Town of Weston Board of Finance

Fund Balance Policy Subcommittee
Primer on Available Fund Balance Ratio
using Moody's US Cities and Counties Methodology

GFOA Best Practices on Fund Balance

October 21, 2024

Overview

- Weston was affirmed as **Aaa** with a **stable outlook** in Moody's most recent Annual Comment dated June 7, 2023 (see attachment)
- **Aaa obligations are judged to be of the highest quality, subject to the lowest level of risk**
- These ratings are based on Moody's revised methodology for rating US cities and counties issued on November 2, 2022[2]

Moody's Methodology Summarized

- **Moody's gives a 30% analytic weighting to a city's financial performance** and is apportioned across two ratios:
  - **Available Fund Balance Ratio** (20%)
  - **Liquidity Ratio** (10%)

US Cities and Counties Scorecard Overview

Factor	Factor Weighting*	Sub-factor	Sub-factor Weighting
Economy	30%	Resident Income (MHI Adjusted for RPP / US MHI)†	10%
		Full Value per Capita (Full Valuation of Tax Base / Population)	10%
		Economic Growth (Difference Between Five-Year Compound Annual Growth in Real GDP and Five-Year CAGR in Real US GDP) ‡	10%
Financial Performance	30%	Available Fund Balance Ratio (Available Fund Balance + Net Current Assets / Revenue)	20%
		Liquidity Ratio (Unrestricted Cash / Revenue)	10%
Institutional Framework	10%	**	10%
Leverage	30%	Long-term Liabilities Ratio ((Debt + ANPL + Adjusted Net OPEB + Other Long-Term Liabilities) / Revenue)††	20%
		Fixed-Costs Ratio (Adjusted Fixed Costs / Revenue)	10%
Total	100%		100%

Moody's US Cities and Counties Methodology – November 2, 2022

Moody's Rationale for Aaa Rating

- **Moody's has historically acknowledged that both of Weston's ratios of liquidity and available fund balances to revenue are weaker than the US medians of Aaa-rated cities**

- **These metrics have not been a problem for Weston maintaining its Aaa Moody's bond rating**
  - Moody's has commented that "Connecticut local governments tend to have financial ratios lower than US medians because they generally derive a majority of revenues from stable property taxes and their financials typically incorporate school operations which are predictable." [3]

- **Moody's has also commented on our other strengths[4], including:**
  - Very strong wealth and income profile
  - Healthy tax base
  - Low pension liability
  - Negligible debt burden

Available Fund Balance Ratio

- Moody's relies upon this ratio as a "useful indication of whether a city's or county's resources would be sufficient to bridge temporary budget imbalances."

$$\frac{(A + B + C)}{(D)} = \text{AVAILABLE FUND BALANCE RATIO}$$

- The calculation of Available Fund Balance Ratio uses the following elements:
  - A) Available fund balance of governmental funds, including committed, assigned, or unassigned funds
  - B) Net current assets of business-type activities
  - C) Net current assets of internal service funds
  - D) Total revenue

Sub-Factor Weight	AFB Ratio Rating Criteria	
	Aaa	Aa
20%	**≥ 35%**	**25 – 35%**

Moody's US Cities and Counties Methodology – November 2, 2022

Available Fund Balance Ratio 2022-2023

- **Weston's AFB Ratio, per Moody's, was 26.7% in 2022,** *below* the suggested 35% criteria range for a Aaa rating
- An unofficial calculation of Weston's **2023 AFB Ratio is roughly the same at 26.9%.**
- **Current estimate is that our AFB ratio for FY 2024 is 24.5%; audited financials will be available in January 2025 to provide a better calculation**

Algorithm	**Available Fund Balance Ratio ($000s)**	**2022**	**2023**
a	Available Fund Balance	$ 23,488	$ 22,649
b	Net Current Assets (Internal Service Fund)	419	419
c	Business Type Activities (Net Unrestricted Current Assets)	438	740
d = a + b + c	**Total Available Fund Balance & Net Unrestricted Current Assets**	**$ 24,345**	**$ 23,808**
e	**Total Revenue**	**$ 91,086**	**$ 88,663**
f = d / e	**Available Fund Balance Ratio**	**26.7%**	**26.9%**
g	Special Appropriation for Engine 7		(1600)
h	FYTD Prior Supplemental Appropriations		(375)
i	PFAS Filters		(14)
j	Catch basin purchase		(100)
k = d + g + h + l + j	Revised Total Available Fund Balance & Net Unrestructed Current Assets		$ 21,720
l = k / e	**Revised Available Fund Balance Ratio**		**24.5%**

Sources:
Moody's US Cities and Counties Methodology – November 2, 2022
Moody's Annual Comment on Town of Weston - June 7, 2023
Town of Weston Audited Financial Statement June 30, 2023

Overview

- Available Fund Balance provides a cushion against potential revcenue and expenditure volatility
- We are focused on the general unassigned fund balance
- Government Finance Officers Association publication (September 2015) offers guidance on key considerations in establishing an available fund balance policy
  - Appropriate Level
  - Use & replenishment
  - Unrestricted Fund Balance Above Formal Policy Requirement

Appropriate Level

- Predictability of revenue
- Volatility of expenditures
- Risk of one-time outlays
- Potential risk of general fund use and availability of other funds as cushion
- Potential impact on bond ratings and corresponding increased cost of borrowed funds
- Commitments and assignments

Use & Replenishment

Policy should define conditions warranting AFB use and how to replenish if balance falls below appropriate level

- Define the time period when fund balances may be used
- Describe how expenditure and revenue levels may be adjusted to match new economic realities that justify use of fund balance as a financing bridge
- Describe the period of time for replenishing appropriate level of AFB (typically 1 - 3 years)
  - Time constraints may consider:
    - Budget reasons
    - Extreme events
    - Political continuity
    - Financial planning time horizon
    - Long-term forecasts and economic conditions
    - External financing expectations

Unrestricted Fund Balance Above Formal Policy Requirement

What is the appropriate use of unrestricted fund balance in excess of appropriate level?

- One-time capital expenditure purchases
- Sinking funds
- Debt pre-payment (bonds, pension, OPEB)

Endnotes

[1] https://ratings.moodys.com/rating-definitions

[2] https://www.moodys.com/creditfoundations/US-Cities-and-Counties-Methodology-05E006

[3] https://www.moodys.com/research/Town-of-Weston-CT-Annual-Comment-on-Weston-Issuer-Comment--PBM_1271020?cy=asia&lang=en

[4] Ibid.

MOODY'S
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RATING METHODOLOGY

US Cities and Counties Methodology

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Introduction

In this rating methodology, we explain our general approach to assessing credit risk of US cities and counties, including the qualitative and quantitative factors that are likely to affect rating outcomes in this sector.

We discuss the scorecard used for this sector. The scorecard[1] is a relatively simple reference tool that can be used in most cases to approximate credit profiles in this sector and to explain, in summary form, many of the factors that are generally most important in assigning issuer-level ratings to issuers in this sector. The scorecard factors may be evaluated using historical or forward-looking data or both.

We also discuss other considerations, which are factors that are assessed outside the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. In addition, some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.[2] Furthermore, since ratings are forward-looking, we often incorporate directional views of risks and mitigants in a qualitative way.

As a result, the scorecard-indicated outcome is not expected to match the actual rating for each issuer.

Our presentation of this rating methodology proceeds with (i) the scope of this methodology; (ii) a sector overview; (iii) the scorecard framework; (iv) a discussion of the scorecard factors; (v) other considerations not reflected in the scorecard; (vi) the assignment of issuer-level and instrument-level ratings; (vii) methodology assumptions; and (viii) limitations. In Appendix A, we describe how we use the scorecard to arrive at a scorecard-indicated outcome. Appendix B shows the full view of the scorecard factors, sub-factors, weights and thresholds. Appendix C describes our approach for assigning instrument ratings for US cities and counties.

1 In our methodologies and research, the terms "scorecard" and "grid" are used interchangeably.

2 A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Scope

This methodology is used to assign issuer ratings to US cities, counties and other general government entities below the level of a state or territory (including towns, townships, villages, boroughs and parishes). In the sections that follow, we refer to all of these entities as cities and counties. This methodology also applies to US Native American tribal nations.

This methodology is also used to assign debt instrument ratings to cities' and counties' general obligation unlimited tax, general obligation limited tax, general promises to pay, and lease and contingent obligations.[3] This methodology also applies to the debt instruments of city or county enterprises and component units that benefit from a city's or county's general obligation pledge or general promise to pay, or from a lease, appropriation or moral obligation of the city or county.

US cities and counties rated using this methodology are self-governing municipal entities that provide general public services to residents within defined geographic boundaries. These cities and counties have the legal ability to issue debt[4] and may impose taxes, fees, fines or service charges. They may also have other legal means of financing public services and paying debt service.

US cities and counties that provide K-12 education directly or that issue debt on behalf of a school district are rated using this methodology. In most US states, K-12 public education is provided by K-12 public school districts that are separate from the city or county, and these school districts are rated using a separate methodology.[5]

Cities' and counties' special tax and special assessment obligations are also rated using separate methodologies, as are city and county obligations supported solely by the enterprise revenues of a city or county (e.g., a water or sewer enterprise). In addition, this methodology is not used to rate debt supported solely by independent special purpose entities (e.g., a standalone park district or a tax increment district) or the debt of component units of a city or county supported exclusively by a pledge of the tax or other revenue of the special purpose entity or component unit (e.g., a municipal utility).[6]

3 Lease and contingent obligations also include moral obligations, non-lease annual appropriation obligations, abatement lease-backed obligations and comparable debt.

4 Cities and counties rated using this methodology have the power to issue debt on their own behalf or are the obligor to debt issued through an authority or dedicated financing vehicle.

5 See our methodology that describes our approach for rating K-12 school districts. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

6 Examples of special purpose local governments that are typically out of scope are standalone toll roads, sewage systems, municipal airports, public hospitals, public colleges and universities, ports, housing authorities, library districts, fire protection districts and tax increment districts, regardless of the security pledge of their debt.

Sector Overview

Cities and counties provide basic services, which often include police and fire protection, courts and jails, public record-keeping, social services, park services and public works, including streets and roads.

Some cities and counties provide a narrow range of services, while others provide more comprehensive services as part of their primary government activities, including water, sewer, power or other utility services, healthcare services, economic development or transportation services (e.g., airport, port and transit services).

Cities and counties fund the services they provide with an array of revenues, including property taxes, sales taxes, income taxes, state and federal aid, departmental income (such as fines and fees) or direct charges for services.

Cities and counties issue a wide array of debt instruments that may be structured with quite different revenue pledges; e.g., a broad pledge such as a general obligation pledge, a narrower pledge, or a pledge limited to the enterprise revenues of a city or county, such as water and sewer revenue bonds. As described in the "Scope" section, we use separate methodologies to rate debt supported solely by enterprise revenues of a city or county.

Nonetheless, we consider the enterprise activities of cities and counties to be among the core services they provide. As described in the sections that follow, we assess cities and counties in their totality and include their governmental and business-type financial results, assets and liabilities in our analysis of the fundamental credit strength of the city or county.

A city's or county's institutional framework is established and defined by its respective state constitution, laws or court decisions. In some states, cities are subordinate to a county as a unit of local government, and in other states, cities operate independently of county governments.

Typically, cities and counties are governed by a chief executive and an elected body.

Scorecard Framework

The scorecard in this rating methodology is composed of four factors, most of which comprise sub-factors. The scorecard also includes five notching factors, which may result in upward or downward adjustments in half-notch or whole-notch increments to the preliminary outcome.

EXHIBIT 1

US Cities and Counties Scorecard Overview

Factor	Factor Weighting*	Sub-factor	Sub-factor Weighting
Economy	30%	Resident Income (MHI Adjusted for RPP / US MHI)†	10%
		Full Value per Capita (Full Valuation of Tax Base / Population)	10%
		Economic Growth (Difference Between Five-Year Compound Annual Growth in Real GDP and Five-Year CAGR in Real US GDP) ‡	10%
Financial Performance	30%	Available Fund Balance Ratio (Available Fund Balance + Net Current Assets / Revenue)	20%
		Liquidity Ratio (Unrestricted Cash / Revenue)	10%
Institutional Framework	10%	-- **	10%
Leverage	30%	Long-term Liabilities Ratio ((Debt + ANPL + Adjusted Net OPEB + Other Long-Term Liabilities) / Revenue)††	20%
		Fixed-Costs Ratio (Adjusted Fixed Costs / Revenue)	10%
Total	100%		100%
		Preliminary Outcome	
Notching Factor			Notching Range
Additional Strength in Local Resources			0 to +2
Limited Scale of Operations			–1 to 0
Financial Disclosures			–2 to 0
Potential Cost Shift to or from the State			–1 to +1
Potential for Significant Change in Leverage			–2 to +1.5
		Scorecard-Indicated Outcome	

* Factor weights shown in this table reflect standard weights. As described in Appendix A, we apply overweighting when scores are low.

† MHI stands for median household income. RPP stands for regional price parity.

‡ CAGR stands for compound annual growth rate.

** This factor has no sub-factors.

†† ANPL stands for adjusted net pension liabilities. OPEB stands for other post-employment benefit liabilities.

Source: Moody's Investors Service

Please see Appendix A for general information about how we use the scorecard and for a discussion of scorecard mechanics. The scorecard does not include or address every rating factor that a rating committee may consider in assigning ratings in this sector. Please see the "Other Considerations" and "Limitations" sections.

Discussion of the Scorecard Factors

In this section, we explain our general approach for scoring each scorecard factor or sub-factor, and we describe why they are meaningful as credit indicators.

Factor: Economy (30% Weight)

Why It Matters

A city's or county's economy provides important indications of its capacity to generate revenue at the local level.

This factor comprises three quantitative sub-factors:

Resident Income: Median Household Income (MHI) Adjusted for Regional Price Parity (RPP) / US MHI

The ratio of adjusted MHI of a city or county to the MHI of the US provides an indication of the relative strength of a local government's capacity to generate revenue at the local level. A city or county with relatively high MHI typically has greater capacity to raise revenue from local sources in order to pay debt service and to fund services and infrastructure that attract residents and businesses to the community. A city or county with relatively low MHI may have more limited capacity to support revenue growth. Low MHI may also signal a greater demand for city or county spending on social services.

We use MHI to compare resident income across cities and counties because this statistic includes the income of all residents of a housing unit regardless of their relationships, including families, single persons living alone and unrelated roommates. Adjusting MHI for RPP is important because it allows for comparability across the US by adjusting for regional differences in the cost of living. RPP reflects the average prices paid by consumers in a region of the US, compared to the national average.

Full Value per Capita: Full Valuation of the Tax Base / Population

The ratio of the full valuation of the property tax base to the population of a city or county provides another indication of the relative strength of a local government's capacity to generate revenue, but from a different perspective. This ratio is an important indicator of a city's or county's economic strength and capacity to generate revenue, even beyond levying taxes on real estate values.

Economic Growth: Difference Between Five-Year Compound Annual Growth Rate (CAGR) in Real Gross Domestic Product (GDP) and Five-Year CAGR in US Real GDP

Economic growth is an important indicator of a city's or county's ability to continue generating the revenue necessary for the programs and services it provides. Cities and counties within growing regional economies are more likely to retain residents and businesses and attract additional residents and businesses who will pay taxes, utility fees and other sources of government revenue. In general, a city or county with a more productive regional economy over a multiyear period is better able to generate adequate revenue on an ongoing basis. Cities and counties in regions with robust, sustained GDP growth are typically better positioned to grow revenue and build reserves against economic shocks. Comparing the GDP growth of a city's or county's region to US GDP growth provides an important indication into city or county economic strength above or below national economic fluctuations.

How We Assess It for the Scorecard

Scoring for this factor is based on three quantitative sub-factors: Resident Income, Full Value per Capita and Economic Growth.

RESIDENT INCOME — MHI ADJUSTED FOR RPP / US MHI:

The numerator is the MHI of a city or county, which we adjust for regional price differences. We make this adjustment by dividing the issuer's MHI by the RPP for the metropolitan statistical area (MSA).[7] For cities and counties that are outside of an MSA, we adjust based on the respective state's statewide non-metropolitan portion RPP. The denominator is US MHI. We use the American Community Survey (ACS) from the US Census Bureau, where available, or a successor report as our source of MHI data.[8] The US Bureau of Economic Analysis or a successor agency is our source for RPP data.

FULL VALUE PER CAPITA — FULL VALUATION OF THE TAX BASE / POPULATION:

The numerator is the full market valuation of taxable property in the city or county, and the denominator is the population of the city or county.

For the numerator, we use the full market valuation of each city or county. Cities and counties often calculate full market value as a multiple of assessed value or of the book value of taxable properties in a city or county, but calculation methods vary by state, and we use assessed value where full market value is not available. Where either full market valuation or population data are not available, we use the full value per capita of a proxy, for example, a nearby local government entity whose tax base characteristics or demographic data reflect those of the entity being evaluated.

ECONOMIC GROWTH – DIFFERENCE BETWEEN FIVE-YEAR CAGR IN REAL GDP AND FIVE-YEAR CAGR IN US REAL GDP:

For cities and counties, we use the difference between the five-year CAGR in real GDP of the city's or county's MSA and the five-year CAGR of US real GDP. For cities and counties outside of an MSA, we use the relevant county real GDP. The US Bureau of Economic Analysis is typically our source for GDP data.

FACTOR

Economy (30%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Resident Income (MHI Adjusted for RPP / US MHI)*1	10%	≥ 120%	100 - 120%	80 - 100%	65 - 80%	50 - 65%	35 - 50%	20 - 35%	< 20%
Full Value per Capita (Full Valuation of the Tax Base / Population)*2	10%	≥ $180,000	$100,000 - $180,000	$60,000 - $100,000	$40,000 - $60,000	$25,000 - $40,000	$15,000 - $25,000	$9,000 - $15,000	< $9,000
Economic Growth (Difference Between Five-Year Compound Annual Growth in Real GDP and Five-Year CAGR in Real US GDP)*3	10%	≥ 0	(1)% - 0	(2.5) - (1)%	(4.5) – (2.5)%	(7) – (4.5)%	(10) – (7)%	(15) – (10)%	< (15)%

*1 For the linear scoring scale described in Appendix A, the Aaa endpoint value is 200%. A value of 200% or better equates to a numeric score of 0.5. The Ca endpoint value is 0%. A value of 0% or worse equates to a numeric score of 20.5.

*2 For the linear scoring scale, the Aaa endpoint value is $400,000. A value of $400,000 or better equates to a numeric score of 0.5. The Ca endpoint value is $7,500. A value of $7,500 or worse equates to a numeric score of 20.5.

*3 For the linear scoring scale, the Aaa endpoint is 2%. A value of 2% equates to a numeric score of 0.5. The Ca endpoint value is (20)%. A value of (20)% or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

7 Because RPP is expressed relative to a benchmark of 100 for the US, we first divide RPP by 100.

8 Where MHI is not available for a city or county, we typically use the MHI of an overlying or other local government located near the city or county (e.g., a neighboring town or most-proximate school district). In cases where we use a proxy entity, we also use that proxy's per capita income and population data in our scorecard metrics.

Factor: Financial Performance (30% Weight)

Why It Matters

Operational and financial strength is a significant driver of credit quality. The financial performance of a city or county, inclusive of its governmental funds and business-type activities, greatly influences its ability to meet existing financial obligations and its flexibility to adjust to new obligations or unexpected contingencies, such as unanticipated revenue shortfalls or cost increases.

This factor comprises two quantitative sub-factors:

Available Fund Balance Ratio: (Available Fund Balance + Net Current Assets) / Revenue

The ratio of available fund balance and net current assets[9] to revenue provides a useful indication of whether a city's or county's resources would be sufficient to bridge temporary budget imbalances.

The sum of a city's or county's available fund balance and net current assets represents the resources available to fund services and unforeseen contingencies, including, for example, a budget shortfall. The available fund balance includes cash as well as receivables, payables and other current assets and liabilities across total governmental funds that are likely to become cash inflows or outflows in the short term. Net current assets includes cash as well as receivables, payables and other unrestricted current assets and liabilities across business-type activities that are likely to become cash inflows or outflows in the short term. Comparing the sum of available fund balance and net current assets to revenue provides insights into the strength of a city's or county's near-term resources relative to the scale of the city's or county's primary governmental activities.[10]

Liquidity Ratio: Unrestricted Cash / Revenue

The ratio of unrestricted cash to revenue provides another important perspective into financial flexibility. Unrestricted cash is a city's or county's most readily available liquid resource. Accruals can cause available fund balance to diverge from unrestricted cash, because the available fund balance reflects receivables, payables, and other current assets and liabilities that are not incorporated into unrestricted cash. For example, a large receivable for taxes or state aid could lead to a high available fund balance position, but a city or county could have a weak unrestricted cash position; in such cases, the city's or county's unrestricted cash position may provide a better indicator of its immediate financial flexibility. Alternatively, a city or county could have a high unrestricted cash position because it has deferred certain expenditures into the next fiscal year. In this case, its lower available fund balance would reflect the payable that will eventually reduce the unrestricted cash position.

How We Assess It for the Scorecard

Scoring for this factor is based on two quantitative sub-factors: Available Fund Balance Ratio and Liquidity Ratio. In our assessment of the scorecard sub-factors, we incorporate total governmental funds and business-type activities to capture a broad view of a city's or county's activities, assets and liabilities.

AVAILABLE FUND BALANCE RATIO — (AVAILABLE FUND BALANCE + NET CURRENT ASSETS) / REVENUE:

The numerator is a city's or county's available fund balance plus its net current assets.

Available fund balance is the sum of a city's or county's available fund balance across all governmental funds. The available fund balance equals the sum of all fund balances that are classified as unassigned,

[9] The Available Fund Balance Ratio uses the available fund balance of total governmental funds and the net current assets of business-type activities and internal services funds.

[10] We use the term *primary government* to refer to a city's or county's governmental and business-type activities. The primary government presentation typically includes blended component units but not discretely presented component units.

assigned or committed in the total governmental funds section of a city's or county's audited financial statements. We exclude any non-spendable fund balance that is in the total governmental funds section, and typically exclude restricted fund balance in that section.

We define net current assets as unrestricted current assets minus current liabilities from a city's or county's business-type activities and internal services funds. Long-term liabilities, including the current portion that we incorporate into the Long-term Liabilities Ratio, where disclosed, are not incorporated into the calculation of net current assets. This approach results in comparability between net current assets and available fund balance, even though each measure is derived from a different accounting presentation.

The denominator is revenue, which is the 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. The netting out of transfer activity minimizes double-counting, i.e., we do not count a transfer as revenue because it is likely already counted as revenue elsewhere in the financial statements. In excluding transfer revenue, we also minimize revenue volatility stemming from activity outside normal governmental activities.

For cities and counties that do not report governmental activities on a modified accrual basis, we frequently cannot calculate or estimate available fund balance. In these cases, scoring for this sub-factor is based on net cash as a proxy for available fund balance. We also apply downward notching if certain financial information is not disclosed, as described in the "Notching Factors" section. For cities and counties that do not report business-type activities on an accrual basis, we frequently cannot calculate or estimate net current assets. In both these cases, scoring for this sub-factor is also based on net cash.

EXHIBIT 2

Illustrative Example of Available Fund Balance Calculation

Fund or activity	Total Governmental	Internal Service	Business-Type	Fund Balance Ratio
Typical accounting standard	**Modified Accrual**	**Accrual**	**Accrual**	
Non-spendable fund balance	*Typically excluded*	n/a	n/a	
Restricted fund balance	*Typically excluded*	n/a	n/a	
Committed fund balance	$3.5	n/a	n/a	
Assigned fund balance	$36.1	n/a	n/a	
Unassigned fund balance	$26.9	n/a	n/a	
Sub-total: governmental fund balance	**$66.5**	**$0.0**	**$0.0**	**$66.5**
Total unrestricted current assets	n/a	$21.0	$132.2	
Total current liabilities	n/a	($8.4)	($55.1)	
Add back: current portion of long-term debt	n/a	$0.0	$16.0	
Add back: current portion of other long-term liabilities	n/a	$0.0	$4.7	
Sub-total: net current assets	**$0.0**	**$12.7**	**$97.9**	**$110.5**
Fund Balance Ratio Numerator	**$66.5**	**$12.7**	**$97.9**	**$177.1**
Total revenues	$164.7	n/a	n/a	
Total operating revenues	n/a	*Typically excluded*	$255.0	
Non-operating revenues	n/a	$0	$7	
Revenue denominator	**$164.7**	**$0.5**	**$261.7**	**$426.9**
Fund Balance Ratio				**41.5%**

Source: Moody's Investors Service

LIQUIDITY RATIO — UNRESTRICTED CASH / REVENUE:

The numerator is the sum of unrestricted cash in total governmental activities, total business type activities and the internal services fund, net of short-term debt. For this calculation, we consider short-term debt to be debt issued for operations maturing within one year, such as cash flow notes or tax anticipation notes. The denominator is revenue.

FACTOR

Financial Performance (30%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Available Fund Balance Ratio (Available Fund Balance + Net Current Assets / Revenue)*4	20%	≥ 35%	25 - 35%	15 - 25%	5 - 15%	0 - 5%	(5) - 0%	(10) – (5)%	< (10)%
Liquidity Ratio (Unrestricted Cash / Revenue)*5	10%	≥ 40%	30 - 40%	20 - 30%	12.5 - 20%	5 – 12.5%	0 - 5%	(5) – 0%	< (5)%

*4 For the linear scoring scale, the Aaa endpoint value is 50%. A value of 50% or better equates to a numeric score of 0.5. The Ca endpoint value is (15)%. A value of (15)% or worse equates to a numeric score of 20.5.

*5 For the linear scoring scale, the Aaa endpoint value is 60%. A value of 60% or better equates to a numeric score of 0.5. The Ca endpoint value is (10)%. A value of (10)% or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Factor: Institutional Framework (10% Weight)

Why It Matters

The institutional framework is important because it affects the ability of a city or county to match recurring revenue with expenditures. The statutory and legal framework under which a city or county operates defines the scope of services it is required to provide and establishes its revenue structure. These determine how much flexibility a city or county has to increase revenue or reduce spending.

Some cities and counties have broader latitude than others in determining the bulk of their revenue. For example, the ability to raise property tax revenue through a tax rate increase may be subject to the approval of the city or county governing body alone, or it may also need the approval of local voters or another level of government. Cities and counties that can increase revenue without the approval of voters or other governments are more easily able to accommodate changes in expenditures. In addition, the revenue-raising ability of a city or county may be subject to local tax rate caps or levy limits. Other forms of city or county revenue may include sales taxes, income taxes, utility rates and various fees. The state ultimately controls the extent to which a city or county may determine its revenue.[11]

In addition, cities and counties operate within different expenditure-cutting frameworks, e.g., cities and counties that are required to provide mandated services, such as public health or education, regardless of revenue, typically have lower flexibility to reduce costs than those that are not required to provide services, or that are only required to provide services if the state provides funding for those services.

How We Assess It for the Scorecard

In our assessment of this qualitative factor, we consider whether the institutional framework gives the city or county control over the majority of its revenue across governmental and business-type activities, and whether this revenue is subject to caps (such as on property taxes or utility rates), or other limitations. We consider whether revenue increases are subject only to the approval of the city's or county's own governing board, or additionally require the approval of local voters or another level of government. If approval is required by external parties, we consider the extent to which the city or county can increase revenue within the constraints. We also consider the extent to which a city or county can reduce expenditures outside externally imposed mandates and restrictions, e.g., outside any spending requirements, such as aid to local schools or support to public health systems. If our assessment of revenue characteristics is different from expenditure characteristics, we typically assign the factor score to the alpha category that reflects the more meaningful characteristic.

Most cities and counties in a given state receive the same score for this factor, except where the revenue-raising or expenditure-cutting framework of a category of cities or counties is materially different from others in the state under state law. We typically perform an assessment of city and county institutional frameworks on a statewide basis once a year.

[11] This is not the case for US Native American tribal nations, which are under the jurisdiction of the federal government. Tribal nations have the right to make and enforce laws, to levy taxes and authorize expenditures, and to license and regulate activities within their borders.

FACTOR

Institutional Framework (10%)

Institutional Framework	Factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Institutional Framework	10%	The majority of revenue is not subject to externally imposed caps and the governing body can increase revenue meaningfully without limitation or without approval of voters or other governments. And: The ability to meaningfully reduce expenditures is not constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps but the governing body can increase revenue meaningfully without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is mildly constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps but the governing body can increase revenue moderately without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is moderately constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body can increase revenue only minimally without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is heavily constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body cannot increase revenue without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is very heavily constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body cannot increase revenue. Or: The ability to meaningfully reduce expenditures is extremely constrained by externally imposed mandates or restrictions.	Not applicable.	Not applicable.

Source: Moody's Investors Service

Factor: Leverage (30% Weight)

Why It Matters

Leverage measures provide important indications of a city's or county's capacity to invest in capital assets and pay annual fixed costs, including debt service, while meeting its core responsibility to provide municipal services.

The more leveraged a city or county is, the less flexibility it has to pay debt service and meet its other obligations. High and rising costs related to debt service, retirement benefits or other large long-term liabilities can crowd out other service priorities, reducing a local government's ability to deliver on its core service mission. As a city's or county's financial capacity to deliver on its core service mission declines, the risk rises that it will default and seek to restructure its debt. High leverage may also diminish a city's or county's access to credit markets either due to statutory debt limits or a lack of investor willingness to extend credit.

This factor comprises two quantitative sub-factors:

Long-term Liabilities Ratio: (Debt + Adjusted Net Pension Liabilities + Adjusted Net OPEB Liabilities + Other Long-Term Liabilities) / Revenue

Debt, unfunded pension liabilities and unfunded other post-employment benefit (OPEB)[12] liabilities typically represent the primary long-term financial obligations of a city or county; other types of material long-term liabilities may include compensated absences, claims and judgments, or liabilities related to environmental remediation. This factor provides a comprehensive view of a city's or county's leverage compared to the revenue that will support those obligations.

