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MOODY'S
INVESTORS SERVICE

RATING METHODOLOGY

US Local Government General Obligation Debt

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This methodology explains how Moody's evaluates the credit quality of US local government General Obligation (GO) debt. This document is intended to provide general guidance that helps local governments, investors, and other interested market participants understand how key quantitative and qualitative risk factors are likely to affect rating outcomes for local governments that issue GO bonds. This document does not include an exhaustive treatment of all factors that are reflected in our ratings but should enable the reader to understand the qualitative considerations, financial information, and ratios that are usually most important for ratings in this sector.

This rating methodology replaces the Rating Methodology for General Obligation Bonds Issued by US Local Governments published in April 2013. While reflecting many of the same core principles that we have used in assigning ratings to this sector for many years, this updated methodology introduces a scorecard that quantifies several factors that we previously evaluated in qualitative ways. A modest number of ratings are expected to change as a result of the publication of this methodology.

The purpose of the scorecard is to provide a reference tool that market participants can use to approximate most credit profiles within the local government sector. The scorecard provides summarized guidance for the factors that we generally consider most important in assigning ratings to these issuers. However, the scorecard is a summary that does not include every rating consideration. The weights the scorecard shows for each factor represent an approximation of their importance for rating decisions. In addition, the scorecard was built based on historical results while our ratings are based on our forward-looking expectations. As a result, we would not expect the scorecard-indicated rating to match the actual rating in every case.

The refinements to our analytical approach were outlined in a Request for Comment which we published in August 2013. We received market commentary which we have sought to address where appropriate.

THIS REPORT WAS REPUBLISHED ON 2 FEBRUARY 2015 WITH A SINGLE UPDATE ON PAGE 19 PROVIDING COMMENTARY AND ADDITIONAL TRANSPARENCY CONCERNING OUR TREATMENT OF PUBLIC-PRIVATE PARTNERSHIPS (P3S) AS DEBT-LIKE OBLIGATIONS. NO OTHER ASPECT OF THIS METHODOLOGY HAS BEEN REVISED SINCE ITS EARLIER 2014 PUBLICATION DATE, NOR DOES THIS UPDATE RESULT IN ANY RATING CHANGES.

Introduction

The methodology covers debt backed by the GO pledge of a local government[1] to pay its debt service. The unlimited tax GO pledge most often provided by US local governments is a contractual "full-faith-and-credit pledge," including, either explicitly or implicitly, the local government's obligation to levy an unlimited ad valorem (based on the value of property) property tax to pay debt service. In some instances, a local government's GO bonds are secured solely by an unlimited ad valorem tax without the broader "full faith and credit pledge."In other situations, the GO pledge is subject to limits on tax rate or amount of pledge.

Despite its fundamental strength, the GO pledge has practical and legal limits. From a practical perspective, there is an economic limit on the level of taxation that a municipality's tax base can bear. From a legal perspective, the local government's mandate to provide essential public services and pay retiree pensions may also have strong claims on a government's revenue and taxing power, depending on the particular state's laws. While a default on GO debt can occur with or without a Chapter 9 bankruptcy filing, bankruptcy laws may further circumscribe the power of the GO pledge (see "General Obligation Bonds in Bankruptcy" later in this report).

While property taxes are typically the security underpinning the GO pledge, we do not restrict our analysis to the capacity of a property tax levy to cover debt service. The unconditional and open-ended nature of the GO pledge typically means a local government legally commits all its revenue-producing powers to meet debt service. Even in instances where the legal commitment is not that broad, our evaluation of credit quality includes more than just an evaluation of the local government's legally pledged resources. Rather, our analysis seeks to measure a local government's overall means and wherewithal to meet financial obligations from all of the resources at its disposal.

This methodology identifies and describes the various measures of our broad rating factors: economy/tax base, finances, management, and debt/pensions. Additionally, we describe the reasons we rate most local governments' General Obligation debt higher than many other governmental and corporate borrowers, and the types of developments that can cause a local government rating to fall outside of the normal rating distribution.

The Scorecard

The local government scorecard (see Exhibit 1 and Appendix A) is a tool providing a composite score of a local government's credit profile based on the weighted factors we consider most important, universal and measurable, as well as possible notching factors dependent on individual credit strengths and weaknesses. The scorecard is designed to enhance the transparency of our approach by identifying critical factors as a starting point for analysis, along with additional considerations that may affect the final rating assignment.

The scorecard is not a calculator. Its purpose is not to determine the final rating, but rather to provide a standard platform from which to begin viewing and comparing local government credits. It therefore acts as a starting point for a more thorough and individualistic analysis.

[1] Other types of local government bonds such as pool financings, government-owned utility revenue bonds, lease financings, and special tax bonds are covered under different methodologies. See Moody's Index of Rating Methodologies. Some of these security types, such as lease financings, are often notched off or otherwise related to the GO rating.

The scorecard-indicated rating will not match the actual rating in every case, for a number of reasons including the following:

» Our methodology considers forward-looking elements that may not be captured in historical data

» The scorecard is a summary that does not include every rating consideration

» In some circumstances, the importance of one factor may escalate and transcend its prescribed weight in this methodology

EXHIBIT 1

Scorecard Factors and Weights

Local Governments

Broad Rating Factors	Factor Weighting	Rating Subfactors	Subfactor Weighting
Economy/Tax Base	30%	Tax Base Size (full value)	10%
		Full Value Per Capita	10%
		Wealth (median family income)	10%
Finances	30%	Fund Balance (% of revenues)	10%
		Fund Balance Trend (5-year change)	5%
		Cash Balance (% of revenues)	10%
		Cash Balance Trend (5-year change)	5%
Management	20%	Institutional Framework	10%
		Operating History	10%
Debt/Pensions	20%	Debt to Full Value	5%
		Debt to Revenue	5%
		Moody's-adjusted Net Pension Liability (3-year average) to Full Value	5%
		Moody's-adjusted Net Pension Liability (3-year average) to Revenue	5%

Our scorecard metrics were intentionally limited to major rating drivers that are common to most issuers. Outside of these drivers, we may adjust the grid score for a variety of "below-the-line" adjustments, which are more idiosyncratic factors that are likely not to apply to all issuers, but that can impact credit strength. The scorecard score is the result of the "above-the-line" score based quantitatively on the above-the-line ratings factors, combined with any "below-the-line" notching adjustments. The scorecard score is a guideline for discussion, but does not determine the final rating. The rating is determined by a committee, which considers, but is not bound by, the scorecard score.

What is a local government?

A local government is a subdivision of a state, most commonly a city[2], county, or school district. The provisions establishing local governments are typically enumerated in each state's constitution. Most states have local government laws governing the authorities and responsibilities of the political subdivisions within each state.

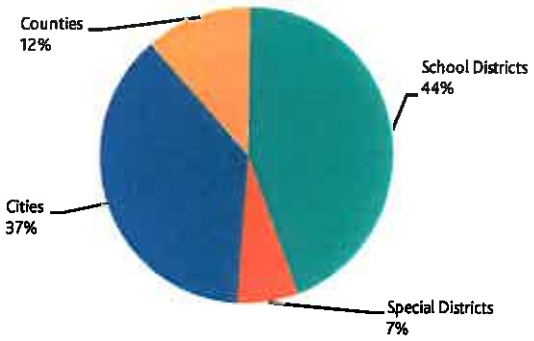
Local governments provide public services such as police and fire protection, courts, property records, public works maintenance, and water and sewer services. Cities or counties can also be responsible for

[2] We use the term "city" interchangeably with terms such as Town, Township, Village, and Borough.

public education, but this varies by states, and in most cases is provided by a separate school district dedicated to that sole function. Local governments fund these services with an array of revenues including property taxes, sales taxes, income taxes, state and federal aid, departmental income such as fines and fees, or direct charges for service.

States or subdivisions frequently create additional local governments such as authorities or special districts. These could include separate government-owned water, sewer, sanitation, or electric utilities, or public library, park, community college, or community development districts.

EXHIBIT 2
Moody's Rated Local Governments by Sector



Source: Moody's

What is a GO bond?

An unlimited tax GO (GOULT) bond is typically a security backed by the full-faith-and-credit pledge and total taxing power of the local government. The GOULT pledge means the local government promises to do everything it can to meet debt service. The specific definition of the pledge is laid out in state laws governing local government debt issuance; the precise legal characteristics of a GO bond can vary by state and sector (school district, county, etc.) depending on the structure of the local government and other technical issues.

Most often, the GO security offers the local government's full faith and credit pledge, including the levying of ad valorem taxes without limit as to rate or amount, for the timely payment of debt service (an unlimited tax, or GOULT pledge).

An illustration of the variety in the meaning of "General Obligation" arises in California, where a local government "General Obligation" bond is not secured by the full faith and credit of the local government, but solely by an unlimited ad valorem tax. We rate California local government GO bonds under this methodology, and even though they do not benefit from the broader pledge that secures GO bonds in many other states[3], this is not necessarily a weakness.

