

CREDIT OPINION

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City of Boston, MA

Update to credit analysis

Summary

[Boston](#) (Aaa stable) benefits from a strong economy and favorable resident income and wealth. The city is New England's principal regional economic center with significant government, higher education and healthcare sectors. The city's stable financial position benefits from conservative and proactive fiscal management that is expected to maintain healthy reserves and liquidity. The city's leverage is moderate driven by large but well managed unfunded pension and OPEB liabilities.

Credit strengths

- » Strong regional economy with significant government, higher education and healthcare sectors
- » High reliance on stable property tax revenue
- » Stable historical trend of maintaining healthy reserves and liquidity

Credit challenges

- » High personnel related costs subject to collective bargaining with strong employee unions
- » Managing education funding and services for a diverse student population
- » Long-term impacts of addressing affordable housing

Rating outlook

The stable outlook reflects the strong fiscal management that will likely maintain the city's financial position over the outlook period based on conservative budgeting and adherence to formal fiscal policies. The outlook further incorporates the strength of Boston's economy that benefits from significant institutional presence.

Factors that could lead to an upgrade

- » Not applicable

Factors that could lead to a downgrade

- » Material decline in available reserves and/or liquidity
- » Inability to maintain current pension and OPEB funding plans
- » Significant increase in leverage as a percent of revenue

Key indicators

Exhibit 1

Boston (City of) MA

	2019	2020	2021	2022	Aaa Medians
Economy					
Resident income ratio (%)	102.6%	104.2%	108.0%	N/A	173.2%
Full Value (\$000)	\$179,793,041	\$179,793,041	\$203,894,526	\$203,894,526	\$8,668,233
Population	684,379	689,326	672,814	N/A	36,139
Full value per capita (\$)	\$262,710	\$260,824	\$303,047	N/A	\$225,444
Economic growth metric (%)	N/A	0.5%	0.7%	N/A	-0.6%
Financial Performance					
Revenue (\$000)	\$3,953,047	\$4,151,076	\$4,165,565	\$4,676,012	\$101,271
Available fund balance (\$000)	\$1,458,009	\$1,581,927	\$1,553,574	\$1,667,128	\$60,284
Net unrestricted cash (\$000)	\$2,102,027	\$2,182,298	\$2,334,067	\$2,795,910	\$85,080
Available fund balance ratio (%)	36.9%	38.1%	37.3%	35.7%	62.5%
Liquidity ratio (%)	53.2%	52.6%	56.0%	59.8%	89.9%
Leverage					
Debt (\$000)	\$1,458,662	\$1,427,237	\$1,501,389	\$1,766,477	\$71,359
Adjusted net pension liabilities (\$000)	\$4,293,840	\$5,435,422	\$6,560,441	\$6,015,162	\$120,889
Adjusted net OPEB liabilities (\$000)	\$4,030,980	\$0	\$3,867,867	\$3,136,196	\$14,025
Other long-term liabilities (\$000)	\$481,159	\$495,236	\$534,915	\$533,260	\$3,650
Long-term liabilities ratio (%)	259.7%	177.3%	299.2%	244.9%	257.7%
Fixed costs					
Implied debt service (\$000)	\$106,471	\$106,351	\$102,208	\$105,307	\$4,843
Pension tread water contribution (\$000)	\$148,700	\$146,943	\$125,089	N/A	\$3,247
OPEB contributions (\$000)	\$176,018	\$0	\$170,560	\$172,149	\$517
Implied cost of other long-term liabilities (\$000)	\$32,968	\$35,081	\$35,465	\$37,519	\$244
Fixed-costs ratio (%)	11.7%	6.9%	10.4%	9.4%	11.3%

For definitions of the metrics in the table above please refer to the [US Cities and Counties Methodology](#) or see the Glossary in the Appendix below. Metrics represented as N/A indicate the data were not available at the time of publication. The medians come from our most recently published [US Cities and Counties Median Report](#). The Economic Growth metric cited above compares the five-year CAGR of real GDP for Boston-Cambridge-Newton, MA-NH Metropolitan Statistical Area to the five-year CAGR of real GDP for the US.