The ratio of the sum of debt, adjusted net pension liabilities (ANPL), adjusted net OPEB liabilities and other long-term liabilities from total governmental funds and business-type activities to revenue is an important indicator of total leverage.

Fixed-Costs Ratio: Adjusted Fixed Costs / Revenue

The ratio of adjusted fixed costs to revenue provides an important indication of the annual financial burden associated with a city's or county's debt, pensions, OPEB obligations and other miscellaneous long-term liabilities relative to its revenue. The ratio also provides by proxy the percentage of revenue that remains available for the entity to provide core services after fixed costs are paid. A city or county with high fixed costs faces a greater challenge adjusting its expenditures than one with low fixed costs.

How We Assess It for the Scorecard

Scoring for this factor is based on two quantitative sub-factors: the Long-term Liabilities Ratio; and the Fixed-Costs Ratio.

LONG-TERM LIABILITIES RATIO — (DEBT + ANPL + ADJUSTED NET OPEB LIABILITIES + OTHER LONG-TERM LIABILITIES) / REVENUE:

The numerator is the sum of a city's or county's debt outstanding, ANPL, adjusted net OPEB liabilities and other long-term liabilities. When incorporating these four elements into the numerator, we typically include all long-term liabilities of a city or county reported in the governmental and business-type activities entries of the audited financial statements (i.e., the primary government, as reported). The denominator is revenue.

A city's or county's debt includes its long-term bonds and other obligations. Debt includes all forms of debt on a city's or county's governmental activities and business-type activities balance sheets and may include other obligations that are not reported on the balance sheet. Examples of debt include general obligation bonds; general promises to pay; lease-backed, appropriation and moral obligations; bond anticipation notes; special tax debt; revenue bonds; loans from the state; and leases.

A city's or county's debt also typically includes guarantees that it has provided for another entity's debt. We also typically include public-private partnership (P3 or PPP) agreements that contractually obligate the city or county to make scheduled payments. We typically include guarantees and P3 obligations in our assessment, regardless of their treatment in a city's or county's financial statements.[13]

Debt excludes debt such as short-term cash flow notes that are considered liabilities in calculating the Available Fund Balance Ratio and Liquidity Ratio but includes short-term debt that is not deducted from these ratios. Typically, we include bond anticipation notes in debt and exclude it from the Financial Performance ratios.

[12] OPEBs most often are retiree healthcare benefits.

[13] See the "Other Considerations" section of this methodology for analytic considerations related to extraordinary or ongoing support that may affect the rating.

For a description of how we calculate or estimate ANPL and adjusted net OPEB liabilities, please see our cross-sector methodology that describes our adjustments to pension and OPEB data reported by Governmental Accounting Standards Board (GASB) issuers.[14]

Other long-term liabilities typically comprise the miscellaneous liabilities reported under the governmental and business-type activities entries in a city's or county's financial statements that are not included in debt, ANPL or adjusted net OPEB liabilities. These liabilities typically include compensated absences, claims and judgments, or liabilities related to environmental remediation.

FIXED-COSTS RATIO — ADJUSTED FIXED COSTS / REVENUE:

For any period, the numerator is the sum of a city's or county's implied debt service, its pension tread water indicator, its OPEB contributions and its implied carrying costs for other long-term liabilities. The denominator is revenue. The four components of the numerator are described below.

Implied Debt Service

A city's or county's implied debt service represents the annual cost to amortize its debt over 20 years with level payments. The metric amounts to an implied carrying cost for debt. We use a 20-year amortization period to reflect the typical composite useful life of capital assets financed by cities and counties, which range from assets with long expected useful lives, such as police stations, to assets with short useful lives, such as sanitation trucks and technology improvements. The 20-year amortization period also provides a general composite of the weighted average maturity of a city's or county's debt.

We use a city's or county's implied debt service rather than its actual debt service as an input to the fixed-costs ratio for two key reasons. First, implied debt service provides a comparable measure of annual debt carrying costs across cities and counties. Using actual debt service in the ratio could have the effect of rewarding the backloading of debt amortization — in these cases, the current year ratio would understate the city's or county's growing fixed cost burden. Using actual debt service could also penalize more rapid debt amortization, because the current fixed-costs ratio would appear relatively weak. Second, implied debt service avoids potentially misleading volatility in actual debt service payments that can be caused by refunding (i.e., debt refinancing) activity.

We calculate or estimate implied debt service in several steps (see the exhibit below):

- **Step 1**: We assign a common implied interest rate to all cities and counties, approximately annually. We base the implied interest rate each year upon a 10-year rolling average of a high-grade municipal bond index, such as the Bond Buyer 20-bond GO index or a comparable index, as of the end of the prior calendar year (see line A).
- **Step 2**: A level-dollar amortization divisor is calculated, using a 20-year period, with debt service payments made annually, and the implied interest rate calculated in Step 1 (see line B).
- **Step 3**: The city's or county's debt outstanding, as defined in the numerator of the Long-term Liabilities Ratio, at the beginning of the fiscal year (i.e., its outstanding debt at the end of the prior year) is divided by the amortization divisor calculated in Step 2. The result is the implied debt service (see lines C and D).

[14] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

EXHIBIT 3

Example Calculation of Implied Debt Service

Line item	Example Issuer Information	Value	Typical Source
A	Implied interest rate (10-year rolling average as of end of prior calendar year)	3.70%	Bond Buyer 20-bond GO or comparable index
B	Amortization divisor	13.964	= {1 - [1 / (1+ A)^{20}]} / A
C	Debt outstanding, end of prior fiscal year	$1,000,000	Audited financial statements
D	Implied debt service	$71,613	= C / B

Source: Moody's Investors Service

In addition, we apply the same approach described above for calculating or estimating implied carrying costs of debt to our calculation of the implied carrying costs of other miscellaneous long-term liabilities, excluding ANPL and adjusted net OPEBs, for governmental and business-type activities.

Pension Tread Water Indicator

The pension tread water indicator represents our estimate of the pension contribution necessary to prevent reported unfunded pension liabilities from growing, year over year, in nominal dollars, if all actuarial assumptions are met.[15] The pension tread water indicator is the sum of two components: the employer portion of the service cost and the implied interest on the reported net pension liability at the beginning of the plan's fiscal year.

OPEB Contributions

The input to the fixed-costs ratio for OPEBs is a city's or county's actual contribution in a given period, typically the fiscal year. In the event a city or county issues pension or OPEB funding bonds, the deposit of the proceeds into a retirement system or trust is not considered a contribution in our analysis of fixed costs, nor in our analysis of pension contributions relative to the pension tread water indicator.

FACTOR

Leverage (30%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Long-term Liabilities Ratio ((Debt + ANPL + Adjusted Net OPEB + Other Long-Term Liabilities) / Revenue)*6	20%	≤ 100%	100 - 200%	200 - 350%	350 - 500%	500 - 700%	700 - 900%	900 – 1,100%	> 1,100%
Fixed-Costs Ratio (Adjusted Fixed Costs / Revenue)*7	10%	≤ 10%	10 - 15%	15 - 20%	20 - 25%	25 - 35%	35 - 45%	45 - 55%	> 55%

*6 For the linear scoring scale, the Aaa endpoint value is 0%. A value of 0% or better equates to a numeric score of 0.5. The Ca endpoint value is 1,300%. A value of 1,300% or worse equates to a numeric score of 20.5.

*7 For the linear scoring scale, the Aaa endpoint value is 0%. A value of 0% or better equates to a numeric score of 0.5. The Ca endpoint value is 65%. A value of 65% or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

[15] For more information about our adjustments, see our cross-sector methodology that describes our adjustments to pension and OPEB data reported by GASB issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Notching Factors

The scorecard includes notching factors. Our assessment of these notching factors may result in upward or downward adjustments to the preliminary outcome that results from the four weighted scorecard factors. Adjustments may be made in half-notch or whole-notch increments based on the notching factors listed in the table below.

In aggregate, the notching factors can result in a total of up to four and one-half upward notches or up to six downward notches from the preliminary outcome (the scorecard notching range) to arrive at the scorecard-indicated outcome. In cases where we consider that the credit weakness or credit strength represented by a notching factor, or by these factors in aggregate, is greater than the scorecard notching range, we incorporate this view into the city's or county's rating, which may be different from the scorecard-indicated outcome.

EXHIBIT 4

Notching Factor Table

Notching Factor	Notching Range
Additional Strength in Local Resources	0 to +2
Limited Scale of Operations	–1 to 0
Financial Disclosures	–2 to 0
Potential Cost Shift to or from the State	–1 to +1
Potential for Significant Change in Leverage	–2 to +1.5

Source: Moody's Investors Service

Additional Strength in Local Resources

Why It Matters

For some cities or counties, very high aggregate property values or extremely high resident income levels may provide credit strength that is not fully reflected in the Resident Income or Full Value per Capita sub-factors. Cities or counties with very high property values or extremely high adjusted MHI have greater revenue-generating capacity than most other cities or counties. For example, where the values of second homes and commercial properties augment the tax base, this strength may not be fully reflected in the weighted sub-factors.

How We Assess It for the Scorecard

In assessing this notching factor, we consider the following two metrics. Notching for this factor is cumulative. Notching for this factor is only upward, in part because extraordinarily weak adjusted MHI and Full Value per Capita are overweighted in the scorecard.[16]

- **Extremely High Adjusted MHI**. We use the Resident Income sub-factor (the ratio of MHI (adjusted for RPP) to US MHI). We apply a one-half upward notch if the value is 200% to 250%. We apply one upward notch if the value is greater than 250%.
- **Very High Full Value per Capita.** We use the Full Value per Capita sub-factor. This notching factor results in an adjustment of up to one upward notch for cities or counties whose ratios are high relative to peers. We apply a one-half upward notch if the full value per capita is $400,000 to $800,000 and one upward notch if it is greater than $800,000.

[16] Overweighting is described in Appendix A, in the "Determining the Overall Scorecard-Indicated Outcome" section.

Limited Scale of Operations

Why It Matters

Small scale is important because cities or counties with very small budgets are at greater risk of a budgetary disruption than cities or counties with large budgets, which typically have greater economies of scale. Event risks, such as an unexpected capital need or an adverse litigation outcome, can disrupt the budget of a city or county whose scale of operations is limited.

How We Assess It for the Scorecard

Scale is assessed using total revenue. This notching factor results in a downward adjustment of one-half notch for cities or counties whose revenue is between $4 million and $8 million and one notch for cities or counties whose revenue is less than $4 million. This notching factor does not result in upward notching because large size on its own does not reduce credit risk for cities and counties.

Financial Disclosures

Why It Matters

Scorecard ratios may not accurately reflect all elements of a city's or county's financial position where certain financial disclosures are not provided in an issuer's financial statements, potentially understating credit risk.

How We Assess It for the Scorecard

Notching for this factor is applied cumulatively as explained below and is capped at two downward notches.

CASH BASIS REPORTING:

For cities or counties that do not report non-cash assets and liabilities including receivables and payables, typically because they report on a cash basis, we apply one downward notch to reflect the risk that net cash may not be an accurate representation of the city's or county's available fund balance ratio.

PENSION LIABILITIES AND PENSION COSTS:

There is up to one cumulative downward notch related to pension disclosures.

For cities or counties whose financial statements do not follow GASB rules for the reporting of pension liabilities, we may use estimates for certain pension characteristics. We typically estimate pension liabilities based on partial information where we have data on one pension plan but not on the issuer's other plans. In such cases, we apply a one-half downward notch to reflect that adjusted liability values may be an imprecise reflection of the issuer's actual liabilities.

For cities or counties whose financial statements do not comply with GASB rules for the reporting of pension costs, we may not have sufficient information to calculate or estimate a pension tread water indicator. In these cases, we use actual pension contributions to calculate the Fixed-Costs Ratio sub-factor, and we apply a one-half downward notch to reflect that actual pension contributions may be an imprecise or understated reflection of pension funding needs. Pension system financial reporting, which we often rely on to calculate the tread water indicator, can lag behind a city's or county's own financial reporting. In these cases, we may rely on a fixed-costs ratio that incorporates the tread water indicator from the prior year, but would not apply downward notching.

OPEB LIABILITIES AND OPEB CONTRIBUTIONS:

There is up to one cumulative downward notch related to OPEB disclosures.

We typically estimate OPEB liabilities based on partial information where we have data on one OPEB plan but not on the issuer's other plans, and in such cases, we apply a one-half downward notch. We typically use a value of zero for a missing OPEB liability input where a city or county does not report this information, and in such cases, we typically apply a one-half downward notch.

We typically use a value of zero for a missing OPEB contribution input where a city or county provides OPEB benefits but does not report this information, and then apply a one-half downward notch.

DEPRECIATION OF CAPITAL ASSETS:

For cities or counties that do not report gross capital asset values or depreciation, we do not have sufficient information to assess the Potential for Significant Change in Leverage notching factor (see below), and we apply a one-half downward notch.

Potential Cost Shift to or from the State

Why It Matters

In some cases, the state has recently taken or we expect that it may take future action to shift certain costs to a city or county or to absorb costs on its behalf, detracting from or adding to the city's or county's financial flexibility. A state may also take such action on a group of cities or counties or on all cities or counties in the state. These shifts can affect our view of a city's or county's credit strength, even where not yet reflected in historical metrics and where they cannot be quantified in our forward view of metrics.

A state is more likely to pass down costs during times of state budgetary stress and is more likely to provide additional funding when it is in a relatively strong financial position or has a political incentive to support certain local programs. For example, a state could shift pension costs to a city or county by requiring them to pay a higher proportion of annual pension contributions. As another example, a state could appropriate less money than in previous years for capital work or for certain forms of state aid. Conversely, states on occasion may take on a greater proportion of pension costs or capital funding or may provide additional aid or material new forms of aid.

How We Assess It for the Scorecard

In assessing the likelihood of a state government shifting material costs toward or away from cities or counties, we consider the state's budgetary position, spending priorities and political incentives to provide or reduce financial support for cities or counties. We also consider whether any shift in material costs is likely to be temporary or long-lasting, and whether it indicates a secular trend. We typically perform this assessment on a statewide basis, unless a potential state action affects only a subset of cities or counties, and we typically conduct the assessment once a year.

This notching factor may result in a downward or upward adjustment of up to one notch. Where notching is applied, it is typically applied to all of a state's cities or counties that we expect will be affected by the cost shift.

Potential for Significant Change in Leverage

Why It Matters

The potential for a significant increase in leverage or fixed costs due to pension asset risk, slow or negative pension amortization or unmet capital needs can weaken a city's or county's ability to meet its obligations. These forward-looking risks may not be fully incorporated into the preliminary scorecard outcome. Alternatively, some cities and counties have comparatively much lower exposure to a significant change in leverage because they have no pension asset risk or have minimally depreciated capital assets.

How We Assess It for the Scorecard

Our assessment, based on total primary government reporting, uses the following metrics, if data are available. If data for one or more of the following metrics are not available, we would apply no notching based on the relevant metric in this notching factor and score this notching factor without those inputs. In addition, we would apply the Financial Disclosures notching factor, discussed above. Notching for this factor is cumulative and is capped at two downward notches or one and one-half upward notches.

- **Pension Asset Shock Indicator (PASI)**. We use the pension asset shock indicator to assess a city's or county's exposure to potential pension system investment losses.[17] The PASI is expressed as a probability. It represents the likelihood that a city's or county's pension system(s) will experience investment losses in a given year that amount to 25% or more of the city or county district's revenue. If a city or county district has a PASI of 18%-23%, we notch downward by one-half notch. If a city or county has a PASI of 23% or higher, we apply one downward notch.[18]
- **Pension Tread Water Gap**. The pension tread water gap reflects the difference between a city's or county's pension tread water indicator (or contribution benchmark)[19] and its actual pension contributions. To arrive at the pension tread water gap, we use a ratio; the numerator is the pension tread water indicator minus the city's or county's actual pension contributions in the most recent year, and the denominator is revenue. If a city's or county's tread water gap is equal to 5%-10% of its revenue, we notch downward by one-half notch. We notch downward an additional one-half notch for each five-percentage-point increase in the gap (i.e., 10%-15%, 15%-20%, 20% or higher), up to a maximum of two downward notches.
- **Defined Contribution Plan**. If the city or county does not have a defined benefit plan and instead has a defined contribution or similar plan, we apply one upward notch to reflect the lack of exposure to pension risk.
- **Capital Asset Depreciation Ratio**. We use a ratio of accumulated depreciation to gross depreciable assets in a given year. If the ratio is lower than 25%, we notch upward by one-half notch to reflect the city's or county's very low level of capital asset depreciation. If the ratio is equal to 25%-65%, we do not apply notching. If the ratio is 65% or higher, we notch downward by one-half notch. A ratio above 65% indicates that reinvestment in capital assets (excluding non-depreciable assets such as land and construction-in-progress) is lagging behind depreciation. A ratio above 65% is also a signal of likely future debt issuance to improve or replace capital assets.

[17] Cities and counties often have their own pension systems, but some participate in statewide pension systems as well. For more information about the pension asset shock indicator, see our cross-sector methodology that describes our adjustments to pension and OPEB data reported by GASB issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

[18] While dependent on the combination of inputs, a PASI of 18% (i.e., an 18% likelihood of an investment loss equal to 25% of revenue) roughly translates to a 10% likelihood of losses amounting to 50% of a sponsoring government's revenue. A PASI of 23% roughly translates to a 15% likelihood of losses amounting to 50% of a sponsoring government's revenue, and a 5% likelihood of losses amounting to 100% of revenue.

[19] For more information about the tread water indicator, see our cross-sector methodology that describes our adjustments to pension and OPEB data reported by GASB issuers. A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

EXHIBIT 5

Notching Factor: Potential for Significant Change in Leverage

	Level of Notching						
	+1	+0.5	0	-0.5	-1.0	-1.5	-2.0
Notching Metric							
Pension Asset Shock Indicator (PASI)	n/a	n/a	< 18%	18% - 23%	≥ 23%	n/a	n/a
Pension Tread Water Gap	n/a	n/a	< 5%	5% - 10%	10% - 15%	15% - 20%	≥ 20%
Defined Contribution Plan	Yes	n/a	n/a	n/a	n/a	n/a	n/a
Capital Asset Depreciation Ratio	n/a	< 25%	25% - 65%	≥ 65%	n/a	n/a	n/a
						Sub-Total Before Cap	+1.5 to -3.5
						Total Factor Notching	+1.5 to -2

Source: Moody's Investors Service

Other Considerations

Ratings may reflect consideration of additional factors that are not in the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. Such factors include financial controls and the quality of financial reporting; the quality and experience of management; assessments of governance as well as environmental and social considerations; and possible interference from other levels of government. Regulatory, litigation, liquidity and technology risk as well as changes in demographic and macroeconomic trends also affect ratings.

Following are some examples of additional considerations that may be reflected in our ratings and that may cause ratings to be different from scorecard-indicated outcomes.

Environmental, Social and Governance Considerations

Environmental, social and governance (ESG) considerations may affect the ratings of cities and counties. For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.[20] Environmental considerations, such as exposure to natural disaster risk, and social considerations, such as the risk of labor strikes, may influence credit strength.

Cities and counties may be directly exposed to extreme weather events due to climate change, such as floods, which may affect credit quality. Government facilities or investments in physical assets could be affected by physical risks and by other sources of environmental risk. Coastal cities and counties, in particular, are highly exposed to numerous environmental risks. Environmental hazards, such as hurricanes or wildfires, can result in an immediate adverse impact on economic activity and result in revenue disruption, while longer-term environmental trends, such as rising sea levels, can cause more prolonged pressure on budgeting and spending priorities.

Social considerations for cities and counties include positive and adverse trends in the statistical characteristics of populations (such as the percentage of the population at working age), labor market conditions, housing affordability and the poverty rate. For example, new home construction or

[20] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

business growth can improve a city's or county's revenue-generating capacity. As another example, a regional economic center may generate revenue from daytime visitors such as employees or shoppers who are not part of the city's or county's reported population. In contrast, unusually high unemployment or increasing poverty levels can strain a city's or county's capacity to generate revenue and provide social services. For example, where housing affordability is low, such risks can influence population and business retention, dampen property tax revenues and increase the cost of social services. They may lead to a declining tax base, diminished economic growth and higher social spending over time.

Some governance considerations are reflected in the qualitative Institutional Framework factor, including revenue-raising and spending flexibility. Additional considerations may include debt management, multiyear fiscal planning, the timeliness of information disclosure, and legislation or other legal action that materially affects a city's or county's expenditures or revenue, such as a lawsuit that challenges a levy. We may also consider management's ability to develop and adhere to budgets that provide for capital investment while managing debt levels and unfunded retirement liabilities. Weak or opaque governance can negatively affect a city's or county's performance, which can reduce taxpayer willingness to support the city's or county's revenue needs and can constrain capital market access. Conversely, very strong governance can lead to outcomes that foster economic growth or to measures that effectively mitigate certain kinds of credit-negative governance exposures.

ESG considerations are not always negative, and they can be a source of credit strength in some instances. For example, a strong labor market, and relatively good housing affordability can drive strong tax revenue trends and foster economic growth. External support, such as state or federal government funds for natural disaster relief, can help to mitigate the credit impact of ESG exposures.

Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in a city's or county's fundamental creditworthiness, which may cause actual ratings to be lower than the scorecard-indicated outcome. Event risks — which are varied and can include natural disasters, sudden changes in state law or regulation, material litigation, pandemics or cybercrime events — can have a material credit impact on even a stable city or county.

Strengths or Weaknesses Related to Economic Concentration

Economic concentration can be an important consideration because cities and counties that rely heavily on a single taxpayer or industry can be particularly vulnerable to revenue losses, especially if the industry is weak or volatile. Sometimes these losses are sudden, such as when a large local employer closes on short notice. We consider the economic drivers of each key industry and the likely trajectory of those drivers.

In addition, the presence of some types of industries in a city or county, such as state government, higher education or the military, can stabilize or strengthen a city's or county's economic base by supporting steady population growth and acting as a draw for economic activity from students, military personnel and their visitors. In our analysis, we typically consider the likelihood that the activity will continue to contribute materially to the city's or county's population and economy.

Unusual Strengths or Weaknesses Related to Budgets or Liquidity

Unusually volatile or unpredictable revenue sources or expenditures can result in budget imbalances and reduce fund balance and cash reserve stability. We may consider recent or expected volatility in revenue or expenditures that is not already captured in the scorecard. We may also qualitatively consider a city's or county's financial flexibility to the extent that it is not captured in the scorecard.

Revenue or expenditure timing issues may overstate or understate fund balance or cash at year end, and we may consider the issuer's financial position at other points of the year. We also qualitatively assess the extent of pass-through revenue, such as state aid earmarked for a county's schools, that is captured as revenue in scorecard metrics but is not available for primary government activities. We also may consider other potential sources of liquidity that are not already reflected in the scorecard-indicated outcome.

In addition, high delinquencies in revenue collection can be an indication of low affordability of government service charges, low support for the government or weaknesses in the administration of revenue collection, all of which can constrain a city's or county's credit strength. Collection rates have been typically high in this sector, approaching 100%.

Fund-specific Financial Considerations

The scorecard metrics incorporate all governmental and business-type activities. These metrics capture the fundamental credit strength of a city or county across all of its primary activities. However, in some cases, the incorporation of all governmental and business-type activities in scorecard metrics may obscure strengths or weaknesses of the overall credit profile.

For example, our analysis typically includes consideration of restrictions on the ability to move money across governmental activities funds and business-type activities funds. Where meaningful restrictions exist, the scorecard metrics may overstate the fund balance and liquidity available to a city or county for general purposes. Airport funds may fall into this category due to Federal Aviation Administration (FAA) restrictions on the use of airport revenues.

In addition, fund balances and cash balances that are reported as restricted are considered qualitatively. For example, we typically consider restricted fund balances that are available for core governmental operations (e.g., fund balances dedicated to public safety operations) or rainy day funds as providing additional financial flexibility not reflected in the scorecard. In contrast, we typically do not consider restricted fund balances consisting of bond proceeds to be resources that provide additional operating flexibility.

Competitive Enterprise Risk in Governmental or Business-Type Activities

While scorecard metrics incorporate all governmental or business-type activities reported in financial statements, market competition in certain of these activities may present additional credit risk that is not fully captured in the scorecard-indicated outcome. For example, the operation or ownership of a hospital, nursing home, sports stadium or economic development project is typically affected by competitors' service mix, pricing and market share. Where a function of a city or county is exposed to competitive market risks, we may additionally consider historical and forward-looking metrics that are outside the scorecard, e.g., metrics related to that enterprise's sector, as well as the extent of competition and the enterprise fund's financial condition.

Credit Strength or Weakness Associated with Component Units or Other Related Entities

A city or county may be closely related to a separate entity, such as a discretely presented component unit. Some cities or counties may support that entity through managerial oversight, direct financial assistance or by issuing debt on behalf of the entity. The willingness to extend such extraordinary support often reflects a particular priority (e.g., economic development). Depending upon the circumstances, this support can be temporary or extended. Extraordinary support that is material in relation to the city's or county's own financial and economic resources could weaken its credit profile.

In such scenarios, we assess, among other things, the financial condition of the separate entity as an indicator of the likelihood that the city or county will need to support it, the extent of such support and the effect on the city's or county's credit quality.

An unexpected call on a contingent liability of a city or county, such as a debt service guarantee, can also reduce credit strength. We typically would consider the guaranteed entity's amount of debt, market access, debt structure and legal issues that could limit the flexibility of the city or county in the event it had to pay the entity's debt service or manage its operations.

There may also be circumstances in which a default of a separate entity that is outside the primary government, even if the debt is not guaranteed or is otherwise non-recourse to the city or county, may reflect poorly on the city's or county's overall governance and debt management practices and may negatively affect credit quality.

In addition, there may be circumstances where a separate entity outside the primary government enhances a city's or county's credit quality by providing ongoing support. For example, a utility system that is a component unit of a city or county could provide a recurring and predictable source of revenue for the city or county. In these cases, we would assess the financial condition of the entity as an indicator of its capacity to continue providing revenue.

Related Local Governments

In some cases, other governments related to a city or county affect its credit strength. The same taxpayers that support the debt and activities of the city or county typically also support the debt and activities of overlapping local government entities, such as a local school district. The expenses and the debt, pension and OPEB burdens of these overlapping entities can elevate total tax rates or bills, thus impeding the willingness or ability of a city or county to generate additional revenue, even where legally permitted to do so.

Some cities or counties are members of a regional government or enterprise, e.g., a regional jail that provides jail services to member towns. Such cities or counties can face unique risks, such as the possibility of a change in the proportionate membership of participating jurisdictions, which can change the percentage of expenses billed to the remaining members.

Likelihood of Receiving Extraordinary or Ongoing Support

Some cities and counties receive extraordinary support from a higher level of government, such as the state, or, more rarely, from the federal government, typically to help the city or county avoid a default on debt obligations. In some cases, extraordinary support may come from another local government. For example, a county may provide assistance to a nearby city undergoing financial distress.

The circumstances surrounding extraordinary support for a city or county are often very situation-specific. For example, a state may provide meaningful financial or managerial support to a city or county undergoing stress, thereby bolstering a weak fundamental credit profile and materially lowering the risk of a payment default. Conversely, a temporary infusion of state funds may bolster financial performance in the short term but leave a city or county exposed to rapid financial deterioration if the state aid does not continue.

We typically assess whether the support has been received or is imminent, whether it will be ongoing and whether it will be sufficient to stabilize the city or county. We would typically give positive consideration where the support is material and not already reflected in scorecard metrics. We also consider the associated benefits or risks of dependence on such support. Alternatively, many cities and counties receive annual funding from their state government for programs such as education and

transportation. This type of state funding is often earmarked, and we do not consider it to be extraordinary support.

Financial Controls

We rely on the accuracy of audited financial statements to assign and monitor ratings in this sector. The quality of financial statements may be influenced by internal controls, including the proper tone at the top, centralized oversight of operations, and consistency in accounting policies and procedures. Auditors' reports on the effectiveness of internal controls, auditors' comments in financial reports and unusual restatements of financial statements or delays in regulatory filings may indicate weaknesses in internal controls.

Unusual Risk or Benefit Posed by Long-Term Liabilities

Most cities and counties issue fixed-rate debt that amortizes over a multiyear period. Cities and counties that have variable-rate debt, debt with bullet maturities or capital appreciation bonds, derivatives such as interest rate swaps or other forms of debt that are subject to remarketing risk may be more exposed to liquidity demands or may require market access for refinancing, which can place downward pressure on credit quality. Liquidity and market access risks can also arise with variable-rate demand obligations and bonds that contain provisions that allow debtholders to put bonds back to the issuer. The potential adverse credit effects of variable-rate demand obligations are assessed in the context of the overall credit profile and circumstances of each issuer. In addition, a large amount of short-term debt without sufficient offsetting liquidity can expose a city or county to market access risks.

A city or county that is rapidly paying off debt or other long-term liabilities with recurring revenue typically has greater financial flexibility, which may result from a conservative financial policy and may indicate strengthening credit. Conversely, if a city's or county's current debt service costs are very high and are causing financial stress that is not fully captured in the implied debt service input to the Fixed Costs Ratio in the scorecard, the actual rating may be lower than the scorecard-indicated outcome.

Also, we may conclude that a city's or county's adjusted net pension or adjusted net OPEB liability is likely to grow due to pension funding law or policy, resulting in insufficient contributions, overly optimistic assumptions for the return on pension plan assets or other factors. Conversely, we may conclude that a city's or county's adjusted net pension or adjusted net OPEB liability is likely to diminish in light of pension benefit changes or larger contributions. We may also incorporate a qualitative assessment of the trajectory of net pension and net OPEB liabilities over the medium- to long-term.

History or Likelihood of Impaired Liquidity or Market Access or Missed Debt Service Payments

While liquidity is specifically considered in the scorecard, when it is very weak, near-term default risk may be elevated and the impact liquidity has on ratings may be much greater than the standard scorecard weight would imply. In our forward view of liquidity, we typically consider the city's or county's own sources of liquidity as well as its market access. In our assessment, we may use scenario analysis, including a scenario where market access is lost.

