse collects payment, it will convert that receivable into cash. That transaction is as follows:

Transaction 10: Treehouse receives payment from the school district for the outreach program delivered three weeks ago.

Assets		= Liabilities		+ Net Assets	
Cash	+ $2,500				
Accounts Receivable	– $2,500				

Transaction 10 does not affect the income statement but remember that the transaction that resulted in the original accounts receivable did.

Note, if Treehouse had received payment immediately at the end of the session, then:

Transaction 9b: Treehouse delivered an outreach program at a local school and received a payment of $2,500.

Assets		= Liabilities	+ Net Assets	
Cash	+ $2,500		Program Revenue (*Net Assets, Without Donor Restrictions*)	+ $2,500

In *Transaction 9,* Treehouse earned revenue. Of course, that revenue did not just appear. Treehouse incurred various expenses – staff time, travel, supplies, etc. – to deliver that service. When should it recognize the expenses incurred to deliver that program? One of the core principles of GAAP is the *matching principle*. That is, when we recognize revenue, we should recognize expenses that were incurred to produce that revenue. This is not always clear for services. Services are driven by personnel, and we incur personnel expenses constantly. Services also require equipment, certifications, and other assets where it is not always clear what it means to "use" that asset.

The matching principle is more applicable when the transaction involves a good rather than a service. When an organization sells a good, it presumably knows what it costs to produce that good. Those costs, known generally as the *cost of goods sold*, are immediately netted against the revenue collected from the transaction. That is why, in the flow chart above, you see some additional recognition related to delivering goods.

That said, public organizations encounter a few typical transactions that account for many of their expenses. First and most important is when Treehouse pays its staff and recognizes salary expenses.

Transaction 11: Treehouse recognizes and pays bi-weekly payroll of $15,000.

Assets		= Liabilities		+ Net Assets	
Cash	+ $2,500	Wages Payable	+ $15,000	Wage Expense	– $15,000
Cash	– $15,000	Wages Payable	– $15,000		

Payroll is critical because personnel is the largest expense for most public organizations. From the organization's perspective, payroll is an expense because it receives services from its employees. That "service" is their day-to-day work. This is different than if the organization hired the one-time services of, say, a plumber from another company to fix some leaky pipes. But the accounting recognition is essentially the same.

Keep in mind that there is frequently a lag between when wage expense is recognized and when

payroll is remitted. The first transaction recognizes the expense; the second transaction recognizes payment on an outstanding liability. The initial transaction would be reflected in the income statement; the subsequent transaction would not.

Treehouse incurred other expenses to deliver the school outreach program. The program was held at a school 100 miles from the non-profit's headquarters. The two staff members who delivered that program rode together to that off-site location in their personal vehicles. They will expect to be reimbursed. Many non-profits and government organizations follow the federal government's guidance and reimburse mileage at a fixed rate of 57.5 cents per mile.

Transaction 12: Treehouse pays mileage expenses of 57.5 cents/mile for a 100-mile round trip for two staff members.

Assets	= Liabilities	+ Net Assets	
Cash	– $115	Mileage Expense	– $115

To deliver the outreach program, staff used up $100 of construction paper, colored pencils, and other supplies. Recall that supplies are an asset. To account for the full cost of the outreach program, we should also recognize that Treehouse "used up" or "expensed" these assets. For example:

Transaction 13: Treehouse expenses $100 in supplies related to its outreach program.

Assets	= Liabilities	+ Net Assets	
Supplies	– $100	Supplies Expense	– $100

LIFO AND FIFO

Inventory presents some unique challenges for accounting recognition. Organizations use inventory all the time, so most have to estimate the value of inventory assets at any moment. There are several ways to produce those estimates, including ***First In, First Out (FIFO)*** , and ***Last In, First Out (LIFO).*** For organizations that use a lot of inventory, small changes to inventory valuation can significantly change the reported value of inventory and inventory expense. That said, for most public managers, the technical aspects of inventory valuation fall squarely within the realm of "know what you don't know."

PRACTICE PROBLEM: EARNED INCOME AND EXPENSES

The **Museum of Contemporary Art (MCA)** operates a gift shop and coffee bar. The gift shop reported $1,425,000 in revenues (all cash sales). Payroll expenses for the year were $650,000. The Museum purchased $325,000 in inventory (for the gift shop) and $145,000 in supplies (for the coffee bar) and reported a balance of $45,000 in inventory and $7,000 in supplies.

Assuming all purchases and expenses had been paid in full, how much did the gift shop report in profits or losses in its gift shop operations for the fiscal year?

Assets		= Liabilities		+ Net Assets	
Cash	+$1,425,000			Program Revenue (Net Assets, Without Donor Restrictions)	+$1,425,000
Earned income reported as revenue without donor restrictions. Cash sales increase MCA cash balances.					
Cash	-$325,000				
Inventory	+$325,000				
Cash	-$ 145,000				
Supplies	+$ 145,000				
MCA purchased $325,000 in inventory for the gift shop and $145,000 in supplies for its coffee shop operations. Vendors were paid in full, upon delivery.					
Inventory	-$280,000			Inventory Expense	-$280,000
Supplies	-$138,000			Supplies Expense	-$138,000
Of the $325,000 in inventory, MCA reports a balance of $45,000. Assuming there was no inventory at the start of the financial period, inventory expense would be the difference between inventory purchased and balances at the end of the year (i.e., $325,000 - $45,000). The same applies for supplies. Supplies expense is equal to purchased supplies less supplies available at the end of the year ($145,000 - $7,000).					
		Wages Payable	+$650,000	Payroll Expense	-$650,000
Cash	-$650,000	Wages Payable	-$650,000		
Payroll expense of $650,000. Wages payable were paid in full.					

So, how much did MCA report in earned income from the gift shop and coffee bar? To estimate profit, we review transactions in the Net Asset column of the transaction sheet. As discussed in this chapter, all revenues are reported as an increase in net assets, and all expenses are reported as a decrease in net assets. **Net income (or Change in Net Assets) is the difference between revenues and expenses**.

We estimate the overall profitability was **$357,000 (i.e., $1,425,000 – $280,000 – $138,000 – $ 650,000).** Net income represents an increase in MCA's net worth. If you were to estimate the balances in each asset account reported on the right-hand side, you would find the organization's assets also increased by $357,000.

Gift Shop Balance Sheet

Assets	
Cash*	$305,000
Inventory	$45,000
Supplies	$7,000
Total Assets	**$357,000**
Liabilities	**$0**
Net Assets	
Without Donor Restrictions	$357,000
With Donor Restrictions	$0
Total Net Assets	**$357,000**

**Assuming MCA reported a zero cash balance at the start of the year, year-end balances were $305,000 (i.e., $1,425,000 – $325,000 – $145,000 – $650,000).*

Recall that Treehouse also pre-pays for many of its ongoing expenses, such as insurance and certifications. The choice of when to expense pre-paid items is admittedly arbitrary. Most organizations have accounting policies and assumptions that state when and how this happens. Most will record those expenses monthly or quarterly. Recall that Treehouse pre-paid $1,500 for some annual professional association memberships. Assume that it expenses those memberships quarterly. At the end of the first quarter, since the membership was paid, it would record:

Transaction 14: Treehouse records quarterly professional association membership expenses. Recall that annual association dues are $1,500.

Assets		= Liabilities	+ Net Assets	
Prepaid Expenses	– $375		Membership Expense	– $375

Remember that after this first portion is expensed, $1,125 in pre-paid association membership expenses remains on the balance sheet. In other words, this transaction expenses one-quarter of the original $1,500 asset.

Another crucial set of accounting assumptions is around *depreciation*. To deliver services, Treehouse must use up some portion of its building, vehicles, audiology equipment, and other capital items. Like with salaries and pre-paid expenses, it's not always clear when and how those assets are "used up." Some of that use is normal wear and tear. Some of it might happen if the asset bears a particularly heavy workload. Some capital items might be largely out of use, but they will lose value because, each year that goes by, they'll become harder for Treehouse to sell should they choose to liquidate them.

Without a detailed way to measure that wear and tear, accountants typically deal with depreciation by simplifying assumptions. One of the most common is to use *straight-line depreciation,* also known as the *straight-line method*. Under the straight-line method, when an organization purchases a new capital asset, it determines the length of time it can use that asset to deliver services. This is known as the *useful life*. The organization must also determine the value of that asset once it is no longer useful for delivering services. This is the *salvage value*, *residual value,* or value at *write-off*. If we subtract the salvage value from the historical cost and divide it by the useful life, we get the annual depreciation expense.

For example, let's return to Treehouse's office furniture. Recall that it purchased that furniture for $20,000. Say that equipment has a useful life of 10 years. Also, assume that at the end of its useful life Treehouse will be able to sell it for $2,500. To calculate the annual depreciation expense using the straight-line method, we take the purchase price of $20,000, subtract the salvage value of $2,500, and divide the difference by 10. The estimated depreciation expense would be $1,750 per year. Using this assumption, we could record the following transaction:

Transaction 15: Treehouse records an annual depreciation expense of $1,750 on its equipment.

Assets		= Liabilities	+ Net Assets	
Equipment	– $1,750		Depreciation Expense	– $1,750

After this first recording for depreciation expense, the value of the equipment reflected in the Balance Sheet will be $18,250 (*i.e., $20,000 – $1,750*). We refer to the value of assets, net of depreciation, as the "*book value.*"

Other methods of calculating depreciation expense include *accelerated method*, *declining balance*, and *sum-of-the-years method*. Underlying assumptions in each method produce different estimates of depreciation expenses.

PRACTICE PROBLEM: DEPRECIATION

Dorchester Home Health Services (DHHS) is a private, non-profit home health agency. At the start of FY 2020 (i.e., July 1, 2019), DHHS reported $5,900,000 in fixed assets (net of depreciation).

The non-profit sold its existing fleet of vehicles, with a book value of $12,000, for $15,000.

It paid for the new vehicles in cash on October 1, 2019, at a cost of $200,000. Assuming that these vehicles have a useful life of five years and a salvage value of $20,000, how much should DHHS report in fixed assets (net of depreciation) at the end of the year? You may assume DHHS uses the straight-line depreciation method, and the estimated depreciation expense on existing equipment for FY 2020 was $195,000.

Assets		= Liabilities	+ Net Assets	
Cash	+$15,000			
Fixed Assets	-$12,000		Profits from the Disposal of Assets	+$3,000
The purchase of four new vehicles at a cost of $200,000, all of which was paid in cash.				
Cash	-$200,000			
Fixed Assets	+$200,000			
The purchase of four new vehicles at a cost of $200,000, all of which was paid in cash.				
Fixed Assets *(Depreciation)*	-$195,000		Depreciation Expense	-$195,000
Fixed Assets *(Depreciation)*	-$27,000		Depreciation Expense	-$27,000
Depreciation expense for the new equipment = ($200,000 - $20,000)/five years = $36,000. Note, however, the vehicles were purchased on October 1, 2019. We therefore need to pro-rate the depreciation expense, as DHHS owned the vehicles for nine months. Pro-rated depreciation expense is $27,000 (i.e., ($36,000/12 months) x nine months).				

Fixed assets, net of depreciation, at the end of FY 2020:

= Beginning Balance + Additions – Eliminations – Deprecation
=$5,900,000 + $200,000 -$12,000 – ($195,000+$27,000)
=**$5,866,000**

This same concept of spreading out the useful life also applies to intangible assets. Say, for example, Treehouse purchases some specialized case management software that allows it to store client records

safely. That software requires Treehouse to purchase a five-year license. That license is an intangible asset, and the non-profit expects to utilize the software over the next five years. In this case, Treehouse would *amortize* the intangible asset – i.e., recognize that the value of the intangible asset decreases every year. The expense associated with using that intangible asset is referred to as *amortization expense*. If Treehouse purchased a five-year license for $5,000, it would record a $5,000 software license as an asset at that purchase. After that, if it amortized that license in equal annual installments, the effect on the fundamental equation is as follows:

Transaction 16: Treehouse purchased a records management software for $5,000. Assuming a useful life of five years, the annual amortization expense is estimated to be $1,000.

Assets		= Liabilities	+ Net Assets	
Cash	– $5,000			
Software License	+$5,000			
Software License	– $1,000		Amortization Expense	– $1,000

Following this first amortization expense, the license would remain on Treehouse's balance sheet at $4,000.

Finally, we must consider what happens if Treehouse is paid for a service before it delivers it. This is known as *deferred revenue* or *unearned revenue*. Deferred revenue is a liability because it represents a future claim on Treehouse resources. By taking payment for a service not yet delivered, Treehouse is committing future resources to deliver that service. Once it delivers that service, it incurs expenses and removes that liability.

For example, imagine that Treehouse arranges a $1,500 outreach program with a different school district. That school district is nearing the end of its fiscal year, so it agrees to pay Treehouse for the program several weeks in advance. Once it receives that payment, it would recognize that transaction as follows:

Transaction 17: Treehouse takes a $1,500 payment for a school outreach program to be delivered in the future.

Assets		= Liabilities	+ Net Assets	
Cash	+ $1,500		Deferred Revenue	+ $1,500

This initial transaction does not affect the income statement. However, when Treehouse delivers the program a few weeks later, it records the following:

Transaction 18: Treehouse delivers the school outreach program for which it was paid previously.

Assets		= Liabilities		+ Net Assets	
		Deferred Revenue	– $1,500	Program Revenue *(Net Assets, Without Donor Restrictions)*	+ $1,500

The key takeaway from all these income statement transactions is simple: For Treehouse to be profitable, it must take in more revenue from its programs and services than the total payroll and other expenses it incurs to deliver those programs. If revenues exceed expenses, then its net assets

will increase. If expenses exceed revenues, then net assets will decrease. That is why, as previously mentioned, change in net assets is the focal point for much of our analysis of an organization's financial position.

RECOGNITION CONCEPTS FOR SPECIAL CIRCUMSTANCES

PLEDGES AND DONOR REVENUES

Non-profits aren't traditionally paid for their services. In fact, large parts of the non-profit sector exist precisely to provide services to those who cannot pay for those services. People experiencing homelessness, foster children, and endangered species come to mind immediately. Non-profits depend on donations and contributions to fund those services.

At the outset, it might seem like the accrual concept breaks down here. How can a non-profit recognize revenue if the recipients of its services do not pay for those services? In non-profit accounting, we address this problem by simply drawing a parallel between donations and payments for service. Donors who support a non-profit are, in effect, paying that non-profit to pursue its mission. Donors may not benefit directly from their contribution, but they benefit indirectly through tax benefits and a feeling of generosity. Those indirect benefits are substantial enough to support the accrual concept in this context.

Practically speaking, we address this with a category of net assets called "donor revenue" and a category of assets called "pledges receivable." For example:

Transaction 19: Treehouse received pledges of gifts in the amount of $2,500 to be used as its Board of Directors considers appropriate.

Assets		= Liabilities	+ Net Assets	
Pledges Receivable	+ $2,500		Net Asset without Donor Restrictions *(Public Support)*	+ $2,500

Most donor revenues happen through the two-step process suggested here. A donor pledges to donate which is recognized as pledges receivable. GAAP stipulates that a signed donor card or other documented promise to give constitutes a pledge that can be recognized. Once the donor writes Treehouse a check for the pledged amount, Treehouse will book the following:

Transaction 20: Treehouse collects the $2,500 pledge recognized in Transaction 19.

Assets		= Liabilities	+ Net Assets
Cash	+ $2,500		
Pledges Receivable	– $2,500		

NET ASSETS SUBJECT TO DONOR RESTRICTIONS

One of the big financial questions for any non-profit is how much control it has over where its money comes from and where it goes. In a perfect world, non-profit managers fund all their operations

through unrestricted program revenues and donations. It is much easier to manage an organization when no strings are attached to its money.

Most non-profit managers aren't so lucky. Virtually all non-profits have some restrictions on when and how their organization can spend money. Donors who want to ensure the organization accomplishes specific goals will restrict how and when their donation can be spent. Governments do the same with restricted grants or loans. Some resources, namely endowments, can't ever be spent.

Restricted resources usually appear as "net assets with donor restrictions." Consider this example:

Transaction 21: Treehouse receives a cash donation of $5,000. That gift was accompanied by a letter from the donor to Treehouse's executive director requesting that the donation be used for staff development.

Assets	= Liabilities	+ Net Assets	
Cash	+ $5,000	Net Asset with Donor Restriction *(Public Support)*	+ $5,000

This is a typical revenue subject to donor restrictions. The donor has specified how Treehouse will use these donated resources. We'd see a similar restriction if the donor had specified that the donation could not be spent for some period of time.

Previously, net assets with donor restrictions were reported as either temporarily or permanently restricted net assets. Temporarily restricted net assets were restricted with respect to time or use. Permanently restricted net assets were permanently restricted and could never be spent. Recent changes in financial reporting altered the reporting of restricted gifts and aggregated these two categories, now reported as "Net Assets with Donor Restrictions." While this change altered the presentation of financial information in the audited financial statements, it did not alter donor intent. In other words, if a donor had provided a gift to be used in perpetuity, the accounting rules do not alter that donor's intent. They change how we report that information. The focus is now on all assets subject to donor restrictions – irrespective of whether they are time-restricted, use-restricted, or the *corpus* is restricted in perpetuity.

Our accounting recognition for net asset restrictions is not unlike other transactions that affect the income statement. The main difference is that with restricted net assets, we have to take the additional step of "undoing" the restriction once the donor's conditions have been satisfied. For instance:

Transaction 22: Treehouse staff attend a national training conference. Travel, lodging, and conference registration expenses were $3,990. Staff are reimbursed from the resources donated in Transaction 21.

Assets	= Liabilities	+ Net Assets	
		Released from Restrictions (***From*** *Net Assets with Donor Restrictions)*	– $3,990
		Released from Restrictions (***To*** *Net Assets without Donor Restrictions)*	+ $3,990
Cash	-$3,990	Professional Development Expense	– $3,990

The first part of this transaction converts donations subject to restrictions to unrestricted revenue. This is reported in the income statement as *"released from restrictions."* Treehouse can do this conversion because it has met the donor's condition: staff attended a professional development conference. The second part of the transaction recognizes the professional development expenses. Not all expenses are reported under "Net Assets Without Donor Restriction." No expenses are reported in the "Net Assets with Donor Restrictions" column. Why? All expenses originate within the organization and, therefore, cannot be restricted by an external third party. Revenues, on the other hand, are resources provided to the organization and therefore, can be restricted. After the transaction, $1,010 of the original gift remains in Treehouse's balance sheet and income statement as "Net Assets with Donor Restriction."

While we often think of restricted gifts as contributions, restricted gifts do include property and equipment. Following FASB's Accounting Standards Update (ASU) 2016-14, assets should be released from donor restrictions when they are placed in service rather than releasing donor restrictions over estimated useful life (unless otherwise stipulated by the donor). In other words, if the gift of a vehicle or building is being used as intended by the donor, that asset is reported under "Net Assets without Donor Restriction."

Net assets restricted in perpetuity (previously classified as permanently restricted net assets) most often appear as endowment investments. Endowment investments represent a pool of resources that exists to generate other assets to support the organization's mission. By definition, the donation that comprises the original endowment – also known as the *corpus* – cannot be spent. In practice, the accounting recognition for the formation of an endowment looks like this:

Transaction 23: An anonymous benefactor donates 3,500 shares of Vanguard's Global Equity Investor Fund (a mutual fund) to Treehouse. The gift stipulates that the annual investment proceeds from that stock support general operations and that Treehouse cannot, under any circumstance, liquidate the endowment. At the time of the gift, the investment had a fair market value of $100,000.

Assets	= Liabilities	+ Net Assets	
Investments	+ $100,000	Net Asset with Donor Restriction *(Public Support)*	+ $100,000

Once the endowment is established, it generates investment earnings that are not subject to donor

restrictions unless otherwise stipulated by the donor. Income from endowment investments is recorded as "distribution from endowment" or "endowment investment income."

Transaction 24: At the end of the Endowment's first fiscal year, Treehouse receives a dividend check from Vanguard (the mutual fund manager) for $4,500.

Assets		= Liabilities	+ Net Assets	
Cash	+ $4,500		Net Asset without Donor Restriction *(Investment Income)*	+ $4,500

If the anonymous benefactor designated the income from the mutual fund to be used for a specific program or activity, the investment income would be reported under "Net Asset with Restriction."

Assets		= Liabilities	+ Net Assets	
Cash *(With Restrictions)*	+ $4,500		Net Asset with Donor Restriction *(Investment Income)*	+ $4,500

Remember, not all investments are endowment investments. The non-profit could report an investment portfolio significantly larger than its endowment, especially if income from the endowment exceeds distributions or the non-profit has diverted excess cash to investments over time. While unrestricted investments are reported together with restricted investments, restricted investments remain subject to donor restrictions.

Even though the format of the financial statements – Net Assets without Restrictions and Net Assets with Restrictions – simplifies the presentation of financial information, non-profits must report in detail about the nature and purpose of Net Assets with Donor Restrictions.

PRACTICE PROBLEM: PUBLIC SUPPORT WITH DONOR RESTRICTIONS

The Museum of Contemporary Art (MCA) receives a $1,000,000 cash gift from Mr. and Mrs. Carter. The donors have asked the museum to create an endowment for $750,000 and use all other funds to curate a collection of contemporary music. The donors expect the MCA to create a contemporary music collection in the summer of 2022.

Assets		= Liabilities	+ Net Assets	
Cash *(With Restrictions)*	+$1,000,000		Net Asset with Donor Restriction *(Public Support)*	+$250,000
			Net Asset with Donor Restriction *(Public Support)*	+$750,000

The cash gift is subject to donor restrictions. We therefore record receipt of donation and an increase in net assets "with donor restrictions." Note, we separate out the funds that can be expended in the near-term, having met donor requirements from those that cannot be expended. Recent changes in accounting rules eliminated previous categories – temporarily restricted versus permanently restricted. That said, the accounting rules only apply to reporting. The reporting requirement does not eliminate donor intent. The non-profit has to maintain accounting records that accommodate donor intent. In this instance, the $750,000 can never be expended, whereas the $250,000 would be expended at a future date on purposes designated by the donor.

Cash *(With Restrictions)*	-$750,000
Investments *(With Restrictions)*	+$750,000

MCA transferred funds from Cash to Investments. Note, while the gift of $750,000 is restricted, income from the gift is not restricted, unless the donor has imposed that restriction.

IN-KIND CONTRIBUTIONS

In addition to donated revenue, non-profits also depend on donations of goods and services. These are called in-kind contributions. According to GAAP, a non-profit can record as an in-kind contribution to specialized services that it would otherwise purchase. This usually means professional services like attorneys, counselors, accountants, or professional development coaches. We recognize in-kind services once they've been received, and all the recognition happens in the net assets part of the fundamental equation. For instance:

Transaction 25: A local attorney agrees to represent Treehouse "pro bono" in a lawsuit filed by the family of a former client. The attorney's regular rate is $500/hour, and the case requires ten billable hours. Without these pro bono services, Treehouse would have had to hire outside counsel.

Assets	= Liabilities	+ Net Assets	
		Net Asset without Donor Restriction *(In-Kind Public Support)*	+ $5,000
		Attorney Fees	– $5,000

If in-kind contributions don't result in a net increase or decrease in net assets, then why do we bother recognizing them? Because recognizing them helps us understand the organization's capacity

to deliver its services. If it had to pay for otherwise donated goods and services, those purchases would undoubtedly affect its financial position and its service-delivery capacity.

Some in-kind contributions produce both an in-kind contribution and a donated asset. This is especially important for services like carpentry or plumbing. For example:

Transaction 26: A local contractor agrees to donate the labor and materials to construct a new playground at Treehouse. Total labor expenses for the project were $3,000, and the contractor purchased the new playground equipment for $8,000.

Assets	= Liabilities	+ Net Assets	
		Net Asset without Donor Restriction *(In-Kind Public Support)*	+ $3,000
		Contractor Fees	– $3,000
Equipment	+ $8,000	Net Asset Without Donor Restrictions *(In-Kind Public Support)*	+ $8,000

The contractor's donated labor is reported as a revenue and an expense, whereas the donated equipment is reported as an asset and revenue. The asset would then be depreciated over its useful life.

BAD DEBT

Unfortunately, pledges do not always materialize into contributions. Sometimes the donors' financial situation changes after making a pledge. Sometimes they have too much wine at a gala event and promise more than they can give. Sometimes they change their mind. For these and many other reasons, non-profits rarely collect 100 percent of their pledged revenues.

Most non-profits re-evaluate at regular intervals – usually quarterly or semi-annually – the likelihood they'll collect their pledges receivable. Once they determine that a pledge cannot or will not be collected, the amount of pledges receivable must be adjusted accordingly. The accounting mechanism to make this happen is an expense called "*bad debt*." Bad debt is a specific type of reconciliation entry known as a *contra-account*. Like with depreciation, amortization, and other reconciliations, contra-account entries do not affect cash flows. They are "*write-off*" transactions to offset the reduction of an asset, in this case, pledges receivable. Consider this example:

Transaction 27: Treehouse determines it will not be able to collect $3,000 of pledges made earlier in the fiscal year.

Assets	= Liabilities	+ Net Assets	
Pledges Receivable	– $3,000	Bad Debt Expense	– $3,000

When is a pledge deemed uncollectable? That depends on the organization's policies. GAAP rules only state that an organization must have a policy that dictates how it will determine collectability. To that effect, non-profit policies state that a pledge is uncollectable after a certain number of days past the close of the fiscal year or if the donor provides documentation that the pledge is canceled.

Among non-profits, pledges receivable is the most common type of asset to be offset by bad debt

expense. However, be aware that bad debt is not unique to non-profits or pledges receivable. For-profits and governments can and often do record bad debt expenses. Those expenses can apply to any receivable, including accounts receivable for goods and services previously delivered or grants receivable from a donor or a government.

MINI CASE: SEATTLE COMMUNITY FOUNDATION

The Seattle Community Foundation (herein referred to as "Foundation"), a non-profit entity that supports charitable organizations in the Puget Sound area, reported the following transactions for FY 2020 (July 1, 2019 – June 30, 2020). Use this information to prepare a Statement of Activities.

1. The Foundation has a large portfolio of investments. At the beginning of the year, the fair value of the portfolio was $76,850,000. In a 12-month period, the Foundation transferred $4,250,000 from cash to investments.

Assets	= Liabilities	+ Net Assets
Cash	– $4,250,000	
Investments	+ $4,250,000	

2. For the year ending June 30, 2020, the Foundation received $650,000 in interest and dividend payments. Investment managers reported $675,000 in realized gains and $215,000 in unrealized losses. The Foundation reports all investment income (interest and dividend payments, realized gains or losses, and unrealized gains or losses) as revenue without donor restrictions.