Sources: US Census Bureau, Boston (City of) MA's financial statements and Moody's Investors Service, US Bureau of Economic Analysis

Profile

Boston is the capital and largest city in [Massachusetts](#) (Aa1 stable) as well as New England. It has a population of 675,6476 (2020 Census) and is New England's principal regional economic center. The city provides governmental services include K-12 public education, public safety, public health, public works, public library system and parks and recreation.

Detailed credit considerations

Economy: strong regional economic center supported by significant institutional presence

Boston is the principal center of economic activity in New England. The city's economy over the last five years has outperformed the nation with the Boston metropolitan statistical area's five-year CAGR of real GDP equal to a 0.7% growth rate over the US. We expect the city's significant institutional presence of governmental services, higher education and healthcare sectors to continue to have a stabilizing presence on the economy. These sectors, along with finance, business and professional services, have helped Boston's workforce to almost fully recover from the decline during the coronavirus pandemic. The exception continues to be in the retail and hospitality sectors that are recovering at a much slower pace. The city's unemployment rate is low at 3.5% (February 2023) compared to the state's 4.2% and US rate of 3.9%.

The city's tax base (assessed value) grew by 7.3% in 2023 over the prior year to \$212.2 billion. We expect the strong residential sector to help mitigate anticipated softening of the commercial sector over the next few years as that sector incorporates the impacts from many companies implementing permanent and hybrid work-from-home models. The city reports that as of the 2022 fourth quarter

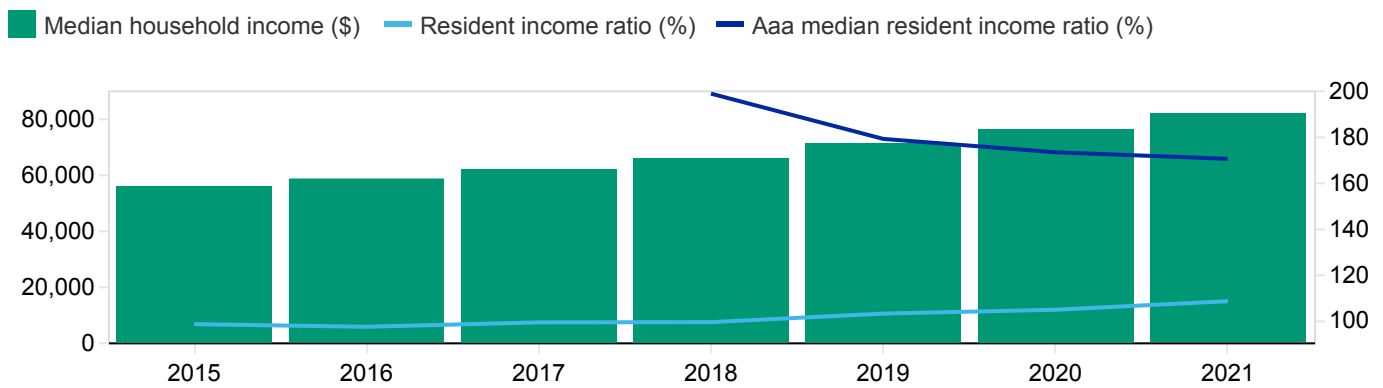
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the office market vacancy rate in the city was 11.2% and the downtown area was up to 13.3% compared to 6.1% and 6.4% in 2019, respectively. The hotel occupancy rate continues to improve, with an average occupancy rate in 2022 of 70.4% which is up from a low 26.5% in 2020. Occupancy rates were just over 82% from 2017 through 2019 before the pandemic.