In addition, cash flow or deficit financing could indicate an unbalanced budget or financial stress. For distressed cities or counties, access to financing from public markets or banks could be a stopgap to defer a liquidity crisis. The loss of such market access could be a prelude to debt restructuring and possibly a default.

We also typically consider whether a past default on rated or unrated obligations indicates a heightened risk of failure to meet financial obligations going forward, especially if the credit drivers of

the default have not been cured. In addition, a history of default can indicate weak or wavering willingness to take necessary steps to avoid a future default. We include in this category missed or materially late payments on any of a city's or county's long-term bonds or short-term notes, reflecting an inability or unwillingness to pay, and we typically include defaults on contingent obligations, including moral obligations. We place less emphasis on this consideration in cases where a city or county has demonstrated an ability and willingness to address the credit drivers behind a default.

Expected Decline or Improvement in Instrument-Level Credit Quality

Expectations of a marked decline in credit quality (e.g., debt service coverage) on any debt pledge of a city or county could indicate weakening credit quality of the city or county itself that is not yet reflected in the scorecard. Conversely, an expected material improvement in instrument-level credit quality may indicate improving credit quality of the city or county. Overall, a change in the credit quality of any instrument of a city or county could indicate shifts in the credit quality of the city or county itself, e.g., through financial or governance ties between the instrument and general government activities.

Considerations Specific to US Native American Tribal Nations

Unlike cities and counties, US Native American tribal nations operate under the jurisdiction of the federal government and not under the jurisdiction of any state. Tribal nations have the right to make and enforce laws, to levy taxes and authorize expenditures, and to license and regulate activities within their borders. An additional consideration is the extent to which a tribal nation has waived its sovereign immunity with respect to creditor protections. In the absence of such a waiver, creditors may not have the ability to enforce their rights, potentially leading to a significantly higher expectation of loss upon an event of default, which we would incorporate in the issuer rating.

Additional Metrics

The metrics included in the scorecard are those that are generally most important in assigning ratings to issuers in this sector; however, we may use additional metrics to inform our analysis in specific cases. These additional metrics may be important to our forward view of metrics that are in the scorecard or other rating factors.

Assigning Issuer-Level and Instrument-Level Ratings

After considering the scorecard-indicated outcome, other considerations and relevant cross-sector methodologies, we typically assign an issuer rating to a city or county.

Individual debt instrument ratings for general obligation unlimited tax, general obligation limited tax, general promises to pay, and lease and contingent obligations may be assigned at the same level or higher or lower than the issuer rating to reflect our assessment of differences in expected loss related to an instrument's priority of claim as well as our assessment of the specific pledge included in the instrument's terms. Broad guidance for decisions on assigning instrument ratings relative to the issuer rating can be found in Appendix C. Guidance for rating city and county short-term debt is provided in our methodologies for short-term obligations, and guidance for the ratings of city and county long-term debt instruments not discussed in Appendix C is provided in the relevant security-specific methodologies.[21]

[21] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Key Rating Assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions.*[22]

Limitations

In the preceding sections, we have discussed the scorecard factors and many of the other considerations that may be important in assigning ratings. In this section, we discuss limitations that pertain to the scorecard and to the overall rating methodology.

Limitations of the Scorecard

There are various reasons why scorecard-indicated outcomes may not map closely to actual ratings.

The scorecard in this rating methodology is a relatively simple tool focused on indicators for relative credit strength. Credit loss and recovery considerations, which are typically more important as an issuer gets closer to default, may not be fully captured in the scorecard. The scorecard is also limited by its upper and lower bounds, causing scorecard-indicated outcomes to be less likely to align with ratings for issuers at the upper and lower ends of the rating scale.

The weights for each factor and sub-factor in the scorecard represent an approximation of their importance for rating decisions across the sector, but the actual importance of a particular factor may vary substantially based on an individual issuer's circumstances.

Factors that are outside the scorecard, including those discussed above in the "Other Considerations" section, may be important for ratings, and their relative importance may also vary from issuer to issuer or from instrument to instrument. In addition, certain broad methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.[23] Examples of such considerations include the following: how sovereign credit quality affects non-sovereign issuers, the assessment of credit support from other entities, and the assignment of short-term ratings.

We may use the scorecard over various historical or forward-looking time periods. Furthermore, in our ratings we often incorporate directional views of risks and mitigants in a qualitative way.

General Limitations of the Methodology

This methodology document does not include an exhaustive description of all factors that we may consider in assigning ratings in this sector. Cities and counties may face new risks or new combinations of risks, and they may develop new strategies to mitigate risk. We seek to incorporate all material credit considerations in ratings and to take the most forward-looking perspective that visibility into these risks and mitigants permits.

Ratings reflect our expectations for an issuer's future performance; however, as the forward horizon lengthens, uncertainty increases and the utility of precise estimates, as scorecard inputs or in other considerations, typically diminishes. Our forward-looking opinions are based on assumptions that may prove, in hindsight, to have been incorrect. Reasons for this could include unanticipated changes in any of the following: the macroeconomic environment, general financial market conditions, disruptive technology, or regulatory and legal actions. In any case, predicting the future is subject to substantial uncertainty.

[22] A link to *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section.

[23] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Appendix A: Using the Scorecard to Arrive at a Scorecard-Indicated Outcome

1. Measurement or Estimation of Factors in the Scorecard

In the "Discussion of the Scorecard Factors" section, we explain our analytical approach for scoring each scorecard factor or sub-factor,[24] and we describe why they are meaningful as credit indicators.

The information used in assessing the sub-factors is generally found in or calculated from information in the city's or county's audited financial statements or regulatory filings, derived from other observations or estimated by Moody's analysts. We may also incorporate non-public information.

Scorecard metrics typically include the accounts reported in the governmental and business-type activities entries of a city's or county's audited financial statements (i.e., the primary government's audited financial statements, as reported). Typical examples of governmental funds include a city's or county's General Fund and Debt Service Fund. Typical examples of business-type activity funds include water and sewer enterprise funds. The actual governmental or business-type activity funds that pertain to a specific city or county may vary.

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of a city's or county's performance as well as for peer comparisons. Financial ratios, unless otherwise indicated, are typically calculated based on an annual or 12-month period. However, the factors in the scorecard can be assessed using various time periods. For example, rating committees may find it analytically useful to examine both historical and expected future performance for periods of several years or more.

Information on how we calculate metrics that relate to pension and OPEB obligations can be found in our cross-sector methodology that describes our adjustments to pension and OPEB data reported by GASB issuers.[25] Financial metrics may incorporate analytical adjustments that are specific to a particular city or county.

2. Mapping Scorecard Factors to a Numeric Score

After estimating or calculating each factor or sub-factor, each outcome is mapped to a broad Moody's rating category (Aaa, Aa, A, Baa, Ba, B, Caa or Ca, also called alpha categories) and to a numeric score.

Qualitative factors are scored based on the description by broad rating category in the scorecard. The numeric value of each alpha score is based on the scale below.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	3	6	9	12	15	18	20

Source: Moody's Investors Service

Quantitative factors are scored on a linear continuum. For each metric, the scorecard shows the range by alpha category. We use the scale below and linear interpolation to convert the metric, based on its placement within the scorecard range, to a numeric score, which may be a fraction. As a purely theoretical example, if there were a ratio of revenue to interest for which the Baa range was 50x to 100x, then the numeric score for an issuer with revenue/interest of 99x, relatively strong within this range, would score closer to 7.5, and an issuer with revenue/interest of 51x, relatively weak within this range, would score closer to 10.5. In the text or table footnotes, we define the endpoints of the line (i.e., the

[24] When a factor comprises sub-factors, we score at the sub-factor level. Some factors do not have sub-factors, in which case we score at the factor level.

[25] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

value of the metric that constitutes the lowest possible numeric score, and the value that constitutes the highest possible numeric score).

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
0.5-1.5	1.5-4.5	4.5-7.5	7.5-10.5	10.5-13.5	13.5-16.5	16.5-19.5	19.5-20.5

Source: Moody's Investors Service

3. Determining the Overall Scorecard-Indicated Outcome

The numeric score for each sub-factor (or each factor, when the factor has no sub-factors) is multiplied by the weight for that sub-factor (or factor). A further weighting is then applied by scoring category as shown in the table below.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	1	1	1	1	4	8	8

Source: Moody's Investors Service

We weight the three lowest scoring categories more heavily than higher scores in this scorecard because a serious weakness in one area often cannot be completely offset by strength in another.

The actual weighting applied to each sub-factor is the product of that sub-factor's standard weighting and its overweighting, divided by the sum of these products for all of the sub-factors (an adjustment that brings the sum of all the sub-factor weightings back to 100%).

The numeric score for each sub-factor is multiplied by the adjusted weight for that sub-factor, with the results then summed to produce an aggregate numeric score before notching factors (the preliminary outcome). We then consider whether the preliminary outcome that results from the weighted factors should be notched upward or downward[26] in order to arrive at an aggregate numeric score after notching factors. In aggregate, the notching factors can result in a total of up to four and one-half upward notches or up to six downward notches from the preliminary outcome to arrive at the scorecard-indicated outcome.

The aggregate numeric score before and after notching factors can be mapped to an alphanumeric. For example, an issuer with an aggregate numeric score before notching factors of 11.7 would have a Ba2 preliminary outcome, based on the ranges in the table below. If the combined notching factors totaled two upward notches, the aggregate numeric score after notching factors would be 9.7, which would map to a Baa3 scorecard-indicated outcome.

[26] Numerically, a downward notch adds 1 to the score, and an upward notch subtracts 1 from the score.

EXHIBIT 6

Scorecard-indicated Outcome

Scorecard-indicated Outcome	Aggregate Numeric Score
Aaa	x ≤ 1.5
Aa1	1.5 < x ≤ 2.5
Aa2	2.5 < x ≤ 3.5
Aa3	3.5 < x ≤ 4.5
A1	4.5 < x ≤ 5.5
A2	5.5 < x ≤ 6.5
A3	6.5 < x ≤ 7.5
Baa1	7.5 < x ≤ 8.5
Baa2	8.5 < x ≤ 9.5
Baa3	9.5 < x ≤ 10.5
Ba1	10.5 < x ≤ 11.5
Ba2	11.5 < x ≤ 12.5
Ba3	12.5 < x ≤ 13.5
B1	13.5 < x ≤ 14.5
B2	14.5 < x ≤ 15.5
B3	15.5 < x ≤ 16.5
Caa1	16.5 < x ≤ 17.5
Caa2	17.5 < x ≤ 18.5
Caa3	18.5 < x ≤ 19.5
Ca	19.5 < x ≤ 20.5
C	x > 20.5

Source: Moody's Investors Service

In general, the scorecard-indicated outcome is oriented to the issuer rating.

Appendix B: US Cities and Counties Scorecard

	Factor or Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Factor: Economy (30%)									
Resident Income (MHI Adjusted for RPP / US MHI)*[1]	10%	≥ 120%	100 - 120%	80 - 100%	65 - 80%	50 - 65%	35 - 50%	20 - 35%	< 20%
Full Value per Capita (Full Valuation of the Tax Base / Population)*[2]	10%	≥ $180,000	$100,000 - $180,000	$60,000 - $100,000	$40,000 - $60,000	$25,000 - $40,000	$15,000 - $25,000	$9,000 - $15,000	< $9,000
Economic Growth (Difference Between Five-Year Compound Annual Growth in Real GDP and Five-Year CAGR in Real US GDP) *[3]	10%	≥ 0	(1)% - 0%	(2.5) - (1)%	(4.5) – (2.5)%	(7) – (4.5)%	(10) – (7)%	(15) – (10)%	< (15)%
Factor: Financial Performance (30%)									
Available Fund Balance Ratio (Available Fund Balance + Net Current Assets/ Revenue)*[4]	20%	≥ 35%	25 - 35%	15 - 25%	5 - 15%	0 - 5%	(5) - 0%	(10) – (5)%	< (10)%
Liquidity Ratio (Unrestricted Cash / Revenue)*[5]	10%	≥ 40%	30 - 40%	20 - 30%	12.5 - 20%	5 – 12.5%	0 - 5%	(5) – 0%	< (5)%

Factor or Sub-factor	Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Factor: Institutional Framework (10%)									
	10%	The majority of revenue is not subject to externally imposed caps and the governing body can increase revenue meaningfully without limitation or without approval of voters or other governments. And: The ability to meaningfully reduce expenditures is not constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps but the governing body can increase revenue meaningfully without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is mildly constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps but the governing body can increase revenue moderately without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is moderately constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body can increase revenue only minimally without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is heavily constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body cannot increase revenue without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is very heavily constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body cannot increase revenue. Or: The ability to meaningfully reduce expenditures is extremely constrained by externally imposed mandates or restrictions.	Not applicable.	Not applicable.

	Factor or Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Factor: Leverage (30%)									
Long-term Liabilities Ratio ((Debt + ANPL + Adjusted Net OPEB + Other Long-Term Liabilities) / Revenue)*6	20%	≤ 100%	100 - 200%	200 - 350%	350 - 500%	500 - 700%	700 - 900%	900 – 1,100%	> 1,100%
Fixed-Costs Ratio (Adjusted Fixed Costs / Revenue)*7	10%	≤ 10%	10 - 15%	15 - 20%	20 - 25%	25 - 35%	35 - 45%	45 - 55%	> 55%

Notching Factors	Notching Range
Additional Strength in Local Resources	0 to +2
Limited Scale of Operations	–1 to 0
Financial Disclosures	–2 to 0
Potential Cost Shift to or from the State	–1 to +1
Potential for Significant Change in Leverage	–2 to +1.5

*1 For the linear scoring scale described in Appendix A, the Aaa endpoint value is 200%. A value of 200% or better equates to a numeric score of 0.5. The Ca endpoint value is 0%. A value of 0% or worse equates to a numeric score of 20.5.

*2 For the linear scoring scale, the Aaa endpoint value is $400,000. A value of $400,000 or better equates to a numeric score of 0.5. The Ca endpoint value is $7,500. A value of $7,500 or worse equates to a numeric score of 20.5.

*3 For the linear scoring scale, the Aaa endpoint is 2%. A value of 2% equates to a numeric score of 0.5. The Ca endpoint value is (20)%. A value of (20)% or worse equates to a numeric score of 20.5.

*4 For the linear scoring scale, the Aaa endpoint value is 50%. A value of 50% or better equates to a numeric score of 0.5. The Ca endpoint value is (15)%. A value of (15)% or worse equates to a numeric score of 20.5.

*5 For the linear scoring scale, the Aaa endpoint value is 60%. A value of 60% or better equates to a numeric score of 0.5. The Ca endpoint value is (10)%. A value of (10)% or worse equates to a numeric score of 20.5.

*6 For the linear scoring scale, the Aaa endpoint value is 0%. A value of 0% or better equates to a numeric score of 0.5. The Ca endpoint value is 1,300%. A value of 1,300% or worse equates to a numeric score of 20.5.

*7 For the linear scoring scale, the Aaa endpoint value is 0%. A value of 0% or better equates to a numeric score of 0.5. The Ca endpoint value is 65%. A value of 65% or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Appendix C: Assigning Instrument Ratings for US Cities and Counties

In this appendix, we describe our general principles for assessing how an instrument's particular characteristics affect its credit risk, more specifically the instrument's probability of default and loss upon an event of default. Credit risk of individual debt instruments of cities and counties may be different from what is reflected in the issuer rating.

We also provide guidance for assigning individual debt instrument ratings relative to the issuer rating based on these considerations.[27] These differences may arise from the specific pledge included in the instrument's terms, the instrument's priority of claim and the nature of the instrument (e.g., whether it is a contingent or a non-contingent obligation). As a result, instrument considerations may lead to the application of upward or downward notches from the issuer rating.

General Approach for Assigning Instrument Ratings

In this section, we describe some of the analytic elements of the typical structural features of debt instruments in the sector, and why they are important. Individual instruments may include a variety of permutations of these analytic elements. We divide instruments into two groups of pledges that are typical in the sector: (i) real property-based pledges; and (ii) non-contingent general promises to pay and contingent obligations.

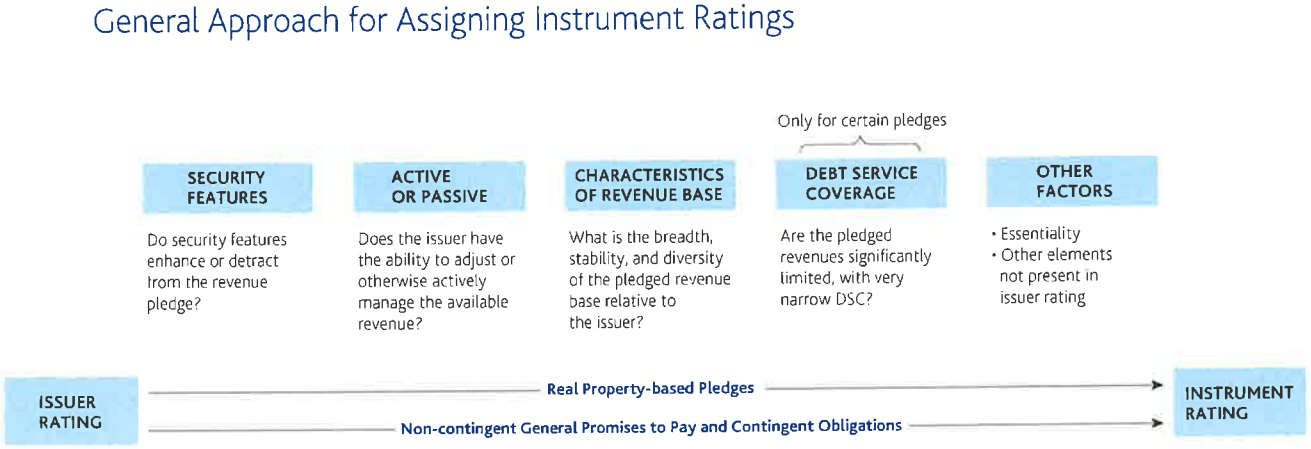
For each instrument type, we evaluate the instrument's security features, including whether the debt obligation is contingent or non-contingent. We also consider whether the pledge, if any, is active or passive. Based on these characteristics, we may also assess the characteristics of the revenue base available to pay debt service on the debt instrument, debt service coverage and other factors. We consider the aggregate (typically cumulative)[28] effect of these structural analytic elements to arrive at the assigned instrument rating.

The exhibit below illustrates how these instrument-level ratings may be assigned relative to the issuer rating.

[27] For clarity, the guidance for assigning instrument ratings also refers to situations where we assign a debt instrument rating at the same level as the issuer rating.

[28] In most cases, notching for the various analytic elements is cumulative; however, there may be circumstances where one analytic element mitigates or exacerbates the credit effect of another analytic element.

EXHIBIT 7
General Approach for Assigning Instrument Ratings



Note: DSC stands for debt service coverage.
Source: Moody's Investors Service

Security Features

Why It Matters

Security features set the framework for our overall debt instrument analysis because these features may enhance or weaken the instrument's credit risk relative to the credit risk indicated by the issuer rating. Security features include the specific revenue pledge, if any, that an issuer grants to bondholders.

A fundamental security consideration is whether the pledge is contingent or non-contingent. Contingent obligations are typically weaker than a non-contingent general promise to pay (as described below). Contingent debt is an obligation where the bondholder has no long-term claim and the stated promise to pay depends on an additional action by the issuer or on the availability of a pledged asset. A typical contingency requires an issuer to appropriate funds to pay debt service annually; each appropriation renews the pledge for another year. There are other types of contingencies, such as a requirement for a leased asset to remain available for a city's or county's use or occupancy in order for a city or county to remain obligated to make lease payments.[29] It is important to look through the nominal debt type to the underlying characteristics of the pledge to understand whether it is contingent or non-contingent.

The physical and legal separation of pledged revenue from the issuer's control is another important security feature. This can be accomplished through the combination of a lockbox and a valid security interest, such as a lien that is granted pursuant to statute and that makes holders of the pledge secured creditors. Both are important security features because a lockbox provides physical separation and a security interest provides legal separation through a property interest in pledged revenues. Other securitization or structural features that create physical and legal separation may also achieve the same result.

In the case of a lockbox, funds from tax collections or intergovernmental transfers are transferred directly from a third-party tax collector or grantor, often another government, to the trustee for the

[29] Typically, from a statutory perspective, contingent obligations are not considered debt, which is often a reason why these instruments are employed; they also do not typically require voter approval. Please see *Rating Symbols and Definitions* for more information on what we consider to be a default.

bonds. The lockbox segregates the revenue dedicated to debt service from the issuer's accounts and control. The lockbox feature can lessen the likelihood of default because it creates a separation from the issuer's operations and other funds. When combined with legal separation, a lockbox can also be a positive credit factor in recovery, as described below.

In some states, certain pledges are secured by statute when executed properly. Such statutorily secured debt is reasonably expected to have lower probability of default and higher recovery in an insolvency scenario than unsecured debt. While these structures are largely untested in a default scenario, under federal bankruptcy law secured debtholders have priority over unsecured debtholders and other unsecured creditors in a reorganization. Together, a lockbox and statutory provisions for secured status, like a lien, may enhance recovery prospects compared with other debt. Both features are necessary to provide separation of the pledged revenue from the issuer's control and a security interest that makes the bondholders' interest in the pledged revenue that of a secured creditor.

Active or Passive Pledges

Why It Matters

The active or passive nature of a pledge[30] is important because it can differentiate whether the issuer has promised to raise revenue to pay debt service or otherwise has the legal ability to do so. We consider a pledge to be active if the issuer can increase the revenue stream (e.g., by raising tax rates or fees) without meaningful limitation or additional approvals from voters or other governments. We consider a pledge to be passive if the issuer can increase the pledged revenue stream only after securing voter approval or other external approvals, often from the state government, or if there are specific legal or practical limitations on the pledged revenue stream, e.g., tax rate limitations. In these cases, revenue to pay debt service typically depends on the performance of the revenue base, e.g., economic growth, and thus is more vulnerable than the issuer's overall revenue to economic decline. We do not differentiate between pledges where the issuer has promised to raise revenue and pledges where the issuer has the legal ability to raise revenue but has not promised to do so.

We view as active both pledges where the issuer has promised to raise revenue and pledges where the issuer has the legal ability to raise revenue but has not promised to do so.

Characteristics of the Revenue Base

Why It Matters

The promise to pay and the revenue pledge, if any, embedded in the instrument delineate the relationship between the issuer's total revenue and economic base, which are considered in its issuer rating, and the revenue base that is available to pay debt service of a specific instrument.

The breadth, stability and diversity of the revenue base available for debt service relative to the issuer's total revenue base provide important indications of the relative strength or weakness of the obligation. If the revenue base from which debt service will be paid is materially more narrow or less stable than the broad revenue base that is reflected in the issuer rating, a bondholder may face more risk than is indicated in the issuer rating, e.g., bondholders may have limited recourse if the specific pledged revenue is insufficient to meet debt service on the related obligations. However, in some cases, a technically narrower pledge can still be robust.

[30] In this context, a pledge means the revenue that is effectively designated as being available to pay debt service on the instrument in the transaction documents. This designation may be explicit, such as a pledge of real estate tax revenue, or implicit, such as a general promise to pay from revenue that is not specifically pledged to other debt obligations.

Debt Service Coverage

Why It Matters

For some instrument types, debt service coverage is an important indicator of the sufficiency of the available revenue to meet debt service payments, e.g., where the dedicated revenue stream is limited. If there is material excess revenue, the relevant bonds have lower exposure to potential variations in the revenue stream.

Other Factors

Why It Matters

Additional factors, some of which vary by pledge or security type, may also affect the risk of a given debt instrument relative to the credit strength of the issuer. Following are some examples:

- For contingent obligations, where there is one or more leased or financed asset or function, essentiality is important because it can indicate the likelihood that an issuer will choose to appropriate funds to pay the lease. For an abatement lease, the more important the pledged asset or function is to the borrower, the more likely it is that the borrower will ensure that it is repaired in an abatement circumstance. In some instruments, there may be a sunset provision in the pledge that precedes the maturity of the debt obligation.
- Where a pledge type is subject to unanticipated legal challenges, an individual debt instrument may be vulnerable to non-payment even if the issuer is not undergoing stress.
- Where an issuer's debt includes a significant amount of derivatives such as interest rate swaps that are exposed to liquidity demands or that may require market access for refinancing, this may result in meaningful additional risk to the holders of the instrument.
- For US Native American tribal nations, if a nation were to waive its sovereign immunity with respect to a specific instrument but not with respect to creditor interests in general, the instrument rating would reflect the positive credit impact of this waived immunity.

Guidance for Assigning Individual Debt Instrument Ratings

In assigning instrument ratings, we consider all of the analytic elements relevant to the specific debt issuance and their impact. In this section, we provide guidance on the typical range of notching for common security types. For each major security type, the guidance for assigning a rating is described by analytic element and is typically cumulative. However, actual ratings may be different from the guidance where there is unusual strength or weakness in the legal structure or revenue base, in the terms of the debt instruments, or in the relation of an issuer to the obligation, e.g., where the issuer or instrument is in financial distress.

Other issuer-specific or instrument-specific considerations may also be relevant.

The exhibit below illustrates the typical rating range seen between issuer ratings and instrument ratings.

EXHIBIT 8

Illustrative Example: Typical Relationships Among City or County Instrument Ratings

Note: GOULT stands for general obligation unlimited tax, GOLT for general obligation limited tax and COPs for certificates of participation.
Source: Moody's Investors Service

Where an issuer is undergoing financial distress, we may widen or narrow the rating differentials between the issuer rating and the rating of any specific obligations, based on our view of the relative probabilities of default and relative loss rates upon default. In these instances, the anticipated recovery rate for an obligation would be a more important rating consideration than our general principles for assigning instrument-level ratings. Our views of relative expected loss would generally be informed by state or federal case law within the relevant jurisdiction and other meaningful issuer-specific risk factors that may indicate the issuer's relative willingness and ability to pay various types of obligations.

The guidance below for assigning instrument-level ratings is divided into two groups of pledges that are typical in this sector: (i) real property-based pledges; and (ii) non-contingent general promises to pay and contingent obligations.

Real Property-based Pledges

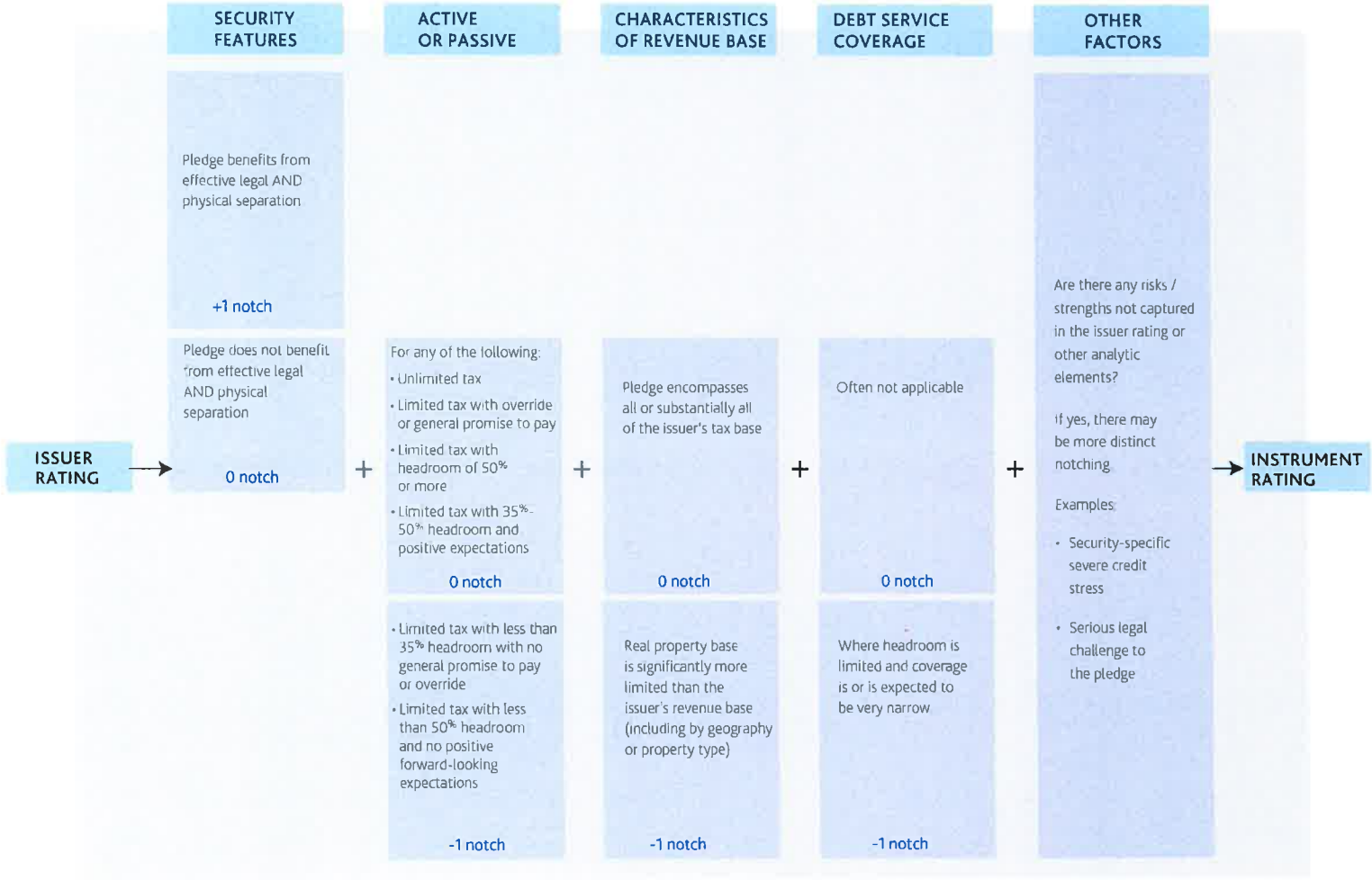
In a real property-based pledge, the issuer pledges taxes that are levied on real property[31] or other real property-related revenue. These pledges can be active or passive but are, by definition, non-contingent. Examples of real property-based pledges include general obligation unlimited tax (GOULT) and general obligation limited tax (GOLT) pledges.