Assets	= Liabilities	+ Net Assets	
Cash	– $650,000	Net Asset without Donor Restriction *(Investment Income)*	+ $650,000
Investments	+ $675,000	Net Asset without Donor Restriction *(Realized Gains on Investments)*	+ $675,000
Realized gains from investments are reported under investments – not cash – if the investments were sold and the investment manager immediately purchased alternative investments. If investments were sold and proceeds were transferred to cash, a secondary transaction would be reported here. For simplicity, we assume that the non-profit did not transfer funds from investments to cash.			
Investments	– $215,000	Net Asset Without Donor Restriction *(Unrealized Loss on Investments)*	– $215,000

3. The Foundation held its annual fundraising dinner event on February 18, 2020. The dinner raised $1,600,000 in unrestricted support and $3,200,000 in restricted support.

Assets		= Liabilities		+ Net Assets	
Pledges Receivable *(Without Donor Restriction)*	+ $1,600,000			Net Asset without Donor Restriction *(Public Support)*	+ $1,600,000
Pledges Receivable *(Without Donor Restriction)*	+ $3,200,000			Net Asset with Donor Restriction *(Public Support)*	+ $3,200,000

Public support with donor restrictions is reported separately from public support without donor restrictions on both the asset side (as pledges receivable) and on the net asset column (as public support or revenue). See the Statement of Activities below.

4. As of June 30, 2020, the Foundation had received $825,000 of the $1,600,000 in unrestricted support and $1,250,000 of the $3,200,000 in restricted support. Historically, 1.5 percent of all pledges have been uncollectable.

Assets		= Liabilities		+ Net Assets	
Pledges Receivable *(Without Restrictions)*	– $825,000				
Cash *(Without Restrictions)*	+ $825,000				
Pledges Receivable *(With Restriction)*	– $1,250,000				
Cash *(With Restriction)*	+ $1,250,000				
Pledges Receivable *(With Restrictions)*	– $48,000			Bad Debt Expenses	– $72,000
Pledges Receivable *(Without Restrictions)*	– $24,000				

Even though the Foundation received payment on a portion of the pledges subject to donor restriction, receipt of payment does not eliminate the donor restriction. We therefore report the funds separately as cash balances without restrictions and cash balances with restrictions. See transaction 5 below.

The Foundation's expenses were as follows:

5. The Foundation made $2,100,000 in cash awards to various charitable organizations. Of the total, $1,250,000 was funded with restricted public support. The remainder was funded with unrestricted revenues.

Assets		= Liabilities		+ Net Assets	
				Released from Restrictions (***From*** *Net Assets with Donor Restrictions)*	– $1,250,000
				Released from Restrictions (***To*** *Net Assets without Donor Restrictions)*	+$1,250,000
Cash	– $2,100,000			Grant Expense	– $2,100,000

Public support has to be released from restrictions before it can be expended. Note all expenses are reported in the column "Without Donor Restrictions." See the Statement of Activities below.

6. Foundation salaries and benefits were $420,000 for the year. Of the total, $35,000 remained unpaid at the end of the year. Fundraising and marketing costs for the year were $150,000. All fundraising and marketing expenses had been paid in full by year-end. Other expenses paid in

full included rent and utilities ($144,000), equipment lease ($12,000), office supplies ($8,500), and miscellaneous expenses ($15,000).

Assets		= Liabilities		+ Net Assets	
		Wages Payable	+ $420,000	Wage Expense	– $420,000
Cash	– $385,000	Wages Payable	– $385,000		
Cash	– $150,000			Marketing Expense	– $150,000
Cash	– $144,000			Rent Expense	– $144,000
Cash	– $12,000			Lease Expense	– $12,000
Cash	– $8,500			Supplies Expense	– $8,500
Cash	– $15,000			Miscellaneous Expenses	– $15,000

7. On June 28th, the investment manager sent the Foundation an invoice for services rendered in FY 2020 for $82,000. The Foundation expected to write a check for the full amount on July 15, 2020.

Assets		= Liabilities		+ Net Assets	
		Accounts Payable	+ $82,000	Investment Manager Fee	– $82,000

8. The Foundation purchased $21,000 in computing equipment in cash. The new equipment is expected to have a useful life of three years and zero salvage value. Depreciation expenses on existing equipment for FY 2020 were expected to be $32,500.

Assets		= Liabilities	+ Net Assets	
Fixed Assets	+ $21,000			
Cash	– $21,000			
Fixed Assets	– $7,000		Depreciation Expense	– $7,000
Fixed Assets	– $32,500		Depreciation Expense	– $7,000
Depreciation expense for the new equipment = ($21,000 – $0)/three years = $7,000.				

9. For FY 2020, the Foundation reported $25,000 in interest expense on its long-term debt. The Foundation had also made $75,000 in principal payments for the year.

Assets		= Liabilities		+ Net Assets	
Cash	– $100,000	Loan Payable	– $75,000	Interest Expense	– $25,000

Seattle Community Foundation
Statement of Activities
for the year ending June 30, 2020

Revenues	Without Donor Restrictions	With Donor Restrictions	Total
Public Support			
Donor Revenue	$ 1,600,000	$ 3,200,000	**$ 4,800,000**
Net Assets Released from Restrictions	1,250,000	(1,250,000)	-
Earned Income			
Investment Income	650,000		**650,000**
Realized Gains	675,000		**675,000**
Unrealized Gains	(215,000)		**(215,000)**
TOTAL REVENUES	**$ 3,960,000**	**$ 1,950,000**	**$ 5,910,000**
Expenses			
Grant Expense	2,100,000		**2,100,000**
Bad Debt Expense	72,000		**72,000**
Wage Expense	420,000		**420,000**
Fundraising Expense	150,000		**150,000**
Rent and Utilities	144,000		**144,000**
Equipment Lease	12,000		**12,000**
Supplies Expense	8,500		**8,500**
Miscellaneous Expense	15,000		**15,000**
Investment Manager Fee	82,000		**82,000**
Depreciation Expense	39,500		**39,500**
Interest Expense	25,000		**25,000**
TOTAL EXPENSES	**$ 3,068,000**		**$ 3,068,000**
CHANGE IN NET ASSETS	**$ 892,000**	**$ 1,950,000**	**$ 2,842,000**

How much did the Foundation report as Investments on June 30, 2020?

= Beginning Balance + Additions – Withdrawals + Unrealized Gain (Loss) + Realized Gain (Loss)
= $76,850,000 + $4,250,000 + $675,000 – $215,000
= **$81,560,000**
(Note: Investment income of $650,000 was reported under Cash, not Investments, so it is not included in the balance here)

How much was reported as pledges receivable on June 30, 2020?

=Public Support – Payment Received – Bad Debt Expense
=$4,800,000 – $825,000 – $1,250,000 – $24,000 – $48,000
=**$2,653,000**

DEBITS AND CREDITS

You've probably heard accountants talk about debits and credits. They are the basis for a system of accounting shorthand. In this system, every transaction has a debit and a credit.

A debit increases an asset, decreases a liability, or decreases net assets. Debits are always on the left of the account entry. **A credit decreases an asset account, increases a liability, or increases net assets.** Credits are always on the right of the account entry.

Debits and credits must always balance.

To illustrate, let's say Treehouse delivers a service for $1,000 and is paid in cash. Here, we would debit cash and credit services revenue. That entry is as follows:

	Debit	Credit
Cash	$1,000	
Revenue (Net Assets, without Donor Restrictions)		$1,000

For another illustration, imagine that Treehouse receives $500 cash in payment of an account receivable. That entry is:

	Debit	Credit
Cash	$500	
Accounts Receivable		$500

If Treehouse purchased $750 of supplies on credit, we would debit supplies and credit accounts payable:

	Debit	Credit
Supplies	$750	
Accounts Payable		$750

This system is popular because it's fast, easy to present, and appeals to our desire for symmetry. However, it also assumes you're familiar with the fundamental equation and how different types of transactions affect it. If you're new to accounting, this can be a big conceptual leap. That's why throughout this text, we present transactions relative to the fundamental equation of accounting rather than as debits and credits. We encourage you to try out debits and credits as you work the practice problems throughout this text.

MINI CASE CONTINUED, DEBITS AND CREDITS: SEATTLE COMMUNITY FOUNDATION

1. The Foundation has a large portfolio of investments. At the beginning of the year, the fair value of the portfolio was $76,850,000. In the 12-month period, the Foundation transferred $4,250,000 from cash to investments.

	Debit	Credit
Investments	4,250,000	
Cash		4,250,000

2. For the year ending June 30, 2020, the Foundation received $650,000 in interest and dividend payments. Investment managers reported $675,000 in realized gains and $215,000 in unrealized losses. The Foundation reports all investment income (interest and dividend payments, realized gains or losses, and unrealized gains or losses) as revenue without donor restrictions.

	Debit	Credit
Cash	650,000	
Net Asset Without Donor Restriction (Investment Income)		650,000
Investments	675,000	
Net Asset Without Donor Restriction (Realized Gains on Investments)		675,000
Net Asset Without Donor Restriction (Unrealized Loss on Investments)	215,000	
Investments		215,000

3. The Foundation held its annual fundraising dinner event on February 18, 2020. The dinner raised $1,600,000 in unrestricted support and $3,200,000 in restricted support.

	Debit	Credit
Pledges Receivable	1,600,000	
Net Asset Without Donor Restriction (Public Support)		1,600,000
Pledges Receivable	3,200,000	
Net Asset With Donor Restriction (Public Support)		3,200,000

4. As of June 30, 2020, the Foundation had received $825,000 of the $1,600,000 in unrestricted support and $1,250,000 of the $3,200,000 in restricted support. Historically, 1.5 percent of all pledges have been uncollectable.

	Debit	Credit
Cash (Without Restrictions)	825,000	
Cash (With Restrictions)	1,250,000	
Pledges Receivable		2,075,000
Bad Debt Expense	72,000	
Pledges Receivable		72,000

The Foundation's expenses were as follows:

5. The Foundation made $2,100,000 in cash awards to various charitable organizations. Of the

total, $1,250,000 was funded with restricted public support. The remainder were funded with unrestricted revenues.

	Debit	Credit
Released from Restrictions (From Net Assets with Donor Restrictions)	1,250,000	
Released from Restrictions (To Net Assets without Donor Restrictions)		1,250,000
Grant Expense	2,100,000	
Cash		2,100,000

6. Foundation salaries and benefits were $420,000 for the year. Of the total, $35,000 remained unpaid at the end of the year. Fundraising and marketing costs for the year were $150,000. All fundraising and marketing expenses had been paid in full by year-end. Other expenses paid in full included rent and utilities ($144,000), equipment lease ($12,000), office supplies ($8,500), and miscellaneous expenses ($15,000).

	Debit	Credit
Wage Expense	420,000	
Wages Payable		420,000
Wages Payable	385,000	
Cash		385,000
Fundraising Expense	150,000	
Cash		150,000
Rent Expense	144,000	
Cash		144,000
Equipment Lease Expense	12,000	
Cash		12,000
Office Supplies Expense	15,000	
Cash		15,000
Miscellaneous Expenses	8,500	
Cash		8,500

7. On June 28th, the investment manager sent the Foundation an invoice for services rendered in FY 2020 of $82,000. The Foundation expected to write a check for the full amount on July 15, 2020.

	Debit	Credit
Investment Advisor Expenses	82,000	
Accounts Payable		82,000

8. The Foundation purchased $21,000 in computing equipment in cash. The new equipment is expected to have a useful life of three years and zero salvage value. Depreciation expenses on existing equipment for FY 2020 were expected to be $32,500.

	Debit	Credit
Property and Equipment	21,000	
Cash		21,000
Depreciation Expense	39,500	
Property and Equipment		39,500

9. For FY 2020, the Foundation reported $25,000 in interest expense on its long-term debt. The

Foundation had also made $75,000 in principal payments for the year.

	Debit	Credit
Loan Payable	75,000	
Interest Expense	25,000	
Cash		100,000

RECOGNITION CONCEPTS FOR MODIFIED ACCRUAL ACCOUNTING

Governmental funds, and the modified accrual basis of accounting on which they are prepared, focus on expendable financial resources. Taxpayers want to know that their government used its current financial resources to meet its current financial needs. This is, once again, a core part of how accountants think about inter-period equity. If a government pushes costs into future fiscal periods, future taxpayers will have to pay more taxes or expect fewer services.

For this reason, when thinking about the fund financial statements, we need to re-think how we recognize certain revenues. Instead of focusing recognition on when a government "earns" revenue, we focus instead on when the government has an inflow of financial resources. As a corollary, this focus on financial resource inflows means we naturally focus on resources that are available to pay for obligations or will become available soon. Specifically, GAAP for governments requires that for revenue to be recognized in the current fiscal period, it must be *measurable* and *available*.

- *Measurable* means the government can reasonably estimate how much it will collect. For taxes like property taxes, this is easy. They're measurable because the government determines what a taxpayer owes and then sends a bill. But for sales taxes, income taxes, or other revenues, measurable might require some reasonable estimates.
- According to GAAP, *available* means revenue is recognized during the fiscal period for which it's intended to pay liabilities or up to 60 days after the close of that fiscal period. Again, this is not always clear. For instance, when does an intergovernmental grant become available if it requires the government to perform certain services or incur certain expenditures?

These adaptations to GAAP are collectively known as *modified accrual* accounting or euphemistically as *fund accounting*.

Here are a few hypothetical transactions to illustrate those concepts. We'll recognize all these transactions in the fund financial statements and, thus, on the modified accrual basis. If we recognized these transactions in the government-wide statements, the normal accrual concepts would apply. To simplify, we restate the fundamental equation as

Assets = Liabilities + Fund Balance.

In Chapter 1, we said the property tax is the local revenue workhorse. So, let's start there. Let's assume Bothell sends out its annual property tax bills in January. Those bills are based on the City's assessed value, property tax rates, and applicable tax preferences. After running calculations, Bothell

determines it will send out $515 million in property tax bills. From past experience, it also knows it will only collect a portion of those bills.

Property taxes are *imposed non-exchange* revenues, meaning they are not related to a specific transaction. As such, they become measurable and available when the government imposes them. As soon as property taxes are imposed, Bothell has a legal claim to them and can expect to receive a payment within 60 days. In this case, to impose them means to levy them or to send out property tax bills.

Transaction 28: In January 2019, Bothell levies property taxes of $515 million for the year. It is estimated that $15 million will be uncollectible.

Assets		= Liabilities		+ Net Assets	
Property Tax Receivable	+ $515MM	Deferred Property Tax Revenue	+ $500MM		
				Allowance for Uncollectable Property Taxes	+ $15MM

This recognition records Bothell's property tax levy. What happens then when Bothell collects these property taxes?

Transaction 29: Throughout 2019, Bothell collected $410 million in property taxes. It collects $30 million of the remaining 2019 taxes during each of the first two months of 2020 and estimates that the $15 million balance will be uncollectable.

Assets		= Liabilities		+ Net Assets	
Part a					
Cash	+ $470MM				
Property Tax Receivable	– $470MM				
Part b					
		Deferred Property Tax Revenue	– $410MM	Property Tax Revenue	+ $410MM
		Deferred Property Tax Revenue	– $60MM	Property Tax Revenue	+ $60MM
Part c					
Property Tax Receivable	– $15MM			Delinquent Property Tax	– $15MM

Note of the $515 million in property tax revenue, $410 million is collected in the year and $60 million will be collected in the first 60 days (i.e., $30 million/month x two months).

We recognize these collections in four different parts. Part a) recognizes the collection of property taxes throughout 2019 and during the first two months of 2020. Bothell collected $30 million in each of the first three months, but according to GAAP, only the first 60 days are available. Part b) converts deferred revenues into property tax revenues for the taxes collected during 2019 and does the same for the taxes collected during the first two months of 2020. Part c) recognizes a write-down of the uncollectable property taxes.

Note that this recognition approach would also apply to the other non-exchange revenues, including fines and fees. Those revenues are also recognized when they are levied or imposed.

Sales and income taxes are the most common type of *derived* taxes, meaning the taxes collected are derived from another transaction. For derived taxes, the revenues become measurable and available when the underlying transaction occurs. For sales taxes, those transactions are taxable retail sales. For income taxes, it's a bit more abstract. The "transaction" in question is when an employer pays wages to an employee, and that transaction denotes the earnings on which the income tax is based.

Let's look at a hypothetical sales tax recognition in Bothell:

Transaction 30: In December 2019, merchants in Bothell collected $20 million in local sales taxes; $12 million was collected prior to December 15 and must be remitted by February 15, 2020, and the remaining $8 million must be remitted by March 15, 2020. How should Bothell recognize these December 2019 sales?

Assets		= Liabilities		+ Net Assets	
Sales Tax Receivable	+ $20MM				
		Deferred Sales Tax Revenue	+ $8MM	Sales Tax Revenue	+ $12 MM

According to GAAP, Bothell should recognize the assets from derived revenues during the period when the underlying transaction takes place. That's why it records all $20 million as sales taxes receivable. At the same time, it will only collect $12 million within 60 days of the end of the fiscal year, so only that portion is considered available and should be recognized now. The remaining $8 million will become available later, so for now, it's considered deferred revenue. We would see a similar pattern with income taxes and other derived revenues.

A government recognizes an inter-governmental grant when it has satisfied all the eligibility requirements. Only then are grants considered measurable and available.

Transaction 31: In October 2019, Bothell was notified that it would receive a $15 million grant from the state's Clean Water Revolving Fund. The funds, transmitted by the state in December 2015, must be used for stormwater infrastructure upgrades but may be spent at any time.

Assets		= Liabilities	+ Net Assets	
Cash	– $15MM			
			Grant Revenue	– $15 MM

The State has placed a purpose restriction on this grant. **Purpose restrictions do not affect the measurability or availability of the grant revenues**. That said, because they are subject to a purpose restriction, Bothell should recognize these revenues in a special revenue fund.

Many intergovernmental grants take the form of reimbursements. In this case, the revenues are not available until the government incurs the *allowable costs* stipulated by the grant.

Transaction 32: In December 2019, Bothell was awarded a grant of $400,000 to train community police officers. During the year, it spends $300,000 in allowable costs, for which it is reimbursed $250,000. It expects to be reimbursed for the $50,000 balance in January 2020 and to expend – and be reimbursed – for the remaining $100,000 of its grant throughout

2020. It must incur allowable costs to remain eligible for the grant.

Assets		= Liabilities	+ Net Assets	
Cash	– $300,000		Training Expenditures	– $300,000
Grant Receivable	+ $300,000		Grant Revenue *(Community Policing)*	+ $300,000
Cash	+ $250,000			
Grant Receivable	– $250,000			

We recognize police officer training expenditures first, as the grant is on a reimbursement basis. The second transaction recognizes reimbursement on the grant. Note the reimbursement falls short of total expenditures, so the balance on the grant receivable is $50,000.

For this grant, Bothell must first incur the requisite expenditures before it recognizes the grant revenues. In part a) it incurs those expenditures. In part b) it recognizes that it was reimbursed $250,000 cash. The city records grants receivable for the portion it expects to collect within 60 days of the end of the fiscal year and records the $300,000 in grant revenue (Community Policing Special Revenue Fund) – the amount of the grant it expects to be reimbursed.

And finally, let's look at another unique revenue recognition treatment: sales of fixed assets. It's not uncommon for governments to sell buildings and other fixed assets. In the fund financial statements, the value of such a sale is equal to the sale proceeds. This seems simple, but it's quite different from the government-wide statements, where we'd recognize the difference between the sale proceeds and historical cost plus accumulated depreciation.

Transaction 33: On December 31, 2019, Bothell purchased a new police car for $40,000. On January 2, 2020, the vehicle was damaged in an accident. The city is able to sell the nearly demolished vehicle for $5,000.

Assets		= Liabilities	+ Net Assets	
Cash	+ $5,000			
			Other Financing Sources *(Proceeds from Sale of Assets)*	+ $5,000

It might seem strange that $35,000 worth of a $40,000 vehicle was lost, but the only impact on Bothell's governmental fund statements is an increase in cash. And yet, that's precisely how we would recognize this transaction on the modified accrual basis. Why? Recall that we do not recognize fixed assets in the governmental fund statements because those funds are focused on near-term financial resources. Fixed assets are, of course, a long-term financial resource.

Fortunately for the readers of Bothell's financial statements, Bothell would recognize the sale of the $35,000 of asset value in the *Statement of Net Position*.

EXPENDITURE RECOGNITION CONCEPTS

Expenditures in the governmental funds, according to GAAP, result in a decrease in the net financial resources. An expense is, on an accrual basis, a reduction of overall net assets. How are they different? Or, to put it more practically, when are expenses, not expenditures?

For most governments, major expense items are expenditures because they result in a reduction of financial resources. When a government pays salaries, it has less cash and, in turn, fewer current financial resources to use to apply to other spending needs in the immediate future. So practically speaking, expenditures and expenses are not that different.

There are, however, a few instances where expenses are not expenditures. If a government agrees to pay a legal settlement, it will recognize an expenditure only if that settlement is paid out of current financial resources. If that payment is paid by the government's insurance company or is paid out of long-term financial reserves, then no expenditure is recognized. Another is repayments of long-term debt. Here a government reports an expenditure as payments are made, but unlike on the accrual basis, interest on the debt is not accrued. This also applies to other occasional transactions in areas like inventory and pre-paid items. But in general, most expenditures are recognized much the same as expenses.

CHAPTER 5.

COST ANALYSIS

COST ANALYSIS: WHAT DOES THIS COST?

Cost analysis is useful for addressing several key questions that managers ask:

- Will the revenue from a new grant opportunity cover the costs of expanding a program?
- Will a program or service benefit from economies of scale? If not, why not?
- How much should we budget for a new staff member? To add a new shift or another group of new staff?
- How much "overhead" or "indirect costs" should we negotiate into a contract with a government?
- What price should we set for a new fee-based service?
- When will we need to add more staff, and how will adding staff affect our cost structure?
- What's the best way to share costs between departments within an organization? Between organizations? Between units of government?

In February 2016, a federal judge in Albuquerque, NM, approved a $1 billion settlement between the Obama administration and nearly 700 Native American tribes. This settlement ended a decades-long class action lawsuit over how the Bureau of Indian Affairs (BIA) had distributed aid to tribes since the mid-1970s.

This case came about because of some disagreements over how to measure costs. For over 150 years, the BIA was directly responsible for most of the health care, education, economic development, and other core services delivered on Native American reservations. But then, starting in the mid-1970s, it shifted its focus from direct service provision to helping tribes become self-sufficient. Instead of managing services, it redirected its resources toward training, technical assistance, and other efforts to help tribes launch and maintain their own services.

To make that transition, BIA re-classified many of its activities as "contract support costs." This change was not just semantic. Funding for direct BIA-administered services is part of a regular federal budget appropriation. That appropriation was stable and predictable. By contrast, funding for support costs on federal government contracts is variable and is often subject to renegotiation. Perhaps not surprisingly, BIA spending declined steadily under this new capacity-building model.

Tribes across the US argued that by re-classifying many of BIA's costs, the federal government gave itself permission to slash BIA's budget without Congressional approval. The tribes alleged that this simple cost measurement maneuver allowed BIA to operate well outside its authority and inflict

substantial harm on Native Americans around the country. BIA argued that the cost reclassification was a standard accounting change that had been happening across the federal government for decades. The case was ultimately settled for far less than the tribes requested. Still, the federal government did agree to re-classify contract support costs as direct service costs, for which federal funding is far more transparent and predictable.

This case illustrates the central point of this chapter. How we define and measure costs matters tremendously. In this instance, cost measurement is not just a technical exercise; it had real impacts on the lives of hundreds of thousands of Native Americans. The same is true for virtually all public services. How we define, measure, and plan for costs affects which services we deliver and how we deliver them.

LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- Define the cost objective and relevant range for the goods and services that public organizations deliver.
- Contrast fixed costs with variable costs.
- Contrast direct costs with indirect costs.
- Allocate costs across departments, organizations, and jurisdictions.
- Determine the full (or total) cost of a good or service.
- Prepare a flexible budget for a program or service.
- Calculate the break-even price and break-even quantity for a good or service.
- Contrast cost-based pricing with price-based costing.
- Recommend management strategies and policies informed by analysis of costs "at the margin."
- Analyze budget variances, both positive and negative.

WHAT IS COST ANALYSIS?

If you've ever flown on an airplane, there's a good chance you know Boeing. The Boeing Company generates around $90 billion each year from selling thousands of airplanes to commercial and military customers around the world. It employs around 200,000 people, and it's indirectly responsible for more than a million jobs through its suppliers, contractors, regulators, and others. Its main assembly line in Everett, WA, is housed in the largest building in the world, a colossal facility that covers nearly a half-trillion cubic feet. Boeing is, simply put, a massive enterprise.

And yet, Boeing's managers know the exact cost of everything the company uses to produce its airplanes, every propeller, flap, seat belt, welder, computer programmer, and so forth. Moreover, they know how those costs would change if they produced more or fewer airplanes. They also know the price at which they sold that plane and the profit the company made on that sale. Boeing's executives expect their managers to know this information in real time if the company is to remain profitable.

Cost accounting **(also known as managerial accounting) is the process of creating information about costs to inform management decisions.**

Managers need good information about costs to set prices, determine how much of a good or service to deliver, and manage costs in ways that make their organization more likely to achieve its mission. Managers in for-profit entities like Boeing have instant access to sophisticated cost information that would assist with those types of decisions. But managers in the public and non-profit sectors usually don't. There are many reasons for this:

- Large parts of the public sector do not produce a "product," but they deliver services like counseling juvenile offenders, protecting the environment, or housing people experiencing homelessness. Sometimes, we know the "unit" of production and can measure costs relative to that unit. In the case of counseling juvenile offenders, we might think about the cost per offender to provide those services. But for services without a clear "end user," like environmental protection, this analysis is much more difficult.
- Most (usually around 80 percent) of the costs incurred by a typical public sector organization are related to people. A parole officer will see many different types of parolees. Some will demand a lot of attention and follow-up. Some will need next to none. Some parole officers are comfortable giving each case equal time and attention. Others are not. This type of variability in how and where people spend their time, and as a result, where labor costs are incurred, can make cost analysis quite difficult.
- Employees often work across multiple programs. A program manager at a non-profit organization might work across two programs funded by two different grants from two funding agencies. Unless that program manager allocates their time exactly equally across both programs – and that's unlikely – we can't know the exact cost of each program without a careful study of how and where that employee spends their time.
- Public services often share buildings, equipment, vehicles, and other costs. It isn't easy to know the full cost of services without a system to track which staff and programs use exactly which resources.
- Good cost analysis has no natural political constituency. Careful cost analysis requires substantial investments in information technology, staff capacity, accounting information systems, and other resources. Most taxpayers and funders would rather see that money is spent on programs and services to help people in the short term rather than on information systems to analyze and plan for future costs.

