S&P Global Ratings

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

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Credit Profile		
US$500.0 mil rural Colorado certs of part ser 2022 dtd 06/15/2022 due 12/15/2041		
Long Term Rating	AA-/Stable	New
Colorado ICR		
Long Term Rating	AA/Stable	Affirmed
Capitol Pkg Auth, Colorado		
Colorado		
Capitol Pkg Auth (Colorado) APPROP (AMBAC)		
Unenhanced Rating	AA-(SPUR)/Stable	Affirmed
Colorado Educl & Cultural Facs Auth, Colorado		
Colorado Springs Charter Academy, Colorado		
Colorado Educl & Cultural Facs Auth (Colorado Springs Charter Academy)		
Long Term Rating	A+/Stable	Affirmed

Rating Action

S&P Global Ratings assigned its 'AA-' long-term rating to the State of Colorado's $500 million Rural Colorado certificates of participation (COPs), series 2022. At the same time, S&P Global Ratings affirmed its 'AA' issuer credit rating (ICR) on the state, its 'AA-' long-term rating on Colorado's lease debt and COPs outstanding, and its 'A+' long-term rating on the state's moral obligation debt outstanding. The outlook on all ratings is stable.

The 2022 COPs are secured by annually appropriated legally available money from the state general fund and payments allocated by the Transportation Commission of Colorado for the Colorado Department of Transportation (CDOT) from the state highway fund for the lease of various state property. Colorado Revised Statutes Section 24-82-1301 (the Act) authorized the state to issue up to $500 million in COPs annually to fund state highway and capital construction payments from fiscal years 2019 through 2022. However, the lease payments authorized under the Act may not exceed $150 million annually. The master indenture for the COPs specifies that the lease payments are payable separately by the state and CDOT.

The series 2022 COPs, similar to the outstanding COPs under the Act, are expected to fund necessary high-priority highway and transit projects. The Act, which was part of the provisions of Senate Bill (SB) 17-267 adopted in the 2017 legislative session, authorized the financing of $2 billion in capital and transportation projects through fiscal 2022. This is expected to be the fourth and final sale of COPs under the Act.

Credit overview

Our 'AA' ICR on Colorado reflects our opinion of the state's strong economy, good budget management, and strong internal liquidity, offset by constitutional Taxpayers Bill of Rights (TABOR) limits on revenue growth, a somewhat cyclical financial history, and a pension system for which the funded ratio had been allowed to decline over several years under a statutory funding mechanism that did not match actuarial requirements.

In recent years, Colorado enacted statutory increases in pension contributions to put it back on a path to full funding, but then temporarily delayed the increased contribution scheduled in fiscal 2020 due to the COVID-19 pandemic. The state's adopted fiscal 2023 budget resumes the scheduled contribution increases, with an extra appropriation for the missed fiscal 2020 payment. Recently released actuarial reports have raised the state's combined pension funds' funded ratio up to a still-low 67% in fiscal 2021 (as of a Dec. 31, 2020, measurement date) from a weak 56% in fiscal 2019, on a Governmental Accountings Standards Board (GASB) generally accepted accounting principles (GAAP) basis of accounting, in part due to a large 17.0% one-year investment return in 2020.

Colorado's history of making midyear budget corrections when necessary, during weak economic periods, close quarterly budget monitoring, and strong internal liquidity helped the state navigate through the pandemic-induced recession, although in part by delaying the increase in pension contributions. Coming out of the recession, Colorado has experienced strong economic growth and well above-budgeted revenues that are expected to lift revenues above its TABOR revenue limit for the foreseeable future.

The state conservatively set low revenue targets going into the pandemic-led recession, which it greatly exceeded. Despite a statutory general fund reserve target of 3.1% of appropriations in fiscal 2020, and 2.9% for fiscal 2021, actual general fund balances on a budgetary basis of accounting came in at a very strong 15.4% in fiscal 2020, and an even stronger 28.9% in 2021, due to unexpectedly strong revenue growth. As a result of this strong revenue performance, the state raised its general fund reserve target to 13.4% for fiscal 2022. However, the governor's Office of State Planning and Budgeting's (OSPB) March 2022 forecast estimates fiscal 2022 will end with an even stronger 31.0% general fund balance at fiscal year-end June 30, 2022. Colorado has just adopted its fiscal 2023 budget, with some bills yet to be signed or vetoed. However, the state believes that the 2023 general fund reserve target will at least reach 15% when all budget legislation has been finalized. An updated OSPB forecast incorporating final enacted budget-related bills will be released in June. The state estimates combined general fund and education fund reserves will total a very strong $4.5 billion at fiscal year-end 2022, or 27.4% of combined expenditures.

