Article Title: Criteria | Governments | U.S. Public Finance: GO Debt Data: (EDITOR'S NOTE: —On Aug. 15, 2023, we republished this criteria article to make nonmaterial changes related to the archival of "Guidance: Assessing U.S. Public Finance Pension And Other Postemployment Obligations For GO Debt, Local Government GO Ratings, And State Ratings," published Oct. 7, 2019. See the "Revisions And Updates" section for details.) 1. When a state or municipal issuer sells a general obligation (GO) bond, the issuer pledges its full faith and credit to repay the financial obligation. Unless certain tax revenue streams are specifically restricted, the GO issuer frequently pledges all of its tax-raising powers. These criteria apply to special-purpose districts, such as school districts, library districts, park districts, and forest preserve districts, among others. These criteria do not apply to U.S. local government issuer credit ratings and issue ratings on GO bonds issued by municipal governments that are not special-purpose districts and which are rated under "U.S. Local Governments General Obligation Ratings: Methodology And Assumptions," published Sept. 12, 2013. These criteria also do not apply to U.S. states or territories, which are rated under "U.S. State Ratings Methodology," published Oct. 17, 2016. 2. GO bonds remain essential financing instruments of tax-supported capital projects. Examining four basic analytical areas enables S&P; Global Ratings to assess the capacity and willingness of municipal governments to repay tax-secured debt. Those areas are: Economy; Financial performance and flexibility; Debt burden; and Management. Economic Base 3. The economic base is one of the most critical elements in determining an issuer's rating. It incorporates local and national economic factors and trends. The foundation of an entity's fiscal health is its economy. Financial growth prospects and volatility of major revenue sources depend on the performance of the local economy, as do the affordability and range of services delivered by a government. An issuer's geography and proximity to transportation networks, cities, and markets play a key role in economic development. The infrastructure of an area, including the road network, utility systems, and transportation facilities, will also be important. These two areas provide background about how a specific economy has developed to date, but also provide information on future growth prospects. 4. Demographic characteristics factor heavily into economic analysis. The population base is analyzed in terms of age, education, labor skills and competitiveness, and wealth and income levels, and how these factors are changing over time. Demographic analysis also considers the impact of annexations and the effect of migration patterns. Wealth characteristics are a highly critical element of a demographic review. High wealth and income characteristics are viewed very favorably and can contribute to superior debt-repayment capabilities. Common ratios used to analyze economic factors include per capita effective buying income, which measures resident incomes net of personal income tax and nontax payments and median household effective buying income, which measures after tax income on a household basis. 5. An entity's tax base is initially evaluated for size, structure, and diversity. Assessed- and market-valuation trends are analyzed historically, as is building-permit activity. The tax base composition is reviewed to identify proportionate contributions from residential, commercial, and industrial tax-revenue sources. To determine the degree of concentration, the leading taxpayers are profiled and assessed for their direct and indirect effects on the local economy. If a tax base is concentrated, in either taxpayer or employment sectors, there may be a vulnerability to any changes in one or a few taxpayers' assessments, especially when property taxes comprise a large portion of the revenue base. Significant changes in the tax base are analyzed to determine whether the causes are structural or cyclical. Common ratios used by S&P; Global Ratings to evaluate the tax base include total market value and market value per capita. 6. The composition, output, and diversity of the employment base are prime considerations in evaluating economic strength. The employment base provides the primary growth engine of a community and can be an attraction or a deterrent for continued economic development and viability. Specifically, the factors S&P; Global Ratings analyzes include, but are not limited to: The industry mix and employment by sector to identify diversification trends or structural changes in the economy over time. Specifically, contributions from the manufacturing, services, trade, construction, government, health care, higher education and agriculture sectors and how these have changed over time relative to national and state trends; Concentration in major employers or reliance on particular industries; Employer commitment to the community--importance of local facilities and employees to the overall strategy of local employers, business-development plans, age of plant, and industry prospects; Unemployment patterns and labor force growth, to gauge the cyclically of the underlying base; The regional patterns of employment and growth to the extent that a municipality participates in a regional economy; and The level of retail sales as well as growth trends over time, particularly when communities rely on sales tax revenues. 