MOODY'S INVESTORS SERVICE

RATING METHODOLOGY

Tax Increment Debt Methodology

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Analyst Contacts:

SAN FRANCISCO +1.415.274.1708

Lori Trevino +1.415.274.1757
Assistant Vice President - Analyst
lori.trevino@moodys.com

Eric Hoffmann +1.415.274.1702
Associate Managing Director
eric.hoffmann@moodys.com

NEW YORK +1.212.553.1653

Leonard Jones +1.212.553.3806
Managing Director - Public Finance
leonard.jones@moodys.com

Timothy Blake +1.212.553.4524
Managing Director - Public Finance
timothy.blake@moodys.com

This rating methodology replaces the *Tax Increment Debt* methodology published in February 2019. We have updated the example in the "Scope" section and the accompanying footnote that refers to other methodologies. This update does not change our methodological approach.

Introduction

In this rating methodology, we explain our general approach to assessing credit risk of tax increment debt issued by US local governments and governmental authorities, including the qualitative and quantitative factors that are likely to affect rating outcomes in the tax increment debt sector.

We discuss the scorecard used for tax increment debt. The scorecard[1] is a relatively simple reference tool that can be used in most cases to approximate credit profiles in this sector and to explain, in summary form, many of the factors that are generally most important in assigning ratings to tax increment debt issuers. The scorecard factors may be evaluated using historical or forward-looking data or both.

We also discuss other considerations, which are factors that are assessed outside the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. In addition, some of the methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector.[2] Furthermore, since ratings are forward-looking, we often incorporate directional views of risks and mitigants in a qualitative way.

As a result, the scorecard-indicated outcome is not expected to match the actual rating for each tax increment debt issuance.

1 In our methodologies and research, the terms "scorecard" and "grid" are used interchangeably.
2 A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

Our presentation of this rating methodology proceeds with (i) the scope of this methodology; (ii) an overview of tax increment financings; (iii) the scorecard framework; (iv) a discussion of the scorecard factors; (v) other considerations not reflected in the scorecard; (vi) the assignment of instrument-level ratings; (vii) methodology assumptions; and (viii) limitations. In Appendix A, we describe how we use the scorecard to arrive at a scorecard-indicated outcome. Appendix B shows the full view of the scorecard factors, sub-factors, weights and thresholds.

Scope of This Methodology

This methodology applies to debt issued by US local governments that is secured by a legal pledge of incremental property tax revenue. Specifically, this is a pledge of revenue that is generated from cumulative growth in the tax base of a tax increment financing (TIF) district relative to that district's tax base as of a specific date. In most cases, the legal pledge of the incremental growth in property tax revenue is net of any reductions associated with administration of the tax, tax-sharing agreements, pass-through payments or other statutorily or contractually required set-asides.

For tax increment bonds that are supported by additional pledged revenue, we typically assign ratings based on the methodology that pertains to the stronger pledge. For example, this methodology does not apply to tax increment debt that is additionally secured by a state or local government's general obligation pledge.[3]

Overview of Tax Increment Financings

TIFs are established as a way to fund improvement projects in the TIF district in order to foster economic development that will result in higher assessed property values (AV) that in turn generate incrementally higher tax revenue. When funded by borrowing, the incremental property tax revenue is pledged to repay the TIF loans and bonds.

Local governments or their agencies typically form TIF districts to encourage economic development through redevelopment or the remediation of blight, or the development of raw land. Projects include roads, street lights, landscaping, sidewalks, water and sewer systems, flood control or public safety facilities, or nearly any project intended to foster economic development. Projects can also include the acquisition, disposition and redevelopment of private property by the agency or its selected developer.

Tax increment revenue is the portion of property tax revenue generated from the incremental growth in AV in a TIF district over a base-year value. Upon the formation of a project area, a base-year value is set. Property tax revenue above the base-year value is distributed to the tax increment debt issuer and may be used for pay-as-you-go projects or pledged as security for tax increment debt. Tax revenue up to the base-year amount continues to be distributed to the overlapping local government(s) that received it prior to establishment of the TIF district, such as the city, school districts, county and special districts. Cumulative growth in the tax base over time from the base year – what we refer to as the incremental (cumulative) AV – is the difference between the TIF project area's current total AV and the base-year AV.

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

Unlike cities or counties, which generally have the authority to set tax rates (either on their own or with voter approval), TIF-funded economic development agencies or other authorities that receive tax increment revenue have no ability to raise tax rates or otherwise exert control over their tax revenue. Applicable tax rates are set by cities, towns, school districts and counties, or are controlled by state law. Changes in tax rates (upward or downward) made by an overlapping government entity generally apply to the TIF district tax rates. As a result, TIF district revenues are typically more immediately exposed to a decrease in AV than US local governments, because most TIF districts cannot adjust tax rates to keep revenue neutral.

Scorecard Framework

The scorecard in this rating methodology is composed of three weighted factors. Two of the three factors comprise a number of sub-factors. The scorecard also includes six notching factors, which may result in upward or downward adjustments in half-notch increments to the preliminary outcome.

