MOODY'S INVESTORS SERVICE

RATING METHODOLOGY

US Public Finance Special Tax Methodology

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This rating methodology replaces "US Public Finance Special Tax Methodology" last revised on July 19, 2017. We have clarified certain references to other sector methodologies.

Summary

This methodology describes our general approach to assessing the creditworthiness of special tax bonds issued in the US public sector. We highlight factors that are critical to the ability of a special tax instrument to honor its debt obligations over time.

- This methodology sets forth our approach to rating Special Tax Bonds.
- This methodology presents a scorecard, which is a tool for the analysis and relative weighting of certain important quantitative and qualitative factors considered in our ratings analysis.
- This methodology includes appendices describing the approach to GARVEE and adjustable assessment bonds in the methodology and scorecard.

Sector Definition

This methodology provides detailed guidance regarding our approach to rating Special Tax Bonds, defined as non-property tax secured bonds issued by State and Local Governments. This methodology encompasses a wide range of special taxes, including, but not limited to:

1. Sales and excise taxes
2. Tourist-related taxes and fees (tourist development, hotel/motel, rental car, meals)
3. Income/occupational taxes
4. Utility services taxes
5. Gas taxes and motor vehicle user fees
6. Stadium-related and convention development taxes
7. Real property transfer taxes or mortgage fees
8. Court fines and fees
9. Mandatory assessments on payrolls, insurance policies, or other non-property bases
10. Fixed payment allocations of any of the above from a higher level of government

Special Tax Bonds

Special Tax Bonds are rated primarily based on the type of security pledged, the legal structure and protections provided to bondholders, and the debt service coverage. The underlying strength of the taxable base is a key scorecard factor.

There are two broad types of Special Tax Bonds:

» Those secured by a pledge of special tax receipts specifically dedicated for capital or a specific project/purpose. These special tax revenues are passive in nature and the cash flows are likely to be highly leveraged with lower debt service coverage ratios given their intended nature as a capital financing vehicle. These bonds have a closed loop flow of funds, whereby excess cash flows are restricted for specific uses by the issuing government. The restricted use of these funds could be viewed positively in the composite legal structure as they add liquidity and could be used for early bond redemption.

» Those secured by a pledge of special taxes utilized as a primary revenue source to fund day to day operations of a municipal government. These special tax revenues are also passive in nature, but the cash flows are usually less leveraged with traditionally high debt service coverage ratios in order to yield material excess revenues needed to support general government operations. Thus, these bonds typically have an open loop flow of funds, allowing for excess cash flows to be distributed to the issuing government after debt service is paid. In instances where Special Taxes are not a large revenue source for the municipality (typically less than 30% of operating revenues), there is no expectation that the municipality will maintain higher coverage ratios to ensure an adequate amount of excess cash for operations from this special tax revenue source.

The use of Special Tax Bonds became more prevalent in the past when the national economy was expanding and, as a general rule, are utilized more heavily in states that have property tax caps or other tax rate caps. Rapid population growth and an economy based on consumer spending contributed to the increased utilization of Special Tax Bonds secured primarily by dedicated sales, gas, hotel, and utility taxes to fund related economic development and growth-related projects. Most Special Tax Bonds are of this dedicated nature, utilized for capital, and distinguished by some important limitations, including the passive and leveraged nature of the dedicated special tax, the limited nature of the security pledge, and limited bondholder recourse.

Some municipalities use certain special taxes, such as sales and income taxes, as the primary sources of debt repayment for general government capital purposes as opposed to general obligation property tax bonds, either because they do not require voter approval or they are intended to be repaid from taxes and fees on the users of the projects funded with the bonds.

This methodology does not apply to bonds secured by dedicated property tax assessments.[1]

Applying This Methodology

This methodology is a tool to help gauge the credit quality of a number of diverse special tax securities. The identified rating factors and the developed scorecard are a framework for achieving that end. The spectrum of special taxes varies from the more reliable and essential consumer-based taxes to the more volatile tourist-based taxes. A solid legal framework is an important aspect in bondholder protection that provides credit support through different economic cycles. Just as certain legal elements can help improve special tax ratings, inherent weaknesses associated with a generally passive revenue stream can weigh heavily on a credit.

Transparency versus Accuracy: Our scorecard incorporates a trade-off between simplicity that enhances transparency and greater complexity that might enable the scorecard to map more closely to actual ratings. In this case, given the broad range and complexity of special tax securities, we have emphasized simplicity and flexibility.

Approximation: While this methodology aims to offer robust guidelines as to how we rate Special Tax Bonds, we caution that not all special tax securities will match exactly every factor outlined for a given rating category. The rating outcome is the result of a committee process that considers the factors identified in the scorecard, as well as other qualitative factors described in this methodology.

Limits of Applicability: This methodology focuses on the more established security types used by issuers in the market and does not specifically address every financing innovation or structural nuance employed by various issuers in different states. While we have endeavored to capture the key factors that are considered in rating committee as closely as possible, there may be specific issues that emerge in the market over time that a methodology cannot fully anticipate. As such, this methodology does not replace the fundamental analysis and expert judgment applied through the rating committee process. Its primary purpose is to provide transparency to the market with a common starting point of analysis, while ensuring consistent rating outcomes across a diverse spectrum of issuer types, revenue pledges, leverage and cash flow quality, and legal security features.

[1] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

In This Methodology

Our approach to rating Special Tax Bonds under this methodology incorporates a scorecard based upon factors considered in our rating committee process. Within each scorecard factor, there are sub-factors that incorporate both quantitative and qualitative considerations. Each sub-factor consists of quantifiable ranges or other descriptive characteristics for broad scoring categories. The scorecard applies specific weights to each factor and sub-factor based upon their relative importance. This enables the determination of a scorecard-indicated score, which is then mapped to a Moody's alpha-numeric outcome. This scorecard-indicated outcome may be adjusted up or down by a number of potential notching adjustments to reflect credit strengths or weaknesses not captured in the scorecard. After applying any notching adjustments, a final scorecard-indicated outcome is determined. This scorecard-indicated outcome may differ from the assigned public rating due to additional considerations factored in by a rating committee.