7. Specific comparisons of the general factors outlined above are made with available economic data. Where appropriate, these data also are compared with metropolitan statistical area (MSA), state, and national data. Historical trends and their likely development are much more valuable than data comparisons for a specific point in time. 8. Generally, entities with higher income levels and diverse economic bases have superior debt-repayment capabilities, reflecting better protection from economic changes or unexpected volatility than other communities. Nevertheless, a strong economy does not always ensure a strong ability to meet debt payments. It is extremely important for an issuer to be able to capitalize on its primary economic strengths in terms of revenue collection, leading to another highly critical factor in credit evaluation: the financial management and performance of an entity. Financial Indicators 9. Financial analysis involves several areas: Accounting and reporting methods; Revenue and expenditure structure and patterns; Annual operating and budgetary performance; Financial leverage and equity position; Budget and financial planning; and Contingent financial obligations, such as off-balance sheet debt, pension liabilities and other post-employment benefits. 10. An analysis of these factors will present a clear indication of the financial strengths and weaknesses of an issuer. Such analysis also will provide the framework for judging capacity to manage economic, political, and financial uncertainties. 11. The first important variable in judging financial performance is the method of accounting and financial reporting. Based on the guidelines of Generally Accepted Accounting Principles (GAAP), S&P; Global Ratings assesses an entity's financial reports. Emphasis is placed on the government's primary government/major funds (general, debt-service, and special-revenue funds), which under GASB Statement 34 are now called fund financial statements and its government-wide statements, which provide a broad overview that provides an all-encompassing view of the government's finances. 12. Further, Governmental Accounting Standards Board (GASB) interpretations of accounting rulings are considered in evaluating the organization of funds, accruals, and other financial reporting methods. GAAP reporting is considered a credit strength, and the ability to meet the Government Finance Officers Association's (GFOA) Certificate of Conformance reporting requirements also is viewed favorably. Enhancing public disclosure is a government's Comprehensive Annual Financial Report (CAFR), which includes significant financial data and various statistical data to supplement the accounting statements. 13. Issuers are expected to supply adequate and timely financial reports. Financial reports prepared by an independent certified public accountant are preferred. Lack of an audited financial report prepared according to GAAP could have a negative impact on an issuer's rating, since questions about reporting will be raised. If state agencies or other internal government units prepare financial reports, S&P; Global Ratings is interested in any deviation from GAAP standards and the independence of the auditors preparing the reports. 14. Operating-account analysis includes an examination of operating trends, focusing on the structure of revenue and expenditure items, primarily within the primary/major fund category including general fund and debt-service funds. If other funds are tax supported or include revenues related to general government purposes, they also have relevance in developing a complete understanding of financial performance. 15. Diverse revenue sources are preferable, as they can help to strengthen financial performance and enhance stability. The use of fees not only creates new revenue streams, but also places the burden for municipal services on the users of the services. Special taxes, such as sales or excise taxes, allow for further revenue diversification. Although a balanced composition of revenues gives an issuer the flexibility to meet all of its financial obligations, it does not necessarily protect against the impact of a general economic decline. For example, if a government's tax collections depend on several major revenue sources, the direct and indirect effects of an economic downturn can be broad enough to affect revenue performance. Revenue sources are examined over a three- to five-year period, with particular focus on unusual patterns in revenue performance that could lead to significantly different financial performance in the future. 16. Similarly, expenditure composition and stability are analyzed in the context of revenue patterns. Large expenditure items are identified and examined to determine if continued expenditure growth could endanger existing services or require additional budget actions to maintain balance. To the extent that certain spending items are extraordinary or nonrecurring, the effect on long-term financial performance is discounted; conversely mandated expenses can limit flexibility and decision-making. Discretionary spending, such as pay-as-you-go capital, is evidence of operating flexibility. 