

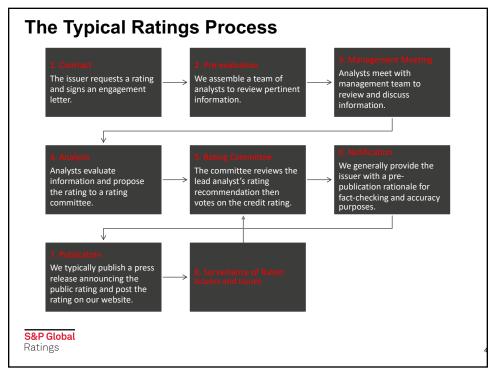
Topics

- Overview of the Ratings Process
- S&P Global Local Government Framework
- How Climate Change Risks Factor into Municipal Ratings
- Financial Management Assessment (FMA) Criteria
- NC Local Government and County Medians

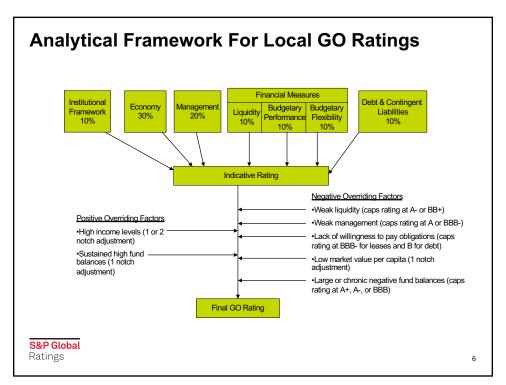
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Institutional Framework

Assesses the legal and practical environment in which the local government operates

The score is based on the average of four discretely scored areas

- Predictability: the extent to which a local government can forecast its revenues and expenditures on an ongoing basis
- Revenue and expenditure balance: the extent to which a local governments have the ability to finance the services they provide
- Transparency and accountability: the overall institutional framework's role in encouraging the transparency and comparability of relative financial information
- System support: the extent to which local governments receive extraordinary support from a state government when the local government is under extreme stress

All governments of the same type within the same state receive the same score

- · Cities and counties can differ
 - $\circ\,$ Municipalities of the same type can differ based on home rule status, population, etc.

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North Carolina Institutional Framework

Very Strong Institutional Framework for Municipalities and Counties

- Predictability: A very stable system
- Revenue and expenditure balance: Significant revenue-raising flexibility, no material expenditure mandates
- <u>Transparency and accountability</u>: Very transparent with comparability of financial information
- System support: High likelihood of extraordinary support
 - The state has established a model of comprehensive oversight managed by the state treasurer's local government commission (LGC)

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Economy

- Assess both the health of the asset base relied upon to provide both current and future locally derived revenues as well as the likelihood of additional service demands resulting from economic deterioration
- The initial score (1 through 5) is based on market value per capita and projected per capita income as a % of U.S.
- · Per capita income is based on a 5-year projection

Table 8 Assessing The Economic Score (see paragraphs 41-47)					
		Total Ma	arket Value Per C	apita	
Projected per capita effective buying income as a % of U.S. projected per capita E BI	>\$195,000	\$100,000 to \$195,000	\$80,000 to \$100,000	\$55,000 to \$80,000	<\$55,000
>150	1	1.5	2	2.5	3
110 to 150	1.5	2	2.5	3	3.5
85 to 110	2	2.5	3	3.5	4
70 to 85	2.5	3	3.5	4	4.5
≤70	3	3.5	4	4.5	5
A score of '1',' 2', '3',' 4', and '5' means very strong	ng, strong, ade	quate, weak, and v	very weak, respect	tively.	

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Economy – Adjustments

Qualitative factors with a positive impact on the initial score	Qualitative factors with a negative impact on the initial score
Participation in a larger broad and diversified economy (see paragraphs 45-47).	Negative budget impact from demographic profile: population decrease and/or high share of dependent population (>55%) have a material negative impact on future revenue growth and expenditure needs.
A stabilizing institutional influence with a longstanding role as a major employer, such as higher education, health care, military, or large and stable corporate presence.	High county unemployment rate (>10%).
	If employment concentration where an individual sector (excluding education/health, government, and transportation, trade and utilities) represents more than 30% of the nonfam work base, or tax base concentration where the top 10 taxpayers represent more than 35% of the tax base exists, the score worsens by one point (1). If the top 10 taxpayers exceed 45% of the tax base, the score worsens by two points (2.0).

