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Ratings

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Colorado; Appropriations; Charter Schools; General Obligation; Moral Obligation; School State Program

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Rationale

S&P Global Ratings has affirmed and revised the outlook to stable from negative on its 'AA' issuer credit rating (ICR) on the state of Colorado, its 'AA-' long-term rating on its lease debt and certificates of participation (COPs) outstanding, and its 'A+' long-term rating on the state's moral obligation debt outstanding.

We have revised the outlook on all our ratings to stable following the state's adoption of pension reform in its 2018 legislative session, which, in our view, should be sufficient to prevent further decline of the funded ratios in the current outlook period. The state intends to reduce its unfunded liabilities and reach full funding within 30 years under the new bill, which incorporates automatic adjustments to contributions when needed to reach its goal. However, statutory limits to automatic contribution increases means that the state will need to proactively and adequately fund its pensions on an actuarial basis using prudent assumptions, including calling special sessions if necessary, to avert deterioration of unfunded liabilities over time (when assumptions are missed) and continued long-term pressures on the pension system and the state's rating.

While we still view the state's pension funding as weak, the stable outlook reflects that, unlike other states with similarly low funded ratios, we believe that Colorado's strong economic growth and finances positions it to make meaningful steps to address its pension funding while maintaining structurally balanced budgets in the future. Improvement of our long-term view of the state's pension will require continuous demonstrated commitment to fully funding the system and using assumptions that are better aligned with experience to determine its long-term liability.

The 'AA' ICR on Colorado reflects what we consider:

- A broad and diverse state economy that continues to exhibit better-than-average income, employment, and population trends;
- Good year-end reserves in recent years which are expected to improve in 2018 based on recent revenue estimates;
- The state's history of making midyear budget corrections, when necessary, during weak economic periods, and its close quarterly budget monitoring and forecasting; and

- Low debt and moderate other postemployment benefit (OPEB) levels.

The preceding credit strengths are offset by what we see as:

- A weak pension funded ratio, as well as a history of funding less than the annual pension actuarially determined contribution (ADC) under a statutory funding formula, although recent pension reforms may improve pension funding; and
- Constitutional provisions that limit state tax revenue, while also mandating a minimum level of school expenditures, which, in our view, limits revenue and spending flexibility.

We have applied our "Issue Credit Ratings Linked To U.S. Public Finance Obligors' Creditworthiness" (published Jan. 25, 2018, on RatingsDirect) criteria to analyze outstanding COPs and moral obligation ratings.

On May 9, 2018, the state's legislature adopted Senate Bill 18-200, which made several changes to the Colorado Public Employees' Retirement Association (PERA) to restore the system to full funding within 30 years. These changes include a phased- in 2% increase in contribution rates for most employees, suspension of the cost-of-living adjustment (COLA) for retirees through 2019, and limiting future adjustments to 1.5% from 2%, 0.25% increase in nonlocal government employer's contribution rates, and a direct annual allocation of $225 million from the general fund to PERA beginning fiscal year ending 2019. These changes and additional changes in the bills are expected to reduce the expected amortization of the system's unfunded liabilities to 30 years.

SB 18-200 also contains additional provisions to adjust employee and employer contributions (subject to a statutory 0.5% annual cap or 2% limit above statutory rates), as well as allocations from the state's budget to keep the system fully funded within a closed 30-year amortization. We understand that PERA will determine the contribution required to keep the system funded based on its adopted actuarial assumptions annually beginning in fiscal 2020. These contribution increases will be absorbed equally among the retirees, employers, employees, and the state's budget subject to statutory limits. Increases to employee and employer contributions are, however, limited to 0.5% annually, or a cumulative 2% above determined statutory rates. If increases subject to the statutory limitation are inadequate to fund the determined contribution, the state could address the potential underfunding of the system in a legislative session. Colorado's funding practice, which has been statutorily based and set as a percentage of payroll in prior years, has led to the state funding less than its ADC in the last ten years. While we consider this provision a positive divergence from the state's current funding practice, Colorado's funding system emphasizes fixed contribution levels, which may be below the actuarial recommendation, leaving it susceptible to underfunding when investment returns are below projections or other actuarial assumptions fall short of experience. This provision also poses some implementation risk as its efficacy relies on the commitment of the legislature to address underfunding promptly in a session promptly when needed and prioritize full funding of the system even when competing needs are present.

We calculate that under GAAP, and based on a 5.26% GASB single discount rate, the state's combined pension funded ratio had fallen to 43% as of Dec. 31, 2016. Our state rating methodology provides for a one-notch negative rating adjustment to our indicative rating if we believe a state's pension funded ratio will fall below 40% with no credible plan to reverse these trends. Based on the most recent audit (fiscal year 2016) for PERA, the state's unfunded liability per capita of $3,216 has increased based on the Governmental Accounting Standards Board (GASB) 68's breakout of the state's pension liability. Colorado's $17.8 billion combined net pension liability had what we consider a weak funded ratio of 42.8%, a decline from 52.8% the year before.

PERA's actuarial assumptions, which we currently view as optimistic, also play a key role in keeping the state on the path to better funding. If the actuarial assumptions remain optimistic and out of line with the system's experience, leading to an opinion that the system's liabilities are significantly understated, this could present additional pressure to the rating.