These are just a few of the many barriers that prevent public organizations from acting more like Boeing, at least with respect to cost analysis.

And yet, good **cost analysis is critical to public organizations**. Public financial resources are finite, scarce, and becoming scarcer. Public managers must understand how and where they incur costs, how those costs will differ under different service delivery models, and whether that pattern of costs is consistent with their organization's mission and objective. In this chapter, we introduce the core concepts of cost accounting and show how to apply those concepts to real management decisions.

At the outset, it is essential to distinguish between *full-cost accounting* and *differential-cost accounting*. Full cost accounting is the process of identifying the full cost of a good or service. Differential cost accounting – sometimes called *marginal cost analysis* – is the process of determining how the full cost of a good or service changes when we deliver more or less of it. Sound financial management requires careful attention to both.

Let us start with a simple example. Imagine a copying machine that is shared among three departments within the Environmental Health Department of a county government. Those three departments are:

1. Food Protection. This includes inspection and licensing of restaurants and other establishments that serve food. This program is designed to prevent outbreaks of food-borne diseases like E. coli, botulism, and Hepatitis A. Staff in this division make around 500 copies each day, mostly related to documenting restaurant inspections.
2. Animals and Pests. This includes animal control, rodent testing and control, and educational programs to promote pet safety and neutering/spaying. These programs are designed to prevent communicable diseases, including rabies, that vagrant animals most often spread. Staff in this division make around 250 copies each day, but that number can increase in the event of an outbreak of avian flu or other communicable disease.
3. Wastewater. The Wastewater Department is responsible for treating wastewater. Staff in this division issue water discharge permits to businesses and industrial operations and test water quality near wastewater discharge sites. These programs are necessary to prevent waterborne communicable diseases like cryptosporidium. Wastewater staff typically make around 100 copies daily but make up to 1,000 per day when processing complex industrial building permits. They process around six such permits each year.

As a manager, you would want to know what it costs to operate the copier and how those costs should be spread across the three departments. To put this question in the language of cost accounting, we want to know:

a. What is the *full cost* of operating the copier?
b. How should we *allocate* the costs of operating the copier across the three departments?

To answer these questions, we first need to know all of the different ways the copier incurs costs. A few come to mind immediately: paper and toner to make the copies, a lease or rental payment to take possession of the copier, and the occasional maintenance and repairs. A few might be less obvious: electricity to run the machine, space within a building to house the copier, and an office manager's time to coordinate maintenance and repairs. We can observe many of these costs, but we'll need to estimate or impute others.

COST VS. PRICE

It's important at the outset to distinguish between cost and price. Cost is what you give up. Costs include money, time, uncertainty, and, most importantly, the opportunity to invest time or money in another project. In public financial management, we usually talk about cost in terms of the measurable, direct, and indirect financial expenses required to produce or acquire a good or service. Price is the market rate, or "sticker price," of a good or service.

Most public services are delivered "at cost," meaning they are priced to generate enough revenue to cover the full cost to deliver them, but not more. The late management guru Peter Drucker called this **cost-based pricing**. By contrast, many for-profit goods and services are sold at prices well in excess of cost. For instance, most wines are priced at 100-200% above the full cost to produce them. A box of popcorn at the movies is usually priced at 700-800% above cost. And so forth. Wine retailers and cinemas will sell these products at whatever price consumers are willing to pay, regardless of what they cost to produce. Drucker called this **price-based costing**. Virtually all highly profitable businesses design the cost structure of their products and services around what consumers will pay. The opposite is also true. For-profits often sell goods and services at prices well below cost – a so-called "loss leader" – to attract customers. Most public organizations cannot engage in price-based costing tactics and expect to accomplish their missions and remain financially sound.

The next question is how the departments should share these costs. Imagine, for instance, that they split those costs one-third for each department. This approach is simple, easy, and transparent. But what's wrong with it? Each department makes a different number of copies, and each has a different workflow related to the copier. These departments also have different potential "economies of scale" for copying. Also, keep in mind that the Animals and Pests department will need "emergency" or "surge" capacity while the other two departments may not. So, if an even distribution is not the most appropriate, what is? With careful attention to cost accounting methods, we can begin to address these and other questions.

FULL COST ACCOUNTING

MEASURING FULL COST: THE SIX-STEP METHOD

To answer the question "what does this service cost?" cost accountants follow a six-step process. Each step of this process is driven by policies and procedures that are defined by an organization's management:

To answer the question "what does this service cost?" cost accountants follow a six-step process. Each step of this process is driven by policies and procedures defined by an organization's management.

1. **Define the cost object**. The *cost object* is the product or deliverable for which costs are measured. Service-oriented public organizations typically define cost objects in terms of the end user or recipient of a service. Examples include the cost to shelter a person experiencing housing insecurity for an evening, the cost per counseling session delivered to recovering substance abusers, the cost to place a family in affordable housing, and so forth.
2. **Determine cost centers**. A *cost center* is a part of an organization that incurs costs. It could be a program, a unit within a department, a department, a grant, a contract, or any other entity defined for cost accounting purposes. Generally, cost centers work best for homogeneous groupings of activities.

3. **Distinguish between direct and indirect costs**. *Direct costs* are connected to a specific cost center. In fact, they are often called "traceable costs." Examples include salaries for staff who work entirely within a cost center, facilities and supplies used only by that cost center, training for cost center-specific staff, etc. Many public organizations further stipulate that a cost is direct to a cost center only if that center's management can control it. *Indirect costs* apply to more than one cost center. They include shared facilities, general administration, payroll processing services, and information technology support. Some managers call them *service center costs*, *internal service* costs, or *overhead costs* because they are usually for support services provided within an organization.
4. **Choose allocation bases for indirect costs.** One of the main goals of full-cost accounting is to distribute indirect costs to cost centers. This follows from the logic that all direct costs require support from within the organization. An *allocation basis* is an observable metric we can use to measure the relationship between direct and indirect costs within a cost center. For example, a non-profit might allocate indirect costs according to the number of full-time equivalent (FTE) employees within a cost center or the percentage of the organization's overall payroll earned by employees within that cost center. **The full cost of any service is the sum of direct costs plus the unit's share of indirect costs.**
5. **Select an allocation method**. There are two main methods to *allocate* or *apportion* indirect costs to cost centers. One simply calls indirect costs their own cost centers and plans accordingly. For instance, a non-profit could choose to call the executive director its own cost center. In that case, it would plan for and report the executive director's salary, benefits, and other costs as a stand-alone entity rather than allocate those costs as an indirect cost to other direct service cost centers. A more common approach is to allocate by a denominator that is common to all the cost centers that incur a particular indirect cost (see below).
6. **Attach costs to cost objects**. One of the biggest challenges for public organizations is that cost objects are usually people, and no two people are alike. For instance, a parole officer might have 30 clients, but each requires a different amount of time, attention, and counseling. When the cost per client varies a lot, the cost accounting system should reflect those differences, usually by applying different overhead rates or percentages to different types of clients.

Let's illustrate some of these concepts with the copier example. To begin, assume that the copier is a cost center. Services like copying, information technology, and payroll exist to serve clients within the organization, so they are called *service centers*. One of the goals of cost accounting is to allocate service center costs to *mission centers* that are more directly connected to the organization's core programs and services. In this case, we can assume Food Inspection, Animals and Pests, and Wastewater are mission centers that will ultimately receive costs allocated from the copier service center. Given those assumptions about cost centers, we can assume the cost object for the copier service center is the cost per copy.

With those assumptions established, we can define direct and indirect costs for the copier service center. Direct costs include paper, toner, rental/lease fees for the copier, and machine maintenance. These costs are incurred exclusively by the copier. Electricity, building space, and the

office manager's time are indirect costs. They are incurred by the copier cost center and by other cost centers.

To illustrate, the table below lists some details on the copier's costs.

Annual Full Cost of Environmental Health Department Copier Cost Center

Direct Costs			
	Number	**Unit Cost**	**Total Cost**
Paper	500 reams	$20/ream	$10,000
Toner	30 cartridges	$90/cartridge	$2,700
Machine Rental	$500/month	12 months	$6,000
Machine Maintenance	$75/month	12 months	$900
Total Direct Costs			**$19,600**
Indirect Costs			
	Cost Driver/Amount	**Unit Cost**	**Total**
Electricity	1,500 kWh	.12/kWh	$180
Building Space	100 sq. ft.	$15/sq. ft.	$1,500
Office Manager Time	5 hours	$20/hour	$100
Total Indirect Costs			**$1,780**
FULL COST			**$21,380**

THE GAP IN COST ACCOUNTING STANDARDS

Keep in mind that there are no national or international standards for how public organizations measure and define their cost structures, also known as their cost accounting practices. Governments employ a variety of state- and local-specific cost accounting methods. Non-profits tend to follow the cost accounting conventions prescribed by federal and state grants or major foundations, but those conventions do not equate to national standards. By contrast, financial accounting – or accounting designed to report financial results to outside stakeholders – is dictated by GAAP. That's why it's possible to compare a government's financial statements to that of another government and a non-profit's financial statements to that of another non-profit, but not necessarily possible to compare different organizations' budgets or internal cost accounting systems.

INDIRECT COST ALLOCATION: COST DRIVERS AND ALLOCATION BASES

To find the full cost of the copier cost center, we'll need to find some way to allocate its share of indirect costs to it. A good cost allocation scheme follows from a clear understanding of an organization's cost drivers. A *cost driver* is a factor that affects the cost of an activity. A good cost driver is a reliably observable quantity that shares a consistent relationship with the indirect cost in question. Fortunately, we have an intuitive cost driver for the copier cost center: the number of copies.

Ideally, we can allocate indirect costs according to their key cost driver(s). An *allocation basis* is a cost driver common to all the cost centers that incur an indirect cost. For building space, for example, we might find the portion of the total building space that is occupied by the copier and allocate a proportionate share of the building space costs to the copier copy center.

For example, this county government allocates electricity costs to different cost centers per kilowatt

hour (kWh). Sometimes it is feasible to measure electricity use with this level of precision, and sometimes it is not. Assume that the copier has an individualized meter measuring its electricity use.

This government allocates building space costs per square foot. This assumes it has a reasonably sophisticated way to measure how much space each cost center uses. Allocations by space can be contentious because not every unit uses space in quite the same way to accomplish its mission. For instance, most Food Protection staff spend most of their time in the field inspecting restaurants. They report to the office at the beginning and end of the day but infrequently during the day. This is quite different from the Animals and Pets center, where most of the staff spend most of their time in the office.

These figures also assume that the government allocates the office manager's time to individual cost centers. The office manager can do this if they track the amount of time they spend on work related to each cost center. Some public organizations have systems, often based on a billable hours concept, similar to those used by professionals like lawyers or accountants. Many do not.

MORE ON COST DRIVERS

One of the big challenges in cost accounting is identifying appropriate cost drivers and allocation bases. Each indirect cost item is a bit different and requires a slightly different concept to support an allocation basis. In fact, many public organizations do not allocate indirect costs precisely because they cannot agree on allocation bases that make sense across an entire organization. That said, many of the most common indirect costs can be allocated using simple metrics that can be computed with existing administrative data.

Here are a few examples:

Cost Item	Potential Cost Driver/Allocation Basis
Accounting	– Number of transactions processed
Auditing	– Direct audit hours
Data Processing	– System usage
Depreciation	– Hours that equipment is used
Insurance	– Dollar value of insurance premiums
Legal services	– Direct hours/Billable hours
Mail	– Number of documents handled
Motor Pool	– Miles driven and/or days used
Office machines	– Square feet of office space occupied
Management	– Number of employees; total payroll
Procurement	– Number of transactions processed

Also, note that the copier cost center does not receive overhead from other service centers. We don't see, for example, that the copier center is allocated a portion of the county administrator's salary, insurance expenses, or other organization-wide indirect costs. This is a policy choice. Some public organizations do not require service centers to receive overhead costs, mostly to keep down the rates

they must charge their internal clients. Many state and local governments have budgeting rules that state programs – if *independently financed* or paid for with specific fees or charges rather than general fund resources – do not need to allocate their indirect costs or receive an indirect cost allocation.

That said, many public organizations allocate overhead to internal cost centers. In fact, when they do, they typically use the *step-down method* of allocating indirect costs. That is, they allocate organization-wide indirect costs to *all* cost centers first, then allocate service center costs, including their portion of the organization-wide indirect costs, to the mission centers.

With those assumptions in place, recall that:

- The Food Protection mission center averages 500 copies each day. Assuming 260 workdays/year, that is 130,000 copies (i.e., 500 copies x 260 days). In this case, the 130,000 copies are the *relevant range* or the amount of activity upon which our cost analysis is based. Assuming the Food Protection mission center would require twice as many copies, our per-unit costs and cost allocations would look quite different. Good cost analysis follows from clear, defensible *assumptions* about the relevant range of activity that will drive costs.
- The Animals and Pests mission center makes 250 copies each day but makes many more in the event of a communicable disease outbreak. Assuming no outbreak, that is 65,000 copies (i.e., 250 copies x 260 days).
- The Wastewater division makes 100 copies daily and up to 1,000 copies around six times yearly when processing complex permits. Let's assume a typical surge in copies for a complex permit will last for five days. That would mean 230 typical days and 30 "surge days" (i.e., six permits x 5 days/permit). So total number of copies would be around 53,000 (i.e., typical day copies of 100 copies X 230 days + and surge days copies of 1,000 copies X 30 days).

From these figures, we can determine that the copier will make 248,000 copies each year (i.e., 130,000 copies + 65,000 copies + 53,000 copies).

If we divide the full annual cost of the copier by the number of copies ($21,380/248,000 copies), we arrive at a *unit cost* of $0.0862/copy (i.e., 8.62 cents per copy).

With those full costs established, we must ask how the Environmental Health Department should allocate the full costs of the copier cost center across the three mission center departments. Fortunately, this is easy to do because the copier cost center has a clear cost object (cost per copy), and each department/cost center measures the number of copies it makes. As a result, each department would be assigned copier center indirect costs at a rate of 8.62 cents/copy.

- Food protection would be assigned $11,206 (i.e., 130,000 copies X $.0862/copy).
- Animals and Pests would be assigned $5,603 (i.e., 65,000 copies X $.0862/copy).
- Wastewater would be assigned $4,569 (i.e., 53,000 copies X $.0862/copy).
  Due to a rounding difference, the total adds up to $21,378.

With an appropriate allocation basis, it is possible to allocate any indirect costs in a similar way.

This copier example also shows why the cost center and cost object are essential to the cost allocation

process. For instance, imagine that the copier was defined not as one cost center but as separate cost centers for large copying jobs (say, more than 500 copies) and small copying jobs, or for color copies vs. black and white copies. This would also require different cost objects, such as the "cost per black and white copy" or "cost per color copy." The cost per black and white copy would presumably be less than the cost per color copy, and the cost per copy for large print jobs would presumably be less than that for small jobs. Different cost centers, cost objects, and allocation methods can mean substantially different answers to the question, "What does a copy cost?"

One potential drawback of the step-down method is that it allows "double counting" or *"cross-allocation"* of service center costs to service centers already allocated to mission centers. For example, recall that the annual full cost of the copier service center was $21,380. That full cost incorporated the indirect costs of the office manager's time to manage the copier. Under the step-down method, the cost of the office manager's time is allocated to the copier cost center, and the copier cost center costs are then allocated across the mission centers. But what happens if the office manager makes copies? Under this indirect cost allocation scheme, the office manager's copies would not be reflected in the total volume of copies made, and the office manager would not receive any of the copy center's costs. As a result, the mission centers subsidize the office manager's copying by absorbing a larger share of the copy center's costs.

In this particular example, those subsidies are a negligible amount. But in many other scenarios, cross-allocation of service center costs can significantly impact the full cost of a good or service. For instance, imagine a non-profit organization with three mission centers, a service center for the executive director, and a human resources service center. The human resources service center spends most of its time interacting with the executive director, as is often the case in small non-profits. If this organization uses the typical step-down approach, and it first allocates the executive director's costs to the other service centers, then the full costs of the three mission centers will include a sizable subsidy for the costs of the executive director-human resource center's interactions.

To address this problem, many public organizations instead use the *double-step-down method*. After each service center/department's costs have been allocated once, each center/department's cost not included in the original allocation is totaled and allocated again. To illustrate, let's return to the copy center-office manager example above. If this allocation were done with the double-step-down method, the office manager's copies would be included in the total copy figure. The copy center would first allocate its costs to the mission centers, excluding the office manager's copies. Then in a second step, the office manager's share of the copying costs would be allocated to the mission centers separately. This double-step method minimizes the cross-allocation of service center costs. For more on cost allocation methods for governments, see several chapters in Zach Mohr, ed. (2016), Cost Accounting in Government: Theory and Applications (New York: Routledge); also see the chapter "Cost Accounting and Indirect Costs" in Dittenhoffer and Stepnick, eds. (2007), Applying Government Accounting Principles (Lexis-Nexus Publishing).

DOUBLE STEP-DOWN COST ALLOCATION

The Iron River Transportation Agency (IRTA) has two mission departments – ***Rapid Transit*** and ***Para-Transit***. Rapid transit uses high-speed trains and is highly equipment-intensive, while Para-Transit uses mopeds and is far more labor-intensive.

IRTA has two service departments: maintenance and administration. Management has decided to allocate maintenance costs on the basis of depreciation dollars in each department and administration costs on the basis of labor hours worked by the employees in each department.

The following data appear in the agency's records for the current period. Allocate the service center costs to production centers using the step-down method and determine the relevant total costs. Begin with the maintenance department.

	Mission Centers		Service Center		
	Rapid-Transit	Para-Transit	Maintenance	Administration	Total Costs
Direct plus Distributed Costs	$8,000,000	$4,000,000	$1,160,000	$2,400,000	$15,560,000
Allocation factors					
Indirect Depreciation Costs	$ 3,000,000	$ 800,000	$ 200,000	$ 2,000,000	$ 6,000,000
Labor Hours	10,000	40,000	20,000	10,000	80,000

We need to allocate two different service centers: Maintenance and Administration. It makes sense to allocate maintenance by depreciation dollars because depreciation is a proxy measure of each cost center's scale of capital assets.

Depreciation costs, excluding maintenance, are $5,800,000 (i.e., $3,000,000 + $800,000 + $2,000,000). If we divide total maintenance costs by the total depreciation dollars excluding maintenance, we get $0.20 per depreciation dollar (i.e., $1,160,000/$5,800,000).

The Administration service center had $2,000,000 in depreciation, so we allocated it $400,000 in maintenance costs (i.e., $0.20 x $2,000,000). The Rapid Transit mission center had $3,000,000 of depreciation, so we allocated $600,000 (i.e., $0.20 x 3,000,000). Finally, the Para-Transit mission center had $800,000 of depreciation, so we allocated $160,000 (i.e. $0.20 x 800,000).

We then allocate administration by labor hours. This makes sense because supervising staff is the administration's most significant cost driver. Since we've already allocated maintenance costs, let's allocate the $2,800,000 costs from Administration (i.e., $2,000,000 in direct costs + $800,000 in indirect maintenance costs) to the mission centers based on the number of labor hours. There are 50,000 labor hours each at $56 per labor hour (i.e., $2,800,000/50,000). To Rapid Transit, we allocate $560,000 ($56 x 10,000 hours), and to Para-Transit, we allocate $2,240,000 ($56 x 40,000 labor hours). As the table shows below, we exclude Maintenance from this step since we've already assigned those costs to Rapid-Transit, Para-Transit, and Administration.

	Rapid-Transit	Para-Transit	Maintenance	Administration	Total Costs
Direct plus Distributed Costs	8,000,000	4,000,000	1,160,000	2,400,000	15,560,000
Allocated Maintenance Costs	600,000	160,000	(1,160,000)	400,000	-
Step 1 Total Cost	**8,600,000**	**4,160,000**	**-**	**2,800,000**	**15,560,000**
Allocated Administration Costs	560,000	2,240,000	-	(2,800,000)	-
Step 2 Total Cost	**9,160,000**	**6,400,000**	**-**	**-**	**15,560,000**

The total cost of the Rapid Transit program is $9,160,000 and the total cost of the Para-Transit program is $6,400,000.

Note, if we **change the order of cost allocation** to administration first followed by maintenance, total costs in the mission centers will be different. Recall that administration costs are allocated based on labor hours ($34.28 per labor hour, i.e., $2,400,000/70,000 hours). Maintenance costs will be allocated by depreciation costs ($0.49 per dollar of depreciation costs, i.e., $1,845,714/$3,800,000).

	Rapid-Transit	Para-Transit	Maintenance	Administration	Total Costs
Direct plus Distributed Costs	8,000,000	4,000,000	1,160,000	2,400,000	15,560,000
Allocated Administration Costs	342,857	1,371,429	685,714	(2,400,000)	-
Step 1 Total Cost	**8,342,857**	**5,371,429**	**1,845,714**	**-**	**15,560,000**
Allocated Maintenance Costs	1,457,143	388,571	(1,845,714)		-
Step 2 Total Cost	**9,800,000**	**5,760,000**	**-**	**-**	**15,560,000**

The order of cost allocation affects the full costs in the mission center. Rapid-Transit costs are higher (lower) if administration (maintenance) costs are allocated first. **Irrespective of the order of "steps," Total Costs for the department do not change**.

INDIRECT COST ALLOCATION: INDIRECT COST RATES

Cost drivers and allocation bases work well when the service has a clear cost objective and a measurable unit of service. Most public organizations, as described above, don't have this luxury. Many don't deliver services with measurable outcomes. Most public organizations' costs relate to personnel, and personnel costs are not distributed evenly across clients or cases. Moreover, a growing number of public services are delivered through partnerships and collaborations where it's often unclear how costs are incurred and murkier how those costs ought to be allocated across the partner organizations. Traditional cost allocation methods often don't work in the public sector for these and many other reasons. And yet, it's still critically important to measure and properly account for full costs, especially indirect costs that can be difficult to measure.

To address these problems, many public organizations rely on indirect cost rates. An *indirect cost rate* is a ratio of indirect costs to direct costs. For instance, a city police department might determine that its indirect cost rate is 15 percent. That means that for every dollar of direct costs like police officer salaries and squad cars, it will incur 15 cents of payroll processing, insurance, procurement expenses, and other indirect costs.

TAKING STOCK OF COSTS

Public organizations rarely have sophisticated cost tracking and measurement systems that you might find at manufacturers like Boeing, logistics companies like FedEx, or retail entities like Amazon. So how do budgeting and finance staff understand what a public organization's services cost? There are three basic methods:

- Time in Motion. Public organizations occasionally send analysts to see where and how employees spend their time. For instance, a city planning department might allow analysts into their office to watch how much time staff spend on different types of permits, appeals, and other activities. After observing the department's activities for a sample of days over weeks or months, cost analysts can estimate how much time staff spends on each of their different activities and then build out cost estimates.
- Self-reported Allocations. Some organizations ask staff to keep track of their own time, much like the billable hours method used by attorneys, accountants, and other professionals. Some of these tracking schemes are pretty detailed, requiring time reported in 15-minute intervals. Others are more general and allow for estimates on larger intervals like days or weeks.
- Statistical Analysis. Cost accountants occasionally use regression analysis and other statistical tools to estimate the relationship between costs and services delivered. One of the most common is to determine the linear trend, if any, between total expenses and the volume of service delivered over time. Variation around that trend (i.e., the residuals from the regression analysis) suggests a potential pattern of variable costs.

Let's illustrate this with a more detailed example. Surveys show that many local public health departments would like to offer more services related to hypertension outreach and management. Chronic health conditions like heart disease and diabetes are known to be related to high blood pressure, so better management of high blood pressure can affect public health in a substantial, positive way. However many citizens, especially those without health insurance, cannot access regular blood pressure screening and other services needed to identify and manage hypertension.

Say, for example, that Smallville County and Riverdale County would like to launch a new, shared hypertension prevention and management (HPM) program. Neither currently has a formal program in this area, but both offer services through a patchwork of partnerships with local non-profits. Smallville County has roughly twice the population of Riverdale County, and Riverdale's per capita income and property values are 30 to 40 percent higher than Smallville's.

What does it cost to deliver this service? As with most public health programs, the main costs will be related to personnel, namely public health nurses, outreach counselors, and nutritionists. The program will also require space and other overhead costs. The outreach and education components will require advertising, travel, and other costs. For a service-sharing arrangement to work, the two counties must decide how to share these costs.

Suppose the counties also agree in advance to share costs evenly. This approach is simple and straightforward. However, it ignores many of the program's underlying cost drivers. Smallville has a much larger population than Riverdale, so more participants will probably come from Smallville. Simply splitting these costs "50-50" means Riverdale will likely subsidize Smallville, an arrangement Riverdale's leaders might find unacceptable.

So, what's the alternative? Smallville could bill Riverdale for each Riverdale resident who participates in the program. They could use an allocation basis like population or assessed property values. A more cutting-edge scheme might be to share the costs according to the incidence of the chronic diseases the HPM program is designed to prevent. Each of these strategies demands a trade-off. Some are simpler but at the expense of fairness. Some require additional data that might result in an expensive cost measurement process or one that is not feasible. Others are more feasible but might place costs disproportionately on the population the program is designed to serve.

To begin, let's assume Smallville will structure the new HPM as a cost center within the Health Behaviors division of its Public Health department. Let's also assume that since HPM's main "deliverable" will be blood pressure screening, it will define its unit cost as the cost per blood pressure screening performed.

Given those assumptions, Smallville's budget analysts estimate that for the first year of operations, the HPM program will serve 400 clients, and its costs will include:

- *Direct Labor*. This includes seven full-time and one half-time licensed nurse practitioners who can administer blood pressure screening. The annual salary for each nurse practitioner is $67,500. The program will also employ a health counselor to guide clients on managing hypertension through healthier eating and fitness. The counselor's annual salary is $74,500.
- *Direct Non-Labor*. Nurses and the health counselor will need to travel to visit clients and deliver outreach programs. Staff estimates total travel of 20,400 miles at $0.40/mile. The HPM program will also require medical supplies, office supplies, and a few capital items. Budget staff estimates $6,142 of annual direct non-labor costs for each nurse and $7,566 for the health counselor. This difference is due to a heavier expected travel schedule for the counselor. The program will also execute an annual contract, valued at $15,725, with a communications consultant who will develop and deliver a healthy eating outreach marketing effort in both counties. Even though most of these costs are related to labor, they're considered non-labor "contractual" costs.
- *Indirect Labor*. Smallville County's Health Behaviors Manager will supervise the HPM staff, and Smallville County's Executive will provide policy direction and other leadership. A portion of both administrators' salaries is allocated to HPM as indirect labor costs. HPM staff will also incur indirect labor costs like payroll support, accounting and auditing services, and procurement support. Budget staff estimates $10,456 of annual indirect labor costs for each nurse and $8,519 for the health counselor.
- *Indirect Non-Labor*. HPM staff must also have access to office space, liability insurance, association memberships, and other indirect non-labor costs. Budget staff estimates annual indirect non-labor costs of $4,799 for each nurse and counselor.