The adjustment impact of each qualitative factor counts for one point (1.0), except for employment and tax base concentration, where the score may differ by two points (2.0) as described above. The final economic score equals the initial score adjusted up or down based on the net effect of the qualitative factors. Metrics that equal a cut-off point between two initial scores will equate to the worse score. To calculate the market value per capita, the emost recent estimate available. To calculate projected per capita EBI, the criteria use the most recent local level EBI available, adjusted for per capita personal income growth expectations for the next five years. IHS Inc. (known as Slobal Insight) or another similar source is used for county-level data and U.S. income projections, while Nielsen (Claritas) or another similar source is used for local level data. To measure unemployment, the criteria use county-level data from the Bureau of Labor Statistics and take the annual rate for the last calendar year. For local governments located with multiple counties, county-level data is weight-averaged based on the percentage of the population of the local government in each county.

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Management

- Assess the impact of management conditions on the likelihood of repayment
- Financial Management Assessment (FMA) is based upon our current methodology

Management - Adjustments

Qualitative factors with a positive impact on the initial score	Qualitative factors with a negative impact on the initial score
Consistent ability to maintain balanced operations.	Frequent management tumover inhibiting a current understanding of the government's financial position and its ability to adjust, or political gridlock, or instability that brings the same results.
Government service levels are limited.	Consistent inability to execute approved structural reforms for two consecutive years.

For each relevant qualitative factor, the score changes by one point. The final management score equals the initial score adjusted up or down based on the net effect of the qualitative adjustments. Qualitative adjustments cannot improve an initial management score of '5' or, in certain cases, a score of '4' (see paragraph 57).

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Financial Measures

- Three components factor into our assessment of a municipality's financial credit characteristics
 - Budgetary flexibility
 - Budgetary performance
 - Liquidity
- Each factor is weighted 10% all financial measures together are 30%

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Flexibility

The budgetary flexibility initial score measures the degree to which the government can create additional financial flexibility in times of stress

- Available fund balance as a % of general fund expenditures: for the most recently reported fiscal year
- When other fund balances outside of the government's general fund are available beyond the current fiscal year, they are included in the calculation
- This measure can cap a rating or it can be a positive override if extremely strong

Table 10 Assessing The Budgetary Flexibility Score (see paragraphs 59-64)					
		Available Fund	Balance As A %	Of Expenditures	
%	>15	8-15	4-8	1-4	<u><</u> 1
Score	1	2	3	4	5
A score of '1', '2', '3', '4', and '	5' means verv stro	ng, strong, adequate,	weak, and very w	eak, respectively.	

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Flexibility - Adjustments

Qualitative factors with a positive impact on the initial score:	Qualitative factors with a negative impact on the initial score:
If projections for the current year and the following year suggest a better initial score.	If projections for the current year and the following year suggest a worse initial score.
Ability to avoid financial imbalances with demonstrated capacity and willingness to cut operational spending (by more than 2%), resulting from a flexible cost structure, flexible legislation, and/or widespread political support.	High levels of questionable receivables or amounts due from other funds with deficit balances.
Existing state tax caps do not apply to the government, or the government retains substantial flexibility under the caps.	Limited capacity to cut expenditures due to infrastructure or operational needs or political resistance.
Demonstrated ability and willingness to raise taxes when needed (and voter support is usually obtained when such approval is required).	Limited capacity to raise revenues due to consistent and ongoing political resistance which can include self-imposed restrictions through charter or local initiative processes.
Timing of fiscal year and tax billing dates result in high cash with abnormally low fund balance levels.	Where cash accounting is used, the criteria use cash balances instead of fund balances and the score is worsened by one point.
Maintenance of an available fund balance exceeding 30% of general fund expenditures for the most recently reported year, the current year and next year.	