As a result of strong revenue growth, particularly in individual income taxes, Colorado exceeded its constitutional TABOR revenue cap in fiscal 2021 by $547.9 million, requiring a taxpayer refund in the following fiscal year. The state currently projects its will exceed its TABOR limit for the foreseeable future, by $2.2 billion in fiscal 2022, $2.0 billion in 2023, and $1.3 billion in 2024, assuming current high inflation continues throughout 2022, thereby allowing additional TABOR cap growth in fiscal 2024. As a result of future TABOR limits, the state has prioritized using budgeted spenddowns of recent high reserves on one-time items (including TABOR refunds), so as not to increase ongoing spending above what can be supported within the TABOR limit. Fiscal 2022's TABOR excess is being refunded in fiscal 2023 through direct payments of $400 to individual income tax filers, and $800 for joint filers.

Although state housing prices have risen, they are still favorable compared with California housing prices, and the state continues to receive significant in-migration. IHS Markit forecasts that state economic growth will rise at rates slightly faster than those of the U.S. through calendar 2025. It forecasts Colorado real gross state product (GSP) will increase

2.6% in calendar 2022 and 3.0% in calendar 2023, compared with 2.4% GDP for the nation in both years.

The ICR reflects what we consider the state's:

- Broad and diverse economy that continues to exhibit better-than-average income, employment, and population trends;
- Strong year-end reserves;
- History of making midyear budget corrections, when necessary, during weak economic periods, and close quarterly budget monitoring and forecasting; and
- Low debt and moderate other postemployment benefit levels.

These credit strengths are offset by what we see as:

- A still-weak pension funded ratio; and
- Constitutional provisions such as the TABOR that limit state tax revenue, while at the same time mandating a minimum level of school expenditures, which we believe limits revenue and spending flexibility, and can contribute to cyclical finances.

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 '1.9' to Colorado, which is consistent with a 'AA' indicative rating.

The stable outlook reflects good recent economic trends and revenue performance, which we expect will continue over our two-year outlook horizon.

Environmental, social, and governance

ESG credit indicators: E-3, S-2, G-2

Environmental factors are a moderately negative consideration in our credit rating analysis for Colorado. The state has elevated risk of wildfires, as well as water scarcity stemming from drought conditions and because limited supplies of Colorado River drinking water compete with a growing population, we expect the state will factor this into its long-term plans. Social and governance factors have an overall neutral influence on our credit rating analysis. We believe the state has strong demographic trends compared with those of the nation, specifically population growth faster than the nation and a lower age dependency ratio of 57.5% compared with 63.1% for the nation, although this is somewhat offset by rising home prices, which could slow future growth, and the need for increased education spending as school enrollment increases. The state conducts quarterly financial projections and has been timely in identifying shortfalls.

Stable Outlook

Downside scenario

Deteriorating fiscal performance and evidence of weaker commitment to fiscal discipline, as demonstrated by weakened reserves and significant reliance on one-time measures to address revenue shortfalls, could lead to a negative rating action. A significant decrease of Colorado's combined pension funded ratios either from reduced commitment to pension funding or asset declines could also pressure the rating.

Upside scenario

Upward movement on the rating or outlook would likely involve demonstration of sustained revenue or expenditure flexibility throughout the economic cycle, in light of Colorado's TABOR limitation on revenue growth and constitutional formula mandates for school spending.

Credit Opinion

Government Framework

Voter initiatives 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 Colorado as a whole, not just the general fund. The state's March 2022 quarterly forecast anticipates general fund revenues will surpass the TABOR cap by $2.2 billion in fiscal 2022, $2.0 billion in fiscal 2023, and $1.3 billion in fiscal 2024. General fund revenues exceeding the TABOR cap will be refunded to taxpayers in the following fiscal years as per state constitutional requirements. In fiscal 2023 this will include $400 direct payments to individual income tax filers and $800 for joint filers. Although we believe that TABOR limits tax-raising flexibility, in the short term, it can provide some stability in revenue forecasting to the extent that if revenues are above the cap, declines in revenue will not necessarily result in less revenue available for the general fund, merely smaller rebates to taxpayers, until annual revenue falls below the TABOR limit. However, TABOR's prohibition on tax increases without a popular vote can limit budget flexibility in periods of rising education, social service, and Medicaid costs.