EXHIBIT 1

Tax Increment Debt Scorecard Overview

Factor	Factor Weighting	Sub-factor	Sub-factor Weighting
Project Area Characteristics / Tax Base	45%	Incremental (Cumulative) AV	10%
		Median Family Income as a % of US	5%
		Top Ten Taxpayers' AV as a % of Incremental (Cumulative) AV	15%
		Ratio of Incremental (Cumulative) AV to Total AV	15%
Financial Strength	35%	MADS Coverage	25%
		Three-Year CAGR of Tax Increment Revenue	10%
Legal Structure / Debt	20%	Additional Bonds Test (ABT)	20%
Total	**100%**	**Total**	**100%**

Preliminary Outcome

Notching Factor	
Structural or Legal Elements That Materially Affect Ability to Pay Debt Service	+2 to -2
Tax Base Characteristics That Provide Economic Stability or Heighten Potential Volatility	+2 to -2
Additional Revenue Pledged for Debt Service	+2 to 0
Limits on Tax Increment Revenue	0 to -2
Exposure to Variable-Rate Debt or Swaps, or Other Unusual Debt Structure	0 to -2
Unusually Strong or Weak Governance, Management or Oversight	+2 to -2

Scorecard-Indicated Outcome

Source: Moody's Investors Service

Please see Appendix A for general information relating to how we use the scorecard and for a discussion of scorecard mechanics. The scorecard does not include or address every factor that a rating committee may consider in assigning ratings in this sector. Please see the "Other Considerations" and "Limitations" sections.

Discussion of the Scorecard Factors

In this section, we explain our general approach for scoring each scorecard factor or sub-factor, and we describe why they are meaningful as credit indicators.

Factor: Project Area Characteristics / Tax Base (45% Weight)

Why It Matters

Project area characteristics, such as the size and economic strength of the tax base, as well as how diverse and volatile it is, provide important indications of the likelihood that pledged revenue will be sufficient to pay debt service when due.

The size of a TIF district's incremental AV is generally an indicator of its economic strength and tax increment revenue potential. Project areas with a smaller incremental AV tend to be less diverse and more vulnerable to stresses that reduce taxable property values, such as fires, localized natural disasters or the closure of a major employer. A tax base with a larger incremental AV is inherently better able to absorb and rebound from these kinds of events.

Median family income, as a percentage of US median family income provides a meaningful indication of the general economic strength of the area and its potential for economic development. A high ratio can also indicate a lower potential for property tax delinquencies.

Taxpayer diversity is important because TIF districts concentrated in one or a small number of taxpayers may experience a significant loss of tax increment revenue from the bankruptcy, delinquency or relocation of a major taxpayer. TIF project areas characterized by a diverse group of taxpayers, including predominantly residential project areas, tend to be more resilient and generate more stable revenue.

Potential tax base volatility is a critical indicator of revenue stability. Since TIF districts lack the authority to increase tax rates, revenue growth largely depends on tax base growth. This dependence on tax base growth can result in much higher potential tax base volatility for TIF districts than their overlapping local government counterparts, with changes in AV producing wider fluctuations in incremental property tax revenue.

How We Assess It for the Scorecard

INCREMENTAL (CUMULATIVE) AV:

We use this metric to assess the size of the tax base, measured or estimated as the AV that TIF revenue is based on. We subtract the TIF district's base-year AV in dollars from the most recent year's total AV in dollars to arrive at incremental (cumulative) AV.

MEDIAN FAMILY INCOME AS A % OF US:

We use this ratio to assess the economic strength of the TIF project area. The numerator is the median family income of the TIF district's primary overlapping local government (usually a city or a county), because income data for the project area are rarely available. The denominator is US median family income.

TOP TEN TAXPAYERS' AV AS A % OF INCREMENTAL (CUMULATIVE) AV:

We use this ratio to assess tax base diversity. The numerator is the most recent AV of the top 10 taxpayers in the TIF district. The denominator is the most recent incremental (cumulative) AV of the TIF project area.

RATIO OF INCREMENTAL (CUMULATIVE) AV TO TOTAL AV:

We use this ratio to assess the potential volatility of the TIF tax base. The numerator is the TIF project area's most recent incremental (cumulative) AV. The denominator is the TIF project area's total AV, which includes the base-year valuation and incremental growth.

The lower the ratio of incremental AV to total AV, the greater the potential volatility of the TIF tax base. For example, if the incremental AV is 25% of the total AV of the TIF project area, then a 2% across-the-board reduction in the total AV would represent an 8% reduction in the incremental AV and in tax increment revenue. The lower the ratio of incremental (cumulative) AV to total AV, the greater this multiplier effect.

