FitchRatings

CDIAC

Municipal Debt Essentials

Credit Ratings and Municipal Bonds

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The Rating Framework

What Drives the Rating

The Rating Framework: What Drives the Rating

Fitch's Ratings are Based on Three Key Rating Drviers (KRDs):

- **Financial Profile** : financial resilience, available fund balance, budgetary tools, operating framework, and revenue sensitivity to economic stress

- **Demographic and Economic Strength**: level, trend, and composition of economic activity and demographic factors supporting the resource base

- **Long-Term Liability Burden** : direct debt and Fitch-adjusted net pension liabilities relative to personal income, revenue, and spending

Key Rating Drivers

Financial Profile

- Available reserves
- Revenue control & volatility
- Expenditure control
- Budgetary flexibility

D&E Strength

- Population size and trend
- Unemployment
- Education attainment
- Median household income
- Economic concentration

Long-term Liability Burden

- Direct debt & pensions to personal income
- Direct debt & pensions to governmental revenues
- Carrying costs to governmental expenditures

The Rating Framework: What Drives the Rating

Focus on What Can You Control..

Financial performance – consistent performance, conservative budgeting, results consistent with budget/forecasts, contingencies in the budget, mid-year budget reviews/updates, multi-year forecasts for planning

Liabilities – Long term capital plan with breakout of sources of funds, conservative debt profile – fully amortizing, fixed rate, moderate duration, limited debt for economic development (stadiums, convention centers, etc), internal affordability guidelines.

..and Explain How you Mitigate Weaknesses you Cannot Control

The Rating Framework: What Drives the Rating

Criteria and Models

- Fitch employs a single criteria for all local government ratings, which utilizes the same model – Local Government Rating Model (LGRM)
  - Cities, counties, school districts, special districts
- Utilities, healthcare, non-profits, higher education all have separate criteria under a Revenue Master Criteria.
- After the Great Financial Crisis in 2008-2010, amid regulatory scrutiny and demands for greater transparency, shifted to more quantitative rating criteria

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LGRM

From Numbers to

A Letter

LGRM: From Numbers to a Letter

The Quantitative - Models and Scoresheets

Fitch's **Local Government Rating Model (LGRM)** generates a **Metric Profile** using 11 key metrics across the three Key Rating Drivers. The Metric Profile maps to the Rating Scale.

LGRM Weights

Key Ratings Driver	Metrics	Implied Metric Weight (%)	Implied Composite Weight [bcd] (%)
Financial Profile	Financial Resilience	35	35
	Revenue Volatility[a]	—	—
Demographic and Economic Strength	Population Trend	8	8
	Unemployment Rate	9	—
	% of Population w. Bachelor's Degree and Higher	9	—
	MHI as a % of Portfolio Median	9	26
	Population Size	4.5	—
	Economic Concentration	4.5	9
Long-Term Liability Burden	Liabilities (Direct)/Personal Income	7	—
	Liabilities (Direct)/Governmental Revenues	5	—
	Carrying Costs/Governmental Expenditures	8	21

LGRM Correspondence Table

IDR	Metric Profile/Model Implied Rating Numerical Value
AAA	10
AA+	9
AA	8
AA–	7
A+	6
A	5
A–	4
BBB+	3
BBB	2
BBB– and below	1

Source: Fitch Ratings

Local Government Rating Model (LGRM)

Version 1.2.0-2023

Issuer	Sample County	Financial Profile	0
Fiscal Year	2022	Demographic and Economic Strength	0
		Long-Term Liability Burden	0
		AAF Notching Total [4]	0
Metric Profile (excludes Additional Analytical Factors (AAF))	9.78	**Model Implied Rating**	9.78
Metric Profile Mapping (excludes Additional Analytical Factors (AAF))	AA+	**Model Implied Rating Mapping**	AA+