In some instances, GO bonds are secured by a limited rather than unlimited property tax pledge. The limits may be on the specific debt service levy or tax rate, or on the taxing jurisdiction's overall

[3] The primary rationale for this inclusion is threefold: First, our GO ratings reflect a comprehensive evaluation of a municipality's overall credit quality, which includes more than just an evaluation of pledged, legal security. Most significantly, we believe a California local government's overall financial profile and general management wherewithal can provide meaningful additional indicators of GO bond default probability. Second, the stronger a local government's overall, general credit quality, the less likely the local government will ever seek bankruptcy court protection. Third, our GO methodology is sufficiently flexible to recognize the unique strengths and weaknesses of each state's particular version of GO bonds, including California's, with "below-the-line" adjustments. Such adjustments are discussed later in this report.

property tax levy or total tax rate. We use our GO methodology for evaluating such limited tax General Obligation (GOLT) bonds in the same manner as unlimited tax GO bonds, but we may notch downward from the GOULT rating (whether an implied or public rating) to reflect the narrower, limited security provided by the GOLT pledge.

Moody's assesses the relative strength of unlimited versus limited tax securities on a case-by-case basis, considering, among other things, the legal provisions that protect bondholders' potential claims on tax revenue in the event of a default. We also consider the degree to which a currently levied, limited property tax rate is below the legally allowed maximum rate, and the amount of any additional available or pledged revenues beyond property taxes to pay debt service.

Some types of revenue bonds or other structures can receive a GO rating based on either a "double-barrel" pledge (meaning the GO as well as a second security are both explicitly pledged) or a municipality's legal guarantee to cover a separate entity's debt, provided we determine the legal enforceability of the guarantee and the structural mechanics assure the issue is sufficiently insulated from the risk of payment default by the underlying obligor.[4]

Note that state-level GO bonds do not typically involve ad valorem taxes and are rated under our separate state methodology[5].

General Obligation Bonds in Bankruptcy

The enforceability of the GO pledge can change once a municipality enters a Chapter 9 bankruptcy. Treatment of GO bonds can vary by state, with some states designating GO debt service as a protected payment stream, others prohibiting bankruptcy altogether, and some leaving the question of how GO bonds should fare in a bankruptcy unanswered.

When a local government petitions for Chapter 9 bankruptcy protection, the debtor is subject to an "automatic stay" that halts all outflows, freezes all creditor recovery actions against the debtor, and prevents the borrower from liquidating assets to pay claims.

Bankruptcy courts have generally interpreted "special revenues" as exempt from the automatic stay, and therefore of stronger credit strength than other debts in a bankruptcy situation. Unless otherwise specified by state law or a jurisdiction's bankruptcy court, we believe GO bonds would generally not be treated as special revenues. In addition, certain states provide a statutory lien for GO bonds that makes it likely that courts would treat them as secured debt. In other states it is unclear whether GO claims could be considered unsecured and therefore enjoy less protection than secured debt.

Many Chapter 9 bankruptcy provisions remain untested, so it is difficult to make generalizations about how GO bonds will fare in bankruptcy. We expect the treatment of GO bonds in bankruptcy to evolve as precedents are set. It is also important to note that default and bankruptcy are separate events. A default can occur without a jurisdiction ever entering Chapter 9 proceedings, and conversely, a local government can enter bankruptcy without defaulting on its GO debt.

For more information, please refer to our Special Comment, Key Credit Considerations for Municipal Governments in Bankruptcy.

[4] See "Rating Transactions Based on the Credit Substitution Approach" (March 2013)

[5] See US States Rating Methodology (April 2013)

Fundamental Strengths of the Local Government Sector

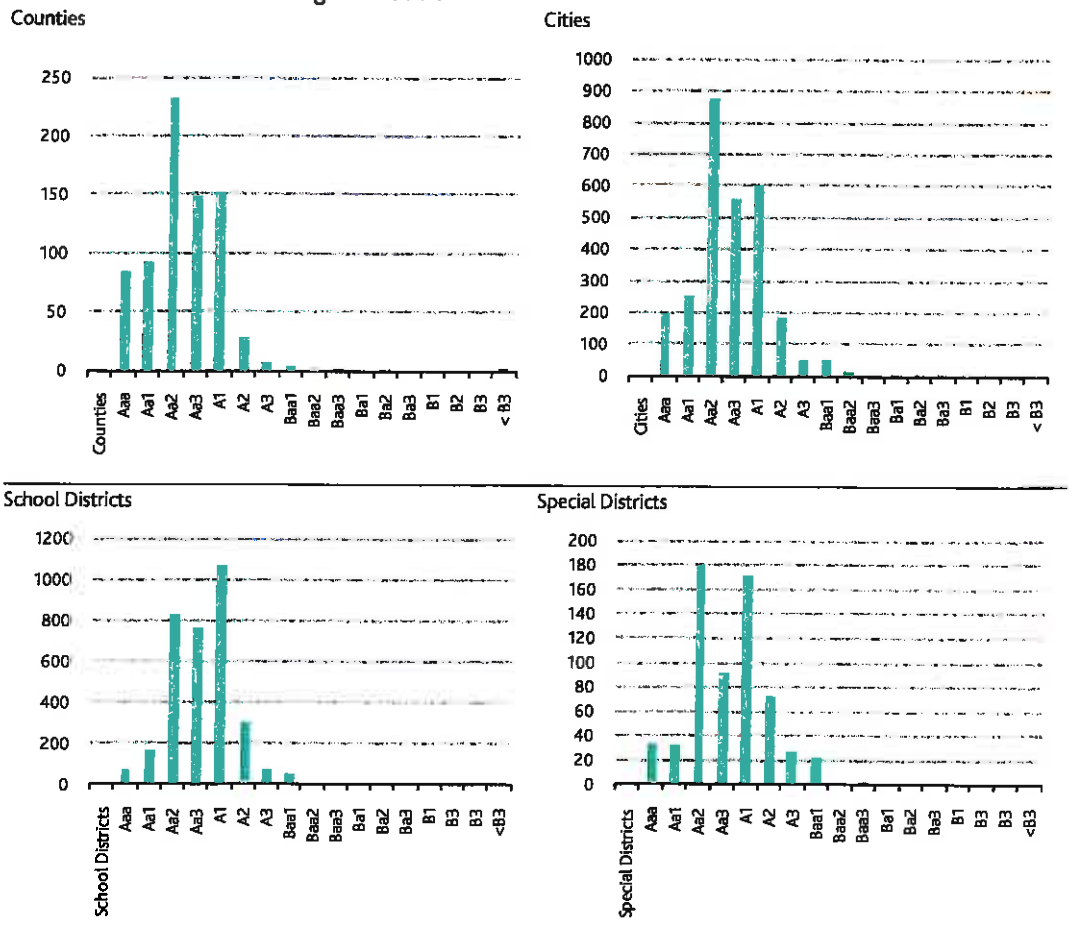
US local governments are generally highly-rated compared to other types of government entities and corporations. As of this report publication date, only about 35 local government GO bonds are rated below investment-grade, out of a rated universe of approximately 8,000.

The high average rating assigned to local government general obligation bonds reflects credit strengths which typically include the strong institutional framework, predictability of property tax revenues, characteristic use of amortizing debt structures and the strengths resulting from municipal governments' perpetual status, and is consistent with historical and expected rating performance. Default experience for General Obligation bonds is exceedingly limited. We believe the occurrence of defaults will remain rare and the great majority of local governments will continue to warrant investment grade ratings.

This performance record and a number of fundamental strengths anchor the majority of ratings in the A and Aa range.

EXHIBIT 3

Local Government GO Rating Distribution



Source: Moody's

The potency of ad valorem taxing power

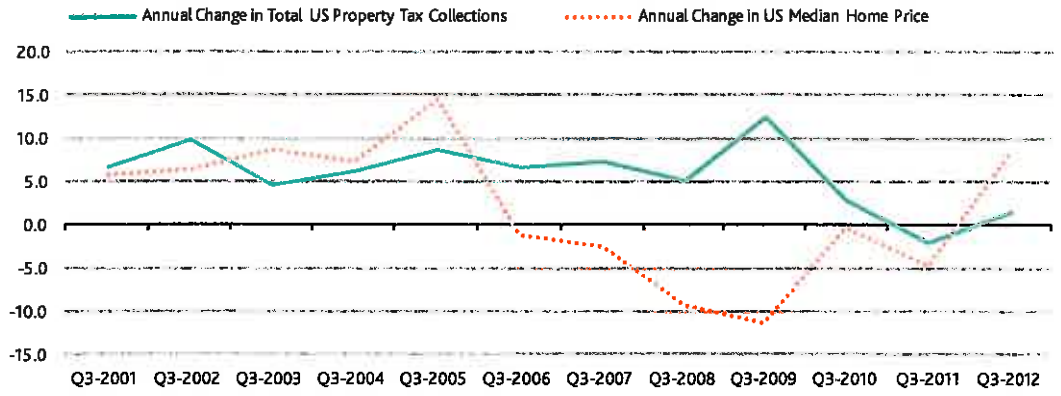
The pledge to levy ad valorem property taxes to repay bondholders has proven its durability over many decades.

Ad valorem taxes -- the bedrock of US local government finance -- are by nature predictable. Property taxes are historically more stable through economic cycles than sales taxes, income taxes, or other local government revenues.

Even during depressed real estate cycles such as the US housing downturn over the last several years, property taxes have remained generally stable. One reason for this is that a local government first determines the amount that it wants to raise (the levy) and then sets the tax rate (millage) on the taxable properties in its jurisdiction. If taxable property values decline, municipalities usually have the legal ability to increase the millage to achieve an unchanged or increased levy. Further, changes in the market value of taxable properties usually translate to the assessed value on municipalities' tax rolls on a lag, and to the property tax bills on a further lag, helping to smooth economic cycles (see Exhibit 4). Though some local governments were hit with double-digit declines in tax base in the years following 2008, the ability to adjust millage, in combination with the time-lag buffer, enabled most to adjust and re-balance operations.