17. The effect of any transfers among other governmental and capital funds is considered in the review of financial performance. When inter-fund transfers support the general fund and/or debt-service fund, S&P; Global Ratings reviews the policy guidelines and historical transfer practices. Volatility in transfers that represents a deviation from past policy could be viewed as a sign of fiscal stress in both the transferring and receiving funds. 18. The balance-sheet examination focuses on liquidity, fund-balance position, and the composition of assets and liabilities. In S&P; Global Ratings' consideration of appropriate fund-balance levels, several variables are important: The makeup and liquidity of the fund balance, particularly as related to the volatility and patterns of the revenue stream; The predictability of government spending; The availability of unencumbered reserves or contingency funds; and The ability of public officials to sustain a strong financial position. 19. The fund-balance position is a measure of an issuer's financial flexibility to meet essential services during periods of financial strain. S&P; Global Ratings considers an adequate fund balance and policies determining fund-balance goals to be credit strengths. A common ratio used to evaluate fund balance is the unreserved fund balance expressed as a percent of operating expenditures. This provides a measure of how much of the fund balance is not committed to spending and is available for contingencies. 20. With the implementation of GASB Statement 34, S&P; Global Ratings also evaluates issuers' Statement of Net Assets, which measures all assets and liabilities (similar to a private sector business) and the statement of activities, which presents how net assets have changed over the prior year. Over time increases or decreases in net assets provide an indicator of how a government's financial position is changing. Increases in net assets may indicate an improved overall financial position while decreases in net assets may reflect a changing manner in which a government may have used previously accumulated funds. 21. The analysis of financial performance also takes into account the role of short-term financing and its implications. As available cash balances decrease, cash flow difficulties can become more prominent. Nevertheless, conservative financial strategies and management practices can enable an issuer to minimize cash flow difficulties. 22. In reviewing an issuer's cash management and investment practice, S&P; Global Ratings considers the types of investments, security precautions, and uses of investment income. Debt Factors And Long-Term Liabilities 23. The analysis of debt focuses on the nature of the pledged security, the debt repayment structure, the current debt-service burden, and the future capital needs of an issuer. Manageable debt levels are an important consideration, since accelerated debt issuance can overburden a municipality while low debt levels may indicate under-investment in capital facilities. 24. Investment in public infrastructure is believed to enhance the growth prospects of the private sector. Neglecting critical capital needs may impede economic growth and endanger future revenue generation. Although some capital projects are discretionary and can be deferred in difficult economic periods, the failure to maintain existing facilities can create a backlog of projects. Eventually, when the backlogged projects are funded, the cost may prove burdensome to future taxpayers. 25. In difficult fiscal situations where municipalities face operating deficits, some entities choose long-term financing of accumulated deficits as a solution. S&P; Global Ratings believes that the "bonding out" of financial problems is not a permanent cure and may complicate the ultimate resolution of the fiscal strain. 26. The specific security pledged is analyzed. A GO pledge takes various forms that provide different degrees of strength. Unlimited ad valorem property-tax debt, secured by a full faith and credit pledge, usually carries the strongest security. However, in all ad valorem pledges, during a period of fiscal stress, debt service competes with essential services. Limited ad valorem tax debt, or a limited-tax pledge, carries legal limits on tax rates that can be levied for debt service. S&P; Global Ratings views this type of security more as a means to limit debt issuance than as a strict cap on revenues available to retire debt. 27. This paragraph has been deleted. 28. GO bonds are considered self-supporting when the enterprise can pay debt service and operating expenses from its own operating revenues. Such a self-supporting enterprise could use the full faith and credit support of a municipal government without diminishing the credit quality of the government's GO debt. 29. The debt maturity schedule can become important in certain circumstances. Prudent use of debt dictates that the debt's term matches the useful economic life of the financed assets. An average maturity schedule for capital projects is one in which 25% of the debt rolls off in five years and 50% is retired in 10 years. A faster maturity schedule may be desired to avoid increased interest costs; however, it can place undue strain on an operating budget. Statutory provisions governing debt retirement are also important considerations in evaluating payout. 