Overall, a major consideration for all securities within the real property-based pledge grouping is whether the city or county can adjust without limit the tax rate that generates the pledged revenue. We also consider how meaningful the limitation is. Where we consider the limitation to be material, the instrument rating is typically one notch below the issuer rating.

[31] Typically, a city's or county's tax base includes property that is categorized in many sub-groupings, including real, personal, tangible and mineral property. The type of property subject to ad valorem taxation varies by state.

EXHIBIT 9

Real Property-based Pledges: Illustrative Notching



Source: Moody's Investors Service

General Obligation Unlimited Tax Pledge

While a GOULT pledge often includes a general promise of the issuer to pay the obligation (the specific language may vary; an example is a full faith and credit pledge), the key differentiating feature is the pledge to levy ad valorem taxes,[32] without limit as to rate or amount, sufficient to make timely payment of debt service. Because of the breadth of the pledge, most GOULT instrument ratings are at the same level as the issuer rating.

How We Assess It

SECURITY FEATURES:

Where a GOULT pledge provides physical and legal separation of pledged revenue from the issuer's control, typically through a lockbox and valid security interest, such as a lien, and we consider these to be effective, there is typically one upward notch for this analytic element. While the presence of only one of these elements may provide a modest benefit, it is not sufficient to provide uplift from the issuer rating.

We may not consider these security features to be effective where the responsible governments have not carried out their lockbox obligations, where we think the legal separation is weak or where there have been successful legal challenges to the separation.

ACTIVE OR PASSIVE PLEDGE:

These are, by definition, active pledges. There is no notching for this analytic element.

CHARACTERISTICS OF THE REVENUE BASE:

Where the GOULT pledge encompasses all or substantially all of the issuer's tax base, there is no notching for this analytic element. Where we consider that the revenue pertaining to the specific GOULT pledge is significantly more limited than the issuer's revenue base (e.g., from a more limited geographic base or property type), there may be one downward notch for this analytic element, although there may be more than one downward notch if the revenue base is exceptionally limited. Where this more limited tax base is still robust, there may be no downward notching for this analytic element.

DEBT SERVICE COVERAGE:

Not applicable.

OTHER FACTORS:

We also consider risks in the structural features of the pledge that are not already reflected in the issuer rating or other analytic elements. If the risks are material, cumulative notching may reflect one or more additional downward notches, depending on the severity of the risks.

For example, a serious legal challenge to the validity of the GOULT pledge could lead to downward notching for this analytic element.

General Obligation Limited Tax Pledge

A GOLT pledge is a general obligation of a city or county that includes a limited rather than an unlimited tax pledge. The nature of the limit for a GOLT varies. It can be imposed on the tax rate or on the levy amount that is available to pay the related debt service. In other cases, there may be a limit on the issuer's overall property tax levy, e.g., a limit on the rate, on the annual rate of growth or on the total amount of tax revenue collected. Although some of these limitations result in materially weaker

[32] Ad valorem taxes are based on the value of property.

credit strength, in many other cases, the tax limit does not materially constrain an issuer's ability to pay debt service and therefore does not result in a material difference in the credit risk of the instrument relative to the issuer rating.

There are various structural features that can reduce or eliminate the difference in credit risk between GOULT and GOLT pledges. For example, an issuer may be able to override the stated limit, or it may issue GOLT debt that is also secured by a broad revenue pledge. In addition, some issuers' GOLT pledges have headroom within the limit that we think will be sufficient to cover projected growth in GOLT debt service or withstand potential decreases in net revenue (due to, for example, decreases in the assessed valuation of real property). If there are no sufficient mitigants, a GOLT instrument is typically rated one notch below the issuer rating.

How We Assess It

SECURITY FEATURES:

Where a GOLT pledge includes both a lockbox and a valid security interest, such as a lien, and we consider these to be effective, there would typically be one upward notch for this analytic element. While the presence of only one of these elements may provide a modest benefit, one without the other is not sufficient to provide uplift from the issuer rating.

We may not consider these security features to be effective where the responsible governments have not carried out their lockbox obligations, where we think the legal separation is weak or where there are historical or ongoing significant legal challenges.

ACTIVE OR PASSIVE PLEDGE:

Where an issuer has a meaningful ability to raise taxes within the stated limit (i.e., meaningful headroom) or can override the limit, or where an additional pledge not subject to the cap (e.g., a general promise to pay) is broad enough to mitigate the limit, we consider the pledge to be active. In these cases, there is no downward notching for this analytic element. The absence of meaningful headroom typically leads to one downward notch for this analytic element. We typically consider headroom of 50% or more of maximum annual debt service (MADS) to be meaningful (see box). Where headroom is at least 35% and up to 50%, we may consider it sufficiently meaningful based on our forward view of the issuer's revenue and economic base.

How We Estimate or Calculate Headroom for Raising Tax Revenue

We estimate or calculate headroom based on the ratio of the incremental revenue permitted by the limit to MADS for the pledge (e.g., GOLT).

The numerator is the current taxable assessed valuation related to the pledge multiplied by the maximum allowable tax rate for the debt ("projected maximum levy," or revenue) minus the "current levy used for debt service." The denominator is the MADS amount in dollars on all of the issuer's parity debt.

(PROJECTED MAXIMUM LEVY – CURRENT LEVY USED FOR DEBT SERVICE) / MADS

If the levy is not used exclusively for debt service, we would use the maximum allowable levy in the "projected maximum levy" calculation and the portion of this levy used for debt service in the "current levy used for debt service."

In addition, if a limited tax pledge includes both property and non-property tax revenue, we include both types of revenue in the "projected maximum levy" calculation.

In our forward-looking view of this metric, we may incorporate a projection of additional parity debt and resultant MADS, and we may project taxable assessed value, particularly if we expect that the city's or county's tax base will decline.

CHARACTERISTICS OF THE REVENUE BASE:

Where the GOLT pledge encompasses all or substantially all of the issuer's tax base, there is no notching for this analytic element. Where revenue pertaining to the specific GOLT pledge is significantly more limited than the issuer's revenue base (e.g., from a more limited geographic base or property type or from a material decline in assessed valuation), there may be one downward notch for this analytic element and there may be more than one downward notch if the revenue base is exceptionally limited. Where this more limited tax base is still robust, however, there may be no downward notching for this analytic element.

DEBT SERVICE COVERAGE:

For GOLT pledges that we consider active because of (i) an ability to override a limitation; (ii) a broad additional pledge; or (iii) meaningful headroom, this analytic element does not apply.

Where headroom is limited, we typically assess debt service coverage on a current and forward-looking basis. In cases where the debt service coverage of the pledge is materially lower than the issuer's general ability to meet all of its obligations, we may notch the instrument rating down to reflect this risk to the extent it is not already captured in the issuer rating or other analytic elements.

One downward notch is typical for this analytic element where there is no meaningful headroom and debt service coverage is expected to be near or below 1.1x. More than one downward notch may be applied where there is no meaningful headroom and debt service coverage is expected to be below 1.0x.

OTHER FACTORS:

We also consider strengths or risks in the structural features of the pledge that are not already reflected in the issuer rating or other analytic elements. If the strengths are material, cumulative notching may reflect one upward notch. If the risks are material, cumulative notching may reflect one or more additional downward notches, depending on the severity of the risks.

For example, a serious legal challenge to the validity of the GOLT pledge or a sunset provision in the pledge that precedes the maturity of the debt obligation could lead to downward notching for this analytic element.

Non-contingent General Promises to Pay and Contingent Obligations

This grouping includes (i) general promises to pay where there is a non-contingent pledge to pay debt service that may specifically include all or some of the issuer's revenue, and (ii) contingent obligations.

Non-contingent General Promises to Pay

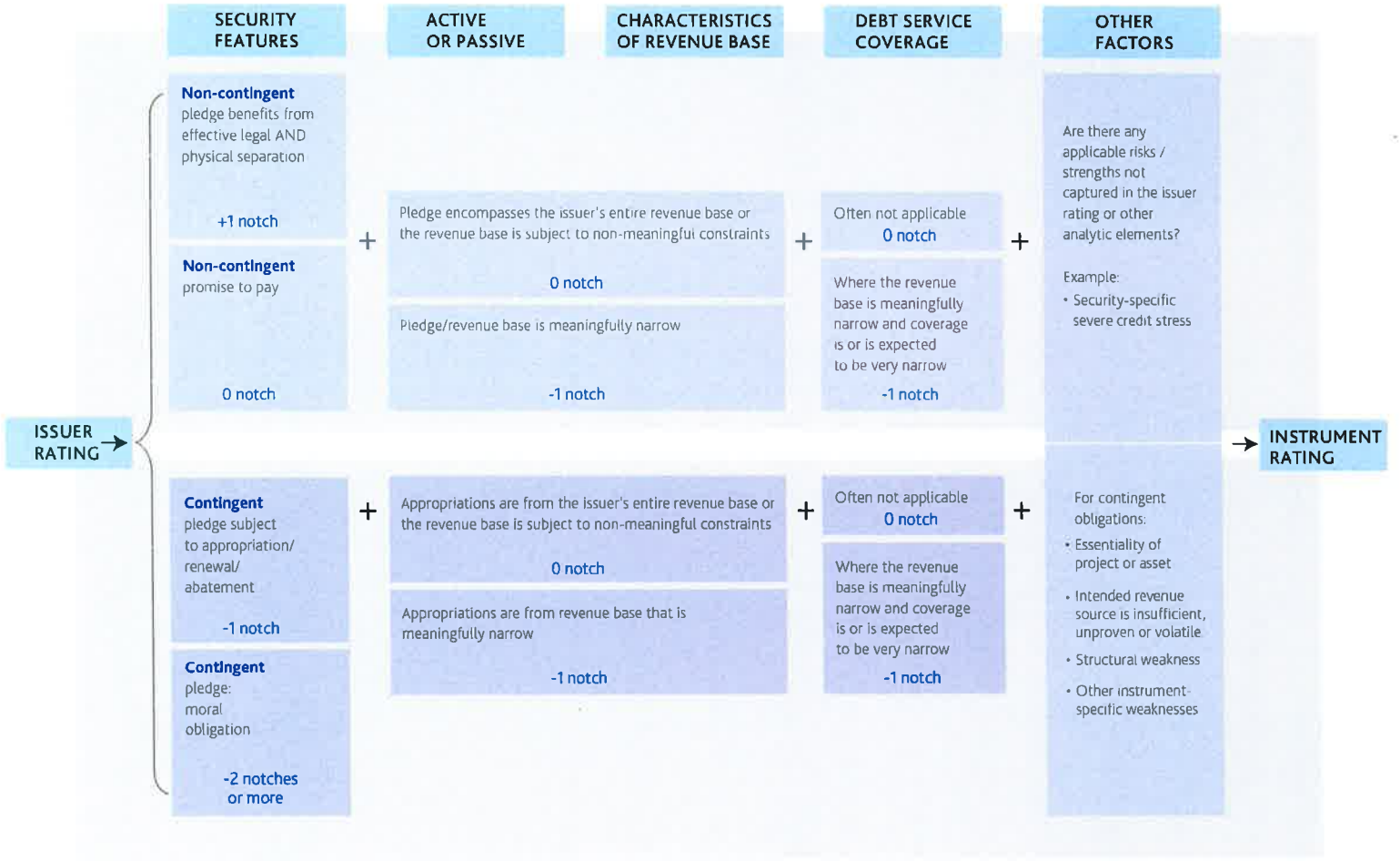
Some obligations represent a non-contingent general promise to pay. In some cases, these instruments are called "general obligations," but the instrument does not include a property-tax pledge. In other cases, pledges specifically exclude some or all tax revenues. Many obligations in this group contain broad language describing the promise (e.g., "full faith and credit"[33] or similar wording) but do not include a specific pledge of a property tax or other revenue. Because these promises to pay are non-contingent, we may consider them to be as strong as the issuer rating. In other cases, the general promise to pay is weaker than the issuer rating because there are material carve-outs of revenue. As there is wide variation in the language used, we look at the substance of the issuer's obligation.

[33] There are cases where language such as "full faith and credit," under the laws of the state, requires the issuer to levy taxes sufficient to pay the obligation; we consider these to be real property-based pledges.

This category includes: (i) non-ad valorem debt, which is typically is a non-contingent promise to pay debt service with the explicit exclusion of revenue derived from ad valorem property taxes; (ii) non-tax debt, which is typically is a non-contingent promise to pay debt service from general revenue with the explicit exclusion of all revenue derived from taxes.

EXHIBIT 10

Non-contingent General Promises to Pay and Contingent Obligations: Illustrative Notching



Source: Moody's Investors Service

How We Assess It

SECURITY FEATURES:

There is typically no notching for this analytic element, because general promises to pay are non-specific as to revenue, by definition. However, we assess the security features of each transaction in order to determine if they provide material benefit to creditors.

ACTIVE OR PASSIVE PLEDGE AND CHARACTERISTICS OF THE REVENUE BASE:

We consider these two analytic elements together.

Where the pledge or general promise to pay encompasses all of the issuer's revenue base, there is no notching for these analytic elements. If the revenue base is subject to some limitations but the constraints are not meaningful, there is also no notching for these analytic elements.

Where the relevant revenue base is meaningfully narrow, there is typically one downward notch for these analytic elements, although there may be more than one downward notch if the revenue base is exceptionally narrow.

We also consider the extent to which the issuer has active control over the ability to raise revenues in the relevant pledge.

DEBT SERVICE COVERAGE:

For non-contingent pledges, there is no upward notching for this analytic element. Where the pledge is substantially reduced by carve-outs or other competing claims that render the pledged revenue significantly more limited than the city's or county's revenue, we typically assess debt service coverage on a current and forward-looking basis. One downward notch is typical for this analytic element where there are material revenue carve-outs and debt service coverage is expected to be near or below 1.1x. More than one downward notch is likely to be applied where there are material revenue carve-outs and debt service coverage is expected to be below 1.0x.

OTHER FACTORS:

We also consider strengths or risks in the structural features of the pledge that are not already reflected in the issuer rating or other analytic elements. If the strengths are material, they may offset downward notching related to other analytic elements. If the risks are material, cumulative notching may reflect one or more additional downward notches, depending on the severity of the risks. For example, security-specific severe credit stress or a legal structure or security type with a poor track record in default could lead to downward notching for this analytic element. In addition, a serious legal challenge to the validity of a non-contingent general promise to pay could lead to downward notching for this analytic element.

Contingent Obligations

In almost all cases, we notch down from the issuer rating for a city's or county's contingent obligations. Examples of contingent obligations include appropriation lease-backed obligations, abatement lease-backed obligations, non-lease annual appropriation obligations and moral obligations.[34] In the municipal market, appropriation-backed instruments are often issued as certificates of participation.

For cities and counties, a typical contingent obligation is an appropriation lease-backed instrument. The city or county usually does not pledge any specific revenue to the lease and instead annually appropriates funds to pay debt service. The city or county obligates itself to make lease payments pursuant to a capital lease between itself (as lessee) and, usually, a special purpose entity lessor

[34] Not all leases are contingent obligations. Non-contingent leases are rated based on the long-term pledge, e.g., general promise to pay or GOULT.

created and controlled by the lessee. This lease payment revenue is used to pay debt service on the lease-backed instrument.

In the case of an appropriation lease, the city or county has a legal right to choose not to appropriate the funds, thereby not renewing the lease. The city or county generally covenants to take proactive steps to make the annual lease payment and lease renewal, although with the explicit recognition that it is legally entitled to choose not to appropriate funds for the lease payment, or renew the lease. Issuers typically appropriate the funds annually as part of the regular budget cycle. The same kind of appropriation structure can exist without a lease or leased asset.

A second common type of contingent obligation is an abatement lease, where the lessee's requirement to make the lease payment is contingent upon the continued availability of the leased asset for use or occupancy. If the use of the asset is compromised because the asset is damaged or destroyed (e.g., a government building is partially destroyed by an earthquake), the lessee would be required to abate, meaning to reduce, the lease payment in proportion to the reduction in use.

Issuers may also issue non-lease annual appropriation obligations. These obligations are typically backed solely by the issuing government's covenant to take certain administrative steps to consider appropriating for debt service in each budget cycle. The appropriations are typically made through the government's annual budget process. Once the appropriation is made, it is absolute and unconditional for the time period to which the appropriation applies (typically one year). After one year, the annual option to not appropriate renews. Annual appropriation obligations do not include recourse to an asset among the remedies in case of a default.

A fourth type of contingent obligation is a moral obligation. An example of a moral obligation structure would be where a city or county promises to consider supporting a contingent obligation, under certain circumstances, by appropriating funds for the replenishment of a debt service reserve. A moral obligation pledge is neither a guarantee to pay debt service nor a promise to replenish a debt service reserve nor a legally enforceable obligation to pay. Rather, it is a declaration that the city or county intends to support the debt and will consider making appropriations and providing funding under certain circumstances.

Based on these contingencies, these four types of contingent obligations are not typically defined as debt under state law and would therefore be excluded from statutory and constitutional restrictions on debt issuance that apply to cities or counties. However, we consider such obligations to be the debt of the city or county.

Contingent obligations are not typically defined as debt under state law and would therefore be excluded from statutory and constitutional restrictions on debt issuance that apply to cities or counties. However, we consider such obligations to be the debt of the city or county in our analysis of the likelihood of repayment.

In all cases, contingent debt includes a contractual out, either through failure to appropriate or abatement, and therefore lacks a firm pledge of revenue over the life of the debt. Even in cases where an issuer plans to use certain revenue flows for contingent lease payments or debt service, unless they are pledged for the life of the instrument, this intention does not improve credit quality. However, where the issuer signals an intention to use limited revenue to pay the contingent obligation, this may indicate additional risk for the lease bonds. An example is where the issuer intends to pay from expected project revenue (e.g., an economic development project that involves market risk), as opposed to general revenue.

The number of downward notches for appropriation and abatement obligation bonds is usually limited to one or two, depending on our assessment of the essentiality of the pledged asset or financed project to the city's or county's operations. In most cases there is a fundamental connection between the financed asset and the fundamental operations of the city or county, providing a strong incentive for cities or counties to appropriate funds for debt service payments. For moral obligation pledges, the typical notching is two or more downward notches, depending on the legal structure and assets involved.

How We Assess It

SECURITY FEATURES:

A contingent pledge is notched downward for security features.

A contingent pledge subject to appropriation, renewal or abatement typically leads to one downward notch for this analytic element. An exception is if an instrument also carries a backup general obligation pledge (GOULT, GOLT or full faith and credit pledge) or other non-contingent pledge, in which case we rate the instrument based on the stronger of the two pledges.

Where the contingent pledge is a moral obligation, there are typically two downward notches for this analytic element, and there may be more than two downward notches where the legal structure is unusually weak. In a typical moral obligation structure, a parent government undertakes to consider appropriating funds for the replenishment of a debt service reserve under certain circumstances. An unusually weak moral obligation structure might include numerous conditions that must be met for the government to consider appropriating, or the timing of debt service payments may not align well with the timing during which the city or county could appropriate funds for debt payment or replenishment of a debt service reserve. The greater notching for moral obligations, relative to leases and appropriation obligations, reflects several characteristics of moral obligations, including that they are typically contingent upon legislative approval and are only called upon if the underlying revenue streams are insufficient.

ACTIVE OR PASSIVE PLEDGE AND CHARACTERISTICS OF THE REVENUE BASE:

We consider these two analytic elements together.

Where the issuer's entire revenue base is available for annual appropriation, including cases where the revenue base is subject to some limitations but those constraints are not meaningful, there is typically no downward notching for these analytic elements.

However, there would typically be one downward notch for these analytic elements where the available revenue base is meaningfully narrow, although there may be more than one downward notch if the revenue base is exceptionally narrow.

DEBT SERVICE COVERAGE:

Where the available revenue base for debt service is significantly more limited than the issuer's revenue base, we typically assess debt service coverage on a current and forward-looking basis. One downward notch is typical for this analytic element where debt service coverage is assessed and expected to be near or below 1.1x. More than one downward notch will likely be applied where debt service coverage is assessed and expected to be below 1.0x.

OTHER FACTORS:

We also consider strengths or risks in the structural features of the pledge that are not already reflected in the issuer rating or other analytic elements. If the strengths are material, there may be one upward notch, although this would be unlikely to offset the downward notching for contingency risk. If

the risks are material, cumulative notching may reflect one or more additional downward notches, depending on the severity of the risks.

The exhibit below shows the typical notching between the city's or county's issuer rating and the rating on non-contingent lease-backed obligations, contingent obligations and moral obligations.

EXHIBIT 11

Typical Downward Notching from the Issuer Rating

For non-contingent lease-backed obligations, contingent obligations and moral obligations

Security Type	Non-Contingent Lease-Backed Obligations	Contingent Lease-Backed and Annual Appropriation Obligations		Moral Obligations	
Essentiality	*N/A*	*More*	*Less*	*More**	*Less*
Notches from Issuer Rating:					
Zero	X				
One		X			
Two			X	X	
Three or more				X	X

*For moral obligations, we may apply two or three downward notches from the issuer rating for more essential assets, depending on the legal structure.

Source: Moody's Investors Service

Essentiality

For contingent obligations, the essentiality of the underlying assets or financed project or function to the issuer's core operations is a major consideration. We consider essentiality to be a strong indicator of the issuer's incentive to appropriate funds for these contingent payments.

While essentiality falls on a continuum, we typically classify it in two categories. We generally consider an asset or project that is critical to the issuer's core operations or administration as more essential (e.g., construction of administrative buildings, capital improvements on roads and financing of equipment that directly supports city or county operations). In these cases, the asset or project also cannot be separated from the issuer (is not severable) and has no commercial or enterprise risk. With more essential assets, there is no notching for the essentiality consideration.

Less essential assets or projects are not critical to city or county core operations or administration, are severable, or have commercial or enterprise risk, e.g., an economic development project or a project that depends on vendor performance. In these cases, a future administration may no longer choose to support the project, appropriate funds for debt service, or repair the asset following an abatement event. In these cases, there are typically one or more downward notches for the essentiality consideration.

Some cities and counties issue non-lease annual appropriation obligations. These obligations do not include recourse to an asset among the remedies in case of a default and are typically backed solely by the issuing government's covenant to take certain administrative steps to consider appropriating for debt service in each budget cycle. Creditor recourse is often very limited in the event of non-payment.

We typically look at the programs or functions being funded with the contingent obligation and assess their essentiality.

The exhibit below provides a summary of typical notching for the essentiality consideration. Actual notching is based on our view of the circumstances of the issuer, the terms and conditions of the obligation and the issuer's incentives or disincentives to honor the obligation. If there is a mix of more and less essential assets associated with an individual instrument or master lease structure, we generally characterize the essentiality of the entire asset pool by the single most essential asset.

EXHIBIT 12

Typical Notching for Essentiality

More Essential	Less Essential
Asset, project or function is critical to core operations or administration, not severable, and has no commercial or enterprise risk.	Asset, project or function is not critical to core operations or administration, is severable, or has commercial or enterprise risk.
Examples (Illustrative; categorization could vary based on specific circumstances)	
» Public safety buildings or functions (courthouses, jails, police/fire stations, etc.) » Public infrastructure including roads, water/sewer/electric facilities » Administrative, educational or health facilities or functions » Facilities supporting other core services (affordable/senior housing, nursing homes, libraries, school buildings, etc.) » Improvements, equipment or technology not severable from core operations or essential facilities (parking garages, HVAC, etc.)	» Facilities for economic development, tourism or recreation (hotels, convention centers, golf courses, sport stadiums, recreational, athletic, or cultural, etc.) » Projects dependent on commercial/vendor performance[35] » Facilities supporting less essential services (animal shelters, ice rinks, marinas, community/senior centers, theaters or concert halls, etc.) » Parks and vacant land » Improvements, equipment and technology severable from core operations or supporting less essential facilities or functions (parking garages, etc.)
Typical Notching for Essentiality	
No notching	One or more downward notches

Source: Moody's Investors Service

Additional Abatement Risk Considerations

For contingent obligations that are subject to abatement, there is typically one downward notch from the issuer rating due to abatement risk because the leased asset's availability for a city's or county's use or occupancy is a source of credit risk. In the absence of both the ability to substitute an asset and standard insurance provisions, such as title insurance and renters' interruption insurance, there may be one additional downward notch from the issuer rating.

Intended Revenue Source

In some cases, issuers may have an intended source of revenue to support contingent obligations, even if the pledge is to pay these obligations with all available revenue. The intention to use a specified revenue source does not offset the contingent nature of the obligation, regardless of how stable the revenue source is. Where the intended revenue source is unproven or volatile, the issuer may not expect or be prepared to pay debt service from other sources. In these cases, we may apply one or more downward notches for this analytic element.

Structural Weakness

For any contingent pledge, where there is a material structural weakness, such as lack of clarity in the legal documents on the pledge and its mechanics, cumulative notching may reflect one or more

[35] Vendors are not the lessors or owners of projects, but their performance may affect the anticipated impact of the lease payments on a city's or county's budget. A city's or county's payment obligation is not explicitly conditioned on vendor performance.

additional downward notches, depending on the severity of the risks. Also, unusual complexity in the financing structure, such as inclusion of a non-governmental third party in the transaction, or a serious legal challenge to the validity of a contingent pledge could lead to downward notching for this analytic element.

Moody's Related Publications

Credit ratings are primarily determined through the application of sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. A list of sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings, please click here.

For further information, please refer to *Rating Symbols and Definitions*, which is available here.