Identification of Scorecard Factors

Our rating approach to Special Tax Bonds includes three scorecard factors and seven sub-factors:

I. Taxable Base And Pledge (30%)
   a. Economic Strength
   b. Nature of the Special Tax Pledge

II. Legal Structure (30%)
   a. Additional Bonds Test (ABT)
   b. Debt Service Reserve Fund (DSRF) Requirement

III. Financial Metrics (40%)
   a. Maximum Annual Debt Service Coverage Ratio (MADS coverage)
   b. Revenue Trend
   c. Revenue Volatility

Although the factors described in this methodology cover the principal drivers of our analysis, the process also includes a number of other important considerations that are consistently examined for municipal ratings. These factors include, among other things, management quality, institutionalized fiscal and debt management policies, our expectations of future special tax performance and debt service requirements. In addition to these key factors, notching factors are utilized to capture specific aspects of the variety of special tax securities that may make particular securities unique and either enhance or weaken their credit quality.

Measurement of the Scoring Factors

For each of the factors cited above, a set of criteria enables the user to understand how we measure each factor. Each of the three scorecard factors is comprised of between two and three sub-factors. Where possible, we provide quantitative metrics for sub-factors related to financial performance. For some factors, however, qualitative assessment is more appropriate.

Mapping Factors to Rating Categories

The measurement criteria developed for each sub-factor were classified into five ranges that map to respective broad rating categories (Aaa, Aa, A, Baa, and Speculative Grade, also called alpha categories). For example, we specify what level of maximum annual debt service coverage is generally acceptable for a Aa- versus an A-rated credit. Each sub-factor is mapped in the scorecard separately.

Determining the Scorecard-Indicated Outcome

To determine the scorecard-indicated outcome, each of the assigned scores for the sub-factors is converted into a numeric value based on the following scale:

Rating Category	Aaa	Aa	A	Baa	SG
	1	2-4	5-7	8-10	11-21

Source: Moody's Investor Service

Each sub-factor's numeric value is multiplied by its assigned weight and then summed to produce a composite weighted average score. This score is then mapped to the ranges specified in the table below, and a corresponding alpha-numeric outcome is determined based on where the total score falls within the ranges. This scorecard-indicated outcome 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 rating change, depending on the raw scorecard-indicated score.

Scorecard-Indicated Outcome	Overall Weighted Score
Aaa	0 to 1.9
Aa	1.91 to 4.9
A	4.91 to 7.9
Baa	7.91 to 10.9
Ba to C	10.91 to 21

Source: Moody's Investor Service

The mapping scale utilized is based on the assumption that the raw score for most credits will be investment grade, consistent with historical experience, and that below investment grade credits are those with prior investment grade ratings that have been downgraded primarily due either to extraordinary circumstances or significantly underperforming tax receipts leading to coverage ratios below 1.0.

The best possible score from the scorecard is a 1.0, which is very rare; scores up to 1.90 map to Aaa. At the lower end of the scale, scores in excess of 10.9 map to speculative grade ratings, which are categorized more broadly in the scorecard given the rare instances of scoring in this range, and the false precision of mapping scores to specific rating categories in the speculative grade space for this sector.

When a credit exhibits significant stress, a speculative grade rating is assigned, which incorporates an assessment of the expected recovery should a default occur. These considerations are outside of the parameters of the scorecard and are accounted for by applying the notching considerations.

The outcome of this weighted average approach is one input into our credit analysis of Special Tax Bonds. Emphasis given to each factor may vary depending on where the credit lies on the rating scale and the degree to which it is an outlier on a given factor. These considerations, as well as the interaction between factors, shape rating committee decisions.

Rating Above the General Obligation Level

In nearly all cases, an issuer's special tax rating is at or below the issuer's corresponding general obligation rating, given the strength of the full faith and credit pledge backing the general obligation rating. In cases where we assign a special tax rating that is higher than the general obligation rating, the pledged special tax revenue stream must be legally separated from the state or local government's general credit.

State governments can achieve legal separation by constitutionally dedicating the pledged revenues or through the legal divergence of the pledged revenue away from the state, thus precluding the state from accessing the revenues for its general operations. Local governments achieve legal separation similarly through legal divergence and may also require special state level legislation to create a special purpose entity to which the state treasurer diverts first-in revenues until the year's debt service payments are fully or substantially set aside prior to distributing any revenues to the local government.

When special tax ratings exceed general obligation ratings, the general obligation rating is also typically lower than would otherwise be indicated by the strength of the economy and tax base alone. This usually occurs in cases where an issuer's economic base is large, diverse and mature, but the general obligation rating is constrained by weak finances, management, and/or governance issues.

When investment grade special tax ratings exceed their corresponding general obligation rating, they are typically no more than two notches above the general obligation rating, although there are a handful of cases where the notching difference has been greater. We do not explicitly limit the number of notches by which a special tax rating can exceed its general obligation rating. However, the more the special tax revenue stream is tied to the general economy, the less the degree of rating separation will likely exist between the special tax and the general obligation ratings. The ultimate degree of separation between special tax and general obligation ratings is determined on a case-by-case basis.

Factor 1: Taxable Base and Pledge (30%)

Why It Matters

The type of special tax pledge and the strength of the taxable base on which it is levied drives an issuer's ability to generate special tax revenues to meet debt service costs. As such, this factor measures the intrinsic strength of the taxing jurisdiction's revenue base.

Sub-factor 1: Economic Strength (15%)

Economic strength is based on the taxable base's diversity, size, breadth, stability, and growth potential, as well as an assessment of the area's socioeconomic indicators.

Diversity, Size, and Stability

In considering a special tax pledge, we review the geographical base's size and composition from which the revenue is derived. The economic size of the taxable base is measured by the jurisdiction's population and current full (or market) property valuations for local governments. We also consider whether a diverse mix of industries is present to support job growth, tax base stability or growth, and a range of primary revenue streams for a municipality. We expect greater stability in tax revenues when imposed across a larger base, where it is less likely that one economic event will affect all payers simultaneously as compared to a smaller municipality. Tourist based taxes should be scored similar to the broader local economy as a whole, unless there is notable concentration among actual taxpayers in the area (i.e. few hotels).

Socioeconomic Indicators

Socioeconomic indicators are key for primarily residential areas. A variety of socioeconomic measures offer an indication of the ability to generate future pledged special tax revenues including population and unemployment trends, per capita income (PCI), and median family income (MFI).