Colorado has experienced what we view as strong economic performance in the past several years, although this has been tempered recently by a slowdown in the oil and gas sector. Mining and logging, however, now account for only 0.9% of state employment. Overall, jobs and population have continued to grow, although at a slower rate. State average unemployment dropped to 2.8% in 2017, the fifth straight decline since 2012 and below the national rate of 4.4%. Growing sectors include construction, leisure and hospitality, education and health, and high technology. Strong employment growth has led to population gains: Colorado's population increased 1.4% in 2017 to 5.6 million, roughly double the national rate of growth, in part due to in-migration. State income levels are good, in our view, with per capita personal income at 106% of the U.S. in 2017. IHS Markitt projects state employment growth of 2.5% in 2018, compared with 1.7% for the nation.

Good economic performance led to better-than-budgeted financial results and the building of fund balances in fiscal years 2014, 2015, and 2017, although fiscal 2016 results were weaker, drawing down the general fund balance by $98 million. At the end of fiscal 2017, the general fund balance was an estimated $615 million on a budgetary basis, or 6.3% of appropriations. This exceeds the state's Office of Planning and Budgeting's December 2016 quarterly budget forecast by $95 million, or 18%. Based on the March 2018 quarterly budget forecast, the general fund revenue is expected to increase at rates of 12.9% in fiscal 2018 and 3.2% in fiscal 2019. Relative to December projections, the fiscal 2017-2018 general fund revenue forecast is higher by $309.3 million, or 1.8%, largely due to increased tax revenues from the recently enacted federal tax reform. However, some of the improved revenue collections for 2018 may be due to a nonrecurring windfall related to taxpayers' response to the federal tax law change and could foreshadow a subsequent slowdown in future revenue collection. The state's enacted budget estimates that Colorado's general fund will end fiscal 2018 with a $1.2 billion budgetary basis balance, or 10.4% of appropriations, up from 6.3% at fiscal year-end 2017 and $481.6 million above the required reserve of 6.5%.

Estimated revenues are expected to keep Colorado below its Taxpayer Bill of Rights (TABOR) revenue limitation cap in fiscal 2018. TABOR prohibits tax rate increases without a popular vote, and requires the rebate of tax revenue above an inflation- and population-based formula in the following year, absent a voter referendum to retain the extra revenue. However, the passage of Senate Bill (SB) 17-267 during the 2017 legislative session changed a number of factors that affect the state's budget by generating additional resources and flexibility in the general fund. The legislation replaced the hospital provider fee with a new TABOR-exempt enterprise fee and lowered the Referendum C cap by $200 million in fiscal 2017-2018. The cap increases by population growth and inflation from this lower amount in subsequent years. SB 17-267 also raised the business personal property tax income tax credit, repealed the 2.9% sales tax on retail marijuana (which was subject to TABOR), and increased the special sales tax on marijuana (which is exempt from TABOR) from 8% to 15% in fiscal 2017-2018. Lastly, the legislation authorized the financing of $2 billion in capital and transportation projects over the next four years. With SB 17-267, revenues came in $435.9 million below the TABOR cap in fiscal 2017. Based on the March forecast, revenue is expected to fall $408.8 million short of the TABOR cap in fiscal 2018, and $422.5 million below the cap in 2019. In addition, constraining state budgeting flexibility is voter initiative Amendment 23, which creates a mandated level of school spending.

Colorado has a history of making midyear cuts when necessary to restore budget balance, including midyear budget adjustments in fiscal years 2010 and 2011. Budget actions the governor implemented at that time included hiring freezes, capital spending deferrals, expenditure cuts, and fund sweeps as a result of the state's regularly scheduled quarterly budget update forecasts.

Fiscal 2017 is the most recent audited fiscal year. On a GAAP basis, Colorado's general fund balance increased by $77 million to $1.15 billion, or what we consider a strong 6.5% of general fund expenditures (not counting continuing below-the-line transfers to the education fund as expenditures). However, the available assigned and unassigned general fund balance was only $17 million, the result of categorizing the state's statutory budget reserve as a committed fund balance. The 2017 total GAAP general fund balance only slightly lower than the ten-year high of $1.23 billion in fiscal 2012 and represents a substantial increase from the low point at fiscal year-end 2010, when it was just $16 million due to the Great Recession. However, given the long period of record economic expansion and forecasted softening in the economic growth, the low unassigned balance may limit Colorado's ability to respond adequately in the event of adverse shocks that may cause another potential economic downturn.

We consider Colorado's financial management practices "good" under our financial management assessment (FMA) methodology, indicating practices exist in most areas, although not all might be formalized or regularly monitored by government officials.

S&P Global Ratings views Colorado's net tax-backed debt levels as low at $332 per capita, at fiscal year-end 2017, with slow debt amortization. The state has constitutional prohibitions on general obligation (GO) debt. From time to time, it has issued lease-secured debt secured by general fund appropriations for capital purposes, as well as bonds secured by vehicle registrations and grant and revenue anticipation bonds secured by federal transportation grants.

While we consider the state's pension funded ratio low, we consider its OPEB liabilities moderate. Colorado's multiple-employer OPEB trust fund had what we view as a moderate $1.27 billion unfunded liability at Dec. 31, 2016, and an OPEB trust funded ratio of 17.4%.

Based on the analytic factors we evaluate for states, on a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a composite score of '1.95' to Colorado.