30. S&P; Global Ratings looks for realistic debt limitations that permit an issuer to meet ongoing financing needs. A city near its debt limit has less flexibility to meet future capital needs, but more importantly, may be unable to borrow money in the event of an emergency. Restrictive debt limitations often necessitate the creation of financing mechanisms that do not require GO bond authorization or voter approval. 31. S&P; Global Ratings examines the community's future financing needs; a capital improvement plan indicating both funding needs and anticipated funding sources is a useful planning tool for determining future borrowing needs. Municipalities should regularly review their critical capital needs and schedule capital improvements for assets' life. The history of past bond referendums is one indication of the community's willingness to pay for such improvements. 32. S&P; Global Ratings also measures the debt burden against a community's ability to repay. Three indicators of this ability are: The tax base; The wealth and income of the community; and Total budget resources. 33. Ratios used by S&P; Global Ratings to measure debt burden include: Debt to market value, which measures overall debt to all taxable property within the government's jurisdiction; Debt per capita, which measures overall debt by population; Debt as a percentage of personal income (which is available on the state level but not on the local level); and Debt as a percentage of operating expenditures. 34. Each of the first three debt burden ratios are also measured net of self-supporting obligations for the purpose of ascertaining the true debt obligation supported by no other sources. 35. In general, a debt burden is considered high when debt-service payments represent 15%-20% of the combined operating and debt-service fund expenditures. This benchmark will vary with the structure of government and the level of services that an entity provides. 36. Pension liabilities remain a significant credit factor for obligors in the scope of these criteria. S&P; Global Ratings views pension obligations as long-term liabilities that should be managed in a way that will not adversely affect the bond issuer's ability to make debt service payments. Although various debt instruments may have a lien position that is senior to pension obligations, benefit payments carry with them a political reality that adds to any legal protections. While debt levels are usually more predictable due to long-term capital plans and the largely fixed-rate nature of the obligations, unfunded pension liabilities tend to be more volatile. 37. It is important to consistently monitor the key variables of the issuer's retirement systems. Accordingly, S&P; Global Ratings reviews pension trends related to funding progress. This analysis includes changes in assets and liabilities, funded ratios, unfunded actuarial accrued liabilities (UAAL) and the relationship of the UAAL to payroll. Pension asset valuations can change, as can actuarial liabilities. The higher contribution requirements that result from unfunded liabilities could make any preexisting fiscal stress more acute, especially if the increase was dramatic. Therefore, S&P; Global Ratings will evaluate the sponsor's pension funding strategy, and the current and projected cost implications on its financial profile. As part of this analysis, S&P; Global Ratings will review the track record annual required contributions (ARC) and the percent of the ARC made. The historical and forecast trends in pension funding are as important, if not more so, than the specific liability level at a single point in time. 38. From a credit standpoint, OPEB liabilities and funding strategies will be evaluated in a similar way to pension obligations. This analysis will include a review of the historical and projected pay-go costs for OPEB, the newly quantified un-funded liabilities and current funded status, and the plan for managing ongoing annual required contributions. Also, the impact of projected annual OPEB costs on the current and future budgets will be assessed. This review would also include the legal and practical flexibility a specific government has in managing these obligations from both the asset and liability perspectives. Management Factors 39. An understanding of the organization of government is critical. The powers of a municipality establish the entity's ability to plan for changes in the political, economic, and financial environment, and the capacity to respond in a timely fashion. The entity's degree of autonomy is affected by home-rule powers, as well as legal and political relationships between state and local levels of government. 40. The range and growth potential of services provided by the entity are also examined in relation to the capacity to provide such services. The ability of officials to implement timely and sound financial decisions in response to economic and fiscal demands can depend on the tenure of government officials and frequency of elections. The background and experience of key members of the administration are important considerations if they affect policy continuity and the ability to reformulate plans. 