RETHINKING FINANCIAL REPORTING



THE THREE CLOCKS OF PUBLIC FINANCE

A practical indicator set for local government financial health

RETHINKING FINANCIAL REPORTING

ABOUT THE AUTHORS

- **Shayne C. Kavanagh**, Senior Manager of Research, GFOA
- **Craig S. Maher**, Professor, University of Nebraska at Omaha
- **Thao Pham**, Consultant, GFOA

ABOUT GFOA

The Government Finance Officers Association (GFOA) represents over 33,000 public finance officers throughout the United States and Canada. GFOA's mission is to advance excellence in government finance. GFOA views its role as a resource, educator, facilitator, and advocate for both its members and the governments they serve and provides best practice guidance, leadership, professional development, resources and tools, networking opportunities, award programs, and advisory services.

ABOUT RETHINKING FINANCIAL REPORTING

Local government is in a time of constrained resources, declining trust, and rapid change. This has prompted GFOA to launch a "rethinking" of several aspects of public finance, including Rethinking Financial Reporting. For example, in a time of decreasing trust in government, we should ask if lengthy, technical financial reports that take significant time to compile, undergo lengthy audit processes, and, as a result, are often published many months in arrears are the most effective way to build trust with government's most important constituency: the public. In a time of declining resources, we should ask if the finance officer's time is well spent producing these reports, if, in fact, these reports are not the best way to provide accountability to the public. Time spent on general purpose external financial reports is time not spent on other forms of decision support and public engagement. Simply put, this time is lost opportunity cost that could otherwise be used to build trust. Rethinking Financial Reporting is a fact-based examination into the costs and benefits of the current model of financial reporting and how we can decrease the former and increase the latter.

USE OF GENERATIVE ARTIFICIAL INTELLIGENCE IN THIS REPORT

This report was developed with the assistance of generative artificial intelligence (AI) tools, used in the following ways:

- **Idea development** — brainstorming and structuring the report outline.
- **Drafting** — generating text for select sections. Where AI's contribution to the final language is material, this is noted in the report. Minor assistance, such as wording or grammar suggestions, is not separately flagged.
- **Editing** — reviewing drafts for clarity and accessibility for the intended audience.
- **Challenge review** — using AI to challenge the report's assumptions, arguments, or conclusions and surface weaknesses before publication.

All facts, data, and ideas sourced from AI tools were independently verified by the author(s) before inclusion; none were taken at face value. GFOA recognizes that generative AI can produce biased, incomplete, or inaccurate output, and applies this same scrutiny regardless of which AI tool was used.

© 2026 Government Finance Officers Association

SUMMARY OF KEY IDEAS | SHAREABLE INFOGRAPHIC

THE THREE CLOCKS OF PUBLIC FINANCE

A PRACTICAL INDICATOR SET FOR LOCAL GOVERNMENT FINANCIAL HEALTH

Public finance operates on more than one timeline. A government can balance this year's budget while weakening its long-term position—or make investments today that improve conditions for future generations.

The Three Clocks of Public Finance provides a way to run these questions together. The Three Clocks organizes financial indicators around the questions decision-makers most want answered. By viewing three time horizons—Annual, Trajectory, and Generational—leaders can see a more complete picture of financial condition and the consequences of today's choices.



ARE WE MANAGING THIS YEAR WELL?

WHERE IS THE MONEY GOING?

This speaks to whether the cost of government is worth it.

Example: Expenditure per capita
How much government spends per resident.

CAN WE AFFORD OUR COSTS?

This answers whether revenues are sufficient to cover costs.

Example: Revenues per capita
How much revenue the government generates per resident.

ARE WE HEADING IN THE RIGHT DIRECTION?



ARE WE BUILDING LONG-TERM STRENGTH OR ACCUMULATING LONG-TERM DEBTS?

This concerns assets and liabilities that affect value to taxpayers over the long-term.

Example: Change in net position
Shows overall financial position. Captures long-term debt, pension obligations, and more.

WHAT IS THE COMMUNITY'S FISCAL CAPACITY?

The government's financial condition depends on the health of its tax base.

Example: Resident Income
A community's income level supports public services through taxes and fees.

ARE WE MAINTAINING OUR RESERVE?

Reserves are the money local government has put aside to be prepared for a "rainy day". It shows the discipline to accumulate surpluses over many years.

Example: All-of-government fund balance
This is money set aside for the future.



WHAT ARE WE HANDING FORWARD?

ARE WE CREATING CONDITIONS THAT CAN BE SUSTAINED?

Costs like capital assets and employee pensions have generational impact. Getting these correct sets up future generations for success.

Example: Capital asset condition
Assets wear out. This shows about how much useful life remains.

CONTENTS

INTRODUCTION: Why Indicators Need More Than Calculation ... 4

CLOCK 1: THE ANNUAL CLOCK ... 8

Where is the money going? ... 9

INDICATOR 1: Expenditures per Capita ... 9

INDICATOR 2: Capital Spending Ratio ... 10

INDICATOR 3: Interest Cost vs. Revenues ... 11

Can we afford our costs? ... 12

INDICATOR 4: Revenues per Capita ... 12

INDICATOR 5: Operating Margin ... 13

INDICATOR 6: Own-Source Revenue Ratio ... 14

INDICATOR 7: Fee Coverage Ratio ... 15

CLOCK 2: THE TRAJECTORY CLOCK ... 16

Are we building long-term strength or accumulating long-term debts? ... 17

INDICATOR 8: Change in Net Position ... 17

INDICATOR 9: Long-Term Liabilities vs. Revenues ... 18

INDICATOR 10: Net Pension Liability (NPL) vs. Revenues ... 19

Are we maintaining our reserve? ... 20

INDICATOR 11: General Fund Balance vs. Revenues ... 20

INDICATOR 12: All-of-Government Fund Balance ... 22

What is the community's fiscal capacity? ... 23

INDICATOR 13: Resident Income ... 23

INDICATOR 14: Full Value per Capita ... 24

CLOCK 3: THE GENERATIONAL CLOCK ... 25

Are we creating conditions that can be sustained? ... 26

INDICATOR 15: Capital Asset Condition ... 26

INDICATOR 16: Pension Funded Ratio ... 27

CONCLUSION ... 28

APPENDIX 1: Criteria for Picking Comparable Governments ... 29

Core Matching Criteria ... 29

Fiscal Capacity Criteria ... 30

Service Scope Criteria ... 30

Other Criteria ... 30



INTRODUCTION

Why Indicators Need More Than Calculation

Local governments produce a great deal of financial data through annual financial reporting. Data, however, is not the same as information.

Information is data that has been given meaning through context. Ratios and other financial indicators have long been used to turn financial data into information. The classic example is unrestricted fund balance as a percent of revenue. A raw fund balance figure tells you very little. Comparing it to annual revenues provides context: How much of a government's annual budget could be replaced by fund balance if there were a revenue interruption? Further context comes from comparing the ratio across years, against peer governments, and against the government's own reserve policy.

Most indicator frameworks stop there. They turn data into information — numbers given meaning through context. We go further. For each measure, we address how to calculate it, what it means in practice, and what a desirable result looks like. We also explain when results are genuinely ambiguous and how one indicator illuminates another. This is the move from information to knowledge and, ultimately, to wisdom in applying that knowledge to the community's financial health.

Individual indicators are useful, but an entire system of indicators provides considerably more knowledge and wisdom. In this report, we introduce **The Three Clocks of Public Finance**.

Each clock answers a different question for a different time horizon.

CLOCK 1, the Annual Clock, asks whether the government is managing this year well.