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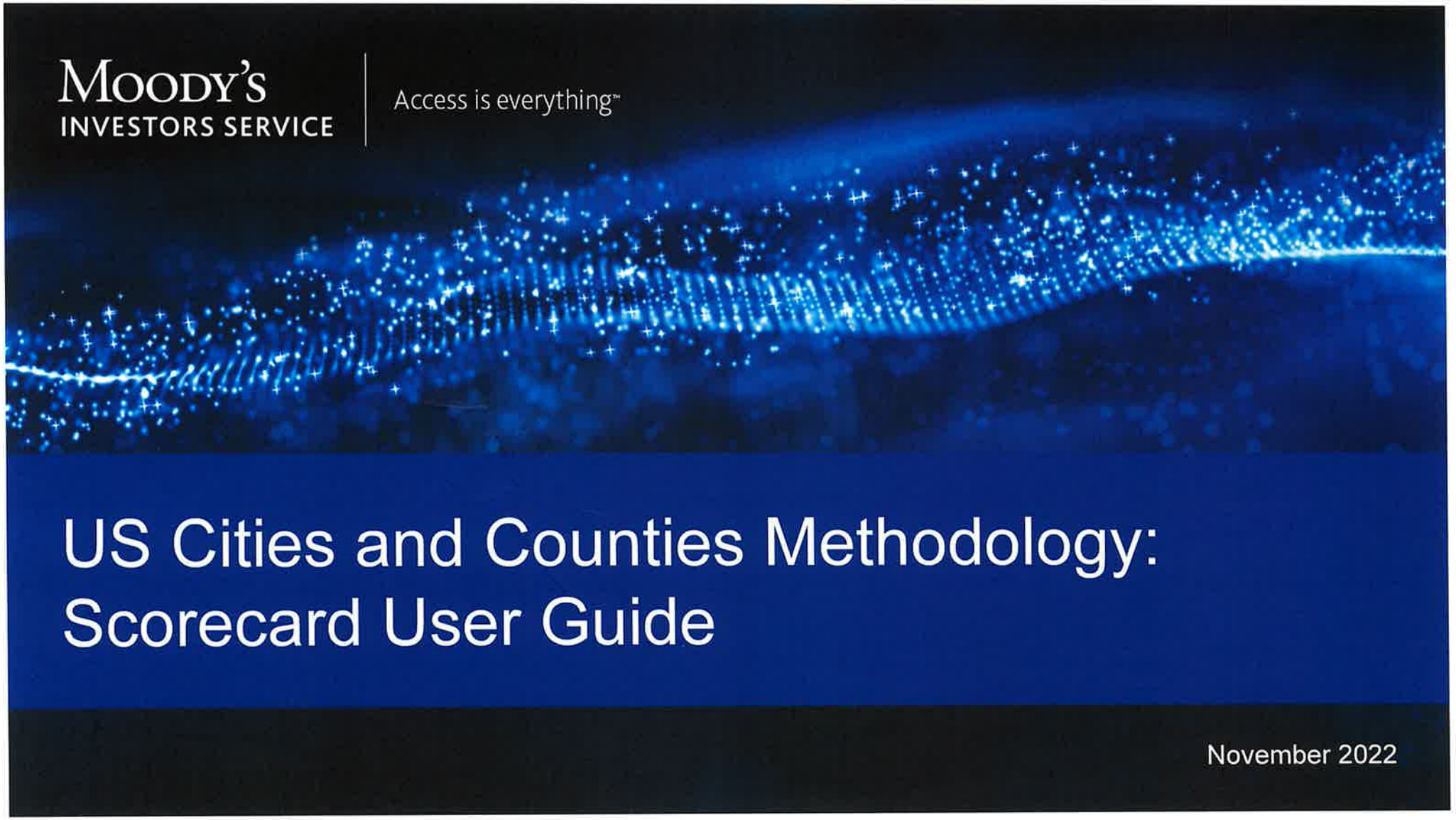

US Cities and Counties Methodology: Scorecard User Guide

November 2022

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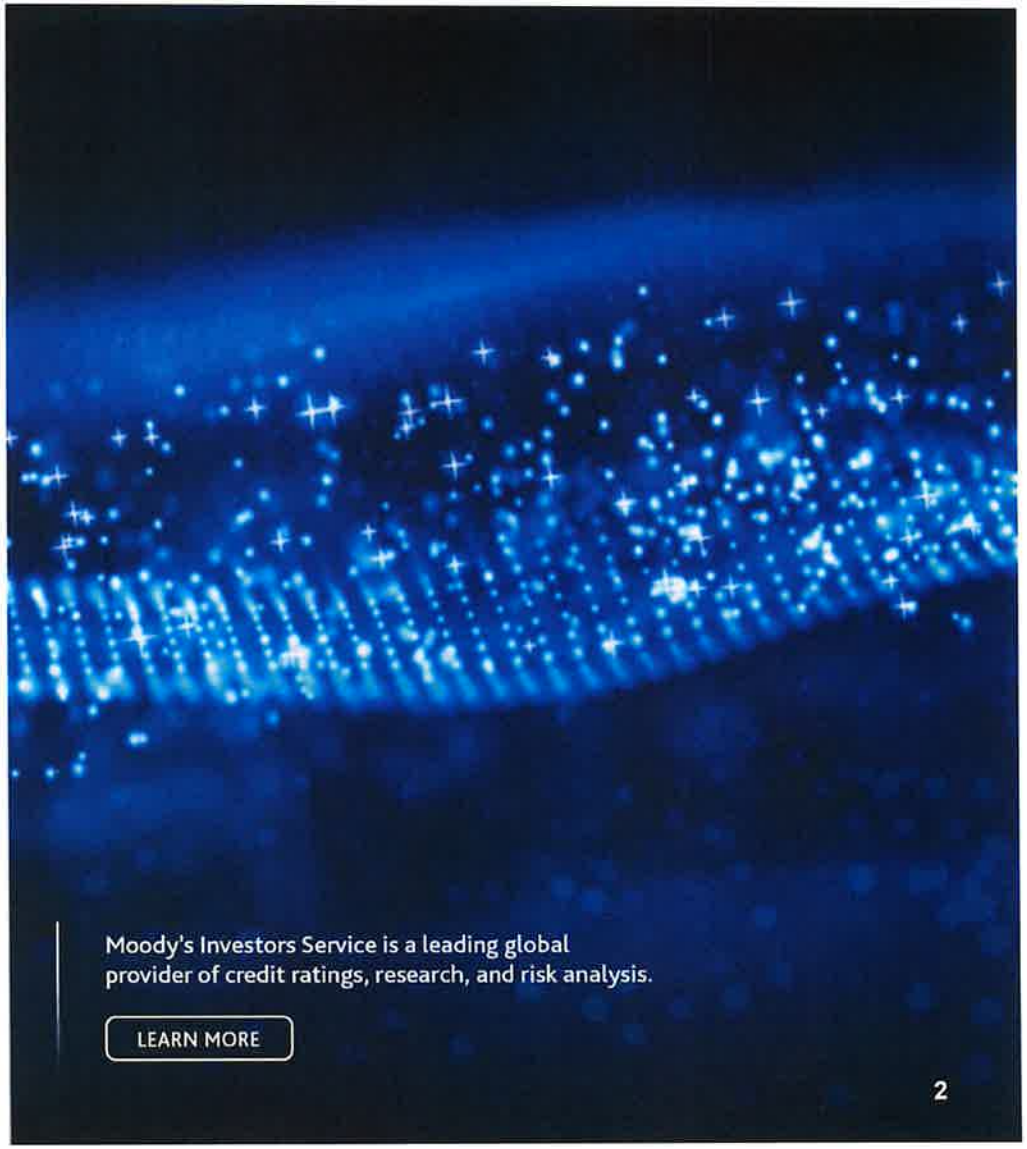
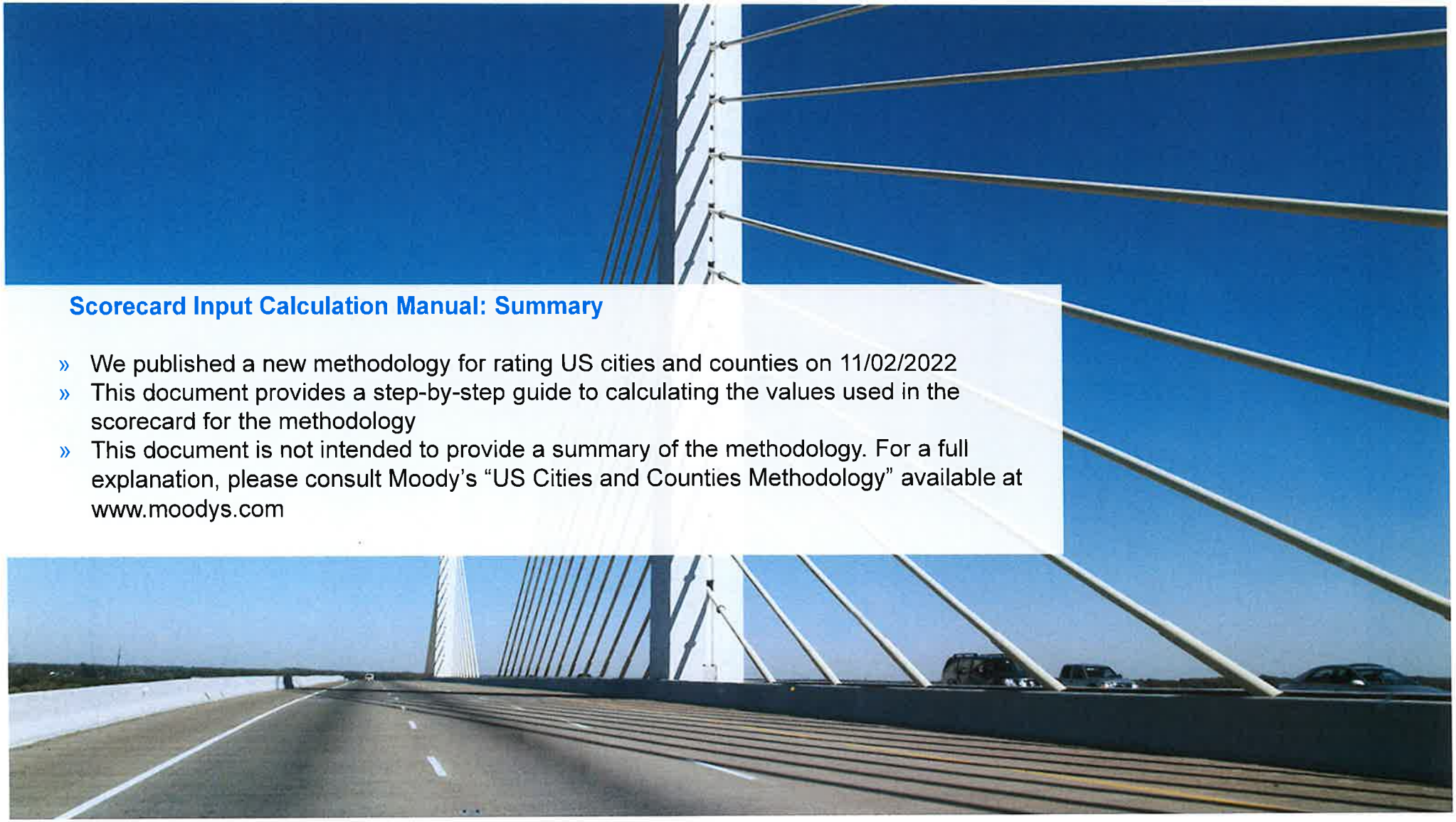
Over 100 years of experience delivering forward-looking, independent, stable and transparent opinions

Engagement
Meaningful interactions across multiple channels between our analysts and market participants





Scorecard Input Calculation Manual: Summary

- We published a new methodology for rating US cities and counties on 11/02/2022
- This document provides a step-by-step guide to calculating the values used in the scorecard for the methodology
- This document is not intended to provide a summary of the methodology. For a full explanation, please consult Moody's "US Cities and Counties Methodology" available at www.moodys.com

Table of Contents

Overview of the Scorecard

- This presentation is designed to help users calculate the values for the US Cities and Counties scorecard, including the eight scorecard sub-factors and the five notching factors.
- Note that all the financial calculations in this scorecard are calculated with dollars in thousands.
- The scorecard is used to produce a scorecard-indicated outcome, which is not the rating and is not expected to match the actual rating for each issuer.
- Ratings may differ from the scorecard-indicated outcome for a variety of reasons, such as for factors that may be important only under certain circumstances or for a subset of issuers.
- For more information about the how the scorecard inputs contribute to the scorecard-indicated outcome and the role of the scorecard-indicated outcome in the rating, see the methodology.

The Scorecard

The Cities and Counties scorecard assigns scores for 8 sub-factors (grouped under 4 major factors), and provides for adjustments for 5 notching factors

Factors	Sub-Factor	Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Economy	Resident Income	10%	≥120%	100% - 120%	80% - 100%	65% - 80%	50% - 65%	35% - 50%	20% - 35%	<20%
	Full Value per Capita	10%	≥$180000	$100000 - $180000	$60000 - $100000	$40000 - $60000	$25000 - $40000	$15000 - $25000	$9000 - $15000	<$9000
	Economic Growth	10%	≥0%	(1)% - 0%	(2.5)% - (1)%	(4.5)% - (2.5)%	(7)% - (4.5)%	(10)% - (7)%	(15)% - (10)%	<(15)%
Financial Performance	Available Fund Balance Ratio	20%	≥35%	25% - 35%	15% - 25%	5% - 15%	0% - 5%	(5)% - 0%	(10)% - (5)%	<(10)%
	Liquidity Ratio	10%	≥40%	30% - 40%	20% - 30%	12.5% - 20%	5% - 12.5%	0% - 5%	(5)% - 0%	<(5)%
Institutional Framework	Institutional Framework	10%	The majority of revenue is not subject to externally imposed caps and the governing body can increase revenue meaningfully without limitation or without approval of voters or other governments. And: The ability to meaningfully reduce expenditures is not constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps but the governing body can increase revenue meaningfully without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is mildly constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps but the governing body can increase revenue moderately without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is moderately constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body can increase revenue only minimally without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is heavily constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body cannot increase revenue without the approval of voters or other governments. Or: The ability to meaningfully reduce expenditures is very heavily constrained by externally imposed mandates or restrictions.	The majority of revenue is subject to externally imposed caps and the governing body cannot increase revenue. Or: The ability to meaningfully reduce expenditures is extremely constrained by externally imposed mandates or restrictions.	Not applicable.	Not applicable.
Leverage	Long-term Liabilities Ratio	20%	≤100%	100% - 200%	200% - 350%	350% - 500%	500% - 700%	700% - 900%	900% - 1100%	>1100%
	Fixed-Costs Ratio	10%	≤10%	10% - 15%	15% - 20%	20% - 25%	25% - 35%	35% - 45%	45% - 55%	>55%
Notching Factors	Additional Strength in Local Resources									
	Limited Scale of Operations									
	Financial Disclosures									
	Potential Cost Shift to or from the State									
	Potential for Significant Change in Leverage									

Each sub-factor has a weight ...

... and a value

All of the weighted scores are summed to arrive at a preliminary outcome.

The preliminary outcome can then be adjusted upward or downward based on five notching factors to arrive at a scorecard-indicated outcome.

How the Calculations Work

To illustrate the calculations underlying the scorecard, we now walk through the scorecard for a sample issuer – the City of Lincoln, NE (Scorecard-Indicated Outcome Aa2, Issuer Rating Aaa) – to help the reader understand how to perform the calculations feeding the sub-factor scores and the notching factors.

Complete Scorecard for Lincoln:

Factor	Sub-Factor	Value	Aaa	Aa	A	Baa	Ba	B	Caa	Ca	Numeric Sub-Factor Score	Sub-Factor Weight	Weighted Numeric Score
Economy	Resident Income	98.5%	≥120%	100% - 120%	80% - 100%	65% - 80%	50% - 65%	35% - 50%	20% - 35%	<20%	4.73	10%	0.47
	Full Value per Capita	$83,801	≥$180000	$100000 - $180000	$60000 - $100000	$40000 - $60000	$25000 - $40000	$15000 - $25000	$9000 - $15000	<$9000	5.71	10%	0.57
	Economic Growth	0.5%	≥0%	(1)% - 0%	(2.5)% - (1)%	(4.5)% - (2.5)%	(7)% - (4.5)%	(10)% - (7)%	(15)% - (10)%	<(15)%	1.25	10%	0.13
Financial Performance	Available Fund Balance Ratio	50.4%	≥35%	25% - 35%	15% - 25%	5% - 15%	0% - 5%	(5)% - 0%	(10)% - (5)%	<(10)%	0.5	20%	0.10
	Liquidity Ratio	79.9%	≥40%	30% - 40%	20% - 30%	12.5% - 20%	5% - 12.5%	0% - 5%	(5)% - 0%	<(5)%	0.5	10%	0.05
Institutional Framework	Institutional Framework	Aa	Aaa	Aa	A	Baa	Ba	B	Caa	Ca	3.00	10%	0.30
Leverage	Long-term Liabilities Ratio	203.9%	≤100%	100% - 200%	200% - 350%	350% - 500%	500% - 700%	700% - 900%	900% - 1100%	>1100%	4.58	20%	0.92
	Fixed-Costs Ratio	13.3%	≤10%	10% - 15%	15% - 20%	20% - 25%	25% - 35%	35% - 45%	45% - 55%	>55%	3.48	10%	0.35
												Aggregate numeric score	2.88
												Preliminary outcome	Aa2

Each scorecard value translates to a numeric sub-factor score

The weighted numeric score is the numeric sub-factor score multiplied by its weight ...

... and the aggregate numeric score is the sum of these products

The aggregate numeric score maps to a preliminary outcome

Notching Factors	Notch Adjustment
Additional Strength in Local Resources	0
Limited Scale of Operations	0
Financial Disclosures	0
Potential Cost Shift to or from the State	0
Potential for Significant Change in Leverage	0
Total Notching	0
Numeric score after notching adjustments	2.90
Scorecard-Indicated Outcome:	Aa2

After calculating the preliminary outcome, we then may adjust that outcome for up to 5 notching factors ...

The adjusted numeric score then provides the Scorecard-Indicated Outcome

Filling out the scorecard

Factor 1	Economy
Sub-Factor 1a	Resident Income

Sub-Factor 1a: Resident Income

The calculation of Resident Income uses the following elements:

A) The median household income of the city/county

B) The median household income of the United States

C) The regional price parity of the city/county's region

The formula to calculate this sub-factor:

$$\frac{A/(C/100)}{B} = \text{RESIDENT INCOME}$$

The weight of this sub-factor in the scorecard is 10%.
See How We Assess It for the Scorecard on Page 5 of the methodology for more information.

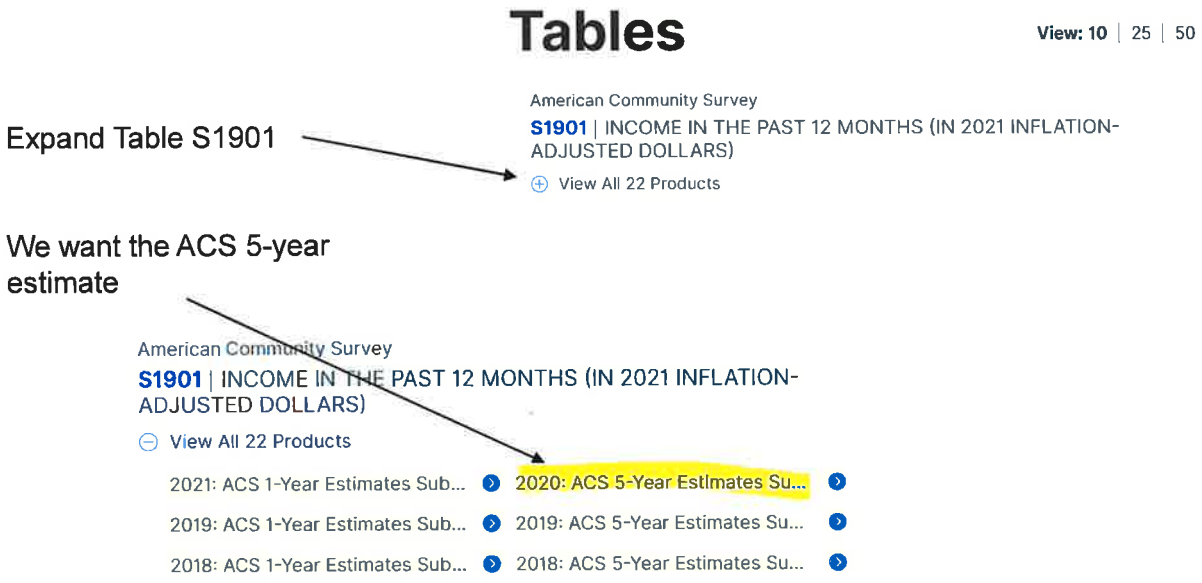
Sub-Factor 1a: Resident Income

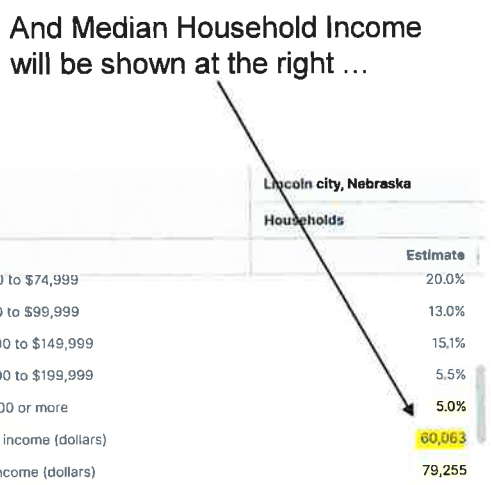
Input A: Median household income

To calculate this metric for Lincoln, the first step is to obtain Lincoln's median household income from the Census Bureau. Go to data.census.gov.

Sub-Factor 1a: Resident Income

Input A: Median household income





A = $60,063

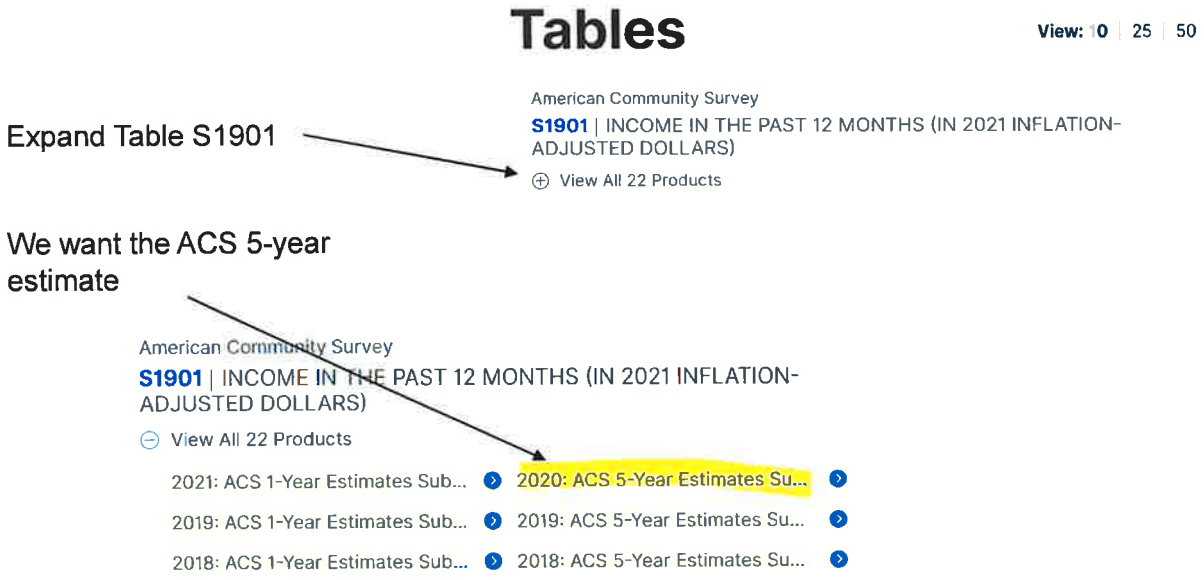
Sub-Factor 1a: Resident Income

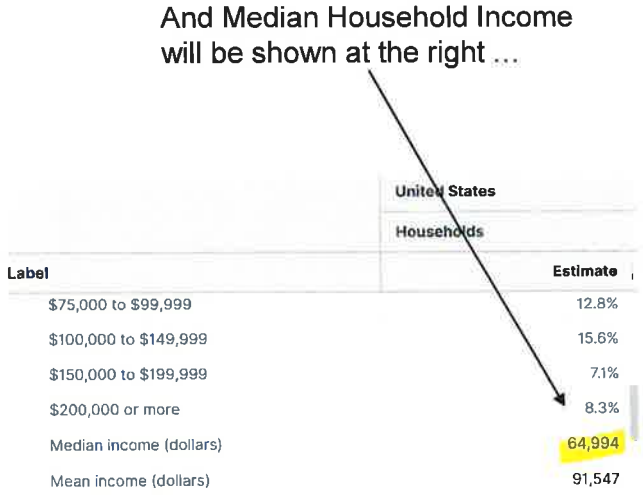
Input B: US median household income

Next repeat this process for the United States. Go to data.census.gov.

Sub-Factor 1a: Resident Income

Input B: US median household income



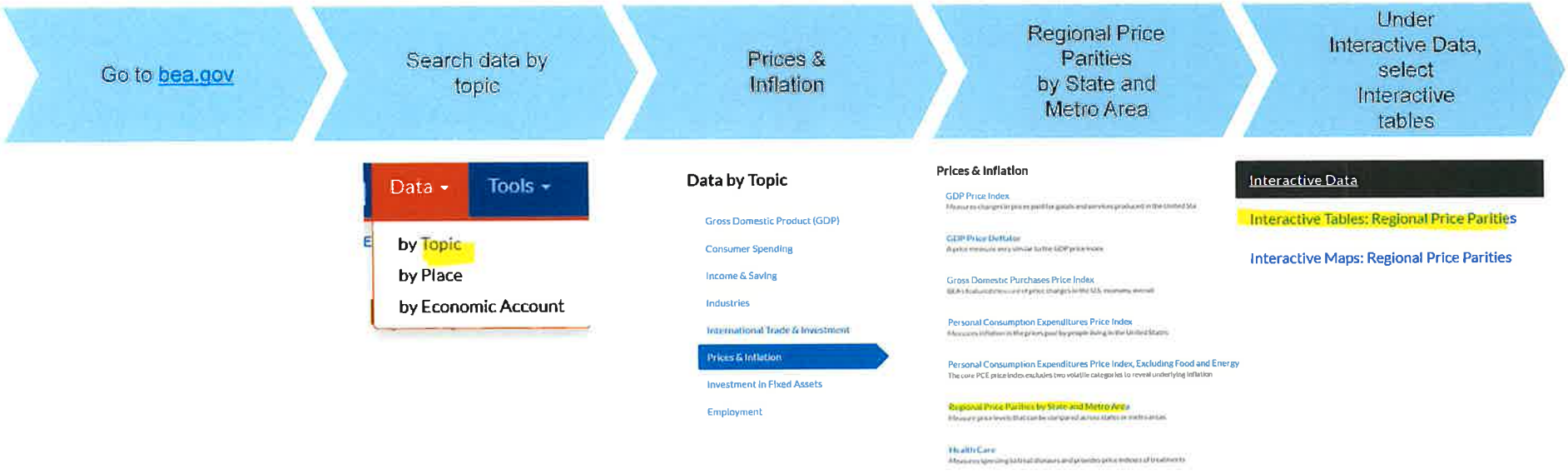


B = $64,994

Sub-Factor 1a: Resident Income

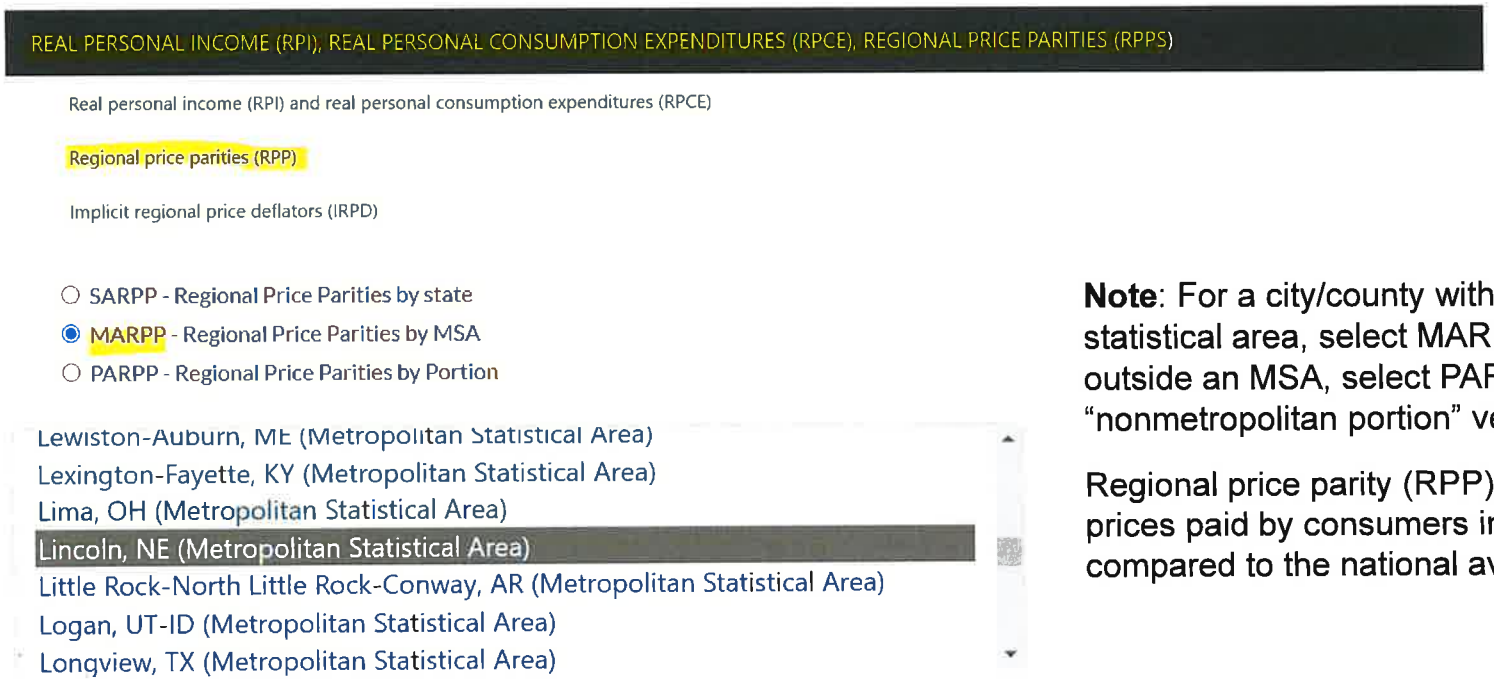
Input C: Regional Price Parity

The last piece of information we need is the regional price parity, in order to adjust for regional differences in the cost of living.



Sub-Factor 1a: Resident Income

Input C: Regional Price Parity



Then click "next step" twice.

Note: For a city/county within a metropolitan statistical area, select MARPP. For a city/county outside an MSA, select PARPP, followed by the "nonmetropolitan portion" version of the state.

Regional price parity (RPP) reflects the average prices paid by consumers in a region of the US, compared to the national average.

Sub-Factor 1a: Resident Income

Input C: Regional Price Parity

MARPP Regional price parities by MSA

(index)

Metropolitan Statistical Area

Modify Chart Table

GeoFips	GeoName	LineCode	Description	2020
30700	Lincoln, NE (Metropolitan Statistical Area)	1	RPPs: All items	93.788
30700	Lincoln, NE (Metropolitan Statistical Area)	2	RPPs: Goods	94.999
30700	Lincoln, NE (Metropolitan Statistical Area)	3	RPPs: Services: Housing	80.223
30700	Lincoln, NE (Metropolitan Statistical Area)	4	RPPs: Services: Utilities	103.327
30700	Lincoln, NE (Metropolitan Statistical Area)	5	RPPs: Services: Other	97.489

C = 93.788

Sub-Factor 1a: Resident Income

We now have all the elements we need to calculate this ratio:

$$\frac{A/(C/100)}{B} = \text{RESIDENT INCOME} \quad \text{Or ...} \quad \frac{\$60{,}063 \,/\, (93.788/100)}{\$64{,}994} = \mathbf{98.5\%}$$

Value for Sub-Factor 1a: 98.5%

Note: *See the methodology for how this sub-factor value is mapped to a numeric score.*

Factor 1

Sub-Factor 1b

Economy

Full Value Per Capita

Sub-Factor 1b: Full Value Per Capita

The calculation of Full Value Per Capita uses the following elements:

A) The full valuation of the city/county's tax base

B) The population of the city

The formula to calculate this sub-factor:

$$\frac{A}{B} = \text{Full Value Per Capita}$$

The weight of this sub-factor in the scorecard is 10%.
See How We Assess It for the Scorecard on Page 5 of the methodology for more information.

Sub-Factor 1b: Full Value Per Capita

Input A: Full value

The first input we need is full value.

Note that we derive full value from a variety of sources that can vary by state and sector.

In Lincoln's case, we take the reported taxable assessed value from the city's latest audited financial statements (see Page 167).

Table 10

CITY OF LINCOLN, NEBRASKA
ASSESSED VALUE AND ACTUAL VALUE OF TAXABLE PROPERTY
LAST TEN FISCAL YEARS

Fiscal Year Ended August 31,	Real Property: Residential Property	Real Property: Commercial Property	Other Property: Personal Property	Other Property: Centrally Assessed Property	Total Taxable Assessed Value	Total Direct Tax Rate
2021	$ 16,151,804,023	$ 6,775,086,845	$ 641,171,654	$ 431,669,274	$ 23,999,731,796	0.3198
2020	15,805,725,977	6,349,850,359	699,265,096	412,322,035	23,267,163,467	0.3198
2019	14,354,319,521	6,278,422,408	679,715,484	357,899,663	21,670,357,076	0.3165
2018	13,997,042,582	5,582,574,159	686,085,810	251,232,302	20,516,934,853	0.3165
2017	12,573,902,552	5,443,342,291	622,334,345	231,246,376	18,870,825,564	0.3337
2016	12,353,764,148	5,264,621,434	613,850,419	225,082,751	18,457,318,752	0.3196
2015	11,584,715,041	5,017,666,961	573,730,282	204,014,089	17,380,126,373	0.3196
2014	11,403,992,418	4,962,314,863	554,193,402	190,468,076	17,110,968,759	0.3158
2013	11,181,988,692	4,787,396,700	524,415,751	182,395,753	16,676,196,896	0.3158
2012	10,745,000,908	4,476,953,562	517,899,056	160,975,287	15,900,828,813	0.3158

Note: Property is assessed at actual value; therefore, the assessed values are equal to actual value.