EXHIBIT 4

Property Tax Receipts Lag Valuations



Source: Census Bureau, National Association of Realtors, Moody's Analytics

Amortizing debt structures

Most local government debt service structures are level or declining. Local governments typically pay down some principal with each year of debt service. Spikes in debt principal are rare.

This type of debt structure mitigates or eliminates several risks prevalent in other sectors, including rollover risk, balloon repayment risk and interest rate risk (if the coupon is fixed, which is the typical municipal structure). Local governments generally pay debt service according to a predictable schedule and, unlike many sovereign and corporate bond borrowers, generally do not rely on market access (i.e., new borrowing) to meet debt service payments.

Several of the local government sector's largest General Obligation defaults arose because of municipalities that exposed themselves to unstable debt structures (Jefferson County, AL) or carried an unmanageable debt burden because of a guarantee issued on another entity's debt (City of Harrisburg, PA).

Stable institutional framework

The local government General Obligation pledge has proven extremely strong in part because local governments' legal, institutional, and practical environment is stable and protective.

- Most local governments are perpetual entities and monopoly providers of essential, legally mandated services such as police and fire protection, jails, and education.
- Local governments in nearly all states operate under balanced budget requirements. Strictly speaking it is illegal for most entities to operate with imbalanced budgets.
- Most entities are required to submit to annual audits, and budgets are subject to public scrutiny.
- Many states limit local government debt burdens.
- Many states operate fiscal oversight programs that monitor local government behavior and in some cases take over financially struggling entities. School districts in particular are typically closely linked to their states through oversight and operational mandates.

The local government sector's elemental strengths lead to high ratings on average.

Discussion of Key Scorecard Factors

A primary purpose of the methodology and scorecard is to enhance the transparency of our rating process by identifying and discussing the key factors and subfactors that explain our local government ratings and how these factors and subfactors are used. The scorecard is not intended to be an exhaustive list of factors that we consider in every local government rating, but should enable the reader to understand the key considerations and financial metrics that correspond to particular rating categories. We reiterate that our rating process involves a degree of judgment, or consideration of analytical issues not specifically addressed in the scorecard, that from time to time will cause a rating outcome to fall outside the expected range of outcomes based on a strict application of the factors presented herein.

To arrive at a scorecard-indicated rating, we begin by assigning a score for each subfactor. We've chosen quantitative measures that act as proxies for a variety of different tax base characteristics, financial conditions, and governance behaviors that can otherwise be difficult to measure objectively and consistently. Based on the scores and weights for each subfactor, a preliminary score is produced that translates to a given rating level.

We may then move the score up or down a certain number of rating notches based on additional "below-the-line" factors that we believe impact a particular local government's credit quality in ways not captured by the statistical portion of the scorecard. This is where analytical judgment comes into play. We may also choose to make adjustments to the historical subfactor inputs to reflect our forward-looking views of how these statistics may change.

The scorecard score, combined with below-the-line notching, then provides an adjusted score. This adjusted score is not necessarily the final rating. Because some local governments' credit profiles are idiosyncratic, one factor, regardless of its scorecard weight, can overwhelm other factors, and other considerations may prompt us to consider ratings that differ from the scorecard-indicated rating.

Below we discuss each factor and subfactor, as well as the below-the-line adjustments and other considerations we analyze within each category of the methodology. From time to time, we may amplify or further clarify the various subfactor considerations and below-the-line adjustments within this methodology.

Factor 1: Economy/Tax Base (30%)

	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Tax Base Size: Full Value	> $12B	$12B ≥ n > $1.4B	$1.4B ≥ n > $240M	$240M ≥ n > $120M	$120M ≥ n > $60M	≤ $60M	10%
Full Value Per Capita	> $150,000	$150,000 ≥ n > $65,000	$65,000 ≥ n > $35,000	$35,000 ≥ n > $20,000	$20,000 ≥ n > $10,000	≤ $10,000	10%
Socioeconomic Indices: MFI	> 150% of US median	150% to 90% of US median	90% to 75% of US median	75% to 50% of US median	50% to 40% of US median	≤ 40% of US median	10%

Why It Matters

The ultimate basis for repaying debt is the strength and resilience of the local economy. The size, diversity, and strength of a local government's tax base and economy drive its ability to generate financial resources. The taxable properties within a tax base generate the property tax levy. The retail sales activity dictates sales tax receipts. The income earners living or working in the jurisdiction shape income tax receipts. The size, composition, and value of the tax base, the magnitude of its economic activity, and the income levels of its residents are therefore all crucial indicators of the entity's capacity to generate revenues.

Also crucial in this area of our analysis is the type of tax base and economy (residential bedroom community or an industrial, retail, or services center). Based on the type of local economy, Moody's will focus its questions and comparisons to include topics like commuting patterns, office or retail vacancy rates, or residential building permit activity, among other things.

While economic factors are important in our analysis, as demonstrated by the factor's 30% weight, the depth and breadth of a tax base is not the sole determinant of a credit rating. We have seen some local governments either unwilling or unable to convert the strength of their local economies into revenues. Tax caps, anti-tax sentiment, the natural lag between economic activity and its conversion into government revenues, and a variety of other factors have the potential to place obstacles between municipal governments and the wealth generated by their local economies. For these reasons, we consider other factors as well. Our scorecard inputs into Finances and Management capture the strengths of those governments that are able to translate economic weight into credit strength, while not assuming all do.

Subfactor 1.a: Tax Base Size (10%)

Input: *Full value, i.e. the market value of taxable property accessible to the municipality. Often calculated as a multiple of assessed value, or the book value of properties on the tax rolls. Methods for calculating vary by state.*

The tax base represents the well from which a local government draws its revenues. A larger tax base (measured by full value, or the total taxable value of property) in general offers a local government a broader, more flexible, and more diverse pool from which it can draw revenues. Smaller tax bases are more susceptible to shocks such as natural disasters or the closure of a major employer that destroy a great portion of taxable property values. Larger tax bases are better able to absorb these kinds of shocks. Smaller tax bases also tend to be less diverse and more dependent on a small number of properties.

Because an ad valorem pledge often underpins the GO security, the tax base is in a sense the ultimate repayment source for GO bondholders.

Subfactor 1.b: Full Value Per Capita (10%)

***Input:** Full value divided by population*

Full value per capita scales the taxable property available to generate resources to a per resident metric. The per resident property wealth of the tax base depicts the availability of tax-generating resources relative to the users of the services those resources fund.

We believe looking at the magnitude of taxable property in tandem with taxable property per capita gives a clearer picture of tax base strength than looking at the magnitude of taxable property alone. Some entities, such as the City of Detroit, MI, have large tax bases on an absolute basis but low full value per capita, illustrating the difficulties in funding services for the city's population using the resources of the base. Alternatively, the City of Industry, CA has a very high full value per capita despite moderate income levels, due to a substantial commercial presence that is a robust component of the tax base.

Subfactor 1.c: Median Family Income (10%)

***Input:** Median family income as a percentage of the US median (source: American Community Survey[6])*

An important measure of the strength and resilience of a tax base is the income level of its residents. A community with higher wealth levels may have relative flexibility to increase property tax rates in order to meet financial needs. A wealthier community has greater spending power to sustain sales tax revenue and provide the demand necessary to support growth in the commercial and service sectors.

We emphasize median family income over per capita income because per capita income is more easily skewed by low-income populations that are not necessarily reflective of the strength of the tax base, such as the student residents at a university or inmates at a prison. To illustrate, the per capita income of the City of Charlottesville, VA was equal to 90% of the US median as of 2010, a figure we believe understates the city's wealth because of the presence of the 21,000-student University of Virginia. Both median family income and full value per capita portray a stronger tax base than the PCI indicates for Charlottesville.

Median family income also recognizes the economies of scale achieved when people share a household.

Below-the-line adjustments

Institutional presence (positive): Some types of properties such as universities or military bases can offer stability and tax base strength. Because these properties are often tax-exempt, they may not be captured in full value or full value per capita; in fact, they often depress full value per capita. We may notch a score up if tax base measures fail to capture the anchoring influence of an institution. Institutional presence is exhibited when the local government is the state capital or a long-term, stable entity such as a university or military base that contributes 10% or more of a local government's population.

Regional economic center (positive): Economic and employment centers may generate revenues from daytime visitors such as employees or shoppers. Traditional tax base measures don't necessarily reflect the characteristics of these revenue-generating people if they are not permanent residents. We may notch a score up if a local government has a substantially greater daytime population than nighttime or weekend population.

[6] The American Community Survey has replaced the Census as surveyor of incomes in the US.

Economic concentration (negative): Local governments that generate a significant portion of their revenues from a single taxpayer or industry are particularly vulnerable to a loss of those revenues, especially if that industry is weak or volatile. Sizable economic concentrations could cause us to notch a score down.

Outsized unemployment or poverty levels (negative): This factor is designed to adjust the final score if a local government's socioeconomic characteristics are unusually weak in ways not already reflected in the scorecard. High unemployment or poverty levels may strain a local government's ability to tap its tax base for new revenues, or in extreme cases sustain existing tax collections. High levels may also pose additional demands for services.

Other considerations not on the scorecard that may lead to scorecard adjustments

A number of other factors do not appear on the scorecard or as a below-the-line adjustment, but are considered in our ratings and are frequent topics of discussion in our analysis.