With that information and a few additional assumptions, we can begin to detail HPM's cost structure and compute some indirect cost rates. The table below lists HPM's direct, "observable" costs. We know the program will employ nurses and counselors, and we know it will demand mileage and the communications contract as direct, non-labor costs. These "observable" direct costs total $604,635, or $1,512 per client given the estimated 400 clients.

Direct, "Observed" Costs

	Units		Cost per Unit		Total Cost
Nurse Salaries	7.5	$	67,500	$	506,250
Health Counselor Salaries	1	$	74,500	$	74,500
Mileage	20,400	$	0.40	$	8,160
Outreach				$	15,725
Total Direct, Observed HPM Program Costs				**$**	**604,635**
			Estimated # Clients		**400**
			Cost per Client	**$**	**1,512**

IS IT ALLOWABLE?

One of the key questions when computing indirect cost rates is which indirect costs are allowable or reasonable. For example, in some cases, it's unclear whether staff who contribute marginally to a program's operations – such as development directors, general outreach coordinators, and others – should be included as an indirect cost. Certain types of training might be helpful, but not essential, for staff to understand their jobs and deliver the service. And of course, there's always a reason to define indirect costs as broadly as possible, especially if you can recover those costs through some external funding source.

There are no national standards, per se, for what constitutes a relevant indirect cost. Each project, program, and funder is different. That said, the federal government has guidelines on what types of indirect costs it will reimburse. Many states and local governments also use these standards – or some adaptation of these standards – for their internal cost accounting. You can find more information on those guidelines in OMB Circular a-87: Cost Principles for State, Local, and Indian Tribal Governments. This publication is available at http://www.whitehouse.gov/omb/circulars_a087_2004.

But the much more important question is how we account for the indirect costs and for the direct costs that are more difficult to observe. The lower part of this table outlines those costs. When we include the indirect labor and indirect non-labor costs, we see the full cost of the program increases to $785,997, or $1,965/client. Or, put differently, the full cost of the program increases by more than 30 percent if we include all the indirect costs in our estimate of the full costs. Recall that Smallville County plans to bill Riverdale County for its share of program costs. If Smallville bills only for the direct costs, it undercharges Riverdale by nearly 30 percent. That is why it is important to measure full costs, especially when pricing services or requesting reimbursements for expenses incurred.

Full Cost, by Main Direct Labor Inputs

Nurses	Cost Per Nurse	Total Cost	% of Costs
Direct Labor	$ 67,500	$ 506,250	74%
Direct Non-Labor Mileage	960	7,200	1%
Direct Non-Labor Outreach	1,850	13,875	2%
Other Direct Non-labor	6,142	46,065	7%
Indirect Labor	10,456	78,420	11%
Indirect Non-labor	4,799	35,993	5%
Full Cost of Nurses		**687,803**	**100%**
Health Counselor	**Cost Per Counselor**	**Total Cost**	**% of Costs**
Direct Labor	$ 74,500	74,500	76%
Direct Non-Labor Mileage	960	960	1%
Direct Non-Labor Outreach	1,850	1,850	2%
Other Direct Non-labor	7,566	7,566	8%
Indirect Labor	8,519	8,519	9%
Indirect Non-labor	4,799	4,799	5%
Full Cost of Counselor		**98,194**	**100%**

Full Cost of HPM Program	**$**	**785,997**
Cost per Client	**$**	**1,965**

What about potential indirect cost rates? According to these figures, 74 percent of the full cost to employ a nurse is direct labor costs, and 10 percent is direct non-labor costs (i.e., mileage, outreach, and other direct non-labor). It follows that the remaining 16 percent is indirect costs related, in a predictable way, to those direct costs. Each nurse and health counselor will be insured, have their payroll processed by the payroll office, occupy space, and so on. If those figures are predictable, we can assume the current indirect cost rate for nurses is 16 percent. For the health counselor, the direct costs are a bit higher at 76 percent. Direct non-labor costs are 11 percent, and indirect costs are 14 percent.

In practice, this means that in future budgets, the HPM program could **assume** that for every dollar it will spend on nurse salaries, it can expect to incur 16 cents of indirect costs, and for every dollar it will spend on health counselor salaries, it can expect to incur 14 cents of indirect costs (i.e., indirect cost rate).

Some organizations compute indirect cost rates based only on direct labor costs. In that case, the rate for nurses would be the indirect cost rate would be 22.6 percent – i.e., $10,456+$4,799)/$67,500. For healthcare counselors, the indirect cost rate would be 22.8 percent.

We can also consider an indirect cost rate for the entire HPM program. For that, we compare the total indirect costs to the total direct costs. Total indirect costs for the nurses are $114,413; for the counselor, $13,318. That means total indirect costs are $127,731. Total direct costs are $573,390 for the nurses and $84,876 for the counselor, for total direct costs of $658,266. The indirect cost rate would be 19.4 percent (i.e., $127,731/$658,266). Again, all these figures assume the HPM program serves 400 clients.

Information about indirect cost rates is relevant to many types of decisions. For instance:

- HPM staff might compare their indirect cost rate to the rates of other programs within

Smallville County. If its rates are noticeably higher or lower, it might more carefully review its cost structure and how it manages its costs. If its rates seem grossly out of line with other units, it might request an additional review by Smallville County's budget staff.

- The counties might use these rates when applying for federal or state grants or for support from philanthropic foundations to support the HPM program.
- The counties might eventually decide to contract out some or all of HPM's operations to a non-profit healthcare provider. In that case, these rates would be a focal point for negotiating the per-client rate at which the counties would reimburse a prospective contractor.
- Other governments might review these rates as an initial indicator of whether they can afford their own HPM program.

EASY AS ABC?

Some governments – and many private sector organizations – try to address this problem through activity-based costing (ABC). ABC identifies the full cost of different activities within organizations that drive costs, regardless of the original cost center to which those costs were assigned. It then allocates those full costs according to changes in those underlying cost drivers.

If Smallville County followed an ABC model in the HPM example, the information services staff might have identified the unit costs of different types of information service requests. More complex activities, like the information-gathering about Riverdale County residents, would incur costs at a different rate than simpler activities. To the earlier point, this sort of small discrepancy could easily dissuade Smallville from continuing to participate in this sharing arrangement. A better alternative might have been to measure the number of hours or percentage of total time on this project attributable to gathering information specifically on Riverdale residents. And yet, the additional time and effort to gather that information might far outweigh the benefit of more precise cost allocation. This is a small-scale example, but it illustrates that every cost allocation basis comes with trade-offs that all the parties involved must understand and agree to upfront.

COST SHARING ALTERNATIVES

Traditional cost allocation works best when it's possible to observe when and where all the costs are incurred. When that information is unavailable, as is often the case for partnership arrangements that span multiple organizations, there are several alternative ways to organize a cost allocation plan. To illustrate, assume the full annual cost of HPM was $800,000 and that Smallville County must bill Riverdale County for Riverdale County's share of those costs.

- *Equal share*. Total costs are divided equally across all participating partners. This is more typical for informal arrangements. It's also common for services where it is unclear who "receives" or "uses" the service or to observe all the relevant indirect costs predictably and consistently. In equal share approaches, one partner often subsidizes the other, sometimes unknowingly. In the HPM example, Smallville would keep $400,000 of the costs and bill Riverdale its equal share of $400,000.
- *Per capita*. Total costs are divided by the population proportion in each partner jurisdiction. This approach is good for services without an observable "client" or discrete individual services. It's less useful when population size is not the best cost driver or when the

populations involved are different on some key characteristic that might affect the utilization of the service in question. Per capita sharing is often the most transparent way to share costs. In the case of HPM, recall that Smallville's population is 240,000 and Riverdale's population is 160,000. In other words, 60 percent of the population served resides in Smallville and 40 percent resides in Riverdale. Under a per capita model, Smallville would bill Riverdale $320,000.

- *Cost Plus Fixed Fee*. Personnel costs are often step-fixed costs, and it can be challenging to know when those costs will "step up" at higher levels of service (more on step-fixed costs below). To account for that uncertainty, some cost allocation strategies call for non-weighted cost sharing plus some fixed periodic fees. The fee part of the plan is designed to buffer the sharing arrangement against the uncertainty surrounding step-fixed costs. For HPM, one potential application of this method would be for the counties to share costs per capita but for Smallville to receive an annual payment of $35,000 at the start of its fiscal year to compensate in advance should it need to hire an additional nurse during the year. The cost-plus fixed fee model can also be used where overhead costs (e.g., space, utilities, administration, and accounting) would be shared one way, and incremental costs (e.g., costs for lab work or medical supplies) are charged based on volume.
- *Ability to Pay*. Some cost allocation arrangements are designed to make a service available where citizens and clients are otherwise unable to pay for it. In these cases, allocating costs according to the ability to pay makes sense. We can approximate the ability to pay through assessed property values, median household income, or other measures of income or wealth. In the HPM example, consider the following scenario: Riverdale's median household income is $50,000, and Smallville's is $40,000. Riverdale has a smaller population but is wealthier. In this case, Riverdale's median household income ratio to Smallville's is 1.25 ($50,000/$40,000). This is commonly known as a *wealth factor*. Recall that an equal share allocation is $400,000 for each jurisdiction. If 50-50 share is adjusted by a wealth factor, Riverdale's share of costs would be $400,000 X 1.25, or $500,000, while Smallville's share would be $300,000.
- *Prevalence*. In this method, the parties share costs according to the prevalence of the public health problem the service is designed to address. In the HPM example, the partners could share the total program costs according to observed instances of diabetes or heart disease. The logic here is simple: diabetes and heart disease tell us something about the expected number of people with hypertension. If the prevalence of the disease is not known, the partners can use a proxy, like socioeconomic status, to project the anticipated need for services in each population. In the HPM example, Riverdale's higher overall wealth suggests its residents are at lower risk for hypertension compared to Smallville residents. Sharing by prevalence adds substantial complexity because cost sharing is now based on data from a series of measurements unrelated to costs. In this case, those measurements are the incidence of disease or an indicator of socioeconomic status, which can be difficult to measure reliably, and other health-related behaviors like smoking or medication adherence. That said, this approach is especially good where population, property values, income, and other measures vary too much among sharing jurisdictions to offer meaningful comparisons. In this instance, we assume Smallville will have an estimated 12,740 cases of type 2 diabetes during the coming year, and Riverdale County will have an estimated 5,460 cases. This strategy considers each

county's share of the total incidence across both counties. According to that logic, 70 percent of the cases will be found in Smallville and 30 percent in Riverdale. Allocating costs this way leads to a share of $560,000 for Smallville and $240,000 for Riverdale. Some versions of prevalence also incorporate a moving average so that one community does not incur huge costs in a single year, and costs are recovered over time.

- *Weighted formula*. This plan addresses some of the big problems with the per capita sharing approach. For example, in a weighted formula approach, the participants might agree to share total costs according to a combination of population, median household income, usage, and other factors. By incorporating these other factors, the cost apportionment method will better reflect differences in fixed costs in urban vs. rural areas, differences in travel distances within each county, and a wide variety of other factors that may affect service delivery. For HPM, assume that Smallville and Riverdale decide to share costs according to a three-factor formula that incorporates population, ability to pay, and prevalence of type 2 diabetes. This formula reflects both counties' shared understanding of the cost structure and cost drivers of the HPM program. The counties, realizing the difference in the prevalence of type 2 diabetes, agree to weigh that difference in prevalence more heavily in the cost-sharing formula. They agree to a three-factor formula where population accounts for 25 percent, prevalence is 50 percent, and ability to pay is 25 percent of the total costs allocated to each county. Recall that Smallville accounts for 60 percent of the population served by HPM, and Riverdale accounts for 40 percent. At the same time, Smallville accounts for 70 percent of the prevalence factor and Riverdale for 30 percent. We would apply that formula as follows:
    - Cheng County: $800,000 X ((.6 X .25) + (.7 X .5) + (.44 X .25)) = $488,000;
    - Duncombe County: $800,000 – $488,000 = $312,000

DIFFERENTIAL COST ACCOUNTING

In the previous section, we explained how to measure the full cost of a service. Those techniques assume we're measuring the cost of the service for a given level or volume of the service. Until now, for instance, we've assumed our hypothetical HPM program will serve 400 clients a year. But sometimes, the more interesting question is: How do a program's costs change if we deliver more or less of it? For instance, how does HPM's cost per client change if we expand it to 500 clients? Or restrict it to 300 clients? These questions sound simple, but they require careful attention to different concepts. We turn to differential cost accounting when we want to know how costs change in space and time. **Differential cost accounting is, simply put, comparing how costs change at different levels of output**.

COST BEHAVIOR

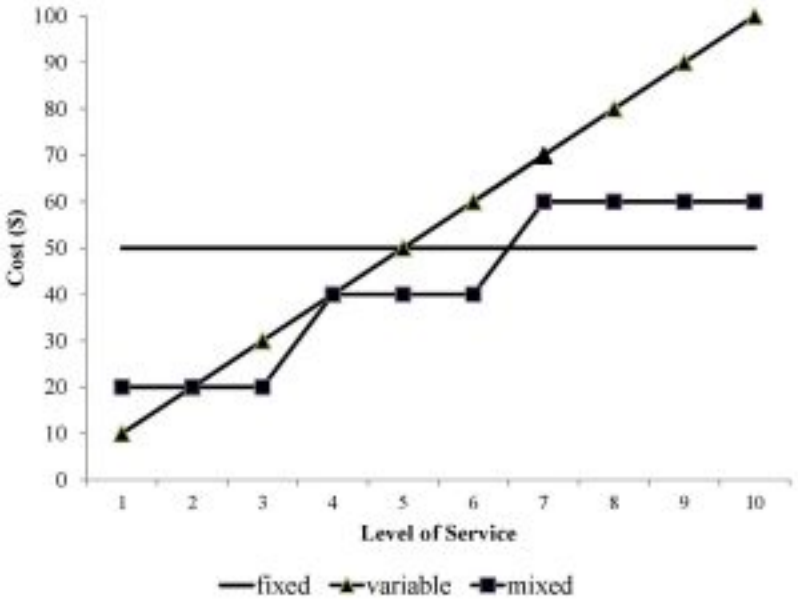
We know that what a service costs largely depends on how much of it we deliver. This is broadly known as *cost behavior.* Every cost type falls into one of three different cost behavior categories:

- *Fixed costs* do not change in response to the amount of service provided. In the HPM case, Smallville County owns some of its own blood pressure screening equipment, so the costs of acquiring equipment costs won't change even if the HPM program delivers a lot more blood

pressure screenings. There, however, is a caveat to this. It is reasonable to assume that fixed costs will not change within a *relevant range*. Relevant range frequently refers to capacity. If current demand exceeds capacity, we'll need to incur additional costs to expand capacity (e.g., room size, equipment that is available, etc.).

- *Step-Fixed Costs* are fixed costs within a relevant range. Step-fixed costs are frequently personnel costs. A nurse, for example, can see eight patients per day, and a counselor can see five patients per day. They are paid a fixed rate, regardless of number of patients they see. That said, they will likely not have the time to see more patients than the current workload. Therefore, we need to hire an additional nurse if we expect to see more than eight patients daily and an additional counselor if we expect to see more than five patients daily. So, if nurse visits per day were 20, we would need to hire three nurses and have the excess capacity to see an additional four patients (i.e., three nurses x a maximum of eight patient visits = 24 visits per day).
- *Variable Costs* change directly in response to the amount of service provided. For the HPM program, this might include copies and other office supplies needed to process physician referrals and mileage required to travel to outreach sessions, among others.
- *Mixed Costs (or Semi-Variable Costs)* have both a fixed and variable component. Utilities and equipment lease agreements are frequently semi-variable, with a fixed monthly charge irrespective of use and rate per unit of service consumed. Returning to our example of the copier, the monthly rate is fixed and the per-page service fee would be variable.

The figure below illustrates the cost behavior concepts for a generic, hypothetical service. The horizontal axis is the quantity of service provided, and the vertical axis is the total cost. The horizontal line at $50 represents a fixed cost. It does not change, regardless of the level of service provided. The triangle-marked line identifies a variable cost. Here we see each additional unit of service increases the total cost by $10, and that change is constant from zero to three units of service. The line marked with squares shows a step-fixed cost. Here, the cost is fixed at $20 from zero to three units of service. Once we reach four units of service, that total cost steps up to $40, where it stays fixed until seven units of service.



FIXED COSTS DEFINED DIFFERENTLY

"Fixed Cost" can mean different things in different settings. For our purposes, it means a cost that does not change in response to the volume of service delivered. By contrast, cost accountants sometimes use fixed cost to describe a cost that does not change during a given time period. This is an important difference.

It's useful to think about a program or service with reference to these main cost behaviors. In fact, we can place most programs/services/organization units into one of six cost behavior categories. Those categories are outlined below, along with examples of each from typical non-profit organizations and government programs.

COST STRUCTURES WITH ILLUSTRATIONS		
	Direct	**Indirect**
Fixed or Step-Fixed	*Typical cost items:* Salaried FTE program staff, program-specific equipment Programs with this cost structure tend to: – Have salaried staff that work across an organization's core programs or services. – Have low overhead. Example program: Drop-in center for youth experiencing housing insecurity.	*Typical cost items:* Payroll services, facilities maintenance Programs with this cost structure tend to: – Have mostly salaried staff that serve multiple programs/units – Allocate their costs to other units on a "billable hour" or similar allocation basis Example program: Development/fundraising staff at a large non-profit
Variable	*Typical cost items:* Program-specific inventory used by program participants Programs with this cost structure tend to: – Focus on "inventory management" – Focus on "surge capacity" Example programs: Food banks, county prosecutor home detention programs (e.g., "ankle monitors")	*Typical cost items:* Inventory, equipment, commodities Programs with this cost structure tend to: – Allocate their costs to other units by outputs – Focus on inventory management Example program: Procurement staff within a non-profit hospital
Step-Fixed	*Typical cost items*: Hourly/part-time program staff, shared facilities or equipment Programs with this cost structure tend to: – Focus on workload and staffing ratios. – Focus on enrollment caps, waitlists, other workload management strategies. Example program: Non-profit after-school daycare program	*Typical cost items:* Liability insurance, shared facilities Programs with this cost structure tend to: – Allocate their costs to other units according to "jobs" or "engagements" – Market their services outside their home organization Example program: Employee assistance program at a non-profit hospital

It's immensely helpful to think about cost behavior when we have to make decisions about how to design and fund programs. Consider this simple example based on the previously mentioned HPM program.

HPM staff have some rough budget projections. Their program is expected to incur fixed costs of $800,000 and variable costs of $400 per client. The program has expanded a lot since it launched, and it now expects to serve 550 clients but could serve up to 600 with current staffing levels. Meanwhile, nearby Emerald County has offered to pay $750 per client to expand the program to include an additional 50 Emerald County residents. Should Smallville and Riverdale counties agree to partner with Emerald County on these terms?

HPM's cost behavior is outlined in the table below. Given its projected fixed and variable costs, at 550 clients, the average per-client cost is $1,855. If HPM scales up to serve 600 clients, its average cost will decrease to $1,734 per client. However, that average cost of $1,734 is still much higher than the $750 per client that Emerald County offering. On the basis of "average" unit costs, this proposal is a definite "no-go" for Smallville and Riverdale.

HPM Program Cost Calculations

# of Clients	Fixed Costs	Variable Costs	Total Costs	Average Cost/Client
500	$800,000	$200,000	$1,000,000	$2,000
550	$800,000	$220,000	$1,020,000	$1,855
600	$800,000	$240,000	$1,040,000	$1,734

However, keep in mind the relationship between fixed and variable costs. Recall that HPM staff have said they can add 50 more clients without taking on additional fixed costs. If that is true, then the new cost to add a client is only the additional variable cost. Put differently, the average cost of each client is $1,734, but the *marginal cost*, or the cost of a new client, is $400. If HPM is reimbursed $750 per client, the additional "profit" is $350. If HPM makes this decision "at the margin" or with reference only to the marginal cost, it should take the deal with Emerald County. This is a good example of a service with positive *economies of scale*; the marginal cost of each unit of service decreases as the volume of service delivered increases.

Of course, there are trade-offs here. At 600 clients, the HPM program will operate at full capacity. HPM staff will almost certainly have to spend less time with clients. This could lead to a decline in the quality of service and could even increase staff burnout and turnover. But if we look just at the marginal cost, it makes sense for Emerald County to join the program.

This example also illustrates the key concept of *sunk costs*. Many fixed costs are for capital items like equipment, land, and buildings that can be bought and sold. A public health department can, in concept at least, recover some of those costs by selling those capital items. However, HPM's spending on employee salaries, training, insurance, and many other costs cannot be recovered. Those costs are sunk.

Some economists argue that sunk costs ought to be irrelevant to future decisions. In other words, at the margin, all that matters are the future, measurable, variable costs. Of course, this is difficult in practice. In the HPM case, scaling up to full capacity will mean additional stress on staff, and perhaps more importantly, it would mean giving up the opportunity to take on additional clients without taking on additional fixed costs. These costs are much harder to measure, but they are key components of decisions about cost sharing. The key takeaway here is that when considering a service-sharing arrangement, be sure to consider both the marginal costs and the opportunity costs.

DIFFERENTIAL COST ANALYSIS

You are the director of the **Department of Human Services for Algonquin Bay.** One of your public health programs provides services to senior citizens and children. The full-time direct staff includes licensed nurses and drivers (senior citizen program only). The department has also hired a program administrator and a secretary to manage the 20 full-time program staff (17 nurses and 3 drivers). Total costs for the two cost centers are expected to be $1,459,620. The program expects to receive $829,400 in reimbursements from Medicaid. A family foundation has pledged to support your efforts with an unrestricted grant ($100,000).

	Children	Seniors	Total
Patient Visits	18,200	9,360	
Nurses	7	10	
Drivers	-	3	
Direct Costs			
Nurses	390,600	558,000	**948,600**
Drivers	-	113,400	**113,400**
Supplies	45,500	23,400	**68,900**
Fuel	-	18,720	**18,720**
Total Direct Costs	***436,100***	***713,520***	***1,149,620***
Indirect Costs			
Depreciation (Vehicles)	-	10,000	**10,000**
Rent (Building)	92,453	47,547	**140,000**
Administrator and Secretary	56,000	104,000	**160,000**
Total Indirect Costs	***148,453***	***161,547***	***310,000***
Total Costs	**584,553**	**875,067**	**1,459,620**
Reimbursement Rev.	455,000	374,400	**829,400**
Unrestricted Grant	25,000	75,000	**100,000**
Total Revenue	**480,000**	**449,400**	**929,400**
Surplus (Deficit)	**(104,553)**	**(425,667)**	**(530,220)**
Surplus (Deficit) as % of Costs	***-18%***	***-49%***	***-36%***

The Department recently received an unsolicited bid from a local non-profit. The non-profit has proposed to take on the senior citizen program if the city agreed to reimburse the non-profit at a rate of $65 per patient visit. Should the department accept this proposal? What are the policy tradeoffs of delivering this service via a third party?

Assuming the non-profit provides services to the projected clients (9,360), the direct cost of the contract would be **$608,400 (=$65 x 9,360).** The direct costs of the contract would be significantly lower than the agency's direct costs ($713,520/9,360 = $76.23. Assuming the average costs do not change significantly as the number of clients increases (for the department and the non-profit), the department would be better off contracting out with the non-profit.

Before the department accepts the non-profit proposal, they should consider the ramifications of having a third party provide services to their clients. That includes the quality of service provided to the senior citizens, as well as the capacity of the non-profit to deliver services. Accepting the bid at a cost lower than the department average could be an indicator of efficiency. It could also be the case that the non-profit has understaffed its program, resulting in lower average costs per visit. An inspection of the non-profit facility and a review of the home-visit practices should be considered in the bid review process.

The budget analyst assigned to your agency has recommended that you eliminate the senior citizen program since its costs far exceed revenues. Should the Department accept this proposal? What are the policy tradeoffs of dropping a cost center (i.e.,

senior citizens)?

Dropping the senior program would eliminate direct costs only! The total costs for the children's program would increase by $161,547 to **$746,100** (i.e., $584,553 + $161,547 or $436,100 + $310,000). Assuming there are no changes to unrestricted grants received, the children's center would receive $555,00 in revenues (i.e., 455,000 + $100,000), and the deficit would decrease from $530,200 to $191,100 (i.e., $555,000 – $746,100). The analyst's recommendation would result in a smaller deficit if laying off the nurses and drivers in the senior citizen program is at no cost to the department.

While eliminating the senior citizen cost center cuts the deficit by more than $339,000, the program will no longer serve clients in need of outreach and support. There would likely be unanticipated costs associated with eliminating the program. For example, failure to monitor the health and well-being of senior citizens could lead to these clients being hospitalized. Costs associated with their hospital visits and inpatient care would more than likely exceed the savings projected here. Thus, the strategy would be short-sighted.

The budget analyst assigned to your agency has recommended that the program eliminate off-site visits (i.e., lay off all drivers). In other words, nurses will no longer make site visits but rather, their clients will come to one central location for all their appointments. What are the financial benefits of this proposal? What are the policy tradeoffs of pursuing this strategy?

Laying off the drivers in the senior program would cut costs for the program from $875,067 to $732,947 – the costs associated with the nurses (keep in mind eliminating the drivers would also eliminate the indirect costs for the program (i.e., depreciation of $10,000)). The cuts to the program would shrink the budget deficit from $425,667 to $283,547.

While eliminating drivers in the senior citizen program would shrink the budget deficit for the cost center and the program, the strategy assumes that senior citizens would be able to make the trip to see the nurses at the program office. We could therefore see the workload for the department drop significantly and nurses be underutilized. The clients would likely turn to alternatives like relying on emergency services, which could end up costing the city even more over the long run (e.g., the nurses would be underutilized if visits fall below current levels), and use of emergency services (in-patient or out-patient hospital visits) would likely cost the city more than the costs associated with having the drivers.