CLOCK 2, the Trajectory Clock, looks at the *direction* the government is heading over the next few budget cycles. These are trends that a sitting finance officer and governing body can observe, respond to, and most readily alter within a term of office. Rising liabilities, declining reserves, and eroding fiscal capacity are trajectories that current decisions can reverse.

CLOCK 3, the Generational Clock, is about *commitments already made* whose consequences will be borne by future officeholders and future residents. The pension funded ratio does not measure the direction you are heading. It measures how much of a promise has already been backed with assets. Capital asset condition does not measure a current decision. It measures the cumulative effect of decades of investment and deferred maintenance. The key distinction is that Clock 3 indicators describe *conditions being handed forward*, not trajectories being set.

EXHIBIT 1 | **The Three Clocks of Public Finance**



No single clock is sufficient on its own. A government can look healthy on Clock 1 — expenses covered, budget balanced — while Clock 2 shows declining net position and rising long-term liabilities. Clock 3 might reveal that the government's infrastructure is aging faster than it is being replaced and that pension promises are underfunded. Any one clock alone can mislead. The full picture requires all three running simultaneously.

The indicators are organized under six critical questions, one or a few per clock. These questions correspond to what elected officials should be asking and finance officers should be able to answer. For each indicator, we describe why it matters in plain language and how to calculate it. We also explain how to interpret it, including what a desirable result looks like and important analytical perspectives. We identify nuances that require careful interpretation and other indicators that should be read alongside it.

Before discussing the indicators, there are four important points to keep in mind.

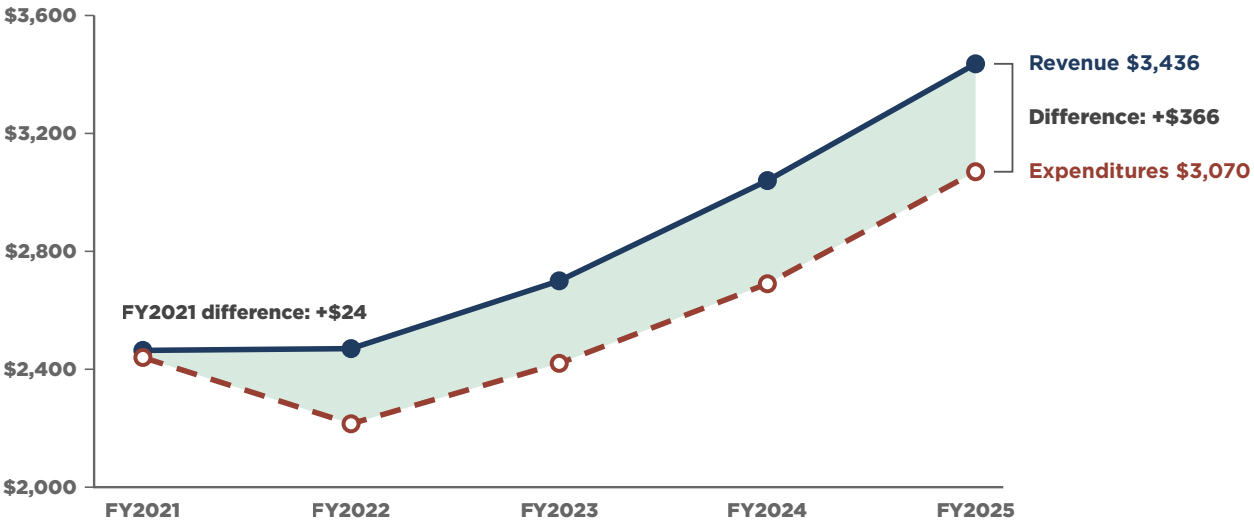
First, we believe the best way to present most indicators is to show multiple years of results, such as three to five years or more. We also recommend adding a trend line through the data points to make the underlying direction of change clear. Exhibit 2 provides an illustration. If any given indicator creates an exception to this rule, it will be noted as a "special presentation consideration" in our description of the indicators.

Second, many financial indicator sets for local governments focus on the general fund and overlook other funds. The Three Clocks uses all governmental funds as the starting point for analysis. This recognizes that other governmental funds, such as special revenue and capital funds, often play a large and essential role in providing public services. Business-type activities can also play a large role in local governments. In some municipalities, enterprises such as utilities and airports can rival or even surpass the size of general government. Cross-subsidization between governmental and enterprise

EXHIBIT 2 | **Where is the money going?**

Expenditures per capita vs. revenue per capita

Since FY2022, revenue per resident has exceeded expenditures per resident by a steady 10–12%.



Difference = revenue per resident minus expenditures per resident.

Green shading: revenue above expenditures. Pink shading: expenditures above revenue.

Source: City of Burbank, CA ACFRs, FY2021–FY2025; total governmental funds (unaudited extraction).

funds can also make financial difficulties harder to see. And some special districts, such as utilities, do not have governmental funds at all. Business-type activities comprise many different types of activities. A water utility, an airport, a transit system, and a convention center differ in how they are funded, how much tax support they receive, and the risks they face. As a result, there may be a strong case for presenting major enterprises separately. The proprietary fund statements report each major enterprise fund in its own column. For each indicator, we explain whether it applies to business-type activities. If it does not, we identify possible substitute measures.

Third, comparisons with peer governments can sometimes provide additional context, but there are often nuances that may limit or even negate the value of peer comparisons for any given indicator. Each indicator has a section on "Comparison with Peer Governments" that describes these nuances. Choosing the right peers is necessary to make comparisons useful. Appendix 1 describes criteria for choosing peers.

Finally, we have presented formulas for calculating measures that we believe apply to all or most governments. But there may be cases where a government has good reason for adjusting a measure to suit its circumstances. For example, some governments act as financial conduits for activities carried out by others. A government may collect a tax and pass most of it through to other governments. In such a case, revenues and expenditures shown in the financial report may give the impression that the scale of the government's operations is larger than it actually is. In this example, the finance officer should consider adjusting the presentation of revenues and expenditures to help the audience better judge the scale of the government's own operations versus what it passes through to others. More broadly, finance officers should be mindful of situations where the standard calculation of a measure may give the audience a partial or mistaken impression and adjust accordingly, even if such situations are rare.

Getting Data for the Three Clocks



Much of the data behind the Three Clocks lives in ACFRs, which means it's locked in PDFs. GFOA, its subsidiary GovFi Solutions, and MadisonAI have developed an approach to extracting this data with AI. It differs from past efforts in five ways:

- **Cross-checking.** Most key figures, such as total fund balance, can be derived more than one way within an ACFR. Where possible, the approach extracts them from multiple places and compares the results.
- **The whole report.** Useful data is spread throughout the ACFR, so extraction isn't limited to one or two statements.
- **Trends, not snapshots.** The approach is designed to capture multiple years of reports per government, including older scanned documents that aren't easily machine-readable.
- **A fixed source of truth.** AI can misremember data. Validated figures are recorded in a static database, and analysis draws from that database rather than from the AI.
- **Enables accurate peer comparisons.** Agencies can compare against peers using established and vetted metrics.

Data gathered this way opens the door to comparing financial health across peer governments and over time, questions that are hard to answer when the data sits in PDFs.



Managing the Near Term Well

The Annual Clock captures the government's current financial position and operating decisions. Its two critical questions ask where the money is going and whether the government can afford its costs. These are the questions most immediately within a finance officer's line of sight and the ones elected officials most often want answered.

IN THIS SECTION:

Where is the money going?

1. Expenditures per capita
2. Capital spending ratio
3. Interest cost vs. revenues

Can we afford our costs?

4. Revenues per capita
5. Operating margin
6. Own-source revenue ratio
7. Fee coverage ratio

Where is the money going?