Issuer Position Within AA+ Rating

AAA — AA

Strong AA+	Mid AA+	Low AA+
10 to 9.67	9.67 to 9.33	9.33 to 9

	Metric			Composite		
Metric	Metric Level	Percentile	Weight	Percentile / Value	Assessment	Weight
Financial Profile						
Financial Resilience Components						
Available Reserves (FB/Expenditures: 5-Year Low) (%)	30.0				aaa	35%
Revenue Control Assessment	High					
Expenditure Control Assessment	Midrange					
Budgetary Flexibility	High Midrange					
Financial Resilience	aaa	-	100%			
Lowest Cumulative 3 Year Revenue Performance (+/-) since 2008 (%)	-1.0				Strong	0%
Revenue Volatility [1]	0.1	70%	100%			
Demographic and Economic Strength						
Trend						
Population Trend (%) [2]	0.9	47%	100%	47%	Midrange	8%
Level						
Unemployment Rate as a Percentage of National Rate (%) [5]	86.1	68%	33%	71%	Strong	26%
Population w/ Bachelor's Degree and Higher (%) [2]	33.0	58%	33%			
MHI as a % of the Portfolio Median [2]	149.8	88%	33%			
Concentration & Size						
Population Size [2][3]	115,000	100%	50%	100%	Strongest	9%
Economic Concentration [2][3] (%)	40.0	100%	50%			
Long-Term Liability Burden						
Liabilities /Personal Income (%)	5.0	53%	35%	44%	Midrange	21%
Liabilities /Governmental Revenues (%)	150.0	64%	25%			
Carrying Costs / Governmental Expenditures (%)	19.0	24%	40%			

- Metrics communicated as percentile relative to rating portfolio
- Better transparency
- Communication of "rating headroom" or distance to the next higher or lower rating
- An interactive external version of the LGRM allows market participants to model potential rating outcomes and "what-if" scenarios
- Forward-looking focus
- Analytical judgment continue to drive final rating outcome

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Analytical Judgement

Where Subjectivity Lies

Analytical Judgement

- Forward looking model Inputs into the metric profile
  - Historical data anomalies
  - Forward-looking performance shifts – e.g. fund balance
  - Non-recurring events that skew data – e.g. some pandemic economic performance

- Application of Additional Analytical Factors – not automatic but through a structured framework - to account for factors not fully captured in the model that can mitigate or exacerbate credit risks
  - Not wholly quantifiable and/or not statistically significant, not consistently available

- Model Deviations for developing situations such as:
  - Natural disaster, climate-related risk, or cybersecurity events
  - Litigation or change in law
  - Exceptionally weak liquidity

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ESG in the Rating Process

ESG Relevance Scores

CREDIT-RELEVANT ESG SCALE

How relevant are E, S and G issues to the overall credit rating?

Highly relevant, a key rating driver that has a significant impact on the rating on an individual basis. Equivalent to "higher" relative importance within Navigator.

Relevant to rating, not a key rating driver but has an impact on the rating in combination with other factors. Equivalent to "moderate" relative importance within Navigator

Minimally relevant to rating, either very low impact or actively managed in a way that results in no impact on the entity rating. Equivalent to "lower" relative importance within Navigator.

Irrelevant to the entity rating but relevant to the sector.

Irrelevant to the entity rating and irrelevant to the sector

* ESG Relevance is applicable for international scale ratings only

- ESG factors are <u>not rating factors</u> but are scored on a scale of 1-5
- If an ESG factor influenced the rating (through the rating criteria), it is disclosed that an ESG score is elevated.
- Most common elevated ESG scores for local government are in governance, related to late audits, significant/repeated key management turnover, and in some rarer cases very high concentration in oil development.

ESG Relevance Scores – Typical Issuer

Environmental (E) Relevance Scores

General Issues	E Score	Sector-Specific Issues	Reference	E Relevance
GHG Emissions and Air Quality	3	Emissions and air pollution as constraints on economy and revenue growth; enforcement/compliance with governmental/regulatory standards	Long-Term Liability Burden; Demographic and Economic Strength	5
Energy Management	3	Impact of energy resources management on economy and governmental operations, including enforcement/compliance with governmental/regulatory standards	Long-Term Liability Burden; Demographic and Economic Strength	4
Water Resources and Management	3	Water resource availability impacts on economy and governmental operations, including enforcement of governmental/regulatory standards	Long-Term Liability Burden; Demographic and Economic Strength	3
Biodiversity and Natural Resource Management	3	Impact of natural resources management on economy and governmental operations	Long-Term Liability Burden; Demographic and Economic Strength	2
Natural Disasters and Climate Change	3	Impact of extreme weather events and climate change on economy, governmental operations and policy related to natural disasters treatment	Long-Term Liability Burden; Financial Profile	1

