

Moody's Update

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A comprehensive view of the global markets through our ratings and research



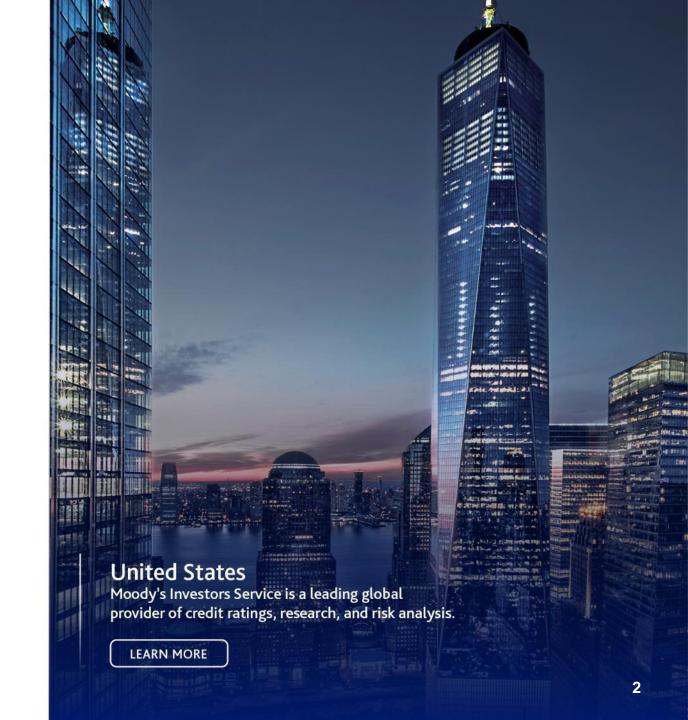
Credibility

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



Agenda

- 1. Overview of North Carolina Ratings
- 2. Overview of Cities and Counties Methodology
- 3. Issuer rating
- 4. Instrument rating
- 5. ESG Framework
- 6. Questions





Overview of North Carolina Ratings

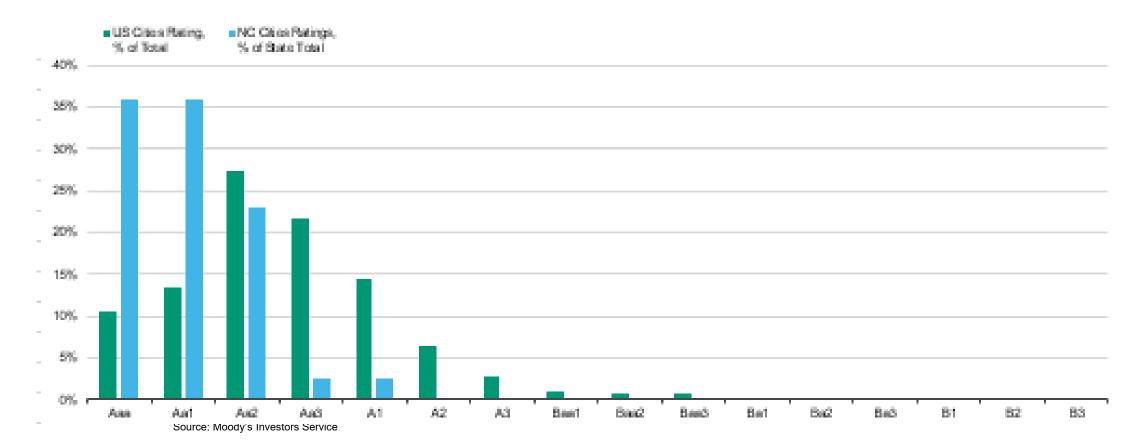
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Credit strengths of NC municipalities

- » Cities and counties are heavily dependent on stable property tax revenues
 - No legal limitations on property tax rate increases
- » Strong oversight by Local Government Commission
 - Enforces manageable debt positions
 - Encourages strong fiscal management, including formal fund balance policies
- » Growing economies are supported by an educated work force, relatively low cost of living and continued diversification

