Ratings and Credit Conditions Update

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Tennessee GFOA September 27, 2023



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Agenda

- S&P Ratings and the Rating Process
- U.S Public Finance Outlook
- Credit Conditions Update
- Tennessee Local Governments Credit Comparison





Ratings Overview



Understanding S&P Global's Ratings

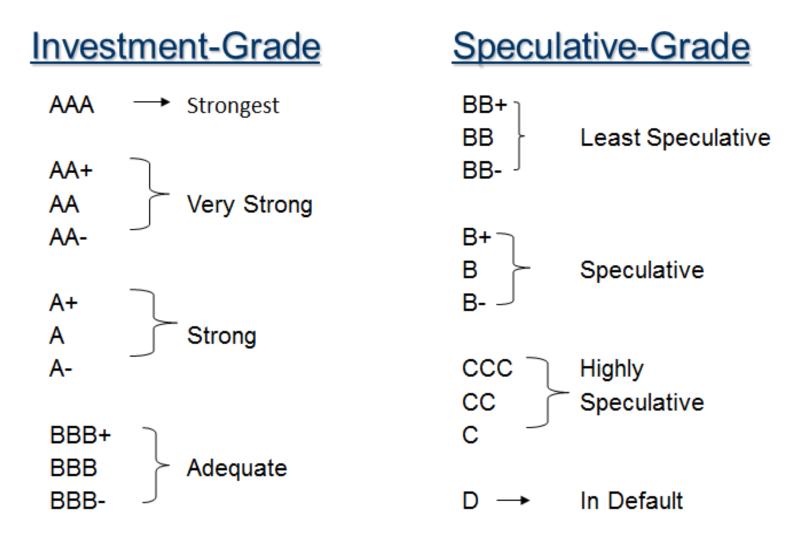
- An issuer's *ability* and *willingness* to pay debt in a *timely* manner
- Credit ratings are forward looking
- S&P Global ratings are opinions, not guarantees of credit quality or exact measures of the probability that a particular issuer or particular debt issue will default
- The Ratings scale is relative and based on the creditworthiness of an issuer or credit quality of an individual debt issue, from strongest to weakest, within a universe of credit risk
- Criteria provide the analytic framework to derive the rating opinion



Ratings 101 | S&P Global's Ratings Scale

S&P Global

Ratings



Short-term U.S. Public Finance note ratings: SP-1+, SP-1, SP-2 & SP-3

Ratings 101 | Outlooks and CreditWatch

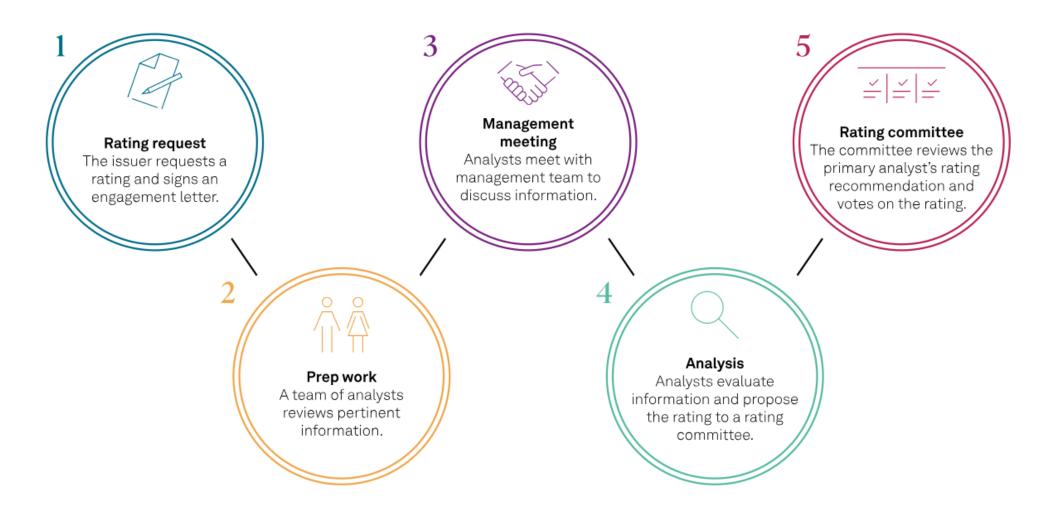
<u>Outlooks</u>

- Potential rating change within 1 to 2 years
- At least 1-in-3 likelihood of rating action
- Outlooks can be:
 - Stable
 - Positive
 - Negative
 - Developing