Outlook

The stable outlook on all ratings reflects our view that the state has adopted a sustainable plan to address its weak pension funded ratio, which is well below similarly rated states following a long trend of annually contributing less than its ADC to its retirement system. We expect Colorado's economic growth to remain strong and state reserves to remain at what we consider good levels. It is our view that, given the state's strong finances and economic growth, it currently has the capacity to address its liabilities through adopted measures without significant budget pressures as contributions increase. However, the state will need to proactively and adequately fund its pensions on an actuarial basis using prudent assumptions, including calling special sessions when necessary, to avert deterioration of unfunded liabilities over time and continued long-term pressures on the pension system and the state's rating. Should implementation of the changes fail to prevent further decline of the state's combined pension funded ratios or lead to a decline of its finances during our two-year outlook horizon, we could lower our rating on the state.

Until the state implements adopted changes effectively as well as demonstrates a record of fully addressing its long-term pension liabilities (including fully funding at its ADC) and improving its pension funded ratios, we are unlikely to raise the rating.

Governmental Framework

Voter initiatives in Colorado are a major factor in state operations. Colorado voters have approved initiatives that have limited revenue flexibility and mandated spending. The net effect has reduced state flexibility and delayed revenue budget-balancing options.

The TABOR initiative, passed in 1992, requires voter approval to levy any new state tax, as well as to extend existing taxes or increase tax rates. TABOR also limits growth in state revenues to inflation plus population growth rates. TABOR tax revenue limitations apply to the state as a whole, not just the general fund. Revenue is expected to be $414.3 million lower than the TABOR cap in fiscal 2018 and $429.9 million below the cap in fiscal 2019, based on the December economic forecast. The constitution requires amounts above the TABOR limit to be refunded to taxpayers.

While we believe that TABOR limits tax-raising flexibility, in the short run, it can provide some stability in revenue forecasting to the extent that declines in revenue do not necessarily mean less revenue available for the general fund until annual revenue falls below the TABOR limit. However, TABOR prohibits tax increases without a popular vote, which can limit budget flexibility in periods of rising education, social service, and Medicaid costs. Any surplus revenue over the limit would continue to be refunded to taxpayers.

Colorado also must contend with voter initiative Amendment 23, passed in 2000, which mandated increases in school spending until fiscal 2011, when increases must equal the inflation rate. Amendment 23 spending levels apply whether or not revenues fall below the TABOR limit. Another voter initiative lowered residential assessment ratios compared with commercial property. Combined, these two initiatives have had the effect of increasing state funding for local school operations, and to some extent, crowding out general fund appropriations for other purposes. State voters in November 2013 defeated a proposed voter initiative that would have raised income tax rates and dedicated the new revenue to increased school spending. Overall, we believe that Colorado is an active voter initiative state.

Colorado has a requirement for a balanced budget. The state must both balance the proposed budget and take necessary action to bring the current budget to balance within one fiscal year. However, constitutional and statutory factors limit budget discretion. State constitutional provisions from voter initiative Amendment 23 protect most (but not all) of grade K-12 school funding. In previous years, Colorado has found ways to cut K-12 funding by adjusting the inputs to Amendment 23's funding formula, but its ability to do this is limited.

In accordance with the Colorado Constitution, the state cannot issue GO bonds. Therefore, Colorado has historically issued appropriation-backed debt, although it also has debt secured by specific transportation revenues. For the appropriation-backed debt, there is not a priority of payment, and the state has tended to issue under various COP programs for such areas as school facilities and prisons. These programs include total limits on appropriation debt in the program, but there is not an overall appropriation limit. There are no general appropriation debt amortization limits.

Other fixed-cost pressures include Medicaid and proposals on the change to federal funding to states for Medicaid, which could increase the cost to the state over time. On a GAAP basis, social assistance, of which the state's Medicaid program makes up the dominant share, was 43% of fiscal 2017, audited combined governmental fund expenditures.

On a scale ranging from '1.0' (strongest) to '4.0' (weakest), we have assigned a score of '2.1' to Colorado's governmental framework.

Financial Management Assessment

We consider Colorado's financial management practices "good" under our FMA methodology, indicating practices exist in most areas, although not all might be formalized or regularly monitored by government officials.

Highlights of the state's management policies include:

- Quarterly monitoring of revenue and expenditures, coupled with the statutory requirement to initiate midyear adjustments to ensure adequate reserves;
- Formal revenue and expenditure forecasting that uses outside sources and consultants to support budgetary projections;
- A statutory budgetary general fund balance target with a requirement that the governor act to balance the budget based on revenue forecast changes (the state has adjusted this percentage in recent years, from 2.3% in fiscal 2011 to 6.5% for fiscal 2017); and
- Detailed and formal investment management policies, including public posting and quarterly review of investment results.

The state's written debt management policy lacks specific numerical debt targets or a formal multiyear, statewide capital improvement program (CIP), although various departments maintain independent plans subject to legislative approval.

Budget Management Framework

The legislative and executive branches provide formal, ongoing revenue and expenditure updates on a quarterly basis. These reports include tax and other revenue forecasts, budget and cash fund updates, calculations as to whether the state meets various statutory requirements (including those linked to TABOR), and state and national economic data. Statute defines the yearly budget timeline, including dates for the governor's budget request (and supplemental request) to the Joint Budget Committee and dates by which quarterly forecasts are due.