EXHIBIT 1

	Aaa	Aa	A	Baa	SG
Economic Strength	Very strong and very well-diversified economic base with solid growth OR PCI/MFI is 200% or greater of national median for primarily residential bases	Strong and well-diversified economic base with solid growth OR PCI/MFI is 125% - 200% of national median for primarily residential bases	Developed and reasonably diversified economic base with average growth OR PCI/MFI is 75% - 125% of national median for primarily residential bases	Small to evolving economy with modest diversification and some concentration with slow to declining growth OR PCI/MFI is 50% to 75% of national median for primarily residential bases	Deteriorating economic base with very little diversification or significant concentration with declining growth OR PCI/MFI is 50% or below of national median for primarily residential bases

Source: Moody's Investor Service

Sub-factor 2: Nature of the Special Tax Pledge (15%):

This sub-factor differentiates the relative strength of the tax being pledged based on essentiality (i.e. what is actually being taxed), as well as historical tax revenue volatility through different economic cycles, and expectations for future performance. The stronger special tax pledges (sales, utility, and income taxes) are levied on more essential items or consumer-based services, are typically applied broadly, and are more resilient during economic downturns compared to more volatile tourist-based taxes (hotel/motel, car rental, and meals) and taxes related to real estate transactions, such as home sales (documentary stamp and transfer taxes), which may decline significantly in a short period of time. The number of special tax payers or taxable transactions is also a key consideration. Special taxes levied statewide or countywide are stronger than those levied in a smaller city or village, given the larger taxable bases, and score higher on this sub-factor.

We rank the various types of special tax pledges below. Very Broad to Average are used for sales, utility, income and gas taxes/motor vehicle registration fees, given the strengths referenced above. Narrow is typically reserved for tourist-related (hotel/motel, meal, rental cars) and so-called "sin" (liquor and cigarettes) taxes, while Very Narrow has been mostly associated with real estate transactions, given their volatility in various economic cycles, or very narrowly applied tourist or sin taxes.

EXHIBIT 2

	Aaa	Aa	A	Baa	SG
Nature of the Special Tax Pledge	Very Broad (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees; Fixed Payments from the State depending on State's Rating)	Broad (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees; Fixed Payments from the State depending on State's Rating)	Average (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees)	Narrow (e.g. Hotel, Car Rental, Meals, Lottery, Liquor, and Cigarette Taxes)	Very Narrow (e.g. Document Stamp, Hotel, Car Rental, Meals, Lottery, Liquor, and Cigarette Taxes)

Source: Moody's Investor Service

In Figure 3, we have identified some of the specific risks associated with special taxes previously discussed, for all special tax pledges are pressured during periods of economic stress.

EXHIBIT 3

Special Tax Pledges	Risks
Utilities services tax	Population decline; rate changes; weather
Sales tax	Competition; concentration; reduced discretionary spending
Gas tax, motor vehicle registration fees, and highway user fees	Higher gas prices; change in distribution formulas; high discretionary travel; more fuel-efficient vehicles
Hotel (motel/tourist development/bed) tax	Spike in gas or airline prices; competition
Restaurant/meals tax	Competition
Car rental tax/surcharge	Competition; higher gas prices
Income/occupational tax	High unemployment; industry concentration
Real property transfer tax	Slow housing sales; increased housing inventory
Fixed state payment allocations	Distribution formula changes

Source: Moody's Investor Service

Factor 2: Legal Structure (30%)

Why It Matters

The legal structure is a vital component of the Special Tax Bond rating analysis as it provides bondholder safeguards that provide a buffer against non-payment during periods of economic disruption or a short-term interruption of revenues. Establishing the legal structure can be difficult for issuers that seek to balance the desire to maximize the special tax revenues within the life or capacity of the pledged special tax, while also maintaining adequate bondholder protections.

We assume a basic level of legal protection that typically includes a defined revenue pledge (gross or net), an additional bonds test limiting the issuance of future parity debt, a debt service reserve fund, and a defined flow of funds, typically administered by a third party, with monthly segregation of collected special tax revenues in an amount equivalent to at least 1/6th of the upcoming semi-annual interest payment and at least 1/12th of the annual principal payment.

Sub-factor 1: Additional Bonds Test (20%)

In instances where the special tax legal structure allows for the issuance of future parity debt, we place more emphasis on the level of the additional bonds test (ABT). Highly-leveraged special tax bonds with a low additional bonds test would ordinarily result in a lower rating level compared to a modestly-leveraged special tax bond that does not allow for the issuance of additional parity bonds. We also assume the ABT is applied historically versus prospectively, which is the sector norm and more conservative given that prospective ABT's usually assume revenue growth. However, when special tax revenues are in decline, applying the ABT historically is less conservative than a prospective ABT given the higher historical performance relative to current and projected performance. Beyond the ABT, further legal limitations (i.e. a voter approved cap) on the issuance of additional bonds may be considered as an "other" upward notching factor to the scorecard-indicated outcome, especially if the ABT is low and the legal limitation is deemed to mitigate the low ABT. This notching may be applied to offset the impact of a low ABT score. Of note, the majority of ABTs for local government issuers are in the 1.15x to 1.50x range, while state government issuers tend to have stronger ABTs in the 1.5x to 3.0x range.

EXHIBIT 4

	Aaa	Aa	A	Baa	SG
Additional Bonds Test (ABT)	3.0x and higher OR a closed lien	1.76x to 2.99x	1.26x to 1.75x	1.0x to 1.25x	No limit

Source: Moody's Investor Service

Sub-factor 2: Debt Service Reserve Fund Requirement (10%)

Debt service reserve fund (DSRF) requirements can have a meaningful impact on the credit quality of Special Tax Bonds. The passive and highly-leveraged nature of most special taxes coupled with the vulnerabilities associated with economic cycles and potential delays or disruption in the collection cycle highlight the importance of the debt service reserve in the legal structure. Cash funded, full year reserve fund requirements are stronger than "springing-reserves", which are funded only when debt service coverage drops below a prescribed level. The scorecard ranks the relative strength of debt service reserve funding requirements with the most common being the industry norm of the lesser of the standard 3-prong test (i.e. 10% of initial principal, maximum annual debt service, or 125% of average annual debt service).