COST-VOLUME-PROFIT ANALYSIS

So far, we have reviewed how public managers can identify the full cost of their services and how that full cost changes as they deliver more or less of a service. Those are crucial questions that all good managers can answer.

However, public managers must often confront a different question: What should we charge for this service? They are also routinely asked a corollary question: What volume of service should we deliver, given that service's cost structure? To answer these questions, we turn to a particular set of concepts within differential cost accounting known as *cost-volume-profit* analysis (CVP). CVP is how an organization determines the volume of activity needed to achieve its profit or mission goal. It is the price it needs to charge to break even or make a profit or the cost limits that it must manage to achieve its profit or mission goal. CVP analysis is usually done for a particular program or service within an organization. The basic equation is:

$$\textbf{Profit} = \textbf{Total Revenue} - \textbf{Total Costs}$$

From this discussion so far, we also know that Total costs = Fixed costs + Variable costs. And since fixed costs are fixed, we can represent the cost equation as:

$$\textbf{TC} = \textbf{a} + \textbf{bx}$$

Where *TC = total costs*, *a = fixed costs*, and *b = variable costs*. We also know that total revenue is simply the price of service (p) times the volume of service delivered (x). That said, we can show the *fundamental profit equation* as:

$$\textbf{Profit} = \textbf{px} - \textbf{(a} + \textbf{bx)}$$

For any service, the *break-even volume* is the point at which total revenue (px) equals total costs (a + bx). To illustrate how we use this formula, let's go back to the Environmental Health Department's copier. Assume for the moment that the county government's leadership wants to make copying more affordable, so it caps the price of copying at 7 cents per copy. At that price, how many copies must the copier center deliver each year to break even? In other words, what's its annual break-even volume?

We know that the copier cost center's fixed costs (a) include $6,000 for the machine rental, $900 for machine maintenance, and $1,500 for its space allocation. Let's also assume electricity and the office manager's time allocation are fixed costs of $180 and $100, respectively. So total annual fixed costs are $6,000 + $900 + $1,500 + $180 + $100, or $8,680.

Variable costs (b) are the largest cost items. Recall that last year the copier made 248,000 copies. Total paper costs were $10,000, so the per-copy cost for paper is ($10,000/248,000), or $.04/copy. Total printing cartridge costs were $2,700, so the per-copy cost for printing cartridges was ($2,700/248,000), or $.011/copy. These two variable costs together give us total variable costs of $.051/copy.

At break-even, profit = 0, so we can re-arrange the fundamental profit equation to px = a + bx. Since the price per copy is capped, per management's policy, at $.07, we can then express this equation as:

$$\textbf{\$0.07x} = \textbf{\$8,680} + \textbf{\$0.051x}$$

To solve, we first subtract $0.051x from both sides, leaving us with $0.019x = $8,680. To solve for x, we divide both sides by $0.019, and we're left with x = 456,842. In other words, at 7 cents per copy, the copier cost center's *break-even quantity* is 456,842 copies. That's nearly twice as many copies as it produced so far. Management might want to rethink this decision.

We can also express break-even quantity as a/(p-b). Arranged this way, the previous quantity is $8,680/($0.07 – $0.051), or $8,680/$0.019 = 456,842. The price minus variable costs is known as the *contribution margin*. In some ways, break-even quantity is finding how many units of volume we need to spread the contribution margin to arrive at break-even quantity.

BREAK-EVEN ANALYSIS

The fixed costs of running a fund-raising gala for the Wenatchee Symphony are $10,000, and the variable costs are $75 per attendee. The facility where the event is being held can accommodate 400 people.

What minimum amount can the Wenatchee Symphony charge for a ticket and still break even?

$$Px = a + bx$$
$$P= (a+ bx)/x$$
$$P = (\$10,000 + \$75 \text{ X } 400)/400$$
$$P=\$100$$

Assuming 400 people attend the gala, how much does the Wenatchee Symphony have to charge for each ticket for the Symphony to earn $20,000?

$$P = ((\$10,000 +20,000) + \$75 \text{ X } 400)/400$$
$$P=\$150$$

If the Symphony received a donation of $2,000, would its breakeven ticket price for the gala would increase, decrease, or stay the same?

$$P = ((\$10,000 - \$2,000) + \$75 \text{ X } 400)/400$$
$$P=\$95 — \$5 \text{ less than the break-even point of } \$100$$

Let's ask a different question. Assume that the copier technician says the current copier is aging and will likely break down if asked to make more than 150,000 copies per year. At that volume, how should the copier cost center adjust its prices, so it continues to break even?

Here we re-arrange the formula as p = (a/x) + b. In other words, the break-even price is the fixed costs divided by the volume plus the variable cost per unit. For the copier cost center, this is ($8,680/150,000) + $0.051, or ($0.0579 + .051) = $0.1089. Put differently, if capped at 150,000 copies, the copier cost center would need to charge 10.89 cents per copy to break even. Once again, management should take a careful look before implementing this policy.

The copier cost center is a useful illustration but is also an outlier because most of its costs are variable. This is typical in for-profit manufacturing, logistics, and other industries but atypical among public organizations. For a more typical public organization example, let's return to the HPM program.

Recall from earlier that HPM has estimated fixed costs (a) of $800,000 and variable costs (b) of $400/client. Say HPM's management wants to keep the program relatively small to ensure a quality service, so it decides to limit its enrollment to 400 clients. At that volume (x), its break-even price is ($800,000/400) + $400, or $2,400/client. If management is willing to expand enrollment to 500 clients, the break-even price becomes ($800,000/500) + $400, or $2,000/client.

In another CVP scenario, management reports that governments and philanthropies will pay a maximum of $1,800 per client to participate in the HPM program. At that price, what is HPM's break-even quantity? Once again, the formula is a/(p-b), or $800,000/ ($1,800-$400), or 571 clients. To break

even at that comparatively low price and contribution margin ($1,800-$400, or $1,400), the program will need to serve substantially more clients than it has served recently.

The table below summarizes these various cost-volume-profit calculations.

Calculation	Formula	Question the Calculation Answers
Break-Even Price	(a/x) + b	At a given level of service, at what price per unit does total revenue equal total costs?
Break-Even Quantity	a/(p-b)	How many units do we need to sell at a given price to ensure that revenue equals total costs?
Contribution Margin	p-b	By how much price exceeds variable costs?

Note: For all formulas p = price, x = quantity, a = fixed costs, b = variable costs

CVP is a powerful tool that can directly illuminate many important management decisions. Most CVP today is done in spreadsheets to allow for maximum flexibility when exploring alternative cost scenarios, especially when analyzing services with step-fixed costs. That said, it's still important to understand the basic concepts.

COST ANALYSIS AND FLEXIBLE BUDGETING

Once we've identified a program or service's cost structure, we can take our first steps toward preparing a budget. A *budget* is simply a plan for what an organization wants to accomplish and the resources it will use to accomplish it. Budgets are important – for governments, an adopted budget is the law. It describes taxes and other resources the government intends to collect. Since taxpayers must pay those taxes, the government must spend those resources per the adopted or amended budget. Recall from the earlier discussion that the budget is one of citizens' most important tools to hold the government accountable. Non-profits' budgets don't have the force of law, but they're also critically important. Why? Because if a non-profit deviates substantially from its budget, its funders, and donors will question its ability to make good on its promises and accomplish its mission.

Budgets are made and organized in many ways (see the next chapter). Regardless of an organization's overall budget process, effective cost accounting is paramount to effective budgeting and management, particularly at the program or service level. Public managers must know what portion of the costs they're responsible for are fixed, variable, and step-fixed. They must also understand how different cost items connect to service delivery outputs and how their cost center is assigned indirect costs. And perhaps most important, they must understand how their program's cost structure and cost behavior will change under different performance scenarios. That is why the best budgets are flexible budgets.

A flexible budget allows a manager to quickly and easily perform sensitivity analysis to explore how changes in key cost assumptions affect a program's unit costs, total costs, and service-delivery volume.

Flexible budgeting follows a basic four-step process:

1. ***Identify types of output or activity***. Sometimes those levels of activity correspond to cost centers. Sometimes they relate to programs or "lines of business" within cost centers.

Sometimes they correspond to entire departments or divisions, especially if that department or division delivers a single good or service.

2. ***Collect cost and price data***. For most budget-making, last year's budget is the best source of data on costs and prices. Pay careful attention to past budget trends unless you're tasked with developing a budget for a new service (and someday you will be!). Two basic types of costs are reflected in most public organizations' budgets: operating and capital costs. Operating costs are incurred through the organization's regular, year-to-year activities, like salaries, benefits, and training. Capital costs are related to capital assets like property, equipment, and buildings. Recall that the portion of a capital asset that is "used up" each year is reflected in the organization's operating costs as depreciation expense.
3. ***Classify inputs***. Every organization classifies its cost inputs a bit differently. For a simple budget, it's appropriate to classify the spending inputs in broad *objects of expenditure* like "salaries" or "commodities" and to call the revenue inputs "service revenues," "fees," or some other appropriate broad label. Some organizations prepare budgets using the same chart of accounts used to prepare the basic financial statements. Others have much more detailed *budget item codes* to identify specific types of budget inputs. The key to a classification scheme is that it's as consistent as possible. Once you make a budget with it, make every budget with it.
4. ***Develop a cost rate or unit cost for each key budget input***. A *cost rate* measures the resources needed to staff a service, usually expressed as a unit of output. A *unit cost* is the cost to acquire or produce a unit of a good or service.

Personnel costs are the largest and most visible budget inputs for most public organizations. That's why effective budgeting for public organizations starts and often ends, with careful attention to budgeting for personnel.

So, let's illustrate this four-step process with a personnel budgeting example.

PERSONNEL COST ESTIMATION[1]

You are the director of a non-profit organization that delivers meals to elderly persons in their homes. The state reimburses you a flat rate per person. Your non-profit provides three meals a day per person, seven days per week, 365 days per year. You hire two types of direct program staff: cooks and drivers – all of whom are full-time employees working eight hours per day, five days a week, and are eligible for 10 days of paid vacation.

Cooks get paid $17 per hour and drivers $14 per hour. Staff are eligible for a 25 percent salary bonus if they work on weekends. Your organization contributes $100 per employee per month in health insurance, contributes five percent of wages to a state-run pension plan, and pays regular rates for Social Security and Hospital Insurance (7.65 percent) and Workers' Compensation and Unemployment Insurance (five percent).
Cooks can prepare three meals per day for a maximum of 50 clients per day and drivers can deliver

1. This example was developed by William Duncombe, a beloved member of the faculty at the Maxwell School – Syracuse University. It is included here with minor modifications.

three meals per day for a maximum of 35 clients per day. How many cooks and drivers do you need to hire and what are the related personnel costs for providing three meals per day to 200 clients?

	Cooks	Drivers	Total
1) Demand (individuals served per day)	200	200	
2) *Divided* by productivity rate (individuals served per employee)	50	35.0	
3) *Equals* staff per day	4.00	5.71	
Round up FTE (Full-time employees cannot be fractional)	4 FTE	6 FTE	10 FTE
4) Times operational days equals annual labor time required			
Annual days (or shifts) required (#FTE x 365 days)	1,460	2,190	
Annual hours required (#FTE x 365 days x 8 hrs./day)	11,680	17,520	
5) Bonus pay shifts for excess compensation			
(2 weekend days x 52 weeks x #FTE)	416	624	
Bonus pay hours	3,328	4,992	
(2 weekend days x 52 weeks x #FTE x 8 hours per day)			
6) Annual labor time per employee			
Paid days per year (365 days minus 104 days off)	261	261	
Paid hours per FTE per year	2,088	2,088	
Minus vacation days	10	10	
Equals annual workdays per employee	251	251	
Actual work hours per FTE per year	2,008	2,008	
7) Required Staff?			
(Labor time step (4) divided by labor time per employee step (6))	5.82	8.73	
Rounded up, full-time employees cannot be fractional	6	9	15
8) Calculate the equivalent annual salary per FTE:	2,088 x $17	2,088 x $14	
(Paid hours (which includes vacation) x hourly wage)	$35,496	$29,232	
9) Calculate the salary budget:			
Base salary budget (number of staff times equivalent salary)	$212,976	$263,088	$476,064
Bonus pay (bonus hours from step (5) x hourly wage x .25)	$14,144	$17,472	$31,616
TOTAL SALARY BUDGET	**$227,120**	**$280,560**	**$507,680**
Fringe benefits:			
Health insurance (# of employees x $100 x 12 months)	$7,200	$10,800	$18,000
Pension (0.05 x total salary budget)	$11,356	$14,028	$25,384
Social Security (0.0765 x total salary budget)	$17,375	$21,463	$38,838
UI and WC (0.05 x total salary budget)	$11,356	$14,028	$25,384
TOTAL FRINGE BENEFITS	**$47,287**	**$60,319**	**$107,606**
TOTAL PERSONNEL BUDGET	**$274,407**	**$340,879**	**$615,286**

What about a scenario where most of the key input items are variable costs? Here we would use the unit cost method. The steps for that method are as follows:

1. Project the demand for the service

2. Estimate the resources consumed per unit of output
3. Determine the average cost per unit of output
4. Multiply these three items together to determine the appropriate budgeted amounts

To illustrate, let's return to the HPM program and focus on the counselor's travel costs. Recall that the counselor travels to deliver outreach programs on healthy eating and active lifestyles designed to prevent hypertension among Smallville and Riverdale County residents. Let's assume that for the coming fiscal year, the number of programs will be a bit lower than in previous years but robust nonetheless:

HPM staff project 175 outreach programs

The average mileage per outreach program is 75 miles, and the rate per mile is $0.40.

175 programs X 75 miles per program X $0.40/mile = $5,250

In this case, the "unit cost" and the "object of expenditure" are the same– individual outreach programs. And once again, we'd ideally set this analysis up in a flexible spreadsheet-based budget.

PRACTICE PROBLEM: UNIT COST TABLE AND PROGRAM BUDGET

You are a new budget analyst working in the Department of Motor Vehicles (DMV). Your first task at the DMV is to analyze costs for the Driver's License Unit (herein Unit). The Unit processes two types of transactions: new license applications and license renewal applications. You have been asked to provide unit cost estimates if the Unit were to review 30,000 new license applications and 270,000 license renewal applications. Operational information is as follows:

- The Unit is open five days a week (Monday through Friday), 52 weeks a year. It employs clerks to process license applications. Because of the specialized requirements, clerks are assigned to work on either new license applications or license renewal applications, but not both. On average, it takes a clerk two hours to process a new license application and 30 minutes to process a license renewal.
- Clerks are full-time employees (FTE). They work eight hours per day and are paid $17.50 per hour. They are entitled to two 15-minute breaks and one 30-minute lunch break. As a result, clerks are only able to process applications seven hours a day. As FTEs, the clerks receive three weeks of paid vacation and one week of paid sick leave. Their benefits are estimated to be 25 percent of their wages.
- Clerks are required to copy and scan application materials to a central processing system. Clerks working on new license applications can use one of three workstations to copy, print, and scan application materials. Clerks working on license renewals can use one of the seven workstations to copy, print, and scan renewal application materials. The Unit estimates that each new license application would require 15 pages of printed material, and each license renewal application would require 10 pages of printed material. The Unit has leased these workstations from a local vendor at $250 per month and $0.05 per page of printed material.

- Once all application materials are received, and the application for either a renewal or new license is approved, the clerks in the respective centers are required to process a state-valid driver's license. The license, regardless of type, is at a cost of $3.00 per license.
- Administration and maintenance costs for the Unit are expected to be $750,000 and $400,000, respectively. The DMV requires administration costs to be allocated on the basis of direct services staff and maintenance costs on the basis of output.

Estimate the required operating personnel and non-personnel costs and estimate the operating budget for the Unit.

Begin the process by identifying the unit or units of activity or output produced by the organization and the mission centers. The mission centers are "*New License*" and "*License Renewal*." You want to organize the cost data around these mission centers.

Step 1: Cost Center Workload

A renewal license clerk can process an application in 30 minutes or 0.5 hrs.
The workload for "*License Renewal* "for the year is 135,000 hrs. = 0.5 hrs. x 270,000 applications.

A new license application clerk can process an application in 2 hrs.
The workload for "*New License*" for the year is 60,000 hrs. = 2 hrs. x 30,000 applications.

Step 2: Hours per Employee

Estimate the number of hours each employee can work in any single year. This is an intermediate step in the process of determining the number of employees.

Work hours = (52 – 3 vacation – 1 sick) weeks x 5 days a week x 7 hrs. per day = 1,680 hrs.

Recall that full-time employees are eligible for three weeks of vacation and one week of paid sick leave. Moreover, even though they work eight hours per day, they are eligible for two 15-minute breaks and one 30-minute lunch break. They, therefore, only process applications for seven hours per day.

Step 3: # of Employees

- # of Clerks "*New License*" = 60,000 hrs/1,680 hrs = 35.71, round up to 36 full-time employees.
- # of Clerks "*License Renewal*" = 135,000 hrs/1,680 hrs = 80.35, round up to 81 full-time employees.

Step 4: Cost per Employee

Paid hours = 52 weeks x 5 days a week x 8 hrs. per day = 2,080 hrs.

The annual wage for clerks in both mission centers = 2,080 hrs. x $17.50 = $36,400.

Fringe benefits are 25 percent of base wages = $36,400 x .25 = $9,100

Direct personnel costs for Renewals = ($36,400 x 81 FTE) = $2,948,400
Direct benefit costs for Renewals = ($9,100 x 81 FTE) = $737,100

Direct personnel costs for New License = ($36,400 x 36 FTE) = $1,310,400
Direct benefit costs for New License = ($9,100 x 36 FTE) = $327,600

Step 5: Estimate all other direct costs.

For renewals, workstation costs are = ($250 x 12 months x 7 workstations) + ($0.05 x 10 pages x 270,000) = $156,000. Printing costs are = $3 x 270,000 =$810,000

For new applications, workstation costs are = ($250 x 12 months x 3 workstations) + ($0.05 x 15 pages x 30,000) =$31,500. Printing costs are = $3 x 30,000 =$90,000

Step 6: Estimate indirect costs.

Indirect costs include administration costs ($750,000) to be allocated on the basis of personnel. Maintenance costs ($400,000) are to be allocated on the basis of the number of applications processed.

Administration costs (Direct Staff): 81 clerks in renewals + 36 clerks in new applications = 117 clerks. Allocation of administration costs (in %).

> Renewals administration cost share = (81/117) = 69.2%, in dollar terms = .692 x $750,000 = $519,000
>
> New License administration cost share = (36/117) = 30.8%, in dollar terms = .308 x $750,000 = $231,000

Maintenance costs (# of Licenses processed): 270,000 renewals+ 30,000 new applications = 300,000 applications. Allocation of administration costs (in %)

> Renewals = (270,000/300,000) = 90%, in dollar terms = .9 x $400,000 = $360,000
>
> New License = (30,000/300,000) = 10%, in dollar terms = .1 x $400,000 = $40,000

Step 7: Estimate Revenues.

For renewals, the Unit will charge $15 per renewal application. For new licenses, the Unit will charge $60 per application. Revenues =

Renewals = $15 x 270,000 = $4,050,000

New License = $60 x 30,000 = $1,800,000

Step 8: Prepare a Unit Cost Table for Driver's License Unit

UNIT COST TABLE FOR DRIVER'S LICENSE UNIT

		Renewals	New License	Total
# of Licenses		270,000	30,000	**300,000**
% of Licenses		90.0%	10.0%	
# of Employees		81	36	**117**
% of Employees		69.2%	30.8%	
Direct Costs				
Personnel Costs	***Step***	2,948,400	1,310,400	**4,258,800**
Benefits	***Step***	737,100	327,600	**1,064,700**
Total Personnel Costs		**$ 3,685,500**	**$ 1,638,000**	**$ 5,323,500**
Workstations	***Semi-variable***	156,000	31,500	**187,500**
State-Issued License	***Variable***	810,000	90,000	**900,000**
Total Direct Costs		**$ 4,651,500**	**$ 1,759,500**	**$ 6,411,000**
	Unit Costs	$17.23	$58.65	
Indirect Costs				
Administration	***Fixed***	519,000	231,000	**750,000**
Maintenance	***Fixed***	360,000	40,000	**400,000**
Total Indirect Costs		**$ 879,000**	**$ 271,000**	**$ 1,150,000**
Total Costs		**$ 5,530,500**	**$ 2,030,500**	**$ 7,561,000**
	Unit Costs	$20.48	$67.68	
Total Revenue		**$ 4,050,000**	**$ 1,800,000**	**$ 5,850,000**
	Charge per Application	$15.00	$60.00	
Total Surplus (Deficit)		**$ (1,480,500)**	**$ (230,500)**	**$ (1,711,000)**
Surplus/(Deficit per License)		**$ (5.48)**	**$ (7.68)**	**$ (5.70)**

BUDGET VARIANCE

The difference between actual results and budgeted results is known as a budget variance. Effective public managers understand when, where, and why variances happen. They also use insights from variances to identify inefficiencies and other current management concerns and how they make future budgets.

The simplest variance analysis approach is to compare budgeted expenses to actual expenses. For example, suppose the HPM program budgeted $759,000 for FY15, but actual spending for the year was $789,000. This would be a *total variance* of ($759,000/$789,000) = .962, or 96.2 percent. In other words, budgeted spending was only 96.2 percent of actual spending. This is a *negative variance* or *unfavorable variance* of 3.8 percent, and it directs HPM's management toward a few important questions about HPM's operations. Did HPM serve more clients than expected? Did it spend more than expected on variable costs like mileage or supplies? Was the contract for communications and outreach properly structured? Are its indirect cost allocations fair and consistent with its actual

operations? To address these questions, of course, it would help to compute variances on individual line items (known as *line-item variances*). Larger organizations often compute *department variances.*

Revenue-side variances demand a different type of interpretation. Imagine, for instance, that HPM budgeted for revenues of $800,000 but collected $750,000. The variance here would be ($800,000/$750,000) = 1.0667, for a negative variance of 6.667 percent. Here, Smallville County's HPM management should ask a different set of questions. For instance, is HPM collecting all its revenues? Is Riverdale County slow in reimbursing Smallville County?

Positive variances beg a different set of questions. For example, say HPM's total spending was just $700,000, compared to its budgeted spending of $759,000. This variance is ($759,000/$700,000) = 1.084, for a positive variance of 8.4 percent. But what does positive mean here? Was management able to drive down costs and deliver the expected volume of service at lower overall costs? Or did it not deliver as much of the service as expected?

BUDGET VARIANCE ANALYSIS

TerraWorks is a social enterprise based in Tanzania that manufactures premium kitchen goods from sustainable bamboo. During the recent quarter, the company manufactured 4,000 chopping blocks using 11,000 board feet of bamboo. TerraWorks paid $18,700 for that 11,000 board feet of bamboo. Its budget assumes that each chopping block requires 2.5 board feet of bamboo at a cost of $1.80 per board foot.

What was TerraWorks' spending variance for chopping block production during the most recent quarter? Is this a favorable or unfavorable variance?

If Actual Price = $18,700/11,000 = $1.70, then

Price Variance = (Actual Volume x (Actual Price – Budgeted Price))

= 11,000 chopping blocks x ($1.70 – $1.80) = -$1,100.

This is a positive/favorable variance. TerraWorks produced the chopping blocks at $1,100 under budget because they paid less than expected for bamboo.

In alternative analysis

The budgeted value of the chopping block was = $1.80 x 11,000 board feet = $19,800. The actual cost was $18,700. Price Variance then is $18,700 – $19,800 = -$1,100

What was TerraWorks' volume variance for chopping block production during the most recent quarter?

Volume Variance = Budgeted Price (Actual Volume – Budgeted Volume) = $1.80 (11,000-10,000) = $1,800.
Note that the budgeted volume was = 2.5 board feet x 4,000 chopping blocks.

This is an unfavorable variance. Producing these units required more bamboo than expected.

What was TerraWorks' total variance for the month? How much of that variance was attributable to price variance rather than volume variance?

$1,800 unfavorable volume variance – $1,100 favorable price variance = $700 unfavorable total variance.

In alternative analysis
The budget for the project was $18,000 (i.e., 2.5 board feet x 4,000 units x $1.80 per board foot).
The actual cost for the project was $18,700.

COST STRUCTURE AND MANAGEMENT STRATEGY

By now, it should be clear that the principles of cost behavior, differential cost analysis, and cost-sharing suggest various management strategies. One of the best approaches to manage costs and bolster profitability for organizations with mostly fixed costs is to "scale up." Since fixed costs are fixed, one way to manage them is to spread them across the largest possible volume of service. However, for organizations with mostly variable costs, scaling up will simply increase variable costs. The better approach in that circumstance is to invest in new technology, procurement processes, or other strategies that can drive down variable costs. With the core principles of cost analysis established, it becomes clear how a public organization's cost behavior might be most effectively managed.

It is also essential to consider how an organization's financial management strategy is contingent on the parts of its cost structure it can control. In other words, how much of its costs are direct and under the control of its management, and how much of its costs are indirect and assigned to it by management? For example, organizations with mostly direct costs often find themselves "scrubbing expenses" because they have the authority and ability to affect those costs. However, organizations with mostly indirect costs are more likely to partner with other organizations to leverage economies of scale, diversify their potential customer/client base, or access new technologies or processes they might not have the authority to pursue on their own.

When we consider these two main parts of an organization's cost structure – direct vs. indirect and fixed vs. variable vs. step-fixed – we begin to see a set of attenuated management strategies. The table below lists some of those strategies.

Main Cost Behaviors	Direct	Indirect
Fixed	1. Scrub expenses 2. Scale up. 3. Add value with volunteers. 4. Explore shared facilities/offices/capital equipment	1. Scale up 2. Diversify the client base 3. "Re-centralize" services 4. Consider partnering/outsourcing non-core competencies
Variable	1. Scrub expenses 2. Leverage new technology to drive down unit costs 3. Encourage cash over in-kind contributions	1. Leverage new technology to drive down unit costs 2. Re-centralize or decentralize services as necessary 3. Consider group purchasing 4. Improve workflow planning and efficiency
Step-Fixed	1. Increase "staffing ratios" 2. Set enrollment caps 3. Employ waitlists/enrollment caps/staggered enrollments	1. Diversify the client base 2. Employ waitlists/enrollment caps/staggered enrollments 3. Consider narrowing or limiting the scope of services 4. Leverage technology to "move the step" on certain costs

For example, in the bottom left section, we see financial management strategies commonly employed by organizations with primarily direct, step-fixed costs. For these organizations, the key is managing workflow. As their volume increases, so do their fixed costs. In turn, many organizations of this type work to spread their fixed costs within whichever step their fixed costs currently stand. That means maximizing staff-to-client ratios at all times, including queuing up clients with waiting lists or staggered enrollments before hiring new staff. Since most of those costs are direct, organizations have the latitude to employ these strategies.