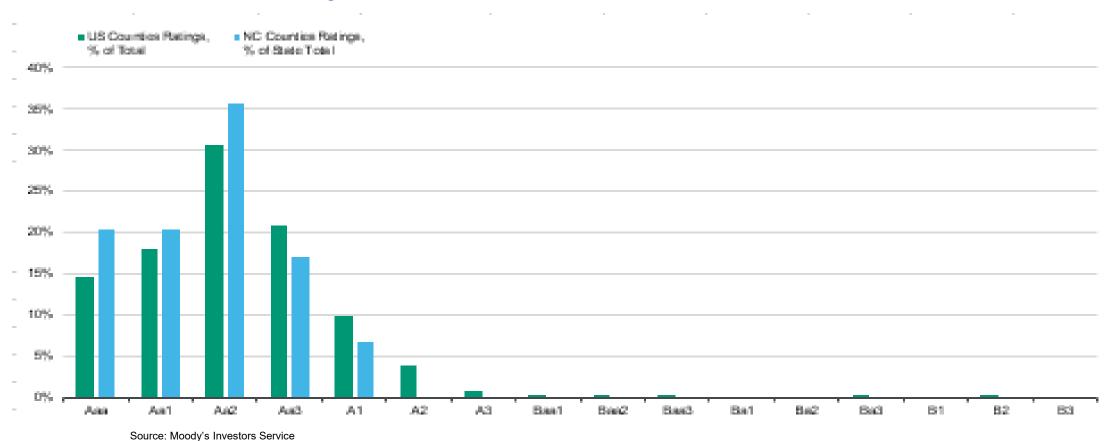
NC cities are highly rated

- » 39 total city ratings in the state
- » Aa1 median rating for NC cities



NC counties are highly rated

- » 59 total county ratings in the state
- » Aa2 median rating for NC counties





Overview of Cities and Counties Methodology

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US Cities and Counties methodology development



Develop methodology proposal



Publish Request for Comment



Receive market feedback



Consider comments



Publish final methodology (November 2)

Key Changes and Benefits



Reduced number

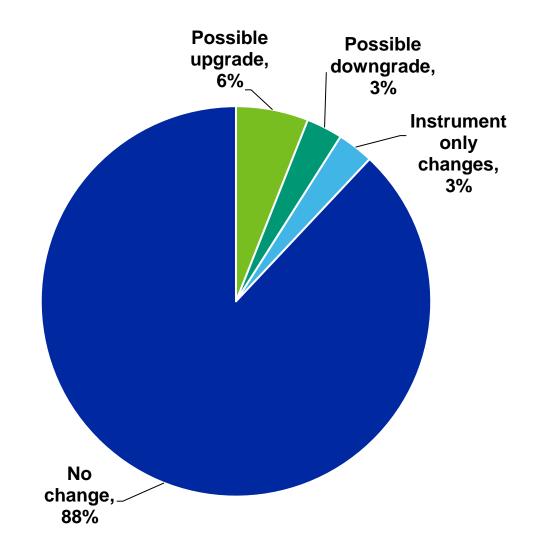
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issuer rating

No rating changes for majority of ~ 3,300 cities and counties

» On November 3, we placed ratings of 345 cities and counties on review for possible change: 252 for potential upgrade and 93 for potential downgrade.

- » Ratings placed under review will be resolved during the next few months.
 - Analysts will hold discussions with every city and county with ratings placed under review.
 - Rating committees will be convened for every rating placed under review.
 - Rating committee decisions will be communicated with press releases.



Common drivers of potential rating changes



- Tax base size has not proven to be a predictor of credit strength or weakness.
- Some instrument ratings were placed on review for potential change even though the issuer rating was not.