Source: Lancaster County Assessor's Office

Assessed value (reported value of property for tax purposes) is often different from full value (market value of taxable property).

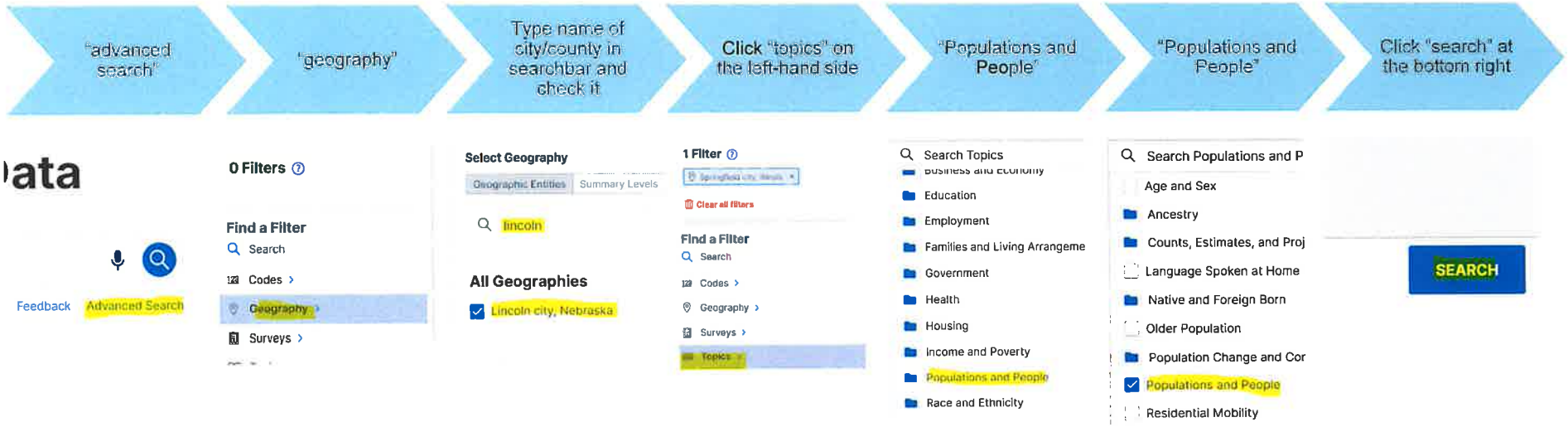
In Lincoln's case, though, they're the same – see the note at the bottom of the table to the left.

A = $23,999,731,796

Sub-Factor 1b: Full Value Per Capita

Input B: Population

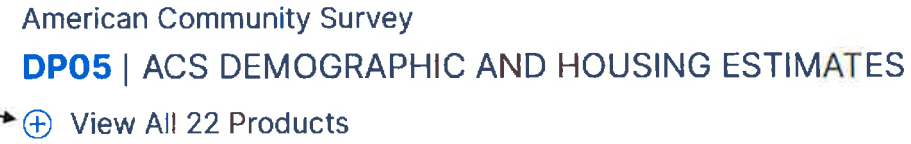
Now we need Lincoln's population. Go to data.census.gov.



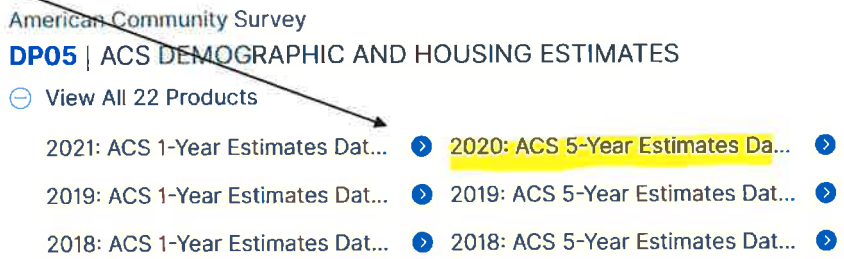
Sub-Factor 1b: Full Value Per Capita

Input B: Population

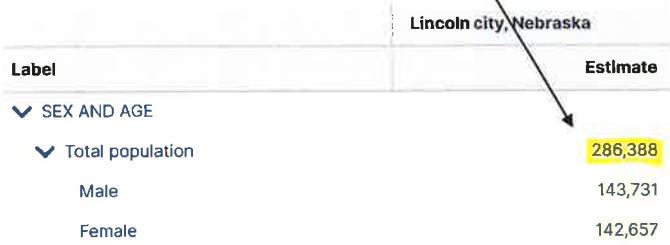
Expand Table DP05



We want the ACS 5-year estimate



And Total Population will be shown at the right …



Label	Lincoln city, Nebraska Estimate
SEX AND AGE	
Total population	286,388
Male	143,731
Female	142,657

Sub-Factor 1b: Full Value Per Capita

We now have all the elements we need to calculate this ratio:

$$\frac{A}{B} = \text{FULL VALUE PER CAPITA} \quad \text{Or ...} \quad \frac{\$23,999,731,796}{286,388} = \$83,801$$

Value for Sub-Factor 1b: $83,801

Note: *See the methodology for how this sub-factor value is mapped to a numeric score.*

Factor 1	Economy
Sub-Factor 1c	Economic Growth

Sub-Factor 1c: Economic Growth

The calculation of Economic Growth uses the following elements:

A) The 5-year compound annual growth rate of the city/county's real GDP

B) The 5-year compound annual growth rate of real US GDP

The formula to calculate this sub-factor:

A - B = ECONOMIC GROWTH

The weight of this sub-factor in the scorecard is 10%.
See How We Assess It for the Scorecard on Page 5 of the methodology for more information.

Sub-Factor 1c: Economic Growth

Input A: CAGR of GDP

The first input to this formula is the 5-year CAGR of Lincoln's real GDP. (We calculate this by metropolitan statistical area. For a city/county not in an MSA, we use the county's GDP.)

To calculate this, we need the Lincoln's MSA's US real GDP 5 years ago, and its real GDP today.

Go to bea.gov → Search data by topic → Gross Domestic Product → Regional Price Parities by State and Metro Area → Under Interactive Data, select Interactive tables

Sub-Factor 1c: Economic Growth

Input A: CAGR of GDP

Now under GDP by county and metro area, select real GDP in chained dollars …

SUMMARY TABLE FOR GDP, PERSONAL INCOME, AND RELATED DATA

QUARTERLY GROSS DOMESTIC PRODUCT (GDP) BY STATE

QUARTERLY PERSONAL INCOME BY STATE

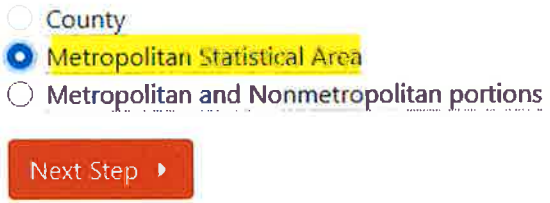
ANNUAL GROSS DOMESTIC PRODUCT (GDP) BY STATE

ANNUAL PERSONAL INCOME AND EMPLOYMENT BY STATE

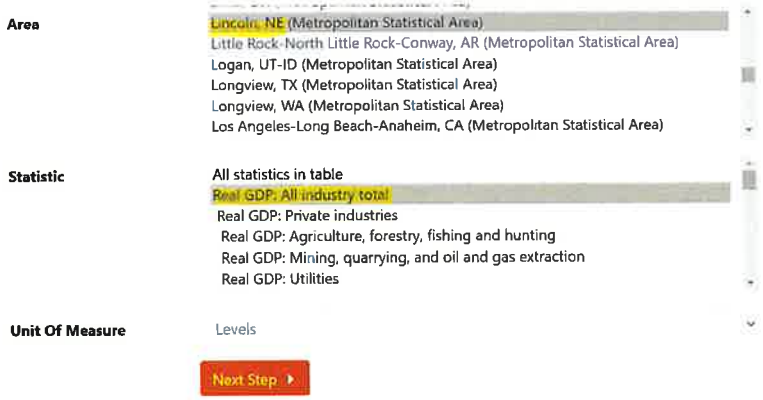
GROSS DOMESTIC PRODUCT (GDP) BY COUNTY AND METROPOLITAN AREA

- County and MSA gross domestic product (GDP) summary
- GDP in current dollars
- Chain-type quantity indexes for real GDP
- Real GDP in chained dollars
- Contributions to percent change in real GDP

Then select MSA and "next step" …



Then select the relevant MSA, real GDP, and "next step" …



Sub-Factor 1c: Economic Growth

Input A: CAGR of GDP

Select "All Years" and "Next Step" …

And this will deliver the data points we need for our formula:

CAGDP9 Real GDP by county and metropolitan area 1/

Real GDP: All industry total (Thousands of chained 2012 dollars)

Metropolitan Statistical Area

Modify | Chart | Table | Download | Print

GeoFips	GeoName	1	2012	2013	2014	2015	2016	2017	2018	2019	2020
30700	Lincoln, NE (Metropolitan Statistical Area)	,298	15,090,768	15,332,419	15,912,408	16,475,104	16,662,821	17,527,329	17,939,702	18,191,361	17,966,337

CAGR = (Most recent year GDP/Five years ago GDP)^(1/5) -1, or (17,966,337/16,475,104)^(1/5) -1 = **1.75%**

A = 1.75%

Sub-Factor 1c: Economic Growth

Input B: CAGR of US GDP

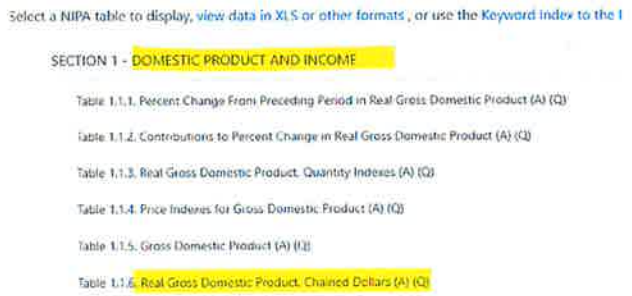
The next input to this formula is the 5-year CAGR of US real GDP. To calculate this, we need US real GDP 5 years ago, and US real GDP today.

Go to bea.gov → Search data by topic → Gross Domestic Product & Gross Domestic Product → Scroll to Interactive Data and select GDP → Under Interactive Data, select Interactive tables

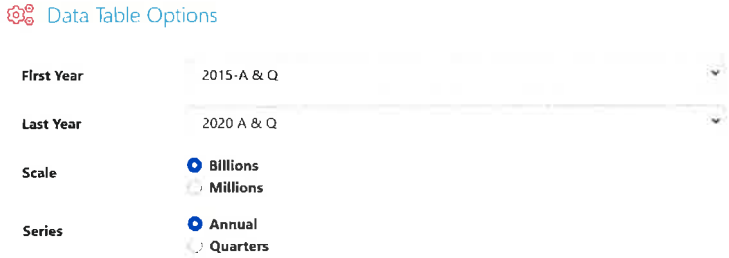
Sub-Factor 1c: Economic Growth

Input B: CAGR of US GDP

Next under Domestic Product and Income, select real GDP chained dollars …



And modify to select the years 2015 to 2020 …



And this will deliver the data points we need for our formula:

Table 1.1.6. Real Gross Domestic Product, Chained Dollars

(Billions of chained (2012) dollars)

Last Revised on: September 29, 2022 - Next Release Date October 27, 2022

Line		2015	2016	2017	2018	2019	2020
Line							
1	Gross domestic product	17,390.3	17,680.3	18,076.7	18,609.1	19,036.1	18,509.1

CAGR = (Most recent year GDP/Five years ago GDP)^(1/5) -1, or (18,509.1/17,390.3)^(1/5) -1 = **1.25%**

B = 1.25%

Sub-Factor 1c: Economic Growth

We now have all the elements we need to calculate this ratio:

A - B = ECONOMIC GROWTH Or … 1.75% - 1.25% = **0.5%**

Value for Sub-Factor 1c: 0.5%

Note: *See the methodology for how this sub-factor value is mapped to a numeric score.*

Factor 2

Financial Performance

Sub-Factor 2a

Available Fund Balance Ratio

Sub-Factor 2a: Available Fund Balance Ratio

The calculation of Available Fund Balance Ratio uses the following elements:

A) Available fund balance of governmental funds

B) Net current assets of business-type activities

C) Net current assets of internal service funds

D) Total revenue

The formula to calculate this sub-factor:

$$\frac{(A + B + C)}{(D)} = \text{AVAILABLE FUND BALANCE RATIO}$$

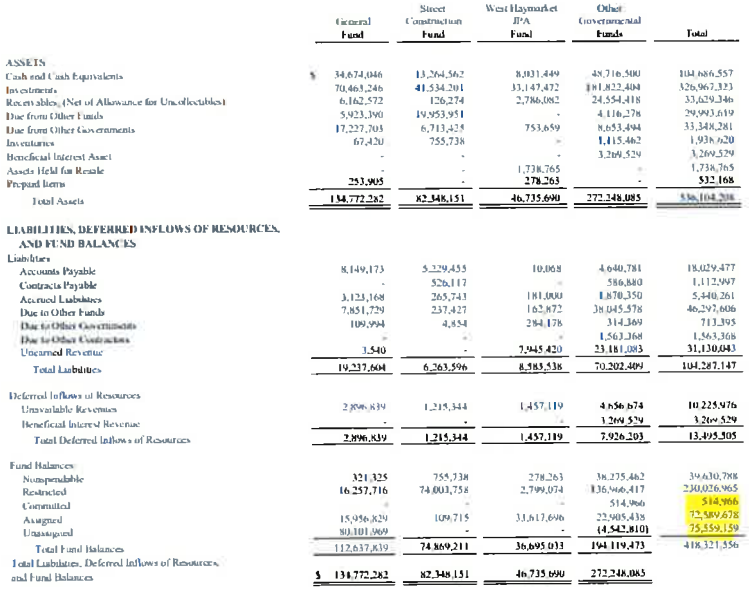
The weight of this sub-factor in the scorecard is 20%.
See How We Assess It for the Scorecard on Page 7 of the methodology for more information.

Sub-Factor 2a: Available Fund Balance Ratio

Input A: Governmental funds balance

All the numbers required for this calculation are taken from Lincoln's 2021 financial report.

Our first figure is available fund balance of governmental funds (Page 18).



	General Fund	Street Construction Fund	West Haymarket JPA Fund	Other Governmental Funds	Total
ASSETS					
Cash and Cash Equivalents	$ 34,674,046	13,264,562	8,031,449	48,716,500	104,686,557
Investments	70,463,246	41,534,201	33,147,472	181,822,404	326,967,323
Receivables, (Net of Allowance for Uncollectibles)	6,162,572	126,274	2,786,082	24,554,418	33,629,346
Due from Other Funds	5,923,390	19,953,951	-	4,116,278	29,993,619
Due from Other Governments	17,227,703	6,713,425	753,659	8,653,494	33,348,281
Inventories	67,420	755,738	-	1,115,462	1,938,620
Beneficial Interest Asset	-	-	-	3,269,529	3,269,529
Assets Held for Resale	-	-	1,738,765	-	1,738,765
Prepaid Items	253,905	-	278,263	-	532,168
Total Assets	134,772,282	82,348,151	46,735,690	272,248,085	536,104,208
LIABILITIES, DEFERRED INFLOWS OF RESOURCES, AND FUND BALANCES					
Liabilities					
Accounts Payable	8,149,173	5,229,453	10,068	4,640,781	18,029,477
Contracts Payable	-	526,117	-	586,880	1,112,997
Accrued Liabilities	3,123,168	265,743	181,000	1,870,350	5,440,261
Due to Other Funds	7,851,729	237,427	162,872	38,045,578	46,297,606
Due to Other Governments	109,994	4,854	284,178	314,369	713,395
Due to Other Contractors	-	-	-	1,563,368	1,563,368
Unearned Revenue	1,540	-	7,945,420	23,181,083	31,130,043
Total Liabilities	19,237,604	6,263,596	8,583,538	70,202,409	104,287,147
Deferred Inflows of Resources					
Unavailable Revenues	2,896,839	1,215,344	1,457,119	4,456,674	10,225,976
Beneficial Interest Revenue	-	-	-	3,269,529	3,269,529
Total Deferred Inflows of Resources	2,896,839	1,215,344	1,457,119	7,926,203	13,495,505
Fund Balances					
Nonspendable	321,325	755,738	278,263	38,275,462	39,630,788
Restricted	16,257,716	74,003,758	2,799,074	136,966,417	230,026,965
Committed	-	-	-	514,966	514,966
Assigned	15,956,829	109,715	33,617,696	22,905,438	72,589,678
Unassigned	80,101,969	-	-	(4,542,810)	75,559,159
Total Fund Balances	112,637,839	74,869,211	36,695,033	194,119,473	418,321,556
Total Liabilities, Deferred Inflows of Resources, and Fund Balances	$ 134,772,282	82,348,151	46,735,690	272,248,085	

We consider fund balances classified as committed, assigned or unassigned as "available." We take these portions of the total governmental funds balance on Page 18 of the financial report. See the methodology for more details.

$514,966 + $72,589,678 + $75,559,159 = **$148,663,803**

A = $148,664

Sub-Factor 2a: Available Fund Balance Ratio

Input B: Net current assets of business-type activities

Now we need net current assets of business-type activities.

We start on Page 24 of the city's 2021 financial report, taking current assets of business-type activities excluding the restricted portions highlighted in red (Page 24) and subtracting current liabilities (Page 25) …

	Business-Type Activities – Enterprise Funds				
	Lincoln Wastewater System	Lincoln Water System	Lincoln Electric System	Other Enterprise Funds	Total
ASSETS					
Current Assets:					
Cash and Cash Equivalents	$ 2,748,608	8,119,964	20,096,000	16,632,511	47,597,083
Investments	7,559,479	22,326,973	104,006,000	16,024,884	149,917,336
Restricted Assets:					
Cash and Cash Equivalents	-	-	6,672,000	-	6,672,000
Investments	-	-	13,527,000	-	13,527,000
Receivables, (Net of Allowance for Uncollectibles)	3,040,773	4,457,559	21,536,000	4,198,778	33,233,110
Unbilled Revenues	3,092,911	6,261,055	14,990,000	-	24,984,364
Due from Other Funds	382,837	1,147,942	-	1,325,635	2,856,414
Due from Other Governments	-	-	-	73,877	73,877
Inventories	115,793	1,702,682	21,262,000	580,086	23,660,561
Plant Operation Assets	-	-	18,332,000	-	18,332,000
Prepaid Expenses	-	-	3,697,000	135,485	3,832,485
Total Current Assets	17,540,401	44,016,775	224,120,000	38,971,056	324,688,230

	Business-Type Activities – Enterprise Funds				
	Lincoln Wastewater System	Lincoln Water System	Lincoln Electric System	Other Enterprise Funds	Total
LIABILITIES					
Current Liabilities:					
Accounts Payable	$ 375,367	808,753	21,663,000	6,203,863	29,050,983
Construction Contracts	1,683,774	4,606,688	-	-	6,290,462
Accrued Liabilities	703,955	1,179,686	29,918,000	529,382	32,331,023
Accrued Compensated Absences	408,516	549,594	-	625,924	1,584,034
Due to Other Funds	-	-	-	146,372	146,372
Due to Other Governments	-	-	-	177,815	177,815
Unearned Revenue	-	-	-	7,971,945	7,971,945
Claims	-	-	-	-	-
Accrued Interest	539,007	81,063	7,532,000	86,959	8,239,029
Current Portion of Commercial Paper and Notes Payable	-	-	65,500,000	-	65,500,000
Current Portion of Capital Lease	23,087	-	-	403,226	426,313
Current Portion of Long-Term Debt	5,916,442	4,701,657	27,455,000	3,455,000	41,528,099
Current Portion of Total OPEB Liability	18,302	26,183	-	44,755	89,240
Total Current Liabilities	9,668,450	11,953,624	152,068,000	19,645,241	193,335,315

Sub-Factor 2a: Available Fund Balance Ratio

Input B: Net current assets of business-type activities

And to this number we add two items.

We add back long-term business-type activity liabilities due within one year (from the note on Debt Obligations on Page 60; note that this number is shown in thousands unlike the others) …

Other Liabilities:					
Compensated Absences	3,855	315	-	4,170	1,584
Construction Contracts	6,771	6,291	(6,771)	6,291	6,291
Note Purchase Agreement	1,500	35,000	(35,000)	1,500	-
Developer Performance Deposits	896	300	(250)	946	-
Claims and Judgements	622	-	(9)	613	-
Net Pension Liability	4,673	-	(2,393)	2,280	-
Total OPEB Liability	2,108	627	-	2,735	89
Accrued Landfill Closure/Postclosure Care Costs	25,117	899	-	26,016	-
Asset Retirement Obligation	3,374	1,347	(1,241)	3,480	-
Business-Type Activities Long-Term Liabilities	$ 932,822	325,176	(366,434)	891,564	49,918

And we add back the city's commercial paper (Page 25), which was part of current liabilities on Slide 36 :

	Business-Type Activities – Enterprise Funds				
	Lincoln Wastewater System	Lincoln Water System	Lincoln Electric System	Other Enterprise Funds	Total
LIABILITIES					
Current Liabilities:					
Accounts Payable	$ 375,367	808,753	21,663,000	6,203,863	29,050,983
Construction Contracts	1,681,774	4,606,688	-	-	6,290,462
Accrued Liabilities	703,955	1,179,686	29,918,000	529,382	32,331,023
Accrued Compensated Absences	408,516	549,594	-	625,924	1,584,034
Due to Other Funds	-	-	-	146,372	146,372
Due to Other Governments	-	-	-	177,815	177,815
Unearned Revenue	-	-	-	7,971,945	7,971,945
Claims	-	-	-	-	-
Accrued Interest	539,007	81,063	7,532,000	86,959	8,239,029
Current Portion of Commercial Paper and Notes Payable	-	-	65,500,000	-	65,500,000
Current Portion of Capital Lease	23,087	-	-	403,226	426,313
Current Portion of Long-Term Debt	5,916,442	4,701,657	27,455,000	3,455,000	41,528,099
Current Portion of Total OPEB Liability	18,502	26,181	-	44,793	89,240
Total Current Liabilities	9,668,850	11,953,624	152,068,000	19,643,241	193,335,315

We sum all these items to arrive at net current assets of business-type activities:

Entry	$
Current assets of business-type activities (Slide 40)	$324,648,230
(Restricted portions of current assets) (Slide 40)	($6,672,000 + $13,527,000)
Current liabilities of business-type activities (Slide 40)	($193,335,315)
Current portion of long-term liabilities (Slide 41)	$49,918,000
Commercial paper	$65,500,000
Net current assets of business-type activities and internal service funds	**$226,531,915**

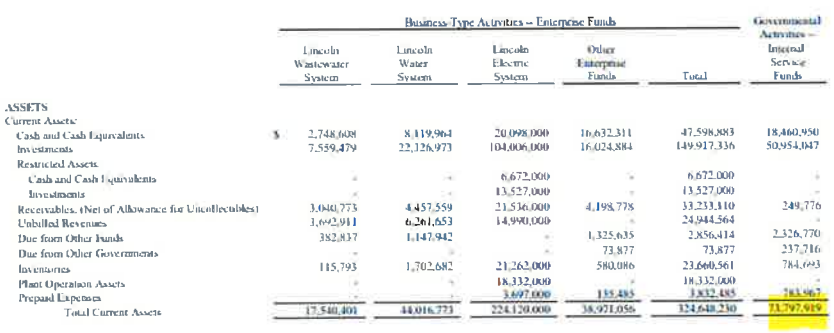
B = $226,532

Sub-Factor 2a: Available Fund Balance Ratio

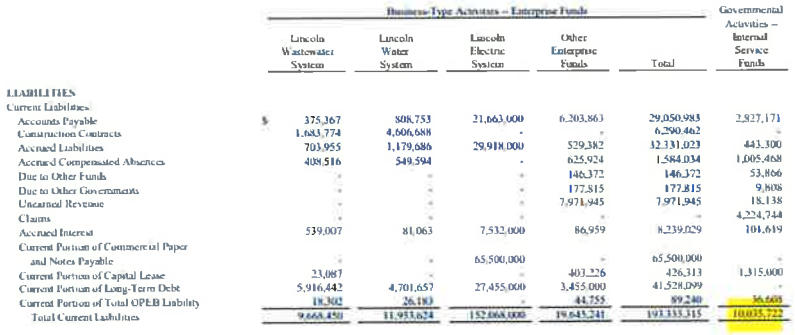
Input C: Net current assets of internal service funds

Now we need net current assets of internal service funds.

This is equal to internal service funds current assets (Page 24) minus internal service funds current liabilities (Page 25), adding back current portions of liabilities highlighted in red …



	Business-Type Activities – Enterprise Funds					Governmental Activities – Internal Service Funds
	Lincoln Wastewater System	Lincoln Water System	Lincoln Electric System	Other Enterprise Funds	Total	
ASSETS						
Current Assets:						
Cash and Cash Equivalents	$ 2,748,608	8,119,964	20,098,000	16,632,311	47,598,883	18,460,950
Investments	7,559,479	22,126,973	104,006,000	16,024,884	149,917,336	50,954,047
Restricted Assets:						
Cash and Cash Equivalents	-	-	6,672,000	-	6,672,000	-
Investments	-	-	13,527,000	-	13,527,000	-
Receivables, (Net of Allowance for Uncollectibles)	3,040,773	4,457,559	21,536,000	4,198,778	33,233,110	249,776
Unbilled Revenues	3,692,911	6,261,653	14,990,000	-	24,944,564	-
Due from Other Funds	382,837	1,147,942	-	1,325,635	2,856,414	2,326,770
Due from Other Governments	-	-	-	73,877	73,877	237,716
Inventories	115,793	1,702,682	21,262,000	580,086	23,660,561	784,693
Plant Operation Assets	-	-	18,332,000	-	18,332,000	-
Prepaid Expenses	-	-	3,697,000	155,485	3,852,485	583,967
Total Current Assets	17,540,401	44,016,773	224,120,000	38,971,056	324,648,230	73,797,919



	Business-Type Activities – Enterprise Funds					Governmental Activities – Internal Service Funds
	Lincoln Wastewater System	Lincoln Water System	Lincoln Electric System	Other Enterprise Funds	Total	
LIABILITIES						
Current Liabilities:						
Accounts Payable	$ 375,367	508,753	21,663,000	6,203,863	29,050,983	2,827,171
Construction Contracts	1,683,774	4,606,688	-	-	6,290,462	-
Accrued Liabilities	703,955	1,179,686	29,910,000	529,382	32,331,023	443,300
Accrued Compensated Absences	408,516	549,594	-	625,924	1,584,034	1,005,468
Due to Other Funds	-	-	-	146,372	146,372	53,866
Due to Other Governments	-	-	-	177,815	177,815	9,608
Unearned Revenue	-	-	-	7,971,945	7,971,945	18,138
Claims	-	-	-	-	-	4,224,744
Accrued Interest	539,007	81,063	7,532,000	86,959	8,239,029	101,619
Current Portion of Commercial Paper and Notes Payable	-	-	65,500,000	-	65,500,000	-
Current Portion of Capital Lease	23,087	-	-	403,226	426,313	1,315,000
Current Portion of Long-Term Debt	5,916,442	4,701,657	27,455,000	3,455,000	41,528,099	-
Current Portion of Total OPEB Liability	18,302	26,193	-	44,755	89,250	36,608
Total Current Liabilities	9,668,450	11,953,634	152,068,000	19,645,241	193,335,315	10,035,722

$73,797,919 – 10,035,722 + 1,315,000 + 36,608 = **$65,113,805**

C = $65,114

Sub-Factor 2a: Available Fund Balance Ratio

Input D: Total revenue

Now for the denominator. We start with governmental funds revenue (Page 19):

	General Fund	Street Construction Fund	West Haymarket JPA Fund	Other Governmental Funds	Total
REVENUES					
Taxes:					
Property	$ 54,590,375	-	-	25,778,462	80,368,837
Motor Vehicle	6,977,769	-	-	-	6,977,769
Wheel	-	-	-	19,884,562	19,884,562
Sales and Use	90,010,201	-	-	15,310,064	105,320,265
Turnback	-	-	-	1,453,709	1,453,709
Sundry and In Lieu	63,667	-	-	9,752	73,419
Occupation	6,119,306	-	16,163,372	1,487,500	23,770,178
Special Assessment	13,398	-	-	1,747,779	1,761,177
Intergovernmental	23,054,670	31,724,794	3,647,762	52,869,643	111,296,869
Permits and Fees	6,203,744	6,116,445	2,930	15,921,939	28,245,058
Reimbursement for Services	8,370,752	859,529	4,998,240	1,130,309	15,358,830
Program Income	-	-	-	43,297	43,297
Investment Earnings	764,482	21,151	286,916	14,453,773	15,526,322
Donations	702,326	-	-	2,844,344	3,546,670
Keno Proceeds	-	-	-	6,813,166	6,813,166
Private Sector Share of Projects	-	1,406,394	-	438,286	1,844,680
Miscellaneous	756,554	147,378	-	209,830	1,113,762
Total Revenues	197,627,244	40,275,691	25,099,220	160,396,415	423,398,570

Sub-Factor 2a: Available Fund Balance Ratio

Input D: Total revenue

And then add revenues of business-type activities including both operating revenues and any positive numbers under nonoperating revenues, and internal service funds nonoperating revenues (Page 27):

	Business-Type Activities – Enterprise Funds					Governmental Activities – Internal Service Funds
	Lincoln Wastewater System	Lincoln Water System	Lincoln Electric System	Other Enterprise Funds	Total	
Operating Revenues						
Charges for Services	$ 35,635,355	47,955,460	292,983,000	12,278,273	388,852,088	96,124,010
Fees	-	-	-	15,760,788	15,760,788	-
Parking Revenue	-	-	-	7,763,402	7,763,402	-
Performance Revenue	-	-	-	2,393,511	2,393,511	-
Other Operating Revenue	-	-	18,230,000	2,802,396	21,032,396	-
Total Operating Revenues	35,635,355	47,955,460	311,213,000	40,998,370	435,802,185	96,124,010
Operating Expenses						
Personal Services	-	-	-	12,476,035	12,476,035	16,852,520
Contractual Services	-	-	-	8,940,103	8,940,103	-
Operation and Maintenance	14,503,184	17,758,913	25,645,000	13,414,498	71,321,595	66,148,032
Purchased Power	-	-	119,067,000	-	119,067,000	-
Depreciation	9,708,991	9,022,382	39,883,000	6,535,785	65,150,158	4,026,529
Administrative Costs	2,766,208	3,287,536	50,474,000	-	56,527,744	-
Total Operating Expenses	26,978,383	30,068,831	235,069,000	41,366,421	333,482,635	87,027,081
Operating Income (Loss)	8,656,972	17,886,629	76,144,000	(368,051)	102,319,550	9,096,929
Nonoperating Revenues (Expenses)						
Investment Earnings	(39,582)	33,444	1,690,000	44,154	1,728,016	47,270
Grant Revenue	14,029	-	-	3,750,073	3,764,102	-
Gain (Loss) on Disposal of Capital Assets	-	-	-	(5,170,470)	(5,170,470)	1,232,245
Insurance Recoveries	25,604	2,993,726	-	6,942	3,026,272	-
Occupation Tax	-	-	-	5,028,574	5,028,574	-
Payments in Lieu of Taxes	-	-	(10,581,000)	-	(10,581,000)	-
Net Costs Recoverable	(65,556)	(49,337)	-	-	(114,893)	-
Debt Issuance Expense	-	-	-	-	-	(57,833)
Interest Expense and Fiscal Charges	(2,460,141)	(933,406)	(21,701,000)	(1,598,314)	(26,692,861)	(254,695)
Other - Flood Recovery Costs	-	(7,209,557)	-	-	(7,209,557)	-
Total Nonoperating Revenues (Expenses)	(2,525,646)	(5,165,130)	(30,592,000)	2,060,959	(36,221,817)	966,987

Entry	$
Business-type activities operating revenues	$435,802,185
Nonoperating revenues of business-type activities	$13,546,964
Nonoperating revenues of internal service funds	$1,279,515
Business-type activities and internal service funds revenues	**$450,628,664**

Total revenue =

$423,398,570 (Slide 43) + $450,628,664 (Slide 44) =

$874,027,234

D = $874,027

Sub-Factor 2a: Available Fund Balance Ratio

We now have all the elements we need to calculate this ratio:

$$\frac{(A + B + C)}{(D)} = \text{AVAILABLE FUND BALANCE RATIO}$$

Or …

$$\frac{(\$148{,}664 + \$226{,}532 + \$65{,}114)}{(\$874{,}027)} = \mathbf{50.4\%}$$

Value for Sub-Factor 2a: 50.4%

Note: *See the methodology for how this sub-factor value is mapped to a numeric score.*

Factor 2
Sub-Factor 2b

Financial Performance
Liquidity Ratio

Sub-Factor 2b: Liquidity Ratio

The calculation of Liquidity Ratio uses the following elements:

A) Governmental funds cash

B) Business-type activities and internal service funds cash

C) Total revenue

The formula to calculate this sub-factor:

$$\frac{(A + B)}{(C)} = \text{LIQUIDITY RATIO}$$

The weight of this sub-factor in the scorecard is 10%.
See How We Assess It for the Scorecard on Page 7 of the methodology for more information.