For each relevant qualitative factor, the score changes by one point. The final budgetary flexibility score equals the initial score adjusted up or down based on the net effect of the qualitative factors. A metric that equals a cutoff point between two initial scores will equate to the worse score.

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Budgetary Performance

The budgetary performance initial score measures the current fiscal balance of

- Total governmental funds net result: the most recent year's net total governmental funds on a budgetary basis as a percent of expenditures
- General fund net result: the most recent year's general fund operational balance as a percent of

Table 11 Assessing The Budgetary Performance Score (see paragraphs 65-68)					
		Total Gov	emmental Funds	Net Result (%)	
General Fund Net Result (%)	> -1	-1 to -5	-5 to -10	-10 to -15	≤ -15
(> 5)	1	2	3	3	4
(-1 to 5)	2	3	3	4	5
(≤ -1)	3	4	4	5	5

A score of '1', '2', '3', '4' and '5' means very strong, strong, adequate, weak, and very weak, respectively.

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Budgetary Performance – Adjustments

Qualitative factors with a positive impact on the initial score:	Qualitative factors with a negative impact on the initial score:
Expected structural improvement: if projections for the current year and following year suggested a better initial score, the score would improve by one point. The score would improve by two points only if required adjustments to revenues or expenditures to produce the result were already approved.	Expected structural deterioration: if projections for the current year and following year suggested a worse initial score, the scor would worsen by one or two points. To worsen by two points, expected performance must fall to the commensurate level within the current year.
	Deferred payments on a cash basis: in cases where good ratios hide significant underspending due to deferred payments, the deferral produces a better score.
	Significant historic volatility in performance because of very cyclical revenues, (e.g. oil & gas or sales taxes on luxury goods and/or dependence on volatile state transfers) or exposure to event-related risks, and the sources of volatility remain.

For each relevant qualitative factor, the score changes by one point, except for expected structural improvement or deterioration which could result in a difference of two points relative to the initial score. The final budget performance score equals the initial score adjusted up or down based on the net effect of the qualitative factors. Metrics that equal a cut-off point between two initial scores will equate to the worse score.

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Liquidity

The initial score measures the availability of cash and cash equivalents to service both debt and other expenditures

Initial liquidity score: combination of two measures

- Total government cash as % of total governmental funds debt service
- Total cash % of total governmental funds expenditures

Table 12 Assessing The Liquidity Score (see paragraphs 69-77)					
	Total Go	Total Government Available Cash As % Of Total Governmental Funds Debt Service			ebt Service
Total Government Available Cash As % Of Total Governmental Funds Expenditures	>120	100 to 120	80 to 100	40 to 80	<u>≤</u> 40
>15	1	2	3	4	5
8 to 15	2	2	3	4	5
4 to 8	3	3	3	4	5
1 to 4	4	4	4	4	5
<1	5	5	5	5	5
A score of 1, 2, 3, 4 and 5 are very strong, strong, adequate, weak and very weak, respectively.					

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Liquidity – Adjustments

Qualitative factors with a positive impact on the initial score:	Qualitative factors with a negative impact on the initial score:
If projections for the current year (and the following year) suggest a better initial score, the score improves by one point.	If projections for the current year (and the following year) suggest a worse initial score, the score worsens by one point.
If access to external liquidity is 'exceptional' as defined in table 13, the score improves by two points; if 'strong', the score improves by one point.	If access to external liquidity is 'uncertain' as defined in table 13, the score worsens by two points; if 'limited', the score worsens by one point.
Very robust and stable internal cash flow generation capacity compared with peers in this category.	High refinancing risk over the next 24 months.
	Aggressive use of investments.
	Exposure to non-remote contingent liability risk that could come due within 12 months.

See paragraph 77 for circumstances resulting in an automatic score of '4' or '5'. Extraordinary proceeds (such as unused shorterm borrowing) that span fiscal years or that are otherwise dedicated will be adjusted out of Total Government Available Cash.