Once a fiscal year is under way, the governor is required to take budget action pursuant to state law to maintain the unappropriated reserve. The governor can make changes to appropriations, alter disbursements, or implement furloughs. During periods of emerging budget gaps, state officials have a good history of bridging the budget gap, in our opinion. However, the steps taken to bridge the gap during the past recession have included the use of one-time funds and nonrecurring revenue as well as recurring items. Colorado has not generally carried forward deficits on a budgetary basis, although at the end of fiscal 2009, it did a temporary transfer to meet its required reserve.

On a scale ranging from '1.0' (strongest) to '4.0' (weakest), we have assigned a score of '2.0' to Colorado's financial management.

Economy

The state's economy continues to grow, although at a slower pace since 2016. Colorado's population rose 15.6% between 2007 and 2017, and the state has consistently maintained a population growth rate well above the national average. (By contrast, the national population growth in the same period was 7.9%.) In 2017, the Census Bureau estimated Colorado's population continued to grow by what we consider a strong 1.4% to 5.61 million.

In 2017, the state's age-dependency ratio, a measure of nonworking age population to total population, was 56.4% and below the nation's average of 61.3%, reflecting in-migrants and a relatively low old-age dependency ratio; the child dependency ratio, however, is about average.

Colorado's employment distribution has a slightly lower concentration in trade, transportation, and utilities; manufacturing; and in education and health services, but a slightly higher proportion in leisure and hospitality, government, and information and financial activities. With a relatively more educated population, the state has a larger employment base in professional and business services at 15.5% of 2016 annual average employment compared with 13.9% of employment for the nation. Construction employment was 6.2%, compared with 4.7% for the nation; the state housing market did not suffer as much as some other fast-growing portions of the country during the recent downturn and has been growing again with the influx of new people. Manufacturing was below average at 5.4% compared with 8.5% nationally. The state's recreational opportunities--including its winter sports industry, which draws visitors nationally--make leisure and hospitality a larger-than-average sector at 12.5% compared with 10.9% for the nation. Trade, transportation, and utilities was 17.3% compared with 18.8% for the nation. Mining employment makes up 1.0% of total state employment (down from 1.4% in 2014), compared with 0.5% for the nation.

According to the Bureau of Labor Statistics, Colorado's annual average seasonally adjusted unemployment rates were below those of the nation for the last 10 years (including during the recession), with unemployment at 2.8% in 2017 compared with 4.4% for the nation.

State per capita income was $53,504 in 2017, or 106% of the national level, while GDP per capita as a percentage of the nation in 2017 was 103%. Until 2013, growth in gross state product (GSP) per capita had been generally similar to the national rate but has surpassed the national average since then.

We consider Colorado's economic growth prospects good. The Denver metropolitan statistical area (MSA) continues to serve as a center for the Mountain West region. Housing costs remain moderate, despite some recent home price increases in the MSA, especially compared with many East and West Coast MSAs. We also believe the state has been good at attracting emerging industries, including high-technology and telecom and, most recently, renewable energy firms. Colorado's outdoor lifestyle continues to draw new residents, and related leisure and hospitality industries are major employers. The state benefited from the shale oil boom, but we do not expect the current decline in oil and gas mining to have a major effect on the economy.

On a scale ranging from '1.0' (strongest) to '4.0' (weakest), we have assigned a score of '1.3' to Colorado's economy.

Budgetary Performance

As part of the state budget process each year, Colorado designates an unrestricted general fund reserve, also known as the unappropriated reserve. It is required to adjust its budget to maintain this reserve throughout the year. Over the past decade, Colorado set this reserve level in general at 4.0%-6.5% of budgetary basis appropriated expenditures. However, the state statutorily changed this to 2.0% in fiscal years 2009 and 2010 before moving it to 2.3% for fiscal 2011. In fiscal 2012, it returned to a 4.0% reserve requirement, increased it to 5.0% in fiscal 2013, and then 6.5% in fiscal 2015, before lowering it again to 5.6% in fiscal 2016. The fiscal year 2017 and 2018 budgets have set the reserve at 6.5% and the governor's budget proposal recommends revising the required reserves to 7% beginning in 2019. In fiscal 2009 (budgetary basis), Colorado technically finished the year with a $440 million budgetary basis balance, or 6.0% of appropriations on a budgetary basis; however, special legislation required the treasurer and controller to temporarily transfer $458 million to the general fund from certain cash funds to achieve this balance (the amount was returned immediately in the new fiscal year). Without this transfer, the fund balance presumably could have been negative.

Due to weak severance taxes, fiscal 2016 ended with revenues below the TABOR limit and a 5.5% budgetary fund balance. Fiscal 2015 ended with a reserve equal to 8.0% of appropriations, with the excess over 6.5% retained in the general fund to improve fiscal 2016's beginning balance due to the projected fund balance decline in 2016 after TABOR refunds. For fiscal 2017, however, financial results show stronger-than-anticipated revenues building the general fund balance back up. At the end of fiscal 2017, the general fund balance was an estimated $613 million on a budgetary basis, or 6.3% of appropriations. Estimates show that Colorado's general fund will end fiscal 2018 with a $784.2 million budgetary basis balance, or 7.5% of appropriations, up from 6.3% at fiscal year-end 2017 and $104 million above the required reserve of 6.5%.