This is the main question taxpayers ask. It speaks to whether the cost of government is worth it.

INDICATOR 1: Expenditures per Capita

This shows how much the government spends per resident. This is the most direct measure of the cost of government.

How to Calculate It

Data point:	**Total Governmental Fund Expenditures**	÷	**Population**
Found in:	**Statement of Revenues, Expenditures, and Changes in Fund Balances—Governmental Funds**		**Statistical Section (several tables address population) or Internet Search***

Calculation note. Use total expenditures only. Other financing uses, such as transfers out, are reported separately on the statement and should be excluded.

How to Interpret It

- **What is desirable.** There is no ideal level of expenditures. Expenditures per capita is best evaluated by comparing it to revenues per capita (Indicator 4). This provides a clear, objective target: expenditures should not exceed revenues. When expenditures consistently outpace revenues, it signals structural imbalance.
- **Special presentation consideration.** The concept of "structural imbalance" between revenues and expenditures also includes using one-time revenues to fund ongoing expenditures. ACFR data doesn't differentiate between one-time and ongoing expenditures or revenues. The finance officer can supplement the presentation by addressing the relationship between ongoing revenues and ongoing expenditures.
- **Comparison with peer governments.** The comparative value of this indicator can be limited, perhaps severely, by differing community characteristics. For example, governments may offer different services. A city with its own fire department might spend more than a city that has an overlapping, independent fire protection district. A city with a large business presence might also spend more per resident than a residential community.
- **Applicability to business-type activities.** This indicator is not applicable. Expenditures per capita is essentially a "per unit cost" for general government services. Population is not a good representation of service responsibility for many enterprises. Operating expense growth rate is a simple measure that could be compared to operating revenue growth rate. This shows whether the enterprise is managing the near term well. The "operating ratio" (operating revenues ÷ operating expenses) is a common measure of fiscal health for enterprise funds.

*Statistical sections are included in annual comprehensive financial reports. For reports without a statistical section, population will have to be sourced elsewhere.

INDICATOR 2: Capital Spending Ratio

Of every dollar spent, how much goes toward the physical assets of the community, such as roads, buildings, and equipment, rather than paying for day-to-day operations? Governments that consistently spend very little on capital are living off infrastructure built by previous generations without reinvesting for the next.

How to Calculate It

Data point:	**Capital Outlay (total governmental funds)**	÷	**Total Governmental Fund Expenditures**
Found in:	**Statement of Revenues, Expenditures, and Changes in Fund Balances**		**Statement of Revenues, Expenditures, and Changes in Fund Balances**

How to Interpret It

- **What is desirable.** There is no clear target for this measure. However, it does offer some clear warning signs. A very high ratio relative to peer communities might indicate a risk of building more infrastructure than the government can afford to operate and maintain in future years. A very low ratio relative to peer communities might indicate underinvestment in infrastructure.

  Other indicators in the Three Clocks can provide valuable context. Capital asset condition (Indicator 15) provides information on how capital asset conditions are deteriorating or improving. Deteriorating conditions along with low capital spending is a strong clue that there is underinvestment. Interest cost vs. revenues (Indicator 3) can also help contextualize capital spending. Low interest costs are generally desirable, but very low interest outlays could indicate that the government is not making good use of its ability to borrow.

- **Special presentation consideration.** The capital spending ratio is one of the noisier indicators in the Three Clocks. Year-to-year results can vary a lot without reflecting a larger underlying trend. The variation reflects a real phenomenon: it shows when major projects happen. However, this variation can "pull" a trend line in a misleading direction. A better way to reduce the variation and show the general direction is to use a three- to five-year moving average. This averages together a given year with the two to four preceding years.

  Also, the capital outlay figure could include large software purchases. For some audience members, software may not fall within the definition of "infrastructure." If software spending can be identified in the notes to the financial statements, it could be subtracted from capital outlay. Otherwise, a trend line or moving average may be the more practical approach. This will provide insight into more "typical" spending patterns.

- **Comparison with peer governments.** Comparability can be limited by a community's stage of growth, such as whether it is built out or growing rapidly. Still, peer comparisons provide useful context for a measure with no clear objective target.

- **Applicability to business-type activities.** This indicator is applicable but requires using different statements. The formula is: Capital expenditures (from the statement of cash flows, "capital and related financing activities" section) ÷ Total operating expenses (from proprietary funds income statement).

INDICATOR 3: Interest Cost vs. Revenues[1]

For every dollar of revenue collected, how many cents go straight to interest before a single service is delivered? A government with a high or rising interest burden has precommitted a growing share of its budget to past decisions, leaving less for current services. This measure expresses debt burden in a way residents and elected officials can easily understand.

How to Calculate It

Data point:	**Interest and Fiscal Charges**	÷	**Total Governmental Activities Revenues (general + program)**
Found in:	**Statement of Activities (governmental activities)**		**Statement of Activities (governmental activities)**

How to Interpret It

- **What is desirable.** The ratio should be as low as possible while still meeting capital investment needs. A rising ratio over multiple years is an unambiguous concern. There is no universal threshold. However, a ratio that is rising while the capital spending ratio (Indicator 2) is falling warrants attention. The government may be paying for past capital while deferring future investment. It is important to note that this ratio only addresses current interest charges and does not provide insight into long-term debt repayment schedules. Debt repayment schedules structured with lower principal payments in early years and larger payments in later years can make current interest costs look modest compared with what will be required in future budgets. Governments planning significant additional borrowing while carrying backloaded debt deserve particular attention. The effect of future principal obligations may not be visible in today's ratio.
- **Comparison with peer governments.** This comparison is useful for governments at similar stages of their development cycle. A rapidly growing government that is building infrastructure will have a higher ratio than a mature, built-out government; that difference reflects capital investment strategy, not fiscal weakness.
- **Applicability to business-type activities.** Business-type activities do not report interest and financing charges as a separate item in the Statement of Activities. A similar measure could be constructed by finding interest charges on the Proprietary Funds Statement of Revenues, Expenses and Changes in Net Position. Alternatively, rating agencies often examine "debt service as a percent of revenue" for enterprises (annual debt service ÷ operating revenues). This might be a good substitute measure, especially for governments that must remain aware of bond ratings.

Can we afford our costs?

This complements our first question: Where is the money going? This question answers whether revenues are sufficient to cover costs.

INDICATOR 4: Revenues per Capita

This shows how much revenue the government generates per resident. It reveals whether the community's revenue base is growing, stagnating, or shrinking. It also reveals whether fiscal capacity is keeping pace with a changing population.

How to Calculate It

Data point:	**Total Governmental Fund Revenues**	**÷**	**Population**
Found in:	**Statement of Revenues, Expenditures, and Changes in Fund Balances—Governmental Funds**		**Statistical Section (several tables address population) or Internet Search***

Calculation note. Use total revenues only. Other financing sources, such as bond proceeds and transfers in, are reported separately on the statement and should be excluded. Including bond proceeds can create large spikes that don't accurately represent the revenue base.