While the impact on the commercial sector remains somewhat cloudy, construction and new development activity remains healthy. The city's building permit revenue in 2022 equaled \$64.1 million which is above the \$53 million average annual revenue since 2013. As of March 2023, Boston has 114.5 million square feet for 427 projects permitted or under construction, approved, or under review. These figures are generally inline with March 2022 development data. Some of the city's larger development projects are located in various neighborhoods including Charlestown, Dorchester and East Boston (Suffolk Downs).

Boston's resident income continues to slowly rise with a median household income adjusted for regional price parity of 108% of the US median (see exhibit). The city benefits from the high educational attainment of its residents and the large student population of around 150,000 is an economic driver. City wealth is strong measured by a 2023 full (equalized) value per capita of \$336,449 that also does not account for a large portion of the city that is classified as tax-exempt.

Exhibit 2
Resident Income



Source: Moody's Investors Service

Financial operations: strong reserves likely to be maintained given stable property tax revenue and conservative budgeting

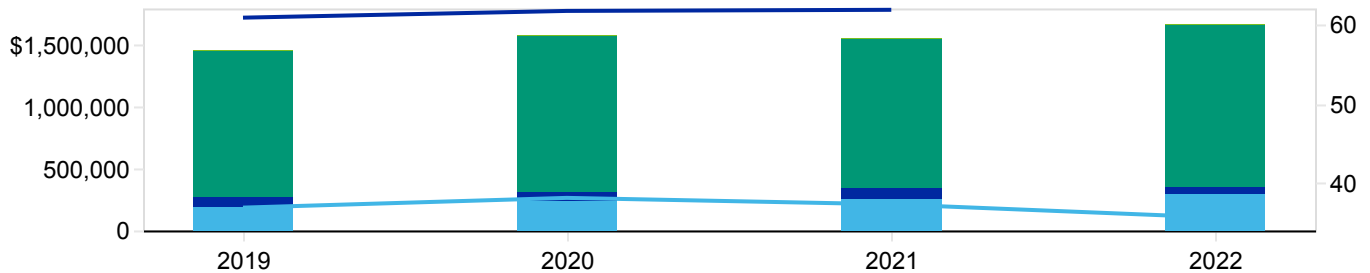
Boston's financial position is likely to remain stable over the next few years because of conservative multiyear budgeting and the ability to rely on a stable property tax levy as its primary revenue source. The proposed fiscal 2024 budget from the mayor reflects small projected budget deficits annually of around 1% of governmental revenue in fiscal 2025 and 2026 driven by rising expenses related to charter school assessments, pension contributions and rising employee related costs. Expired labor contracts for various public safety unions are also likely to be cost drivers. Currently, the police patrolmen's association is seeking mediation under the joint labor management committee which has not yet been scheduled.

Across all governmental funds and the internal service fund (the city does not have any business-type activities) the city closed fiscal 2022 (the latest audit ending June 30, 2022) with an available fund balance of \$1.7 billion representing 35.7% of revenue (see exhibit). Reserves are expected to remain relatively stable over the next two years continuing the city's historical trend of just over 35% of revenue.

Exhibit 3

Fund Balance

■ General fund
 ■ Other governmental funds
 ■ Internal service funds
 ■ Business-type activities
— Available fund balance ratio (%)
 — Aaa median available fund balance ratio (%)



As of June 30 fiscal year-end

Source: Moody's Investors Service

Boston's governmental activities provide 100% of the city's revenue base with property taxes representing 60% of fiscal 2022 governmental revenue. Intergovernmental revenue, mostly state aid for education, is the second revenue source representing 26%. The city's largest expenses are education and public safety representing 55% and 17% of fiscal 2022 expenditures, respectively.

Fiscal 2023 year-to-date operations are trending favorably compared to budget. Revenue from strong property tax collections and local receipts from room and meals excise taxes are above budget. The city's expenses are mostly trending on budget except for recurring deficit spending related to public safety overtime which is usually covered by the positive variance in operations to budget. Year-end results are expected to reflect a surplus at least similar to last fiscal year. Fiscal 2023 also represents the final year of using ARPA funds in the amount of \$40 million as a revenue replacement source.