<u>CreditWatch</u>

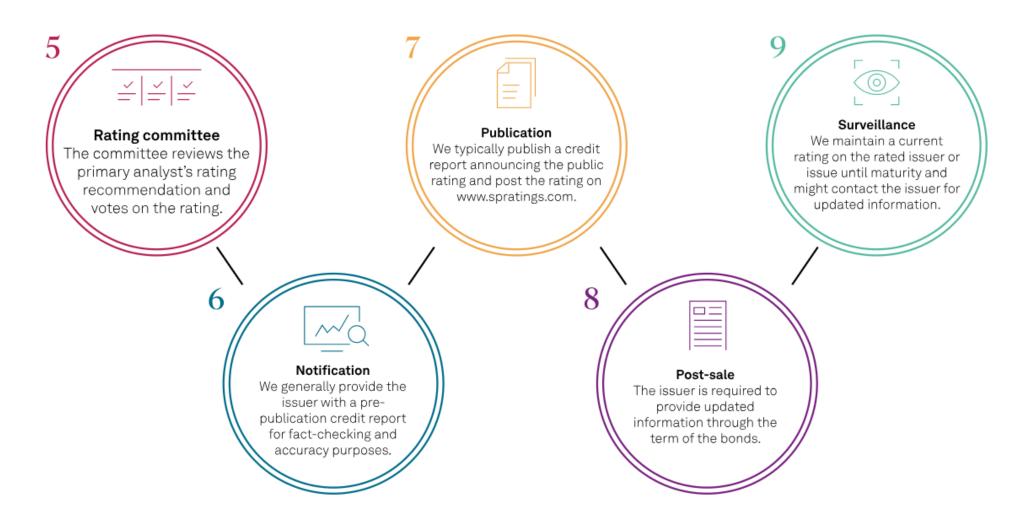
- Potential rating change within 60 to 90 days
- At least 1-in-2 likelihood of rating action
- CreditWatch can be:
 - Positive
 - Negative
 - Developing

S&P Global Ratings' process to committee



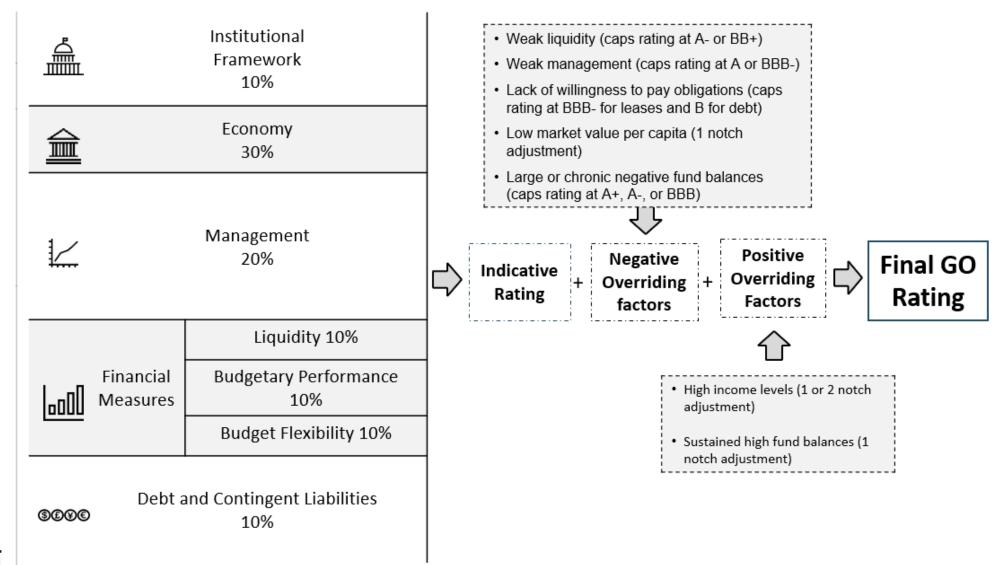
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S&P Global Ratings' process post-committee



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Analytical Framework For Local Government GO Ratings



U.S. Public Finance Outlook



U.S. Public Finance Ratings Landscape

By the Numbers:

- Ratings on 24,130 U.S. government institutions:
- 340 Charter Schools (<u>modal rating</u>: speculative grade)
- 543 Higher educations entities (A+)
- 486 Not-for-profit healthcare entities (A)
- 485 Housing entities (AA+)
- 17,817 Local governments and special districts (A+)
- 375 Public power utilities and co-ops (A)
- 2,085 water/sewer and sanitation utilities (A+)
- 309 Transportation entities (A)
- 50 States (AAA)

Tennessee Credit Coverage

- State of Tennessee (AAA/stable)
- Tennessee Valley Authority (AA+/stable)
- 61 Counties
- 78 Municipalities
- 11 Special School Districts
- 9 Healthcare facilities or systems
- 12 Higher education institutions
- 4 Housing Authorities
- 2 Airports
- 108 utility systems

USPF 2023 Midyear Outlook

What we're watching

- Higher interest rates and inflation continue to be headwinds
- Summer storm and fire season heightens the possibility of catastrophic events