By contrast, organizations with mostly indirect costs may not have the ability to enact new enrollment management policies. They must also “manage the step,” but for them, the better strategy is to narrow or limit the scope of services or to find new clients that can lead to more predictable enrollment patterns. In short, managing direct step-fixed costs is quite different from managing indirect step-fixed costs.

This table is by no means a comprehensive list of strategies, but it does orient you toward the interesting and nuanced relationship between cost structure and financial management strategy.

CHAPTER 6.

BUDGET STRATEGY

BUDGET STRATEGY: GETTING THE DEAL DONE

With a more sophisticated understanding of budget-making processes, public managers can answer a variety of questions and management concerns:

- How is "managing costs" different from "managing a budget"?
- What's the best way – financially and politically – to respond to a potential budget cut? To respond to a possible budget increase or expansion?
- How can we structure budget processes to minimize conflict and maximize employee engagement?
- How does the budget timeline, namely when new information is introduced to budget decision-makers, affect how the budget is made?
- What are decision-makers' key concerns throughout the budget process? How do loss aversion, incrementalism, and parochialism affect budget-making?
- How does the format and presentation of a budget document affect how staff, clients, and other stakeholders perceive it?
- Why do governments' actual budget processes regularly deviate from their statutory or legal budget processes?
- What are the most and least effective ways to engage citizens and other stakeholders in the budget-making process?

In the late 1990s, several dozen people died in major house fires throughout the City of Seattle. Critics blamed the Seattle Fire Department for its slow and insufficient response to those fires. The Fire Chief accepted that criticism and urged the City's leaders to invest in significantly upgrading the Fire Department's facilities, equipment, and training. Then-Mayor Greg Nickels proposed a new, 10-year, $197 million property tax levy to pay for that upgrade, and voters approved that levy in 2003. The centerpiece of that levy was a plan to rebuild or refurbish 33 fire stations.

In 2015, the City announced it had spent $306 million on those fire station projects. Of the 33 projects included in the plan, 32 had exceeded their original budgets. Many had cost twice their initial estimate. And the program is not yet complete. The City expected to spend at least $50 million more from other resources to complete those projects over the next five years.

How did this happen? How can a major city program staffed with many sophisticated budget and finance staff over-run its budget by more than 50 percent?

The problem is best captured by the late, great Yogi Berra's adage that "Predictions are hard, especially about the future." Costs of basic materials and labor change all the time, so it's difficult to forecast those costs seven to 10 years into the future. Indeed, basic construction costs increased by around one-third from early 2005 until late 2007. Moreover, during the ten years of the program, professional standards for firefighters changed. Under the new standards, fire stations must now have better training and fitness facilities, better information technology, and other upgrades that added costs to the project.

To others, the problem is politics. According to some accounts, Mayor Nickels' staff estimated the fire station program would cost around $300 million. The Mayor, however, did not believe voters would approve that large a tax increase. So instead, he proposed the highest possible levy he believed would pass, and he assumed the fire stations could be built at lower costs or that additional money for the program would come from future city budgets. Whether you believe the problem is forecasting, politics, or something else, it is clear that the legacy of the fire station levy is two-fold: better fire protection and, presumably, closer scrutiny of future long-term capital projects.

This story illustrates the central point of this chapter: How we make a budget is just as important as the revenues and spending proposed within it. Consider, for instance, how changes to the City's budget process might have produced a different outcome for the fire station levy:

- If the program had not required voter approval, Mayor Nickels might have proposed a much larger levy that better reflected the full cost of the program.
- At the same time, if the City had paid for the full cost of fire stations out of general fund resources that did not require voter approval, those projects might have crowded out the Mayor's other high-priority projects in areas like economic development and affordable housing.
- If the City Council had better access to more sophisticated cost estimates earlier in the approval process for the new levy, they might have supported a higher requested amount or been willing to spend additional city resources.
- If the City Council members were elected by districts (as they are today) rather than at-large (as they were then), then specific members would have had a stronger incentive to monitor the costs and timing of fire station projects within their districts. That might have produced more substantial changes to the program at both the planning and implementation stages.
- If the City's capital budgeting process had more stringent accountability features, then the mayor might have reduced the budget for projects scheduled later in the program once it was clear that the first few projects had run over budget.

LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- Recognize the key components of a public organization's budget timeline/calendar and formal/legal budget process.
- Recognize the different ways that we define "budget balance" and the implications of those various definitions.
- Recognize that budgets ensure fiscal accountability but do not guarantee financial solvency.
- Know the typical sources of conflict and compromise in the budgeting process.
- Know managers' basic strategies to expand their budget authority or respond to potential cuts.
- Acknowledge the effectiveness of "doing nothing" as a budget-cutting strategy.
- Recognize when and why an organization's budget for a service might be quite different from what that service costs.

"Don't tell me what you value, show me your budget, and I'll tell you what you value."

President Joe Biden

BUDGETS ARE A STATEMENT OF OUR VALUES

Budgets frame values that permeate society. They translate those values into policies and programs and communicate priorities to stakeholders. Budgets provide information for policymaking, public scrutiny, and accountability. Budgets must speak to multiple audiences, including legislative body members, taxpayers, employees, and oversight agencies.

A government's budget is a prospective document that shows policy priorities and how it plans to pay for them. It facilitates the stewardship of resources – that expenses are reasonable, necessary, and incurred in the pursuit of the organization's mission. It identifies proposed spending and the means of financing proposed expenditures for the budget year (or multiple years). To that end, budgets must present a summary of revenues by source, expenditures (or expenses) by policy area, and any other source of funds (e.g., bond proceeds or proceeds from the sale of assets).

Budgets guide policy implementation and assess performance (program and financial performance). To that end, budget documents should include a statement of objectives for each unit within the organization (e.g., department, divisions, offices, or programs) and provide objective measures of performance and outcomes.

OPERATING VS. CAPITAL BUDGET

Most state and local governments have two different budgets: the operating budget for recurring expenditures and a capital budget for non-recurring capital expenditures (e.g., land acquisition and improvement costs). All day-to-day expenses of operating core programs are reported in the operating budget. However, capital expenditures may be included in the operating budget if they are recurring expenditures (e.g., purchase of computing equipment). Operating budgets frequently include spending on existing capital investments, including maintenance costs and principal and interest payments on outstanding debt obligations that finance infrastructure improvements.

Capital budgets typically include a capital improvement plan (CIP) that identifies long-term capital spending needs over a five- or 10-year period. The capital budget will identify funding sources over multiple years, including General Fund revenues, special taxes, user charges or fees, federal grants, reserve funds, and long-term debt (proposed or approved).

Creating and justifying capital expenditures is far more challenging for most state and local governments because these investments are not visible but considerably more expensive. Consider, for instance, that 70 percent of infrastructure assets are underground, but it costs $140,000/mile/year to maintain roads.

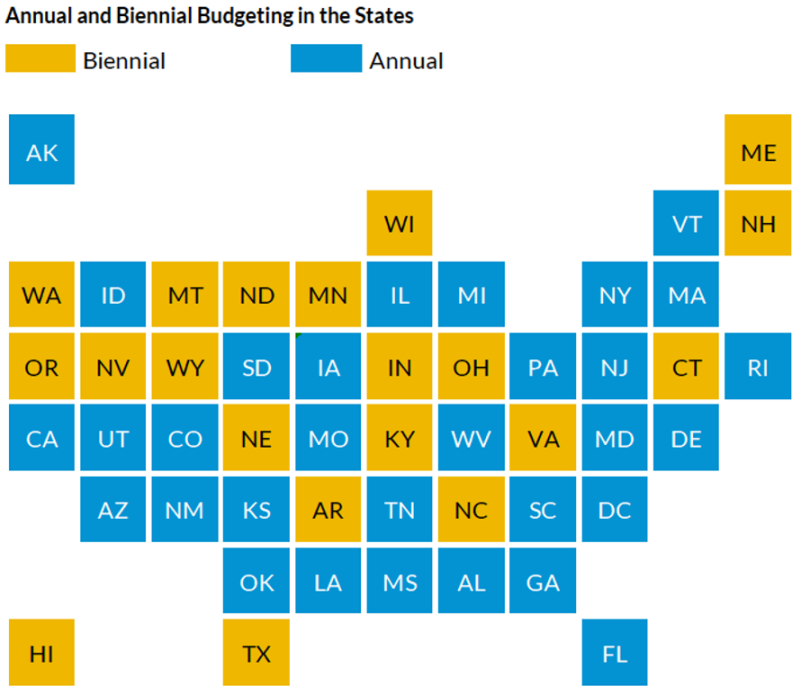
In some instances, spending on capital improvements may require voter approval, as related expenditures are paid for using special tax revenues (e.g., capital projects property tax levy) or general obligation bonds. Borrowing is an acceptable form of financing capital improvements so long as the repayment period does not exceed the asset's useful life. Borrowing should not be used to balance the operating budget. Given the significant costs associated with capital improvements and their potential impact on operating costs, operating budgets, and capital budgets are inextricably linked, as substantive changes in one will impact the other and vice versa.

Most people believe—incorrectly – that governments adopt a single budget. In reality, governments adopt multiple budgets, known as appropriation bills (or spending bills). Up to 13 different appropriation bills must pass both houses of Congress before they go to the President. Appropriation bills may be combined into an omnibus appropriations bill. State and local governments pass fewer bills. The Washington legislature, for example, approves three separate appropriation bills – operating budget bill, capital budget bill, and transportation budget bill.

Governments adopt separate budgets for off-budget entities that are reported in a separate stand-alone budget. While the Federal Reserve System (the Fed) is part of the federal government, the agency has autonomy over its finances with interest on U.S. government securities, foreign currency investments, fees for services provided to depository institutions (e.g., automated clearinghouse operations), and interest earned on loans to banks covering its operating expenses with remittance of any excess funds to the U.S. Treasury. Government-sponsored enterprises, such as the Federal Home Loan Banks, also fall outside the federal budget processes as they are privately owned, and their debt does not bear the full faith and credit of the U.S. government.

ANNUAL VS. BIENNIAL BUDGET

A vast majority of states prepare and present an annual budget. Several states prepare a biennial budget with an annual session. In other words, the state prepares and presents a two-year budget and adjusts the biennial budget at the end of the first year.



Biennial budgeting states generally enact separate budgets for each fiscal year at once. They include Arkansas, Connecticut, Hawaii, Indiana, Kentucky, Maine, Minnesota, Nebraska, New Hampshire, North Carolina, Ohio, Oregon, Virginia, Washington, and Wisconsin. True biennial budgeting—enacting a single two-year budget—is rare, although still practiced in North Dakota and Wyoming. States with biennial budgets and biennial sessions are some of the smallest in the nation — Montana, Nevada, and North Dakota. The exception here is Texas.

Source: National Association of State Budget Officers and Tax Policy Center

INCREMENTALISM AND BUDGET REFORMS

Budgeting is many things to public organizations. It's a mechanism to plan and develop a strategy for the coming year. It's a tool to evaluate how well managers manage. It's a way to evaluate if and how an organization's resources are connected to its priorities. It's a tool to get feedback from key stakeholders about an organization's successes and failures. For governments, the budget is a legally binding document that commits it to a spending plan for the coming year(s). But fundamentally, budgeting is a form of politics. Resources are scarce, and budgeting is the process by which organizations allocate those scarce resources. As such, budgeting is about managing conflict.

Budgeting in governments, and most large bureaucratic institutions, is an *incremental* process. That is, the focal point for each year's budget is an incremental increase or decrease over last year's budget. Put differently, there's an old adage: "Most budgets are last year's budget plus three percent."

Since the Great Recession, most budgets have been last year's minus three, five, or 10 percent. For budget policymakers, conflicts and compromises are often around that annual percentage change or *increment*. This assumes that last year's budget – or *base budget* – fairly represented the organization's goals and priorities. If this is not true, then debating on incremental change will amplify the disconnect between resources and priorities. In fact, for most public organizations, that disconnect is persistent and pervasive.

Historically, governments have prepared line-item budgets that place significant emphasis on inputs. Unfortunately, line-item budgets do not present information in a format that connects the mission to the organization's resources. Most have experimented with various budgeting models designed to "reform" the line-item format and incrementalistic tendency. One of the most popular reform strategies is to allocate resources not through political bargaining but in a more mechanical or formula-driven way driven by priorities or goals. For roughly 50 years, one of the most popular strategies has been *performance budgeting*. In this format, the organization allocates resources not according to inputs or line items like salaries or supplies but rather according to the level of overall resources, regardless of inputs needed to achieve some desired goal or outcome. Some governments extend this model into a *Price of Government* or *Priorities of Government* approach. Under this model, citizens identify the levels and outcomes of government services most important to them, and the government allocates packages of resources to achieve those outcomes.

Performance budgeting and the "Priorities of Government" approach are not mutually exclusive. Cities like Redmond, WA, and Somerville, MA, have implemented performance-based budgeting programs that are tightly connected to strategic priorities. In the Somerville model, departments orient their budget requests around outcomes rather than budget inputs or *line items*. For example, the library system requests its budget in terms of the cost per library patron served, not just in terms of payroll, commodities, equipment, and other line items.

A few state and local governments have experimented with versions of *zero-based budgeting* (ZBB). Under ZBB, the organization assumes there is no such thing as a base budget. Each year, departments and programs must justify everything in their budget. Much of the money state and local government spend is "required by law" or "necessary for public safety," so a large portion of a government's budget cannot be cut through a ZBB process. Some versions of ZBB require departments or programs to connect their non-required spending to the organization's strategic goals or priorities. Proposed spending most closely connected to those goals will likely make its way into the final budget and vice versa. In some ZBB models, departments and programs must present decision-makers with "scenarios" or "decision packages" that identify what will happen if their department or program does not receive a portion of its base budget. All these innovations are designed to remove some or all of the pure political bargaining from budgeting.

That said, most governments and non-profit organizations continue to practice traditional, incremental, line-item budgeting.

OPERATIONALIZING EQUITY AND SOCIAL JUSTICE IN STATE AND LOCAL BUDGETS

City of Seattle Race and Social Justice Initiative (RSJI) is a citywide effort to end institutionalized racism and race-based disparities in government. The Race and Social Justice Initiative leads with racism because race has shaped institutions and policies in the U.S. in ways that have prevented racial equity. When the City of Seattle launched RSJI in 2005, no other government had ever undertaken an effort that focused explicitly on institutional racism. Over the years, several city and county governments have initiated equity and social justice initiatives in their budget processes, including King County (WA), Minneapolis (MN), Madison (WI), Portland (OR), and San Antonio (TX), to name a few.

To be effective, race and social justice initiatives will require concerted efforts in every department in every state or local government. The Seattle Office for Civil Rights leads equity and social justice initiatives in the City and supports the City's departments and staff. Every department has a "Change Team" – i.e., teams facilitating discussions on race, racism, and strategies to overcome institutional barriers to racial and social equity. Departments develop processes that explicitly guide the development, implementation, and evaluation of policies, programs, or initiatives to promote racial equity. The City of Seattle's Racial Equity Toolkit guides the process and requires departments to

- **define racially equitable community outcomes** associated with their program or initiative, focusing on key opportunity areas (e.g., education, community development, public health, environment, criminal justice, and affordable housing)
- **analyze qualitative and quantitative data, and engage community partners**. Conversations with community stakeholders and comparative data would help identify the root causes or factors that can be used to explain racial inequities (e.g., lack of access, bias in processes, lack of racially inclusive engagement)
- **use data to design programs, policies, or initiatives**. They must also outline the expected outcomes (benefits) and unintended consequences (burdens). Recognizing that not all policies will have equitable results, departments must identify strategies that would lead to a long-term positive change or re-align the department's work to achieve racially equitable outcomes
- **evaluate programs to raise awareness and be accountable**. Evaluations would then be used to track impact and identify issues initiatives or programs could not address.

Social justice initiatives face significant challenges, the largest being existing mandatory expenditures, the incremental nature of budgets, and the pervasiveness of restricted revenues, making it extremely challenging to shift resources to under-resourced programs or policy priorities where racial inequities are prevalent. Without new revenues, preferably from progressive taxes, social justice initiatives will have to compete for limited resources.

THE BUDGET PROCESS

Public managers can't control many of the factors that affect their budgets. Managers in government can't control the broader economy. Non-profit managers can't do much to affect the financial health of the foundations that grant them money or individuals who support them through donations. Managers across the public sector can do little to affect rising costs for employee health care, new technology, wages and salaries, and other factors that drive growth in expenses. The best we can do is understand these trends, forecast them to the best of our ability, and help policymakers understand the trade-offs these trends put in play.

But public managers can control how they make their budgets, also known as the *budget process*. In fact, the process is the only part of budgeting that public managers can control. In particular, you alone can answer many of the key questions surrounding each of the three main budget process concerns:

- Who proposes the budget? Do you develop and propose your budget on your own? When developing your initial assumptions, do you solicit input from program managers or other subordinates, your board, council or other policy leaders, outside funders, or other key stakeholders? Do you ask department heads or other subordinates to develop and submit their budgets?
- What information is introduced into the budget process, and when? Do you share the key budget assumptions with program managers, line staff, and other stakeholders? Do you connect budgeted spending with key performance targets? If so, do you make those targets available to other stakeholders? If your budget calls for cuts, do you share when and how those cuts will happen? Do you explain why you chose the cuts you chose? Do you share that information with the entire organization at once or through meetings with individual program managers/department heads/etc.?
- Who decides on final budgeted revenues and spending? Do you afford program managers/department heads/etc., the latitude to propose their own final budget? Does your council/board approve the budget in one action or in stages? If you have the authority to make budget *amendments* or *re-appropriations?* Do you use it, and when? Does your budget include both operations and capital projects, or just operations?

For this and many other reasons, it is important to understand some of the main features of public organizations' budget processes. This discussion is focused on governments' budget processes, mostly because those processes are comparable and are often prescribed by law. That said, many of the basic features of those processes can also apply to non-profits. Moreover, non-profit managers need to understand how government budgets are made, given the centrality of government funding to many non-profit organizations.

BUDGET PROCESS
STATE AND LOCAL GOVERNMENTS

The budget processes of state and local governments share some common characteristics. Most governments follow these basic steps:

1. **Strategic and Department-Level Planning**: This process often begins five to six months before the start of the next fiscal year. The chief executive (governor, mayor, city manager, county administrator, etc.) will issue a budget call highlighting their policy priorities. Department heads and program managers must prepare budgets based on the executive's priorities and their own spending needs. The budget call will include information about expected revenue changes – based on the prevailing economic environment and detailed instructions and assumptions that must be used to prepare the budget (e.g., cost of living adjustments, and mileage rates). The call will also contain detailed instructions on how agencies and departments are expected to prepare budget proposals (e.g., format) and budget calendars to ensure program and departmental budgets are prepared in a timely fashion.
2. **Revenue Forecasting:** For most state and local governments, revenue forecasting begins with national and region-specific forecasts of economic activity. For this, governments frequently use proprietary and national data to predict changes in population, wages, employment/unemployment, income, consumer confidence, market performance, and assess changes in

key sectors in the state or region. Regression models are frequently used to forecast tax revenues. These models incorporate historical data and inputs on expected changes in policy (e.g., changes in marginal income tax rates). Most states and large local governments have a consensus revenue forecast group comprising executive and legislative staff. In seven states, the governor's office alone prepares the estimates (Arkansas, Georgia, Minnesota, New Jersey, Oklahoma, South Carolina, and West Virginia). Others hire consulting firms that prepare, present, and revise multi-year revenue forecasts (Hawaii, Nebraska, Nevada, and Washington). Revenue forecasting is an ongoing process that is revised throughout the preparation, approval, and execution phases of the budget cycle. Revenue officials (treasurer, chief financial officer, finance director, etc.) frequently track economic trends, compare revenue projections to actuals, and use that information to recommend changes during the budget year or the following fiscal year. Some governments' revenues are so volatile that within-year budget changes are frequently required. Volatility in revenues is a function of the volatility of the revenue stream and the share that the stream represents. For example, increased reliance on taxes on oil and minerals (also known as severance taxes) means states like Alaska, North Dakota, and Wyoming have higher volatility scores compared to states like Texas and Pennsylvania, as the latter report a smaller share of revenues from severance taxes. Personal income and sales taxes are typically more stable, while corporate income taxes, like severance taxes, are significantly more volatile.

REVENUE FORECAST VS. CASH FLOW FORECAST

Forecasting has increasingly become an important fiscal planning tool. As the name suggests, to forecast is to "predict or estimate future events." This is often challenging in volatile economic environments. Finance officers will forecast revenues and incorporate estimates in the proposed and approved budget. Proposed and approved budgets are the basis for preparing cash flow forecasts (also known as cash budgets). Unlike revenue forecasts, which are multi-year projections, cash flow forecasts are frequently on a monthly basis. They translate an adopted budget to monthly cash inflows (receipts) and cash outflows (expenditures). This exercise is especially important if cash flows are lumpy. For example, cash inflows from sales taxes or cash outflows for salaries and benefits are monthly and more or less predictable. However, cash inflows from property tax or cash outflows on debt service are lumpy, with payments on a quarterly or semi-annual basis. Similarly, non-profits will receive sizeable cash donations at the end of the year or following a capital campaign/fundraising event. They will frequently be awarded grants and contracts but on a reimbursement basis. That means they'll incur costs – and make payments – before reimbursement is received. Therefore, managers need to plan when and to what extent they'll draw on existing cash reserves, liquidate investments, tap their line of credit, or issue short-term notes. Conversely, they'll use the cash flow forecast to plan how they will restore reserves, invest in safe money-market instruments, or pay off short-term debt.

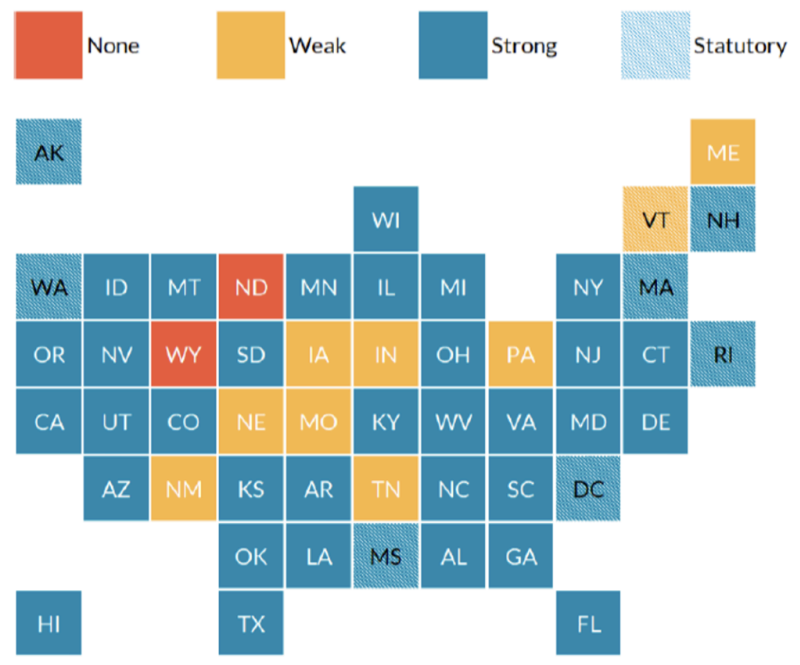
3. **Executive Preparation:** Once budgets are submitted to the executive office, budget staff will review departmental and program budget requests and use these requests to prepare the proposed budget. That's not to say that departmental and program budget requests are adopted as is. In fact, department heads and program directors are often asked to present and defend their budgets, especially if budgets are not consistent with the executive's priorities or exceed budgeted allocations.
4. **Legislative Review and Adoption:** The legislative review process, which often integrates public hearings, begins one to two months before the start of the fiscal year. Legislators will

review the executive's proposed budget, question department and agency heads about their spending plans, and recommend changes that would be included in the final appropriations bill or approved budget. A vast majority of legislative bodies in government will hold public hearings. For states, hearings are part of the regular budget legislative session. For local governments, budget hearings are typically stand-alone public meetings. Budgets are often adopted two to three weeks before the start of the fiscal year, though, in some instances, budget adoption may be delayed. Once legislators pass a budget, the chief executive (governor, mayor, city manager, county administrator, etc.) will sign it. Governors in 44 states can use their line-item veto powers to reject parts of the legislative budget even though doing so would infringe on the legislature's appropriation authority. (i.e., power of the purse). Vetoes can be overridden, typically with a legislative super-majority vote (three-fifths or two-thirds); otherwise, vetoed items do not become part of the approved appropriation, and the deletions or deductions stand.

BALANCED OPERATING BUDGET AND BALANCED BUDGET REQUIREMENTS

Balanced Budget Requirements (BBRs) are constitutional or statutory rules that prohibit states from spending more than they collect. For some governments, this means budgeted revenues must equal or exceed budgeted expenditures when the budget is passed. This is also known as balance "at adoption." For others, it means budgeted revenues and expenditures must equal actual revenues and expenditures, also known as balance "at conclusion."

In most states, the BBRs apply to just the General Fund; in others, the requirement applies to other governmental funds. In some governments, budgeted revenues and expenditures must equal or exceed actual revenues and expenditures at periodic intervals throughout the fiscal year.



Strong balanced budget requirement meets one or more of the following criteria: 1) requires the governor to sign a balanced budget; 2) prohibits the state from carrying over the deficit into the following year or biennium; or 3) requires the legislature to pass a balanced budget, accompanied by within fiscal-year fiscal controls or limits on supplemental appropriations. A statutory designation indicates that all balanced budget rules in that state are statutory, otherwise, the balanced budget rules are in the state's constitution.

Research shows stricter BBRs – particularly those that prohibit states from carrying over deficits into the following fiscal year – are associated with rapid spending adjustments resulting in greater spending volatility as governments cut spending to meet the balanced budget requirement. In some states, BBRs have incentivized unsound budgeting and accounting practices, including frequent use of inter-fund transfers, underestimations of long-term obligations, and the frequent use of asset sales. That said, states that have strict BBRs are more likely to maintain higher reserve balances. The presence of balanced budget laws and higher-than-average reserves means that these governments are more likely to have a higher credit rating and as a result, their borrowing costs are lower.

Source: *Tax Policy Center Briefing Book*

5. **Implementation:** Once the budget is approved, department heads and program managers will implement the approved budget over the next 12 months. Most organizations anticipate changes in forecasted revenues and budgeted spending. They'll plan for mid-year adjustments, some of which may require formal modifications to the adopted budget. The central budget

office will closely monitor the execution processes and adjust next year's budget instructions accordingly.