EXHIBIT 5

	Aaa	Aa	A	Baa	SG
Debt Service Reserve Fund Requirement	DSRF funded at level greater than 1-year of Maximum Annual Debt Service (MADS)	DSRF funded at 1-year of Maximum Annual Debt Service (MADS)	DSRF funded at lesser of standard 3-prong test	DSRF funded at level less than 3-prong test or a springing DSRF	NO DSRF (or DSRF funded with low rated or speculative grade surety provider)

Source: Moody's Investor Service

A debt service reserve is of less importance for those issuers who score "very strong" for Economic Strength and Debt Service Coverage and have minimal likelihood of revenue disruption. Thus, we may notch the scorecard-indicated outcome upward using the "other" scorecard notching mechanism to offset the impact of a low DSRF requirement score.

Factor 3: Financial Metrics (40%)

Why It Matters

Given the economically sensitive and passive nature of special tax revenues, our evaluation of financial performance focuses on flexibility and volatility by measuring the level of revenues relative to debt service costs, as well as trends in revenue performance.

Sub-factor 1: Maximum Annual Debt Service (MADS) Coverage (20%):

The key financial ratio utilized is the maximum annual debt service (MADS) coverage ratio. We calculate MADS coverage by dividing the current year's collected and legally available pledged special tax revenues by the largest single year future principal and interest debt service payment on all outstanding parity bonds. For subordinate lien bonds, we calculate coverage based on total pledged revenues divided by combined senior and subordinate debt service. MADS coverage indicates to what extent future peak debt service can be covered from the current year's pledged revenues. This is a particularly important ratio for newly levied special tax pledges that have a limited collection history and may have an ascending debt service schedule over a long period of time that requires future revenue growth for full debt repayment. In these cases, MADS may not occur for several years in the future, so current year MADS coverage is likely to be low. If we determine that the revenue growth assumptions over such a long amortization time period are reasonable, the scorecard-indicated outcome may be adjusted upward to offset the impact of a low MADS coverage score. Interest rates on variable rate special tax bonds will be determined on a case-by-case basis and would incorporate a reasonable assumption of a fixed interest rate compared to current and historical short-term market rates.

EXHIBIT 6

	Aaa	Aa	A	Baa	SG
MaximumAnnual Debt Service Coverage	Over 4.5x	2.51x to 4.5x	1.51x to 2.5x	1.1x to 1.5x	Less than 1.1x

Source: Moody's Investor Service

Sub-factors 2 and 3: Revenue Trend and Revenue Volatility (10% each):

Given the volatile nature of most special taxes, the pledged revenues will go through multiple economic cycles which can increase or dramatically decrease pledged revenues over the typical long life of the bonds. It is always important to consider past special tax performance trends during past economic cycles to assess its elasticity and project future performance. Revenue volatility is evaluated based on the magnitude of historical revenue declines. Large one-year declines or large sequential year peak-to-trough declines result in a lower score on volatility than multiple consecutive modest declines because they indicate greater volatility and the higher possibility of a revenue "shock" within a short time period. When determining the longer term revenue trend, we consider both the magnitude of the annual declines, as well as the number of consecutive years in which the declines occur.

EXHIBIT 7

	Aaa	Aa	A	Baa	SG
Revenue Trend	Significantly improving with one to no historic decline	Generally improving with few historic declines	Stable with some historic declines	Declining	Rapidly Declining
Revenue Volatility	Has never declined	Negative fluctuations generally within 0% to 5%	Negative fluctuations generally within 5% to 10%	Negative fluctuations generally within 10% to 15%	Negative fluctuations greater than 15%

Source: Moody's Investor Service

Notching Factors

While the factors and sub-factors within the scorecard are designed to assess a given special tax credit's fundamental risk relative to that of others, the scorecard cannot account for all of the nuances associated with each special tax credit that can notably reduce or add risk to the credit profile. As a result, we have developed notching factors that are designed to adjust, either upwards or downwards, a credit's scorecard-indicated outcome. These factors represent various legal, financial, economic, and management considerations, which we may determine are not accurately reflected in the scorecard and warrant a notching adjustment. The notching factors are applied in one-half increments and may result in multiple notches in either direction. The sum of a credit's assigned up and down notches determines the net notching impact.

Up Lift

1) Enhancements

We expect a certain amount of basic legal bondholder protection, as discussed above, but additional elements may result in greater bondholder protection. In such cases, we may adjust the scorecard-indicated outcome to reflect the additional credit strength of the enhancement. One example of an enhancement is where special taxes are collected by the state and legally structured whereby the state pays the local municipality's full year's debt service payment from first-in special tax receipts directly to a credit worthy trustee prior to any distribution to the municipality. Additional liquidity in the form of other dedicated reserves not required by the bond indenture may also provide greater bond holder strength if the balances have been stable to growing in the past and are expected to remain stable in the future.

2) Active management

The ability to raise a special tax rate relatively quickly, coupled with a history of doing so, provides additional credit strength as it is unusual for the sector. We will evaluate the rate raising process and political will to do so, noting that rate increases requiring constitutional or commission oversight are considered less likely than those requiring only the approval of the local municipality. We will typically assign a one-half notch uplift for the ability to raise the rate relatively quickly and a full notch uplift for a demonstrated willingness or a legal requirement to do so (see Appendix C regarding Adjustable Assessment bonds). Legislation changes that increase the rate or reach of the pledge and the ability and willingness to attach additional pledged securities to the bonds may also be viewed favorably.

3) Additional Taxable Base Strength

While the first sub-factor of Factor 1 in the scorecard captures the general economic strength of the taxable base, it does not always adequately capture the regional importance of some issuers for shopping and services, the tourist draw some tax bases enjoy, and the relative stabilizing presence of university and government institutions. These attributes draw additional people into a tax base, resulting in higher special tax revenues than would otherwise be collected from residents within the base. Regions anchored by universities or a significant government presence, such as state capitols are often better able to weather economic downturns. We may allocate one notch of uplift to credits with notable additional strength, whereas a one-half notch of uplift may be allocated to regionally important economic centers.

4) Other:
There may be other potential notching factors that do not fall into one of the above categories, and we reserve the right to adjust the scorecard-indicated outcome accordingly.