How to Interpret It

- **What is desirable.** This indicator is best evaluated against expenditures per capita (Indicator 1). The desirable state is revenues per capita staying even with or above expenditures per capita. Given that this measure is best evaluated in the context of expenditures per capita (and vice versa), it is important that both measures take the revenue and expenditures figures from the same statements.† Of course, both measures should also use the same population figures.
- **Special presentation consideration.** As described under expenditures per capita, the ACFR data doesn't differentiate between one-time and ongoing expenditures or revenues. The finance officer can supplement the presentation by addressing the role of one-time revenues in the government's revenue portfolio.
- **Comparison with peer governments.** Comparability can be limited, perhaps severely, by differing community characteristics. For example, governments with large commercial or industrial land uses will likely have higher revenues per person than residential communities.
- **Applicability to business-type activities.** This indicator is not applicable. Fee coverage ratio (Indicator 7) gives a much more valuable perspective on the revenue position of business-type activities, especially those that are expected to be self-supporting. Operating revenue growth rate is another possibility. It could be compared with operating expense growth rate to provide context for whether the enterprise is managing the near term well. The "operating ratio" (operating revenues ÷ operating expenses) is a common measure of fiscal health for enterprise funds.

*Statistical sections are included in annual comprehensive financial reports. For reports without a statistical section, population will have to be sourced elsewhere.

†Different statements may be constructed using different bases of accounting, thereby complicating comparisons of numbers across statements.

INDICATOR 5: Operating Margin

Previous indicators have looked at revenues and expenditures. This is an important perspective but does not account for future obligations that do not show up in this year's spending. This indicator addresses that concern by including items like depreciation on aging infrastructure and post-employment benefit obligations. Obligations such as pensions may be earned this year but not paid until decades later. This measure also includes resources that traditional revenue figures do not, such as federal capital grants and donated infrastructure. The result is a fuller picture of the resources available to the government and the draws on those resources. The difference between resources available and draws on those resources describes the change in the government's financial position. Expressing this change as a percentage of revenues tells us whether the government is generating enough resources to cover its full cost and by how much. A positive result means the government is living within its means; a negative result means it is quietly drawing down its financial foundation even if the annual budget appears balanced.

How to Calculate It*

Data point:	Change in Net Position (end of year – beginning of year)	÷	Total Governmental Activities Revenues (general + program)†
Found in:	Statement of Activities		Statement of Activities

How to Interpret It

- **What is desirable.** Consistently positive numbers are unambiguously good. The goal is not maximum surplus. A very large margin may indicate over-taxation or under-delivery of services unless there is a specific purpose, like saving up for a large capital project or building needed reserves. Persistently negative results over multiple years signal structural imbalance regardless of what the adopted budget shows.

  An interpretive hazard is that net position can increase because a government acquired significant capital assets. High capital investment improves the operating margin but creates future maintenance obligations. A rising operating margin driven primarily by capital acquisition should be read alongside the capital spending ratio (Indicator 2) and interest cost vs. revenues (Indicator 3) to determine if the investment is sustainable.
- **Special presentation consideration.** Adoption of new GASB standards that change how this measure is calculated can cause discontinuities in the trend. For example, GASB 68 and GASB 75 created one-time discontinuities in net position for many governments when first adopted because they added new elements to the calculation (pensions and other post-employment benefits). Trend lines should be broken or segmented when accounting standards change or when funds are reclassified, such as when an activity moves from a governmental fund to an enterprise fund.
- **Comparison with peer governments.** Full accrual accounting makes cross-government comparisons more meaningful. However, different service responsibilities and revenue mixes limit direct comparability. This indicator is most useful when compared with the same government over time and with peers that have a similar service scope.
- **Applicability to business-type activities.** This indicator is directly applicable and particularly useful for comparison with governmental activities when there are large transfers between funds.

*Statement of Activities (government-wide) → Governmental Activities column → Increase (Decrease) in Net Position ÷ Total Revenues. Full accrual basis includes noncash items such as depreciation. This is expected and appropriate. Cross-check: the derived change in net position should match the difference in net position between years on the Statement of Net Position.

†Transfers are considered part of this calculation. We assume there is a good reason for transfers, so they are part of available resources. That said, there is always a possibility that a government is cross-subsidizing governmental and business-type activities. Therefore, when transfers are an important part of total resources, it is prudent to look at this measure for governmental and business-type funds to ensure both are in good condition, given the transfers being made.

INDICATOR 6: Own-Source Revenue Ratio

A government that depends heavily on outside funding is only as stable as the political decisions of others. This measures how much of the government's revenue it actually controls, such as taxes it collects and fees it charges, versus money it receives from the state or federal government. A government heavily dependent on outside funding is vulnerable. If grants are cut or state aid is reduced, a self-reliant government has options that a dependent one does not. The American Rescue Plan Act (ARPA) funds received in 2020–2023 temporarily lowered this ratio for many governments because they increased intergovernmental revenue. As those funds wind down, the ratio will recover, but the more important question is whether ongoing costs were started with one-time federal money.

How to Calculate It

Data point:	**Own-Source Revenue* (charges for services + general revenues)**	**÷**	**Total Revenues (general + program)**
Found in:	**Statement of Activities**		**Statement of Activities**

How to Interpret It

- **What is desirable.** Higher self-reliance is generally more desirable. There is no universal target because legal constraints vary significantly by state, but a majority of revenues being own-source is a reasonable benchmark. The direction of the trend matters too: a declining ratio signals growing vulnerability to outside decisions.
- **Special presentation consideration.** First, this indicator is focused on intergovernmental revenue. While that is important, it could be that a government has other revenue risks this indicator doesn't capture, such as high reliance on a single taxpayer or reliance on volatile revenue sources. The finance officer should adjust the presentation to include more salient risks, if necessary. Second, ARPA funding could create a large break in the trend for some governments. The presentation may be more informative if ARPA is excluded from a long-term trend line.
- **Comparison with peer governments.** This indicator is most useful for comparisons within the same state, where governments operate under similar legal environments. Governments with higher ratios may have developed other own-source revenue streams worth investigating.
- **Applicability to business-type activities.** The applicability of this indicator depends on the activity. Enterprise activities such as utilities usually have little to no outside funding, while others such as transit might have significant outside funding.

*You will not find an item called "own-source revenue." It comprises the parenthetical items, which you will find.

INDICATOR 7: Fee Coverage Ratio

Some government services should be covered by fees paid by the users of that service. A water utility is a common example. Low fee coverage could mean taxpayers are subsidizing services that could potentially be self-funding.

Other services, such as those provided via governmental funds, might have some role for user fees, but not a dominant role. A very low ratio might mean there are opportunities for greater use of fees and reducing reliance on taxes, while a high ratio might mean fees are being overused.

How to Calculate It

Data point:	**Charges for Services**	÷	**Function/Program Expenses (governmental or business-type activities, matching the charges for services)**
Found in:	**Statement of Activities**		**Statement of Activities**

How to Interpret It

- **What is desirable.** This depends entirely on the service. For utility-like services, 100% cost recovery is appropriate. For core government services, much lower coverage is expected and appropriate. Most important is that fee levels should reflect an intentional policy choice. A lack of clear policy could create problems. For example, the ratio may fall if charges are not updated to reflect changing costs. The ratio may also rise if an unwillingness to levy general taxes results in fees being overused to cover revenue gaps.
- **Comparison with peer governments.** For general government, this could be useful to find examples of governments that are making greater use of fees. Further investigation could reveal whether that represents an opportunity for expanded uses of fees in your own government.
- **Applicability to business-type activities.** This indicator is applicable and especially valuable for enterprises that are expected to be fully self-supporting. For partially self-supporting enterprises, this indicator can be paired with the own-source revenue ratio (Indicator 6). Together, they show the relative importance of self-supporting fees, external support, and transfers from the general government.



CLOCK 2
TRAJECTORY CLOCK

Heading in the Right Direction

The Trajectory Clock provides insight into where the government is trending in the next several years by looking beyond revenues and expenditures. The Trajectory Clock focuses on assets and liabilities and the community's fiscal capacity.

IN THIS SECTION:

Are we building long-term strength or accumulating long-term debts?