- Per capita income (source: American Community Survey)
- Composition of workforce/employment opportunities
- Proportion of tax base that is vacant or exempt from taxes
- Median home value (source: American Community Survey)
- Trend of real estate values
- Population trends
- Property tax appeals outstanding
- Unusually significant tax base declines or growth

Factor 2: Finances (30%)

	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Fund Balance as % of Revenues	> 30% > 25% for School Districts	30% ≥ n > 15% 25% ≥ n > 10% for SD	15% ≥ n > 5% 10% ≥ n > 2.5% for SD	5% ≥ n > 0% 2.5% ≥ n > 0% for SD	0% ≥ n > -2.5% 0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD	10%
5-Year Dollar Change in Fund Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%
Cash Balance as % of Revenues	> 25% > 10% for School Districts	25% ≥ n > 10% 10% ≥ n > 5% for SD	10% ≥ n > 5% 5% ≥ n > 2.5% for SD	5% ≥ n > 0% 2.5% ≥ n > 0% for SD	0% ≥ n > -2.5% 0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD	10%
5-Year Dollar Change in Cash Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%

Why It Matters

A local government's fiscal position determines its cushion against the unexpected, its ability to meet existing financial obligations, and its flexibility to adjust to new ones. Financial structure reflects how well a local government's ability to extract predictable revenues adequate for its operational needs are matched to its economic base.

The Finances category comprises two major components:

» cash reserves and other liquid resources

» the financial trend, which reflects on the quality of financial operations, the local government's ability to adjust to changing circumstances, and the potential for future stability or instability

Moody's financial analysis includes a review of historical financial performance as an indication of a local government's ability to weather budgetary pressures stemming from economic downturns or other factors. Our analysis focuses on multiyear financial trends, rather than performance in any given year, to indicate financial health over the medium term. Financial flexibility is a key area of analysis, as it provides insight into a local government's ability to maintain or augment its financial position going forward, ensuring a sufficient buffer to address any unexpected contingencies.

Moody's assessment of management includes a comparison of budget versus actual performance trends, focusing on the accuracy of both revenue and expenditure forecasts. Revenue forecasting is a key consideration, as overly optimistic revenue budgeting can lead to shortfalls within a fiscal year. The strongest financial managers work with information that is updated on a regular basis. For instance, property tax revenue projections will be more reliable if they are based on historic trends and also include reasonable assumptions about the future of the local real estate market, the direction of national interest rates, and the local government's likely tax collection rate. Similarly, strong sales tax revenue projections incorporate recent actual trends and indicators of likely future purchasing demand – such as population trend numbers, expected unemployment rates and the impact of current and expected nearby retail competition. The strongest management teams have a solid track record of meeting projections in key budget line items over several years.

Finally, school districts, as noted earlier, are local governments dedicated to a single purpose, often operating under extensive state supervision and with correspondingly limited revenue-raising abilities derived from a mix of property taxes and state aid—also state-controlled. School districts tend to have more predictable revenue composition and cost structures than most other types of local governments. Moody's has accordingly developed two separate sets of financial scores, discussed below, to reflect the often less flexible but more stable financial position particular to school districts.

Subfactor 2.a: Fund Balance (10%)

Input: *Available fund balance (Operating funds assets minus operating funds liabilities, adjusted for other resources or obligations that are available for operating purposes) as a percentage of operating revenues*

Fund balance describes the net financial resources available to an entity in the short term. The input for this factor isn't simply General Fund balance; we include all reserves that our analysis finds is available for operating purposes. The specific funds that will be included will vary by credit, although almost all will include at least the General Fund unassigned plus assigned fund balance.

The fund balance communicates valuable information about both the past and the future. The existing balance depicts the cumulative effects of the local government's financial history. It also identifies the liquid resources available to fund unforeseen contingencies as well as likely future liabilities.

The strength of a given level of fund balance varies depending on the particular local government and its respective operating environment. Larger balances may be warranted if budgeted revenues are economically sensitive and therefore not easily forecasted, or to offset risk associated with tax base concentration, unsettled labor contracts, atypical natural disaster risk, and pending litigation. Alternately, municipalities with substantial revenue-raising flexibility may carry smaller balances without detracting from their credit strength; this weakness is offset by their ability to generate additional resources when necessary.

We include both restricted and unrestricted fund balance unless there is reason to believe the restricted portions are not usable for operating purposes. For groups of local governments that do not follow Generally Accepted Accounting Principles accounting standards, we adjust the fund balance to improve comparability. For example, with New Jersey credits, we include in fund balance receivables that under state statutory accounting are stripped out of fund balance, but would be considered part of fund balance under GAAP accounting.

Our scorecard allows for school districts to carry lower fund balances than cities and counties at the same rating level. This is consistent both with existing medians and with our belief that school districts by nature need less fund balance to operate consistently. School districts generally have a more predictable funding composition and more transparent schedule of cash outflows than cities or counties. Cities and counties often provide social services whose costs can spike unexpectedly, and are also typically more reliant on less-predictable revenue sources such as sales taxes, fines, and fees.

Subfactor 2.b: 5-Year Dollar Change in Fund Balance as % of Revenues (5%)

***Input**: Available fund balance in the most recent year minus available fund balance five years earlier, as a percentage of operating revenues in the most recent year*

The strength of local government financial operations encompasses many elements, some of which interact: whether (and how much of) reserves are appropriated into the budget, how conservative the budget projections are, and how management reacts midcourse to variances from the original assumptions.

The most important aspect of financial operations is the local government's ability to achieve structural balance: long-term revenues matching long-term spending. The focus here is on whether financial reserves are increasing in step with budgetary growth.

We measure results as the dollar change in fund balance over the past five years, expressed as a percentage of the most recent year's revenues. We believe that a five-year window is generally representative of a full economic cycle.

For issuers that have maintained a stable fund balance throughout the five-year period, the metric is likely to come out at the "A" level, in the 0% to 10% range. If rating committee feels that the "A" score does not adequately reflect the credit strength of the issuer's five-year fund balance history, the committee can add a half-notch or full notch up in "Other analyst adjustment to Finance factor."

Another adjustment to the scorecard may be made if the change in fund balance was due to planned capital spending. Local governments frequently build capital reserves to pay for projects instead of, or in addition to, borrowing. In this case, the analyst may adjust the calculation to reflect ongoing operating reserves, rather than capital reserves that are likely to be spent on long-term projects.

Subfactor 2.c: Cash Balance (10%)

***Input**: Operating funds net cash (cash minus cash-flow notes) as a percentage of operating revenues*

Fund balance is an accounting measure subject to the modified accrual accounting prescribed by the Governmental Accounting Standards Board. While fund balance and cash are usually correlated, accruals can often lead to divergence between the two. A large receivable for delinquent taxes, for instance, can lead to an ostensibly high fund balance position and a weaker cash position; yet in this case, the fund balance position is less indicative of credit quality than the cash position.

Cash (net of notes payable within one year) represents the paramount liquid resource without regard to accruals.

For the same reasons we believe school districts can carry less fund balance than cities and counties at the same rating level, we believe school districts can carry less cash too.

We believe evaluating cash and fund balance in tandem is more informative than evaluating either in isolation. Our approach mutes some of the effects of modified accrual accounting while still recognizing the non-cash resources that are nonetheless likely accessible in the near-term.

Subfactor 2.d: 5-Year Dollar Change in Cash Balance as % of Revenues (5%)

***Input**: Operating funds net cash in the most recent year minus Operating funds net cash five years earlier, as a percentage of operating revenues in the most recent year*

This factor seeks to reflect changes to a local government's cash position distinct from its fund balance. Accrual accounting can sometimes depict a story that obscures some details of financial operations. The trend in the local government's cash balance gives us additional information about financial operations that may be veiled by accrual-driven changes in fund balance.

Below-the-line adjustments

Outsized enterprise or contingent liability risk (negative): We may notch a score down by one or several notches if a local government operates, has guaranteed the debt of, or is otherwise exposed to an enterprise or operation that poses outsize risk relative to the local government's own operations. This risk could reflect a General Obligation guarantee of an independent entity's debt (such as the City of Harrisburg, PA's guarantee of an incinerator authority's debt) or the local government's operation of an enterprise, even if currently self-supporting. The adjustment strives to reflect the potential impact of an enterprise's debt, debt structure, or legal issues that could limit the flexibility of the general government in the event it had to cover the enterprise's debt or operations.

Unusually volatile revenue structure (negative): Volatile or unpredictable revenue sources can present challenges to budgetary balance and stable fund balance and cash reserves. We may notch a score down if volatile, unpredictable, or economically sensitive revenue sources comprise 50% or more of operating funds revenues, or if any major revenue sources has changed by 10% or more in any one year of the past five.

Other considerations not on the scorecard that may lead to scorecard adjustments

- Questionable balance sheet items that may distort fund balance
- Large portion of fund balance that is restricted or unusable
- Labor contracts that materially affect credit strength

» Limited revenue raising ability: restrictive property tax cap, constraints on capturing tax base growth, or other levy-raising limitation

» Limited ability to cut or control expenditures: limitation constrains budgetary flexibility to a degree not already captured in the scorecard

» Heavy fixed costs, including contractually fixed costs such as pension payments

Factor 3: Management (20%)

	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Institutional Framework	Very strong legal ability to match resources with spending	Strong legal ability to match resources with spending	Moderate legal ability to match resources with spending	Limited legal ability to match resources with spending	Poor legal ability to match resources with spending	Very poor or no legal ability to match resources with spending	10%
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures	> 1.05x	1.05x ≥ n > 1.02x	1.02x ≥ n > 0.98x	0.98x ≥ n > 0.95x	0.95x ≥ n > 0.92x	≤ 0.92x	10%

Why It Matters

Both the legal structure of a local government and the practical environment in which it operates influence the government's ability to maintain a balanced budget, fund services, and continue tapping resources from the local economy. The legal and practical framework surrounding a local government shapes its ability and flexibility to meet its responsibilities.