Down Drag

1) Complexities or Weaknesses

a) **Subordinate lien:** In addition to typically receiving a lower MADS coverage score on the scorecard, a subordinate lien pledge is a complexity that usually also warrants a notch down. An exception to this may be made if the senior lien has been closed to additional issuance and the outstanding senior debt is relatively small and/or limited in tenor.

b) **Release of Pledges:** In cases where more than one special tax secures the rated bonds, there sometimes exists the potential to release a special tax pledge after a specified period of time if certain coverage levels are maintained. The significance of this release provision depends on how much the released pledged revenue stream factored into the original outcome and how the release affects projected debt service coverage. If the release would detract from the overall credit (e.g., remove a more reliable or substantial revenue stream in favor of a weaker one) then the release provision itself could warrant a notching adjustment downward.

c) **Complex debt structure with notable swap and variable rate exposure:** Most Special Tax Bonds are issued as fixed rate long-term bonds with level debt service payments over the life of the bonds. However, some have been issued as variable rate demand obligations and may have associated swaps to hedge the interest rate risk. Such a debt structure introduces additional risks, including counterparty, basis, liquidity facility rollover, and market disruption risks that are not as easily managed due to the passive nature of most special taxes. A rising amortization schedule that requires significant tax receipt growth may also be deemed riskier than the scorecard indicates. We may determine that such debt structures warrant downward adjustments to reflect these additional risks.

d) **Appropriation Risk:** A very small number of Special Tax Bonds do not have an absolute and unconditional pledge of payment from the special tax receipts, but require the issuer to annually appropriate in its budget an amount sufficient to pay bondholders. We may notch down by one notch for this appropriation risk, with additional notches for less essential projects. The presence of appropriation risk would limit the rating of a special tax bond to no higher than one notch below that of the appropriating government's G.O. or issuer rating.

e) **Refinancing Risk:** If there is a significant amount of debt with a bullet maturity (including balloon payments and "put" bonds) requiring refinancing prior to final debt maturity, we may consider notching downward for the refinancing risk.

f) **State Allocation Risk:** In some instances, the special tax is collected at the state level and distributed to the underlying municipalities according to a formula. Some states have the ability to lower these distributions in times of state budgetary stress, as we have seen in past economic downturns. In this instance, we believe bondholders are less protected than in states where the state has explicitly stated that it can reduce distributions to underlying municipalities, but not to a level that would impair the protection of the bondholders (i.e. a non-impairment clause).

g) Lack of Monthly Segregation: An assumed basic level of bondholder protection for most indenture governed special tax bonds is the monthly segregation of pledged receipts in an amount equal to at least 1/6th of the next bond semi-annual interest payment and at least 1/12th of the next bond annual principal payment into an account held by a third-party creditworthy trustee. The lack of this type of monthly segregation may result in an adjustment downward by one notch, depending on the history of management distributing funds in a timely manner to meet payment obligations. If the special tax credit has "very strong" MADS coverage, we may only apply a one-half notch downward adjustment. Quarterly segregation may also result in only a one-half notch downward adjustment. Timing of debt service payments should allow for a reasonable period of delay and fund accumulation.

2) Debt Service Coverage below key thresholds

a) MADS Coverage below Additional Bonds Test: An early sign of fiscal stress appears when the Maximum Annual Debt Service Coverage Ratio (MADS coverage) falls below the legally stated additional bonds test (ABT) and we may adjust downward if the calculated MADS coverage is below the ABT.

b) MADS Coverage below 1.0 and/or Draw on Debt Service Reserve Fund: When the MADS coverage falls below 1.0 and/or there is a draw on the Debt Service Reserve Fund or other funds are utilized to pay debt service, we may adjust downward depending on the magnitude of the draw, likelihood of replenishing the reserve, the likelihood of a rebound in the MADS coverage, and/or the long-term recovery rate expected on the bonds.

3) Additional Leverage

The Additional Bonds Test does not adequately capture an issuer's intention or our expectation of additional leverage of a special tax pledge, thus we may adjust downward to account for an expected dilution of bondholder protection.

4) Other

There may be other potential notching factors that do not fall into one of the above categories, and we reserve the right to adjust the scorecard-indicated outcome accordingly.

Some identified factors that may result in a downward adjustment may include:

a) revenue concentration from a few special tax payers

b) the special tax requires reauthorization or expires/sunsets prior to bond maturity

c) the use of other reserves or funds besides the pledged DSRF to pay debt service

d) prospective additional bonds test

e) a weakening competitive position likely to notably erode revenues

f) Mass Transit system operating risk

g) GARVEE bond reauthorization risk (see Appendix B)

Other Rating Considerations

The scorecard detailed in this methodology attempts to explain the factors that are typically most important for rating Special Tax Bonds. In addition to the factors that have been discussed, there can be other credit considerations that affect a Special Tax Bond rating, which could cause a rating committee to deviate from the scorecard-indicated outcome. Examples include variable rate bond acceleration, a related government's significant credit deterioration, a higher level government's withholding of revenue distributions, and significant revenue underperformance.

Appendix A: Scorecard

Scorecard Factors	Sub-Factors		Aaa	Aa	A	Baa	SG
1. TAXABLE BASE AND PLEDGE - 30%	Economic Strength	15%	Very strong and very well-diversified economic base with solid growth OR PCI/MFI is 200% or greater of national median for primarily residential bases	Strong and well-diversified economic base with solid growth OR PCI/MFI is 125% 200% of national median for primarily residential bases	Developed and reasonably diversified economic base with average growth OR PCI/MFI is 75% - 125% of national median for primarily residential bases	Small to evolving economy with modest diversification and some concentration with slow to declining growth OR PCI/MFI is 50% to 75% of national median for primarily residential	Deteriorating economic base with very little diversification or significant concentration with declining growth OR PCI/MFI is 50% or below of national median for primarily residential bases
	Nature of the Special Tax Pledge	15%	Very Broad (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees; Fixed Payments from the State depending on State's Rating)	Broad (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees; Fixed Payments from the State depending on State's Rating)	Average (e.g. Sales, Utility, Income, and Gas Taxes, Motor Vehicle Registration Fees)	Narrow (e.g. Hotel, Car Rental, Meals, Lottery, Liquor, and Cigarette Taxes)	Very Narrow (e.g. Document Stamp, Hotel, Car Rental, Meals, Lottery, Liquor, and Cigarette Taxes)
	Sub-Factors		Aaa	Aa	A	Baa	SG
2. LEGAL STRUCTURE -30%	Additional Bonds Test (ABT)	20%	3.0x or higher OR a closed lien	1.76x to 2.99x	1.26x to 1.75x	1.0x to 1.25x	NO LIMIT
	Debt Service Reserve Fund Requirement	10%	DSRF funded at level greater than 1-year of MADS	DSRF funded at 1-year of MADS	DSRF funded at lesser of standard 3-prong test	DSRF funded at level less than 3-prong test or a springing DSRF	NO DSRF (or DSRF funded with low rated to below investment grade surety provider)
	Sub-Factors		Aaa	Aa	A	Baa	SG
3. FINANCIAL METRICS - 40%	Maximum Annual Debt Service Coverage	20%	Over 4.5x	2.51x to 4.5x	1.51x to 2.5x	1.1x to 1.5x	Less than 1.1x
	Revenue Trend	10%	Significantly improving with one to no historic declines	Generally improving with few historic declines	Stable with some historic declines	Declining	Rapidly Declining
	Revenue Volatility	10%	Has never declined	Negative fluctuations generally within 0% to 5%	Negative fluctuations generally within 5% to 10%	Negative fluctuations generally within 10% to 15%	Negative fluctuations greater than 15%