Sub-Factor 2b: Liquidity Ratio

Input A: Governmental funds cash

All the numbers required for this calculation are taken from Lincoln's 2021 financial report. Our first figure is unrestricted cash and investments of governmental funds, which we find on Page 18.

	General Fund	Street Construction Fund	West Haymarket JPA Fund	Other Governmental Funds	Total
ASSETS					
Cash and Cash Equivalents	$ 34,674,046	13,264,562	8,031,449	48,716,500	104,686,557
Investments	70,463,246	41,534,201	33,147,472	181,822,404	326,967,323
Receivables, (Net of Allowance for Uncollectibles)	6,162,572	126,274	2,786,082	24,554,418	33,629,346
Due from Other Funds	5,923,390	19,953,951	-	4,116,278	29,993,619
Due from Other Governments	17,227,703	6,713,425	753,659	8,653,494	33,348,281
Inventories	67,420	755,738	-	1,115,462	1,938,620
Beneficial Interest Asset	-	-	-	3,269,529	3,269,529
Assets Held for Resale	-	-	1,738,765	-	1,738,765
Prepaid Items	253,905	-	278,263	-	532,168
Total Assets	134,772,282	82,348,151	46,735,690	272,248,085	536,104,208

$104,686,557 + 326,967,323 = **$431,653,880**

A = $431,654

Sub-Factor 2b: Liquidity Ratio

Input B: Business-type activities and internal service funds cash

Now we take unrestricted cash and investments of business-type activities and internal service funds, which we find on Page 24.

	Business-Type Activities – Enterprise Funds					Governmental Activities -- Internal Service Funds
	Lincoln Wastewater System	Lincoln Water System	Lincoln Electric System	Other Enterprise Funds	Total	
ASSETS						
Current Assets:						
Cash and Cash Equivalents	$ 2,748,608	8,119,964	20,098,000	16,632,311	47,598,883	18,460,950
Investments	7,559,479	22,326,973	104,006,000	16,024,884	149,917,336	50,954,047
Restricted Assets:						
Cash and Cash Equivalents	-	-	6,672,000	-	6,672,000	-
Investments	-	-	13,527,000	-	13,527,000	-
Receivables, (Net of Allowance for Uncollectibles)	3,040,773	4,457,559	21,536,000	4,198,778	33,233,110	249,776

$47,598,883 + $149,917,336 + 18,460,950 + $50,954,047= **$266,931,216**

B = $266,931

Sub-Factor 2b: Liquidity Ratio

Input C: Total revenue

We showed this calculation on Slide 39 and Slide 40.

$$C = \$874,027$$

We now have all the elements we need to calculate this ratio:

$$\frac{(A + B)}{(C)} = \text{LIQUIDITY RATIO} \quad \text{Or} \ldots \quad \frac{(\$431,654 + \$266,931)}{(\$874,027)} = \mathbf{79.9\%}$$

Value for Sub-Factor 2b: 79.9%

Note: *See the methodology for how this sub-factor value is mapped to a numeric score.*

Factor 3 | Institutional Framework

Factor 3: Institutional Framework

- The Institutional Framework score focuses on the ability of a city or county to match recurring revenue with expenditures. We consider whether the city or county has control over the majority of its revenue across governmental and business-type activities, and whether this revenue is subject to caps or other limitations.
- We typically perform this assessment on a statewide basis for each sub-sector (i.e., one for cities and one for counties), unless a potential state action affects only a subset of cities and counties, and we typically conduct the assessment once a year.
- You can see our latest state-level Institutional Framework scores here.
- Nebraska cities' IF score is Aa (as of November 2022).

Value for Factor 3: Aa

The weight of this sub-factor in the scorecard is 10%.
See How We Assess It for the Scorecard on Page 10 of the methodology for more information.

Factor 4

Sub-Factor 4a

Leverage

Long-Term Liabilities Ratio

Sub-Factor 4a: Long-Term Liabilities Ratio

The input for the Long-Term Liabilities Ratio comprises five variables:

A. Debt

B. Adjusted net pension liabilities

C. Adjusted net OPEB liabilities

D. Other long-term liabilities

E. Total revenue

The formula to calculate this ratio:

$$\frac{(A + B + C + D)}{E} = \text{LONG-TERM LIABILITIES RATIO}$$

The weight of this sub-factor in the scorecard is 20%.
See How We Assess It for the Scorecard on Page 12 of the methodology for more information.

Sub-Factor 4a: Long-Term Liabilities Ratio

Input A: Debt

We start with Lincoln's bonds, notes and leases from Page 60 of its 2021 financial report:

	Beginning Balance	Additions	Reductions	Ending Balance
Governmental Activities:				
Bond, Notes, and Leases Payable:				
General Bonds	$ 33,545	-	(2,925)	30,620
Tax Allocation Bonds	2,401	766	(653)	2,514
Tax Supported Bonds	43,775	15,260	(5,200)	53,835
Special Assessment Debt with Government Commitment	2,575	-	(195)	2,380
West Haymarket Joint Public Agency Bonds	324,795	-	(5,510)	319,285
Note from Direct Borrowing	1,985	-	(130)	1,855
Capital Leases	29,859	19,930	(7,879)	41,910
Gross Bonds and Leases Payable	438,935	35,956	(22,492)	452,399
Deferred Amounts:				
For Issuance Premiums	9,117	5,374	(1,060)	13,431
For Issuance Discounts	(988)	-	24	(964)
Net Bonds, Notes, and Leases Payable	447,064	41,330	(23,528)	464,866

Business-Type Activities:				
Bonds, Loans, Note, and Leases Payable:				
Wastewater Revenue Bonds	$ 66,055	-	(4,530)	61,525
Wastewater Loans from Direct Borrowing	17,328	-	(1,206)	16,122
Water Revenue Bonds	24,530	-	(4,190)	20,340
Water Loan from Direct Borrowing	10,996	-	(676)	10,320
Electric System Revenue Bonds	640,045	257,350	(277,745)	619,650
Parking Revenue Bonds	46,060	-	(2,515)	43,545
Solid Waste Management Revenue Bonds	8,265	-	(850)	7,415
Capital Leases	1,138	1,285	(449)	1,974
Gross Bonds, Loans, Note, and Leases Payable	814,417	258,635	(292,161)	780,891
Deferred Amounts:				
For Issuance Premiums	69,489	21,762	(28,609)	62,642
Net Bonds, Loans, Note, and Leases Payable	883,906	280,397	(320,770)	843,533

And add short-term debt (Page 56):

Lincoln Electric System:	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
Commercial Paper Notes	$ 65,500,000	178,300	(178,300)	65,500,000	65,500,000

$464,866 + $843,533 + $65,500 = **$1,373,899**

A = $1,373,899

Sub-Factor 4a: Long-Term Liabilities Ratio

Input B: Adjusted net pension liabilities

The input for pensions is the city's Moody's-adjusted net pension liability (ANPL). We make this adjustment using Moody's "Adjustments to Pension and OPEB Data Reported by GASB Issuers, Including US States and Local Governments Methodology," available here.

Lincoln reported a net pension liability of **$39,668,345** in its 2021 financial report (Page 66).

Net Pension Liability

Total pension liability	$ 358,573,819
Plan fiduciary net position	(318,905,474)
Net pension liability	$ 39,668,345

*Our adjusted net pension liability for the city is **$296.555 million**.*

We will go step-by-step through the adjustments we make to the number on the left in order to arrive at the number on the right.

Sub-Factor 4a: Long-Term Liabilities Ratio

Input B: Adjusted net pension liabilities

Lincoln has one pension plan – the Police and Fire Pension Plan. The city discloses numerous important elements of this plan beginning on Page 63 of its financial report.

We list some of the elements necessary for calculating our adjusted net pension liability here:

Police and Fire Pension Plan	8/31/2021
Total liability	$358,573,819
Plan assets	$318,905,474
Net liability	$39,668,345
Discount rate	**7.35%**

The primary function of our adjustment is to value the plan's liabilities not at the reported discount rate of 7.35% but at a market discount rate. On 8/31/2021 (the measurement date), the FTSE Pension Discount Liability Index showed a market discount rate of 2.753404%.

Date	8/31/2021
FTSE Pension Liability Index	
Discount Rate (%)	2.753404

Therefore, we will spend the next slide adjusting the 7.35% discount rate to a market discount rate of 2.753404%.

Sub-Factor 4a: Long-Term Liabilities Ratio

Input B: Adjusted net pension liabilities

In order to adjust the 7.35% discount rate, we need to calculate the ***duration*** of the plan's liability.

This is made possible by the city's disclosure of the plan's net pension liability's sensitivity to a change in discount rates (Page 67):

	1% Decrease 6.35%	Current Discount Rate 7.35%	1% Increase 8.35%
Total Pension Liability	$ 402,838,797	358,573,819	321,651,944
Fiduciary Net Position	318,905,474	318,905,474	318,905,474
Net Pension Liability	$ 83,933,323	39,668,345	2,746,470

This disclosure shows that a 100-basis point-decline in the discount rate (to 6.35% from 7.35%) leads to a ***12.34473% increase*** in the total pension liability (to $402.8 million from $358.8 million).

This figure equips us to convert the reported total pension liability to an adjusted figure:

Total pension liability * ((1 + reported discount rate)^duration / (1 + market discount rate) ^ duration)) =

$358,574,819 * ((1.0735^12.34473)/(1.02753404^12.34473)) = **$615,460,841**

(This is the estimated total pension liability discounted at 2.753404% instead of 7.35%.)

Sub-Factor 4a: Long-Term Liabilities Ratio

Input B: Adjusted net pension liabilities

The last step is to subtract the plan assets ($318,905,474, from Page 67 of the financial report) from the adjusted total liability:

$615,460,841 - $318,905,474 = **$296,555,367**

This is our adjusted net pension liability.

(Note that for cities or counties that participate in a multi-employer plan, this adjustment will be applied to the plan and the liabilities of the plan allocated to its participants in proportion to their contributions to the plan. We illustrated this approach in detail beginning on Slide 59 of this user guide.)

B = $296,555

Sub-Factor 4a: Long-Term Liabilities Ratio

Input C: Adjusted net OPEB liabilities

Our adjustments to other post-employment benefit liabilities follow the same approach as our pension adjustments.

Lincoln reported a OPEB liability of **$26,986,730** as of 8/31/2020 (Page 73 of the financial report).

	Total OPEB Liability
Balance at Beginning of Year	$ 20,085,510
Changes for the year:	
Service cost at end of year	1,236,714
Interest on total OPEB liability	621,025
Difference between expected and actual experience	265,188
Assumption changes	5,650,737
Benefit payments	(872,444)
Net changes	6,901,220
Balance at End of Year	$ 26,986,730

*Our adjusted net OPEB liability for the city is **$25.475 million**.*

We will go step-by-step through the adjustments we make to the number on the left in order to arrive at the number on the right.

Note that because the city's OPEB liability is measured as of 8/31/2020, we will use the FTSE Pension Liability Index on that date (not the 8/31/2021 we used for the city's pension plan).

Date	8/31/2020
FTSE Pension Liability Index	
Discount Rate (%)	2.659823

Sub-Factor 4a: Long-Term Liabilities Ratio

Input C: Adjusted net OPEB liabilities

We again look to the city's disclosure of the sensitivity of the city's OPEB liabilities to a 100-basis-point change in discount rate (Page 73):

	1% Decrease	Current Discount Rate	1% Increase
	1.11%	2.11%	3.11%
Total OPEB Liability	$ 29,883,200	26,986,730	24,381,041

This disclosure shows that a 100-basis point-decline in the discount rate leads to a ***10.7329417% increase*** in the total OPEB liability (to $29,883,200 from $26,986,730).

This figure equips us to convert the reported total OPEB liability to an adjusted figure:

Total OPEB liability * ((1 + reported discount rate)^duration / (1 + market discount rate) ^ duration)) =

$26,986,730 * ((1.0211^10.7329417)/(1.02659823^10.7329417)) = **$25,475**

This is the estimated total OPEB liability discounted at 2.659823% (Source: Slide 56) instead of 2.11% (Source: sensitivity disclosure above).

Since the city has no OPEB assets, this is our input for the net OPEB liability.

C = $25,475

Sub-Factor 4a: Long-Term Liabilities Ratio

Input D: Other long-term liabilities

Lastly, we add "other long-term liabilities," which include liabilities not captured Inputs A, B, or C.

For this step, we sum the following highlighted liabilities from the Page 60 of the city's financial report.

	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
Governmental Activities:					
Bond, Notes, and Leases Payable:					
General Bonds	$ 33,545	-	(2,925)	30,620	3,015
Tax Allocation Bonds	2,401	766	(653)	2,514	581
Tax Supported Bonds	43,775	15,260	(5,200)	53,835	6,050
Special Assessment Debt with Government Commitment	2,575	-	(195)	2,380	205
West Haymarket Joint Public Agency Bonds	324,795	-	(5,510)	319,285	5,675
Note from Direct Borrowing	1,985	-	(130)	1,855	132
Capital Leases	29,859	19,930	(7,879)	41,910	6,103
Gross Bonds and Leases Payable	438,935	35,956	(22,492)	452,399	21,761
Deferred Amounts:					
For Issuance Premiums	9,117	5,374	(1,060)	13,431	-
For Issuance Discounts	(988)	-	24	(964)	-
Net Bonds, Notes, and Leases Payable	447,064	41,330	(23,528)	464,866	21,761
Other Liabilities:					
Compensated Absences	27,874	13,007	(11,260)	29,621	10,962
Construction Contracts	751	1,753	(69)	2,435	1,753
Claims and Judgements	11,270	39,182	(39,258)	11,194	4,225
Net Pension Liability	71,222	-	(33,834)	37,388	-
Total OPEB Liability	17,971	6,273	-	24,244	791
Governmental Activities Long-Term Liabilities	$ 576,152	101,545	(107,949)	569,748	39,492

Business-Type Activities:					
Bonds, Loans, Note, and Leases Payable:					
Wastewater Revenue Bonds	$ 66,055	-	(4,530)	61,525	4,685
Wastewater Loans from Direct Borrowing	17,328	-	(1,206)	16,122	1,231
Water Revenue Bonds	24,530	-	(4,190)	20,340	4,010
Water Loan from Direct Borrowing	10,996	-	(676)	10,320	692
Electric System Revenue Bonds	640,045	257,350	(277,745)	619,650	27,455
Parking Revenue Bonds	46,060	-	(2,515)	43,545	2,880
Solid Waste Management Revenue Bonds	8,265	-	(850)	7,415	575
Capital Leases	1,138	1,285	(449)	1,974	426
Gross Bonds, Loans, Note, and Leases Payable	814,417	258,635	(292,161)	780,891	41,954
Deferred Amounts:					
For Issuance Premiums	69,489	21,762	(28,609)	62,642	-
Net Bonds, Loans, Note, and Leases Payable	883,906	280,397	(320,770)	843,533	41,954
Other Liabilities:					
Compensated Absences	3,855	315	-	4,170	1,584
Construction Contracts	6,771	6,291	(6,771)	6,291	6,291
Note Purchase Agreement	1,500	35,000	(35,000)	1,500	-
Developer Performance Deposits	896	300	(250)	946	-
Claims and Judgements	622	-	(9)	613	-
Net Pension Liability	4,673	-	(2,393)	2,280	-
Total OPEB Liability	2,108	627	-	2,735	89
Accrued Landfill Closure/Postclosure Care Costs	25,117	899	-	26,016	-
Asset Retirement Obligation	3,374	1,347	(1,241)	3,480	-
Business-Type Activities Long-Term Liabilities	$ 932,822	325,176	(366,434)	891,564	49,918

$29,621 + $2,435 + $11,194 + $4,170 + $6,291 + $1,500 + $946 + $613 + $26,016 + $3,480= **$86,266**

D = $86,266

Sub-Factor 4a: Long-Term Liabilities Ratio

Input E: Total revenue

We showed this calculation on Slide 39 and Slide 40.

$$E = \$874{,}027$$

We now have all the elements we need to calculate this ratio:

$$\frac{(A + B + C + D)}{E} = \text{LONG-TERM LIABILITIES RATIO}$$

Or …

$$\frac{(\$1{,}373{,}899 + \$296{,}555 + \$25{,}475 + \$86{,}266)}{(\$874{,}027)} = \mathbf{203.9\%}$$

Value for Sub-Factor 4a: 203.9%

Note: *See the methodology for how this sub-factor value is mapped to a numeric score.*

Factor 4
Sub-Factor 4b

Leverage
Fixed-Costs Ratio

Sub-Factor 4b: Fixed-Costs Ratio

The input for the Fixed-Costs Ratio comprises five variables:

A) Implied debt service

B) Pension tread water indicator

C) OPEB contributions

D) Implied carrying costs for other long-term liabilities

E) Total revenue

The formula to calculate this ratio:

$$\frac{(A + B + C + D)}{E} = \text{Fixed-Costs Ratio}$$

The weight of this sub-factor in the scorecard is 10%.

See How We Assess It for the Scorecard on Page 12 of the methodology for more information.

Sub-Factor 4b: Fixed-Costs Ratio

Input A: Implied debt service

Our first input is *implied debt service*. Because we are calculating fixed costs for 2021, we will calculate implied debt service on the city's debt balance ***at the end of 2020***. We therefore must calculate debt outstanding at the end of 2020 based on the city's 2020 Comprehensive Annual Financial Report in the same manner we did for 2021 on Slide 51.

Compiling bonds, notes and leases (Page 60) …

	Beginning Balance	Additions	Reductions	Ending Balance
Governmental Activities:				
Bond, Notes, and Leases Payable:				
General Bonds	$ 40,685	4,140	(11,280)	33,545
Tax Allocation Bonds	3,009	-	(608)	2,401
Tax Supported Bonds	47,290	21,765	(25,280)	43,775
Special Assessment Debt with Government Commitment	2,765	-	(190)	2,575
West Haymarket Joint Public Agency Bonds	325,400	100,000	(100,605)	324,795
Note from Direct Borrowing	2,112	-	(127)	1,985
Capital Leases	35,433	-	(5,574)	29,859
Gross Bonds and Leases Payable	456,694	125,905	(143,664)	438,935
Deferred Amounts:				
For Issuance Premiums	13,895	2,314	(7,092)	9,117
For Issuance Discounts	(988)	-	-	(988)
Net Bonds, Notes, and Leases Payable	469,601	128,219	(150,756)	447,064

Business-Type Activities:				
Bonds, Loans, Note, and Leases Payable:				
Wastewater Revenue Bonds	$ 70,540	-	(4,485)	66,055
Wastewater Loans from Direct Borrowing	18,510	-	(1,182)	17,328
Water Revenue Bonds	28,550	-	(4,020)	24,530
Water Loan from Direct Borrowing	11,657	-	(661)	10,996
Electric System Revenue Bonds	662,795	-	(22,750)	640,045
Parking Revenue Bonds	48,375	-	(2,315)	46,060
Solid Waste Management Revenue Bonds	9,095	-	(830)	8,265
Pinnacle Bank Arena Note from Direct Borrowing	800	-	(800)	-
Capital Leases	1,582	-	(444)	1,138
Gross Bonds, Loans, Note, and Leases Payable	851,904	-	(37,487)	814,417
Deferred Amounts:				
For Issuance Premiums	77,208	-	(7,719)	69,489
Net Bonds, Loans, Note, and Leases Payable	929,112	-	(45,206)	883,906

And adding short-term debt (Page 56)…

	Beginning Balance	Additions	Reductions	Ending Balance	Due Within One Year
Lincoln Electric System:					
Commercial Paper Notes	$ 65,500,000	294,750,000	(294,750,000)	65,500,000	65,500,000

Debt outstanding at the end of 2020 was $447,064 + $883,906 + $65,500 = **$1,396,470**

Sub-Factor 4b: Fixed-Costs Ratio

Input A: Implied debt service

From the prior-year debt burden, we calculate *implied* (not actual) debt service *based on a common interest rate and a 20-year amortization schedule*.

Common interest rate: For this calculation (done in November 2022), we will use **3.69568368%**, which is the average yield on the Bond Buyer 20-Bond Index from 2011 to 2020 (again, since we are calculating implied debt service for 2021, we are interested in the interest rate as of the end of 2020).

20-year amortization: Next we calculate the annual payment required to amortize the city's 2020 debt of **$1,396,470** (Slide 62) over 20 years. The formula for this level-payment amortization is

$1,396,470/((1-(1/(1.0369568368)^20))/0.0369568368) = **$100,005**

A = $100,005

Sub-Factor 4b: Fixed-Costs Ratio

Input B: Pension tread water indicator

Next is the pension tread water indicator, which represents our estimate of the pension contribution necessary to prevent reported unfunded pension liabilities from growing, year over year, in nominal dollars, if all actuarial assumptions are met. This calculation uses four pieces of information: 1) reported net pension liability, 2) reported discount rate, 4) service cost, and 4) employee contributions.

Because we are calculating fixed costs for 2021, we will calculate the pension tread water indicator on the city's net pension liability ***at the end of 2020***. Just as we did for 2021 on Slide 54, we consult the city's 2020 financial report (Page 67) to gather the city's net pension liability ($75,894,676) and reported discount rate (7.40%) at the end of 2020. Then we consult the city's 2021 financial report(Page 68) to gather the city's service cost ($7,853,350) and employee contributions ($3,706,959) for 2021.

	1% Decrease 6.40%	Current Discount Rate 7.40%	1% Increase 8.40%
Total Pension Liability	$ 385,509,440	343,087,750	307,688,623
Fiduciary Net Position	267,193,074	267,193,074	267,193,074
Net Pension Liability	$ 118,316,366	75,894,676	40,495,549

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at August 31, 2020	$ 343,087,750	267,193,074	75,894,676
Changes for the year:			
Service cost at end of year	7,853,350	-	7,853,350
Interest on TPL	24,697,386	-	24,697,386
Difference between expected and actual experience	(45,165)	-	(45,165)
Assumption changes	1,998,466	-	1,998,466
Employer contributions	-	9,988,807	(9,988,807)
Employee contributions	-	3,706,959	(3,706,959)
Net investment income	-	57,584,162	(57,584,162)
Benefit payments, including member refunds	(19,017,968)	(19,017,968)	-
Administrative expenses	-	(549,560)	549,560
Net changes	15,486,069	51,712,400	(36,226,331)
Balances at August 31, 2021	$ 358,573,819	318,905,474	39,668,345

Sub-Factor 4b: Fixed-Costs Ratio

Input B: Pension tread water indicator

Variable	Value (from Slide 67)
Net pension liability (2020)	$75,894,676
Reported discount rate (2020)	7.40%
Service cost (2021)	$7,853,350
Employee contributions (2021)	$3,706,959

Armed with these four pieces of information, we can calculate the tread water indicator as follows:

Reported net pension liability (2020) * reported discount rate (2020) + service cost (2021) – employee contributions (2021) =

$75,894,676 * .074 + $7,853,350 - $3,706,959 = **$9,762,597**

B = $9,763

Sub-Factor 4b: Fixed-Costs Ratio

Input C: OPEB contribution

This unadjusted number is the city's actual OPEB contribution for the year.

Deferred Outflows and Inflows of Resources

Deferred Outflows of Resources
As of August 31, 2021

Benefit payments subsequent to the measurement date	$	880,503
Differences between expected and actual experience		230,793
Changes of assumptions		5,971,747
Total	$	7,083,043

(Because Lincoln's OPEB plan valuation date is 8/31/2020, its actual contributions for 2021 are treated as a deferred outflow.)

C = $881

Sub-Factor 4b: Fixed-Costs Ratio

Input D: Implied carrying costs for other long-term liabilities

Here we calculate the city's implied cost of carrying other long-term liabilities, in a matter analogous to our implied debt service calculation. We start by calculating other long-term liabilities for 2020 from Page 60 of the city's 2020 financial report.

	Beginning Balance	Additions	Reductions	Ending Balance
Governmental Activities:				
Bond, Notes, and Leases Payable:				
General Bonds	$ 40,685	4,140	(11,280)	33,545
Tax Allocation Bonds	3,009	-	(608)	2,401
Tax Supported Bonds	47,290	21,765	(25,280)	43,775
Special Assessment Debt with Government Commitment	2,765	-	(190)	2,575
West Haymarket Joint Public Agency Bonds	325,400	100,000	(100,605)	324,795
Note from Direct Borrowing	2,112	-	(127)	1,985
Capital Leases	35,433	-	(5,574)	29,859
Gross Bonds and Leases Payable	456,694	125,905	(143,664)	438,935
Deferred Amounts:				
For Issuance Premiums	13,895	2,314	(7,092)	9,117
For Issuance Discounts	(988)	-	-	(988)
Net Bonds, Notes, and Leases Payable	469,601	128,219	(150,756)	447,064
Other Liabilities:				
Compensated Absences	25,158	12,666	(9,950)	27,874
Construction Contracts	-	1,032	(281)	751
Claims and Judgements	10,107	37,350	(36,187)	11,270
Net Pension Liability	74,070	-	(2,848)	71,222
Total OPEB Liability	15,966	2,005	-	17,971
Governmental Activities Long-Term Liabilities	$ 594,902	181,272	(200,022)	576,152

Business-Type Activities:				
Bonds, Loans, Note, and Leases Payable:				
Wastewater Revenue Bonds	$ 70,540	-	(4,485)	66,055
Wastewater Loans from Direct Borrowing	18,510	-	(1,182)	17,328
Water Revenue Bonds	28,550	-	(4,020)	24,530
Water Loan from Direct Borrowing	11,657	-	(661)	10,996
Electric System Revenue Bonds	662,795	-	(22,750)	640,045
Parking Revenue Bonds	48,375	-	(2,315)	46,060
Solid Waste Management Revenue Bonds	9,095	-	(830)	8,265
Pinnacle Bank Arena Note from Direct Borrowing	800	-	(800)	-
Capital Leases	1,582	-	(444)	1,138
Gross Bonds, Loans, Note, and Leases Payable	851,904	-	(37,487)	814,417
Deferred Amounts:				
For Issuance Premiums	77,208	-	(7,719)	69,489
Net Bonds, Loans, Note, and Leases Payable	929,112	-	(45,206)	883,906
Other Liabilities:				
Compensated Absences	3,509	1,941	(1,595)	3,855
Construction Contracts	7,386	6,771	(7,386)	6,771
Note Purchase Agreement	1,500	-	-	1,500
Developer Performance Deposits	646	250	-	896
Claims and Judgements	588	34	-	622
Net Pension Liability	4,744	-	(71)	4,673
Total OPEB Liability	1,927	181	-	2,108
Accrued Landfill Closure/Postclosure Care Costs	24,087	1,030	-	25,117
Asset Retirement Obligation	3,256	132	(14)	3,374
Business-Type Activities Long-Term Liabilities	$ 976,755	10,339	(54,272)	932,822

$27,874 + $751 + $11,270 + $3,855 + $6,771 + $1,500 + $896 + $622 + $25,117 + $3,374= **$82,030**

Sub-Factor 4b: Fixed-Costs Ratio

Input D: Implied carrying costs for other long-term liabilities

Now we calculate an implied carrying cost of these liabilities the same we way calculated implied debt service for 2020 debt on Slide 63. From the prior-year other long-term liabilities, we calculate an implied carrying cost based on a common interest rate and a 20-year amortization schedule.

