

Municipal Credit Research
U.S. State Government Methodology

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U.S. State Government Methodology

Morningstar's state government credit analysis is prospective in its outlook, and reflects on our expectations of an entity's projected ability to meet its debt service obligations through the life of its bonds. We incorporate both recent measures and historic trends into our analysis. In our view, doing so to allows us to more effectively assess a state entity's current strength, and to more accurately gauge and predict when and how change may occur. We review data from a variety of sources, including federal and state agencies, and other governmental disclosures. Additionally, Morningstar employs proprietary metrics to ensure a complete analysis.

The state government criteria cover states, the District of Columbia, U.S. territories, and related credits.

Morningstar's assessment for all sectors under U.S. public finance is driven by four key pillars:

1. Economic strength
2. Financial condition
3. Debt and long-term liabilities profile
4. Management and operating environment

For each of the four pillars, Morningstar assigns an analyst-driven score ranging from Good to Poor. The pillar scores are then combined to arrive at an Overall Score, which reflects our overall opinion about the credit quality of the entity. Morningstar expects that its state ratings will generally be concentrated on the higher end of the scale, due to the fact that state governments have the benefits a more substantial economic base and greater fiscal autonomy than their counterparts in local government or enterprises. These characteristics yield high economic strength and financial condition scores for state governments generally, such that distinguishing credit characteristics between states stem mostly from differing management and operating environments, as well as from debt and long term liabilities.

Economic Strength

The strength and stability of an entity's economy is central to Morningstar's credit analysis. An entity's economic profile affects the demand for services and expenditures, as well as the revenue-generation capacity to support service needs, overall governmental operations, and debt repayment. For debt with certain security structures, such as a general obligation pledge or various special tax obligations, the economic tax base is also the ultimate legal source for bondholder security. To understand an entity's economic profile, we examine the major industries, employers, and taxpayers driving economic activity; the entity's current market valuation and growth trends; and its demographic characteristics. We assign an economic pillar score based on these key credit metrics.

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Economic Type and Scope

Morningstar evaluates basic economic type and scope, including overall gross state product (GSP), in order to understand an entity's overall stability and resilience during economic disruptions. We review industry and employer concentration, as well as the regional economic centers to gauge economic base diversity. Generally, Morningstar expects highly diversified economies to remain more stable than those concentrated in a particular industry over the longer term.

Income and Demographics

Measurements of a population's ability to pay are important factors in Morningstar's credit analysis. Sales and income tax revenues are tend to be the main source of operating income for most state entities, and this income stream is highly dependent on wealth levels and employment status of state residents. Our analysis incorporates various measures of wealth on per capita and household bases. We also review poverty rates and income levels relative to regional and national averages. Housing characteristics such as median home values, building permit trends, and foreclosure rates are also considered. These measures, coupled with employment data on the size of the labor force and unemployment, provide a comprehensive picture of an area's overall ability to generate financial resources for the state.

Morningstar also reviews trends in population size and age, which serve as indicators of revenue-generating strength and expenditure drivers. Rapid population growth could indicate a strong economy as well as the need for additional capital and resources to support a more populous service area. Conversely, waning populations could indicate an industry's decline and job losses in the area, possibly pressuring both revenue-collection rates and social service demands. Compositional elements of population growth and decline are also considered; changes in the ratio of working age population (ages 18-65) to those being supported (younger than 18 and over 65) help inform our understanding of future revenue flows and expenditure burdens. Additionally, we review school enrollment trends, given that state governments typically allocate funds to local education and public universities.

Market Valuation and Growth Trends

For states that have the ability to levy property taxes, the assessment of their full property market valuation is an important determinant of their ability to generate revenue. Full market value reflects the price that the property would fetch in the marketplace, and in our opinion, entities with larger market valuations have a greater ability to costs associated with higher taxes and fees. This makes it easier to generate income if needed. Market valuation is also a key credit concern for general obligation bonds as they are ultimately secured by a pledge of property tax revenue.

Not all property within the state is taxable though, and state assessors determine the taxable assessed value by taking a percentage of the full market value and subtracting tax-exempt properties. Morningstar considers the current full and assessed valuation, the relationship between the two, and their historical average annual changes. We also review recent building permit activity in the area. The analysis also considers growth by market and industry sector as indicators of future performance.

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Financial Condition

Morningstar's analysis of an entity's financial condition includes a review of operating consistency and reserve levels. Our analysis includes an overview of all funds over time, with emphasis placed on the general fund as well as the debt service fund and any other major governmental funds the analyst may deem to be material or significant. We review balance sheet measures such as cash positions and fund balances, which contribute to our understanding of an entity's liquidity position. We also consider revenue diversity and volatility, expenditure flexibility, and various budgeting practices to inform us of a government's overall financial health and stability. In general, entities with greater financial flexibility are better positioned to manage unforeseen stress factors, and are consequently expected to expose bondholders to lower levels of risk.

