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Moody's Update

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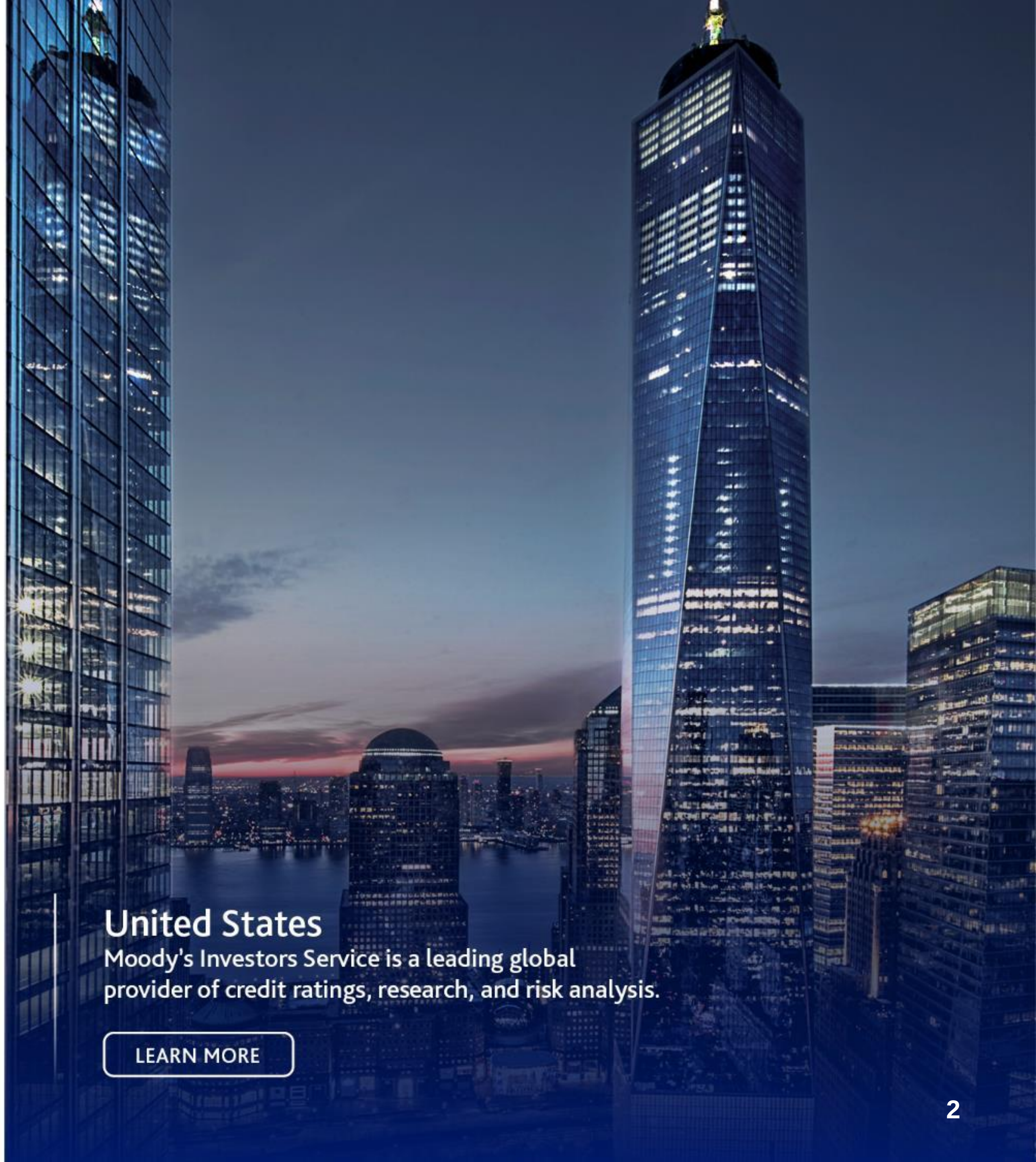