Colorado also must contend with voter initiative Amendment 23 (passed in 2000), which mandated increases in school spending for 10 years, with increases subsequently required at a rate equal to inflation and enrollment. Amendment 23 spending levels apply whether or not revenues fall below the TABOR limit. Another voter initiative (the Gallagher Amendment) lowered residential assessment ratios compared with commercial property, but was repealed by the voters in November 2020. Previously, these two initiatives had the effect of increasing state funding for local school operations, and to some extent, crowding out general fund appropriations for other purposes, and we view the repeal of the Gallagher Amendment as freeing up additional state budget capacity. Since 2013, Colorado voters have defeated several attempts to raise state income tax rates and dedicate the new revenue to special purposes, such as 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 balance both 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 kindergarten to grade 12 (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, it 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.

Colorado faces fixed-cost pressures, including pension and Medicaid increased state contributions under the federal Affordable Care Act, which could increase Medicaid costs to the state over time.

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

Financial Management Assessment

We consider Colorado's financial management practices good under our Financial Management Assessment 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 revenues 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, to 13.4% in fiscal 2022, up from 2.9% in fiscal 2021 and 3.1% in fiscal 2020);
- Detailed and formal investment management policies, including public posting and quarterly review of investment results; and
- A written debt management policy that lacks specific numerical debt targets or a formal multiyear capital improvement plan; however, various individual departments maintain independent plans subject to legislative approval.

Budget Management Framework

The legislative and executive branches provide formal, ongoing revenue and expenditure updates quarterly. These reports include tax and other revenue forecasts, budget and cash fund updates, calculations as to whether Colorado 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 underway, 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, 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, and has used temporary accruals of such things as state pay days to meet budget balance requirements on a budgetary basis of accounting.

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

Colorado's economy was growing faster than that of the nation before the pandemic-induced recession began, it had a less severe economic contraction than the nation during the pandemic, and the economic recovery from the effects of the pandemic remains similar to that of the nation according to IHS Markit.

The state's long-term population growth has been consistently faster than that of the nation on a one- year, five-year, or 10-year time horizon. Colorado's 10-year compound annual population growth rate through calendar 2021 was 1.3% compared with 0.6% for the nation, rising to 5.8 million. Part of this is due to strong in-migration, which has lowered the average age of the population. In 2019, the state's age-dependency ratio, a measure of nonworking age population to total population, was 57.5%, below the nation's average of 63.1%, reflecting a relatively low old-age dependency ratio; the child dependency ratio, however, is about average.

Colorado's employment distribution is similar to that of the U.S., although it has a slightly lower concentration in trade, transportation, and utilities; manufacturing; and 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 16.5% of 2021 annual average employment compared with 14.4% of employment for the nation. Construction employment was 6.4%, compared with 5.1% for the nation; housing prices have risen with the influx of new residents and are seen as one possible impediment to future growth, and the state's construction sector has sometimes yielded a cyclical element to Colorado's economy during periods of high growth. Manufacturing was below average at 5.4% compared with 8.4% nationally. The state's recreational opportunities--including the winter sports industry, which draws visitors nationally--make leisure and hospitality a larger-than-average sector at 11.2% compared with 9.7% for the nation. The trade, transportation, and utilities sector was 17.7% compared with 19.0% for the nation. Mining employment makes up 0.7% of total state employment, compared with 0.4% 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 each of the past 10 years (including during the recession), with unemployment hitting a low of 2.7% in 2019, and rising to an average of only 7.3% in 2020 compared with 8.1% for the nation. As of March 2022, Colorado's unemployment rate had recovered to an estimated 3.7%.

State per capita income was $69,016 in 2021, or 109% of the national level, while GSP per capita as a percentage of the nation was 105% in 2021.