Social (S) Relevance Scores

General Issues	S Score	Sector-Specific Issues	Reference	S Relevance
Human Rights and Political Freedoms	2	Policy framework on social stability and human rights protection	Financial Profile; Demographic and Economic Strength; Long-Term Liability Burden	5
Human Development, Health and Education	3	Impact of health and education on economic resources and governmental operations	Demographic and Economic Strength	4
Labor Relations & Practices	3	Impact of labor negotiations and employee (dis)satisfaction	Financial Profile	3
Public Safety and Security	3	Impact of public safety and security (including cyber security) on business environment and/or economic performance	Demographic and Economic Strength; Financial Profile	2
Demographic Trends	3	Impact on economic strength and stability (labor force supply, household income, population and aging, etc.)	Demographic and Economic Strength; Financial Profile	1

Governance (G) Relevance Scores

General Issues	G Score	Sector-Specific Issues	Reference	G Relevance
Political Stability and Rights	3	Impact of political pressure or instability on operations; tendency toward unpredictable policy shifts	Financial Profile	5
Rule of Law, Institutional & Regulatory Quality, Control of Corruption	3	Government effectiveness; respect for property rights and legal framework governing subnational debt issuance and bondholder rights	Financial Profile; Demographic and Economic Strength; Long-Term Liability Burden	4
International Relations and Trade	3	Trade agreements and impact on economy and revenue growth	Demographic and Economic Strength; Financial Profile	3
Creditor Rights	3	Willingness to service and repay debt; exposure to outstanding or pending litigation	Financial Profile	2
Data Quality and Transparency	3	Limitations on the quality and timeliness of financial data, including transparency of public debt and contingent liabilities	Financial Profile	1

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The Rating Process

Rating Process

Data/Information Needed for a Credit Rating*

Audited Financial Statements:
Audited Financial Statements will be requested (if not publicly available)

Budget:
Current budget and upcoming budget (if available)

Capital Plan:
A long-term strategic roadmap for the municipality/organization

Debt:
Information on any private debt

Dedicated Tax Bonds:
Pledge revenue history, bond indenture and resolution, flow of funds, information on parity/subordinate debt outstanding or plans for future issuance

Labor:
Information on labor unions/collective bargaining groups and contract terms

Management Meeting:
Enable analysts to clarify financial, operational, capital, and risk management details

Pension Plan:
If municipality operates its own pension plan, last three years of plan audits/valuations

POS:
Preliminary Offering Statement (if applicable)

Refunding analysis:
Refunding analysis (if applicable)

* If additional information is required, the analyst may contact you

Fitch Credit Rating Process

Professional service

Step 1
Initiate rating process
- Primary and back-up analyst assigned
- Determination of whether additional industry analyst expertise is required
- Analysts have a range of backgrounds, with the majority recruited from banks, insurance companies, investment houses & financial departments of major companies

Step 2
Collect publicly available information
- Company financial & operational statistics
- Reports filed with regulatory agencies
- Industry & economic reports
- Other data & insights

Thorough pre-analysis

Step 3
Perform pre-analysis & request non-public information, if appropriate
- Information provided directly by the issuer, arranger, sponsor or other involved party
- Can include background data, forecasts & other communications

Step 4
Prepare detailed questionnaire
- Prepare main topics for discussion & key questions
- Establish detailed agenda to ensure productive dialogue

Independent perspective

Step 5
Hold meeting with entity management & other stakeholder
- Face-to-face meetings, site visit and/or teleconference, when appropriate