Agenda

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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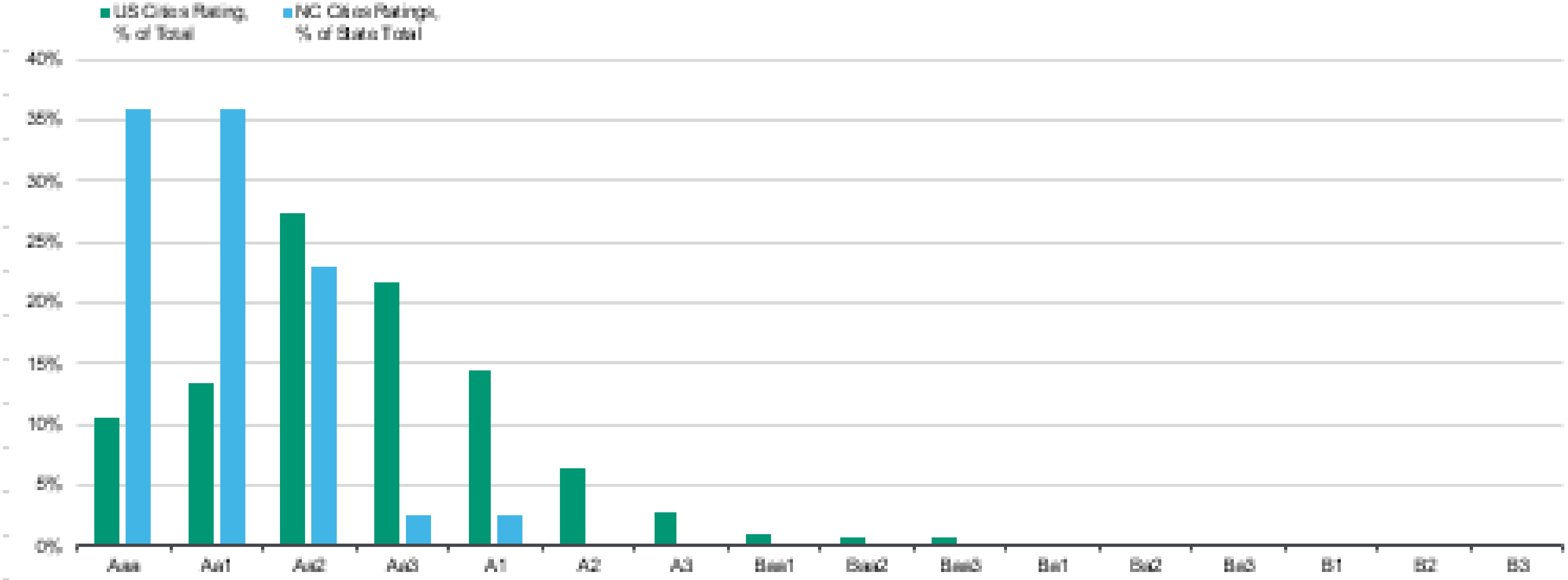
Credit strengths of NC municipalities