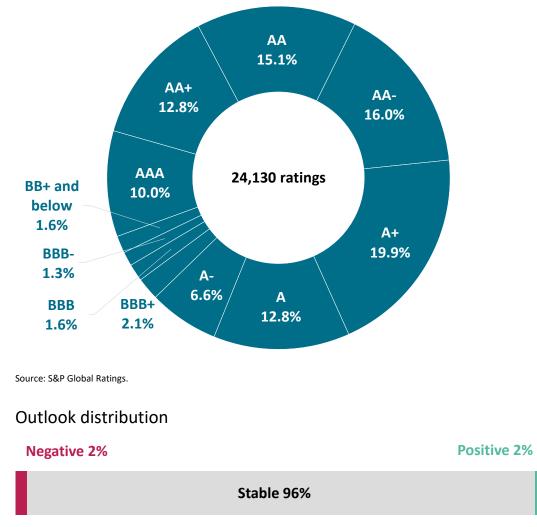
Trends

- Credit conditions have been largely stable, and upgrades have exceeded downgrades this year for most sectors
- The U.S. economy has been resilient
- Federal stimulus and healthy financial reserves continue to provide significant flexibility

Rest of year expectations

 Our baseline U.S. economic forecast is now for a shallower but more protracted slowdown rather than a recession; however, we don't expect this to disrupt credit stability for most issuers

U.S. Public Finance Ratings Distribution

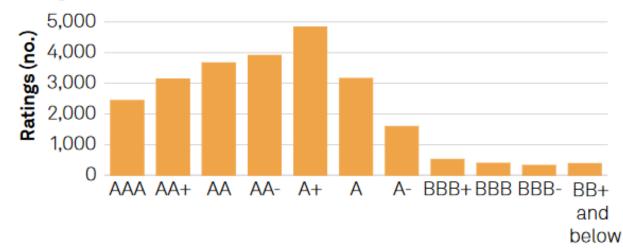


Source: S&P Global Ratings.

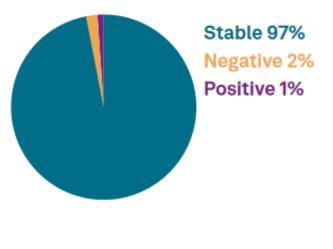
U.S. Public Finance at a Glance (rated issuers, all sectors)

	Rating changes	August 2023	2023 (no.)
	Upgrades	69	580
24,000+	Downgrades	14	170
Ratings 🙊	Outlook and CW changes		
	Favorable	39	204
	Unfavorable	31	358

Rating distribution



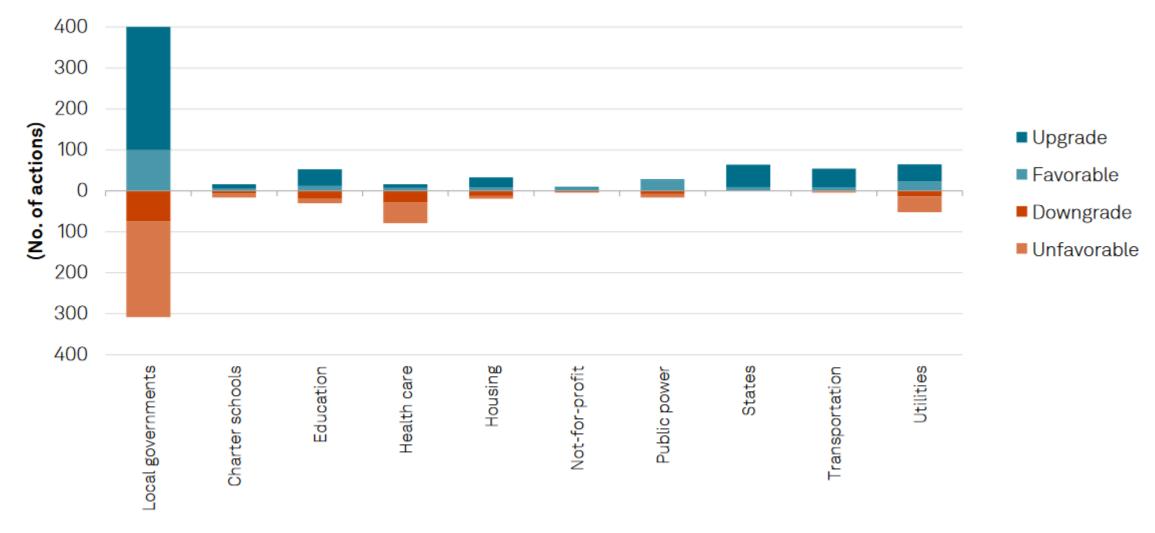
Outlook distribution





Upgrades continue to outpace downgrades year to date, except in the healthcare sector

USPF rating actions by sector YTD 2023



Source: S&P Global Ratings.