41. Financial management is a major factor in the evaluation of state and local government creditworthiness. Past performance against original plans, depth of managerial experience, and risk profiles of key leaders all have an impact on the bottom line. 42. For government tax-backed issues (namely, school districts in the scope of these criteria), we analyze the impact of financial management policies and practices through the Financial Management Assessment (FMA). The FMA provides an assessment of a government's financial practices and highlights aspects of management that are common to most governments in a consistent manner. FMAs are assigned only to general government tax-backed and annual appropriation-backed issues. We won't assign an FMA to special tax districts (such as library, fire, or recreational districts) (see "Credit FAQ: Financial Management Assessment In U.S. Public Finance," published June 27, 2006). 43. A government's ability to implement timely and sound financial and operational decisions in response to economic and fiscal demands is an important component of credit quality. The FMA makes certain aspects of our analysis of management more transparent, specifically those concerned with policies and practices that are considered most critical to credit quality. 44. The FMA encompasses seven areas most likely to affect credit quality: Revenue and expenditure assumptions Budget amendments and updates Long-term financial planning Long-term capital planning Investment management policies Debt management policies Reserve and liquidity policies 45. The overall FMA assessments are communicated in our analyses using the following terminology: "Strong" indicates that practices are strong, well embedded, and likely sustainable. "Good" indicates that practices are deemed currently good, but not comprehensive. "Standard" indicates that the finance department maintains adequate policies in most, but not all key areas. "Vulnerable" indicates that the government lacks policies in many of the areas deemed most critical to supporting credit quality 46. The FMA focuses on a government's policies and practices. It is neither an evaluation of the competency or aptitude of individual finance professionals nor an evaluation of a finance department's ability to handle either ordinary occurrences or unique challenges. The purpose of the FMA is to highlight the most transparent aspects of management that are common to most governments in a consistent manner. Even with this narrow definition, other possible practices could be considered, such as accounting and disclosure practices, internal controls, and policies for knowledge retention and staff turnover. While each of these has the potential to affect credit quality, factors considered in the FMA are those that S&P; Global Ratings considers the most critical in determining credit quality. 47. It is important to keep in mind that the FMA is one component of a rating; we will continue to evaluate all of the other factors–economic, financial condition, debt and management. Given what the FMA measures, it is possible that an entity with a strong FMA may be better able to tolerate weakness in the basic credit areas, or conversely, may be better able to take advantage of improving conditions. As a result, the practices that are captured by the FMA could contribute to rating changes, or allow a community to better prevent a downgrade. 48. This paragraph has been deleted. 49. This paragraph has been deleted. 50. This paragraph has been deleted. Special GO Situations 51. In addition to traditional general obligation ratings, S&P; Global Ratings rates a number of GO securities that carry many of the characteristics of general obligation analysis but may also have their own nuances. For example, in certain parts of the country, library, park, fire, forest preserve, municipal utility, and water and sewer districts issue bonds backed by some form of general obligation taxing powers. Analysis for this type of debt follows the same basic principles of GO tax backed analysis including the four factors (economy, debt, management and finances) but also factors in the uniqueness of the individual districts. These may include the limited service functions, and in some cases the limited revenue raising capabilities or specific millage limitations. Since service functions are often limited (such as providing library services or fire services), budgets are often smaller in size and capital intensive. Often times the fixed portion of the budget dedicated to debt service is a much larger component than would be typical for a larger, full service operating budget of municipality. 52. Many of these types of districts are often coterminous with the municipality or county they lie within. In some cases they lie within more than one municipal boundary. In those cases where they are coterminous and share the same economic base, it doesn't necessarily mean the rating will be the same. While the economic factors may be the same, management practices, financial position and debt profiles may be very different and could result in higher or lower ratings. In particular, financial position will be an important determinant in assigning the rating. 53. Certain districts also carry, in addition to their full faith pledge, the ability to levy rates and charges for specific services provided. In the case where user charges are also used, S&P; Global Ratings evaluates the GO factors while also looking at the revenue stream of the user charge and factors that into the rating. In some instances, the history of using user charges that translate into strong financial position has contributed to higher ratings. Frequently Asked Questions How does S&P; Global Ratings evaluate pension liabilities under these criteria when the municipality prepares its audit in accordance with the standards identified by Governmental Accounting Standards Board (GASB) 67 and 68, which is the updated reporting requirement for most municipal entities in the U. S. that provide their employees with pension benefits? 