- 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

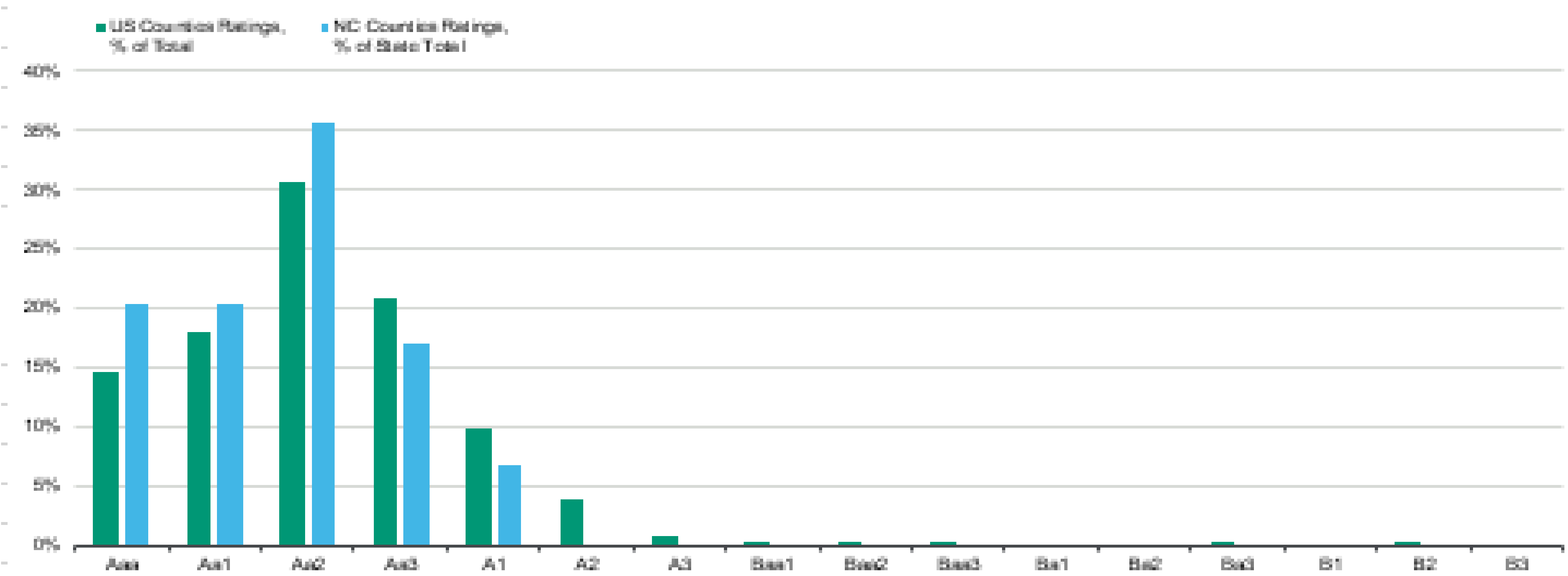
- » 39 total city ratings in the state
- » Aa1 median rating for NC cities



Source: Moody's Investors Service

NC counties are highly rated

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



Source: Moody’s Investors Service

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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

Key changes

- Cities and counties are assigned an issuer rating that reflects their fundamental credit quality, absent the benefit of any specific legal security or additional structural enhancements
- Debt instrument ratings are assigned in relation to the issuer rating
- Financial performance and leverage metrics incorporate all of the issuer's governmental and business-type activities
- Reduced number of notching factors