Step 6
Perform in-depth analysis

Transparent methodology

Step 7
Hold ratings committee
- Committee members review package
- Information considered
- Consensus decision on appropriate rating, including, where appropriate, a Rating Outlook or Rating Watch designation
- Minimum size for committee is four analysts
- Committees frequently include analysts from outside the immediate asset class, sub-sector or geography since peer analysis is a central element of the process
- Committee considers relevant quantitative & qualitative issues

Step 8
Assign ratings write & publish commentary
- Once prepared, report is shown to issuer to check for factual accuracy and presence of non-public information
- Initial ratings actions
- Report published
- Commentary distributed

Ongoing surveillance

Step 9
Conduct ongoing surveillance
- Continual review of market events
- Formalized periodic review
- Continuing evaluation of industry issues & macro economic considerations

Rating process typically takes six to eight weeks

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The Rating Meeting

The Rating Meeting

Best Practices

- Understand the rating criteria so you can address weaknesses
- Be candid about challenges and risks – helps establish trust and expectations
- Highlight institutional strengths that will not change with the current administration
  - Polices on reserves, multi-year planning policies, debt affordability, etc.

Common Pitfalls

- Incomplete disclosure of material issues
- Not providing sufficient time between the meeting and the rating request
- Spending too much time during meeting on public data and not leaving sufficient time for discussion with management on more difficult issues around the budget and interim financial performance, long term planning and other information less publicly available.

Appendix -- Additional Analytical Factors

Financial Profile Additional Analytical Factors

	Rationale	Maximum Adjustment
Fiscal Oversight	For issuers addressing fiscal stress, Fitch may apply positive notching where a plausible recovery plan may indicate a higher degree of resilience than implied by the current Metric Profile. The decision to apply a notch will consider the likelihood of stabilization outcomes, where an independent control board with broad governing powers is viewed more favorably than a plan subject to budgetary execution by the local government. Upward notching under this adjustment would typically be removed when issuers are well along a fiscal recovery path, the results of which should be demonstrated in the Metric Profile or if Fitch expects that the support of the oversight board will not be sufficient to mitigate an issuer's fiscal stress.	+1 notch
Revenue Capacity	Exceptionally high market value per capita ($300,000 or higher) may suggest a greater capacity to tap into revenue-generating resources to support governmental costs and fiscal resilience than that communicated by the Metric Profile, particularly those with weaker demographic and economic metrics. If market value data are not available or are not current, Fitch may consider a positive notch for an issuer with lower than $300,000 market value per capita if Fitch has reason to believe actual market value may be above that threshold. High to midrange revenue control or a record of voter-approved revenue initiatives or other actions that underpin an expectation for similar future revenue support is required for a notch adjustment.	+1 notch
Contingent Risks	To account for actual or potential risks to material litigation or contingent liabilities, including those associated with internal service fund or enterprise operations, or the requirement for periodic reauthorization of existing revenue streams, for example, by voter approval, that account for a meaningful share of total general fund revenue.	−2 notches
Nonrecurring Support or Spending Deferrals	Material deferral of required spending and/or an existing or recent history of reliance on nonrecurring support for operations.	−2 notches
Political Risks	Demonstration or credible allegations of public malfeasance and/or corruption or a history of political interference, including from outside parties (e.g. another level of government) that raises risk to unpredictable shifts in the issuer's financial profile on a forward-looking basis.	−2 notches
Management Practices	Evidence of management ineffectiveness, including poor internal controls, lack of transparency or disclosure that includes habitually late audits, high rates of turnover, excessive brinksmanship or irresolute decision-making.	−1 notch

Source: Fitch Ratings

Appendix - Additional Analytical Factors (cont'd)