54. The following paragraph revises the section "Pension Liabilities" of these criteria for entities that report using GASB 67 and 68. We also added the table below reflecting the new GASB terminology. The changes are largely terminological in nature and do not amend the core analytical approach for the analysis of pension liabilities under these criteria. It is important to consistently monitor the key variables of the issuer's retirement systems. Accordingly, S&P; Global Ratings reviews pension trends related to funding levels. This analysis includes changes in assets and liabilities, funded levels, net pension liabilities, and the relationship of the government's contributions, as reported under the new GASB standards, to its overall budget. Pension asset valuations can change, as can actuarial liabilities. The higher contribution requirements that result from unfunded liabilities could make any pre-existing fiscal stress more acute, especially if the increase was dramatic. Therefore, S&P; Global Ratings will evaluate the sponsor's pension funding strategy, and the current and projected cost implications and determine the impact, if any, on the issuer's financial profile. As part of this analysis, S&P; Global Ratings will review the annual determined contributions (ADC) and the percent of the contribution made. The historical and forecast trends in pension funding are as important, if not more so, than the specific liability level at a single point in time. Table 1 highlights some of the key terminological differences between GASB 67/68 and GASB 25/27. GASB 67/68 replaced GASB 25/27. Table 1 Key Terminological Differences Between GASB 25/27 and GASB 67/68 GASB 25 AND 27 GASB 67 AND 68 Assets Actuarial value of assets (AVA) Plan fiduciary net position (PFNP) Liabilities Actuarial accrued liability (AAL) Total pension liability (TPL) Funding level AVA as a proportion of AAL PFNP as a proportion of TPL Annual contributions Annual required contribution (ARC) Actuarially determined contribution (ADC) or statutorily determined contribution Appendix: Guidelines For Assessing Pension And OPEB Obligations 55. This appendix focuses on how S&P; Global Ratings assesses pension and other postemployment benefit (OPEB) funding assumptions and methods, and their impact on U.S. governments' projected costs and liabilities. Provided are example guidelines that we commonly consider when analyzing the potential for cost acceleration and budget stress. We may adjust guideline numbers as we consider appropriate, such as if market conditions change. 56. When we refer to "guidelines," we mean that we will consider the degree to which an obligor's assumptions or methods vary in relation to the guidelines. Given no two pension plans are exactly alike, there is no single answer for what "good" assumptions look like. Therefore, we use the figures in the table to analyze these assumptions and methods within the context of an obligor's overall credit profile, including its ability to afford rising costs and proactive management measures to address them. 57. Specifically, we use these pension and OPEB guidelines when applying the following sections: Financial Indicators, paragraphs 14 and 16; and Debt Factors And Long-Term Liabilities, paragraphs 36-38. Guidelines 58. Assumptions as well as funding methods underpin the trajectory of pension and OPEB costs, informing our assessment of obligor credit risk. We believe the most sustainable pension and OPEB plans prioritize long-term savings and stability over short-term budgetary relief by using conservative assumptions and methods and proactively addressing liabilities. 59. S&P; Global Ratings views the following assumptions and methods as guidelines for practices to consider when assessing pension and OPEB risks. We start our analysis by reviewing these guidelines when assessing typical plans, but expect that thresholds may be adjusted, as appropriate, for the context of individual obligors. A part of our pension and OPEB analysis includes how these risks factor into an obligor's unique overall credit profile and what strengths or weaknesses arise as a result. Guidelines For Typical U.S. Public Finance Pension And OPEB Plans ACTUARIAL ASSUMPTION OR METHOD S&P; GLOBAL RATINGS GUIDELINE AS OF SEPT. 7, 2021 Funding goal 100% Discount rate 6.00% Actual contribution Minimum funding progress AMORTIZATION METHODS Period Closed