These balances do not include the separate restricted state education fund, whose balance was built up to $1.1 billion at the end of fiscal 2014, but was drawn down to $102 million at the end of fiscal 2017. Year-end balances for 2018 are expected to grow to $183 million. On a combined budgetary basis, general and education fund balances were $716.5 million at fiscal year-end 2017, and the state estimates the combined balance were about $967 million at fiscal year-end 2018.

Although revenues have been affected by the oil and gas slowdown, Colorado has shown a bounce-back in key state tax sources since fiscal 2017 as the oil and gas industry's contraction begins to weigh less on tax collections. The enacted 2019 budget requests $30.5 billion in total funds (an increase of 3.7% from 2018). The general fund portion of the proposed budget is funded with $12 billion in revenue, or $368 million (3.2%) more than in fiscal 2018 before transfers. The bulk of general fund revenue consists of individual income taxes and sales and use taxes. Increases in the general fund budget include a 9.7% increase in higher education funding, a 7.5% increase for the department of corrections, and a 2.1% increase for K-12 education funding. Finally, the budget required additional contributions of $225 million from the state to its pension plan.

Based on the March 2018 quarterly budget forecast, the general fund revenue is expected to increase at rates of 12.9% in fiscal 2018 and 3.2% in fiscal 2019. Relative to December projections, the fiscal 2017-2018 general fund revenue forecast is higher by $309.3 million, or 1.8%, largely due to increased tax revenues from the recently enacted federal tax reform. However, some of the improved revenue collections for 2018 may be due to a nonrecurring windfall related to taxpayers' response to the federal tax law change and could foreshadow a subsequent slowdown in future revenue collection. The state's enacted budget estimates that Colorado's general fund will end fiscal 2018 with a $1.2 billion budgetary basis balance, or 10.4% of appropriations, up from 6.3% at fiscal year-end 2017 and $481.6 million above the required reserve of 6.5%.

Based on the March 2018 quarterly budget forecast, the general fund revenue is expected to increase at rates of 12.9% in fiscal 2018 and 3.2% in fiscal 2019. Relative to December projections, the fiscal 2017-2018 general fund revenue forecast is higher by $309.3 million, or 1.8%, largely due to increased tax revenues from the recently enacted federal tax reform.

Fiscal 2017 is the most recent audited fiscal year. On a GAAP basis, Colorado's general fund balance increased by $77 million, to $1.15 billion, or what we consider a good 6.5% of general fund expenditures (not counting continuing below-the-line transfers to the education fund as expenditures). However, the available assigned and unassigned general fund balance was only $17 million, the result of categorizing the state's 6.5% statutory budget reserve as a committed fund balance. The 2017 total GAAP general fund balance is only slightly lower than the ten-year peak of $1.23 billion in fiscal 2012, and it represents a substantial increase from the low point at fiscal year-end 2010, when it was just $16 million due to the Great Recession. However, given the long period of record economic expansion and forecasted softening in economic growth, the low unassigned balance may limit Colorado's ability to respond adequately in the event of adverse shocks that may cause another potential economic downturn.

In fiscal 2016, Colorado's general fund GAAP balance decreased by $98 million to $1.08 billion, or what we consider a good 6.1% of general fund expenditures. However, the available assigned and unassigned general fund balance was only $18 million. For fiscal 2015, general fund balance increased by $240 million, to $1.175 million, or 7.1% of appropriations and the available assigned and unassigned general fund balance was only $20.7 million.

Colorado also has a constitutionally mandated TABOR emergency reserve, equal to 3% of fiscal year spending. However, these funds remain inaccessible in a practical sense, even during a challenging budget year, given that to expend these funds, the governor must issue either a state of emergency (via a joint resolution approved by two-thirds of both houses and the governor) or a declaration of a disaster. However, in the past, Colorado has designated such assets as a major medical insurance fund, wildlife cash fund, and certain state properties as satisfying the TABOR emergency reserve requirement.

We consider the state's cash monitoring controls good. Colorado matches historical trends over the year, including monthly variations, with revenue forecasting and spending plans for cash flow projections. It also updates cash daily. While expenditures are spread more evenly throughout the year, the state receives the majority of its receipts in the second half, leading it to traditionally issue general fund cash flow notes at the beginning of each fiscal year.

In our view, Colorado's overall liquidity performance has been very strong recently, supported by high general fund balances, strong nongeneral fund internally borrowable resources, and easily conducted yearly cash flow borrowing. However, during the fiscal crisis, the state's general fund had operated from a negative position, including at year-end. Nevertheless, Colorado also has held a sizable portion of internally borrowable nongeneral fund money for many years that it can use for cash flow purposes, if needed. Colorado estimates it ended fiscal 2017 with internally borrowable cash resources of about $4.7 billion, including $441.6 million cash in the general fund. This is somewhat below the $4.9 billion the state projected for fiscal 2017 in the prior year. (For more information about general fund cash, refer to our general fund fiscal 2016 cash flow note rationale on Colorado, published July 6, 2017, on RatingsDirect.)

The executive and legislature branches each have their own formal revenue forecasts, updated quarterly. Although assumptions and forecasts may differ, at budget time, the two sides have historically communicated with each other to align for budgetary purposes. At times, the state has chosen to use the more conservative of the two.

We view Colorado's tax revenues as broad based. In fiscal 2017, on a budgetary basis, 66% of general fund revenues came from individual income taxes, while 30% came from combined sales and use taxes. On a GAAP basis, 34% of general fund revenue derived from individual income taxes and 17% from sales and use taxes.