6. **Audit and Evaluation:** This stage starts at the end of the fiscal year. It can take many months, depending on the organization's size, the complexity of the jurisdiction's chart of accounts, the size, and the professional skills of budget staff and treasury officers, to name a few. Every organization must "close its books" and prepare financial statements before a financial audit. They will also engage in evaluation processes on program effectiveness. The Governmental Accountability Office (GAO) is the audit and evaluation arm of the federal government. Two tasks include "auditing agency operations to determine whether federal funds are spent efficiently and effectively" and "reporting on how well government programs and policies are meeting their objectives."At the state level, the state auditor's office would prepare the government's financial statements and act as watchdogs over state agencies performing internal financial and performance audits. In 24 states, auditors are elected (therefore partisan). Appointed auditors serve as nonpartisan officials.

Even though the stages of the budget cycle are presented here as separate and distinct, they overlap a great deal in practice. For example, the budget's preparation typically begins six to 18 months before the start of the fiscal year, depending on whether the budget is annual or biennial. Thus, when the government is preparing next year's budget request, it is implementing the current year's budget and, in some instances, completing audit reviews, performance evaluations, and financial reporting of the prior year's budget.

Cities, counties, schools, and special districts generally follow the same basic process. In Washington State, most local governments follow a January 1 fiscal year. The mayor/executive/superintendent's staff review departments' budget proposals throughout the late summer and early fall and propose a budget in early September. The Council/Board debates the budget and revises it in late fall and early winter. At the City of Seattle, those proposed changes are articulated in Green Sheets that suggest a change to the Mayor's proposed budget. State law requires a passed budget by December 2. Most local governments do not have the same executive-legislative tensions as the state and federal governments, and local budget processes are rarely as formal. Still, the same basic processes, institutions, and incentives are at play.

BALANCING STATE AND LOCAL GOVERNMENT BUDGETS AMID THE COVID-19 RECESSION

Unlike the federal government, state and local governments must balance their budgets within the budget period or in the next budget period (see Balanced Budget Requirements). Additionally, existing laws prohibit state and local governments from using borrowed funds to pay for operating expenditures.

Practically every economic forecast predicts that the fiscal shock from the COVID-19 recession will be greater than the Great Recession. A prolonged recession and sluggish recovery would likely mean state and local governments must make significant budget cuts. We know from prior recessions that these cuts are more likely to occur in core public services, including healthcare, assistance to older people, and education, as these programs make up more than three-quarters of state or local government

spending.

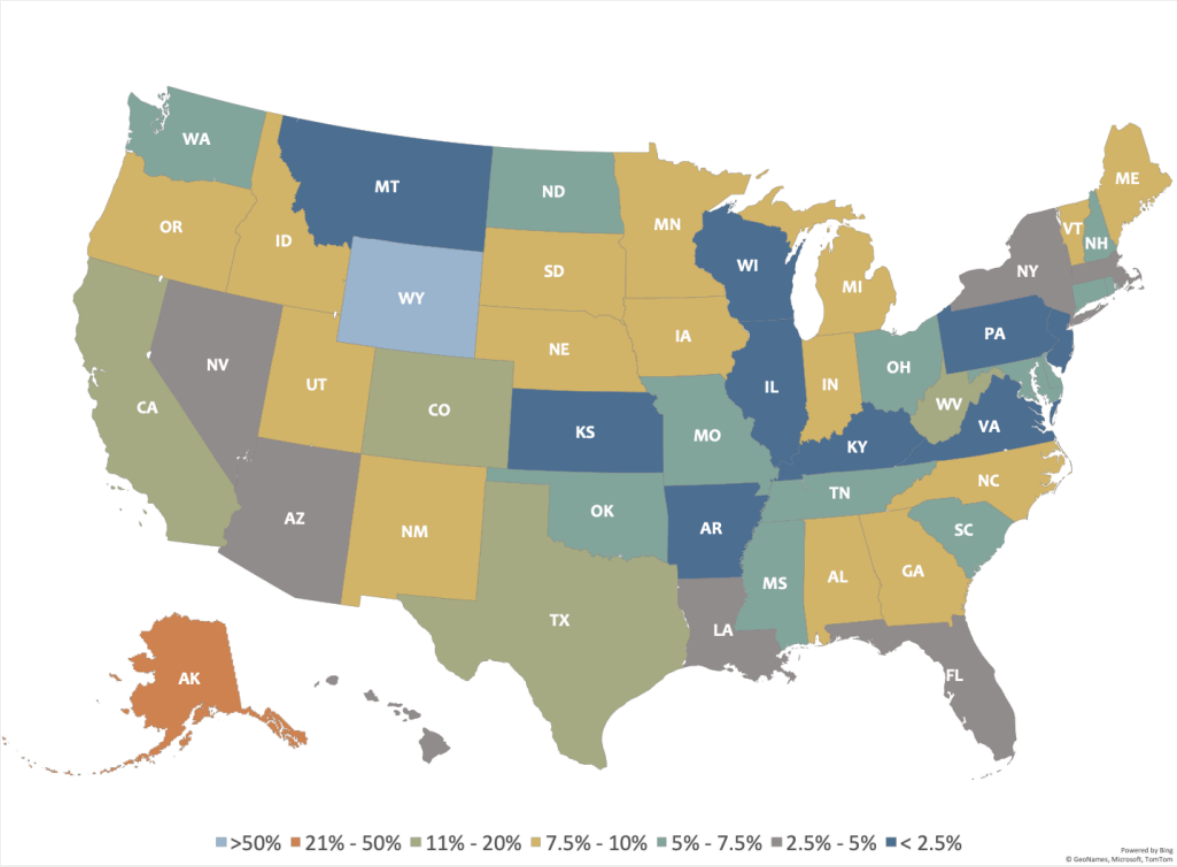
What will these governments do in the near term? Immediate expenditure responses will include hiring freezes, salary, and cost of living adjustment freezes, limits on the use of overtime, improved productivity by streamlining program delivery, cost-effective partnerships with other governments, non-profit organizations, and the private sector, audits of routine expenditures for savings, budget savings following reduced hours of operations, and data-driven targeted cuts in key programs and services. That said, balanced budget requirements frequently necessitate across-the-board (ATB) cuts – and practically every state and local government will use ATB cuts to address projected deficits. In the medium term, governments will likely eliminate programs and close facilities. In the long term, they'll lean on layoffs, furloughs, cuts to employee benefits, and delayed payments to vendors and other governments.

On the revenue side, they'll tap into reserve funds (e.g., Budget Stabilization Funds or unassigned General Funds balances) and rely on inter-fund (internal) loans to ease the cash flow crunch. They'll raise selected fees and taxes (e.g., vehicle registration fees, college tuition, fees for state parks, taxes on gambling (casinos, sports betting, and lotteries), tobacco, alcohol, and marijuana), improve revenue collection (including implementing tax amnesty programs), and mitigate fraud risk loss in government benefit programs (especially in benefit programs). Some will refinance outstanding debt obligations, especially in a low-interest environment. Over the long term, they will finance essential capital expenditures with debt to free up cash for the operating budget. They'll raise rates on major taxes (personal income, sales, and property) and revise their tax codes to reduce or eliminate deductions and exclusions – thereby expanding the taxable base.

SAVING FOR A RAINY DAY

Practically every state government (including the District of Columbia, Puerto Rico, and the U.S. Virgin Islands) has created a budget stabilization fund (BSF, also known as a rainy-day fund (or RDF)). They represent resources explicitly set aside to meet future needs. Many states maintain additional stabilization funds earmarked for specific expenses such as K-12 education (e.g., Idaho's Public Education Stabilization fund) or disaster relief (e.g., California Special Fund for Economic Uncertainties).

Budget Stabilization Funds (as a Percent of General Fund Revenues)



Source: National Association of State Budget Officers (NASBO)

Most local governments do not have formal rainy-day funds in the same way states do. According to recent research, only 11 of the 30 largest U.S. cities have an actual rainy-day fund. Instead, most localities use unassigned fund balances as informal reserves. However, unlike BSF, unassigned fund balances do not have formal constraints. These informal practices are not necessarily bad, but they're not as transparent and funds can be drawn down without setting limits or priorities on the use of these funds.

Funding mechanisms for BSF vary from state to state. Most states allow some or all year-end surpluses to flow to their BSFs. Others mandate deposits to the BSF based on a pre-determined formula. Others set aside funds each year through an annual appropriation process until the fund reaches its mandated cap. Research has shown that for governments to accumulate sufficient reserves, they must identify the source of funding using a pre-determined deposit formula and use approval procedures to withdraw funds from the BSF (e.g., meet the definition of emergency or deficit shortfall or require a super-majority vote). There are benefits to having BSFs. Not only do they provide budget flexibility – the reserves can prevent the need for mid-year budget cuts. Additionally, governments with strict deposit and withdrawal rules are more likely to have a higher credit rating and, as a result, incur lower borrowing costs.

BUDGET PROCESS
FEDERAL GOVERNMENT

The federal government's budget process is three processes in one. The president develops and proposes the *executive budget*, also known as the *budget request*. In Congress, the House Budget Committee and the Senate Budget Committee pass a *budget resolution* that identifies the main spending policies and targets for the Congressional side of the budget. The budget resolution allocates *budget authority*, or the power to incur spending obligations, and *budget outlays*, or the amount of cash that will flow from the Treasury to a federal agency. The budget authority must be re-authorized each year, even though many programs and services call for budget outlays that will span multiple years. It's not uncommon for a project to receive budget authority but not receive adequate budget outlays.

The third part of the process is that the House Ways and Means and Senate appropriations committees must pass a series of appropriations bills allowing the rest of the government to spend money. Once the appropriations bills are passed – usually following a lengthy conference committee process – and the President signs them, they become the federal budget.

The basic timeline for the federal budget process was outlined in the *Congressional Budget Act of 1974*. That process, with the goal of passing the new budget before the end of the federal fiscal year on September 30, is as follows:

The President's Budget

- ***October*** (or shortly after passage of the current fiscal year's budget): The President's *Office of Management and Budget* (OMB) works with executive agencies to develop their budget requests for the coming fiscal year. Executive agencies include all the cabinet-level agencies like the Departments of State, Treasury, Justice, and Education, as well as the federal judiciary, independent regulatory agencies, and several other parts of the federal government. OMB reviews the requests and makes changes, subject to the President's guidance, before combining those requests into the President's budget.
- ***February*****:** President submits the budget request, usually concurrent with the State of the Union address. The House and Senate Budget Committees and House and Senate Appropriation Committees, working through their subcommittees, hold hearings and develop appropriation bills that provide funds for agency operations.

Congressional Budget Process – Budget Resolution and Appropriations Process

- ***March-April***: No later than April 15th of each year, the House and Senate Budget Committees draft and manage the passage of their respective *budget resolutions*. The congressional budget resolution establishes overall revenue and spending totals, allocates spending among major government functions (e.g., national defense, transportation, health, and agriculture), sets limits on resources for discretionary spending programs, and establishes target levels for mandatory spending. Once Budget Committees pass their respective budget resolutions, they go to the House and Senate floors, where they can be amended by majority vote. Representatives from the House and Senate meet in conference to reconcile differences in the House and Senate budget resolutions. The House and Senate then vote on the conference

agreement, which, when passed, becomes the congressional budget resolution. Since the congressional budget resolution is an act of Congress, it does not require the President's signature. Since it does not go to the President, it cannot enact spending or tax law. The congressional budget resolution, therefore, serves as a blueprint for the actual appropriation process and sets targets for other congressional committees that can propose legislation directly.

- ***May-September:*** The adopted budget resolution includes a table called the "302(a) allocation" that sets the cap on spending for the appropriations bills. The House and Senate Appropriations Committees each have 12 subcommittees, and each subcommittee crafts an appropriations bill determining the spending authority for the programs under its jurisdiction. The House and Senate pass their appropriations and reconciliation bills. Conference committees resolve differences in the final appropriations and reconciliation bills. The President signs those bills.
- ***June-July:*** House and Senate committees prepare *reconciliation bills*. Reconciliation occurs if Congress needs to legislate policy changes in mandatory spending or tax laws to meet the annual targets laid out in the budget resolution. Said differently, the reconciliation bills implement changes in *authorizing legislation*, or the laws determining spending on entitlement programs, required by the budget resolution. Most resolution measures are related to entitlement spending like Medicare or to changes in tax law, namely tax cuts.
- ***October 1:*** Fiscal year begins.

The Congressional Budget Act of 1974 established the formal rules of the federal budgeting game. However, in the last few decades, the formal budgeting process explains less and less how the federal government spends money. Consider the following:

- If the appropriations bills are not signed into law by October 1, Congress must pass a *continuing resolution*. This is a temporary measure that extends the existing appropriations bills for a short time, usually 30 to 60 days. Missing the October 1 deadline to enact all 12 appropriation bills is not unusual; in fact, that deadline has not been fully met since FY 1997, and Congress has passed at least one continuing resolution in 16 of the last 20 years. In some years, the government operated on continuing resolutions for most of the next fiscal year.
- For most of the past 20 years, Congress has not passed a budget resolution. Without a resolution, the House and Senate usually pass different substitute versions of the budget targets that would otherwise appear in the budget resolution. Those substitutes or *deeming authorization* bills are advisory, rather than binding, on the appropriations committees. Said differently, the budget resolution mechanism has not been an effective tool for imposing fiscal discipline.
- At any point during the fiscal year, Congress can impose a *rescission* that cancels existing budget authority. The Impoundment Control Act of 1974 specifies that the president may propose to Congress that those funds be rescinded. If both Houses have not approved a rescission proposal (by passing legislation) within 45 days of continuous session, any funds being withheld must be made available for obligation. The threat of rescission, and in some cases the actual use of it, has become a way to enforce de facto budget priorities that were

never written into the budget resolution or appropriations bills. The best recent example is Congress's persistent attempts to strip funding for the Affordable Care Act (ACA, more commonly referred to as "Obamacare").

- In 2011, Congress passed the Budget Control Act (BCA). This law established that unless Congress can reduce the annual budget deficit by a predetermined target, automatic cuts in discretionary and selected entitlement – known broadly as the *sequester*– will take effect. Unless amended, BCA extends the sequester through 2021. Neither the Budget Act nor any other piece of federal budget legislation makes mention of anything like the sequester. BCA was the latest of many *statutory budget caps* designed to limit federal government spending automatically. Those caps are not part of the existing budget process framework laid out in the Congressional Budget Act.
- Many of the federal government's most expensive activities are now paid for outside the budget process. The best recent example is the wars in Iraq and Afghanistan. By some estimates, the two wars cost $1-3 trillion or somewhere between $2,000 and $10,000 for every US taxpayer. Congress appropriated around $50 billion for "The Surge" of US troops into Iraq as part of the FY2006 Defense Department Appropriations bill. The remainder of the funding was allocated through *supplemental appropriations* and *budget amendments*. Supplemental appropriations are appropriations bills that add to an existing appropriation. They are designed to provide resources for unexpected emergencies, such as disaster relief after a hurricane or earthquake. Budget amendments are changes to budget outlays to that same effect. Most of these supplemental/emergency appropriations were financed with debt.

SUPPLEMENTAL APPROPRIATIONS AND THE CORONAVIRUS PANDEMIC

Since March 6, 2020, lawmakers have enacted four laws in response to the pandemic – The Families First Coronavirus Act (March 18, 2020 – $192 billion), The Coronavirus Aid Relief and Economic Security Act (March 27, 2020 – $1.7 trillion), the Paycheck Protection Program and Healthcare Enhancement Act (April 24, 2020 – $483 billion), the Consolidated Appropriations Act (December 27, 2020 – $900 billion), and the American Rescue Plan (March 11, 2021 – $1.9 trillion). The five appropriation bills increased federal government outlays by $5.2 trillion.

For context, following the start of the Great Recession, Congress approved three major pieces of legislation, including the Economic Stimulus Act (February 2008 – $151.7 billion), the Emergency Economic Stabilization Act that created the Troubled Asset Relief Program (October 2008 – $700 billion; TARP recovered $443 billion), and the American Recovery and Reinvestment Act (February 2009 – $840 billion).

- Since roughly 1990, Congress has used budget *reconciliation to* pass several major pieces of legislation, including the "Bush tax cuts," the Medicare prescription drug benefit ("Part D"), and the Affordable Care Act. Reconciliation is a powerful tool because, by Senate rules, reconciliation bills are not subject to filibuster. A *filibuster* is when an individual Senator kills a proposed bill by "talking it to death," taking advantage of Senate rules allowing unlimited debate. To end a filibuster, the Senate must invoke *cloture* with a two-thirds majority vote of all Senators. Given the highly partisan character of the Senate throughout the past few decades, the threat of a filibuster is always present, which imposes a de facto two-thirds

majority to approve virtually every piece of legislation proposed in the Senate.

BUDGET PROCESS
NON-PROFIT ORGANIZATIONS

Unlike governments, non-profits are not required to prepare or adopt a budget prior to the start of the fiscal year (they are required to prepare audited financial statements and file with the Internal Revenue Service tax form 990 at the end of the fiscal year or tax year). Non-profits must therefore be internally motivated to prepare, review, and adopt a balanced operating budget – even though no requirements exist in law. Moreover, the adopted budget should become an unwavering policy guiding the organization throughout the budget period.

Non-profits' budgets should reflect the organization's priorities as outlined in their strategic plan. The non-profit board serves as the organization's governing body with responsibility and oversight of mission, leadership, and finances. While budgets are prepared by program managers together with finance officers and the chief executive, the non-profit board retains the ultimate responsibility of not only setting the organization's strategic direction but also ensuring that there are adequate resources to execute the strategic plan.

The chief executive, together with the finance director, will outline priorities as stated in the organization's strategic plan and given the uncertainty in the external operating environment (e.g., changes in federal or state laws or funding priorities, volatility in the market, and changes in contributions). Having prepared their program budgets, program managers must defend their proposals in a budget review meeting with the chief executive and the finance director. Following an amendment process, the finance director will merge the program budgets, incorporate administrative and overhead costs, and prepare a complete budget proposal for the board to consider.

Most non-profits prepare their operating budgets on a cash basis. Budgets prepared on a cash basis emphasize when cash is received or paid. Budgets prepared on an accrual basis shift the focus away from cash inflows instead of focusing on when revenues are earned and expenses accrued. Does this matter? Absolutely! If the organization is budgeting on a cash basis, expenses that do not result in a cash outflow (e.g., depreciation) would not be included in the budget – even though the expenses represent a real cost for the organization.

While the operating budget represents the organization's priorities for the budget period, non-profits that require capital investments to execute their business model (e.g., universities, museums, and hospitals) frequently consider their capital spending priorities separately from their operating budget. Why? Well, a couple of considerations are important. First, most non-profits finance capital expenditures with non-operating revenues (e.g., proceeds from a capital campaign, accumulated unrestricted reserves, or long-term debt). Second, an assessment of project viability is necessary, as capital investments should provide a return (or, at the very least, cover initial investment costs). Therefore, an assessment of project viability would be prudent. This process requires a different set of analytical tools (e.g., net present value analysis and annual cash flow forecast). Finally, the budget period for capital expenditures is irrelevant, as the focus shifts towards the asset's useful life (e.g., 30 years for buildings).

The (operating and capital) budget review and approval process will be contingent upon the size of the organization's budget, the number of board members, and the board committee structure. The review process frequently begins with a budget presentation to a finance committee. The finance committee pays special attention to the long-term fiscal implications of the proposed spending priorities given current revenue streams. Having approved the budget, an executive committee (made up of board officers and chairs of various committees) reviews and approves the budget, after which it is presented to the entire board for final approval. Once approved, the finance director should report, on a quarterly (or monthly) basis, year-to-date spending, budget versus actual reports (with variance analysis), working capital cash balances, and key changes in programs or policies that affect the operating budget.

"CREATING" BUDGET BALANCE

One of the main criticisms of state and local budgets is that "balanced budgets" might actually hide structural deficits. There are two reasons for this. First, most governments prepare their budgets on a cash basis rather than an accrual basis. Differences in timing and recognition of revenues or expenses mask the long-term effects of budget decisions. Second, managers and policymakers can employ various tactics to create a "phantom" balanced budget.

The pressure to present a balanced budget results in the frequent use of budget gimmicks. Gimmickry can be defined as a practice that intentionally violates accounting rules, budgeting norms, or legal requirements meant to ensure fiscal prudence. They are used to hide program costs, revenue shortfalls, projected deficits, or bypass formal budget process requirements (e.g., adopt a balanced budget).

The temptation of the quick fix has seduced just about every lawmaker. They include:

- **Use of unrealistic budget assumptions**. Use of overly optimistic assumptions that result in revenue projections far exceeding the economic reality, masking the size and magnitude of the government's structural deficit and growth in long-term obligations (e.g., federal debt or unfunded pension obligations).
- **Inter-fund transfers and fund sweeps**. The transfer of resources in and out of funds just before or after budget approval to present a balanced budget.
- **Use of one-time revenues**. State and local governments have used proceeds from asset sales, privatizations, and contract arrangements to balance the current period budget – even though budgets for the out-years remain unbalanced.
- **Accelerating revenue collection.** This changes when revenues are recognized, which can change the budget balance's complexion in a given fiscal period.
- **Putting off payments or ignoring known costs**. Preparing budgets on a cash basis means costs incurred in the current year that are due in a future period are not included in the current budget. When governments offer pension and OPEB benefits but fail to make the contributions necessary to meet future costs, they are essentially borrowing from their future taxpayers.
- **Keeping off the record**. Shift spending to off-budget entities (OBEs) that issue non-guaranteed debt backed primarily with non-tax revenues and are beyond the control and scrutiny of taxpayers.
- **Delaying intergovernmental payments**. This is a common tactic because governments have limited ability to collect revenues from each other.
- **Counting on revenues or savings that are unlikely to materialize – the "Magic Asterisk."** Resources to cover the new spending would come from vaguely described efficiency gains in existing programs. Programs expected to produce those new resources were identified with an asterisk in President Reagan's budgets, hence the name "Magic Asterisk."

"Using proceeds from the sale of government assets as revenues to cover operating costs and thinking you have made the public better off is about the same as burning pieces of your house for heat and thinking that you are better off because you haven't had to buy firewood. "

John Mikesell (2011) "Fiscal Administration: Analysis and Application for the Public Sector"

BUDGET POLITICS

Within the formal budget process, there are budget politics. For most public managers, the politics and strategy of making a budget are just as important, if not more important, than the formal budget process. Here we briefly discuss some of the most common budget-making strategies. Some of these strategies are more appropriate if the goal is to limit spending, while others are more appropriate if

a department or agency wants to expand programs, or at the very least maintain the status quo. They include:

- Cultivate a clientele. Effective public managers understand who "uses" and who "benefits" from their programs and services. They also understand that those users are the best advocates for a program. This is especially true for programs that benefit children, the disabled, and other vulnerable populations. A simple anecdote about a program from one of its clients can be exponentially more powerful than a well-done differential cost analysis.
- Make friends with legislators. Legislators are much more likely to support a program when they understand that program and who benefits from it. This is particularly true when that program benefits its constituents, and when the legislators played a role in creating, expanding, or protecting it. Of course, this strategy comes with risks. Governors, mayors, and other executives often try to limit department heads' and program managers' access to legislators to prevent staff relationships with legislators that might undermine their own budget priorities.
- "Round it Up." This is especially true on the spending side. Rounding up caseloads, spending estimates, interest expenses, and other costs will expand the budget authority and, if actual spending falls short of budgeted spending, create an end-of-year "surplus." The risk is that persistent over-budgeting for spending can undermine a budget maker's credibility.
- "We have a crisis." Some managers like to project that major revenue shortfalls or spending cuts are imminent, even if they aren't. Staff who believe they might face difficult budget cuts are more likely to manage their programs with careful attention to spending discipline and timely collection of revenues. Of course, this can also lead to staff burn-out and ruin a manager's credibility if said crisis never happens.

A few strategies are most effective when a manager is asked to trim their budget.

- "Across-the-Board." Some managers prefer to respond to budget cuts by cutting all their programs equally, or "across the board" (ATB). To staff, ATB cuts appear fair, transparent, and simple. Cutting all programs equally assumes those programs have identical cost structures, current staff openings, and the capacity to generate revenues. That's rarely true. The result is that ATB often affects different programs and services in quite different ways, even though the intent is to bring about a uniform impact. Sometimes those differential effects can themselves be valuable to managers.
- "Do Nothing." An unchanged budget is, in effect, a budget cut. If a program is given no new resources it must find other ways to address cost inflation, growth in caseloads, staff cost of living adjustments, and other growth in spending. Sophisticated managers argue, often successfully, that a "steady state" budget (i.e., no new resources, but no cuts) is a fair way to take a budget cut.
- Lean on precedent. In a cutback environment, what happened in the past can be a powerful tool for managers. No manager wants to have to choose how to cut his or her program. But if they can say, "I didn't really choose these cuts; we're just following past precedent," they're afforded some degree of political cover. Whether past precedent really dictated those cuts, or whether there even is a past precedent, is often debatable.

- "It's essential for public safety." Managers can try to position their program as vital to public health or safety. Sometimes these connections are obtuse, at best. For instance, during the Great Recession, many local libraries protested cuts to library hours by pointing out that libraries are a safe and supportive gathering place for teenagers. Unsupervised teenagers roaming the streets would create, they argued, a serious public safety concern.
- Propose a study. Public organizations can rarely predict – or so they say – exactly how a budget cut will affect their clients, staff, and overall mission. So, in response to a cut, managers routinely propose to "study the issue." A study allows for more time to either identify potential cuts or for the political or economic environment to shift in ways that will obviate the need for a cut at all.
- "Cut the main artery." One way to respond to a requested cut is to cut the largest program that's most central to your mission (i.e. the "main artery"). Cutting that program is, in effect, threatening to cripple your program. Some policymakers will respond with a request for a smaller cut or a cut to a less mission-centric program. The danger here is what happens if policymakers agree to allow a manager to cut the main artery.
- "Just take the whole thing." If a program was cut recently, managers can take the request for an additional cut as an opportunity to offer to end the program. They'll ask: "We've already been cut to the bone, so what's the point of staying open?" or something to that effect. Whether additional cuts would really harm the program is often incidental to the argument.
- "You pick." Instead of proposing cuts, offer policymakers a range of options and ask them to decide which option the program should pursue. Like with "lean on precedent," this allows managers to avoid direct responsibility for specific cuts to his or her staff and other resources. This strategy is prone to backfire when policymakers respond by saying, "It's not my job to pick. You know your program better than anyone. You pick."
- "Washington Monument." In 1994, the federal government shut down after President Clinton and House Speaker Gingrich could not agree on a continuing resolution. President Clinton responded by ordering the National Park Service to close all of the key historic sites in Washington, D.C. One of the first to close was the Washington Monument. As the shutdown dragged on, President Clinton was able to frame the closed Washington Monument as a symbol of Congressional intransigence. The essence of the Washington Monument strategy is to propose cuts to a small but highly visible program.