Issuer Rating

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Issuer and instrument ratings



Issuer Rating

Fundamental credit quality

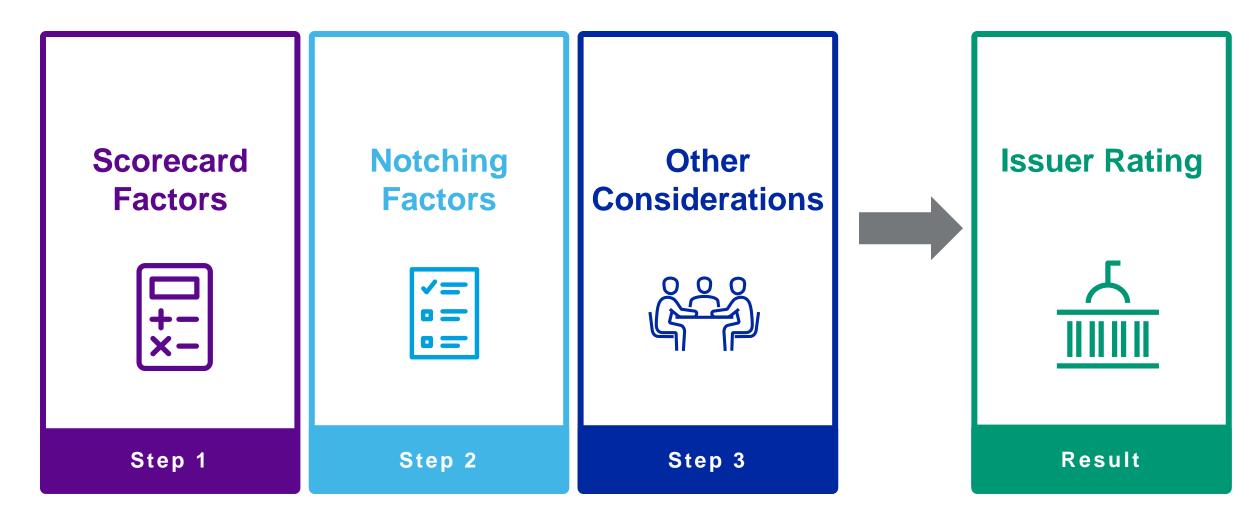
Instrument Considerations

Evaluation of debt instrument characteristics

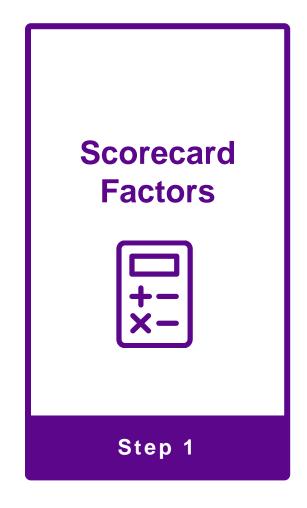
Instrument Rating

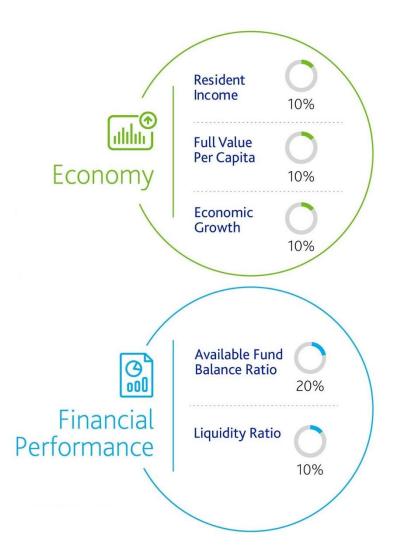
Placed in relation to the issuer rating

Arriving at the issuer rating



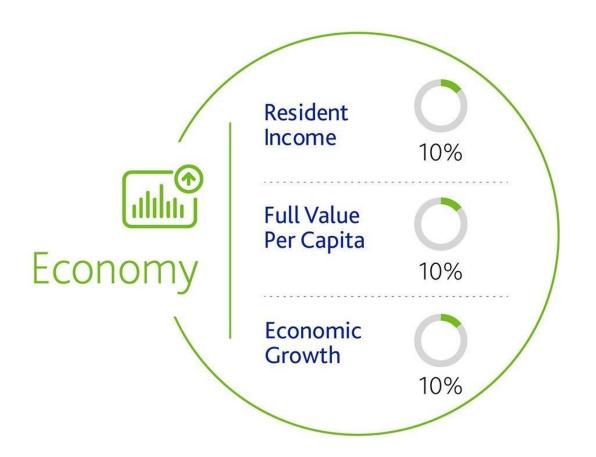
Arriving at the issuer rating – Step 1





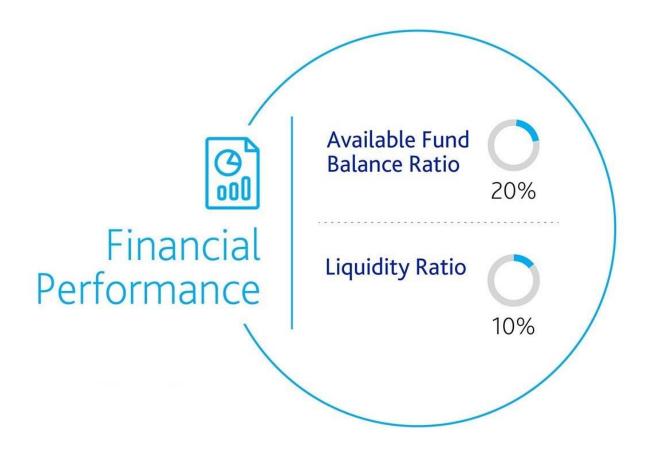


Scorecard Factor 1: Economy



Sub-factor	Sub-factor calculation		
Resident Income (10%)	MHI adjusted for RPP / US MHI		
Full Value Per Capita (10%)	Full valuation of tax base / population		
Economic Growth (10%)	Difference between 5- year CAGR in real GDP and 5-year CAGR in real US GDP		

Scorecard Factor 2: Financial Performance



Sub-factor	Sub-factor calculation
Available Fund Balance Ratio (20%)	(Available fund balance + net current assets) / revenue
Liquidity Ratio (10%)	Unrestricted cash / revenue

Treatment of funds in scorecard ratios

	_	ose District GO (formerly nment GO) Methodology	City and County Methodology		
	Reflected in scorecard ratios	Not reflected in scorecard ratios; only considered outside scorecard ratios	Reflected in scorecard ratios	Not reflected in scorecard ratios; only considered outside scorecard ratios	
Governmental Funds	Typically the general fund, debt service fund, and other operating funds	Typically all other governmental funds, including capital project funds and non-major special revenue funds	All	None	
Enterprise Funds	None	All	All	None	
Discretely-Presented Component Units	None	All	None	All	

Scorecard Factor 3: Institutional Framework



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

Scorecard Factor 4: Leverage



Sub-factor	Sub-factor calculation
Long-term Liabilities Ratio (20%)	(Debt + ANPL + adjusted net OPEB + other long- term liabilities) / revenue
Fixed Costs Ratio (10%)	Adjusted fixed costs / revenue

Arriving at the issuer rating – Step 2



- 1. Additional strength in local resources
- 2. Limited scale of operations
- 3. Financial disclosures
- 4. Potential cost shift to or from the state
- 5. Potential for significant change in leverage

Arriving at the issuer rating – Step 3



Examples of qualitative other considerations (not an exhaustive list):

- » Fund-specific financial considerations
- » Competitive enterprise risk in governmental or business-type activities
- » Likelihood of receiving extraordinary or ongoing support
- » Strengths or weaknesses related to economic concentration
- » Unusual risk or benefit posed by long-term liabilities





Instrument Rating

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Issuer and instrument ratings