For each relevant qualitative factor, the score changes by one point, except for access to external liquidity which could change the final score by two points and contingent liability exposure which could cap the score at '4' or '5'. The final liquidity score equals the initial score adjusted up or down based on the net effect of the qualitative factors. Metrics that equal a cut-off point between two initial scores will equate to the worse score.

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Debt and Contingent Liabilities

Initial debt score: combination of two measures

- Total governmental funds debt service as a percentage of expenditures
 - Measures the annual fixed cost burden that debt places on the government
- Net direct debt as a percentage of total governmental funds revenue
 - Measures the total debt burden on the government's revenue position rather than the annual cost of the debt, which can be manipulated by amortization structures

	Net Dir	ect Debt As %	Of Total Govern	mental Funds R	evenue
Total Governmental Funds Debt Service As A % of Total Governmental Funds Expenditures	<30	30 to 60	60 to 120	120 to 180	≥180
< 8	1	2	3	4	5
8 to 15	2	3	4	4	5
15 to 25	3	4	5	5	5
25 to 35	4	4	5	5	5
≥35	4	5	5	5	5

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Debt and Contingent Liabilities – Adjustments

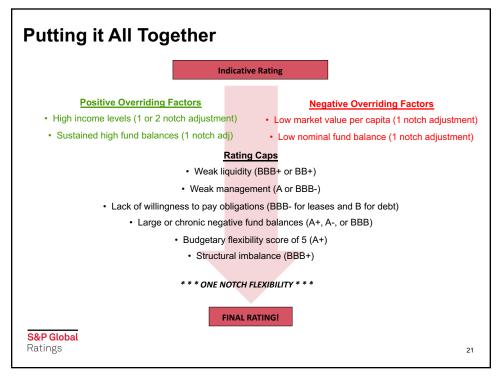
Qualitative factors with a positive impact on the initial score:	Qualitative factors with a negative impact on the initial score:
O verall net debt as a percentage of market value below3%.	Significant medium-term debt plans produce a higher initial score when included.
O verall rapid annual debt amortization, with more than 65% coming due in10 years.	Exposure to interest-rate risk or instrument provisions that could increase annual payment requirements by at least 20%.
	O verall net debt as a percentage of market value exceeding 10%.
	Unaddressed exposure to large unfunded pension or OPEB obligations leading to accelerating payment obligations over the medium term that represent significant budget pressure (see paragraph 82). If there is a plan to address the obligations, the final score worsens by one point; otherwise the score worsens by two points.
	Speculative contingent liabilities or those otherwise likely to be funded on an ongoing basis by the government representing more than 10% of total governmental revenue.

For each relevant qualitative factor, the score changes by one point, except for unaddressed exposure to unfunded pension or OPE B obligations which can worsen the final score by two points. The final debt and contingent liabilities score equals the initial score adjusted up or down based on the net effect of the qualitative factors. Metrics equal a cutoff point between two initial scores will equate to the worse score.

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S&P Global Ratings' Approach to Assessing Climate Change Risk

- 1 Overall focus on management effectiveness and planning
- 2 Sectors have unique E&C risks that apply to their assets or revenue sources
- 3 Often a qualitative assessment when lacking detailed information

Municipal Sector	Sector Specific E&C Factors
Water/Sewer Utilities	Drought planning
Electric Utilities	Carbon fuel concentration
State/Local/ Municipal Enterprises	Financial & Capital planning
All Sectors	Potential impacts to property

values

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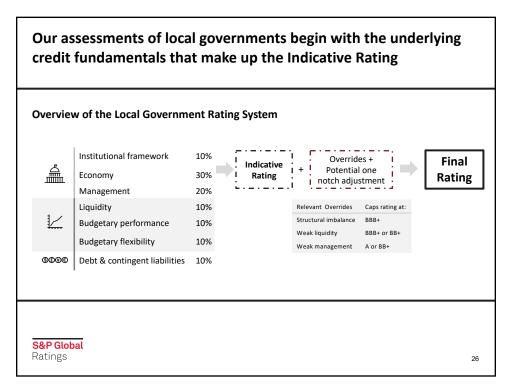
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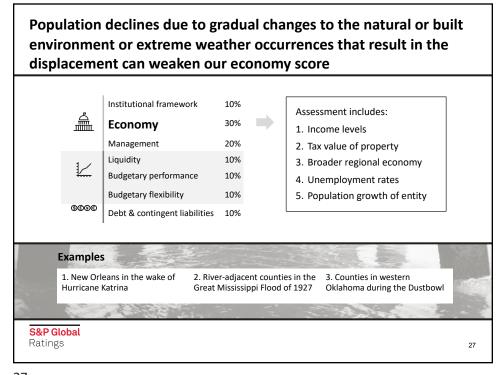
Broad Questions for Public Finance Issuers