FACTOR

Project Area Characteristics/Tax Base (45%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Incremental (Cumulative) AV (USD Millions)*1	10%	≥ $12,000	$1,400 - $12,000	$240 - $1,400	$120 - $240	$60 - $120	$30 - $60	$20 - $30	< $20
Median Family Income as a % of US*2	5%	≥ 150%	90% - 150%	75% - 90%	50% - 75%	40% - 50%	30% - 40%	20% - 30%	< 20%
Top Ten Taxpayers' AV as % of Incremental (Cumulative) AV*3	15%	≤ 2%	2% - 5%	5% - 10%	10% - 20%	20% - 35%	35% - 45%	45% - 55%	> 55%
Ratio of Incremental (Cumulative) AV to Total AV*4	15%	≥ 95%	90% - 95%	85% - 90%	80% - 85%	75% - 80%	70% - 75%	60% - 70%	< 60%

*1 For the linear scoring scale, the Aaa endpoint value is $50,000 (i.e., $50 billion). A value of $50,000 or better equates to a numeric score of 0.5. The Ca endpoint value is $0. A value of $0 equates to a numeric score of 20.5.

*2 For the linear scoring scale, the Aaa endpoint value is 200%. A value of 200% or better equates to a numeric score of 0.5. The Ca endpoint value is 0%. A value of 0% equates to a numeric score of 20.5.

*3 For the linear scoring scale, the Aaa endpoint value 0%. A value of 0% equates to a numeric score of 0.5. The Ca endpoint value is 70%. A value of 70% or worse equates to a numeric score of 20.5.

*4 For the linear scoring scale, the Aaa endpoint value 100%. A value of 100% equates to a numeric score of 0.5. The Ca endpoint value is 40%. A value of 40% or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Factor: Financial Strength (35% Weight)

Why It Matters

The financial strength of a TIF district, including maximum annual debt service (MADS) coverage, is an important indicator of whether current revenue will be sufficient to pay debt service through the life of the bonds. Higher MADS coverage indicates a greater buffer against swings in TIF revenue.

The recent trend of tax increment revenue growth is also important because it is a directional indicator of the TIF district's revenue over the near to medium term and provides insights into future MADS coverage.

How We Assess It for the Scorecard

MADS COVERAGE:

The numerator is the most recent fiscal year's collected, available and legally pledged tax increment revenue. The denominator is the single largest annual debt service payment due in any single future year.[4]

THREE-YEAR CAGR OF TAX INCREMENT REVENUE:

We measure the trend of incremental tax revenue growth using the compound annual growth rate (CAGR) of tax increment revenue for the most recent three-year period. We use a three-year average to smooth annual fluctuations in project area tax revenue, which can experience periods of volatility.

FACTOR

Financial Strength (35%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
MADS Coverage*1	25%	≥ 4x	3x - 4x	2x – 3x	1.3x - 2x	1x - 1.3x	0.8x - 1x	0.6x – 0.8x	< 0.6x
Three-year CAGR of Tax Increment Revenue*2	10%	≥ 10%	5% - 10%	0% - 5%	(2)% - 0%	(5)% - (2)%	(8)% - (5)%	(10)% - (8)%	< (10)%

*1 For the linear scoring scale, the Aaa endpoint value is 8x. A value of 8x or better equates to a numeric score of 0.5. The Ca endpoint value is 0x. A value of 0x equates to a numeric score of 20.5.

*2 For the linear scoring scale, the Aaa endpoint value is 20%. A value of 20% or better equates to a numeric score of 0.5. The Ca endpoint value is (20)%. A value of (20)% or worse equates to a numeric score of 20.5.

Source: Moody's Investors Service

Factor: Legal Structure/Debt (20% Weight)

Why It Matters

The legal structure of a tax increment debt issuance is important because it indicates the level of legal protection in place for current bondholders against the claims of future bondholders.

When a tax increment debt structure includes an open lien, the indenture typically sets out conditions that must be met in order for a TIF district to issue additional debt with a parity pledge of the same tax increment revenue. These requirements generally include the maintenance of a minimum debt service coverage level on prospective total debt service from current revenue, known as an additional bonds test. When an additional bonds test is included as part of the legal structure, it almost always requires current net revenue to be at least one times prospective total debt service, and often well above that level.

Occasionally, tax increment revenue will decline to the point that MADS coverage falls below the additional bonds test. In cases where MADS coverage is persistently below the additional bonds test, which is usually a sign of weak cash flow, ratings may incorporate a relatively higher weighting of the MADS coverage ratio and a relatively lower weighting of the legal structure, because a strong legal structure does not provide meaningful bondholder protection when MADS coverage is below the additional bonds test.

4 Variable-rate debt issuances in this sector are uncommon. In these cases, if there is a maximum rate specified in the bond documents, we would use this rate in calculating the maximum annual debt service. If no maximum rate is specified, we would assume a rate that is 8% over the current variable rate.

How We Assess It for the Scorecard

ADDITIONAL BONDS TEST:

The additional bonds test is the contractually required coverage level that a tax increment debt issuer must maintain before parity debt may be issued. We score closed liens as equivalent to the strongest additional bonds test.