U.S. Local Governments | What We're Watching



Rates

With rising interest rates, issuance remains down, but unspent federal stimulus can help fill the gap for funding capital in the next few years.

\sim

Inflation

Higher cost of capital and supplies raise project costs, potentially limiting what can get done; any softness in revenue growth squeezes margins further, particularly in a high-wage environment.



Unemployment

Low unemployment rates and high demand for skilled labor continue to create difficulties for many issuers across public finance. Expectations for ongoing low unemployment rates don't foretell a respite from the labor shortages.



Commercial real estate

Softness in downtown real estate markets has not resulted in credit deterioration but bears watching, especially if office vacancy rates remain high and there is limited ability to raise property tax rates.



ARPA spending

With 18 months left to designate the use of ARPA, greater use of federal stimulus for programs rather than for capital projects could signal budgetary challenges. This source of ready money could be reprogrammed by U.S. issuers seeing revenue softness.

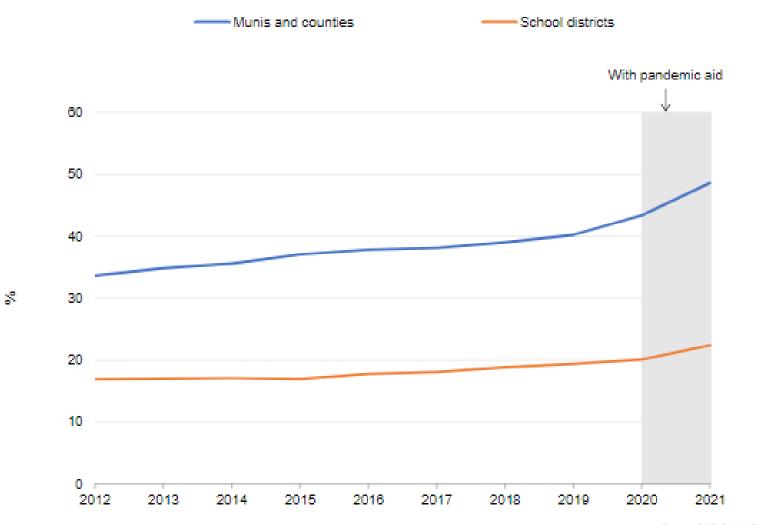


Federal budget

In addition to changes made as part of the debt ceiling deal, contentious budget negotiations later in 2023 will increase the likelihood of cuts to programs and entitlements in the U.S., which can flow through to state and local government budgets.

U.S. Local Governments | Reserve Trends

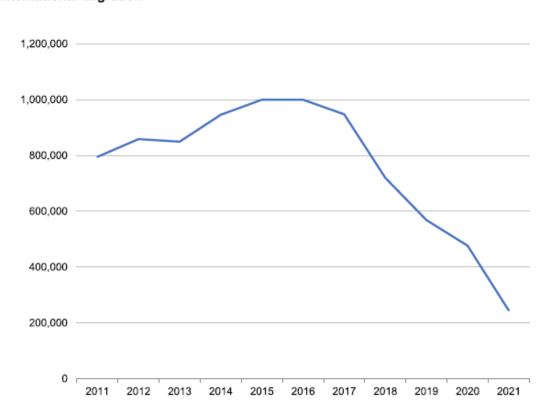
Unassigned General Fund Balance as Share of General Fund Expenditures



S&P Global Ratings

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Workforce Challenges | Demographics/Migration

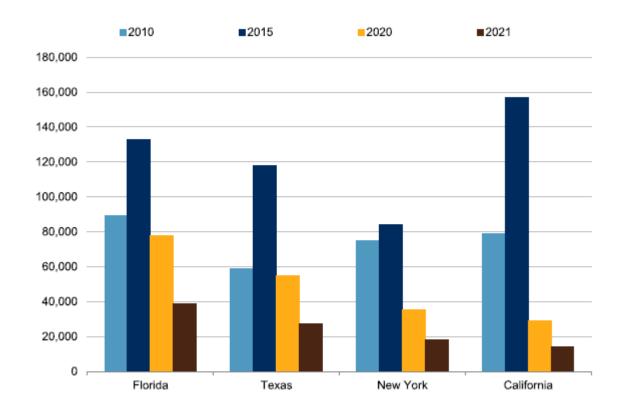


Net International Migration



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Net International Migration To Select High-Immigration States