8 Change in Net Position

9 Long-Term Liabilities vs. Revenues

10 Net Pension Liability (NPL) vs. Revenues

Are we maintaining our reserve?

11 General Fund Balance vs. Revenues

12 All-of-Government Fund Balance

What is the community's fiscal capacity?

13 Resident Income

14 Full Value per Capita

Are we building long-term strength or accumulating long-term debts?

This question concerns assets and liabilities, financial resources and obligations that are not obvious in the annual budget. These assets and liabilities can have a powerful effect on the government's ability to deliver services and provide good value to taxpayers over the long term.

INDICATOR 8: Change in Net Position

This indicator tells us if the government's overall financial position is getting stronger or weaker over time. This measure gives the broadest view of fiscal trajectory. It includes not just cash flows but also the aging infrastructure, pension obligations, and long-term debt.

How to Calculate It

Data point:	Net Position at End of Year	-	Net Position at Start of Year
Found in:	Statement of Activities*		Statement of Activities

How to Interpret It

- **What is desirable.** A government whose net position is steadily declining is spending down its financial inheritance. An increasing net position means the government is building a stronger financial foundation. One caveat is that a government making large capital investments may build assets that it will have difficulty maintaining in the future. Use capital spending ratio (Indicator 2) to get a sense of the amount of investment in capital assets.
- **Special presentation consideration.** Adoption of new GASB standards that change how this measure is calculated can cause discontinuities in the trend. For example, GASB 68 and GASB 75 created one-time discontinuities in net position for many governments when first adopted because they added two new elements to the calculation (pensions and OPEB). Trend lines should be broken or segmented when accounting standards change or when funds are reclassified, such as when an activity moves from a governmental fund to an enterprise fund.

  Also, unlike most other indicators, this is not a ratio. It is just the difference between last year's and this year's value. This is because net position can be a very small number or a negative number, which can make ratios based on change in net position difficult to interpret. Operating margin (Indicator 5) uses the same change in net position but divides it by revenues. The ratio shows whether this year's resources covered this year's full costs; the dollar trend shown here tracks the cumulative direction of the government's financial position.
- **Comparison with peer governments.** The indicator's greatest value is in the long-term trend and whether the trend is net positive or negative. Comparisons could be useful if they show whether a government's performance is consistent with its peers. For example, if a government is losing net position while its peers are gaining, that is a clear cause for concern. Because this indicator is expressed in raw dollars (and not a ratio), comparisons between governments of different sizes are more difficult.
- **Applicability to business-type activities.** This indicator is directly applicable. Also, combining both business-type and governmental activities to see the total primary government view could be especially important when there are significant transfers between governmental and business-type funds.

* This information could also be found in the Statement of Net Position and the Net Position by Component table in the statistical section.

INDICATOR 9: Long-Term Liabilities vs. Revenues

This indicator shows us how many years of revenue it would take to pay off everything this government owes. For example, a ratio of 1.0 means the government owes one full year of revenue. This measure assesses whether a government's debt load is sustainable relative to its ability to generate revenue.

How to Calculate It

Data point:	**Subtotal of Liabilities Due in More Than One Year***	÷	**Total Revenues (general + program)**
Found in:	**Statement of Net Position**		**Statement of Activities**

How to Interpret It

- **What is desirable.** A lower ratio is generally better, provided it is not achieved by underinvesting in capital assets (that is, avoiding debt but being unable to acquire assets as a result). Capital spending ratio (Indicator 2) shows investment in capital assets.
- **Special presentation consideration.** This indicator includes all long-term liabilities. A useful complementary indicator that focuses just on long-term debt is overlapping debt burden. This shows how the debt issued by all government jurisdictions in the area impacts taxpayers. It speaks to a government's ability to issue additional debt given the debt burden on taxpayers created by all units of government. The overlapping debt indicator may be particularly useful if the government is considering issuing debt in the near future.
- **Comparison with peer governments.** There is considerable benefit in comparing with peer governments. Moody's uses a similar ratio as one of its key financial indicators to assess local governments.† S&P uses a related measure of annual liability burden, calculated as debt service plus employer pension and OPEB contributions divided by governmental revenue. For local governments, S&P's initial assessment ranges are less than 8%, 8% to 14%, 14% to 20%, 20% to 25%, 25% to 30%, and 30% or more, with higher percentages corresponding to progressively weaker assessments.[2]
- **Applicability to business-type activities.** This indicator is directly applicable. Also, the total primary government view could be especially important if there are significant transfers between governmental and business-type funds. However, rating agencies typically focus specifically on long-term debt when examining enterprises. Two common measures are "debt service coverage ratio" (net revenues ÷ annual debt service) and "debt-to-operating revenue" (total long-term debt ÷ operating revenues). These might be particularly useful measures for governments that must remain aware of bond ratings.

*The subtotal may or may not be presented in the financial statements.

†Moody's uses additional actuarial information to supplement the pension portion of liabilities, which is not available in the ACFR. See: Moody's Ratings. (2024, July 24). *Rating methodology: US cities and counties*.

INDICATOR 10: Net Pension Liability (NPL) vs. Revenues

Pension promises made to government employees represent a real obligation — money that will need to be paid out in the future. This measure shows how large that obligation is relative to the government's annual revenue. A large and growing ratio means pension costs are claiming an increasing share of fiscal capacity, perhaps crowding out spending on current services.

How to Calculate It

Data point:	**Net Pension Liability**	÷	**Total Revenues (general + program)**
Found in:	**Statement of Net Position**		**Statement of Activities**

How to Interpret It

- **What is desirable.** Lower is better, but this indicator should be read alongside the pension funded ratio (Indicator 16). A high NPL-to-revenue ratio paired with a well-funded plan is a different situation than the same ratio with a poorly funded plan. The latter represents both a large obligation and insufficient assets to meet it. Rating agencies also consider the size of pension liabilities. S&P measures net pension liability per capita using initial assessment ranges of less than $500, $500 to $1,500, $1,500 to $2,500, $2,500 to $3,500, $3,500 to $4,500, and $4,500 or more, with higher liabilities corresponding to progressively weaker assessments. S&P may also apply a negative adjustment when net pension liability exceeds $1,500 per capita and discount-rate assumptions could increase future liabilities.[3]
- **Special presentation consideration.** A three- to five-year time horizon with a trend line or moving average to show the underlying trend is best. This helps show the trajectory despite year-to-year variation.
- **Comparison with peer governments.** Governments make different assumptions about what their pension investments will earn in the future. A government that assumes higher returns calculates a smaller liability today. This means two governments with identical pension promises can show different NPL figures because they made different assumptions — not because one is actually in better shape. For governments that participate in cost-sharing, multiple-employer plans, the NPL is the government's proportionate share of the plan's collective net pension liability. The share is allocated on the same basis the plan uses to set each government's contributions.[4]
- **Applicability to business-type activities.** This indicator is directly applicable with a caveat. Enterprise fund employees may participate in the same pension plans as general government employees. The NPL figure for this indicator is drawn from the government-wide Statement of Net Position, which combines governmental and business-type activities. This is appropriate for the government-wide ratio. Governments whose enterprises employ a significant share of the workforce may wish to separately examine the pension burden on the enterprise side. If the enterprise fund's proportionate share of the NPL is disclosed in the proprietary fund statements, it can be compared with enterprise revenues using the same formula. However, this supplementary analysis requires care because GASB 68 allocation methods vary. The enterprise fund allocation is also not always presented in a consistent location.

Are we maintaining our reserve?