While the state's income tax-dominated revenue stream and moderately cyclical trends have led to some revenue volatility, Colorado's service level requirements are generally more predictable. Funding requirements, especially for education, allow for less flexibility. Gap-closing measures during the economic downturn included several rounds of one-time fund sweeps, very short-term transfers to meet reserves at year-end, one-time and ongoing expenditures cuts, and adjustments to exemptions and credits to increase revenues.

On a scale ranging from '1.0' (strongest) to '4.0' (weakest), we have assigned a score of '1.9' to Colorado's budget performance.

Debt And Liability Profile

The Colorado Constitution has a prohibition on long-term GO debt, but the state has issued general fund appropriation-backed lease-revenue debt for a number of general governmental purposes, including school facilities and prisons. From time to time, it has issued lease-secured debt secured by general fund appropriations for capital purposes, as well as bonds secured by vehicle registrations and grant and revenue anticipation bonds secured by federal transportation grants. The state has not issued deficit bonds in recent years, nor has it restructured debt other than for ordinary refunding issuances for savings.

Tax-supported debt per capita at fiscal year-end June 30, 2017, was low, in our opinion, at $332 per capita. Tax-backed debt includes transportation tax-supported debt, as well as general fund appropriation lease-secured debt, some of which consists of direct placements. However, none of the direct-placement debt has provisions that could accelerate its repayment and none includes cross-default or interest step-up provisions. As a percentage of personal income and GSP, tax-supported debt is what we consider low at 0.6% and 0.54%, respectively. We consider amortization of debt somewhat slow, with 40% of principal outstanding amortized over 10 years, based on debt outstanding at fiscal year-end 2017.

We calculate Colorado had $1.9 billion in total tax-backed debt at fiscal year-end 2017, primarily consisting of $1.6 billion in general fund appropriation-supported COPs, including debt issued through the Higher Education Construction Authority, but also consisting of unrated state unemployment insurance compensation fund bonds, and debt issued by the Colorado Department of Transportation (CDOT). CDOT debt includes$300 in million transportation tax-supported Colorado bridge repair bonds.

Pensions and OPEBs

PERA, Colorado's multiple-employer retirement plan, is broken down into several divisions. The state government is primarily responsible for funding the state division, which is the largest within PERA, as well as the judicial retirement plan. The three-year average funded ratio for all plans over which the state has primary responsibility was 53%, which we view as weak. Based on the most recent audit (fiscal year 2016) for PERA, the state's pension has continued its deteriorating trend over the last ten years. The state pension system's most recent combined funded ratio has declined to 43%. We calculate the state's net pension liability per capita at $3,171, based on the GASB 68's GAAP accounting breakout of the combined state net pension liability of $17.8 billion. The combined net pension liability amounts to what we view as a moderate 5.9% of personal income. The funding ratio has declined in part as a result of reduction in the assumed actuarial rate of return in 2016 to 7.25% from 7.5% and revised mortality projections that better align with the plan's recent experience. The state funded its retirement plans using a statutory funding formula that does not necessarily match the ADC. It has annually funded less than the ADC for at least the last 10 years. The decline in the funded ratio also reflects varying market returns, which have generally trailed the assumed rate of return during the past ten years, and have put additional pressure on the state's already weak pension funded ratio. PERA's total net pension liability was $50.8 billion at Dec. 31, 2016, up from $27.9 billion the year before.

It is our view that the large net pension liability continues to represent a pressure point on the state's rating and significant changes to the pension funding practices and pension reform are required to improve the pension funded ratio and provide a sustainable path to funding the state's pension liabilities. The state's legislature has adopted Senate Bill 18-200, which made several changes to the PERA to restore the system to full funding within 30 years. These changes include a 2% increase in contribution rates for most employees, suspension of the COLA for retirees through 2019 and limiting future adjustments to 1.5% from 2%, a 0.25% increase in nonlocal government employer's contribution rates, and a direct annual allocation of $225 million from the general fund to PERA beginning fiscal 2019. These changes and additional changes in the bills are expected to reduce the expected amortization of the system's unfunded liabilities to 30 years compared to 44 prior to the reform.

SB 18-200 also contains additional provisions to adjust employee and employer contributions (subject to a statutory 0.5% annual cap), as well as allocations from the state's budget to keep the system fully funded within a closed 30-year amortization. We understand that PERA will determine the contribution required to keep the system funded based on its adopted actuarial assumptions. These contribution increases are expected to be absorbed equally by the employers, employees, and the state's budget subject to statutory limits. However, if increases subject to the statutory limitation are inadequate to fund the determined contribution, the state could address the potential underfunding of the system in a legislative session. It may see a reduction in reported unfunded liabilities and higher funded ratios from this reform. However, if it does not adequately fund its pensions on an actuarial basis using prudent assumptions and methods, we will expect to see regression of unfunded liabilities over time and continued long-term pressures on the pension system.

Colorado earlier passed a pension reform law concerning PERA in 2010 meant to address the long-term health of the PERA pension program through increased contributions and decreased long-term liability. The law took steps to reduce "spiking" of the pension in the last year by capping calculated salary increases and raising the retirement age. It also limited pension COLAs to retirees to 2%. However, the plan's funded ratio continued to decline (despite initial increases in 2012 and 2013) from 57.6% in 2011.