Source: U.S. Census Bureau

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Credit Conditions Update



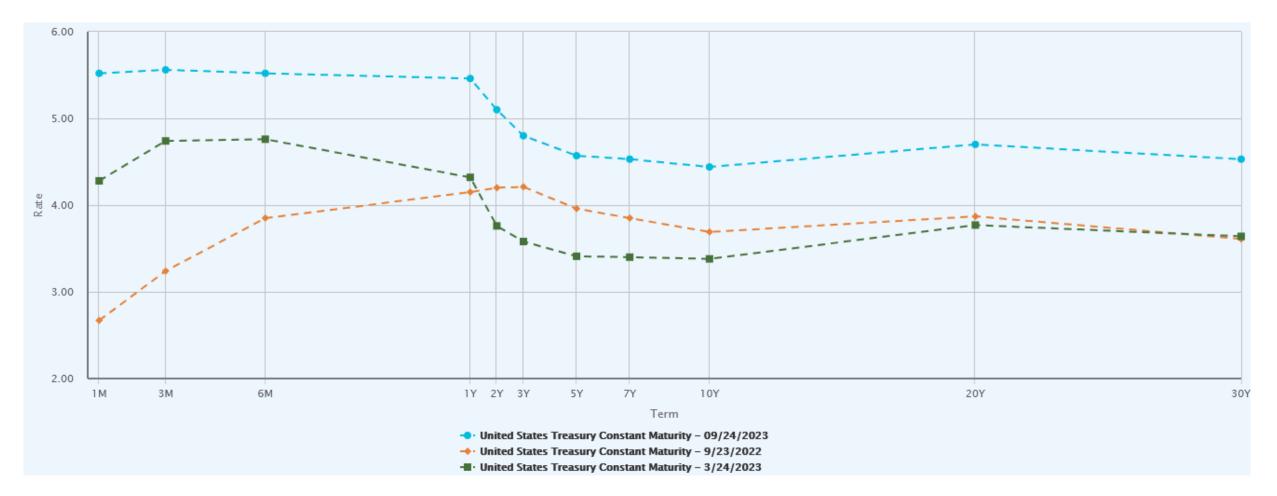
S&P Global Ratings' U.S. Economic Forecast Overview | Resilient Demand, Diminishing Labor Imbalance, Higher for Longer

	2019	2020	2021	2022	2023f	2024f	2025f	2026f
Real GDP (annual average % change)	2.3	-2.8	5.9	2.1	2.3	1.3	1.4	1.8
Real consumer spending (annual average % change)	2.0	-3.0	8.3	2.7	2.5	1.4	1.5	2.1
Real equipment investment (annual average % change)	1.3	-10.5	10.3	4.3	-0.8	1.4	1.7	2.2
Real nonresidential structures investment (annual average %								
change)	2.3	-10.1	-6.4	-6.6	7.6	1.1	0.5	3.2
Real residential investment (annual average % change)	-1.0	7.2	10.7	-10.6	-11.1	0.7	3.2	1.8
Core CPI (annual average % change)	2.2	1.7	3.6	6.2	4.7	2.6	2.3	2.3
Unemployment rate (%)	3.7	8.1	5.4	3.6	3.6	4.1	4.7	4.8
Housing starts (annual total in mil.)	1.3	1.4	1.6	1.6	1.4	1.4	1.4	1.4
Light-vehicle sales (annual total in mil.)	17.0	14.5	15.0	13.8	15.3	15.1	15.5	15.6
10-year Treasury (%)	2.1	0.9	1.4	3.0	3.9	4.0	3.6	3.6

S&P Global Ratings

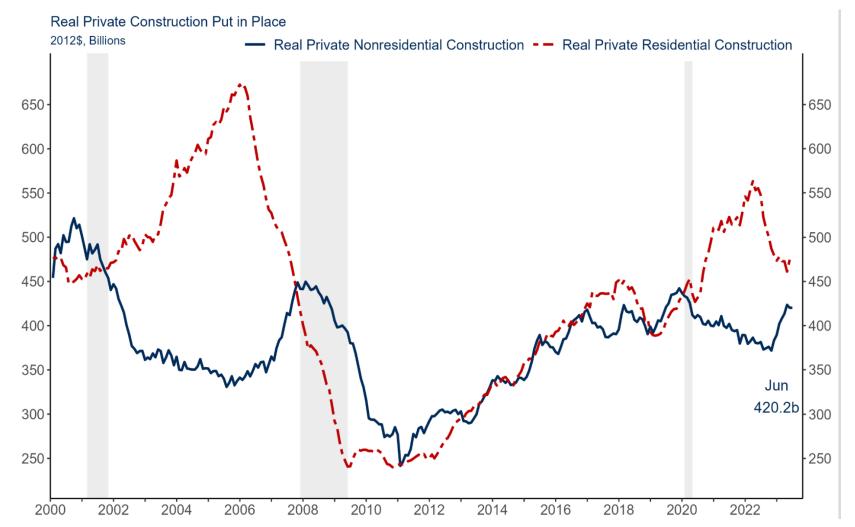
As of June 15, 2023. All percentages are annual averages, unless otherwise noted. Core CPI is consumer price index excluding energy and food components. f--forecast. Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, The Federal Reserve, Oxford Economics, S&P Global Economics' forecasts.