FACTOR

Legal Structure/Debt (20%)

Sub-factor	Sub-factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Additional Bonds Test*1	20%	≥ 3x OR closed lien	1.75x – 3x	1.25x - 1.75x	1.2x - 1.25x	1.15x - 1.2x	1.05x - 1.15x	1x - 1.05x	< 1x OR no ABT

*1 For the linear scoring scale, the Aaa endpoint value is 3.5x. A value of 3.5x or better equates to a numeric score of 0.5. The Ca endpoint value is 0x. A value of 0x equates to a numeric score of 20.5.

Source: Moody's Investors Service

Notching Factors

The scorecard incorporates several notching factors that we take into consideration, which may result in upward or downward adjustments in half-notch increments to the preliminary outcome that results from factors 1 to 3. In the discussion that follows, we provide the typical range of potential notching for each of these factors. In aggregate, these factors can result in a total of up to three upward notches or up to six downward notches from the preliminary outcome to arrive at the scorecard-indicated outcome. In individual cases where we consider that the credit weakness or credit strength represented by a notching factor, or by these factors in aggregate, is greater than the scorecard range, we would incorporate this view into the issuer's rating, which may be different from the scorecard-indicated outcome.

Notching Factor	
Structural or Legal Elements That Materially Affect Ability to Pay Debt Service	+2 to -2
Tax Base Characteristics That Provide Economic Stability or Heighten Potential Volatility	+2 to -2
Additional Revenue Pledged for Debt Service	+2 to 0
Limits on Tax Increment Revenue	0 to -2
Exposure to Variable-Rate Debt or Swaps, or Other Unusual Debt Structure	0 to -2
Unusually Strong or Weak Governance, Management or Oversight	+2 to -2

Source: Moody's Investors Service

Structural or Legal Elements That Materially Affect Ability to Pay Debt Service

Why It Matters

Structural or legal elements that affect the TIF district are important because they can enhance or impair the issuer's ability to pay debt service. These elements may be embedded in state law and apply to all issuers within a state, or they may be specific to an individual issuer through local law or through deal-specific legal provisions. For example, a state may have laws regulating the tax base assessment process that result in stable growth in the tax base. Another state may have laws that limit annual tax base growth. Legal provisions for individual transactions may allow for changes in the flow of increment revenue in certain circumstances or allow for additional claims on the revenue under certain conditions. Further, TIF districts are typically established with an end date, and therefore it would be a credit weakness if debt matured after that date.

How We Assess It for the Scorecard

In assessing this factor, we typically consider the state or local legal environment under which a tax increment debt issuer operates. We also consider any transaction-specific contractual provisions that could impair the flow of funds to pay debt service. We may consider an upward or downward notching adjustment to the preliminary outcome of up to two notches, but in most cases by no more than one notch.

Tax Base Characteristics That Provide Economic Stability or Heighten Potential Volatility

Why It Matters

Aspects of a TIF district that heighten tax base volatility or, conversely, provide additional stability to the tax base are relevant considerations. The TIF project area may depend on speculative development, have a very limited track record, have limited growth prospects or be concentrated in one industry or sector,[5] heightening the risk of wide fluctuations in AV and incremental revenue. The base may benefit from a stabilizing institutional presence, such as a university, or it may be an economic center of a larger area, resulting in a steady flow of activity within the TIF district.

How We Assess It for the Scorecard

In assessing this factor, we typically consider the particular features of the tax base that might intensify or mitigate the volatility of the TIF project area tax base. We may consider an upward or downward notching adjustment to the preliminary outcome of up to two notches, but in most cases by no more than one notch.

Additional Revenue Pledged for Debt Service

Why It Matters

When the pledged revenue for tax increment debt transactions includes sources in addition to the incremental tax revenue generated within the TIF district, it increases the likelihood of timely debt repayment. The issuer may pledge additional revenue beyond the incremental property tax revenue generated by its TIF property tax base, if necessary, to make debt service payments. Pledged tax increment revenue from multiple TIF districts may also be pooled, allowing for excess revenue from a strong district to be used for debt service in a weaker district.

How We Assess It for the Scorecard

In our assessment, we consider whether any revenue sources beyond the incremental tax revenue generated within the district are additionally pledged to pay tax increment debt service. We may consider an upward notching adjustment to the preliminary outcome of up to two notches, but in most cases by no more than one notch.

Limits on Tax Increment Revenue

Why It Matters

Issuers of tax increment debt may be subject to state or local legislation that limits the amount of tax increment revenue they may receive or that limits the duration of the collection of such revenue. These caps are important considerations because they can constrain a TIF district's ability to use tax

5 Concentrations may not be apparent from the percentage of incremental AV from the top 10 taxpayers in situations where many taxpayers are in the same industry or sector. Where concentrations are present, we typically consider the track record, stability and long-term prospects of the industry.

increment revenue to pay TIF debt. There may be additional legal or structural elements that mitigate these constraints, such as a covenant to put tax increment revenue in escrow if projections indicate a risk of reaching the revenue cap prior to final maturity.