Reserves are money a local government has set aside to prepare for unplanned, unavoidable losses, such as a natural disaster. They can also be used to save for projects that are too expensive to pay for with a single year's revenues. In the ACFR, fund balance is the closest measure of reserves.* Fund balance therefore shows the government's ability to access resources beyond its annual revenues. It also reflects the cumulative effect of the government's past surpluses and deficits. It provides insight into the government's history of fiscal discipline.

INDICATOR 11: General Fund Balance vs. Revenues

This is money the government has set aside for the future. These reserves can help when revenues fall short, such as during a recession, or when unexpected costs arise, such as during a natural disaster. Governments with healthy reserves can weather these shocks without cutting services or raising taxes. Governments without them are one bad year away from a crisis. Fund balances are a potential source of funding for large projects that would not be affordable within a single year.

How to Calculate It

Data point:	General Fund Committed + Assigned + Unassigned Fund Balance	÷	General Fund Revenues
Found in:	Balance Sheet		Statement of Revenues, Expenditures, and Changes in Fund Balances

How to Interpret It

- **What is desirable.** The ideal amount of reserves and, therefore, fund balance, depends primarily on two things. First, consider the risks the local government faces. A local government may be exposed to multiple kinds of costly natural hazards. Its revenue streams may also be vulnerable to economic downturns. A government facing these risks would need higher fund balances than one without them. GFOA research has shown how risk analysis can be used to optimize the size of a local government's reserves. Second, consider the government's capital spending plans and willingness to take on debt. A government with capital spending needs and low willingness to incur debt will need higher fund balance to support cash financing of new capital assets. Thus, this measure is best compared to the government's own fund balance policy, assuming it has been designed to account for risk exposure and capital spending plans. In the absence of such a policy, GFOA guidance suggests fund balance equal to around 17% of revenues.† Rating agencies may also have standards for this measure. For instance, S&P evaluates available reserves as a percentage of revenues. For local governments, its initial assessment ranges are 15% or more, 8% to 15%, 4% to 8%, 1% to 4%, and less than 1%, with lower percentages corresponding to progressively weaker assessments. S&P may also weaken the assessment when nominal reserves are consistently below $2 million and weaken it further when reserves are consistently below $1 million because of liquidity risk.[5] However, in recent years, rating agencies have taken a broader perspective than the general fund, consistent with all-of-government fund balance (Indicator 12).‡

*Some portion of fund balance may be restricted to purposes other than those we described for reserves. However, most of the reported fund balance will typically align with the purposes of a reserve.

†GFOA Best Practice on fund balance references two months' worth of revenues or expenditures, or approximately 16.7%. See: Government Finance Officers Association. (2015, September 30). Fund balance guidelines for the general fund. https://www.gfoa.org/materials/fund-balance-guidelines-for-the-general-fund

‡The all-of-government fund balance measure is taken from Moody's rating method, but S&P also looks beyond the general fund to include some other funds. See: S&P Global Ratings. (2024, September 9). Methodology for rating U.S. governments. https://www.spglobal.com/_assets/documents/ratings/research/101604201.pdf

INDICATOR 11: General Fund Balance vs. Revenues *continued*

- **Special presentation consideration.** Fund balance is also useful as a single-year snapshot because it shows how prepared the government is to handle extraordinary costs or losses.

  Some governments also prefer to use expenditures as the denominator for this measure. Either revenues or expenditures can serve as the denominator, so governments that prefer expenditures can use them instead. In practice, the results should be fairly similar since local governments adopt balanced budgets.

- **Comparison with peer governments.** Comparison with peer governments can be useful, provided they have similar risk exposures and capital spending strategies.

- **Applicability to business-type activities.** Fund balance does not exist in enterprise funds, so a substitute is needed. The closest conceptual equivalent is unrestricted net position as a percentage of operating revenues, which, like fund balance, measures the residual cushion of resources not already committed. Because it is accrual-based and reduced by long-term liabilities such as pensions, it can be low or even negative for an enterprise that has ample cash. A complementary liquidity measure, and the one rating agencies emphasize for utilities, is days cash on hand: (unrestricted cash + liquid investments) ÷ O&M expenses excluding depreciation × 365.

INDICATOR 12: All-of-Government Fund Balance[6]

General fund balance vs. revenues (Indicator 11) was limited to the general fund. Indicator 12 extends to the entire government. Some governments may have substantial reserve resources in funds outside the general fund, and these resources could be drawn upon in a crisis.

How to Calculate It

Data point:	**(Total Governmental Funds Committed + Assigned + Unassigned Fund Balance) + (Enterprise Fund Total Current Assets – Total Current Liabilities) + (Internal Service Funds Total Current Assets – Total Current Liabilities)**	÷	**(Total Governmental Fund Revenues) + (Enterprise Fund Operating Revenue) + (Enterprise Fund Nonoperating Revenue) + (Internal Service Fund Nonoperating Revenue*)**
Found in:	**Balance Sheet + Statement of Net Position for Proprietary Funds**		**Statement of Revenues, Expenditures, and Changes in Fund Balances + Statement of Revenues, Expenses, and Changes in Net Position for Proprietary Funds**

Calculation note. For governmental funds, use total revenues only. Exclude other financing sources, such as bond proceeds and transfers in, which are reported separately on the statement.

How to Interpret It

- **What is desirable.** The issues here are similar to general fund balance vs. revenues (Indicator 11) but with some additional considerations. First, this indicator is a useful complement to Indicator 11. If general fund balances are low but the all-of-government fund balance is high, the government is in a better position than if fund balances are low across the government. Second, the right amount of reserves and, therefore, fund balance does depend on risk exposure, as with Indicator 11. Here, however, risk needs to be considered across all funds. Third, Moody's uses this indicator as its measure of fund balance, where a result of 35% or above is associated with an Aaa rating as of 2024.[7] Other rating agencies also consider reserves beyond a single general fund balance, although their measures do not replicate this indicator exactly. S&P evaluates available reserves in a government's operating funds, with its strongest initial assessment beginning at 15% of revenues.[8] Fitch incorporates combined available fund balance into its Financial Resilience measure, which has an indicative model weight of 35%. These measures support a broader view of available financial resources but should not be treated as directly interchangeable with Moody's 35% benchmark or the calculation used for this indicator.[9]
- **Special presentation consideration.** Fund balance is also useful as a single-year snapshot because it shows how prepared the government is to handle extraordinary costs or losses.
- **Comparison with peer governments.** Comparison with peer governments can be useful, provided they have similar risk exposures and capital spending strategies.
- **Applicability to business-type activities.** This indicator is directly applicable because business-type activities are integral to it.

*Two points are worth noting. First, internal service fund revenues are limited to "nonoperating revenues" to exclude service charges received from other funds, which would double count resources. Second, identifying nonoperating revenues requires some judgment because the presentation may show a net expense. An argument can be made that expenses should not be included in this indicator.

What is the community's fiscal capacity?

Up to this point in the Three Clocks, we have focused on the government entity's financial condition. The government's financial condition will ultimately be a function of the community's fiscal capacity. Thus, the Trajectory Clock addresses the community's ability to support taxation.

INDICATOR 13: Resident Income

A community's income level determines its capacity to support government services through taxes and fees. A government serving a high-income community has more fiscal options in a crisis than one serving a lower-income community. For example, it can raise taxes or fees with less pain. This measure provides essential context for interpreting everything else.