Yield Curve Remains Inverted



Source: S&P Global Ratings

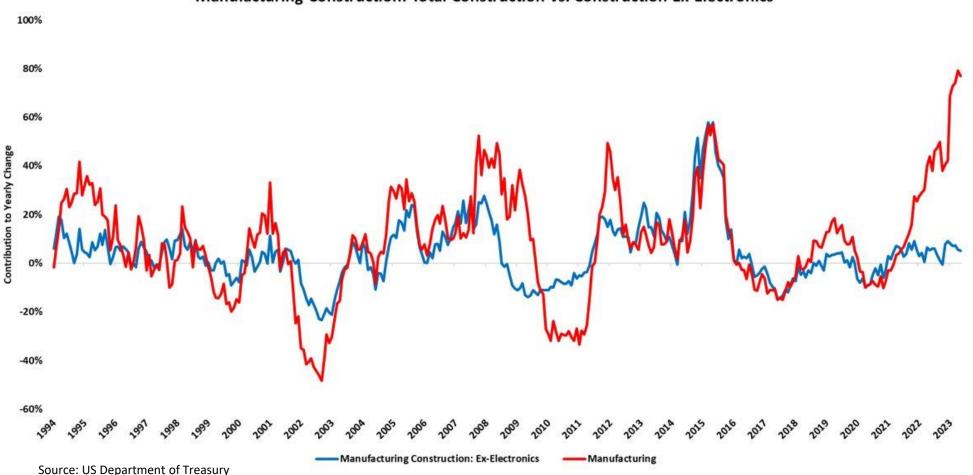
Real Private Construction | Residential vs Non-Res.



Source: Census Bureau; Notes: Private nonresidential construction deflated using the price index for private fixed investment in nonresidential structures and private residential construction deflated using the private residential investment chain price index.

Fiscal Policy Driven | Boom in US Manufacturing Construction

The Infrastructure Investment and Jobs Act (IIJA), Inflation Reduction Act (IRA), and CHIPS Act each provided direct funding and tax incentives for public and private manufacturing construction.

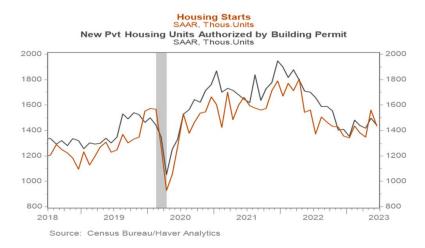


Manufacturing Construction: Total Construction vs. Construction Ex-Electronics

S&P Global Ratings Note: IIJA, IRA, and CHIPS combined is the largest government spending programs directed at the nation's infrastructure and industry since the 1930's. Too early to tell if it will indeed lift productivity and living standards sustainably, but it is clear they are currently stimulating economic growth.

Residential Investments | Found a Floor? Another leg Down? Affordability concerns all around.

Residential construction activity remains resilient



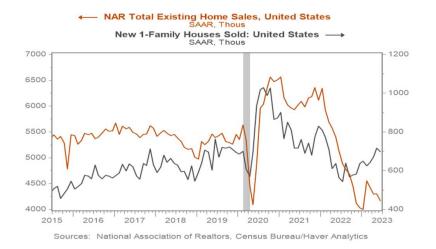
The recent uptick in home prices leaves them just 1% below their June 2022 peak.



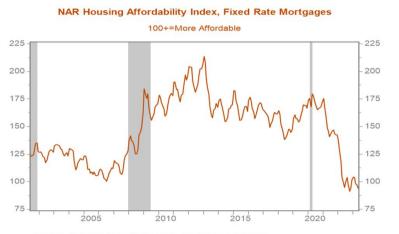
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S&P CoreLogic Case-Shiller Home Price Index: US National % Change - Period to Period SA, Jan-00=100 The resilience of new home sales partially reflects a dearth of homes in the resale market, which has benefited homebuilders.



The ability of a median income household to purchase a median priced existing home remains stretched.