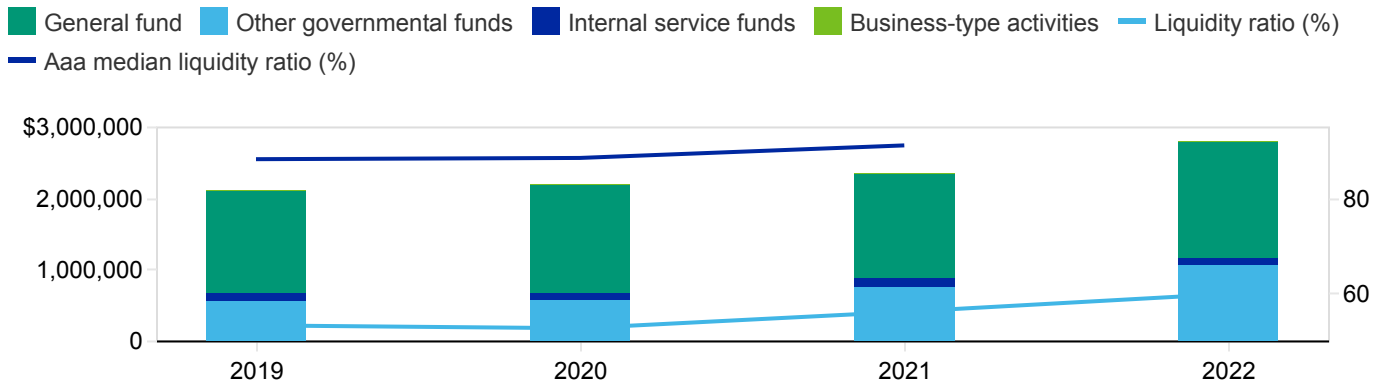
The mayor's proposed fiscal 2024 budget is a 6.8% increase or \$273.7 million from the previous year. The budget drivers include inflationary costs and approved increases in labor costs. The budget is balanced with a 4.5% increase in the tax levy that includes \$60 million new growth assumption and increase in local revenue given the continued recovery of excise taxes from the pandemic. The budget continues to also include \$40 million of free cash to be deposited into the OPEB trust.

Liquidity

The city's unrestricted cash and investments at the end of fiscal 2022 totaled \$2.8 billion equal to a strong 62.7% of revenue. The difference in the city's available reserves and liquidity is due to \$472.3 million in unearned revenue and additional funds allocated as restricted and nonspendable fund balance. The cash position at the end of fiscal 2023 is not expected to materially change.

Exhibit 4

Cash



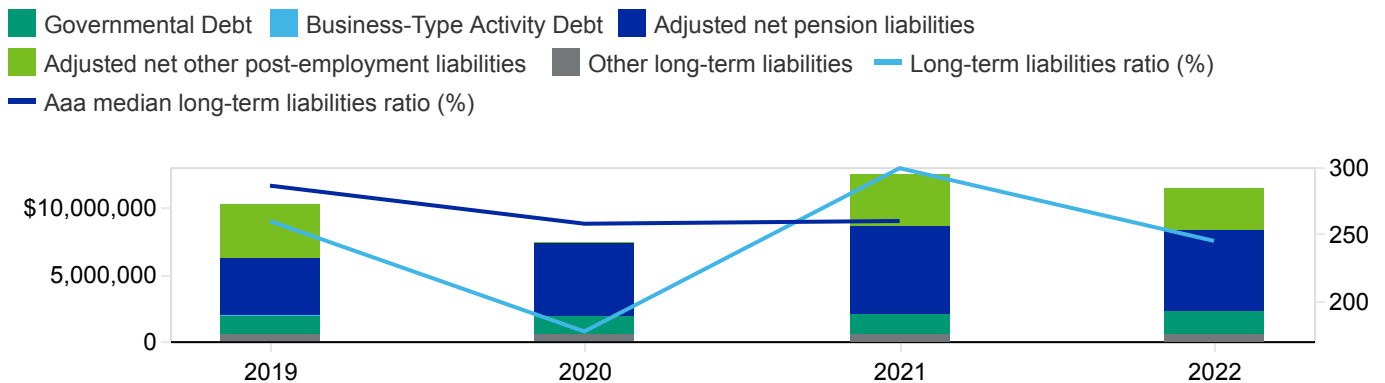
As of June 30 fiscal year-end
 Source: Moody's Investors Service