Demographic and Economic Strength — Additional Analytical Factors

	Rationale	Maximum Adjustment
Economic and Institutional Strength	Given the asymmetric nature of the Economic Concentration and Size metric, the Metric Profile may understate the expected resilience to cyclical and noncyclical stressors for certain economies. A positive notch may be applied to the city/county core of certain MSAs to reflect Fitch's view of their economic importance, measured by real metro product equivalent to 0.5% of U.S. GDP or more, presence of longstanding institutional anchors (the state capital, for example), or role as a regional employment center or predominant state employment center, typically where total employment is => 400,000. The rating committee will consider additional factors that offset these strengths, such as declining population and/or employment, in determining the application of a positive notch.	+1 notch
Revenue Concentration Risks	As most local governments' tax bases and economies are highly diversified, taxpayer and revenue concentration metrics are not statistically significant to the model. However, the unmitigated presence of taxpayer or other revenue concentration inherently increases vulnerability to shock events beyond what is captured in the economic concentration metric. As such, notching may be considered where: • A single taxpayer accounts for ≥10% of the tax base. • The top 10 taxpayers account for a high (≥35%) or very high (≥50%) percentage of the tax base. • Noncore revenues from discretionary economic activities such as tourism, real estate transfers, food and beverage, etc. generate a high (≥35%) or very high (≥50%) proportion of revenues.	−2 notches
School District Resources	The model's demographic and economic strength metrics may provide an incomplete view of the factors that can affect school district revenue, which are largely determined by state budget appropriations and funding formulas that often include enrollment as a key driver. Population trends generally drive enrollment, and therefore school district revenue, but other factors such as competition from charter and private schools and/or local tax base trends can distort the relationship meaningfully. Furthermore, the relationship between enrollment and revenue can vary depending on the specifics of a state's school funding framework, which may serve to offset or augment growth, or exacerbate risks associated with flat or declining enrollment. Given these dynamics, the rating committee may apply up to a two-notch adjustment, positive or negative, when the rating committee's expectations for revenue growth misalign with enrollment trends. Notching will be informed by historical trends and projections for enrollment and state funding. The AAF may also apply to community college districts that operate with a similar state-driven and enrollment-related operating environment.	−2/+2 notches

Source: Fitch Ratings

Appendix - Additional Analytical Factors (cont'd)

Long-Term Liability Burden — Additional Analytical Factors

	Rationale	Maximum Adjustment
Pension Funding Assumptions	The ADC is an annual payment target typically calculated in the funding valuation from each plan's specific funding policy assumptions and methods. There is no single approach to calculating an ADC, and the resulting figure reflects differing legal and policy frameworks, including on investment return assumptions/discount rates, asset smoothing, amortization, payroll growth, certain benefit provisions including cost-of-living, mortality assumptions, etc. While the effect of maintaining an investment return assumption/discount rate higher than 6.0% is captured directly within the Fitch-adjusted NPL (derived from the accounting valuation), the AAF for pension funding assumptions is intended to reflect other funding policy strengths and weaknesses that affect the ADC. Stronger funding policy assumptions are likelier to position plans to make more funding progress over time. Conversely, weaker funding policy	+/−1 notch
Pension Contributions	Fitch's minimum expectation is that issuers will make an actual pension contribution each year that fully matches the ADC for all plans the issuer participates in, based on a long-term commitment to achieve full prefunding of plan liabilities. Fitch will consider applying a downward notch adjustment for consistent payments below the level actuaries calculate or in instances where legal constraints, budgetary choices or other practices result in actual contributions routinely lower than the ADC.	+/−1 notch
Debt Structure	Although unusual for a local government, additional notching considerations may be utilized for entities with debt characteristics that heighten risks in the event of a capital markets disruption or sudden shift in the issuer's overall credit quality. In analyzing these factors, Fitch focuses on the probability and materiality of risk in relation to the local government's financial and liquidity profile. Factors that could warrant negative notching include, but are not limited to: • High levels of variable-rate debt and derivatives exposure (25% or more of total direct debt), particularly for issuers with low liquidity and revenue control. • Provisions included in liquidity or swap agreements that increase risk to counterparty performance. • Material short-term debt and bullet maturities that heighten sensitivity to capital market access.	−1 notch
Capital Demands and Affordability	A negative notch may be applied to reflect risks that may be driven by high, nondiscretionary capital demands (related to growth pressures, deferred maintenance, consent decrees, settlements, etc.), or sizable outstanding debt or pension liabilities of overlapping standalone jurisdictions.	−1 notch

Source: Fitch Ratings

FitchRatings