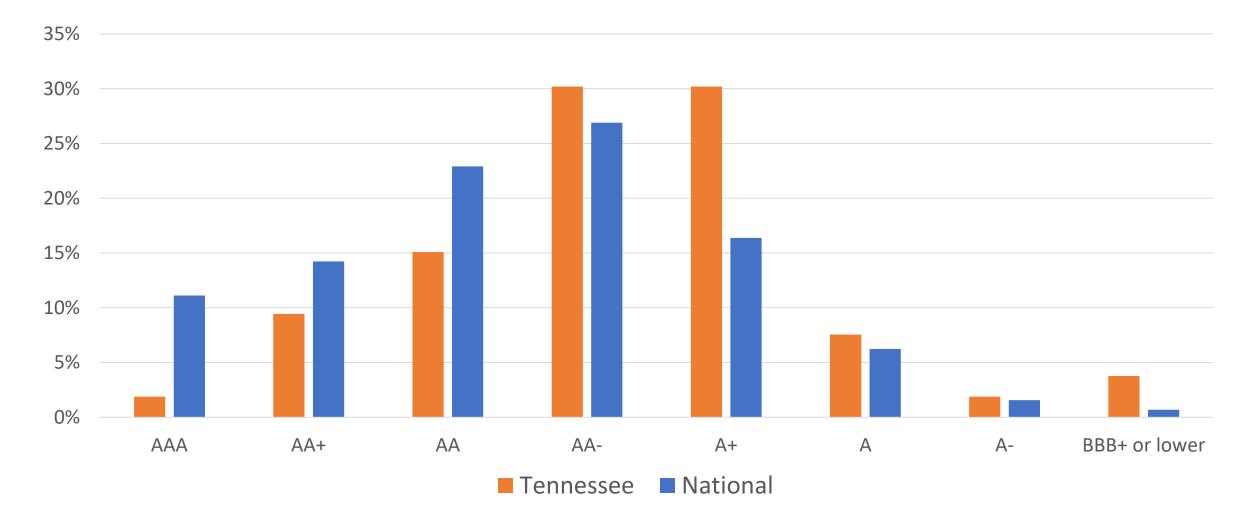


Source: National Association of Realtors/Haver Analytics

S&P Global - Tennessee Local Government Coverage



General Obligation Rating Distribution – 61 TN Counties



Source: S&P Global Ratings

Tennessee Counties Median Credit Factors

	TN Counties	U.S.
Projected per capita EBI* % U	69.7%	82.2%
Market value per capita (\$)	88,460	106,557
Available general fund %		
expenses	42.8%	50.8%
Total liquidity % expenses	86.8%	75.1%
Fixed costs** % expenses	16.0%	9.9%
Net Direct Debt % Revenues	96.0%	50.0%
Pension % funded	114.2%	87.0%

*effective buying income

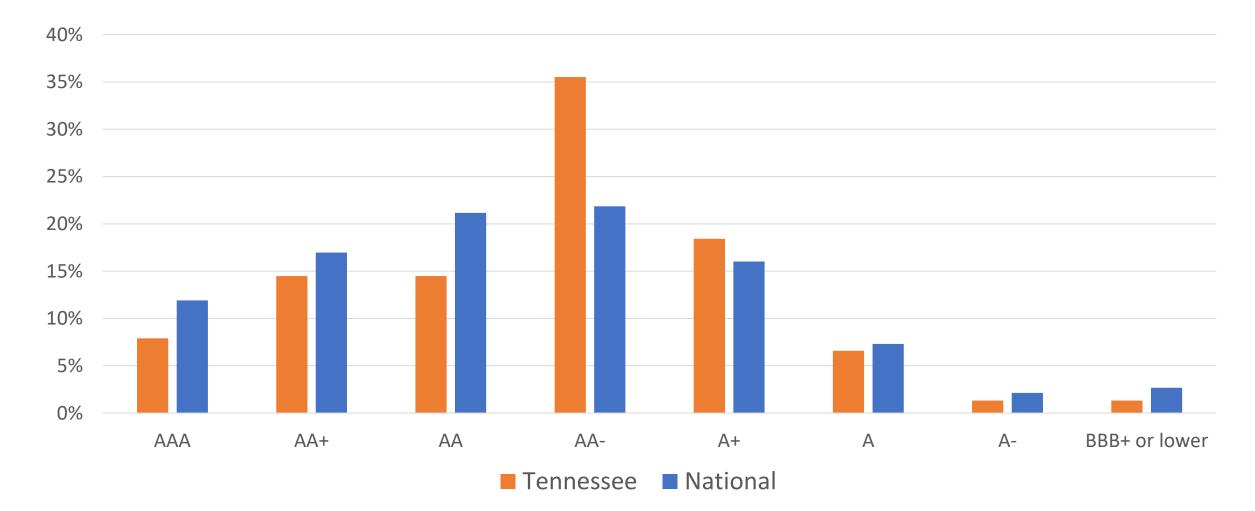
**debt service + debt + retirement

S&P Financial Management Assessment Distribution

	TN Counties	U.S.
Strong	6%	13%
Good	21%	28%
Standard	70%	57%
Vulnerable	4%	2%

Source: S&P Global Ratings

General Obligation Rating Distribution – 78 TN Municipalities



Source: S&P Global Ratings

Tennessee Munis Median Credit Factors

	TN Munis	U.S.
		0.5.
Projected per capita EBI* (%)	72.2%	94.1%
Market value per capita (\$)	92,396	104,555
Available general fund %		
expenses	71.4%	46.3%
Total liquidity % expenses	118.5%	94.2%
Fixed costs** % expenses	9.4%	14.5%
Net Direct Debt % Revenues	61.3%	89.1%
Pension % funded	105.4%	82.1%