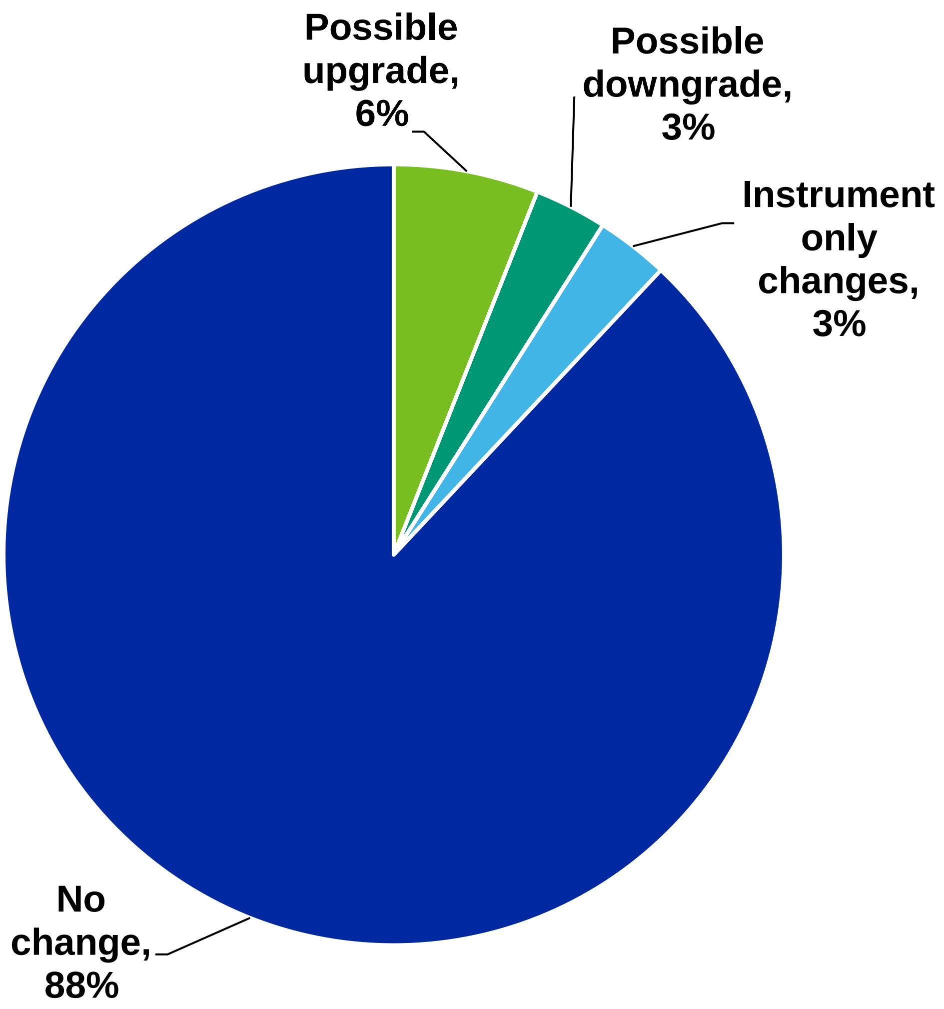
Overarching benefits

- Heightens the focus on credit drivers specific to cities and counties rather than a particular security pledge
- Enhances the consistency of our analysis through a holistic approach which includes all functions of the issuer
- Brings greater transparency to the rating process by providing more systematic clarity to credit considerations
- Follows the sector-based approach established by the US K-12 Public School Districts and US States and Territories methodologies

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

Review Up

- Small tax base
- Strong GDP growth relative to US
- Strong financial ratios with inclusion of all governmental and business-type activities
- Low leverage and fixed costs

Review Down

- Weak GDP growth relative to US
- Low MHI after RPP adjustment
- Weak financial reporting
- High leverage and fixed costs, including OPEB

- *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.*

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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