How We Assess It for the Scorecard

In assessing this factor, we consider the likelihood that a revenue limit will be reached prior to the final maturity given current and projected tax base and tax increment revenue growth. We may consider a downward notching adjustment to the preliminary outcome of up to two notches, but in most cases by no more than one notch.

Exposure to Variable-Rate Debt or Swaps, or Other Unusual Debt Structures

Why It Matters

An issuer of tax increment debt may be exposed to risks related to variable-rate debt or interest-rate swaps. This is an important consideration because TIF districts generally do not have the ability to increase rates, even temporarily, to meet unexpected increases in variable interest rates or accelerated repayments to a liquidity provider in the event of a persistent failed remarketing. Collateral posting requirements for a swap or for a termination of a swap could also pressure increment revenue.

How We Assess It for the Scorecard

In assessing this factor, we consider the TIF district's capacity to meet fluctuations in interest rates, accelerated principal payments or swap collateral postings or termination payments. We may consider a downward notching adjustment to the preliminary outcome of up to two notches, but in most cases by no more than one notch.

Unusually Strong or Weak Governance, Management or Oversight

Why It Matters

The strength or weakness of governance and management are important because they can greatly affect a TIF district's operating effectiveness, and therefore its future revenue generation and growth. Although TIF districts are generally constrained in their ability to directly increase revenue for debt service, districts have the authority to develop strategies that impact the short- and long-term tax base growth and associated tax increment revenue. The governing body of the TIF district, which may be an independent public entity or a division of a municipality, typically has broad oversight of the TIF district and may provide input into day-to-day operations. In some states, a higher level of government, such as a county, provides an additional level of oversight and management of the TIF district's operations, including the collection and distribution of tax increment revenue. The quality of this oversight may strengthen the overall credit quality of the district.

How We Assess It for the Scorecard

In assessing this factor, we typically review the debt issuer's governance structure, the relationship between the governing body and the management of the district, management's economic development strategy and policies, and the existence and quality of oversight. We may consider an upward or downward notching adjustment to the preliminary outcome of up to two notches, but in most cases by no more than one notch.

Other Considerations

Ratings may reflect consideration of additional factors that are not in the scorecard, usually because the factor's credit importance varies widely among the issuers in the sector or because the factor may be important only under certain circumstances or for a subset of issuers. Such factors include financial controls and the quality of financial reporting; the quality and experience of management; assessments of environmental and social considerations; and possible interference from other levels of government. Regulatory, litigation, liquidity and technology risk as well as changes in demographic and macroeconomic trends also affect ratings.

Following are some examples of additional considerations that may be reflected in our ratings and that may cause ratings to be different from scorecard-indicated outcomes.

Potential for Development or Weakening of Incremental (Cumulative) AV

Our forward-looking view incorporates our assessment of the likely growth or erosion of the incremental (cumulative) tax base. TIF districts vary widely in the potential for future development. A district may be poised for strong future development that is not reflected in the Project Area Characteristics/Tax Base factor. A TIF project area may also face a deterioration in incremental (cumulative) AV, resulting in decreasing tax increment revenue. In some cases, we may incorporate our view of the full impact of these considerations into ratings qualitatively, for example when there is substantial uncertainty in the future level of scorecard metrics.

Flexibility to Amend Tax Increment Areas

Some TIF districts have the authority to amend their project areas, including adding or removing specific properties from the tax base within the TIF district. The authority to alter the composition of the tax base for the calculation of tax increment revenue can strengthen or weaken the credit profile of the TIF district. We generally consider an issuer's flexibility to modify the TIF district to be an additional credit strength, because a well-governed TIF will generally use that flexibility to improve its operating and financial position.

Ability of Local Governments to Opt Out of TIF District

Many states have provisions that allow certain local governments to opt out of the diversion of increment revenue to TIF project areas. In these cases, we typically assess the track record and trend of local government abstention from the diversion of tax increment revenue, but we generally consider the ability of local governments to opt out of the remittance of tax increment revenue to be negative for the TIF district's credit profile.

General Credit Quality of Primary Overlapping Local Government

Although TIF district revenue is typically legally segregated from the general revenue of the local governments that also derive property tax revenue from the TIF project area, the TIF district's credit quality may be affected by the overall credit quality of the primary overlapping local government. We assess the potential effects of local government decisions on the tax increment base and revenue stream. This may become particularly relevant when a local government is under financial stress. For example, local government stress could result in pressure for the TIF district to borrow more, or it may result in significant cuts to basic municipal services, such as police and fire protection, which can have a dampening effect on property values and tax base growth.

Financial Controls

We rely on the accuracy of audited financial statements and disclosure filings to assign and monitor ratings in this sector. The quality of financial statements and disclosures may be influenced by internal controls, including consistency in accounting policies and procedures. Auditors' reports on the effectiveness of internal controls, auditors' comments in financial reports and unusual restatements of financial statements or delays in regulatory filings may indicate weaknesses in internal controls.