Although actuarial inputs do not further worsen our scoring of the state's overall pension funding discipline, which we view as already weak, we view some the assumptions as optimistic and believe a history of underfunding of the pension system compared to actuarially recommended contributions continues to undermine the fiscal health of the pension system. The state division of PERA assumes a closed amortization period based on a level percentage of payroll, actuarial methods we view as less conservative than contributions based on a level dollar amount. The plan reported an actual 8.5% five-year average rate of return in its fiscal 2016 Comprehensive Annual Financial Report, which is higher than the assumed rate of return of 7.25%. However, the ten-year average rate of return is lower, at 5.2%, than the assumed rate of return. We believe that, unlike plans with a June 30 fiscal year-end, the Dec. 31, 2016 fiscal year-end could yield an improved subsequent five-year average rate of return, as investment returns have been higher in the latter portion of the year. The state's division of the pension plan shows a crossover date (when assets are projected to be inadequate to cover benefit payments) of 2039, which we consider consistent with our view of the state's weak funding commitment. However, we expect that the recently adopted changes (which will reduce future liability accrual) will lead to the plan's assets to be better able to cover liability in the future. Liability calculations also include assumptions which we view as optimistic. The plan's mortality assumptions, updated in 2016, use MP2014 tables which we consider current but are not projected generationally, and which we consider weak and will need to be updated every five years to reflect potential future increases in lifespan, potentially understating the increase in liabilities due to future mortality improvements. We also believe payroll growth assumptions are high compared to the plan's experience, which indicates the potential for contribution shortfalls in future actuarial valuations. The ratio of active members to beneficiaries is 1.46, which we believe is sustainable, as it is only moderately below the median national ratio of 1.50. Colorado uses four-year smoothing for its asset valuation method. Experience studies are produced at least every five years, and we believe they reflect experience trends and industry standards.

The state's OPEB health care trust fund, for postretirement health care costs, is funded through PERA as a multiple-employer trust fund. The OPEB fund had a $1.28 billion unfunded liability at Dec. 31, 2016 for all employers and a 17.4% funded ratio, not including the Denver schools' OPEBs of $53.5 million. We consider the state of Colorado's OPEB exposure moderate at about $241 per capita.

On a scale ranging from '1.0' (strongest) to '4.0' (weakest), we have assigned a score of '2.5' to the state's debt liability profile.

Ratings Detail (As Of June 7, 2018)		
Colorado bldg excellent schs today certs of part tax-exempt		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado bldg excellent schs today certs of part tax-exempt		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado certs of part (Building Excellent Schs Today) (bldg Excellent Schs Today)		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado certs of part (Grand Junction Regional Facility Lease Purchase Agreement) ser 2015 due 03/15/2033		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado certs of part (QSCBs) (Bldg Excellent Schs Today)		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado lse purch fincg prog certs of part (taxable) (National Western Ctr) ser 2018B due 09/01/2032		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado lse purch fincg prog certs of part (National Western Ctr) ser 2018A due 09/01/2038		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado rfdg certs of part		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado rfdg certs of part (taxable) (Colorado State Penitentiary Ii Proj)		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado rfdg certs of part (Ucdhsc Fitzsimmons Academic Projs)		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado Dept of Transp certs of part		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado ICR		
Long Term Rating	AA/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised

Ratings Detail (As Of June 7, 2018) (cont.)		
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado APPROP		
Long Term Rating	AA-/Stable	Outlook Revised
Twin Peaks Charter Academy (Twin Peaks Charter Academy) CHARTERSCH		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BB+/Stable	Current
Colorado		
Colorado Dept of Transp, Colorado		
Colorado (Colorado Dept of Transp) certs of part (Colorado Dept of Transp)		
Long Term Rating	AA-/Stable	Outlook Revised
Colorado Educl & Cultural Facs Auth, Colorado		
Ben Franklin Acad, Colorado		
Colorado Educl & Cultural Facs Auth rev bnds (Ben Franklin Acad)		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Castle Rock Lifelong Learning Center, Colorado		
Colorado Educl & Cultural Facs Auth (Castle Rock Lifelong Learning Ctr)		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Cesar Chavez Acad, Colorado		
Colorado Educl & Cultural Facs Auth (Cesar Chavez Bldg Corp) (CIFG)		
Unenhanced Rating	A+(SPUR)/Stable	Outlook Revised
Colorado Educl & Cultural Facs Auth, Colorado		
Cheyenne Mtn Charter Academy, Colorado		
Colorado Educl & Cultural Facs Auth (Cheyenne Mtn Charter Academy) charter sch rev rfdg bnds (Cheyenne Mtn Charter Academy) (Vanguard) ser 2016 dtd 0		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Classical Acad Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Classical Acad Charter Sch) CHARTERSCH		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB/Stable	Current
Colorado Educl & Cultural Facs Auth (Classical Acad Charter Sch) CHARTERSCH		

Ratings Detail (As Of June 7, 2018) (cont.)

Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB/Stable	Current

Colorado Educl & Cultural Facs Auth, Colorado

Collegiate Acad Charter Sch, Colorado

Colorado Educl & Cultural Fac Auth (Collegiate Acad of Colorado Proj) charter sch, series 2004

Underlying Rating for Credit Program	BB-/Stable	Current
Unenhanced Rating	A+(SPUR)/Stable	Outlook Revised

Colorado Educl & Cultural Facs Auth, Colorado

Colorado

Colorado Educl & Cultural Facs Auth (Colorado) charter sch ser 2007A (CIFG)

Unenhanced Rating	A+(SPUR)/Stable	Outlook Revised

Colorado Educl & Cultural Facs Auth, Colorado

Colorado Springs Charter Academy, Colorado

Series 2010

Underlying Rating for Credit Program	NR	Current
Long Term Rating	A+/Stable	Outlook Revised

Colorado Educl & Cultural Facs Auth, Colorado

DCS Montessori Charter Sch, Colorado

Series 2012

Underlying Rating for Credit Program	BBB-/Stable	Current
Long Term Rating	A+/Stable	Outlook Revised

Colorado Educl & Cultural Facs Auth, Colorado

Excel Acad Charter Sch, Colorado

Colorado Educl & Cultural Facs Auth (Excel Acad Charter Sch) charter sch rfdg rev bnds (Excel Acad Charter Sch) ser 2016 dtd 07/15/2016 due 12/01/2031

Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current

Colorado Educl & Cultural Facs Auth, Colorado

Flagstaff Acad, Colorado

Colorado Educl & Cultural Facs Auth (Flagstaff Acad) rfdg bnds (Flagstaff Acad)

Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB/Stable	Current

Colorado Educl & Cultural Facs Auth, Colorado

Frontier Acad, Colorado

Colorado Educl & Cultural Facs Auth (Frontier Acad) charter sch rev rfdg and imp bnds

Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current

Colorado Educl & Cultural Facs Auth, Colorado

High Point Academy, Colorado

Colorado Educl & Cultural Facs Auth (High Point Academy) MORALOBLIG

Ratings Detail (As Of June 7, 2018) (cont.)		
Long Term Rating	A+/Stable	Outlook Revised
Colorado Educl & Cultural Facs Auth, Colorado		
Independence Academy, Colorado		
Colorado Educl & Cultural Facs Auth (Independence Academy) CHARTERSCH		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Liberty Common Charter Sch, Colorado		
Colorado Educl & Cult Fac Auth (Liberty Common Sch Proj) charter sch ser 2003 (XLCAPITAL)		
Underlying Rating for Credit Program	BBB-/Stable	Current
Unenhanced Rating	A+(SPUR)/Stable	Outlook Revised
Colorado Educl & Cultural Facs Auth, Colorado		
Liberty Common Sch Bldg Corp, Colorado		
Colorado Educl & Cultural Facs Auth (Liberty Common Sch Bldg Corp)		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Liberty Common Sch Bldg Corp)		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Lincoln Acad Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Lincoln Acad Charter Sch) charter sch rev bnds		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Lincoln Acad Charter Sch) charter sch rev rfdg bnds (Lincoln Acad Charter Sch)		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Littleton Academy Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Littleton Academy Charter Sch) (Arapahoe Cnty) (CIFG), series 2006		
Underlying Rating for Credit Program	BBB/Stable	Current
Unenhanced Rating	A+(SPUR)/Stable	Outlook Revised
Colorado Educl & Cultural Facs Auth, Colorado		
Monument Academy, Colorado		
Colorado Educl & Cultural Facs Auth (Monument Academy) CHARTERSCH		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Negative	Current
Colorado Educl & Cultural Facs Auth, Colorado		
North Star Acad, Colorado		
Colorado Educl & Cultural Facs Auth (North Star Acad) CHARTERSCH		
Long Term Rating	A+/Stable	Outlook Revised

Ratings Detail (As Of June 7, 2018) (cont.)		
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (North Star Acad) (North Star Academy Charter Sch Proj)		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Peak to Peak Charter Sch - Prairie View Inc., Colorado		
Colorado Educl & Cultural Facs Auth (Peak to Peak Charter Sch - Prairie View Inc.) CHARTERSCH		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB+/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Pinnacle Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Pinnacle Charter Sch) charter sch rev rfdg bnds		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Platte River Acad Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Platte River Acad Charter Sch)		
Long Term Rating	A+/Stable	Outlook Revised
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Rocky Mountain Acad of Evergreen, Colorado		
US$5.1 mil charter sch rfdg & imp rev bnds (Rocky Mountain Acad Of Evergreen) ser 2010 dtd 12/16/2010 due 11/01/2040		
Underlying Rating for Credit Program	B-/Stable	Current
Long Term Rating	A+/Stable	Outlook Revised
Colorado Educl & Cultural Facs Auth, Colorado		
The Academy, Colorado		
Colorado Educl & Cultural Facs Auth (The Academy) MORALOBLIG		
Long Term Rating	A+/Stable	Outlook Revised
Colorado Educl & Cultural Fac Auth (Acad of Charter Sch Bldg Corp) charter sch		
Underlying Rating for Credit Program	NR	Current
Unenhanced Rating	A+(SPUR)/Stable	Outlook Revised
Colorado Educl & Cultural Facs Auth, Colorado		
Woodrow Wilson Acad Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Woodrow Wilson Acad Bldg Corp) charter sch, series 2005A		
Underlying Rating for Credit Program	BBB/Stable	Current
Unenhanced Rating	A+(SPUR)/Stable	Outlook Revised

Many issues are enhanced by bond insurance.