Source: Moody's Investor Service

Appendix B: Federal Grant Anticipation Revenue Vehicles (GARVEEs)

Overview

Federal grant anticipation revenue vehicles (GARVEEs) are bonds that are either backed solely by anticipated federal highway or transit grants, or that are paid first from those sources and then have a secondary pledge of other revenue. Although GARVEES share many similar credit factors with other special tax bonds, their distinct characteristic is their exposure to the risk of federal grant reauthorization, which has varied in its dollar amount and period of authorization over time. The purpose of this appendix is to provide additional transparency about our approach to rating GARVEES and how we apply the special tax methodology to these securities.

While GARVEE issuers use federal funds to pay debt service, the federal government is under no obligation to provide specific levels of transportation aid to states or transit agencies or to reauthorize its transportation aid program. This risk is partially mitigated by the economic essentiality of transportation infrastructure and a long history of federal transportation assistance. Although there is no obligation to reauthorize the program, the federal government was involved in the creation of this security class and specifically authorized that grant aid could be pledged to bondholders, which mitigates the risk of program discontinuation.

Special Tax Scoring Factors Applied to GARVEEs

Through our special tax methodology, we examine four broad scorecard factors divided into seven sub-factors. Below we describe how those factors are applied to GARVEEs. The weights applied to each factor and sub-factor are the same as those for the scorecard in the methodology. Future changes to the federal program structure or changes in our views of the risks to future federal revenue amounts and timing could result in adjustments to the way we score GARVEEs in the special tax matrix.

Taxable Base and Pledge (30%)

Economic Strength (15%)

Our assessment of economic strength for GARVEEs focuses on the breadth, size and diversity of the US economy, from which the federal gas tax and other national highway user fees pledged to GARVEEs are derived.

Nature of the Special Tax Pledge (15%)

In assessing the strength of the tax pledge for GARVEEs, we focus on the essentiality of gasoline, historical performance of the pledged revenues, and expectations for future growth. We consider the price inelasticity of demand for gasoline, which has made this revenue stream less volatile and more predictable than most special taxes. Offsetting this strength is the limited scope of the tax compared to a broader tax like a sales tax. In addition, we will consider the extent to which gains in fuel efficiency or changes in technology are expected to continue to erode the value of a flat per-gallon gas excise tax over the long term.

Legal Structure (30%)

Additional Bonds Test (20%)

Additional bonds tests for GARVEEs are treated in the scorecard the same as other special tax bonds. Most highway GARVEEs typically have an additional bonds test threshold of 3.0 or greater. Mass transit GARVEEs typically have an additional bonds test threshold of 1.5.

Debt Service Reserve Fund Requirement (10%)

Debt service reserve funds for GARVEEs are treated in the scorecard the same as other special tax bonds. Most GARVEEs typically do not have a debt service reserve fund.

Financial Metrics (40%)

Maximum Annual Debt Service Coverage (20%)

Coverage of maximum annual debt service (MADS) is the quotient of the issuer's latest available year obligation authority over MADS. Obligation authority is a limit on the amount of the federal government's obligation, or commitment to pay a state or transit agency the federal share of project costs, for a fiscal year. This amount may differ in the short term from actual receipts, which tend to fluctuate based on actual project work that can be lumpy in nature. Receipts over the long term will typically be more closely aligned with trends in obligation authority.

Revenue Trend (10%)

In evaluating the revenue trend for GARVEEs, we consider historical and projected performance of obligation authority. Stagnation in nationwide funding levels and a constrained revenue outlook generally constrain our assessment of the revenue trend from reaching the Aaa or Aa levels. States have experienced similar revenue trends in federal grant aid in the past. Should trends diverge, we would adjust this score up or down for each state accordingly. We use obligation authority as a metric instead of actual receipts because it better captures underlying revenue trends rather than reflecting project timing.

Revenue Volatility (10%)

In evaluating revenue volatility, we consider the historic and projected stability in national and state-specific funding levels. We use obligation authority as a metric since it more accurately reflects changes in grant funding rather than actual receipts which tend to reflect project timing.

Below the Line Rating Adjustments for GARVEEs

Scores of special tax bonds may be notched below the line for a number of legal, governance, economic, or other characteristics. Some of the factors that contribute to below-the-line notching for GARVEEs are:

» Reauthorization Risk

» Maturity

» Prioritization

» Appropriation Risk

» Formula Risk

REAUTHORIZATION RISK: The scorecard-indicated outcome for GARVEEs is notched down to reflect federal reauthorization risk. GARVEEs' principal risk is that the federal government is under no legal obligation to continue the federal aid highway program or to make federal grants at current levels or, theoretically, at all. The risk of non-authorization is mitigated by the long history of uninterrupted funding that reflects the federal government's central role in the financing of transportation infrastructure. The risk of reduced authorization levels is partially mitigated by the essentiality of transportation infrastructure. All highway GARVEEs and, to a lesser extent, transit GARVEEs have debt service coverage ratios and additional leverage constraints designed to protect bondholders from unexpected material reductions in federal transportation aid.