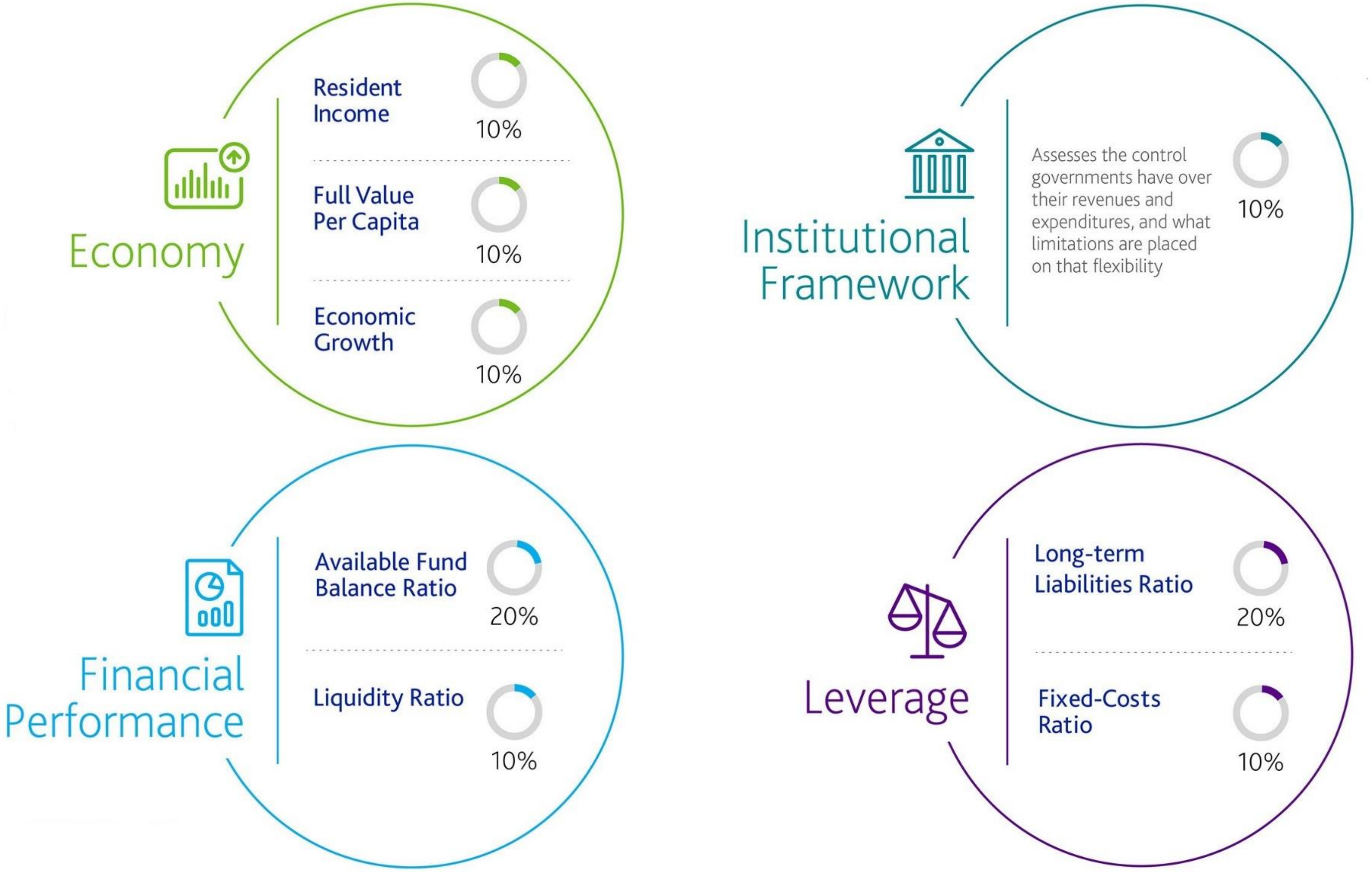
Arriving at the issuer rating

Step 1	Step 2	Step 3	Result
Scorecard Factors	Notching Factors	Other Considerations	Issuer Rating