The laws of each state establish a framework for its political subdivisions that determines what revenues they are empowered to raise and how much flexibility they have in increasing them, as well as what services they are required to provide and how much flexibility they have in cutting them.

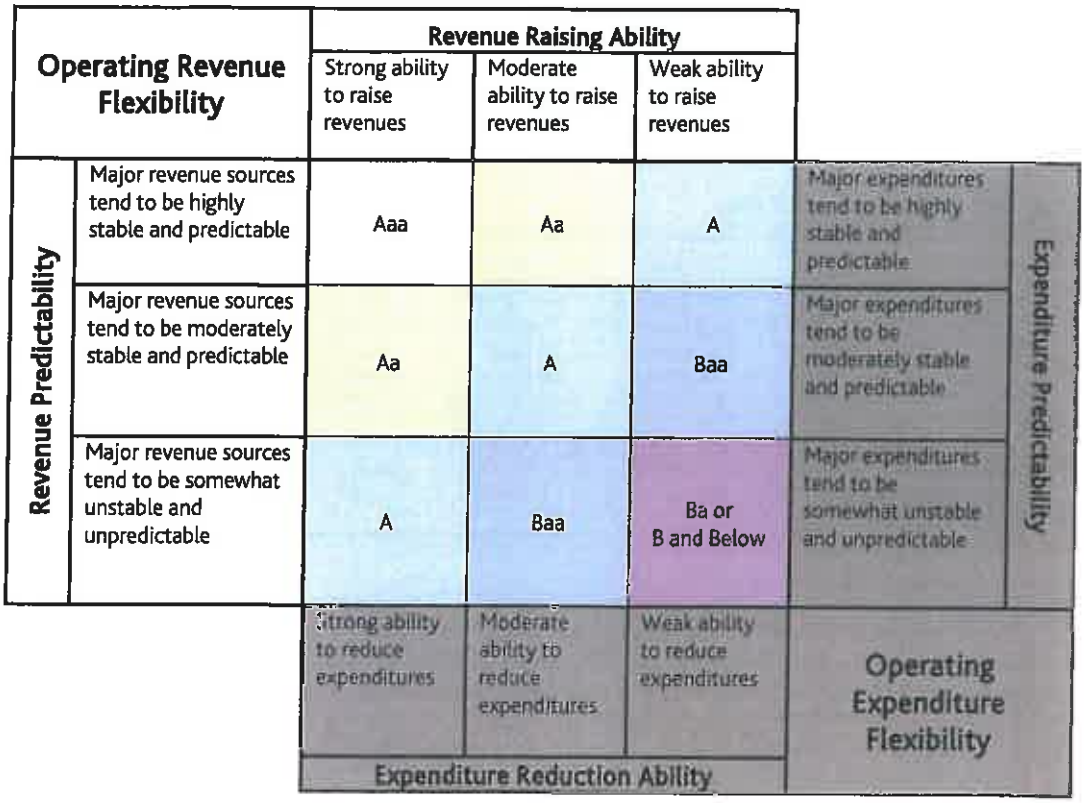
Subfactor 3.a: Institutional Framework (10%)

***Input**: An input of Aaa through B and below determined for each sector/state combination annually*

This score measures the municipality's legal ability to match revenues with expenditures based on its institutional apparatus: the constitutionally and legislatively conferred powers and responsibilities of the local government entity.

We determine one score for every state and sector combination. See link here for the scores. For example, all school districts in Ohio will have the same institutional framework score. Each year, we determine the institutional framework score to apply to all local governments in that state and sector based on the state/sector's legal edifice and any potential changes to it.

The following rubric acts as a launching point for these discussions:



The interplay between legally dictated resources and responsibilities contributes to the stability of a local government's credit profile and its capacity to match revenues to expenditures over time. A local government with a stable institutional framework is less likely to face an abrupt change in its obligations without the corresponding ability to meet those obligations.

Factors that drive the institutional framework score:

» Tax caps[7]

» Organized labor

» Difficulty of increasing revenues (i.e., subject to public approval)

» Predictability of costs (such as charter school tuition)

» State-imposed limitations on fund balance or reserves

We know that applying a single institutional framework score to all local governments in a state and sector will inevitably lead to exceptions. For instance, a struggling school district in a state that may ordinarily provide a weak institutional framework could gain a stronger framework if placed under state supervision or receivership. We will appropriately score these exceptions through adjustments below the line.

[7] Tax caps matter even if they don't limit increases in property taxes to pay for debt service. A limitation on revenue raising can restrict financial flexibility and make it difficult to grow reserves, hampering credit even for an unlimited tax General Obligation pledge.

Subfactor 3.b: Operating History (10%)

Input: *The average of operating revenues divided by operating expenditures in each of the past five years*

While institutional framework communicates the context of a municipality's legal ability to match revenues and spending, the operating history communicates the local government's demonstrated willingness to utilize that ability.

This factor measures the five-year average of the ratio of operating revenues to operating expenditures. A ratio of greater than 1.0 indicates a budget surplus on average, a ratio of 1.0 indicates balanced operations, and a ratio of less than 1.0 indicates a sustained deficit.

A local government's success in navigating the legal, political and practical environment in which it operates depends on a multitude of factors, including management's mastery in understanding its resources and managing its responsibilities, public and executive support for its plans, and its willingness to use the tools at its disposal.

We do not believe a single playbook prescribes how best to manage a budget. Rather, we assess management's success in planning and adjusting under a mosaic analysis based foremost on results: does the evidence show a trend of operating surpluses, operating deficits, or are the results mixed?

When evaluating a credit, we seek to understand the probable impact of fund balance policies, multi-year financial or capital planning, liquidity management, accuracy of budget forecasts, and willingness to make midyear adjustments. Reliance on non-recurring, or "one-shot" revenues, such as proceeds from the sale of assets, windfall delinquent tax collections, or the use of fund balance as a revenue source, leaves the municipality vulnerable should these one-time revenues fail to materialize in the future. Ultimately, we believe actual results are the best indicator of the effectiveness of all these factors. The five-year operating history shows whether the local government's financial position is strengthening or weakening, and whether management has been effective at planning for the future and adjusting when things haven't gone as planned.

Below-the-line adjustments

State oversight or support (positive or negative): Control boards, receivership, emergency management, or other forms of state oversight can alter a municipality's institutional framework and differentiate its resources and responsibilities from others in its state and sector. Oversight structures can make it easier or more difficult to issue debt, raise taxes, or restructure labor contracts. We may notch up, or in some cases down, when state intervention changes a local government's legal and practical landscape.

Unusually strong or weak budget management and planning (positive or negative): We recognize that a five-year operating history will not always tell the whole story of a local government's willingness to achieve balanced operations. We may notch a score up or down if we believe a local government's financial planning and budget management are unusually strong or weak, in ways not reflected in the recent financial trend or existing cash reserves and fund balance.

Factor 4: Debt/Pensions (20%)

	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Net Direct Debt / Full Value	< 0.75%	0.75% ≤ n < 1.75%	1.75% ≤ n < 4%	4% ≤ n < 10%	10% ≤ n < 15.%	> 15%	5%
Net Direct Debt / Operating Revenues	< 0.33x	0.33x ≤ n < 0.67x	0.67x ≤ n < 3x	3x ≤ n < 5x	5x ≤ n < 7x	> 7x	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value	< 0.9%	0.9% ≤ n < 2.1%	2.1% ≤ n < 4.8%	4.8% ≤ n < 12%	12% ≤ n < 18%	> 18%	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues	< 0.4x	0.4x ≤ n < 0.8x	0.8x ≤ n < 3.6x	3.6x ≤ n < 6x	6x ≤ n < 8.4x	> 8.4x	5%

Why It Matters

Debt and pensions represent important components of the long-term financial obligations facing a local government.

Debt and pension burdens are measures of the financial leverage of a community. Ultimately, the more leveraged a tax base is, the more difficult it is to service existing debt and to afford additional debt, and the greater the likelihood that tax base or financial deterioration will result in difficulties funding fixed debt service expenditures.

Our treatment of debt seeks to scale the magnitude of a local government's debt obligations relative to: 1) its resources (using tax base as the proxy), and 2) its operations (using operating revenues as a proxy).

We see pension liabilities as characteristically similar, though not identical, to debt. Because of disparities in the way local governments measure and report pension liabilities, we use an internal standardization process to calculate the adjusted liability[8].

Our methodology and scorecard are more restrictive with respect to debt burdens compared to pension burdens. This reflects the fact that measures of accrued pension liability are estimates that depend on numerous actuarial assumptions and are affected by external market factors that can be volatile from year to year. In addition, it may be possible for governments to amend or renegotiate pension plan provisions in a manner that reduces accrued liabilities. In contrast, debt principal obligations are fixed in nature.