Length <= 20 years Basis Level-dollar or minimal payment acceleration Payroll growth assumption < 1% + long-term inflation Longevity Generational improvements Long-term medical cost trend 4.50% Funding goal 60. In our view, the funding target for public pension and OPEB plans should typically be at least 100%. We view funding targets of less than 100% as a credit weakness because these plans carry higher interest costs associated with the unfunded liability. Discount rate 61. We expect the discount rate to not only align with expected realistic performance of the target asset portfolio, but also reflect prudent and informed decision-making on how much market volatility and liquidity risk, or budgetary stress, an issuer can absorb. When a target asset portfolio contains more risk, it may provide a higher return and lower required contributions (assuming actuarially determined contributions are required). Higher risk typically means exposure to greater volatility. In the event of a market correction, a drop in asset values would necessitate an escalation in required contributions. We incorporate this volatility and exposure to budgetary stress in our analysis of the discount rate. 62. In our view, based on current market conditions, a sustainable discount rate guideline for the typical plan is 6.00%. This discount rate reflects our view of the expected asset return of an average plan in the U.S. without regard to unique attributes or risk tolerances of a given issuer. By using a hypothetical target asset portfolio adjusted according to our view of inflation, reasonable liquidity, and market volatility risk tolerance, we enhance our analysis of the stability and risks of the long-term obligation. 63. We generally view plans with discount rates near our guideline as less likely to contribute to budgetary stress than plans with much higher discount rates. There may be credit-unique circumstances allowing for a higher or lower accepted risk and corresponding assumed return. For example, our discount rate guideline may be aggressive for plans that are closed to new participants or based on an older population. Many plans may have higher discount rates, and we will evaluate credit risk for an obligor based on its assumptions relative to or in conjunction with our view of its overall credit profile. Actual contribution 64. Not all pension plans have an actuarial funding plan in place, which can hinder evaluation of the funding discipline. One way we may evaluate how effective the most recent year's contributions are at reaching 100% funding within a reasonable timeframe is our minimum funding progress (MFP) metric. The MFP metric assesses whether the most recent employer and employee contributions cover total service cost plus unfunded interest cost plus 1/30th of the principal and is defined as follows: 65. MFP = SC + IC + NPL/30 Service cost = new benefits earned during the year Unfunded interest cost = interest earned during the year on the net pension liability Net pension liability (NPL) = NPL at beginning of year 66. When contributions are to equal service cost plus unfunded interest cost alone, the plan would typically maintain its current funding levels and not make any progress toward full funding; in other words, it is "static funding." We generally do not view static funding as prudent because failing to make measurable progress on the unfunded liability, especially during periods of economic expansion, indicates poor plan management that increases the risk of higher costs during down markets. We view contributions that cover static funding plus 1/30th of the unfunded liability in the most recent annual contribution as a minimum amount of progress that governments should make toward full funding, without regard to an actuarial funding plan. Amortization methods 67. Within an actuarial funding plan, we view favorably amortization methods that make progress toward paying down unfunded liabilities within a reasonable timeframe and result in stable and manageable costs over the long run. Weak amortization practices defer contributions to the future and have been a leading cause of pension and OPEB underfunding. We view closed or layered amortizations with reasonably level payments over a time period of 20 years or less as the most prudent practice. 68. Amortization methods are a leading indicator of short-term and long-term impact on budgetary stress because they dictate how quickly an issuer's annual contributions will escalate, as well as the timeframe for making progress toward reducing liabilities. In practice, there is a broad range of amortization methodologies among U.S. public pension plans, which results in significant variance within the measurement of unfunded liabilities and funded positions, as well as contribution trajectories over time. 69. Period:Open amortization methods reset, or refinance, the entire unfunded liability every year so that it is never projected to actually be paid down; this is in contrast to closed amortization methods, which pay off the entire current unfunded liability in a given number of years. Constantly "refinancing" the obligation over a static number of years does not make sufficient funding progress, in our opinion. 70. Length:In our view, amortization lengths of less than 20 years most effectively pay down unfunded liabilities. We view amortization lengths of 25 years or more negatively because progress toward paying down unfunded liabilities is minimal. 71. Basis:Level dollar, or flat, amortization indicates a payment schedule where annual payments are unchanged from year to year. Level percent, or increasing amortizations, often allow growth in the unfunded liability, which leads to an acceleration in future costs. 