We consider Colorado's economic growth prospects good. The Denver metropolitan statistical area continues to serve as a center for the Mountain West region, and most of the state's jobs are in the Denver/Boulder area, including many new high-tech jobs, as people relocated from higher-cost coastal regions. Although housing costs have been rising with the influx of people, they still remain lower than in many areas of southern California and certain East Coast regions. 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 because mining is a relatively small portion of overall state economic output.

IHS Markit forecasts that real state GSP will rise 2.6% in calendar 2022 and 3.0% in calendar 2023, compared with the nation's 2.4% in each of those calendar years.

On a scale ranging from '1.0' (strongest) to '4.0' (weakest), we have assigned a score of '1.1' 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. The state is required to adjust its budget to maintain this reserve throughout the year. In years leading up to the recent recession, Colorado generally set this reserve level at 4.00%-7.25% of budgetary basis-appropriated expenditures, although lowering the target further during recessionary periods. It was as low as 2.00% in fiscal 2009, before being raised to 7.25% in 2019. During the pandemic, it was set at 3.1% in fiscal 2020, and 2.9% in fiscal 2021, before being raised to 13.4% in fiscal 2022. While not all budget bills for fiscal 2023 have yet been finalized, Colorado expects that the 2023 reserve target will be at least 15%. While state law mandated that general fund balances in excess of the statutory reserve go to certain other state funds, in recent years this requirement has sometimes been suspended and full ending balances been brought forward to be made available for the succeeding years' appropriations.

Due to conservative revenue estimates during the pandemic, actual year-end general fund balances are now estimated to be much better than budgeted. Colorado ended fiscal 2021 with a $3.2 billion general fund balance on a budgetary basis of accounting, or a strong 28.9% of appropriations subject to the TABOR limit, and estimates it will end 2022 with an even higher 31.0% reserve, according to its March 2022 quarterly forecast, well above its 13.4% statutory minimum funding target. These balances do not include the separate restricted state education fund or the state highway fund. The combined estimated general and education fund fiscal year-end 2022 balances total a very strong

$4.5 billion at fiscal year-end 2022, or 27.4% of combined expenditures.

Colorado also has a constitutionally mandated TABOR emergency reserve, equal to 3% of fiscal year spending. However, in most years 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, this threshold was met during the recent COVID-19 pandemic, enabling these funds to be used extensively this year and last. In the past, Colorado has sometimes designated such assets as a major medical insurance fund, a wildlife cash fund, and certain state properties as satisfying the TABOR emergency reserve requirement.

As a result of strong revenue growth, particularly in individual income taxes, the state projects tax revenues will hit their constitutional TABOR cap in fiscal 2022 and for the foreseeable future, with excess revenues rebated to taxpayers in each following fiscal year, and will be paid in part from reserve drawdowns.

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, although it typically has sizable internally borrowable non-general funds that would be sufficient to fund seasonal cash flow variations even if it didn't sell cash flow notes. Due to the currently high general fund cash position, it is likely that the state will not issue general fund cash flow notes in either fiscal years 2022 or 2023.

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 2021, on a budgetary basis, 66% of general fund revenues came from individual income taxes, while 29% came from excise 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 GAAP basis, Colorado's general fund ended fiscal 2021 with a total fund balance of $4.5 billion, or 22.5% of general fund expenditures, and an available assigned and unassigned fund balance of $2.5 billion, or 12.5% of expenditures. Total fund balances were up sharply from a restated $2.4 billion at fiscal year-end 2020.

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

At fiscal year-end June 30, 2021, tax-supported debt per capita was moderately low, in our opinion, at $632 per capita. Tax-backed debt consists mainly of general fund appropriation lease-secured debt. As a percentage of personal income and GSP, tax-supported debt is what we consider low at 0.9% and 0.9%, respectively. We consider amortization of debt somewhat slow, with 47% of principal outstanding amortized over 10 years, based on debt outstanding at fiscal year-end 2021. Colorado's debt declined by about $107 million in fiscal 2021 as more debt amortized than was issued. There is discussion of issuing additional transportation debt backed by new transportation-related tax revenue.

We calculate that Colorado had $3.7 billion in total tax-backed debt at fiscal year-end 2021, consisting primarily of general fund appropriation-supported COPs, and debt issued by the CDOT, which includes $300 million in transportation tax-supported Colorado bridge repair bonds.