Balance Sheet Analysis

Key metrics in our financial health assessment include operating fund balance levels and cash positions, both in absolute terms and as a percentage of spending. Specifically, we note trends in operating margins and unrestricted fund balance levels. Morningstar's balance sheet analysis also entails a review of the entity's assets and liabilities, incorporating a detailed assessment of receivables and likelihood of receipt, and an entity's liquidity needs throughout the course of the fiscal year. These ratios serve as measures of resources available to mitigate pressures resulting from unforeseen changes in revenue or expenditures.

As noted under the management pillar discussion, Morningstar recognizes that various reserve levels and cash positions are appropriate for different organizations. While revenue-raising capacity is typically high amongst states, expenditure flexibility and operating environment contribute to determining suitable reserve levels. Meanwhile, areas with rapidly increasing populations and/or which are located in disaster prone locations tend to require higher fund balance margins in order to provide an adequate operating buffer. We view trends of declining reserves and narrowing cash as potential credit concerns across all state entities.

Revenue Diversity and Volatility

Morningstar reviews an entity's revenue sources and growth trends to assess whether they match an entity's budgetary needs. We examine whether income is derived from a narrow or diversified set of sources, and the relative volatility of each source. For state governments, this includes the percentage of revenue derived from various taxes, intergovernmental revenue, service fees, and transfers. Additionally, we review whether revenue growth comes from recurring sources, or are simply driven by one-time events, allowing us to further discern future income statement stability. Entities with diverse revenue streams, and whose revenue growth is both sustainable and recurring, tend to perform better in challenging economic climates.

Expenditure Flexibility

To understand an entity's expenditure flexibility, we evaluate general cost drivers, expenditure growth rates, and the entity's ability to control spending. More specifically, we note that social services--including Medicaid, education and corrections--often account for major line-item expenditures in state governments' annual budgets. We determine the proportion of fixed costs

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through a review of items such as debt service and pension contribution schedules, and note to what extent the government services offered are required or discretionary. An entity with a higher proportion of fixed costs, and which offers more services that are required by policy or legislation, generally has less control over annual spending and therefore less flexibility to react to exogenous stressors.

Debt and Long-Term Liabilities Profile

In the debt and long term liabilities analysis, Morningstar examines an entity's long-term financial commitments, including debt, pension, and other post-employment benefit (OPEB) obligations. Analysis of debt obligations includes an examination of the debt burden, debt structure, and projected future debt needs and capacity. Ultimately, Morningstar is assessing the entity's ability to meet these obligations over their maturity schedule, and the accompanying impact on the overall financial profile. Capital needs are analyzed to project what the debt profile will look like over the medium term. Additionally, the entity's ability to identify and maintain capital needs is critical, as deferred maintenance can lead to larger capital costs in the future and/or negatively impact potential economic activity.

Debt Burden

Debt burden measures the extent to which an entity leverages its revenue base in relation to the gross state product, income levels, and on a per capita basis. Additionally, Morningstar examines debt service as a percentage of spending, which serves as a measure of debt burden magnitude and budgetary flexibility. For nongeneral obligation debt, key drivers are debt service coverage, and legal covenants. For example, special tax revenue bond analysis incorporates the size, diversity and volatility of the revenue pledge, debt service coverage, additional bonds test, debt service reserve fund, and plans for additional leveraging of the security. Project essentiality and strength of the appropriation pledge will also be considered for appropriation and lease revenue-secured bonds.

An entity's use of short-term debt is also evaluated and compared with the entity's liquidity position and timing of cash flows. As short-term debt is scheduled to mature, Morningstar will consider the entity's market access as well as its plan either to retire the debt or to provide long-term financing.

Given that we consider all debt supported by the service area, Morningstar's debt calculations may, under certain circumstances, differ from an entity's definition. Short-term and long-term debt as well as capital leases, appropriation-backed debt, and lease revenue obligations are included, while self-supporting debt from enterprise revenues are excluded.

Debt Structure

The use of various security structures and the current amortization schedule, as well as variable interest rate and derivative products, are factored into Morningstar's debt analysis. The debt structure may serve as an offsetting factor to the debt burden, depending on future capital needs. In general, the life of the bonds should be no longer than the useful life of the project.

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For variable rate debt, Morningstar considers the terms of the current liquidity agreement and procurement plans for future liquidity. Interest rate swaps are examined including the mark to market calculation, and the entity's ability to absorb termination costs or collateral requirements if necessary.