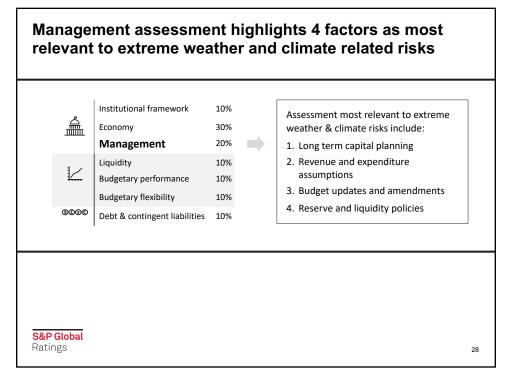
- Have you undertaken an assessment of your current vulnerabilities to natural disaster and long-term climate change risks?
- How are infrastructure assets exposed to climate change risk, and how are you mitigating any risks?
- Does your capital and financial planning incorporate any costs to address any exposures or investment in adaptation?
- How would long-term changes in the environment affect population and demographic trends, land use, employment, and other parts of your local economy?

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Insurance and FEMA reimbursements are likely to comprise the majority of cash spent towards relief, but reserves are necessary to bridge the gap



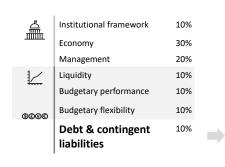
- Available Cash, Available Reserves, and Operating Results
- Consideration of cash and reserves on hand to manage event and impact on ongoing performance
- Ongoing performance may be impacted or if resiliency investments aren't made, we may consider these expenses deferred

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We recognize the potential for extreme weather risk to significantly impact a local government's issuance of new money debt or capital planning activities



Assessed on a combination of two measures:

- 1. debt service as a percentage of total governmental funds expenditures
- 2. net direct debt as a percentage of total governmental funds revenue.

Additional debt and debt service, along with overlapping (or underlying) debt, is factored in our assessment of debt as the additional debt burden is taken on to manage inclement weather risks

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Financial Management Assessment

What is the Financial Management Assessment?

- S&P Global Ratings has established an analytical methodology that evaluates established and ongoing management practices and policies in the seven areas most likely to affect credit quality.
- This assessment is based primarily on the existence and implementation of management practices, and not necessarily the results achieved by such practices.
- The purpose of the focus on policies and practices is to evaluate the potential for credit quality to move away from those currently indicated by results.

What is not included in the Financial Management Assessment?

- The FMA is not an evaluation of the competency or aptitude of individual finance professionals; nor is it an evaluation of a finance department's ability to handle unique challenges.
- The nature of the entity's governing body, the effectiveness of its governance practices, and issues of public policy pursued by the government are beyond the scope of this analysis.

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Are the organization's perspectives?	financial assumptions and projections realistic and well grounded from both long-term and recent trend
Strong	Formal historic trend analysis is performed and updated annually for both revenue and spending; regular effort is made to determine whether revenues or expenditures will deviate from their long-term trends over the next couple of years; evidence of independent revenue forecasting exists(when possible).
Standard	Optimistic assumptions exist that, while supportable, add risk; assumptions are based on recent performance, but little evidence of questioning or validating assumptions exists.
Vulnerable	Assumptions neglect likely shortfalls, expenditure pressures or other pending issues; assumptions exist which enjoy no prudent validation.
Fable 2 Budget Amendmer	or reviewing and amending the budget based on updated information and actual performance to ensure
Cable 2 Budget Amendmer Are there procedures f fiscal targets are met?	•
Fable 2 Budget Amendmer Are there procedures s	or reviewing and amending the budget based on updated information and actual performance to ensure At least quarterly budget surveillance is maintained to identify problem areas and enable timely budget adjustments; management exhibits ability and willingness to address necessary intra-year