Leverage: aggressive pension funding will help manage debt burden and unfunded OPEB liability over the long-term

Boston's leverage is average for the highest rating category and will likely remain relatively stable over the next few years given the city's capital plan while continuing to aggressively fund the pension plan and make annual deposits into the OPEB trust. The city ended fiscal 2022 with a long-term liabilities ratio of 244.9% of revenue (see exhibit). The city's debt accounts for 15% of the total leverage ratio while adjusted net pension liability and adjusted net OPEB liability represent 53% and 27%, respectively.

Exhibit 5

Total Primary Government - Long Term Liabilities



Source: Moody's Investors Service

The city's fiscal 2023-27 capital plan equals \$3.6 billion, up from \$3.3 billion the prior year. The capital plan includes 33% of funding toward streets, 22% schools and 10% to environmental and open space projects. The plans funding sources is primarily debt issuance for almost 73% of the projects.

Legal security

The bonds are general obligations of the city, backed by its full faith and credit including an unlimited tax pledge, as provided in Boston's Bond Procedure Act (Chapter 643 of the Acts of 1983 of the Commonwealth of Massachusetts) which allows the city to levy property taxes, without limit and in excess of Proposition 2.5 limits, to the extent debt service is not otherwise provided for in the tax levy or from other sources, with no allowance made for any other expenditures of the city.

Debt structure

All of the city's debt is fixed rate and amortized over the long-term with a final maturity of 2042. The city's debt management policy includes repayment of debt of at least 40% within five years and 70% in 10 years. The city also maintains an annual debt service ceiling of no more of 7% of general fund expenditures.

Debt-related derivatives

Boston does not have debt-related derivatives.

Pensions and OPEB

Boston's pension and OPEB liabilities are larger than its debt burden and though manageable at this time, represent a potential future credit challenge. The city participates in the Boston Retirement Plan, a multi-employer defined benefit plan and makes annual required contributions. The latest actuarial report assumes a 7.05% discount rate and maintains a funded date of 2027. Annual pension contributions are scheduled to increase by 8.85% annually. The city's teachers participate in the Massachusetts Teachers Retirement System in which the city receives on-behalf payments toward that liability that is covered by the Commonwealth. Moody's 2022 adjusted net pension liability of \$6 billion and uses a 3% discount rate assumption.

The city also funds its OPEB liability on a pay-go basis plus annual budgeted deposits into an OPEB trust. The OPEB plan fiduciary net position is 26.29% of the total OPEB liability as of the end of fiscal 2022, well above most cities with an OPEB liability. The Moody's 2022 adjusted net OPEB liability of \$3.1 billion uses a 4.5% discount rate assumption.