Subfactor 4.a: Debt to Full Value (5%)

***Input:** Gross debt minus self-supporting debt, as a percentage of full value*

Our first gauge of a local government's debt burden evaluates net direct debt relative to full value. This metric tells us how onerous future debt service payments could be to the tax base. We use full value as a proxy for the capacity of a local government to generate additional revenues to pay debt service.

To arrive at net direct debt, we calculate the local government's gross debt burden including all GO bonds, notes, loans, capital leases, and any third-party debt backed by the local government's GO guarantee. This calculation may include lease, other appropriation-backed debt, and special tax debt as well if our analysis concludes these securities represent future claims on operating resources. We then

[8] See Adjustments to US State and Local Government Reported Pension Data (April 2013)

subtract debt for essential service utilities (such as water and sewer systems) that is self-supporting from user fees, based on a coverage calculation[9]. We do not subtract debt whose principal and interest is paid by taxes, even if those costs are external to the General Fund. The self-supporting calculation is designed to strip out debt that won't be supported by taxes or the General Fund because it is paid for with user fees such as water, sewer, or electric charges. We do not deduct GO debt for non-essential enterprises such as golf courses, even if it is self-supporting (see Appendix D).

P3 availability payment obligations may be debt-like

Depending on structure, availability-payment Public-Private Partnerships (P3s) may be viewed as "debt-like" obligations if there are clear, contractual obligations of the local government to make scheduled payments for a project or facility made available to the sponsoring government for use. Under those conditions, we will include the P3 liability in the local government's direct debt measures. References elsewhere in this methodology to debt measures and ratios should be read to include those P3 liabilities we identify as debt-like.

The liability included in a local government's debt metrics will be the higher of (i) the liability as reported on the public entity's financial statement and (ii) the size of the termination payment under a project company default scenario, which is often set in the project agreement at a level of or near 80% of the outstanding debt, and may also be pro-rated in proportion with construction progress. While a project is in construction, typically the government does not report a liability, and the liability is limited to the termination payment the government is required to make if construction isn't completed, as specified by the P3 project agreement. If project-specific documents are not available, we will use an assumed termination payment (80% of the debt outstanding), pro-rated in proportion with estimated construction progress.

Some P3 liabilities may be viewed as 'self-supported' by project revenues

Availability-payment P3s are often structured with the sponsoring government's expectation that project revenues will partially or fully offset the government's contractual obligations. Depending on the structure and performance of the project over time, we may view the availability-payment commitments as "self-supporting" and deduct them from some debt measures. This approach is similar to our treatment of certain types of government-issued debt as self-supporting.

We view an availability-payment P3 transaction as self-supporting based on two criteria. First, user charges earned from the project must demonstrate a track record of self-sufficiency and be credibly projected to continue to amply cover the government's obligations through the life of the obligation with a high level of confidence. Second, the structure must commit the project revenues to offset the government's obligations for the life of the commitment. For this purpose, the project revenues must also cover all operating and maintenance payments as well as the government availability payments. A project that meets these criteria would still be included in our measure of gross debt, but would be excluded from core measures of the government's net debt burden.

Subfactor 4.b: Debt to Revenues (5%)

Input: *Gross debt minus self-supporting debt, as a percentage of operating revenues*

[9] Debt is considered self-supporting if operating revenues minus operating expenditures (excluding depreciation) have been sufficient to cover principal and interest for the previous three years. If essential-service debt fails this test (for instance, if it fails in one of the past three years), it will not be considered self-supporting and will be added to the debt burden.

Next, we evaluate net direct debt relative to operating revenues. This metric expresses the potential budgetary impact of future debt service. A high debt burden relative to operating revenues implies a possibility that debt will consume a greater portion of the local government's budget in future years.

We believe evaluating net direct debt relative to both full value and operating revenues is superior to evaluating either one alone because in tandem they express the obligations' potential pressure on the budget as well as on the revenue-generating resources the local government utilizes to fund the budget.

Subfactor 4.c: 3-year Average of Moody's-Adjusted Net Pension Liability to Full Value (5%)

Input: *The average of Moody's-adjusted Net Pension Liability (as calculated in Appendix B) in each of the past three years, as a percentage of full value*

We seek to measure the magnitude of a local government's pension obligations (as adjusted by Moody's) relative to its tax base. Similar to the debt burden evaluation, we use the tax base as a proxy for future revenue-generating capacity to amortize accrued pension obligations for which trust assets are not currently set aside.

We use a three-year average of the net pension obligation to smooth the volatility inherent in a metric that changes with market interest rates and the value of pension plan assets.

Subfactor 4.d: 3-year Average of Moody's-Adjusted Net Pension Liability to Operating Revenues (5%)

Input: *The average of Moody's-adjusted Net Pension Liability (as calculated in Appendix B) in each of the past three years, as a percentage of operating revenues*

This metric seeks to measure pension obligations relative to the size of the local government's budget.

The metric attempts to reflect the prospect that amortization of accrued net pension obligations could sap revenues out of future-year budgets and lead to funding shortfalls. Because pension contributions are for many governments a significant fixed-cost share of what is already typically the largest component of general government operations – salaries and benefits – they directly affect annual budgets and the ability to sustain essential services.

Overall, the pension scores are used as a starting point for an analysis of the pension position and its impact on operations. The analysis considers the funded status, future contributions, and overall liability in the context of the local government's long-term resources. The analysis is not driven solely by the ANPL number.

Also considered as part of this overall category are other post employment benefits (OPEB), which are primarily healthcare liabilities for retired workers. Municipalities typically do not fund their future healthcare liabilities, choosing instead to meet these payments on a pay-as-you-go basis. We do not add present-value measures of unfunded OPEB to the scorecard, as these obligations have proven in many jurisdictions to be subject to greater discretionary control by management. However, when OPEB obligations appear to be particularly large relative to budget and tax base and management has not demonstrated a willingness to address related costs, we will factor this into our rating analysis through a below-the-line adjustment.

Costs of Funding Retirement Benefits

To provide sufficient funds to meet pension benefit payments when they are due, governments and their actuaries identify annual contributions sufficient to meet a pension plan's accrued obligations over a reasonable time period. The annual amount – known as the actuarially required contribution or ARC – consists of the present value of the future benefits accrued by employees during the current year (referred to as "normal" or "service" cost), plus the amortization of unfunded benefit liabilities accrued in past years.

This ARC was initially adopted by GASB as the standard for creating a sound annual pension contribution amount. Although there has not been uniformity across governments in the calculation of pension valuations and ARCs because of leeway provided by GASB rules, we have considered consistent adherence to a prudent actuarially determined pension funding plan as an indicator of sound budget management practices. Conversely, failure to follow such a plan is an indicator of structural budget imbalance and cost deferral that we view as credit negative. Employers contributing less than an actuarially determined contribution run the risk of experiencing rapid cost increases as unfunded liabilities grow and benefit payments become due. Although GASB has dispensed with providing funding guidance in its new pension accounting standards to be implemented in 2014 and 2015, and therefore ARC as such will disappear, the concept and credit implications of adhering to sound pension funding practices remain unchanged.

While treated similarly to pensions in accounting standards, the costs of retiree health benefits have been approached differently by governments. Most governments meet the current expenses of the plans on a pay-as-you go basis. Since we do not view these liabilities as having the same contractual or constitutional protections as pension liabilities, we expect that governments will have some flexibility over time to manage these expenses. We view pre-funding of OPEB liabilities as moderately credit positive.

Below-the-line adjustments

Unusually weak or strong security features (negative or positive): General Obligation bonds sometimes have structural features that are fundamentally stronger than a local government simply paying debt service out of its operating revenues. For example, some structures employ a lock box, where funds from tax collections are transferred directly from a third-party tax collector to the trustee for the bonds and never flow into the issuer's own accounts. Conversely, if the courts were to interpret a state's GOULT security as weaker than the typical pledge, or if pensions were granted superior status to debt, we could notch down. Overall, this notching factor is designed to adjust the score when the security features enhance or weaken the factors on the scorecard.

Unusual risk posed by debt structure (negative): The structure of a local government's debt profile can pose additional risks not captured by the debt burden. A large amount of short-term notes without sufficient offsetting liquidity can expose the local government to market access risks. A large amount of variable-rate debt or swaps can expose a municipality to a variety of risks, including termination risk, counterparty risk, and interest rate risk. Non-amortizing debt structures with bullet maturities are unusual for General Obligation bonds, and may also result in downward notching.

History of missed debt service payments (negative): A historical default may reflect an elevated risk of failure to meet financial obligations going forward. Defaults frequently reflect poorly on management and the local government's willingness and/or ability to meet financial obligations. We include in this category not only defaults on other General Obligation bonds or guarantees with GO backing, but on non-parity obligations such as a lease revenue bond. The magnitude of notching, if any, depends on the timeframe for the cure if any, changes instituted since the default, and the reason for default or missed payment.[10]

Other considerations not on the scorecard that may lead to scorecard adjustments

» Very high or low debt service relative to budget

» Very high or low overall debt burden (including overlapping debt)

» Heavy capital needs implying future debt increases

» Unusually slow or rapid amortization of debt principal (gauged by the percentage of principal repaid within 10 years)

» Other post-employment benefits (OPEB), the most significant of which is retiree healthcare liabilities, when they have the potential to significantly constrain operational flexibility

Determining the Scorecard-Indicated Rating

To determine the scorecard-indicated rating, each of the assigned scores for the subfactors is converted into a numerical value based on the following scale:

Rating Category	Aaa	Aa	A	Baa	Ba	B and below
	1	2	3	4	5	6

Each subfactor's value is multiplied by its assigned weight and then summed to produce a weighted average score. This score is then mapped to the ranges specified in the table below, and a corresponding alpha-numeric rating is determined based on where the total score falls within the ranges. This produces the grid-indicated rating. This grid-indicated rating is then adjusted up or down, in minimum half-notch increments, for applied notching considerations. A half-notch adjustment up or down may not necessarily result in a change to the final score, depending on the raw grid-indicated score. The outcome of this weighted average approach is one input into our credit analysis of local government General Obligation bonds.