72. Payroll growth assumption:A level percent method also may add risk because payroll growth, if not met, would lead to even faster-than-expected cost increases. We view a payroll growth assumption of more than 1% above a long-term inflation guideline of 2.4% negatively, unless there is indication that such growth can be sustained over the amortization period for a given credit. Longevity 73. We view the use of up-to-date generational improvement projections as the most stable and best way for pension plans to anticipate longevity improvements over time and minimize resulting credit pressures. Pension plans typically provide benefits to retirees for life. This means that as more of the U.S. working population reaches retirement age and people continue to live longer than they did in the past, pension promises are likely to continue to grow more expensive. 74. Generational improvement projections build in incremental changes to life expectancy for each year indefinitely, minimizing the need for major updates and corresponding contribution "jumps." In contrast, static projections incorporate a set number of years into today's valuations and become quickly outdated, and when revised, frequently result in increased liabilities and costs. Long-term medical cost trend 75. We believe an appropriate long-term medical cost trend assumption, often referred to as the ultimate rate, is about 4.5%. Medical trend is the year-over-year increase to medical claims costs for OPEB plans, primarily stemming from inflation and utilization due to economic growth and medical advances. The long-term trend rate is influential in the liability calculation, and is typically second only to the discount rate in terms of the trajectory of OPEB costs, especially for plans that are not prefunding. When the long-term medical trend assumption is aggressively below our guideline, liabilities are likely to be understated, as is the understanding of the contribution trajectory. This could reduce an obligor's ability to plan for future costs and could lead to budgetary stress. Revisions And Updates This article was originally published on Oct. 12, 2006. Changes introduced after original publication: We added a section titled "Frequently Asked Questions" on Oct. 6, 2015. Following our periodic review completed on July 14, 2016, we updated the contact information and added criteria references. Following our periodic review completed on July 6, 2017, we deleted commentary that appeared in paragraph 1; made clarifications to the text in paragraph 42 with respect to the Financial Management Assessment; deleted paragraphs 48-50, which were superseded by "U.S. State Ratings Methodology," published Oct. 17, 2016; and updated the contact information and criteria references. We deleted outdated text in paragraph 27 on Jan. 24, 2018, related to the analytical approach to rating double-barreled bonds. This analytic approach can be found in "Methodology: Rating Approach to Obligations With Multiple Revenue Streams," published Nov. 29, 2011. We also deleted text in paragraph 27 that was superseded by "Issue Credit Ratings Linked To U.S. Public Finance Obligors' Creditworthiness," published Nov. 20, 2019. Following our periodic review completed on July 3, 2018, we updated the contact information and the "Related Criteria" section. Effective on Aug. 30, 2018, we also implemented nonmaterial changes in paragraph 1 to clarify the scope and in paragraph 38 to remove outdated commentary. On Jan. 4, 2019, we republished this criteria article to make nonmaterial changes to the contact information. On Oct. 7, 2019, we republished this criteria article to make nonmaterial changes. We added the guidance article "Guidance: Assessing U.S. Public Finance Pension And Other Postemployment Obligations For GO Debt, Local Government GO Ratings, And State Ratings" to "Related Publications." That guidance provides additional information about our approach to assessing financial management, under paragraphs 34, 57, and 59. It also provides additional information about our approach to assessing debt and liabilities, under paragraphs 69-71 and 73. On Dec. 29, 2020, we republished this criteria article to make nonmaterial changes. We updated the contact information and criteria references. On Aug. 15, 2023, we republished this criteria article to make nonmaterial changes by adding the appendix. As announced in "Evolution Of The Methodologies Framework: Introducing Sector And Industry Variables Reports," published Oct. 1, 2021, we are phasing out guidance documents over time. As part of that process, we have archived "Guidance: Assessing U.S. Public Finance Pension And Other Postemployment Obligations For GO Debt, Local Government GO Ratings, And State Ratings" and moved its contents to the appendix of this article without any substantive changes. In addition, we made editorial changes to improve readability and updated the "Related Publications" section. Related Publications Related criteria Methodology: Rating Approach to Obligations With Multiple Revenue Streams, Nov. 29, 2011 Principles Of Credit Ratings, Feb. 16, 2011 Key General Obligation Ratio Credit Ranges, April 2, 2008 Debt Statement Analysis, Aug. 22, 2006 Financial Management Assessment, June 27, 2006 Related sector and industry variables reports and guidance ARCHIVE | Guidance: Assessing U.S. Public Finance Pension And Other Postemployment Obligations For GO Debt, Local Government GO Ratings, And State Ratings, Oct. 7, 2019 Other related publications Evolution Of The Methodologies Framework: Introducing Sector And Industry Variables Reports, Oct. 1, 2021