*effective buying income

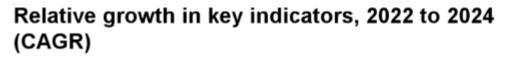
**debt service + debt + retirement

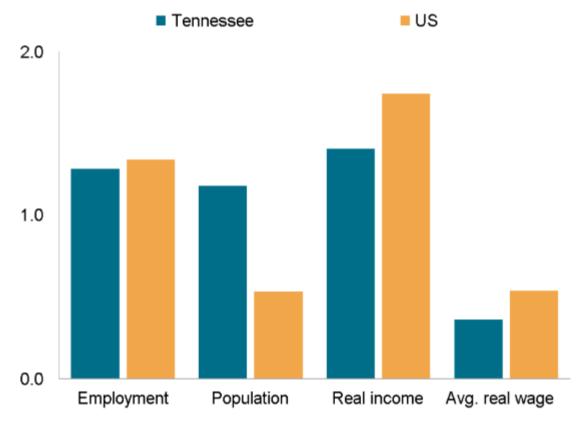
S&P Financial Management Assessment Distribution

	TN Munis	U.S.	
Strong	16%	13%	
Good	34%	35%	
Standard	49%	50%	
Vulnerable	1%	2%	

Source: S&P Global Ratings

Tennessee Economic Trends

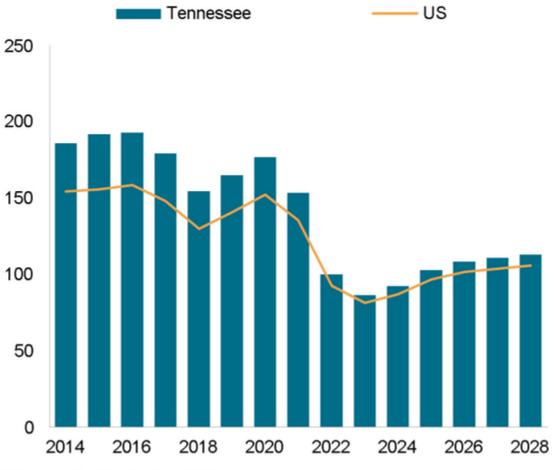




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Housing affordability (higher index reading = more affordable)



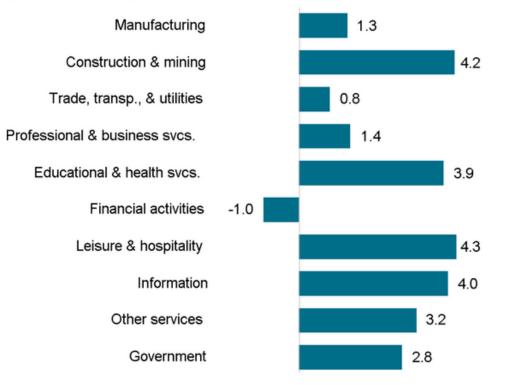
Data compiled September 2023.

Source: S&P Global Market Intelligence.

29

Tennessee Employment

Employment growth by sector, July 2023 (percent change vs. year earlier)



	20)23	2033		
	% of Total	Location quotient (US avg = 100)	% of Total	Location quotient (US avg = 100)	
Construction	4.60%	91	4.60%	88	
Natural Resources and Mining	0.10%	34	0.10%	32	
Manufacturing	11.00%	133	9.40%	130	
Trade, Transportation, and Utilities	20.70%	112	18.90%	112	
Information	1.70%	86	1.50%	81	
Financial Activities	5.20%	90	5.30%	93	
Professional and Business Services	14.40%	97	16.30%	101	
Education and Health	14.10%	87	15.00%	87	
Leisure and Hospitality	11.00%	103	10.70%	104	
Other Services	3.90%	103	4.20%	106	
Government	13.40%	92	14.00%	93	

S&P Global Ratings MSA = metropolitan statistical area. Source: S&P Global Market Intelligence. © 2023 S&P Global.

Tennessee Local Government Outlook

Credit Positives:

- Growing population, incomes, and wealth levels
- Strong employment growth in a variety of industries
- Strong reserve positions
 - County Median TN: 42.8%; US: 50.8%
 - Muni Median TN: 71.4%; US: 46.3%
- High degree of revenue flexibility and ability to balance budgets (no circuit breakers or property tax caps, strong local legislative authority)
- *Still* affordable housing relative to U.S. as a whole
- Well-funded pension positions

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Credit Challenges:

- Slowing revenue growth as the post-COVID boom wanes and 'normalization' of growth from online sales tax collections
- Increasing capital needs associated with a growing population; challenges with contractor and laborer availability
- Competitive labor market driving up personnel costs
- Slowing manufacturing employment growth due to uncertain global demand.

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