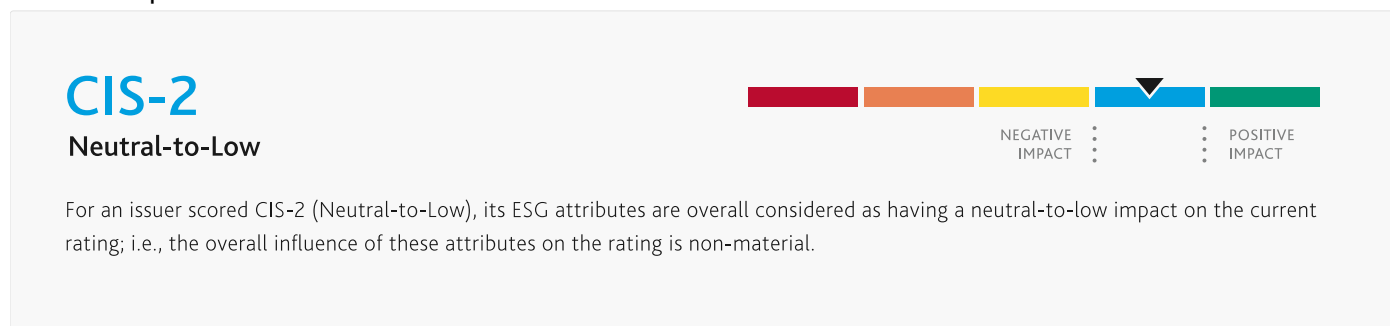
The 2022 fixed costs ratio of 9.4% is very favorable and will likely remain low. Additionally, the city's annual pension contributions for the last five years have been significantly higher than the Moody's tread water indicator, which is the amount required to keep the unfunded liability from increasing if all actuarial assumptions are realized, a reflection of the commitment to meet the 2027 pension funding date.

ESG considerations

Boston (City of) MA's ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 6

ESG Credit Impact Score

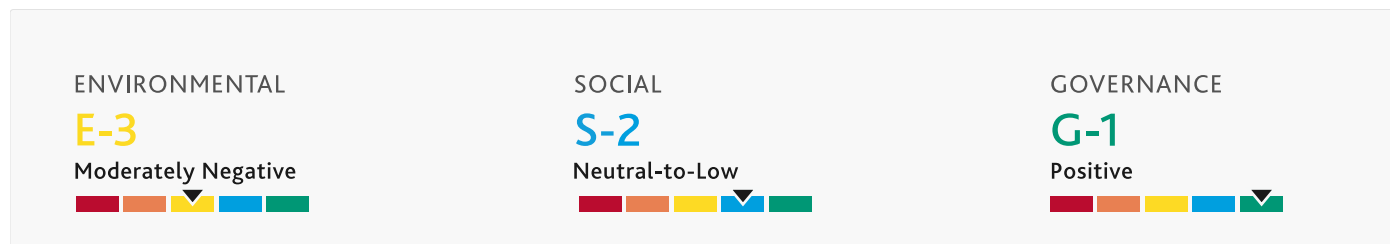


Source: Moody's Investors Service

The City of Boston, Massachusetts' ESG Credit Impact Score is neutral-to-low (**CIS-2**), reflecting moderately negative exposure to environmental risks, low exposure to social risks and a very strong governance profile that supports the city's credit rating, resilience and capacity to respond to shocks.

Exhibit 7

ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

Boston, MA's overall Environmental issuer profile score is moderately negative (**E-3**), reflecting moderate physical climate risks associated with the city's geographical location and exposure to sea level rise and weather events including hurricanes. The score also incorporates neutral to low risks associated with carbon transition, natural resources management, waste and pollution. Mitigating factors reflected in the score include the city's very strong underlying economy, robust financial reserves and the Climate Ready Boston initiative which includes long-term capital planning around resilience to climate change.

Social

Boston, MA's social issuer profile score is neutral-to-low (**S-2**). The city benefits from strong educational attainment and access to health and safety given access to world-renowned healthcare institutions. City residents also have access to basic services, and the city benefits from favorable demographics trends. Housing affordability is a growing challenge that the city has prioritized with financial resources and developer incentives.

Governance

Boston, MA's governance issuer profile score is positive (**G-1**). The city benefits from strong institutional structure, budget management and demonstrated policy effectiveness. The city also maintains favorable transparency and disclosure.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Rating methodology and scorecard factors

The US Cities and Counties Rating Methodology includes a scorecard, which summarizes the rating factors generally most important to city and county credit profiles. Because the scorecard is a summary, and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned.