And finally, managers often deploy a different set of strategies when attempting to expand their program's budget:

- "*It pays for itself*." Managers can sometimes argue that investing in a program will "pay for itself" through cost savings later. For instance, public health advocates have long argued that expanding childhood immunization programs pays for itself by reducing the incidence of communicable diseases like tuberculosis, measles, and rubella that place enormous strain and expense on public hospitals.
- "*Spend to save.*" Investments in technology, equipment, and infrastructure can save staff time, reduce paperwork, collect revenues faster, etc. – or that's how managers sell those investments in the budget process.

- "*Foot in the Door*." Many large, long-standing, popular public sector programs began small. An effective way to expand a program is to run a small pilot program, study, or demonstration project. Legislators and board members are generally willing to appropriate small amounts of money to try "innovative" approaches. With time, many of those small experiments morph into large-scale programs.
- "*It's just temporary*." Like "small innovations," legislators and board members are much more willing to provide temporary funding for a program or project than they are to provide permanent funding or budget authority. Crafty managers are able to convert temporary funding into either "ongoing temporary funding" or even permanent authority.
- "*Finish what we started."* This approach is especially popular with respect to capital projects. Many capital projects begin with an appropriation to analyze, plan, and design a capital project. With that planning in place, managers can make a compelling argument that it's necessary to appropriate more money to "finish what we started," often without regard for whether the plans are complete or whether the analysis suggests the project is necessary.
- "*Re-categorize*." Sometimes shifting a program to a different part of the budget is a necessary step toward expansion. For example, public health advocates have successfully argued that many public health activities like smoking cessation or diabetes prevention are in fact education or outreach programs. Within the education budget, they have access to a much wider range of funding sources and constituent champions. We've seen a similar dynamic with homeland security. Many programs in areas like crime prevention and cybersecurity were once local public safety initiatives but have since migrated to far more lucrative state and federal homeland security budgets.

Amortization: refers to the expensing of acquisition costs (minus residual value) or an intangible asset. The term is also used to refer to the schedule of payments for a loan or mortgage. These are frequently referred to as *loan amortization schedules*. The schedules detail outstanding loan balance, payment per period, principal paid per period, and interest expense per period – through maturity or end of the lending period. See also **depreciation**.

Accrual accounting: reports on a transaction when it has an economic impact, regardless of whether it spends or receives cash. Said differently, under the accrual basis of accounting, revenues are reported when earned and expenses are reported when incurred, regardless of when payment is received or made. See also **modified accrual basis**.

Adverse opinion: is an opinion made by an auditor that states that the financial statements do not fairly present the entity's financial position, results of operations, or cash flows in conformity with generally accepted principles. Also see **unqualified opinion**, **qualified opinion**, and **disclaimer of opinion**.

Allocation basis: is an observable metric we can use to measure the relationship between direct and indirect costs within a cost center. For example, square footage is a metric that can be used to allocate rent or depreciation costs.

Assets: a resource with economic value owned by an individual, company, or government with the expectation it will provide future benefits. Assets are reported in the balance sheet in reducing order of **liquidity**.

Bad debt expense: also known as *allowance for doubtful accounts* or *allowance for uncollectable,* is an estimate of receivables management expects will not be paid. Bad debt expense reduces the number of accounts receivable reported in the balance sheet and provides a more realistic picture of the amount management should expect will turn to cash as payments come due.

Balance sheets: present a summary of an organization's assets, liabilities, and equity position at a particular point in time (e.g., as of December 31, 20XX). Also known as *Statement of Financial Position* or *Statement of Net Position*.

Bankruptcy: proceedings provide financially distressed municipalities with protection from creditors by creating a plan between the municipality and its creditors to resolve the outstanding debt.

Board-designated endowment: also known as a *quasi-endowment*, is a fund that functions like an endowment but without external restrictions. A non–profit's board may designate a portion of the non–profit's investments to a fund with a specific objective in mind (e.g., capital campaign, working-capital reserve). Board–designated funds will be reported under net assets "without donor restrictions." See also **net assets**, **true endowment**, and **term endowment**.

Book value: reports the historical cost of an asset, net of depreciation. Book value is always less than historical cost. See also **historical cost**.

Budgetary solvency: refers to the government's ability to create a balanced budget that provides enough revenues to pay for expenses that occur within the budget period. See also **cash solvency**.

Business-type activities: also known as *proprietary activities*, are supported by user charges and fees for the goods and services it delivers.

Budget resolutions: establish overall revenue and spending totals, allocate spending among major functions of government (e.g., national defense, transportation, health, and agriculture), set limits on resources for discretionary spending programs, and establish target levels for mandatory spending. Since the congressional budget resolution is an act of Congress, it does not require the President's signature. Since it does not go to the President, it also cannot enact spending or tax law. It, therefore, serves as a blueprint for the actual appropriation process and sets targets for other congressional committees that can propose legislation directly.

Budget stabilization funds (BSFs): also known as *rainy-day funds* (RDFs), allow state or local governments to set aside surplus revenue for use during unexpected deficits.

Capital budget: is a state or local government's budget that accounts for the acquisition of property and equipment and all costs related to infrastructure investments. See also **operating budget**.

Capital improvement plan (CIP): is a physical and fiscal planning document that coordinates the timing and financing of capital improvements. CIPs identify long-term capital spending needs over a three-year or five-year period based on a review of existing infrastructure's age, condition, degree of use, and capacity with recommendations to either renew, replace, expand, or retire capital improvements. See also **operating budget** and **capital budget**.

Capital Projects funds: are used to account for and report financial resources that are restricted, committed, or assigned to the expenditure of capital outlays. Restricted or committed revenues may be initially received in another fund (e.g., General Fund), but must be subsequently transferred to the Capital Projects fund. See also, **General Fund**.

Cash equivalents: are investment securities that are meant for short–term investing. They are highly liquid and of high credit quality. They include commercial paperand marketable securities like money market mutual fundsand overnight repurchase agreements (Repos).

Cash Flow Statement: presents a summary of how an organization receives and uses cash to fulfill its mission for a financial period (e.g., for the year ending December 31, 20XX). Also known as *Statement of Cash Flows*.

Cash solvency: is the government's ability to generate and maintain cash balances to pay all its expenditures as they come due. See also **budgetary solvency**.

Commercial paper: an unsecured promissory note issued by large corporations, with excellent credit ratings, with a fixed maturity rarely more than 270 days.

Continuing resolution: a temporary measure that Congress uses to fund the federal government and avoid a government shutdown.

Contingent liability: is a probable obligation that may or may not arise depending on how a future event (e.g., a lawsuit) unfolds. A contingent liability should be recorded as an expense or loss on the income statement and liability on the balance sheet, or otherwise disclosed in the notes to the financial statements.

Cost accounting: also known as *managerial accounting,* is the process of creating information about costs to inform management decisions. Managers need good information about costs to set prices, determine how much of a good or service to deliver and manage costs in ways that make their organization more likely to achieve its mission.

Cost driver: a factor that affects the cost of an activity. A good cost driver is a reliably observable quantity that shares a consistent relationship with the indirect cost in question and the basis for allocating indirect costs.

Credit rating: an independent assessment a rating agency assigns to an issuer (or related bond) to indicate the likelihood the obligor will make payments on time and in full. Ratings range from Aaa/AAA to D – the lowest rating, typically indicating the issuer or obligor is in default.

Current assets: are all the assets that are expected to be sold, used, or converted to cash within a year. Current assets include cash, short–term investments, receivables, and inventory. See also **non-current assets**.

Current liabilities: are all liabilities that need to be paid within a year. Current liabilities include accounts payable, accrued salaries (or wages payable), and the current portion of long-term debt. See also **non-current liabilities**.

Debt issuance costs: are costs paid by the issuer for services relating to the selling of municipal securities – including general obligation bonds, revenue bonds, and notes payable to investors – and managing elements of the transaction. Issuance costs include fees paid to a municipal advisor, credit rating agency, bond insurance, underwriter or underwriting syndicate, and bond counsel, to name a few.

Debt service: is the sum of principal and interest to be paid in the current period, given outstanding long-term debt obligations. On the occasion that the government issues municipal securities, the cost associated with debt issuance would be reported as debt service in the period incurred.

Debt Service funds: are used to account for and report financial resources that are restricted, committed, or assigned to principal and interest expenditures. Restricted or committed revenues may be initially received in another fund (e.g., General Fund), but must be subsequently transferred to the Debt Service fund. See also, **General Fund**.

Deduction: is a dollar amount that reduces taxable income. Taxpayers have a choice of either taking a standard deductionor itemizing their deductions.

Defaults: include *technical default* (failure to comply with bond contract provisions), *pre-monetary*

default (unscheduled draws on debt service reserves), and the most severe type of default, *monetary default* (failure to pay interest or principal).

Deficit: or budget deficit, occurs when expenditures in the budget exceed revenues. A *cyclical deficit*is the result of a decline in revenues as a result of fluctuations in the economic cycle (e.g., an economic recession), and the expected increase in expenditures. A *structural deficit*is when a government's long-term spending exceeds its long-term revenues. It represents a mismatch between revenues generated by a government's current tax laws to fund ongoing essential public services. A fundamental change in taxing and spending policies is required to eliminate a structural deficit.

Deferrals: include *deferred inflow of resources* and *deferred outflow of resources*. A deferred inflow of resources is the acquisition of net assets that apply to a future period, whereas a deferred outflow of resources is the consumption of net assets that apply to a future period. Deferred inflows are substantively different from **unearned revenue**.

Depreciation: is the loss in value of a fixed asset (including improvements on land – such as site preparation, buildings, and infrastructure, office furniture, equipment, computers, and vehicles) with time, due to wear and tear. There are a wide variety of ways of estimating depreciation expense, including **straight-linedepreciation**, accelerated method, declining balance, and sum-of-the-years method – all of which would produce different estimates of depreciation expenses. *Depreciable assets*include improvements on land, equipment, leased assets, etc. *Non-depreciable assets*include construction-in-progress, art, and land (except land bought for mining or extraction).

Differential cost accounting: sometimes called *marginal cost analysis*, is the process of determining how a good or service's full cost changes when we deliver more or less of it.

Disclaimer of opinion: states that the auditor does not express an opinion on the financial statements. Also see **unqualified opinion**, **qualified opinion**, and **adverse opinion**.

Discretionary spending: is government spending controlled in annual appropriation acts approved by Congress. See also **mandatory spending**.

Direct costs: also known as traceable costsor controllable costs, are directly attributable to a cost center. They include salaries for staff who work entirely within a cost center, facilities and supplies used onlyby that cost center, training for cost center-specific staff, etc. Many public organizations further stipulate that a cost is direct to a cost center only if it can be controlled by that center's management. See also **indirect costs**.

Dividends: represent payments made by a company to owners of the company's stock. They represent the distribution of net income to investors and one of the ways investors earn a return from investing in stock.

Effective tax rate: is the ratio of tax liability divided by taxable base (e.g., taxable income or market value of a property).

Fiduciary Fund Statements: are prepared on a full accrual basis and include a *Statement of Net Position* and *Statement of Changes in Net Position*.

Fiscal accountability: is the government's responsibility to justify that their actions in the current period have complied with public decisions concerning the raising and spending of public money in the short-term (usually one budgetary cycle or one year). See also **operational accountability** (from GASB Statement No. 34).

Fund: a stand-alone, self-balancing set of accounts with a specific purpose. A fund is classified as a major fundif government officials believe that fund is particularly important to financial statement users (e.g., the General Fund) or whose revenues, expenditures/expenses, assets, or liabilities are at least 10 percent of corresponding totals for governmental or enterprise funds. See also, **General Fund**.

Filibuster: when an individual Senator kills a proposed bill by "talking it to death," taking advantage of Senate rules allowing unlimited debate. Filibusters allow legislators to debate over a proposed piece of legislation to delay or entirely prevent a decision from being made on the proposal.

Full cost accounting: is the process of identifying a good or service's full cost. The full cost of any service is the direct costs plus the indirect costs.

General Fund: is a *major fund* reported in the **Governmental Fund Statements (GFS)**. The General Fund is frequently the largest fund reported in the GFS. It is used to account for unrestricted resources or resources that are not required to be accounted for in other funds. For a majority of state and local governments, it is the fund that will account for a large proportion of expenditures related to spending priority areas like education, public safety (police and fire), public health, and transportation. These are services that are paid for using unrestricted property and sales taxes.

General obligation bonds: are borrowing by state or local government, backed by its full faith and credit, which essentially means taxing powers. For local governments (and some state governments), voter approval via referendum is required for that entity to issue general obligation bonds. See also **Revenue bonds**.

Governmental activities: are supported by taxes and other non-exchange revenues.

Governmental Fund Statements (GFS): are prepared on a **modified accrual basis** and include a *Balance Sheet* and *Statement of Changes in Revenues, Expenditures, and Fund Balances*. Activities reported in the GFS are those that are generally financed with revenues from taxes, intergovernmental transfers, and other non-exchange or non-market transaction-based revenue sources. The General Fund is a major fund reported in the Governmental Fund Statements. See also **Proprietary Fund Statements** and **Fiduciary Fund Statements**.

Gross Domestic Product (GDP): is a measure of the value of all the final goods and services produced in a specific period.

Historical cost: costs incurred in the acquisition of non-financial assets.See also **book value** and **market value**.

Indirect costs: apply to more than one cost center. Some managers call them *service center*

costs, *internal servicecosts*, or *overhead costs* because they are usually for support services provided within an organization. See also **direct costs**.

In-kind contributions: are goods or services provided for free or at discounted rates. The market value of the in-kind contribution is recognized as revenue and expense in the budget period.

Income Statements: present a summary of an organization's revenues, expenses, and profitability (or *change in net assets*) for a financial period (e.g., for the year ending December 31, 20XX). Also known as an *Operating Statement*, *Profit and Loss Statement*, *Statement of Activities, Statement of Revenues, Expenditures, and Changes in Fund Balances*,or *Statement of Revenues, Expenses, and Changes in Net Position*.

Individual/interpersonal racism: pre-judgment, bias, stereotypes, or generalizations about an individual or group based on race. The impacts of racism on individuals include internalized privilege and oppression. Individual racism can result in illegal discrimination (source: Race and Social Justice Initiative, City of Seattle). See also **institutional racism** and **structural racism**.

Institutional racism: Policies, practices, and procedures that work to the benefit of white people and the detriment of people of color, usually unintentionally or inadvertently (source: Race and Social Justice Initiative, City of Seattle). See also **structural racism** and **individual/interpersonal racism**.

Intangible asset: an asset, other than a financial asset, that lacks physical form. Examples include intellectual property, patents, copyrights, franchises, goodwill, trademarks, and software, to name a few. See also **tangible asset**.

Inventory: goods an organization intends to use, sell, or give away as part of delivering its services.

Liability: sum of money an individual, company, or government owes to others. Liabilities are incurred as a result of general operations (e.g., accounts payable or accrued salaries) or the result of an investment in tangible assets (e.g., mortgages, loans, and bonds). Liabilities are reported in the balance sheet in increasing order of maturity. Maturity refers to the moment in time when payment is due.

Line-item veto: Power possessed by an elected chief executive (e.g., governor) to reduce or reject selected items in an appropriation bill before signing the bill into law.

Line of credit (LOC): sometimes referred to as a *credit line* or *overdraft facility,* is a preset amount of money that a financial institution has agreed to lend either unsecured or secured (using fixed assets or receivables as collateral). Users can draw on the LOC as needed, up to the maximum amount. Interest expense is based on the amount borrowed and the period of use. To be liquid, organizations have to zero out (clean-up or clean-down) for at least 30 consecutive days.

Liquidity: the ease with which an asset can be converted into cash with minimal loss in value.

Long-run solvency: refers to the government's ability to pay for its long-term liabilities given its current taxing or revenue authority. See also **budgetary solvency** and **service-level solvency**.

Mandatory spending: is government spending that is governed by existing law; it is not set by annual

appropriation acts. That said, changes in the level of benefits have to be approved by Congress. See also **discretionary spending**.

Matching principle: is an accounting principle associated with the accrual basis of accounting that requires we recognize expenses in the income statement in the period in which the related revenues were earned. Additionally, if those expenses created a liability, that liability should appear in the balance sheet at the end of the accounting period.

Market value: estimated value of an asset that a willing buyer would pay, and a willing seller would accept, in an open and competitive market. See also **historical cost**.

Modified accrual accounting: is a hybrid of cash basis and full accrual basis of accounting. Under the modified accrual basis of accounting, revenues are recognized when they are both measurable(i.e., cash flow from the revenue can reasonably be estimated) and available(i.e., revenues are available to finance current expenditures within 60 days). Expenditures are to be recognized in the accounting period in which the fund liability is incurred, if measurable, except for interest on long-term liabilities, which should be recognized when due. The governmental fund statements are prepared using the modified accrual basis of accounting. See also **accrual basis of accounting**.

Money market mutual fund: a mutual fund that invests in fixed-income securities with short maturities and minimal credit risk (i.e., high credit quality). Securities frequently include U.S. Treasury bills and commercial paper. Returns from money market funds are minimal but retain value with minimal volatility.

Mortgage: is a debt instrument, secured with collateral of specified real estate property.

Municipal bond: is a debt security issued by the government or a governmental agency to finance capital improvements. Governments can issue two types of bonds: *general obligation bonds* which are backed by the taxing authority of the issuer or *revenue bonds* which are supported with a specific revenue stream (e.g., utility revenues, tuition fees or dormitory rents, patient revenues, or tolls). Non–profits can issue revenue bonds via a special agency or public authority, including healthcare facility authorities, housing finance agencies, higher education facility authorities, and industrial development finance authorities.

Mutual fund: investment instruments that pool money from multiple investors to invest in a diversified portfolio of financial investments (stocks and bonds).

Net assets: represent the difference between assets and liabilities. Non–profits will report net assets "*without donor restrictions*" and net assets "*with donor restrictions*." The latter represents net resources the organization holds that are subject to a donor provision over time or use. These were previously reported as either *temporarily restricted*(over time or use) net assets or *permanently restricted* (restricted in perpetuity) net assets.

Net pension liability: represents the net obligation of retirement benefits a government owes its current employees, retirees, and beneficiaries. It represents the difference between the present value of projected retiree benefits and the assets, most investments, reported at fair value. If accumulated assets exceed projected benefits, a *net pension asset* is reported instead.

Net position: represents the differences between assets and liabilities. Governments will report net position as net investment in capital assets, restricted net assets, and unrestricted net assets. *Net investment in capital*consists of capital assets, net of accumulated depreciation, reduced by outstanding balances of bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets. *Restricted net position* consists of restricted assets reduced by liabilities and deferred inflows of resources related to those assets. The balance is reported under *unrestricted net position*, which represents the sum of net assets, deferred outflows, liabilities, and deferred inflows that are not included in the determination of net investment in capital or restricted component of net position (see GASB Statement 63).

Non-current assets: include assets that are not expected to be sold, used, or converted to cash within a year. Non-current assets include long-term receivables, investments (including restricted investments), and fixed assets. See also **current assets**.

Non-current liabilities: all liabilities that do not need to be paid within the current year. This will include long-term debt payable (net of the current portion) and pension liabilities. See also **current liabilities**.

Notes payable: unsecured short-term loans with maturities ranging from 18 months up to 60 months.

Notes to the Financial Statements: also known as *footnotes to the financial statements*, allow additional information and clarification to items presented in the basic financial statements (balance sheet, income state, and cash flow statement). It presents a summary of required disclosures, including accounting assumptions and any modifications that are material and relevant to financial disclosures, a discussion of financial policies, and a summary of upcoming transactions that may affect the organization's long-term financial position.

Operational accountability: is the government's responsibility to report the extent to which it has met its operating objectives efficiently and effectively, using all resources available for that purpose, and whether it can continue to meet objectives for the foreseeable future. See also **fiscal accountability** (from GASB Statement No. 34).

Operating budget: a state or local government's budget that accounts for recurring agency or program expenditures. See also **capital budget**.

Other financing sources: reported in the governmental fund statements account for inflows and outflows of resources that affect fund balance that are neither a revenue nor expenditure. Other financing sources and uses include proceeds from the sale of assets, insurance recoveries, bond or loan proceeds, and transfers in from or out to other funds.

Other Postemployment Benefits (OPEB): are benefits (other than pensions) that state and local governments provide to retired employees. Benefits principally involve healthcare benefits (including dental, vision, and hearing), but may also include death benefits, life insurance, disability, and long-term care.

Program revenue: includes fees linked to programs for "exchange-like" transactions (e.g., fees the

government charges for the goods and services it delivers) and grants and contributions (i.e., revenues from other governments). Grants are further broken out into operating grants and contributions and capital grants and contributions, with the latter dedicated to capital improvements and investments in infrastructure. See also **general revenue**.

Proprietary Fund Statements: are prepared on a full accrual basis and include a *Statement of Net Position* and *Statement of Revenues, Expenses, and Changes in Net Position*.

Qualified opinion: is an opinion made by an auditor that states that, except for a few issues to which the qualification applies, the financial statements present fairly, in all material respects, the entity's financial position, results of operations, and cash flows in conformity with generally accepted accounting principles. Also see **unqualified opinion**, **adverse opinion**, and **disclaimer of opinion**.

Race equity: if race can no longer be used to predict life outcomes, and outcomes for all groups improved (source: Race and Social Justice Initiative, City of Seattle). See also **Racial inequity**.

Racial inequity: race can be used to predict life outcomes, e.g., disproportionality in education (high school graduation rates), jobs (unemployment rate), criminal justice (arrest and incarceration), etc. (source: Race and Social Justice Initiative, City of Seattle). See also **Racial equity**.

Receivables: including *accounts receivable*, *pledges receivable*,and *grants receivable*, represent monies owed to an organization as a result of a sale of goods or services (accounts receivable), promise to give (pledges receivable), or grant award (grants receivable). Receivables will be reported under current assets if payment is expected within the year; otherwise, they would be reported as non-current assets.

Rescission: The cancellation of budget authority previously provided by Congress. The Impoundment Control Act of 1974 specifies that the president may propose to Congress that funds be rescinded. If both Houses have not approved a rescission proposal (by passing legislation) within 45 days of continuous session, any funds being withheld must be made available for obligation.

Realized gain (loss): results from the selling of a financial asset at a price higher (lower) than the original purchase price or value of the financial asset at the start of the financial period.

Repurchase agreement (Repos): short-term borrowing, mainly in government securities. Specifically, one part sells an asset (usually fixed–income government securities) to another at one price and commits to buying them back, usually the following day, at a slightly higher price.

Revenue bonds: borrowing by state or local government, government enterprises (e.g., water and sewer districts), and non–profits (e.g., hospitals, museums, and private universities) that is secured with non-tax revenues of the issuer. Unlike general obligation bonds, revenue bonds do not require voter approval and governments do not guarantee repayment of bonds with revenues other than those included in the contract. See also **general obligation bonds**.

Sequestration: automatic spending cuts that occur through funding withdrawal for certain (but not all) government programs.

Service-level solvency: a government's ability to pay for all the costs of providing services at the

level and quality that are required for the community's health, safety, and welfare. See also **budgetary solvency** and **long-run solvency**.

Special Revenue funds: used to account for and report on activities related to the use of resources that are restricted or committed for specified purposes other than debt service and capital projects. Those restricted or committed revenues may be initially received in another fund (e.g., General Fund), but must be subsequently transferred to a designated Special Revenue fund. Special Revenue funds should not be used to account for resources held in trust for individuals, private organizations, or other governments. These are reported under fiduciary funds. See also, **General Fund**.

Statement of Functional Expenses: an ancillary financial report used to show the relationship between expenses by type (e.g., salaries, payroll taxes) and key functional areas (e.g., programs, management and administration, and fundraising and development). Following the FASB issuance of Accounting Standards Update (ASU) 2016-14, all non–profits are now required to present a functional expense report.

Straight-line depreciation: estimated by dividing the difference between the asset's historical cost and its expected salvage value (or value at write-off) by the number of years it is expected to be used.

Structural racism: The interplay of policies, practices, programs, and differing institutions leads to adverse outcomes and conditions for communities of color compared to white communities. It occurs within the context of racialized, historical, and cultural conditions (source: Race and Social Justice Initiative, City of Seattle). See also **institutional racism** and **individual/interpersonal racism**.

Supplemental appropriations: Appropriations bill that adds to an existing appropriation and is frequently adopted after the start of the budget year. Legislative bodies may find it necessary to approve additional budget authority for unforeseen contingencies such as natural disasters.

Tangible asset: an asset that has a finite monetary value and usually a physical form (e.g., property and equipment). See also **intangible asset.**

Tax preference: a provision in tax law that allows preferential treatment for certain taxpayers. They include exclusions, exemptions, deductions, preferential tax rates, credits, and deferrals.

Unearned revenue: sometimes referred to as *deferred revenue*, represents revenue the organization has received for services it has yet to provide or goods that have not yet been delivered. If for any reason the organization is unable to deliver the goods or services, it will need to issue a refund to its customers or clients. That is why we recognize that revenue as a liability – the organization owes either goods/services or a refund.

Unrealized gain (loss): records the change in the value of the financial assets if the price is higher (lower) than the original purchase price or value of that financial asset at the start of the financial period. Unrealized gains or losses exist on paper, as the financial assets have not been sold.

Unqualified opinion: also known as a *clean report*, is an opinion made by an auditor that states that the financial statements present fairly, in all material respects, the financial position, results of

operations, and cash flows of the entity in conformity with generally accepted accounting principles. Also see **qualified opinion**, **adverse opinion**, and **disclaimer of opinion**.

Working capital: sometimes known as *net working capital,* is a measure of an organization's liquidity position. It is the difference between current assets (such as cash, cash equivalents, investments, and receivables) and current liabilities (such as accounts payable and wages payable). Every organization needs working capital. It is the excess cash that allows the organization to pay its obligations as they come due, invest in new opportunities as they become available, and have the necessary cushion when payments by clients, donors, grantors, or taxpayers are not received on time or there is a decline in operations.

ABOUT THE AUTHORS

Sharon N. Kioko is an Associate Professor at the Daniel J. Evans School of Public Policy and Governance at the University of Washington. Justin Marlowe is a Research Professor at the University of Chicago Harris School of Public Policy.