Liquidity

Liquidity is an important rating consideration for all issuers of tax increment debt, although it may not have a substantial impact in discriminating between two issuers with a similar credit profile. For example, liquidity issues can arise when there are meaningful mismatches in the timing of cash receipts and cash outlays. We form an opinion on likely near-term liquidity requirements from the perspective of both sources and uses of cash. Ratings can be heavily affected by extremely weak liquidity.

Additional Metrics

The metrics included in the scorecard are those that are generally most important in assigning ratings to issuers of tax increment debt; however, we may use additional metrics to inform our analysis of specific issuers. These additional metrics may be important to our forward view of metrics that are in the scorecard or other rating factors.

Event Risk

We also recognize the possibility that an unexpected event could cause a sudden and sharp decline in an issuer's fundamental creditworthiness, which may cause actual ratings to be lower than the scorecard-indicated outcome. Event risks — which are varied and can include natural disasters, legal judgments, security incidents and abrupt changes in state law — can overwhelm even a stable TIF district. Some other types of event risks include material litigation, pandemics and significant cyber-crime events. Event risk analysis for TIF districts typically includes an assessment of the nature of the disruption or damage, the cost of remediation, lost revenue, potential insurance coverage for property damage and plans to pay for the costs of recovery.

Regulatory Considerations

Issuers of tax increment debt are subject to varying degrees of regulatory oversight. Effects of these regulations may entail higher costs.

Regional differences in regulation, implementation or enforcement may advantage or disadvantage particular issuers. Our view of future regulations plays an important role in our expectations of future financial metrics as well as our confidence level in the ability of an issuer to generate sufficient cash flows relative to its debt burden over the medium and longer term. In some circumstances, regulatory considerations may also be a rating factor outside the scorecard, for instance when regulatory change is swift.

Environmental, Social and Governance Considerations

Environmental, social and governance (ESG) considerations may affect the ratings of issuers in this sector. For information about our approach to assessing ESG issues, please see our methodology that describes our general principles for assessing these risks.[6]

Over time, the economic resiliency and financial strength of a TIF district could be affected by environmental risks, which may weaken economic output and tax base valuation and reduce an issuer's revenue base. We also consider social issues that could materially affect the likelihood of default and

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

severity of loss. For example, we may assess the fiscal, economic and political implications of poverty, social inequality, or violence and crime on economic competitiveness and growth.

Assigning Instrument-Level Ratings

After considering the scorecard-indicated outcome, other considerations and relevant cross-sector methodologies, we typically assign an instrument-level rating. Individual debt instrument ratings may be notched down from the senior instrument-level rating.

Occasionally, a TIF district may issue a debt series with different liens on tax increment revenue. Senior debt has a first lien on incremental revenue and subordinate debt has a junior lien; sometimes, a TIF district will issue an additional series of debt with a third lien or lower. We assess the effect of subordination based on analysis of the revenue coverage for all debt classes as well as the coverage of senior and subordinate debt classes by incremental revenue net of debt service on each prior lien. We may notch subordinate debt down by one notch or more per debt class if our analysis shows material increased risk of default and loss to debt with subordinate liens.

Key Rating Assumptions

For information about key rating assumptions that apply to methodologies generally, please see *Rating Symbols and Definitions*.[7]

Limitations

In the preceding sections, we have discussed the scorecard factors and many of the other considerations that may be important in assigning ratings. In this section, we discuss limitations that pertain to the scorecard and to the overall rating methodology.

Limitations of the Scorecard

There are various reasons why scorecard-indicated outcomes may not map closely to actual ratings.

The scorecard in this rating methodology is a relatively simple tool focused on indicators for relative credit strength. Credit loss and recovery considerations, which are typically more important as an issuer gets closer to default, may not be fully captured in the scorecard. The scorecard is also limited by its upper and lower bounds, causing scorecard-indicated outcomes to be less likely to align with ratings for issuers at the upper and lower ends of the rating scale.

The weights for each factor and sub-factor in the scorecard represent an approximation of their importance for rating decisions across the sector, but the actual importance of a particular factor may vary substantially based on an individual issuer's circumstances.

Factors that are outside the scorecard, including those discussed above in the "Other Considerations" section, may be important for ratings, and their relative importance may also vary from issuer to issuer. In addition, certain broad methodological considerations described in one or more cross-sector rating methodologies may be relevant to ratings in this sector. [8] Examples of such considerations include the

[7] A link to *Rating Symbols and Definitions* can be found in the "Moody's Related Publications" section.
[8] A link to a list of our sector and cross-sector methodologies can be found in the "Moody's Related Publications" section.

following: how sovereign credit quality affects non-sovereign issuers, the assessment of credit support from other entities, the relative ranking of different classes of debt and the assignment of short-term ratings.

We may use the scorecard over various historical or forward-looking time periods. Furthermore, in our ratings we often incorporate directional views of risks and mitigants in a qualitative way.