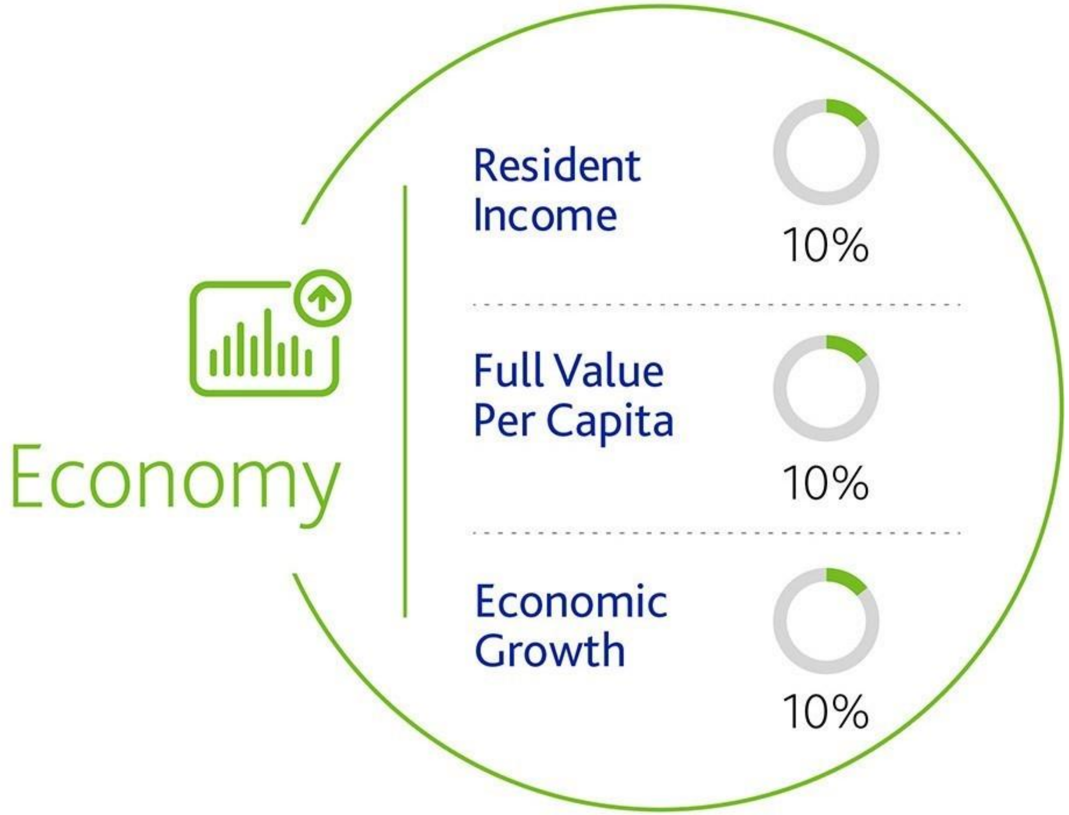
Arriving at the issuer rating – Step 1

Scorecard Factors

Step 1

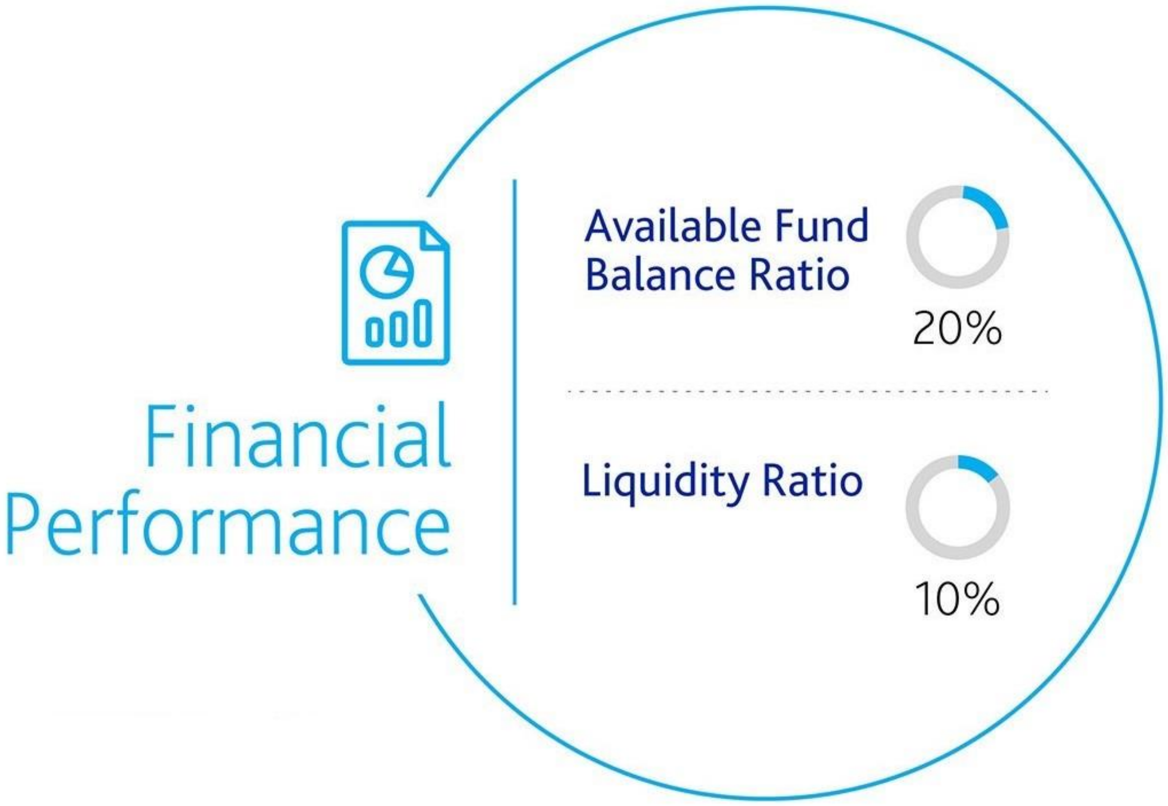


Scorecard Factor 1: Economy



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

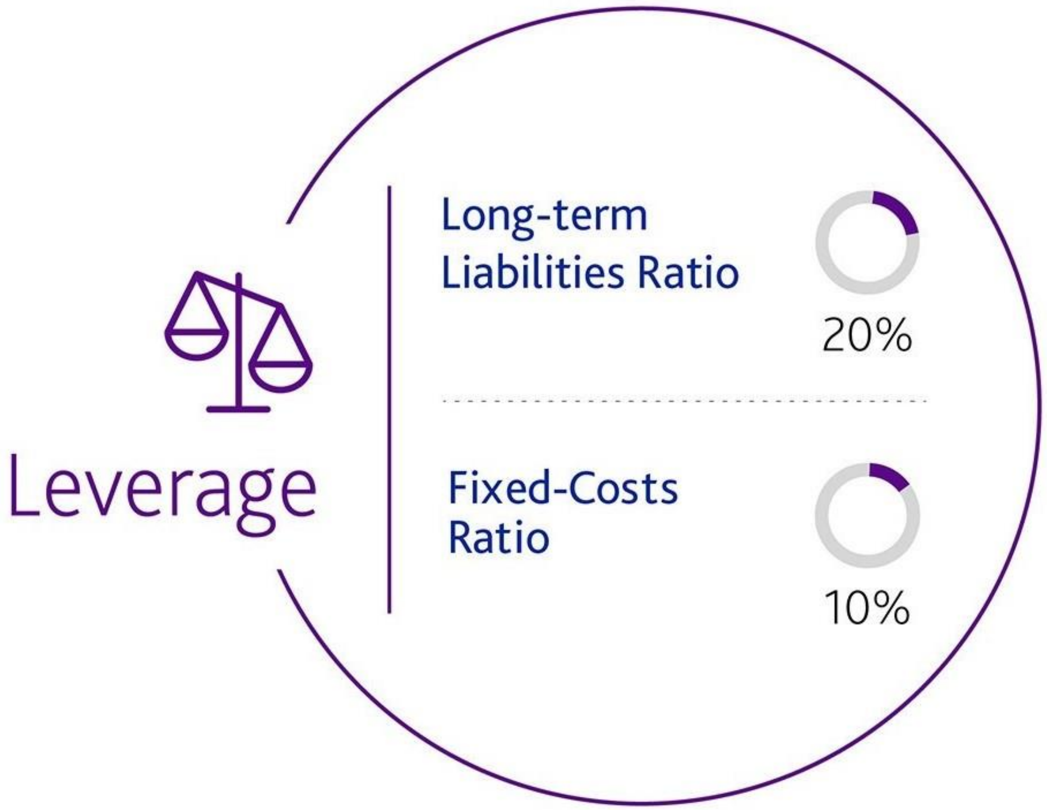
Treatment of funds in scorecard ratios

	Special Purpose District GO (formerly Local Government 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	B
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.

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

Notching Factors

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

Other Considerations

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

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Instrument Rating

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Issuer and instrument ratings

Issuer Rating + **Instrument Considerations** = **Instrument Rating**

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 Considerations

Issuer Rating

Security Features

Do security features enhance or detract from the revenue pledge?

Active or Passive

Does the issuer have the ability to adjust or otherwise actively manage the pledge?

Characteristics of Revenue Base

What is the breadth, stability, and diversity of the pledged revenue base relative to the issuer?

Debt Service Coverage

As applicable, are the pledged revenues significantly limited, with very narrow debt service coverage?

Other Factors

- Essentiality