Another risk is that there may be a lapse between authorizations, constraining the ability of the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) to process grants. Any timing of debt service payments at the beginning of the federal fiscal year on October 1 or shortly thereafter increases the risk that prompt payment of principal and interest could be affected by a delay in reauthorization without a temporary extension. The presence of a debt service reserve fund or advanced set aside in the prior federal fiscal year mitigates this risk. The lack of such a mitigant in combination with an October or November payment date could result in downward adjustment of the scorecard-indicated outcome. Reauthorization risk is mitigated in certain GARVEEs that benefit from a backup pledge of additional state revenues. Depending on the quality and coverage provided by the additional revenues, their outcomes may not be adjusted downwards.

MATURITY: Bonds with maturities longer than the current maximum of 18 years would likely be notched downwards to reflect the risk of programmatic change detrimental to bondholders. Historically, long-term transportation authorizations were about six years in length. A sustained pattern of shorter authorizations may cause us to adjust the scorecard-indicated outcome downwards for bonds with maturities longer than the median 12 years.

PRIORITIZATION: GARVEEs typically benefit from a requirement included in the bond documents that the state department of transportation or transit agency seek obligation for debt service prior to any other use. Alternatively, debt service may be set aside from first federal receipts each year. Lack of prioritization is a credit negative and could result in downward adjustment to the scorecard-indicated outcome.

STATE APPROPRIATION: Some GARVEEs are exposed to state appropriation risk as certain states require the appropriation of federal aid as an additional step before it can be applied to debt service. We view the risk of non-appropriation as minimal. Several factors mitigate non-appropriation risk, including the prioritization of debt service ahead of other uses, the narrow permitted uses of federal transportation grant funds, and the possibility of diminished access to capital markets in the event of non-appropriation. Non-appropriation would likely result in an additional downward adjustment to the scorecard-Indicated outcome.

FORMULA RISK: Beyond the reauthorization risk common to all GARVEEs, the scorecard-indicated outcome and rating is adjusted down to account for status outside the normal funding formula and reliance on discretionary rather than formula funding.

Additional Considerations

» Mass Transit

» Revenues Available But Not Pledged

» Direct vs. Indirect

» Donor / Donee Status

» Treasury Offset Program

MASS TRANSIT: Mass transit agencies receive funding through the mass transit account of the highway trust fund. We do not make a rating distinction based on transportation mode because the split of federal revenues between highway and transit has been fairly consistent over the past few authorizations. Political support for mass transit is less universal than for highways. Given the wider base of political support, we expect highway spending levels to be more resilient to budgetary pressure than transit. A reduction in federal mass transit funding relative to highways could result in an additional downward adjustment to the scorecard-indicated outcome of mass transit GARVEEs.

Mass transit issuers of GARVEEs are also exposed to labor provisions within federal transit law. The US Department of Labor must certify that certain protective arrangements are in place as a condition of federal financial assistance, including the grants that secure transit GARVEEs. We do not make a rating distinction, however, as the risk is small. Denial of transit grants due to labor issues is rare because both labor and transit management have an incentive to maintain the flow of federal grants and a process is in place to address labor issues before a grant is denied.

Mass transit GARVEEs are also exposed to the risk of a federal shutdown. The Federal Transit Administration is mostly funded through the federal general fund and therefore cannot process grants in the event of a shutdown. The Federal Highway Administration, funded mostly through the highway trust fund on the other hand, would be able to process grants. Transit GARVEEs are structured with a debt service reserve or advanced set-aside that mitigates federal shutdown risk. Absence of such a mitigant could result in a downward adjustment.

REVENUES AVAILABLE BUT NOT PLEDGED: Some states make available additional revenues outside of those pledged to bondholders. Only pledged revenues are considered when scoring the financial metrics factor. We generally do not adjust upward for revenues available but not pledged since those revenues are outside of the legal contract between issuer and bondholders.

DIRECT vs. INDIRECT: Federal grants are made on a reimbursement basis for project costs incurred. In a direct GARVEE structure, the Federal Highway Administration directly reimburses an issuer for debt service costs. Debt service for indirect GARVEEs, on the other hand, is paid out of federal aid reimbursements for ongoing construction/capital costs. Direct GARVEEs are exposed to the risk that a lapse in authorization or other interruption in reimbursements will coincide with a debt service payment date and thus impede the reimbursement of debt service. Payment of debt service on indirect GARVEEs relies on the maintenance of a continuous flow of reimbursements for project work.

DONOR/DONEE STATUS: Donor states receive less in federal highway funds than users of their highways are estimated to have paid into the highway trust fund. Donee states are subsidized by other donor states. The risk to donee states is that a new authorization makes the distribution more uniform. All states are typically donee states in that they benefit from federal general fund transfers.

TREASURY OFFSET PROGRAM: Debt owed by states to a federal agency can be referred to the US Treasury to be paid back with the next federal payment to be made to that state or any entity sharing its Taxpayer Identification Number (TIN). We believe the risk to be low, as offsets of federal monies owed to states or municipal entities have historically been infrequent, and issuers can prevent debts owed by related entities affecting their federal transportation grants by obtaining their own TIN. Sharing of a TIN with an entity that is vulnerable to being referred to the TOP may result in an additional downward adjustment to the scorecard-indicated outcome.

Appendix C: Adjustable Assessment Bonds

Overview

Adjustable assessment bonds are special tax bonds that are backed by tax-like adjustable assessments, where the rate of taxation can be adjusted to result in revenues to pay debt service and other costs. Although these obligations share many similar credit factors with other special tax bonds, the flexibility of the assessment mechanism itself is an important distinction. The purpose of this appendix is to provide additional transparency about our approach to rating adjustable assessment bonds and how we apply the special tax methodology to these securities.

Adjustable assessment bonds distinguished by ability to adjust necessary charges

Adjustable assessment financings are secured by a pledge of revenues derived from mandatory assessments on a base of broad or specific economic activity, and on which the issuer has the ability to set the assessment rate on at least an annual basis to insure adequate debt service coverage. Adjustable assessment bonds have been issued by a variety of entities, including state-run insurance entities and governmental financing authorities. The different pledged assessments include those on insurance policies and employment payrolls.

A distinguishing credit factor for this subset of credits is that the assessment mechanism allows the assessment rate to be adjusted without regulatory or political approvals. The assessments are typically applied to an already-existing bill, and can result in substantial penalties if unpaid.