Common interest rate: For this calculation (done in November 2022), we will use **3.69568368%**, which is the average yield on the Bond Buyer 20-Bond Index from 2011 to 2020.

20-year amortization: Next we calculate the annual payment required to amortize the city's 2020 other long-term liabilities of **$82,030** (Slide 67) over 20 years. The formula for this level-payment amortization is

$82,030 / ((1-[1/(1.0369568368)^20])/ 0.0369568368) = **$5,874**

D = $5,874

Sub-Factor 4b: Fixed-Costs Ratio

Input E: Total revenue

We showed this calculation on Slide 39 and Slide 40.

$$E = \$874{,}027$$

We now have all the elements we need to calculate this ratio:

$$\frac{(A + B + C + D)}{E} = \text{FIXED-COSTS RATIO}$$

Or ...

$$\frac{(\$100{,}005 + \$9{,}763 + \$881 + \$5{,}874)}{(\$874{,}027)} = \mathbf{13.3\%}$$

Value for Sub-Factor 4b: 13.3%

Note: *See the methodology for how this sub-factor value is mapped to a numeric score.*

Notching Factors

Notching Factors

The scorecard sub-factors described so far produce a Preliminary Outcome, after which we evaluate 5 notching factors for additional potential notching to produce a Scorecard-Indicated Outcome.

Notching Factor	Notching Range
Additional Strength In Local Resources	0 to +2
Limited Scale Of Operations	-1 to 0
Financial Disclosures	-2 to 0
Potential Cost Shift To Or From The State	-1 to +1
Potential For Significant Change In Leverage	-2 to +1.5

First Notching Factor:

Additional Strength in Local Resources

We apply up to 2 upward notches for certain exceptionally strong Economy sub-factor scores:

Sub-Factor	Plus 0.5 Notches	Plus 1.0 Notch
Adjusted MHI	200% to 250%	>250%
Full value per capita	$400,000 to $800,000	>$800,000

We can see the notching effect of these factors on Lincoln by looking at its:

- Sub-factor 1a (MHI: 98.5%), and
- Sub-factor 1b (Full Value Per Capita: $83,801)

Factor	Sub-Factor	Value	
Economy	Resident Income	98.5%	< 200% = +0 notches
	Full Value per Capita	$83,801	< $400,000 = +0 notches

Notching Effect = None

Second Notching Factor:

Limited Scale of Operations

We apply up to 1 downward notch for small scale, as measured by operating revenue:

Sub-Factor	Minus 0.5 Notches	Minus 1.0 Notch
Operating Revenue	$4 million to $8 million	< $4 million

On Slide 40, we calculated Lincoln's total revenue at $**874,027**, which results in no notching adjustment for this factor.

Notching Effect = None

Third Notching Factor:

Financial Disclosures

We apply up to 2 downward notches for various reporting weaknesses:

Deficiency	Notching Effect
Missing non-cash assets and liabilities	Minus 1 notch
Non-GASB compliant reporting for pension liabilities and costs	Minus 1 notch
Incomplete disclosure for OPEB liabilities and contributions	Minus 1 notch
No gross capital asset value on balance sheet or depreciation	Minus 0.5 notches

(Note that downward notching for this factor is is capped at 2 notches even though the individual components of the factor sum to more than 2.)

Each of these can be found in Lincoln's GASB-compliant financial report …

Pension and OPEB reporting

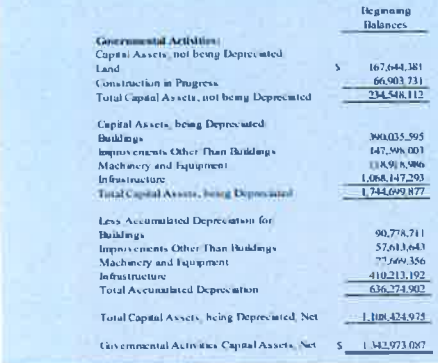
(clean auditor's opinion confirms compliance)

Opinions

In our opinion, based on our audit and the report of other auditors, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, each major fund and the aggregate remaining fund information of the City of Lincoln, Nebraska, as of August 31, 2021, and the respective changes in financial position and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

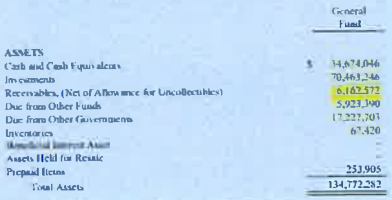
Gross Capital Assets

(presented on Statement of Net Position)



	Beginning Balances
Governmental Activities:	
Capital Assets, not being Depreciated:	
Land	$ 167,644,381
Construction in Progress	66,903,731
Total Capital Assets, not being Depreciated	234,548,112
Capital Assets, being Depreciated:	
Buildings	360,035,595
Improvements Other Than Buildings	147,998,003
Machinery and Equipment	138,918,986
Infrastructure	1,088,147,293
Total Capital Assets, being Depreciated	1,744,099,877
Less Accumulated Depreciation for:	
Buildings	90,778,711
Improvements Other Than Buildings	57,613,643
Machinery and Equipment	77,669,356
Infrastructure	410,213,192
Total Accumulated Depreciation	636,274,902
Total Capital Assets, being Depreciated, Net	1,108,424,975
Governmental Activities Capital Assets, Net	$ 1,342,973,087

Accruals on Balance Sheet (not cash-basis)



	General Fund
ASSETS	
Cash and Cash Equivalents	$ 34,674,046
Investments	70,463,246
Receivables, (Net of Allowance for Uncollectibles)	6,162,572
Due from Other Funds	5,923,390
Due from Other Governments	17,227,703
Inventories	67,420
Beneficial Interest Asset	-
Assets Held for Resale	-
Prepaid Items	253,905
Total Assets	134,772,283

Notching Effect = None

Fourth Notching Factor:

Potential Cost Shift to or from the State

- We apply up to 1 downward or upward notch for the likelihood of a state shifting material costs toward or away from cities or counties, considering the state's budgetary position, spending priorities and political incentives.
- This is typically a statewide assessment, unless a potential state action affects only a subset of cities or counties. We typically assess this once a year.
- Like Institutional Framework, this is a qualitative assessment, and you can see our latest assessments in our report 2022 scorecard inputs for general obligation and K-12 school district methodologies.

No cities/counties currently get this adjustment. All adjustments for a potential cost shift to or from the state are applied K-12 school districts.

State	Sector	Notching Factor	Notch
Illinois	School districts	Potential cost shift to or from the state	-1.0
Kentucky	School districts	Potential cost shift to or from the state	-0.5
South Carolina	School districts	Potential cost shift to or from the state	+0.5

Notching Effect = None

Fifth Notching Factor:

Potential for Significant Change in Leverage

We apply notching for various factors that may indicate a change in leverage going forward. The maximum notching that can result from these factors is 1.5 notches up or 2 notches down.

	Level of Notching						
	+1	+0.5	0	-0.5	-1.0	-1.5	-2.0
Notching Metric							
Pension Asset Shock Indicator (PASI)	n/a	n/a	< 18%	18% - 23%	≥ 23%	n/a	n/a
Pension Tread Water Gap	n/a	n/a	< 5%	5% - 10%	10% - 15%	15% - 20%	≥ 20%
Defined Contribution Plan	Yes	n/a	n/a	n/a	n/a	n/a	n/a
Capital Asset Depreciation Ratio	n/a	< 25%	25% - 65%	≥ 65%	n/a	n/a	n/a
						Sub-Total Before Cap	+1.5 to -3.5
						Total Factor Notching	+1.5 to -2

Fifth Notching Factor:

Pension Asset Shock Indicator

Pension Asset Shock Indicator. This estimates the likelihood that a city/county's pension assets would experience investment losses in one year that amount to 25% of more of revenue.

If a city/county has a PASI of 18%-23%, we notch downward by one-half notch. If a city/county has a PASI of 23% or higher, we apply one downward notch.

We calculate this using Moody's "Adjustments to Pension and OPEB Data Reported by GASB Issuers, Including US States and Local Governments Methodology," available here.

The PASI is primarily influenced by two factors:

1) The scale of pension assets (based on their size relative to revenues)

2) The riskiness of pension investing (based on the volatility implied by the target return)

Fifth Notching Factor:

Pension Asset Shock Indicator

The PASI calculation requires the following inputs:

- Pension assets: $318,905 (Page 67 of the 2021 financial report)
- Total Revenue: $874,027 (Slide 40)
- Target return: 7.35% (Page 67 of the 2021 financial report)
- Standard deviation of returns based on target return: 15.3% (see here for our data report Risk-Return Maps, which presents our estimates of the minimum expected return volatility that can be attained through investment diversification, based on a set of capital markets assumptions; 15.3% is the expected volatility in 2021 corresponding to the city's expected return of 7.35%)

From these we derive:

A) 25% of revenues ($874,027 * .25) = $218,507

B) 25% of revenues as a % of pension assets ($218,507 / $318,905 = 68.5%)

Fifth Notching Factor:

Pension Asset Shock Indicator

We now have all we need to answer the question: What is the probability of a 1-year pension investment loss equal to at least 25% of Lincoln's revenues?

Lincoln has pension assets of $318,905 and would have to record a loss of at least 68.5% for pension losses to be at least equal to 25% of revenues. Given an expected return of 7.35% and a standard deviation of 15.3%, such an event is 5 standard deviations away from the expected mean.

The calculation of the probability for this outcome looks like this in Excel:

=Norm.dist(-68.5,7.35,15.3, TRUE) = 0.00

Probability of a pension asset shock at least equal to 25% of revenues = 0.00 (this rounds down from a minuscule likelihood). As this is below the threshold for notching (Slide 76), this does not result in a downward notch.

Notching Effect = None

Fifth Notching Factor:

Pension Tread Water Gap

The Pension Tread Water Gap is the difference between Lincoln's actual pension contribution (shown below-left, from Page 68 of the 2021 financial report) and its Pension Tread Water Indicator (Slide 65), expressed as a percentage of operating revenue (Slide 40). The formula is shown below-right.

(Note that the negative number is actually a Tread Water surplus, which leads to no notching per Slide 76.)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at August 31, 2020	$ 343,087,750	267,193,074	75,894,676
Changes for the year:			
Service cost at end of year	7,853,350	-	7,853,350
Interest on TPL	24,697,386	-	24,697,386
Difference between expected and actual experience	(45,165)	-	(45,165)
Assumption changes	1,998,466	-	1,998,466
Employer contributions	-	9,988,807	(9,988,807)
Employee contributions	-	3,706,959	(3,706,959)
Net investment income	-	57,584,162	(57,584,162)
Benefit payments, including member refunds	(19,017,968)	(19,017,968)	-
Administrative expenses	-	(549,560)	549,560
Net changes	15,486,069	51,712,400	(36,226,331)
Balances at August 31, 2021	$ 358,573,819	318,905,474	39,668,345

Contribution	$
Tread Water Indicator (Slide 65)	$9,763
Actual Pension Contribution (2021 financial report)	$9,989
Tread Water Gap (Surplus)	($226)
Operating Revenue (Slide 40)	$874,027
Ratio	**(0.03%)**

(Note that the negative number is actually a Tread Water surplus, which leads to no notching per Slide 76.)

Notching Effect = None

Fifth Notching Factor:

Defined Contribution Plan

If a city/county does not have a defined benefit plan and instead has a defined contribution or similar plan, we apply one upward notch to reflect the lack of exposure to pension risk.

Since Lincoln's pension plan is a defined benefit plan, it does not receive this upward notch.

POLICE AND FIRE PENSION

Plan Description – PFP is a single-employer defined benefit pension plan administered by the City of Lincoln for all commissioned police and firefighters. PFP provides retirement, disability, and death benefits to plan members and beneficiaries. The City does not issue a separate report that includes financial statements and required supplementary information for PFP.

Notching Effect = None

Fifth Notching Factor:

Capital Asset Depreciation Ratio

This is the ratio of accumulated depreciation (highlighted in yellow) to gross depreciable assets (highlighted in blue) for both governmental and business-type activities. These can be found on Page 52 of the city's 2021 financial report.

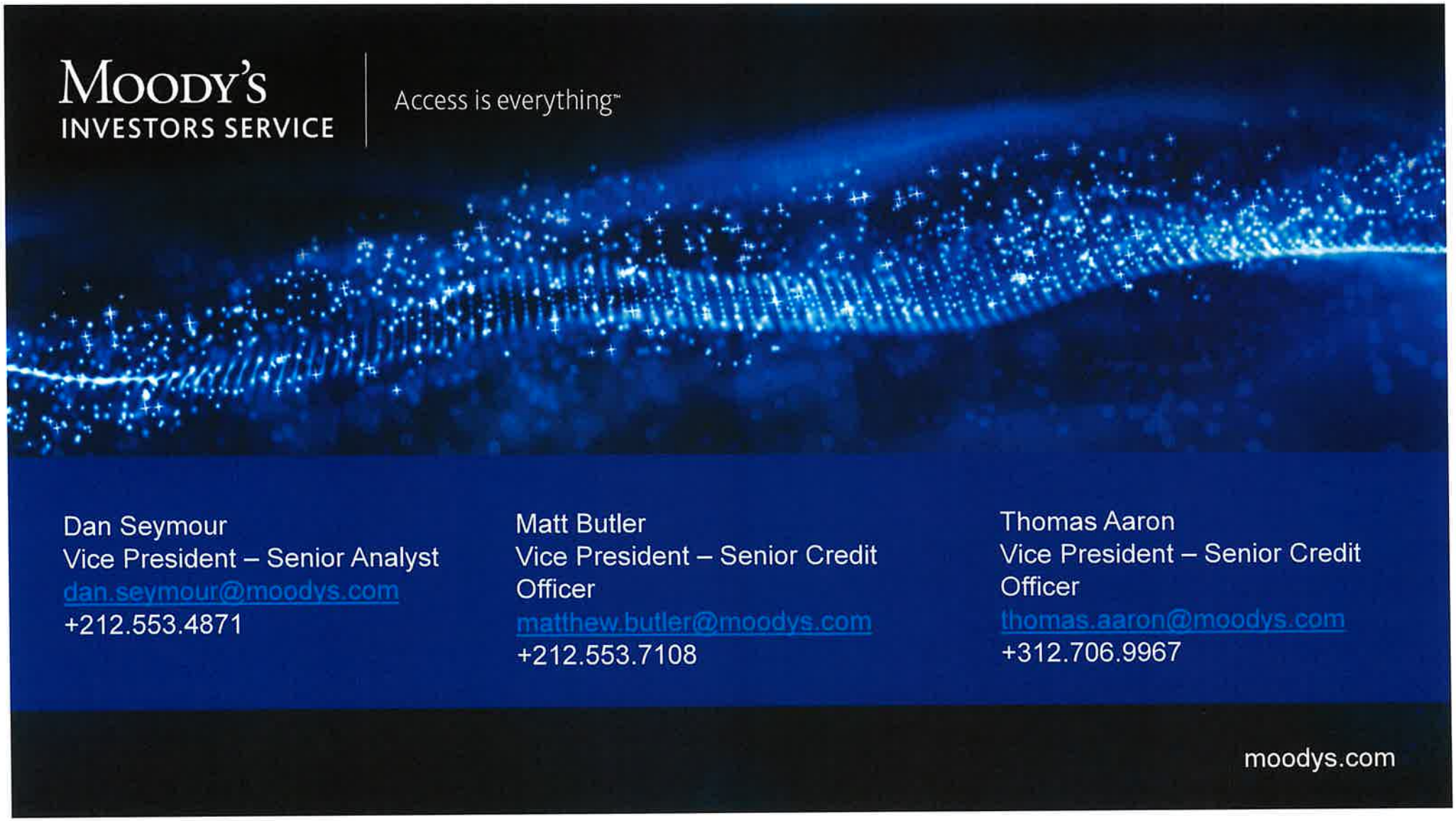
	Beginning Balances	Increases	Decreases	Transfers	Ending Balances
Governmental Activities:					
Capital Assets, not being Depreciated:					
Land	$ 167,644,381	2,179,438	44,922	-	169,778,897
Construction in Progress	66,903,731	24,779,266	8,809,604	(2,895,552)	79,977,841
Total Capital Assets, not being Depreciated	234,548,112	26,958,704	8,854,526	(2,895,552)	249,756,738
Capital Assets, being Depreciated:					
Buildings	390,035,595	4,225,111	-	-	394,260,706
Improvements Other Than Buildings	147,598,003	3,716,392	25,000	-	151,289,395
Machinery and Equipment	138,918,986	13,093,041	5,146,505	-	146,865,522
Infrastructure	1,068,147,293	21,715,075	6,147	-	1,089,856,221
Total Capital Assets, being Depreciated	1,744,699,877	42,749,619	5,177,652	-	1,782,271,844
Less Accumulated Depreciation for:					
Buildings	90,778,711	9,123,077	-	-	99,901,788
Improvements Other Than Buildings	57,613,643	4,550,379	25,000	-	62,139,022
Machinery and Equipment	77,669,356	9,407,271	4,918,677	-	82,157,950
Infrastructure	410,213,192	29,788,028	5,854	-	439,995,366
Total Accumulated Depreciation	636,274,902	52,868,755	4,949,531	-	684,194,126

	Beginning Balances	Increases	Decreases	Transfers	Ending Balances
Business-type Activities:					
Capital Assets, not being Depreciated:					
Land	$ 33,658,567	77,027	-	-	33,735,594
Construction in Progress	126,610,772	111,965,491	79,485,821	-	159,090,442
Total Capital Assets, not being Depreciated	160,269,339	112,042,518	79,485,821	-	192,826,036
Capital Assets, being Depreciated:					
Buildings	251,025,221	3,864,929	-	-	254,890,150
Improvements Other Than Buildings	874,710,383	35,565,178	5,408,832	2,895,552	907,762,281
Machinery and Equipment	69,380,362	3,766,282	758,110	-	72,388,534
Utility Plant	1,683,877,000	43,817,000	5,250,000	-	1,722,444,000
Total Capital Assets, being Depreciated	2,878,992,966	87,013,389	11,416,942	2,895,552	2,957,484,965
Less Accumulated Depreciation for:					
Buildings	111,336,097	5,508,151	-	-	116,844,248
Improvements Other Than Buildings	285,081,190	16,222,662	120,194	-	301,183,658
Machinery and Equipment	44,881,746	3,536,345	698,815	-	47,719,276
Utility Plant	825,789,000	39,883,000	7,528,000	-	858,144,000
Total Accumulated Depreciation	1,267,088,033	65,150,158	8,347,009	-	1,323,891,182

Item	Fiscal 2021
Accumulated Depreciation	$684,194,126 + $1,323,891,182
Gross Depreciable Assets	$1,782,271,844 + $2,957,484,965
Capital Asset Depreciation Ratio	**42.4%**

(This ratio leads to no notching adjustments, per Slide 76.)

Notching Effect = None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BEST PRACTICES

Fund Balance Guidelines for the General Fund

Governments should establish a formal policy on the level of unrestricted fund balance that should be maintained in the general fund for GAAP and budgetary purposes.

In the context of financial reporting, the term *fund balance* is used to describe the net position of governmental funds calculated in accordance with generally accepted accounting principles (GAAP). Budget professionals commonly use this same term to describe the net position of governmental funds calculated on a government's budgetary basis.1 While in both cases *fund balance* is intended to serve as a measure of the financial resources available in a governmental fund; it is essential that differences between GAAP *fund balance* and budgetary *fund balance* be fully appreciated.

1. GAAP financial statements report up to five separate categories of fund balance based on the type and source of constraints placed on how resources can be spent (presented in descending order from most constraining to least constraining): *nonspendable fund balance*, *restricted fund balance*, *committed fund balance*, *assigned fund balance*, and *unassigned fund balance*.2 The total of the amounts in these last three categories (where the only constraint on spending, if any, is imposed by the government itself) is termed *unrestricted fund balance*. In contrast, budgetary fund balance, while it is subject to the same constraints on spending as GAAP fund balance, typically represents simply the total amount accumulated from prior years at a point in time.

2. The calculation of GAAP fund balance and budgetary fund balance sometimes is complicated by the use of sub-funds within the general fund. In such cases, GAAP fund balance includes amounts from all of the subfunds, whereas budgetary fund balance typically does not.

3. Often the timing of the recognition of revenues and expenditures is different for purposes of GAAP financial reporting and budgeting. For example, encumbrances arising from purchase orders often are recognized as expenditures for budgetary purposes, but never for the preparation of GAAP financial statements.

The effect of these and other differences on the amounts reported as *GAAP fund balance* and *budgetary fund balance* in the general fund should be clarified, understood, and documented.

It is essential that governments maintain adequate levels of fund balance to mitigate current and future risks (e.g., revenue shortfalls and unanticipated expenditures) and to ensure stable tax rates. In most cases, discussions of fund balance will properly focus on a government's general fund. Nonetheless, financial resources available in other funds should also be considered in assessing the adequacy of unrestricted fund balance in the general fund.

GFOA recommends that governments establish a formal policy on the level of unrestricted fund balance that should be maintained in the general fund for GAAP and budgetary purposes.3 Such a guideline should be set by the appropriate policy body and articulate a framework and process for how the government would increase or decrease the level of unrestricted fund balance over a specific time period.4In particular, governments should provide broad guidance in the policy for how resources will be directed to replenish fund balance should the balance fall below the level prescribed.

Appropriate Level. The adequacy of unrestricted fund balance in the general fund should take into account each government's own unique circumstances. For example, governments that may be vulnerable to natural disasters, more dependent on a volatile revenue source, or potentially subject to cuts in state aid and/or federal grants may need to maintain a higher level in the unrestricted fund balance. Articulating these risks in a fund balance policy makes

it easier to explain to stakeholders the rationale for a seemingly higher than normal level of fund balance that protects taxpayers and employees from unexpected changes in financial condition. Nevertheless, GFOA recommends, at a minimum, that general-purpose governments, regardless of size, maintain unrestricted budgetary fund balance in their general fund of no less than two months of regular general fund operating revenues or regular general fund operating expenditures.5 The choice of revenues or expenditures as a basis of comparison may be dictated by what is more predictable in a government's particular circumstances.6 Furthermore, a government's particular situation often may require a level of unrestricted fund balance in the general fund significantly in excess of this recommended minimum level. In any case, such measures should be applied within the context of long-term forecasting, thereby avoiding the risk of placing too much emphasis upon the level of unrestricted fund balance in the general fund at any one time. In establishing a policy governing the level of unrestricted fund balance in the general fund, a government should consider a variety of factors, including:

1. The predictability of its revenues and the volatility of its expenditures (i.e., higher levels of unrestricted fund balance may be needed if significant revenue sources are subject to unpredictable fluctuations or if operating expenditures are highly volatile);

2. Its perceived exposure to significant one-time outlays (e.g., disasters, immediate capital needs, state budget cuts);

3. The potential drain upon general fund resources from other funds, as well as, the availability of resources in other funds;

4. The potential impact on the entity's bond ratings and the corresponding increased cost of borrowed funds;

5. Commitments and assignments (i.e., governments may wish to maintain higher levels of unrestricted fund balance to compensate for any portion of unrestricted fund balance already committed or assigned by the government for a specific purpose). Governments may deem it appropriate to exclude from consideration resources that have been committed or assigned to some other purpose and focus on unassigned fund balance, rather than on unrestricted fund balance.

Use and Replenishment.

The fund balance policy should define conditions warranting its use, and if a fund balance falls below the government's policy level, a solid plan to replenish it. In that context, the fund balance policy should:

1. Define the time period within which and contingencies for which fund balances will be used;
2. Describe how the government's expenditure and/or revenue levels will be adjusted to match any new economic realities that are behind the use of fund balance as a financing bridge;
3. Describe the time period over which the components of fund balance will be replenished and the means by which they will be replenished.

Generally, governments should seek to replenish their fund balances within one to three years of use. Specifically, factors influencing the replenishment time horizon include:

1. The budgetary reasons behind the fund balance targets;
2. Recovering from an extreme event;
3. Political continuity;
4. Financial planning time horizons;
5. Long-term forecasts and economic conditions;
6. External financing expectations.

Revenue sources that would typically be looked to for replenishment of a fund balance include nonrecurring revenues, budget surpluses, and excess resources in other funds (if legally permissible and there is a defensible rationale). Year-end surpluses are an appropriate source for replenishing fund balance.

Unrestricted Fund Balance Above Formal Policy Requirement. In some cases, governments can find themselves in a position with an amount of unrestricted fund balance in the general

fund over their formal policy reserve requirement even after taking into account potential financial risks in the foreseeable future. Amounts over the formal policy may reflect a structural trend, in which case governments should consider a policy as to how this would be addressed. Additionally, an education or communication strategy, or at a minimum, explanation of large changes in fund balance is encouraged. In all cases, use of those funds should be prohibited as a funding source for ongoing recurring expenditures.

Notes:

1. For the sake of clarity, this recommended practice uses the terms GAAP fund balance and budgetary fund balance to distinguish these two different uses of the same term.

2. These categories are set forth in Governmental Accounting Standards Board (GASB) Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions.*

3. Sometimes restricted fund balance includes resources available to finance items that typically would require the use of unrestricted fund balance (e.g., a contingency reserve). In that case, such amounts should be included as part of unrestricted fund balance for purposes of analysis.

4. See Recommended Practice 4.1 of the National Advisory Council on State and Local Budgeting governments on the need to "maintain a prudent level of financial resources to protect against reducing service levels or raising taxes and fees because of temporary revenue shortfalls or unpredicted one-time expenditures" (Recommended Practice 4.1).

5. In practice, a level of unrestricted fund balance significantly lower than the recommended minimum may be appropriate for states and America's largest governments (e.g., cities, counties, and school districts) because they often are in a better position to predict contingencies (for the same reason that an insurance company can more readily predict the number of accidents for a pool of 500,000 drivers than for a pool of fifty), and because their revenues and expenditures often are more diversified and thus potentially less subject to volatility.

6. In either case, unusual items that would distort trends (e.g., one-time revenues and expenditures) should be excluded, whereas recurring transfers should be included. Once the decision has been made to compare unrestricted fund balance to either revenues and/or expenditures, that decision should be followed consistently from period to period.

This best practice was previously titled Appropriate Level of Unrestricted Fund Balance in the General Fund.

Board approval date: Wednesday, September 30, 2015

DRAFT

Weston Board of Finance

Fund Balance Policy Sub-Committee

Special Meeting

October 7, 7:00PM

Meeting Held Remotely

BOF Chairman called the meeting to order at 7:00pm. Also attending were BOF subcommittee members Theresa Brasco and Amy Gare.

1. **Discussion on Sub-Committee objectives and work products.** Mr. Imber discussed that TOW has an existing Fund Balance Policy from 2011. Key element highlights of the existing policy were reviewed for balances in the General Fund, unrestricted fund balances, and budget surplus. The goal is to maintain an unassigned fund balance to maintain AAA ratings. Tasks for the subcommittee will be to revisit, update, evaluate elements and update the policy as the final goal. Transparency for revisiting the policy will be used, using best practices for Moody's rating, benchmarks and policies from other comparable towns will all be evaluated.

2. **Discussion on information diligence**
   a. Type of information – fund balance policies from comparative towns (towns in CT, AAA towns, size should be comparable, coordinate with Debt Management subcommittee comp towns, towns that have issued similar debt etc). Review historical data.
   b. Sources for information – Mark Chapman, Munistat Services, Inc, Karl Kilduff, Town Administrator, Government Finance Officers Association (GFOA), Moody's, Connecticut Conference of Municipalities (CCM) in coordination with Karl Kilduff.
   c. Research responsibility assignments – Ms. Gare will be responsible for coordinating inviting experts to subcommittee meetings. Ms. Brasco will be responsible for identifying benchmark towns for subcommittee to consider in coordination with debt management team as well as charter provisions review/recommendation. Mr. Imber will be responsible for researching GFOA, Moody's, CCM with Town Administrator.
   d. Deadlines for research
      3-4 weeks.

3. **Use of Board of Finance Group Outlook Resources**
   a. Files: Sub-committee folders. Online resource/folders for BOF subcommittee to use for work products. All work to be marked as draft. Research material for future reference at meetings will be added to folders as well as posted for public back up with agenda for future meetings.

4. **Discussion on use of available experts**. Mark Chapman, Munistat Services Inc., Karl Kilduff, Town Administrator, Rick Darling, Finance Director.

5. **Discuss tentative Agenda for next Special Meeting, and scheduling of future meetings.** Fund Balance subcommittee will meet every two weeks on Monday's at 7:30pm remotely. Meeting dates will be October 21, November 4, November 18, December 2 and tentatively December 9.
    - Preliminary agenda for October 21st
      -Mark Chapman, Munistat Services. Q&A Fund Balance, Benchmark towns
      -Moody's Scorecard
      -GFOA best practices
      -Approval of 10/7 Special Fund Balance Subcommittee meeting
      -Agenda for 11/4/24 Special Special Subcommittee meeting

6. **Adjourn.** Mr. Imber asked for a motion to adjourn. Motion made by Ms. Gare, seconded by Mr. Brasco. Motion adjourned at 7:46 pm.

Respectfully submitted,
Shawn Amato, Recording Secretary