Issuer Rating

Fundamental credit quality

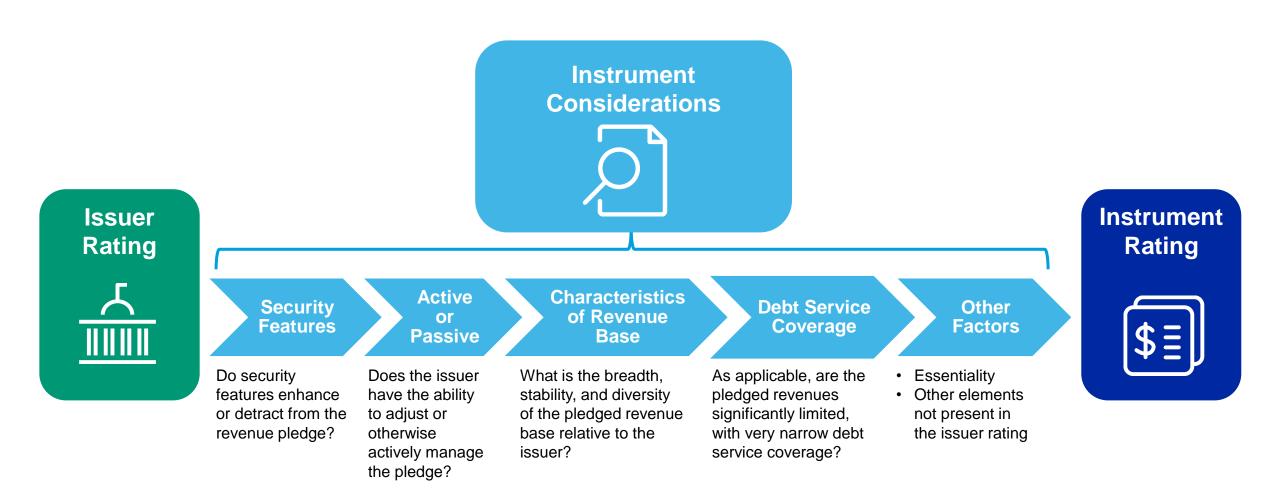
Instrument Considerations

Evaluation of debt instrument characteristics

Instrument Rating

Placed in relation to the issuer rating

Arriving at the instrument rating



Instrument rating examples



Key instrument considerations:Unlimited tax, full faith and credit pledge

Key instrument considerations:

Debt with appropriation or abatement contingency for essential purpose

Instrument
Rating
\$\Begin{array}{c}\Begin{array}{c}\$\Begin{array}{c}\Begin{array}{c} \Begin{array}{c} \Begin

Unlimited tax rating would be equivalent to the issuer rating

Instrument Rating



Appropriation or abatement rating would be at least one notch below the issuer rating





ESG Framework

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Four components to MIS integration of ESG



Ratings & Research

How is ESG integrated into credit ratings?

ESG discussed in all rating committees. Greater transparency in PRs and research on ESG materiality to a specific issuer.



ESG Classification



What is ESG?

Framework Reports describe credit focused classification of ESG risks.



Assessments

How is a specific issuer exposed to ESG risks?

Assessments are issuer-specific scores that provide rank ordering of issuers along a single ESG risk.

Either MIS or affiliate scores (427 or VE).