How to Calculate It

Data point:	Median Household Income
Found in:	**This might appear in the ACFR, but a more reliable source is U.S. Census Bureau American Community Survey (ACS). 5-Year Estimates preferred (larger sample size, available for all geographies including smaller governments)**

How to Interpret It

- **What is desirable.** Higher median household income provides greater fiscal capacity and more fiscal policy options. This is a contextual measure the government does not directly control. There is no target, but it sets the ceiling on what is fiscally achievable. Rating agencies consider resident income as part of bond ratings. Moody's methodology, for example, typically references 120% of the national average with an Aaa bond rating as of 2024.[10] S&P uses county per capita personal income relative to the U.S. level, with its strongest initial economic assessment beginning at 100% of the national level. S&P may also raise the rating anchor by one notch when a local government's effective buying income is generally greater than 150% of the U.S. level.[11] Fitch measures median household income relative to the median for its portfolio of rated local governments, with an indicative model weight of 9%.[12]
- **Special presentation consideration.** This measure changes slowly, so annual changes are rarely meaningful (if such granular data is even available). Hence, using the most recent value available is sufficient.
- **Comparison with peer governments.** This measure can be a good way to select peers for comparison on the other indicators. That way, you can see how a government is doing compared with those with similar underlying community fiscal capacity.
- **Applicability to business-type activities.** This indicator is not applicable. Business-type activities are better represented by the fee coverage ratio (Indicator 7) and other Three Clocks indicators. These directly measure the ability of business-type activities to support themselves.

INDICATOR 14: Full Value per Capita

Property taxes are a key revenue source for most local governments. This measure shows how much taxable property value exists per resident — the depth of the property tax base. A community with high property values per capita has greater potential to raise revenue; one with low values has limited ability to raise taxes.

How to Calculate It

Data point:	**Full Value***	÷	**Population**
Found in:	**Statistical Section**		**Statistical Section**

How to Interpret It

- **What is desirable.** Higher full value per capita provides a deeper property tax base and greater fiscal flexibility. The government does not directly control this. It is a contextual measure that frames the fiscal options available. Rating agencies consider full value per capita as part of bond ratings. Moody's, for example, associates a full value per capita above $180,000 with an Aaa bond rating as of 2024.[13]
- **Special presentation consideration.** This measure changes slowly, so even a one-year snapshot can be quite useful.
- **Comparison with peer governments.** This measure can be a good way to select peers for comparison on the other indicators. It can show how a government is doing relative to those with similar underlying community fiscal capacity.
- **Applicability to business-type activities.** This indicator is not applicable. Business-type activities do not typically rely on property taxes.

*Presentations can vary as to what figure is presented (e.g., full market value, full taxable value, etc.). The figure closest to full market value will provide the best comparison between governments.



CLOCK 3
GENERATIONAL CLOCK

Leaving Behind a Financially Healthy Local Government

The Generational Clock takes the longest view of the three clocks. It extends well beyond the likely time in office of most public officials. It asks current officials to consider the conditions they are setting up for future elected officials and the constituents they will serve.

IN THIS SECTION:

Are we creating conditions that can be sustained?

15 Capital Asset Condition

16 Pension Funded Ratio

Are we creating conditions that can be sustained?

Capital assets and employee pensions are the two parts of local government finance with the largest potential for generational impact. Managing these well helps set up future generations for success.

INDICATOR 15: Capital Asset Condition[14]

Roads, pipes, buildings, and equipment wear out. This measure shows approximately how many years of useful life remain in the government's physical infrastructure at the current rate of depreciation, at least on paper. A steadily declining ratio is an early warning sign. The government is consuming its infrastructure faster than it is replacing it. This builds a maintenance backlog that will eventually require more spending or service cuts.

How to Calculate It

Data point:	**Net Depreciable Capital Assets (gross depreciable assets – accumulated depreciation)***	÷	**Annual Depreciation Expense (current year additions to accumulated depreciation)**
Found in:	**Notes to the Financial Statements – Capital Assets†**		**Notes to the Financial Statements – Capital Assets**

How to Interpret It

- **What is desirable.** A stable or improving ratio over time is desirable. A higher number means more years of useful life remain. A declining trend signals the asset base is aging faster than it is being replaced. The result is expressed in years: a ratio of 20 means the government has approximately 20 years of net asset value remaining at the current depreciation rate. Because ACFR data is based on accounting measures rather than engineering assessments, the trend is more informative than a precise single-year value.

  The capital spending ratio (Indicator 2) is a useful complementary measure because it shows whether capital spending is sufficient to keep up with capital needs.

- **Comparison with peer governments.** The overall trend is useful for comparison. However, different depreciation methods may limit the value of comparing precise results. Moody's uses this measure to assess enterprises and associates a value greater than 25 with a rating of Aa or higher.[15]

- **Applicability to business-type activities.** This indicator is directly applicable.

*Depreciable assets are all capital assets that are depreciated (buildings, improvements, equipment, infrastructure, intangibles). The following should be excluded: land, construction in progress, and lease/right-of-use assets. These are nondepreciable or separately accounted for.

†This is the only indicator that is constructed using the notes to the financial statements. The structure of the notes is less standardized across governments than the statements.

INDICATOR 16: Pension Funded Ratio*

When a government promises a defined benefit pension to an employee as part of the employee's compensation for work provided each year, it should be setting money aside today to pay that pension in the future. This ratio shows how much of the estimated liability has actually been set aside.† A ratio of 100% means the plan is fully funded — every dollar promised has a dollar behind it. A ratio of 60% means 40 cents of every promised dollar will need to come from future taxpayers who had no say in making the promise and who likely did not benefit from the employee's work when it was performed.

How to Calculate It

Data point:	**Fiduciary Net Position as a Percentage of Total Pension Liability (ratio is presented directly, no calculation required)**
Found in:	**Required Supplementary Information, Schedule of Changes in Net Pension Liability and Related Ratios (many governments have multiple pension plans, so there will be one schedule per plan; for cost-sharing, multiple-employer plans, the schedule is the employer's Schedule of the Proportionate Share of the Net Pension Liability)**

How to Interpret It

- **What is desirable.** A ratio of 100% is ideal: every dollar promised has a dollar set aside. Public finance professionals have observed a rule of thumb for this measure: below 80% is a concern, and below 60% is significantly underfunded.
- **Special presentation consideration.** This indicator is useful both as a single-year snapshot and as a multiyear trend.

  The funded ratio appears in one of two schedules in Required Supplementary Information, depending on the type of pension plan.‡ A government with its own plan, or its own account within a statewide system, reports it in the Schedule of Changes in Net Pension Liability and Related Ratios. A government that participates in a cost-sharing plan, where assets are pooled across employers, reports it in the Schedule of the Proportionate Share of the Net Pension Liability.[16]

  Some governments offer other post-employment benefits (OPEBs), most notably retiree health care. OPEBs, like pensions, are a long-term liability. The government could be paying in the future (retiree health care) for a service received in the past (that retiree's labor). These liabilities can vary widely between governments. Some governments do not offer OPEBs at all. Others may have nontrivial OPEB liabilities. Because OPEBs vary widely in importance, the Three Clocks framework does not include a dedicated OPEB measure. OPEBs are, however, reflected in ratios that address liabilities more generally, such as change in net position (Indicator 8) and long-term liabilities vs. revenues (Indicator 9).
- **Comparison with peer governments.** Comparisons with peers are helpful, but the most useful point of comparison is the 100% funded standard.
- **Applicability to business-type activities.** This measure is not presented by fund but by pension plan. Every pension plan should be considered, including those that cover enterprise fund employees.

*Some governments provide defined contribution pension plans in place of, or as supplements to, defined benefit pension plans. For defined contribution pensions, the employer governments' only obligations are to make contributions of pre-determined amounts (generally a percentage of pay) into an account for each individual participating employee. This discussion is not applicable to defined contribution plans.