We use both historical and projected financial results in the rating process. Moody's ratings are forward-looking and incorporate our expectations for future financial and operating performance. Accordingly, we may make adjustments to the quantitative factors based on anticipated near-term

[10] See Moody's Approach for Assessing the Rating Impact of Debt Payments That Are Missed for Operational or Technical Reasons (April 2013)

results. In some cases, confidential information that we cannot publish may inform our expectations for future performance. In other cases, we estimate future results based upon past performance, industry trends, near-term borrowing plans, and other factors. Historical results help us understand patterns and trends for a local government's performance as well as for peer comparison.

Indicated Rating	Overall Weighted Score
Aaa	0.5 to 1.5
Aa1	1.5 to 1.83
Aa2	1.83 to 2.17
Aa3	2.17 to 2.5
A1	2.5 to 2.83
A2	2.83 to 3.17
A3	3.17 to 3.5
Baa1	3.5 to 3.83
Baa2	3.83 to 4.17
Baa3	4.17 to 4.5
Ba1	4.5 to 4.83
Ba2	4.83 to 5.17
Ba3	5.17 to 5.5
B1	5.5 to 5.83
B2	5.83 to 6.17
B3 and below	6.17 to 6.5

Assumptions, Limitations and Rating Considerations Not Covered in the Scorecard

This methodology and scorecard describe generally how we formulate ratings for counties, cities, school districts, and special districts in the US. The methodology and scorecard reflect current rating practices, and capture the factors we believe are most relevant to local governments' long-term credit quality, but it is not an exhaustive discussion of all factors that Moody's analysts consider in every US local government rating.

The rating methodology scorecard incorporates a trade-off between simplicity that enhances transparency and greater complexity that would enable the scorecard to map more closely to actual ratings. The scorecard's four rating factors and 12 subfactors do not constitute an exhaustive treatment of all of the considerations that are important to local government ratings.

In choosing metrics for the methodology scorecard, we have excluded certain factors that are important to ratings but may be either subjective or based on predictions about future events, although such considerations may be important in individual rating determinations. Accordingly, ranking the factors by rating category in a grid would in some cases suggest too much precision and stability in the relative ranking of particular local governments. The expectation that a local government's budgetary process may reach stalemate in the upcoming budgetary cycle is an example of a factor that has not been included in the scorecard but may factor into a rating.

Ratings may also reflect circumstances in which the actual weighting of a particular factor or subfactor is significantly different from the weighting suggested by the scorecard. For example, a local government's multi-year spending trend, severe illiquidity, or persistent retirement system underfunding may pressure the financial stability of the local government so significantly that we feel the scorecard-assigned weighting of one particular factor or subfactor is insufficient. This variation in weighting as a rating consideration can also apply to factors not represented in the scorecard.

Our ratings incorporate expectations for future performance, while much of the information used in the scorecard is historical. In some cases, our expectations for future performance may differ from past performance, and may affect the rating.

How the US Government Bond Rating Can Affect a Local Government Rating

Outside the United States, subsovereign ratings are generally capped at the level of the sovereign, with few exceptions. Given their degree of independence from the credit condition of the US government, the large majority of local governments could be rated higher than the sovereign if the US government were to be downgraded by one notch. Certain local governments, however, have greater exposure to potential federal cuts or are highly dependent on federal employment, procurement, or transfer payments. Therefore their ratings are capped at the sovereign rating[11].

Moody's analysis to determine whether a municipal rating is linked to the US government's rating focuses on specific metrics such as federal procurement activity, federal employment and healthcare employment as indicators of economic sensitivity. Medicaid expenditures for states and public hospital expenditures for local governments as indicators of direct exposure to federal spending are also considered, along with the presence of short-term or puttable debt as an indicator of exposure to capital markets disruptions.

[11] See Moody's, "How Sovereign Credit Quality May Affect Other Ratings", published February 2012.

Appendix A: US Local Government General Obligation Scorecard

	Very Strong	*Strong*	*Moderate*	*Weak*	*Poor*	*Very Poor*	
	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Economy/Tax Base (30%)							
Tax Base Size: Full Value	> $12B	$12B ≥ n > $1.4B	$1.4B ≥ n > $240M	$240M ≥ n > $120M	$120M ≥ n > $60M	≤ $60M	10%
Full Value Per Capita	> $150,000	$150,000 ≥ n > $65,000	$65,000 ≥ n > $35,000	$35,000 ≥ n > $20,000	$20,000 ≥ n > $10,000	≤ $10,000	10%
Socioeconomic Indices: MFI	> 150% of US median	150% to 90% of US median	90% to 75% of US median	75% to 50% of US median	50% to 40% of US median	≤ 40% of US median	10%
Finances (30%)							
Fund Balance as % of Revenues	> 30% > 25% for School Districts	30% ≥ n > 15% 25% ≥ n > 10% for SD	15% ≥ n > 5% 10% ≥ n > 2.5% for SD	5% ≥ n > 0% 2.5% ≥ n > 0% for SD	0% ≥ n > -2.5% 0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD	10%
5-Year Dollar Change in Fund Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%
Cash Balance as % of Revenues	> 25% > 10% for School Districts	25% ≥ n > 10% 10% ≥ n > 5% for SD	10% ≥ n > 5% 5% ≥ n > 2.5% for SD	5.% ≥ n > 0% 2.5% ≥ n > 0% for SD	0% ≥ n > -2.5% 0% ≥ n > -2.5% for SD	≤ -2.5% ≤ -2.5% for SD	10%
5-Year Dollar Change in Cash Balance as % of Revenues	> 25%	25% ≥ n > 10%	10% ≥ n > 0%	0% ≥ n > -10%	-10% ≥ n > -18%	≤ -18%	5%
Management (20%)							
Institutional Framework	Very strong legal ability to match resources with spending	Strong legal ability to match resources with spending	Moderate legal ability to match resources with spending	Limited legal ability to match resources with spending	Poor legal ability to match resources with spending	Very poor or no legal ability to match resources with spending	10%
Operating History: 5-Year Average of Operating Revenues / Operating Expenditures	> 1.05x	1.05x ≥ n > 1.02x	1.02x ≥ n > 0.98x	0.98x ≥ n > 0.95x	0.95x ≥ n > 0.92x	≤ 0.92x	10%

	Very Strong	*Strong*	*Moderate*	*Weak*	*Poor*	*Very Poor*	
	Aaa	Aa	A	Baa	Ba	B & Below	Weight
Debt/Pensions (20%)							
Net Direct Debt / Full Value	< 0.75%	0.75% ≤ n < 1.75%	1.75% ≤ n < 4%	4% ≤ n < 10%	10% ≤ n < 15%	> 15%	5%
Net Direct Debt / Operating Revenues	< 0.33x	0.33x ≤ n < 0.67x	0.67x ≤ n < 3x	3x ≤ n < 5x	5x ≤ n < 7x	> 7x	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Full Value	< 0.9%	0.9% ≤ n < 2.1%	2.1% ≤ n < 4.8%	4.8% ≤ n < 12%	12% ≤ n < 18%	> 18%	5%
3-Year Average of Moody's Adjusted Net Pension Liability / Operating Revenues	< 0.4x	0.4x ≤ n < 0.8x	0.8 x ≤ n < 3.6x	3.6x ≤ n < 6x	6x ≤ n < 8.4x	> 8.4x	5%

Scorecard: US Local Government General Obligation Bonds

Adjustments/Notching Factors	
Description	*Direction*
Economy/Tax Base	
Institutional presence	up
Regional economic center	up
Economic concentration	down
Outsized unemployment or poverty levels	down
Other analyst adjustment to Economy/Tax Base factor (specify)	up/down
Finances	
Outsized contingent liability risk	down
Unusually volatile revenue structure	down
Other analyst adjustment to Finances factor (specify)	up/down
Management	
State oversight or support	up/down
Unusually strong or weak budgetary management and planning	up/down
Other analyst adjustment to Management factor (specify)	up/down
Debt/Pensions	
Unusually strong or weak security features	up/down
Unusual risk posed by debt/pension structure	down
History of missed debt service payments	down
Other analyst adjustment to Debt/Pensions factor (specify)	up/down
Other	
Credit event/trend not yet reflected in existing data sets	up/down

Appendix B: Moody's Pension Adjustments

The steps we take to adjust reported pension liabilities are:

» **Allocating cost-sharing plan liabilities.** We allocate to state and rated local governments their proportionate shares of cost-sharing plan (CSP) liabilities based on the share of total plan contributions represented by each participating government's reported contribution. In cases where there is a known actuarially required contribution (ARC) that is greater than the actual contribution, the entity's proportional share will be calculated using the employer ARC relative to the plan ARC.

As governments begin to report their specific shares of CSP liabilities, as expected in the next few years under new GASB standards, we will use these disclosed liabilities rather than the calculated proportional share approach, provided the disclosed liability in each case appears to be reasonable based on our understanding of the government's relationship with the CSP.