	ave a long-term financial plan that allows them to identify future revenues and expenditures as well as sues that might affect these?
Strong	A multi-year financial plan exists where future issues are identified and possible solutions are identified, if not implemented, revenue and expenditure decisions are made primarily from a long-term perspective. Structural balance is a clear goal.
Standard	Multi-year projections are done informally; multi-year projections are done, but without discussion of pending issues, so that issues are not addressed; some one-shot actions exist, but the long-term consequences of these actions are acknowledged and communicated.
Vulnerable	No long-term financial planning exists; operational planning is done on a year-to-year (or budget-to-budget) basis; one-shot budget fixes are used with little attention to long-term consequences.
Γable 4	
Long-Term Capit	al Planning
Has the organization	n created a long-term capital improvement program?
Strong	A five-year rolling CIP with funding identified for all years exists and is linked to the operating budget and long-term revenue and financing strategies.
Standard	A five-year CIP is done, but is generally limited to projects to be funded from the current budget plus a four-year wish list; some funding for out-year projects is identified, but not all.
Vulnerable	No five-year CIP exists; capital planning is done as needs arise.

transactions; risk assessment; ir	l policies pertaining to investments, such as the selection of financial institutions for services and uvestment objectives; investment maturities and volatility; portfolio diversification; safekeeping rformance reporting, benchmarking, and disclosure?
Strong	Investment policies exist and are well defined; strong reporting and monitoring mechanisms exist and are functioning.
Standard	Informal or non-published policies exist; policies are widely communicated and followed.
Vulnerable	Absence of informal or non-published policies
Has the organization established debt (including economic develo enhancement, and derivatives; a	opment projects); maturity and debt service structure; use of security and pledges, credit
Has the organization established debt (including economic develo	pment projects); maturity and debt service structure; use of security and pledges, credit and debt refunding guidelines? Debt policies exist and are well defined; strong reporting and monitoring mechanisms exist and are functioning. If swaps are allowed, a formal swap management plan has been adopted (see "Contingent Liquidity Risks in U.S. Public Finance Instruments: Methodology

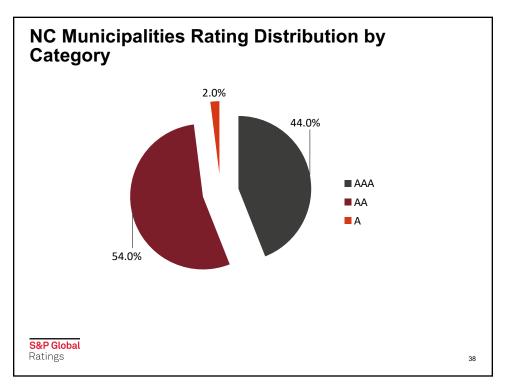
	Policies
	ished a formalized operating reserve policy, which takes into account the government's cash ts and the historic volatility of revenues and expenditures through economic cycles?
Strong	A formal operating reserve policy is well defined. Reserve levels are clearly linked to the government's cash flow needs and the historic volatility of revenues and expenditures throughout economic cycles. Management has historically adhered to it.
Standard	A less defined policy exists, which has no actual basis but has been historically adhered to it.
	Absence of basic policies or, if they exist, are not followed.

- To perform its analysis of local government financial practices, S&P Global Ratings will rely on documentation provided by the government and discussions with the organization's management.
- Relevant documents include, but are not limited to, audited financial statements and accompanying notes, budget documents, financial plans, management policy statements, procedure manuals, and periodic reports.