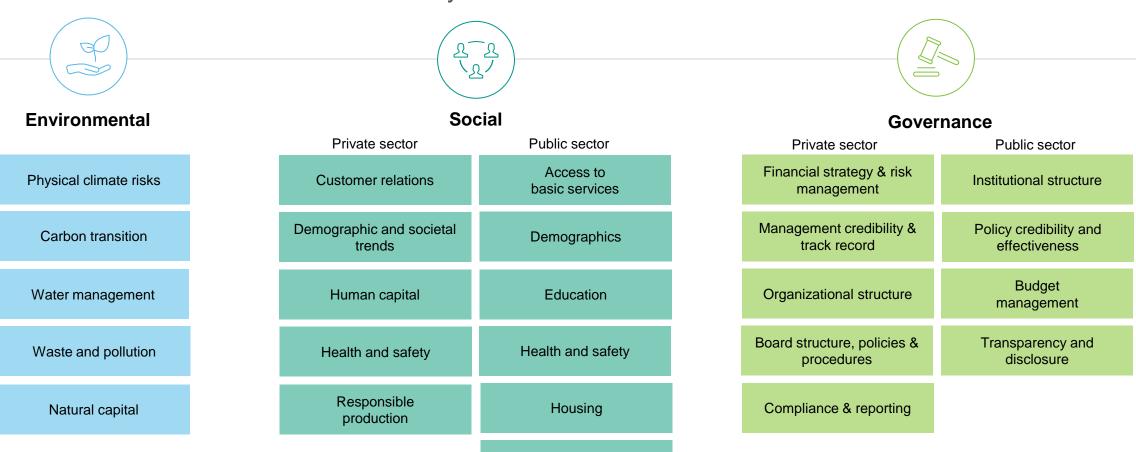


Is ESG material to credit quality?

Heat maps provide relative ranking of various sectors along the E and S taxonomy of risks.

ESG Classification system incorporates credit relevant considerations

Our assessment of ESG risks is framed by the classification



Labor and income

Environmental classification updated 14 December 2020 Source: Moody's Investors Service

E, S and G Issuer Profile Scoring Scale

Assessed on a five-point scale from positive to negative exposure

	Score		Definition
POSITIVE	E-1 S-1 G-1	:	Issuers or transactions with a Positive E or S issuer profile score typically have exposures to E or S issues that carry material credit benefits. For G, issuers or transactions typically have exposure to G considerations that, in the context of their sector, positions them strongly, with material credit benefits.
NEUTRAL- TO-LOW	E-2 S-2 G-2	:	Issuers or transactions with a Neutral-to-Low E or S issuer profile score typically have exposures to E or S issues that are not material in differentiating credit quality. In other words, they could be overall slightly credit-positive, credit-neutral, or slightly credit-negative. An issuer or transaction may have a Neutral-to-Low score because the exposure is not material or because there are mitigants specifically related to any E or S risks that are sufficient to offset those risks. Issuers or transactions with a Neutral-to-Low G issuer profile score typically have exposure to G considerations that, in the context of their sector, positions them as average, and the exposure is overall neither credit-positive nor negative.
MODERATELY NEGATIVE	E-3 S-3 G-3	i	Issuers or transactions with a Moderately Negative E or S issuer profile score typically have exposures to E or S issues that carry moderately negative credit risks. These issuers may demonstrate some mitigants specifically related to the identified E or S risks, but they are not sufficiently material to fully offset the risks. Issuers or transactions with a Moderately Negative G issuer profile score typically have exposure to G considerations that, in the context of the sector, positions them below average and the exposure carries overall moderately negative credit risks.
HIGHLY NEGATIVE	E-4 S-4 G-4	:	Issuers or transactions with a Highly Negative E or S issuer profile score typically have exposures to E or S issues that carry high credit risks. These issuers may demonstrate some mitigants specifically tied to the E or S risks identified, but they generally have limited effect on the risks. Issuers or transactions with a Highly Negative G issuer profile score typically have exposure to G considerations that, in the context of their sector, positions them weakly and the exposure carries overall highly negative credit risks.
VERY HIGHLY NEGATIVE	E-5 S-5 G-5		Issuers or transactions with a Very Highly Negative E or S issuer profile score typically have exposures to E or S issues that carry very high credit risks. While these issuers or transactions may demonstrate some mitigants specifically related to the identified E or S risks, they are not meaningful relative to the magnitude of the risks. Issuers or transactions with a Very Highly Negative G issuer profile score typically have exposure to G considerations that, in the context of their sector, positions them very poorly and the exposure carries overall very high credit risks.