†Because many factors affect the actual amount and timing of pension benefit payments, such as job tenure, future salary changes, cost-of-living adjustments, longevity, and — to the extent the plan is funded — investment earnings, it is only possible to estimate the final cost of pension benefits.

‡Note that when governments contribute to private-sector pension plans, as might be the case for members of trade unions for whom the unions' plans provide such benefits, information about those plans' liabilities and funded ratios is not available in the governments' financial statements or disclosures.



CONCLUSION

The Three Clocks provide a practical way to assess a government's financial health from different perspectives. No single indicator tells the whole story. Used together, the indicators can help governments understand their current financial position, identify trends, and recognize long-term obligations that may affect future generations.

The value of the Three Clocks comes from using the indicators consistently over time and considering them together. By looking at the Annual, Trajectory, and Generational clocks, governments can move beyond a snapshot of today's finances and develop a more complete picture of their financial health. The Three Clocks can be particularly valuable when used as part of an integrated financial management cycle that brings together financial reporting and budgeting. See the report **Working With the Clock, Not Against It** for more on this topic.

APPENDIX 1

Criteria for Picking Comparable Governments

The following criteria can help select comparables. All criteria use information already available from the Three Clocks measurements. It is not necessary to use the same comparable group for every measure. For example, for measures that only touch upon governmental funds, the size of comparables' enterprise operations may not be a big concern. But for measures that cover the entire primary government, the presence of large enterprises becomes important.

Core Matching Criteria

Population (or other basic government size measure) is the starting point. Size shapes service delivery costs, staffing, infrastructure needs, and borrowing access. Population growth rates can also be checked for comparability. A rapidly growing city and a built-out city might have the same population but are on very different growth trajectories, which reduces comparability. For governments where population is not a useful measure of size (e.g., many kinds of special districts), total revenues might be an easily obtainable measure of size.

Same state. State legal frameworks govern fund structure, debt limits, revenue authority, pension systems, and mandated expenditure categories. Ideally, comparables will be drawn from the same state. The notable exception to this is the largest local governments in the state. See the "dominant jurisdiction exception" below for when this constraint should relax.

Dominant jurisdiction exception. City populations within states follow a well-documented distribution that approximates what is known as "Zipf's law." The largest city tends to be much larger than the second largest, which is much larger than the third. Eventually, cities begin to cluster more closely in size. The practical implication is that the dominant city in a state is naturally peer-isolated regardless of its absolute size. A city that substantially outpaces its next-largest in-state comparable should be matched nationally rather than confined to in-state peers. This may be true even if the city is small by national standards. This phenomenon (Zipf's law) has not been as widely studied for other kinds of local governments. However, the same basic rationale applies. If the largest local governments in a state do not have a sufficient number of in-state comparables, then comparables need to come from out of state.

Being in the same region within a state adds value beyond being in the same state alone, since shared labor markets, property dynamics, and infrastructure relationships further narrow the comparison. For example, two similarly sized cities may not be good comparables if one is a suburb of a major city and the other is a county seat in a rural county.

APPENDIX 1 Criteria for Picking Comparable Governments *continued*

Fiscal Capacity Criteria

Revenue per capita distinguishes communities that look similar by population but have fundamentally different fiscal profiles. A residential suburb and a commercial or industrial hub of the same size are not meaningful comparables. Revenue per capita acts as a proxy for tax base composition.

Market value of the tax base measures underlying wealth. Two governments with identical revenue per capita can have very different tax base wealth if one is drawing heavily on its base and the other is not.

Resident income captures something none of the other criteria address: the community's capacity to sustain fiscal demands over time. Lower-income communities typically face both higher service demand and less political flexibility to raise revenue in a fiscal crunch.

Service Scope Criteria

Differences in service levels are a common pitfall when choosing comparables. ACFRs do not provide detailed information about service levels. However, total enterprise revenue can help distinguish the relative size of enterprise and general government operations. Governments with materially different enterprise profiles are poor comparables for indicators that touch business-type activities. When enterprise revenue differs significantly across otherwise similar governments, restrict comparisons to indicators that draw only on governmental funds. Government staff can use their knowledge of peer communities to hone a comparable group beyond what can be done with ACFR data alone.

Other Criteria

These criteria should cover most cases, but local finance officers should consider whether unique local circumstances call for additional criteria. For example, a government with a tax base highly concentrated in one taxpayer or industry may face added financial risk. It may need to carry a higher fund balance than otherwise similar organizations. Such additional criteria could justify refining the comparable group or adding nuance to the interpretation of peer results. In this example, a higher fund balance than peers could be reassuring.

Endnotes

[1] This measure is taken from the Strong Towns Finance Decoder. Strong Towns. (n.d.). *Finance Decoder*. https://www.strongtowns.org/decoder

[2] S&P Global Ratings. (2024, September 9). *Methodology for rating U.S. governments*, "Debt and Liabilities." https://www.spglobal.com/_assets/documents/ratings/research/101604201.pdf

[3] S&P Global Ratings. (2024, September 9). *Methodology for rating U.S. governments*, "Debt and Liabilities." https://www.spglobal.com/_assets/documents/ratings/research/101604201.pdf

[4] Governmental Accounting Standards Board. (2012, June). *Statement No. 68: Accounting and financial reporting for pensions*, paragraph 48. https://storage.gasb.org/GASBS_68_0.pdf

[5] S&P Global Ratings. (2024, September 9). *Methodology for rating U.S. governments*, "Reserves and Liquidity." https://www.spglobal.com/_assets/documents/ratings/research/101604201.pdf

[6] This measure is taken from Moody's rating methodology. Moody's Ratings. (2024, July 24). *Rating methodology: US cities and counties*. https://ma.moodys.com/rs/961-KCJ-308/images/PBM_1401434.pdf

[7] Moody's Ratings. (2024, July 24). *Rating methodology: US cities and counties*. https://ma.moodys.com/rs/961-KCJ-308/images/PBM_1401434.pdf

[8] S&P Global Ratings. (2024, September 9). *Methodology for rating U.S. governments*, "Reserves and Liquidity." https://www.spglobal.com/_assets/documents/ratings/research/101604201.pdf

[9] Fitch Ratings. (2026, May 1). *U.S. public finance local government rating criteri*a.

[10] Moody's Ratings. (2024, July 24). *Rating methodology: US cities and counties*. https://ma.moodys.com/rs/961-KCJ-308/images/PBM_1401434.pdf

[11] S&P Global Ratings. (2024, September 9). *Methodology for rating U.S. governments*, "Economy" and "Modifiers and Caps." https://www.spglobal.com/_assets/documents/ratings/research/101604201.pdf

[12] Fitch Ratings. (2026, May 1). *U.S. public finance local government rating criteria*.

[13] Moody's Ratings. (2024, July 24). *Rating methodology: US cities and counties*. https://ma.moodys.com/rs/961-KCJ-308/images/PBM_1401434.pdf

[14] This measure is taken from the Strong Towns Finance Decoder. Strong Towns. (n.d.). *Finance Decoder*. https://www.strongtowns.org/decoder

[15] Moody's Investors Service. (2014, December 15). *US Municipal Utility Revenue Debt: Rating Methodology*, Asset Condition subfactor and Appendix A. https://www.amwa.net/assets/final_moodysmethod_dec2015.pdf

[16] Governmental Accounting Standards Board. (2012, June). *Statement No. 68: Accounting and financial reporting for pensions*, paragraphs 46 and 81. https://storage.gasb.org/GASBS_68_0.pdf

Government Finance Officers Association
203 N. LaSalle Street, Suite 2700
Chicago, IL 60601
312-977-9700 | **gfoa.org**