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NC Municipalities: Medians

As of July 2017

Table 1

North Carolina Municipalities: Medians						
	Rating					
	AAA	AA+	AA	AA-	A+	Total
Projected per capita EBI (%)	107	91	80	71	69	91
Market value per capita (\$)	116,044	111,146	90,017	72,680	49,109	111,146
Available general fund* (%)	49	58	33	34	42	41
General fund performance* (%)	4.5	1.0	(0.4)	0.5	(2.9)	1.7
Cash and expense* (%)	109	109	104	91	102	104
Carrying charge* (%)	8.7	6.7	7.7	8.8	3.0	8.2
Pension ARC plus OPEB as % expense*	5.7	3.5	5.6	4.1	7.1	4.4

 $[*]Unadjusted\ data.\ EBI--Effective\ buying\ income.\ ARC--Annually\ required\ contribution.\ OPEB--Other\ postemployment\ benefits.$

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NC Municipalities: Selected Adjustments

As of July 2017

Table 2

North Carolina Municipalities: Percent Receiving Adjustments

-	Rating					
	AAA	AA+	AA	AA-	A+	Total
Large balance (positive adjustment)	6	11	0	0	0	5
Broad and diverse (positive adjustment)	100	56	83	57	0	78
No plan for pension/OPEB (negative adjustment)	0	0	0	0	0	0

OPEB--Other postemployment benefits.

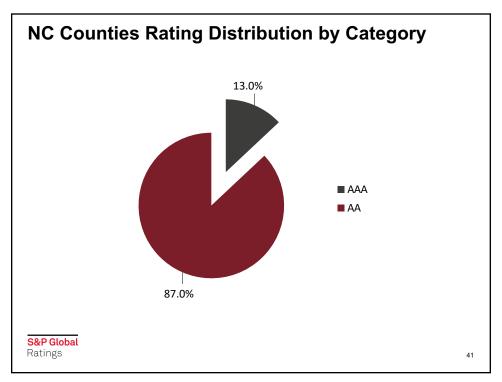
Table 3

North Carolina Municipalities: Financial Management Assessment

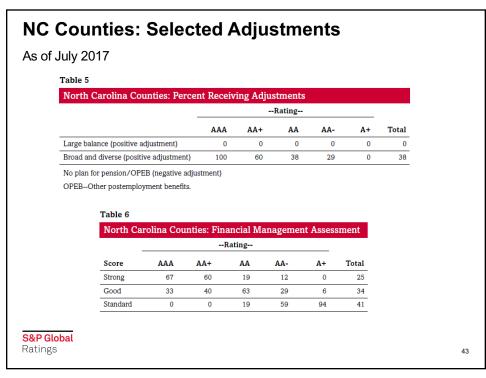
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Score	AAA	AA+	AA	AA-	A+	Total
Strong	67	11	17	0	0	34
Good	33	67	67	100	0	56
Standard	0	22	17	0	100	10

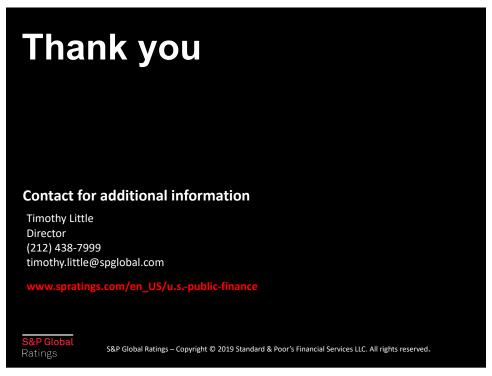
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s of July 2017						
able 4						
North Carolina Counties: Medians			Rating			
	AAA	AA+	AA	AA-	A+	Total
Projected per capita EBI (%)	110	91	79	68	61	73
Market value per capita (\$)	117,350	111,846	99,770	74,610	66,543	84,966
Available general fund* (%)	21	27	25	30	21	24
		1	Rating			
	AAA	AA+	AA	AA-	A+	Total
General fund performance* (%)	0.3	2.4	2.5	1.1	0.6	1.4
Cash and expense* (%)	40	51	48	45	36	42
Carrying charge* (%)	13.7	12.5	8.2	7.7	6.5	9.0
Pension ARC plus OPEB as % expense*	2.5	2.7	2.3	2.8	3.0	2.6
Unadjusted data. EBIEffective buying income. AR	CAnnually requir	ed contributi	on OPFR	Other poster	mnlovment	henefits





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