Exhibit 8

Boston (City of) MA

	Measure	Weight	Score
Economy			
Resident income ratio	108.0%	10.0%	Aa
Full value per capita	336,449	10.0%	Aaa
Economic growth metric	0.7%	10.0%	Aaa
Financial Performance			
Available fund balance ratio	35.7%	20.0%	Aaa
Liquidity ratio	59.8%	10.0%	Aaa
Institutional Framework			
Institutional Framework	Aa	10.0%	Aa
Leverage			
Long-term liabilities ratio	244.9%	20.0%	A
Fixed-costs ratio	9.4%	10.0%	Aaa
Notching factors			
No notchings applied			
Scorecard-Indicated Outcome			Aa1
Assigned Rating			Aaa

Sources: US Census Bureau, Boston (City of) MA's financial statements and Moody's Investors Service

Appendix

Exhibit 9

Key Indicators Glossary

	Definition	Typical Source*
Economy		
Resident income ratio	Median Household Income (MHI) for the city or county, adjusted for Regional Price Parity (RPP), as a % of the US MHI	MHI: US Census Bureau - American Community Survey 5-Year Estimates RPP: US Bureau of Economic Analysis
Full value	Estimated market value of taxable property in the city or county	State repositories; audited financial statements; continuing disclosures
Population	Population of the city or county	US Census Bureau - American Community Survey 5-Year Estimates
Full value per capita	Full value / population	
Economic growth metric	Five year CAGR of real GDP for Metropolitan Statistical Area or county minus the five-year CAGR of real GDP for the US	Real GDP: US Bureau of Economic Analysis
Financial performance		
Revenue	Sum of revenue from total governmental funds, operating and non-operating revenue from total business-type activities, and non-operating revenue from internal services funds, excluding transfers and one-time revenue, e.g., bond proceeds or capital contributions	Audited financial statements
Available fund balance	Sum of all fund balances that are classified as unassigned, assigned or committed in the total governmental funds, plus unrestricted current assets minus current liabilities from the city's or county's business-type activities and internal services funds	Audited financial statements
Net unrestricted cash	Sum of unrestricted cash in governmental activities, business type activities and internal services fund, net of short-term debt	Audited financial statements
Available fund balance ratio	Available fund balance (including net current assets from business-type activities and internal services funds) / Revenue	
Liquidity ratio	Net unrestricted cash / Revenue	
Leverage		
Debt	Outstanding long-term bonds and all other forms of long-term debt across the governmental and business-type activities, including debt of another entity for which it has provided a guarantee disclosed in its financial statements	Audited financial statements; official statements
Adjusted net pension liabilities (ANPL)	Total primary government's pension liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	Audited financial statements; Moody's Investors Service
Adjusted net OPEB liabilities (ANOL)	Total primary government's net other post-employment benefit (OPEB) liabilities adjusted by Moody's to standardize the discount rate used to compute the present value of accrued benefits	Audited financial statements; Moody's Investors Service
Other long-term liabilities (OLTL)	Miscellaneous long-term liabilities reported under the governmental and business-type activities entries	Audited financial statements
Long-term liabilities ratio	Debt + ANPL + ANOL + OLTL / Revenue	
Fixed costs		
Implied debt service	Annual cost to amortize city or county's long-term debt over 20 years with level payments	Audited financial statements; official statements; Moody's Investors Service
Pension tread water contribution	Pension contribution necessary to prevent reported unfunded pension liabilities from growing, year over year, in nominal dollars, if all actuarial assumptions are met	Audited financial statements; Moody's Investors Service
OPEB contribution	City or county's actual contribution in a given period	Audited financial statements
Implied cost of OLTL	Annual cost to amortize city or county's other long-term liabilities over 20 years with level payments	Audited financial statements; Moody's Investors Service
Fixed-costs ratio	Implied debt service + Pension tread water + OPEB contributions + Implied cost of OLTL / Revenue	

*Note: If typical data source is not available then alternative sources or proxy data may be considered. For more detailed definitions of the metrics listed above please refer to the [US City and Counties Methodology](#).

Source: Moody's Investors Service

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