Pensions

Colorado's Public Employees' Retirement Association (PERA) is a multiple-employer retirement plan 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 Colorado has primary responsibility was 62%, which we view as moderately weak. Based on the most recent audit (fiscal 2020) for PERA, legislation enacted in 2018 to shore up PERA has had a positive effect, although implementation of stepped state contributions was pushed back a year under the fiscal 2020 pandemic-related adopted budget. The pension reform legislation reduced allowable increases in yearly cost-of-living allowances (COLAs) and increased annual contributions, with provisions for limited yearly increases in contribution rates if investment performance falls short of the assumed rate of return, as it did in 2018, when PERA had a negative 3.3% return. The current assumed rate of return is 7.25%, a level we see as aggressive, and the state's annual pension contribution for the state division plan met only 74% of our static funding calculation as of a Dec. 31, 2020, measurement date. The adopted fiscal 2023 budget includes a make-up payment for the missed stepped-up pension contribution in fiscal 2020.

As a result of the legislation, the state pension system's most recent combined GASB funded ratio improved to 64% in fiscal 2020, from 56% the year before, and 44% in fiscal 2018. The fiscal 2021 funded ratio improved to 67%, in part due to a strong 17.1% investment return in 2020. We calculate Colorado's net pension liability per capita at $1,570, a decrease from $1,853 the year before, based on the GASB 68's GAAP breakout of the combined state net pension liability of $9.1 billion, down from $11.0 billion the year before. The combined net pension liability amounts to what we view as a moderate 3.5% of personal income. Previous declines in the funded ratio were in part a result of a reduction in the assumed actuarial rate of return in 2016 to a somewhat less aggressive 7.25% from 7.50% and revised mortality projections that better align with the plan's recent experience. Colorado previously funded its retirement plans using a statutory funding formula that caused the state to fund annually less than the actuarially determined contribution for over 10 years. The decline in the funded ratio also reflected varying market returns, which in some years have trailed the assumed rate of return.

Legislative pension reform changes under SB 18-200 were designed to restore PERA to full funding within 30 years, although actuarial projections forecast 33 years to full funding based on a 2018 experience study. Legislative changes included a 2.0% increase in contribution rates for most employees, suspension of the COLA for retirees through 2019 and limiting future adjustments to 1.5% from 2.0%, a 0.25% increase in nonlocal government employer's contribution rates, and a direct annual allocation of $225 million to PERA from the general fund beginning fiscal 2019. 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, Colorado would need to address the potential underfunding of the system in a future legislative session. Due to negative investment returns in 2018, automatic adjustments were expected to be implemented in fiscal 2020, meaning the contributions would have increased, but the fiscal 2020 budget delayed implementation of the increased contributions for one year. The state resumed scheduled increased contributions in the fiscal 2022 budget, and made an extra contribution in the recently adopted fiscal 2023 budget for the missed contribution increase in 2020.

We view some of PERA's actuarial assumptions as optimistic, although investment returns in 2020 were well above the assumed rate of return. 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 has an 11.9% five-year average rate of return based on its most recent (fiscal 2020) comprehensive annual financial report, which is higher than the assumed rate of return of 7.25%, largely due to a 20.4% return in calendar 2019, and 17.2% return in 2020. The plan's mortality assumptions, updated in 2016, use MP-2014 tables. We consider the tables current, but they are not projected generationally; we also consider the tables weak and believe they will need to be updated every five years to reflect potential increases in lifespan, possibly understating the increase in liabilities due to future mortality improvements. We also view payroll growth assumptions as high compared with the plan's experience, which indicates the potential for contribution shortfalls in future actuarial valuations. The ratio of active members to beneficiaries is 1.31 for the main state employees' plan, which we consider sustainable. 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.

Other postemployment benefits

In our view, Colorado's unfunded retiree health care and other postemployment benefit (OPEB) liabilities are low. However, we anticipate the state's liabilities will increase in future years primarily due to the current pay-as-you-go funding approach, absent further meaningful reform efforts.

The state's OPEB health care trust fund, for postretirement health care costs, is funded through PERA as a multiple-employer trust fund. Colorado's proportionate share of the net OPEB liability as of the most recent actuarial valuation (Dec. 31, 2019), and a roll forward of liabilities, was $313.2 million, or what we consider low at $54 per capita. The OPEB fund had a $950 million total unfunded liability at Dec. 31, 2020, for all employers, and a 32.8% funded ratio.