- Other elements not present in the issuer rating

Instrument Rating

Instrument rating examples

Issuer Rating

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

Instrument Rating

Unlimited tax rating would be equivalent to the issuer rating

Key instrument considerations:
Debt with appropriation or abatement contingency for essential purpose

Instrument Rating

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

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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).

Heat Maps

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

Environmental

- Physical climate risks
- Carbon transition
- Water management
- Waste and pollution
- Natural capital

Social

Private sector	Public sector
Customer relations	Access to basic services
Demographic and societal trends	Demographics
Human capital	Education
Health and safety	Health and safety
Responsible production	Housing
	Labor and income

Governance

Private sector	Public sector
Financial strategy & risk management	Institutional structure
Management credibility & track record	Policy credibility and effectiveness
Organizational structure	Budget management
Board structure, policies & procedures	Transparency and disclosure
Compliance & reporting	

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	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.

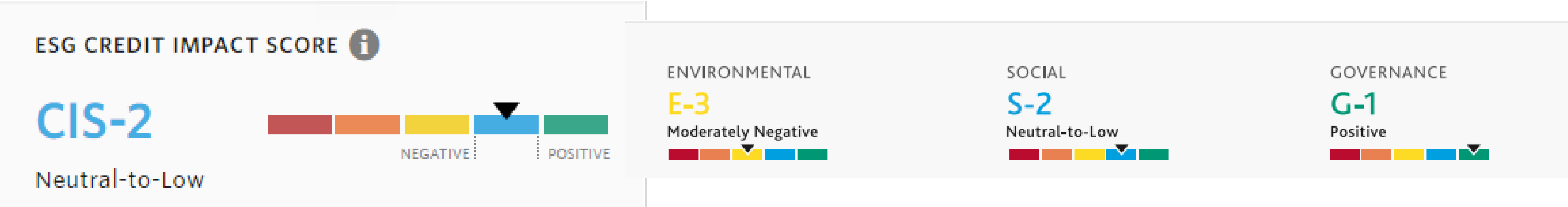
ESG tightly woven into cities credit analysis