Source: Moody's Investors Service

ESG Credit Impact Score (CIS) Scale

		Score	Definition
POSITIVE	:	CIS-1	For an issuer scored CIS-1 (Positive), its ESG attributes are overall considered as having a positive impact on the rating. The overall positive influence from its ESG attributes on the rating is material.
NEUTRAL- TO-LOW		CIS-2	For an issuer scored CIS-2 (Neutral-to-Low), its ESG attributes are overall considered as having a neutral-to-low impact on the current rating; i.e., the overall influence of these attributes on the rating is non-material.
MODERATELY NEGATIVE	:	CIS-3	For an issuer scored CIS-3 (Moderately Negative), its ESG attributes are overall considered as having a limited impact on the current rating, with greater potential for future negative impact over time. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-2.
HIGHLY NEGATIVE		CIS-4	For an issuer scored CIS-4 (Highly Negative), its ESG attributes are overall considered as having a discernible negative impact on the current rating. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-3.
VERY HIGHLY NEGATIVE		CIS-5	For an issuer scored CIS-5 (Very Highly Negative), its ESG attributes are overall considered as having a very high negative impact on the current rating. The negative influence of the overall ESG attributes on the rating is more pronounced compared to an issuer scored CIS-4.

ESG tightly woven into cities credit analysis

- » Environmental factors, especially physical climate exposures, can impact economic growth metrics. Similarly, investment in adaptation impacts leverage metrics.
- » Social factors such as demographics, income levels and ageing influence the economy, can impact financial performance and sway leverage metrics relative to revenue trends
- » Governance heavily influences how governments operate, especially their finances and approaches to debt, pensions and other leverage metrics.

US Cities & Counties Scorecard					
Rating Factor	Rating Subfactor	Environmental	Social	Governance	
Economy	Resident Income		ŸŸŸ		
	Full Value per Capita		ŸŸŸ		
	Economic Growth		ŸŸŸ		
Financial Performance	Available Fund Balance		ŸŸŸ		
	Liquidity		ŸŸŸ		
Institutional Framework/ Governance					
Leverage	Long-term Liabilities	8	ŸŸŸ		
	Fixed Costs		 ŢŢŢ		

LIS Citios & Counting Scorocard

ESG considerations for the state

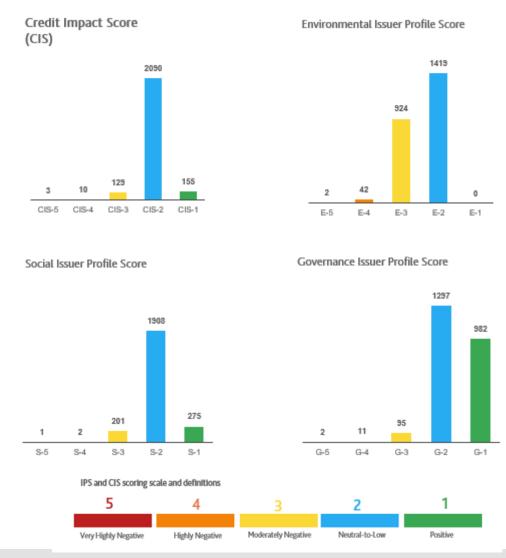


- » North Carolina's environmental risks (E-3) pose moderately negative risk, social risks (S-2) are neutral, while governance considerations (G-1) are credit-positive
- These ESG considerations are already reflected in the state's Aaa rating, and overall do not materially affect the rating (CIS-2)
- » CIS scores indicate the extent, if any, to which an issuer's credit rating is different than it would be in the absence of exposure to its ESG characteristics and risks

ESG scores assigned to all rated cities and

counties in NC

- » In both NC and nationally, most issuers received a CIS-2
- » Environmental risk is most often neutral to low; few coastal issuers received E-3 or E-4 scores
- » Social risk tends to be neutral or positive
- Sovernance risk is mostly positive for NC issuers







Questions & Answers

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