General Limitations of the Methodology

This methodology document does not include an exhaustive description of all factors that we may consider in assigning ratings in this sector. Issuers in the sector may face new risks or new combinations of risks, and they may develop new strategies to mitigate risk. We seek to incorporate all material credit considerations in ratings and to take the most forward-looking perspective that visibility into these risks and mitigants permits.

Ratings reflect our expectations for an issuer's future performance; however, as the forward horizon lengthens, uncertainty increases and the utility of precise estimates, as scorecard inputs or in other rating considerations, typically diminishes. Our forward-looking opinions are based on assumptions that may prove, in hindsight, to have been incorrect. Reasons for this could include unanticipated changes in any of the following: the macroeconomic environment, general financial market conditions, industry competition, disruptive technology, or regulatory and legal actions. In any case, predicting the future is subject to substantial uncertainty.

Appendix A: Using the Scorecard to Arrive at a Scorecard-Indicated Outcome

1. Measurement or Estimation of Factors in the Scorecard

In the "Discussion of the Scorecard Factors" section, we explain our analytical approach for scoring each scorecard factor or sub-factor,[9] and we describe why they are meaningful as credit indicators.

The information used in assessing the sub-factors is generally found in or calculated from information in the issuer's financial statements or regulatory filings, derived from other observations or estimated by Moody's analysts. We may also incorporate non-public information.

Our ratings are forward-looking and reflect our expectations for future financial and operating performance. However, historical results are helpful in understanding patterns and trends of an issuer's performance as well as for peer comparisons. Financial metrics, unless otherwise indicated, are typically calculated based on annual or 12-month period. However, the factors in the scorecard can be assessed using various time periods. For example, rating committees may find it analytically useful to examine both historical and expected future performance for periods of several years or more.

The quantitative credit metrics used in this methodology may incorporate analytical adjustments that are specific to a particular issuer.

2. Mapping Scorecard Factors to a Numeric Score

After estimating or calculating each sub-factor, the outcomes for each of the sub-factors are mapped to a broad Moody's rating category (Aaa, Aa, A, Baa, Ba, B, Caa or Ca, also called alpha categories) and to a numeric score.

Qualitative factors are scored based on the description by broad rating category in the scorecard. The numeric value of each alpha score is based on the scale below.

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
1	3	6	9	12	15	18	20

Source: Moody's Investors Service

Quantitative factors are scored on a linear continuum. For each metric, the scorecard shows the range by alpha category. We use the scale below and linear interpolation to convert the metric, based on its placement within the scorecard range, to a numeric score, which may be a fraction. As a purely theoretical example, if there were a ratio of revenue to interest for which the Baa range was 50x to 100x, then the numeric score for an issuer with revenue/interest of 99x, relatively strong within this range, would score closer to 7.5, and an issuer with revenue/interest of 51x, relatively weak within this range, would score closer to 10.5. In the text or table footnotes, we define the endpoints of the line (i.e., the value of the metric that constitutes the lowest possible numeric score and the value that constitutes the highest possible numeric score).

Aaa	Aa	A	Baa	Ba	B	Caa	Ca
0.5 - 1.5	1.5 - 4.5	4.5 - 7.5	7.5 - 10.5	10.5 - 13.5	13.5 - 16.5	16.5 - 19.5	19.5 - 20.5

Source: Moody's Investors Service

[9] When a factor comprises sub-factors, we score at the sub-factor level. Some factors do not have sub-factors, in which case we score at the factor level.

3. Determining the Overall Scorecard-Indicated Outcome

The numeric score for each sub-factor (or each factor, when the factor has no sub-factors) is multiplied by the weight for that sub-factor (or factor), with the results then summed to produce an aggregate numeric score before notching factors (the preliminary outcome). We then consider whether the preliminary outcome that results from the three weighted factors should be notched upward or downward[10] in order to arrive at an aggregate numeric score after notching factors, based on Structural or Legal Elements That Materially Affect Ability to Pay Debt Service; Tax Base Characteristics That Provide Economic Stability or Heighten Potential Volatility; Additional Revenue Pledged for Debt Service; Limits on Tax Increment Revenue; Exposure to Variable-Rate Debt or Swaps, or Other Unusual Debt Structure; and Unusually Strong or Weak Governance, Management or Oversight. In aggregate, the notching factors can result in a total of up to three upward notches or up to six downward notches from the preliminary outcome to arrive at the scorecard-indicated outcome.

This aggregate numeric score before and after notching factors is mapped back to an alphanumeric. For example, an issuer with an aggregate numeric score before notching factors of 11.7 would have a Ba2 preliminary outcome, based on the ranges in the table below. If the combined notching factors totaled two upward notches, the aggregate numeric score after notching factors would be 9.7, which would map to a Baa3 scorecard-indicated outcome.