Capital Needs

An entity's upcoming capital needs are a key driver for its future debt burden and financial flexibility. An entity's ability to identify and fund necessary capital needs without significantly hindering financial flexibility is critical to long-term credit stability.

Morningstar looks favorably upon the presence of a regularly updated, multiyear capital improvement plan (CIP), which outlines an entity's projected capital needs and projected funding sources. We consider an entity's infrastructure needs relative to stage of development. For instance, areas experiencing rapid population growth, or whose infrastructure is aging, are expected to have more substantial capital needs than those in the middle of their infrastructure cycle.

Morningstar also considers funding sources for upcoming capital projects. A high proportion of pay-go capital funding limits the debt burden and provides additional financial flexibility in economic downturns, given that projects can be delayed, or alternatively funded. Projected bond funding is analyzed in the context of the debt burden, with any substantial change in the expected debt burden potentially leading to a change in our outlook. However, Morningstar notes that capital plans are used as planning tools in differing capacities, with some including projects and funding that are definitely expected to occur, while others compile more of a "wish-list," some of which may not materialize fully over the life of the plan.

Future Debt Capacity

We analyze an entity's future debt capacity in relation to projected capital needs, existing debt burden, and expected amortization schedule. The current debt service structure factors into future debt and financial flexibility; declining future debt service serves as a credit positive, while escalating debt service could hinder an entity's ability to meet its capital and liquidity needs going forward. Morningstar considers the ten year amortization rate as a marker for future debt flexibility.

Morningstar also evaluates legal constraints on debt issuance, as discussed under the legal constraints section. From a credit perspective, such constraints negatively affect an entity's operating flexibility, but a history of strong voter support is also considered a positive if restrictions are in place.

Pension and OPEB liabilities

Other long-term liabilities, largely consisting of pension and other post-employment benefit (OPEB) OPEB obligations, fall under an entity's debt analysis as they represent long-term future costs. In most cases, they are recorded as "soft" liabilities, as projected obligations hinge on long-term investment returns and actuarial assumptions, while future benefits can be adjusted

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under certain circumstances. However, some jurisdictions have issued bonds in order to fund these future costs, converting the soft liability into a hard liability.

For both pension and OPEB liabilities, Morningstar evaluates the magnitude of the liability, and assesses the entity's ability to meet these obligations over the long-term, along with the accompanying projected impact on future financial flexibility. Key components of Morningstar's pension analysis include historical actual pension contributions relative to the actuarial required contribution (ARC), the funded ratio, and pension contributions as a percentage of total spending levels. We consider the feasibility of investment return assumptions when analyzing long-term liabilities, along with each plan's asset valuation methodology. Morningstar notes that states and related governments may often be the administrator of pension and OPEB plans in which they are not a major contributor. In these cases, to the extent possible, we determine the portion of the unfunded liability, and contributions that are attributable to the state.

We consider the level of benefits provided under OPEB, including whether the benefit is implied or explicit, whether spouses and dependents are covered, and whether benefits cease upon the start of Medicare eligibility. While most entities still fund OPEB on a pay-go basis, we view the funding of the full ARC favorably. OPEB spending as a percentage of total spending, along with the funded percentage, are also considered.

Management and Operating Environment

The willingness and ability of management to secure the financial stability of an entity through all stages of an economic cycle are key drivers of our public finance credit opinions. A strong government team maintains fiscal discipline during positive revenue environments and makes appropriate budgetary adjustments during economic downturns.

Morningstar determines a management and operating environment pillar score based on an entity's adherence to prudent fiscal and debt policies, its fiscal planning methods, and its disclosure and accounting practices. Morningstar also analyzes each entity's operating environment, consisting of legal constraints, political atmosphere, and market position. While legal constraints establish quantifiable limitations on fiscal authority, qualitative factors such as political environment and market position can be equally important, often creating practical barriers that affect operations.

Fiscal Policies

The implementation of and compliance with prudent fiscal and debt policies are prime examples of management's direct impact on overall credit quality, and are viewed favorably by Morningstar. While policies can either be self-implemented or mandated by outside entities, management is a critical determinant of the entity's ability to remain in compliance with such policies. An operating reserve policy, usually in the form of a fund balance or contingency reserve requirement, is among the most frequently implemented fiscal policies. It is a key indicator of sound management, as it provides a buffer against cyclical downturns and unforeseen budget variances. Because there is no universal level of reserves that is appropriate for all entities, Morningstar analyzes the soundness of reserve levels relative to many factors,

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including the ability to increase revenue, revenue and expenditure volatility, and service area growth rates, as well as infrastructure and regulatory needs.