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

Related Research

Through The ESG Lens 3.0: The Intersection Of ESG Credit Factors And U.S. Public Finance Credit Factors, March 2, 2022

Ratings Detail (As Of May 19, 2022)		
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
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Long Term Rating	AA-/Stable	Affirmed
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Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed

Ratings Detail (As Of May 19, 2022) (cont.)		
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
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Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado Dept of Transp APPROP		
Long Term Rating	AA-/Stable	Affirmed
Twin Peaks Charter Academy CHARTERSCH		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BB/Negative	Current
Colorado		
Colorado Dept of Transp, Colorado		
Colorado (Colorado Dept of Transp) APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado Educl & Cultural Facs Auth, Colorado		
Bell Creek Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Bell Creek Charter Sch) MORALOBLIG (ASSURED GTY)(CIFG)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
Colorado Educl & Cultural Facs Auth, Colorado		
Ben Franklin Acad, Colorado		
Colorado Educl & Cultural Facs Auth (Ben Franklin Acad)		
Long Term Rating	A+/Stable	Affirmed

Ratings Detail (As Of May 19, 2022) (cont.)		
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	Affirmed
Underlying Rating for Credit Program	BBB/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Cheyenne Mtn Charter Academy, Colorado		
Colorado Educl & Cultural Facs Auth (Cheyenne Mtn Charter Academy) (BAM) (SECMKT)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Negative	Current
Colorado Educl & Cultural Facs Auth (Cheyenne Mtn Charter Academy) (Vanguard)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Negative	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Classical Acad (The), Colorado		
Colorado Educl & Cultural Facs Auth (Classical Acad Charter Sch) CHARTERSCH		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB/Stable	Current
Colorado Educl & Cultural Facs Auth (Classical Acad Charter Sch) CHARTERSCH		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
DCS Montessori Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (DCS Montessori Charter Sch)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Excel Acad Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Excel Acad Charter Sch)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Flagstaff Acad, Colorado		
Colorado Educl & Cultural Facs Auth (Flagstaff Acad)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB/Negative	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Frontier Acad, Colorado		
Colorado Educl & Cultural Facs Auth (Frontier Acad)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current

Ratings Detail (As Of May 19, 2022) (cont.)		
Colorado Educl & Cultural Facs Auth, Colorado		
Independence Academy, Colorado		
Colorado Educl & Cultural Facs Auth (Independence Academy)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Independence Academy)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Independence Academy)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Independence Academy) (BAM)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Independence Academy) (BAM) (SECMKT)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Liberty Common Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Liberty Common Charter Sch) STENCHPRO		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Positive	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Lincoln Acad Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (Lincoln Acad Charter Sch)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Lincoln Acad Charter Sch)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Lincoln Acad Charter Sch) (BAM) (SECMKT)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
Monument Academy, Colorado		
Colorado Educl & Cultural Facs Auth (Monument Academy) CHARTERSCH		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BB/Negative	Current
Colorado Educl & Cultural Facs Auth, Colorado		
New Vision Charter Sch, Colorado		
Colorado Educl & Cultural Facs Auth (New Vision Charter Sch)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current

Ratings Detail (As Of May 19, 2022) (cont.)		
Colorado Educl & Cultural Facs Auth (New Vision Charter Sch)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (New Vision Charter Sch)		
Unenhanced Rating	A+(SPUR)/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth, Colorado		
North Star Acad, Colorado		
Colorado Educl & Cultural Facs Auth (North Star Acad)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (North Star Acad) CHARTERSCH		
Long Term Rating	A+/Stable	Affirmed
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	Affirmed
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)		
Long Term Rating	A+/Stable	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado Educl & Cultural Facs Auth (Pinnacle Charter Sch)		
Long Term Rating	A+/Stable	Affirmed
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	Affirmed
Underlying Rating for Credit Program	BBB-/Stable	Current
Colorado		
Colorado		
Colorado Dept of Transp, Colorado		
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed
Colorado		
Colorado		
Colorado Dept of Transp, Colorado		
Colorado APPROP		
Long Term Rating	AA-/Stable	Affirmed

Many issues are enhanced by bond insurance.