EXHIBIT 2

Scorecard-Indicated Outcome

Scorecard-Indicated Outcome	Aggregate Numeric Score
Aaa	x ≤ 1.5
Aa1	1.5 < x ≤ 2.5
Aa2	2.5 < x ≤ 3.5
Aa3	3.5 < x ≤ 4.5
A1	4.5 < x ≤ 5.5
A2	5.5 < x ≤ 6.5
A3	6.5 < x ≤ 7.5
Baa1	7.5 < x ≤ 8.5
Baa2	8.5 < x ≤ 9.5
Baa3	9.5 < x ≤ 10.5
Ba1	10.5 < x ≤ 11.5
Ba2	11.5 < x ≤ 12.5
Ba3	12.5 < x ≤ 13.5
B1	13.5 < x ≤ 14.5
B2	14.5 < x ≤ 15.5
B3	15.5 < x ≤ 16.5
Caa1	16.5 < x ≤ 17.5
Caa2	17.5 < x ≤ 18.5
Caa3	18.5 < x ≤ 19.5
Ca	19.5 < x ≤ 20.5
C	x > 20.5

Source: Moody's Investors Service

In general, the scorecard-indicated outcome is oriented to a debt instrument with a senior pledge on incremental tax revenues.

[10] Numerically, a downward notch adds 1 to the score, and an upward notch subtracts 1 from the score.

Appendix B: Tax Increment Debt Scorecard

	Sub-Factor Weight	Aaa	Aa	A	Baa	Ba	B	Caa	Ca
Factor: Project Area Characteristics/Tax Base (45%)									
Incremental (Cumulative) AV (USD Millions)*1	10%	≥ $12,000	$1,400 - $12,000	$240 - $1,400	$120 - $240	$60 - $120	$30 - $60	$20 - $30	< $20
Median Family Income as a % of US*2	5%	≥ 150%	90% - 150%	75% - 90%	50% - 75%	40% - 50%	30% - 40%	20% - 30%	< 20%
Top Ten Taxpayers' AV as % of Incremental AV*3	15%	≤ 2%	2% - 5%	5% - 10%	10% - 20%	20% - 35%	35% - 45%	45% - 55%	> 55%
Ratio of Incremental AV to Total AV*4	15%	≥ 95%	90% - 95%	85% - 90%	80% - 85%	75% - 80%	70% - 75%	60% - 70%	< 60%
Factor: Financial Strength (35%)									
MADS Coverage*5	25%	≥ 4x	3x - 4x	2x – 3x	1.3x - 2x	1x - 1.3x	0.8x - 1x	0.6x – 0.8x	< 0.6x
Three-year CAGR of Tax Increment Revenue*6	10%	≥ 10%	5% - 10%	0% - 5%	(2)% - 0%	(5)% - (2)%	(8)% - (5)%	(10)% - (8)%	< (10)%
Factor: Legal Structure/Debt (20%)									
Additional Bonds Test*7	20%	≥ 3x OR closed lien	1.75x – 3x	1.25x - 1.75x	1.2x - 1.25x	1.15x - 1.2x	1.05x - 1.15x	1x - 1.05x	<1x OR no test

Notching Factors	
Structural or Legal Elements That Materially Affect Ability to Pay Debt Service	+2 to -2
Tax Base Characteristics That Provide Economic Stability or Heighten Potential Volatility	+2 to -2
Additional Revenue Pledged for Debt Service	+2 to 0
Limits on Tax Increment Revenue	0 to -2
Exposure to Variable-Rate Debt or Swaps, or Other Unusual Debt Structure	0 to -2
Unusually Strong or Weak Governance, Management or Oversight	+2 to -2

*1 For the linear scoring scale, the Aaa endpoint value is $50,000. A value of $50,000 or better equates to a numeric score of 0.5. The Ca endpoint value is $0. A value of $0 equates to a numeric score of 20.5.
*2 For the linear scoring scale, the Aaa endpoint value is 200%. A value of 200% or better equates to a numeric score of 0.5. The Ca endpoint value is 0%. A value of 0% equates to a numeric score of 20.5
*3 For the linear scoring scale, the Aaa endpoint value 0%. A value of 0% equates to a numeric score of 0.5. The Ca endpoint value is 70%. A value of 70% or worse equates to a numeric score of 20.5.
*4 For the linear scoring scale, the Aaa endpoint value 100%. A value of 100% equates to a numeric score of 0.5. The Ca endpoint value is 40%. A value of 40% or worse equates to a numeric score of 20.5.
*5 For the linear scoring scale, the Aaa endpoint value is 8x. A value of 8x or better equates to a numeric score of 0.5. The Ca endpoint value is 0x. A value of 0x equates to a numeric score of 20.5.
*6 For the linear scoring scale, the Aaa endpoint value is 20%. A value of 20% or better equates to a numeric score of 0.5. The Ca endpoint value is (20)%. A value of (20)% or worse equates to a numeric score of 20.5.
*7 For the linear scoring scale, the Aaa endpoint value is 3.5x. A value of 3.5x or better equates to a numeric score of 0.5. The Ca endpoint value is 0x. A value of 0x equates to a numeric score of 20.5.

Source: Moody's Investors Service

Moody's Related Publications

Credit ratings are primarily determined through the application of 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. An index 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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Author
Geordie Thompson
Julie Beglin