Adjustable assessment bonds also include a number of disaster-related bonds issued by state-run property and casualty insurers. These bonds can be issued on a pre-event or post-event basis, in either case for the purpose of providing liquidity to pay claims in the event of a major weather storm. These financings are typically backed by assessments on insurance policies, are included on homeowners' insurance bills, and can cause loss of the insurance policy if not paid.

Adjustable Assessment Credits Share Many Characteristics with Tax-Backed Credits

Debt secured by adjustable assessments is similar to debt secured by taxes and shares a number of credit factors. The assessment bases may be small or large, narrow or diverse, similar to the variation in economic bases underlying tax-backed pledges. Payment of assessments is highly enforceable and non-payment of assessments tends to result in steep penalties, also similar to most taxes. In our analyses, we view both assessment-backed and tax-backed obligations within a specific economic base and evaluate the nature of the pledge and strength of the legal structure.

Within the context of the special tax methodology, the two key differentiating factors of adjustable assessment bonds are: 1) the ability and obligation to set the assessment rate on at least an annual basis to insure coverage of bond debt service, a feature that is not included in most special tax-backed bonds; and 2) some of the bonds in this category have been issued by disaster-related entities for the purpose of paying damage claims after a major storm. This type of event risk and potential for operating or revenue disruption are typically not found in most tax-backed bonds.

The event and insurance industry risks associated with disaster-related bonds stem from the potential disruption brought about by major storms. While the assessment mechanisms may have very strong legal protections, collections of insurance or operations of the insurer could be interrupted if there is significant devastation in the tax base from a hurricane for example. Most tax-backed bonds in the municipal sector are not susceptible to storm risk. However, some have tax bases that are also located in storm prone areas, exposing them to a similar level of storm risk.

Revenue vulnerability, however, tends to vary depending on the pledge. In some cases, we have seen increases in sales tax revenues post-storm as residents increase purchases to replace damaged goods and for clean-up needs.

Applying the Special Tax Scorecard to Adjustable Assessment Bonds

Special Tax Methodology Scoring Factors Applied to Adjustable Assessment bonds

Through our special tax methodology, we examine four broad scorecard factors divided into seven sub-factors. Below we describe how those factors are applied to adjustable assessment bonds. The weights applied to each factor and sub-factor are the same as those for the scorecard in the methodology.

Taxable Base and Pledge (30%)

Economic Strength (15%)

For each assessment bond, we evaluate the size, diversity and growth prospects of the assessment base, which typically encompass an entire state.

Nature of the Special Tax Pledge (15%)

To evaluate the strength of an assessment bond pledge, we focus on the broadness of the pledge. Assessments levied on all employers within a state are the strongest, whereas assessments levied on a smaller subset of employers, such as insurers of a specific line of coverage, are by their nature a weaker pledge.

Legal Structure (30%)

Additional Bonds Test (20%)

Most adjustable assessment bonds are not structured with an additional bonds test, and therefore are typically scored lower on this factor. Other types of leverage constraints may exist, however, such as limits on overall assessments or issuance, which would be reflected in a below the line upward adjustment.

Narrow debt service coverage can be balanced by the ability to set the assessment rate and achieve a higher degree of certainty for debt service coverage than is the case in bonds where there is no active management of the tax rate.

Debt Service Reserve Fund Requirement (10%)

While some adjustable assessment bond structures do include debt service reserve funds, many do not because of the higher degree of certainty of collecting adequate debt service due to the adjustable assessment. Disaster-related issuers may also issue bonds for pre-event liquidity, in which case proceeds are not drawn unless a major storm strikes; these bonds may also have springing reserve fund requirements.

Financial Metrics (40%)

Maximum Annual Debt Service Coverage (20%)

MADS coverage for adjustable assessment bonds can be narrower due to the ability to set the assessment rate and achieve a high degree of certainty for debt service coverage.

Revenue Trend (10%)

Trend in size of assessment base is used as a proxy for revenue. Changes in revenue resulting from rate changes are excluded as they do not reflect the underlying economic trend.

Revenue Volatility (10%)

The trend of volatility of the assessment base is used as a proxy for volatility of revenue collections. Volatility caused by changes in the assessment rate is excluded as it does not reflect the underlying economic trend.

Notching Factors for Adjustable Assessment bonds

Uplifts

ACTIVE MANAGEMENT: The scorecard-indicated outcomes for all adjustable assessment bonds typically receive a one-notch uplift reflecting the ability to set the assessment rate on at least an annual basis without onerous external approval. We view the ability to set rates to meet debt service coverage requirements as a fundamental credit strength of adjustable assessment bonds and the primary difference between them and all other special tax bonds. Pledged revenues for most other special tax bonds are determined by a set rate and a base of economic activity that varies and do not benefit from active management of the rate setting process, whereas, in the case of adjustable assessment bonds, pledged revenues can be increased by adjusting the tax rate, a process that is typically governed by bond documents.

ENHANCEMENTS: Many adjustable assessment bonds do not have debt service reserve funds, and are scored as such. However, some have structural features that provide additional liquidity, which we may reflect with upward notching below the line. For example, some bonds are issued to provide liquidity to pay claims in advance of a potential hurricane. There may be no formal debt service reserve, because the expectation is that bond proceeds will remain with the trustee and be used to pay debt service (assuming there is no hurricane). In the event of a storm, where bond proceeds are drawn down, there may be a "springing" debt service reserve (a reserve required to be funded at that time). In another example, a bond that does not have a formal debt service reserve, but requires that the assessment be annually set at greater than 1 times debt service, will likely always have a liquidity cushion available.

Features and structures such as these may be given a notch of uplift below the line. Also, a limitation on debt issuance or overall assessment combined with a rate covenant may offset the lack of an additional bond test.

Down Drags

Adjustable assessment bonds that are exposed to event risk, specifically natural disaster risk in the case of the state-run insurance companies, are notched down, generally one notch. Also, certain kinds of operating risks, such as vulnerability to legislative changes or management issues, could impede an issuer's ability to collect assessments for debt service in a timely way, and result in additional downward notching.

Moody's Related Publications

Credit ratings are primarily determined by sector credit rating methodologies. Certain broad methodological considerations (described in one or more cross-sector rating methodologies) may also be relevant to the determination of credit ratings of issuers and instruments. A list of sector and cross-sector credit rating methodologies can be found here.

For data summarizing the historical robustness and predictive power of credit ratings, please click here.

For further information, please refer to *Rating Symbols and Definitions*, which is available here.

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