- 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			
	Full Value per Capita			
	Economic Growth			
Financial Performance	Available Fund Balance			
	Liquidity			
Institutional Framework/ Governance				
Leverage	Long-term Liabilities			
	Fixed Costs			

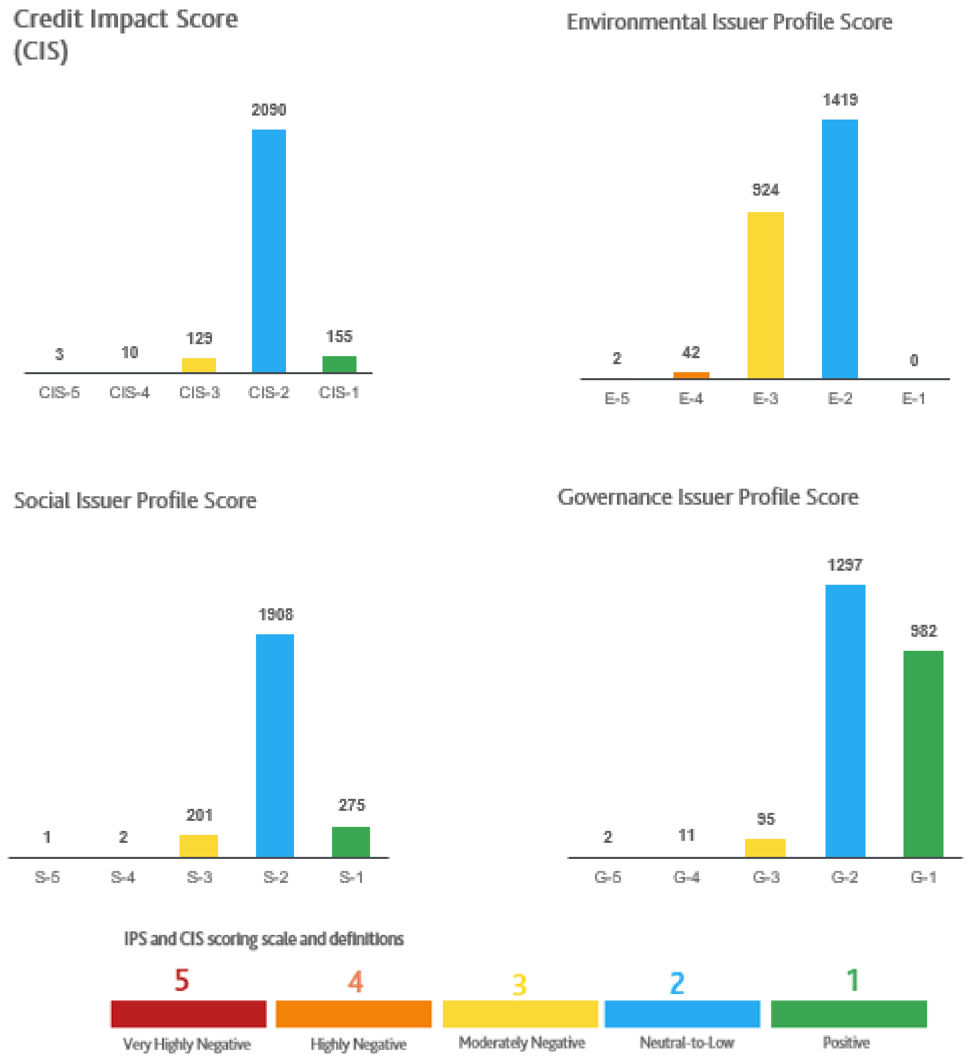
ESG considerations for the state



- 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
- Governance risk is mostly positive for NC issuers



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Questions & Answers

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