Debt policies typically limit the maximum debt burden and the application of potential debt structures, including the use of derivatives, maximum maturity, and alignment of expected life of project with the final bond maturity. Other policies delineating practices for investments, transfers, balanced budgets and use of one-time revenue windfalls are also examined as fitting the entity, and its needs.

Maintenance of timely disclosure, including the regular release of audits, is also reflective of managerial discipline. Morningstar uses comprehensive annual financial reports (CAFRs) to analyze financial, economic, and debt profiles. Historical and timely release of CAFRs will be monitored by Morningstar as will the presence of any audit findings. Additional best practices for accounting include adherence to Generally Accepted Accounted Principles (GAAP) and Governmental Accounting Standards Board (GASB) standards.

Fiscal Planning

We also consider the effective use of short- and long-term fiscal planning, including the timely adoption of annual budgets and the use of multiyear financial plans. We view ongoing budgetary monitoring and the ability to make effective midyear budget adjustments as credit-positive characteristics. Specifically, we examine interim financial reports, evaluate the accuracy and robustness of such reports, and assess the government's ability to make effective midyear budget adjustments.

Morningstar compares an entity's historical year-end financial results with original operating budgets to gauge management's ability and willingness to accurately predict and react to its operating environment. A review of future budget assumptions and forecasting practices also informs us of the reliability of expected financial performance.

Legal Constraints

Constitutional and statutory rules shape the environment in which all institutions operate. Legal provisions may enhance or hinder entities' ability to execute actions in ways that reflect favorably on their ability to service debt.

Legal limits on state fiscal autonomy may originate from federal mandates, state constitutional and statutory provisions, and court rulings. The source of the legal constraint is an indicator of the level of changeability of the provisions. Federal and constitutional rules are largely immutable, whereas statutory provisions and court rulings may be amended and overturned with changing legislatures and judiciaries. In voter initiative states, entities may be subject to unpredictable changes in operating environment, as voter referenda spur legislation that places new responsibilities and fiscal burdens on state authorities.

For state issuers of debt, legal constraints on fiscal flexibility take the form of limits on revenue-raising capacity, expenditure autonomy, and debt issuance authority. Depending on the issuer, a varying amount of these restraints may be relevant. Limits on revenue-raising capacity can

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take the form of legal restrictions on rate increases, or introductions of new taxes. Expenditure autonomy can be restricted through federally or constitutionally mandated appropriation requirements, regulatory standards, and legal expenditure limits. Debt issuance authority and debt ceilings are also often legally codified for state issuers. The effect of these types of provisions on fiscal decision-making depends on legal language, changeability, and override mechanisms, as well as political will to execute laws as intended. Morningstar also considers other legal provisions, including right-to-work legislation.

Political Environment

Political factors such as legislative party alignment and executive veto power are informative for assessing resistance to political stalemates, especially in areas where supermajority authorization is required to overturn existing tax, expenditure, or debt limitations. Labor relations also play a critical role in enhancing or hindering an entity's ability to negotiate staffing levels, worker compensation, and post-employment benefits, and ultimately to control expenditures. In areas where voter authorization is required for debt issuance or revenue enhancement, a history of voter support is also considered.

Market Position

Market position measures the entity's ability to attract and retain a customer base. The significance of market position varies between entities, but serves as a critical component for all states. For example, states compete for population and corporate inflow, both nationally and internationally, which directly impacts their revenue base.

An entity's scope of service offerings impacts its potential customer base. Analysis of the scope of services considers the size of operations as well as the diversity of services offered. A larger scope of operations can buffer against economic cyclicality, contribute to economies of scale, and broaden the potential customer base.

Competition measures the saturation of entities that provide similar services in the geographic area. In areas where market competition could be a concern, Morningstar considers an entity's market position relative to its peers, reviewing the essentiality of products and services offered, rate structure, and service delivery systems. A high degree of regional competition can put a practical constraint on an entity's rate setting ability. Perceived value of the service rendered, as well as demand for services, can also affect market position.

Summary

Morningstar's state methodology is comprehensive in scope and reflects our view that the economic strength, financial condition, debt and long-term liabilities, and management and operating environment of an entity are the driving determinants of credit quality. Our analysis seeks to identify the strengths and risks in each of these four pillars and to illuminate the ways in which they are inter-related. For example, economic conditions may affect entities' revenues and debt needs, and management practices may either help or hinder entities' willingness and ability to repay their debt obligations. Ultimately, we believe that our approach provides investors with a holistic understanding of credit quality, which will assist them with their investment decisions.

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