» **Discounting accrued liabilities using a market discount rate.** We use Citibank's Pension Liability Index ("Index") and a common duration of 13 years to adjust each plan's reported actuarial accrued liabilities (AAL). The Index is composed of high credit quality (Aa rated or higher) taxable bonds and is duration-weighted by Citibank for purposes of creating a discount rate for a typical pension plan in the private sector. The reported AAL is projected forward for 13 years at the plan's reported discount rate and then discounted to the present using the Index's value as of the valuation date. This calculation results in an increase in AAL of between 13% and 14% for each one percentage point difference between the Index and the plan's reported discount rate.

As governments and CSPs begin to report plan-specific duration estimates, as expected in the next few years under new GASB standards, we will use these disclosed estimates rather than the 13-year common assumption in the calculation of adjusted accrued liabilities.

Determining the value of plan assets. We value plan assets at the reported market or fair value as of the valuation date.

Note: Market asset values at present are not commonly disclosed for many local government pension plans, but are expected to become available as new GASB reporting standards are implemented in the next few years. Until this data is more consistently available, we will continue to use reported actuarial values of plan assets, but will deduct any reported asset amounts related to deferred contributions receivable.

» **Calculating adjusted net pension liability.** The difference between the adjusted liabilities and the market or fair value of assets is the adjusted net pension liability. This is the number that Moody's will use to calculate the pension liability ratio incorporated in the local government GO scorecard, as per our rating methodology. Further, our calculation of the adjusted net pension liability for a general government attempts to exclude the portion that is attributable to self-supporting enterprises, if information supporting that conclusion is available.

» **Amortizing adjusted net pension liability**. The adjusted net pension liability is amortized over a 20-year period on a level dollar basis, using the interest rate provided by the Index. This measure will be considered by rating committees along with other supplementary information about a government's pension obligations.

US Public Finance

Applying Moody's Adjustments to a Government's Pension Liability

Indicative Calculation Example

	($000)
Reported AAL	$50,000,000
Asset Market or Fair Value	$40,000,000
Assumed investment rate of return	8.00%
Valuation date	6/30/2010
Citibank Pension Liability Index at valuation date	5.47%
Government A contributions to plan / Total employer contributions to plan (i.e. Government A's proportional share)	17.0%
AAL projected forward 13 years at 8.00%	$135,981,186
Discounted at 5.47%	$68,045,989
Adjusted net pension liability (ANPL)	$28,045,989
Government A's 17%share of ANPL	$4,767,818
Government A's amortization of ANPL	$397,975

Appendix C: Criteria for Sufficient Information to Assign or Maintain Ratings

If, in our opinion, sufficient information to effectively assess creditworthiness is not available and is unlikely to soon become available, we will decline to assign ratings, or we will withdraw outstanding ratings for a rated entity. If we do not have audited financial statements within 12 months after the end of the fiscal year and do not have sufficient, reliable information to support a credit analysis, we will withdraw the rating. To support ratings on entities with material pension liabilities, we expect regular updates to pension valuations or equivalent measures.

In the US public finance sector, pension valuations commonly lag a government's financial reporting date by six to 12 months. We would view valuation information that lags by more than 24 months to be non-timely and as possible grounds for rating withdrawal.

Appendix D: Framework for Measuring Enterprise or Contingent Liability Risk

Contingent liabilities represent a key credit risk for the small subset of local governments that provide debt guarantees or other financial support for non-essential enterprises and projects. Through the economic downturn and recovery there has been an increase in the number of failing non-essential or otherwise risky enterprises, which have the potential to weigh on local governments that have provided guarantees for these enterprises. Therefore, we may make a downward adjustment to the Finances category score for "Outsized Enterprise or Contingent Liability Risk."

As discussed under subfactor 4.a, Debt to Full Value, our calculation of an issuer's debt includes all third-party debt guaranteed by that issuer. Our calculation of debt subtracts out guaranteed (or direct) debt for essential enterprises that are covering debt service from their own operations. However, we do not subtract guaranteed debt for non-essential enterprises, even if a history of self-support exists.

In addition, enterprise or contingent liabilities can pressure an issuer's finances, when the enterprise fails to perform as expected and the issuer must pay its debt service. We consider a below-the-line adjustment to the Finances score in the scorecard after analysis of additional factors that determine the magnitude of contingent liability risk. These factors include:

» Effect of non-essentiality of the guaranteed enterprise or project on likelihood or willingness of local government to honor obligation.
  - Generally, we consider water, sewer, stormwater, electric and gas enterprises to be "essential government enterprises" because they tend to be necessary to the health and welfare of the community and are therefore likely to garner strong public support; as businesses, they enjoy a relatively inelastic demand. They also often enjoy a monopoly within the service area, insulating them from competition from the private sector. We will not typically make additional adjustments to the scores of issuers who have guaranteed debt for such enterprises. Less or non-essential enterprises, such as sports arenas, recreation facilities or economic development projects that are directly exposed to market forces, may have limited support and at higher risk of unwillingness by the obligor to honor the liability.

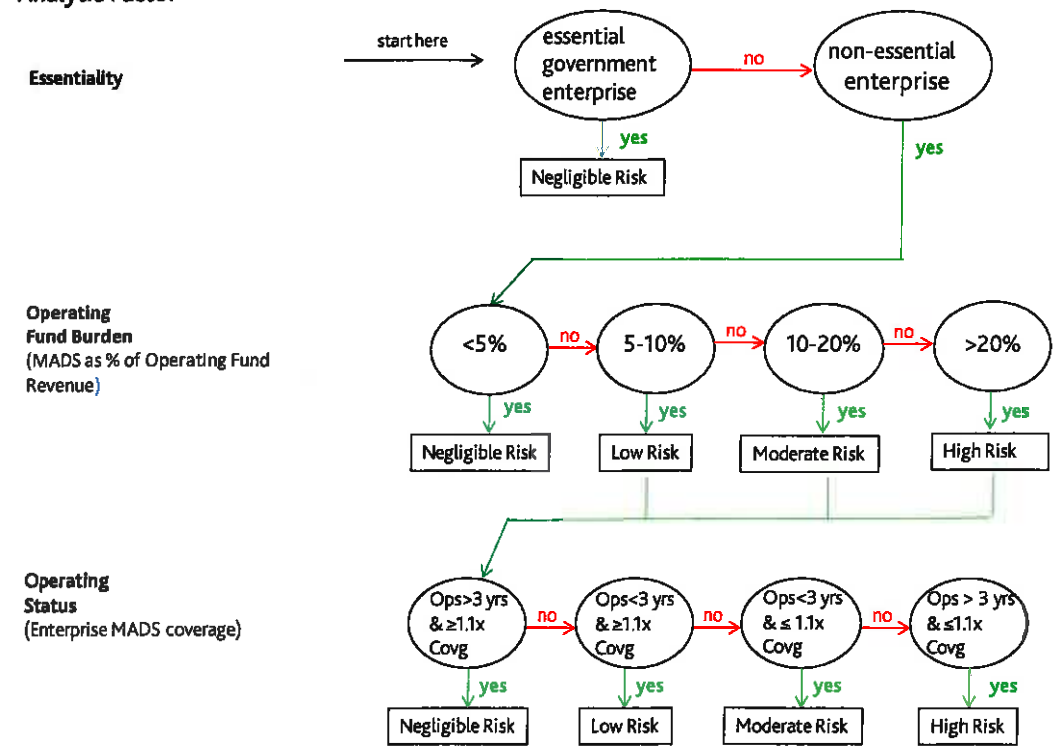
» Local government's financial ability to cover debt service
  - In order to account for the potential full effect of a contingent liability to the local government's operations, we look at the maximum annual debt service (MADS) of the guaranteed debt of the enterprise relative to total operating fund revenues. In general, we consider MADS that falls below 5% of operating fund revenues to present little or minimal risk to a local government's operations. Once MADS goes above 20% of revenues, we believe the risk is high.

» Likelihood of the enterprise's need for financial support from the local government
  - Once we have established the risk to the local government's operations of the full contingent labiality, we explore the likelihood that an enterprise or project's net revenues will fall short of full debt service. The history of the enterprise's operations and track record of MADS coverage provide key data to assist in determining the risk the local government will need to

subsidize the debt service. We consider the enterprise to pose little or no risk if it has at least a 3-year operating history that demonstrates 1.1 times coverage of MADS from net revenues. The magnitude of the risk increases with a shorter history of adequate coverage and even more so if there is a history of coverage falling below 1.1 times.

The flow chart below illustrates the analysis that we undertake to determine the magnitude of contingent liability risk to determine whether, and by how much, to adjust the scorecard based on contingent liability risk. There may be additional considerations we include in our analysis as well. If the enterprise's liquidity is constrained, for example, it may need additional external support from the local government when revenues cannot cover expenditures.

Analytic Factor



Source: Moody's

Moody's Related Research

The ratings assigned in this sector are primarily determined by this rating methodology. Certain broad methodological considerations (described in one or more cross-sector methodologies) may also be relevant to the determination of specific ratings in this sector. Potentially related cross-sector rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings assigned using this credit rating methodology, see link.

Special Comments:

» US Municipal Bond Defaults and Recoveries, 1970-2012, May 2013 (151936)

» Key Credit Considerations for Municipal Governments in Bankruptcy, January 2012 (136814)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

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