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CREDIT OPINION
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Colorado (State of)

Update to credit analysis

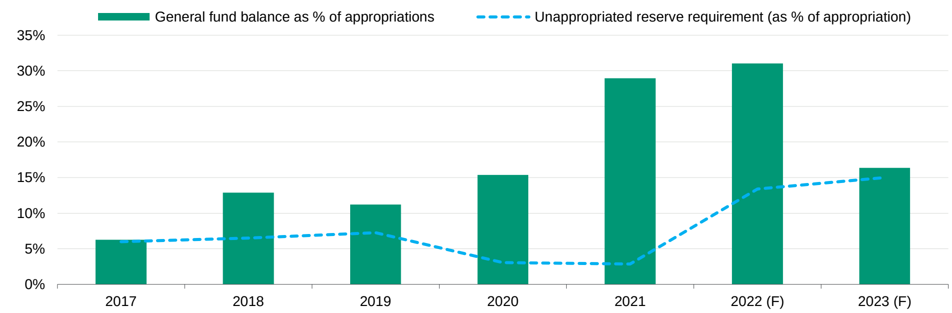
Summary

The State of Colorado's (Issuer Rating Aa1 stable) credit quality reflects the state's positive economic fundamentals, above-average income levels and moderate leverage and fixed costs. The state's credit strengths also include a sound financial position supported by conservative fiscal management. Better than expected revenue performance in recent years have resulted in a significant increase in reserve and cash balances to levels not seen before the coronavirus pandemic (see Exhibit 1), providing the state with budget flexibility through the economic recovery and high inflationary period. Balanced against these strengths are a history of narrower reserves and constitutional restrictions and voter initiatives that constrain revenue growth.

Exhibit 1

Better-than-expected revenue fueled an increase in reserves under the pandemic

Budget basis



(F) represents forecasts as of OSPB March 2022 Revenue Forecast

Source: State of Colorado; Colorado OSPB quarterly forecasts; Moody's calculations.

Credit strengths

» Strong economic fundamentals

» Significantly better-than-expected revenue performance in recent years resulting in an increase in general fund reserves and cash balances

» Moderate leverage and fixed costs

» Conservative and proactive fiscal management supported by number of strong governance practices

Credit challenges

» Complex system of constitutional revenue limits and spending requirements, reflecting an active voter initiative process in the state; voter approval required for any state tax increase

» Volatile, but not dominant, tourism and energy sectors

Rating outlook

Colorado's stable outlook reflects the expectation that the state's strong economic fundamentals and sound fiscal management will continue to support healthy financials. Long-term liabilities are expected to remain moderate with proactive management and a history of timely appropriations for the lease payments securing the vast majority of its debt.

Factors that could lead to an upgrade

» Sustained maintenance of strong financial reserves and cash balances

» Voter actions that enhance the state's fiscal flexibility

Factors that could lead to a downgrade

» A sustained weakening of GAAP-basis fund balances or a significant weakening in liquidity

» Voter actions that further constrain the state's fiscal flexibility

» A protracted weakening of the state's generally strong economic fundamentals

Key indicators

Exhibit 2

	2020	2021	State Medians (2020)
Economy			
Nominal GDP ($billions)	382.6	421.9	243.8
Real GDP, annual growth	-3.0%	5.8%	-3.0%
RPP-adjusted per capita income as % of US	104.2%		96.7%
Nonfarm employment, annual growth	-5.0%	3.5%	-5.5%
Financial performance			
Available balance as % of own-source revenue	33.2%	48.4%	20.2%
Net unrestricted cash as % of own-source revenue	24.3%	63.1%	48.1%
Leverage			
Total long-term liabilities as % of own-source revenue	146.1%	129.0%	147.5%
Adjusted fixed costs as % of own-source revenue	5.5%	4.6%	6.0%

Source: State of Colorado; US Bureau of Economic Analysis; US Bureau of Labor Statistics; Moody's Investors Service

Profile

Colorado is the 21st largest state by population, at 5.8 million. Its nominal state gross domestic product, $421.9 billion of 2021, is the 16th largest. Income levels are above average – the state's per capita personal income is equal to 104.2% of the US level after adjusting for regional cost of living and its poverty level is among the lowest in the nation.

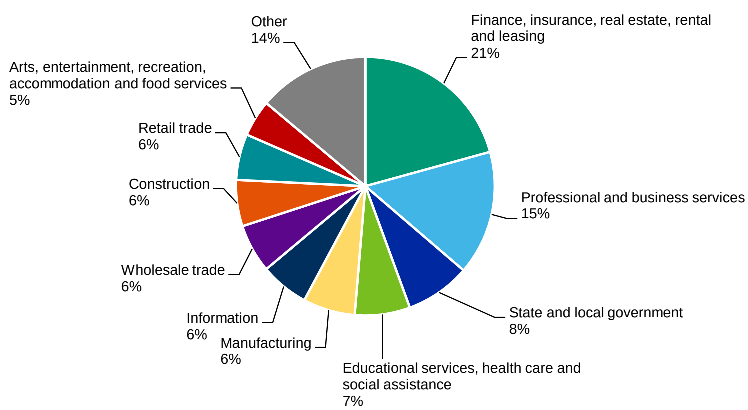
Detailed credit considerations

Economy

The state's economic performance should continue to outperform the nation, supported by growth in a diverse mix of skilled services industries, as well as the in-migration of young, educated workforce. However, similar to many of its peers, Colorado's economic growth will likely slow given inflationary pressures, reduction in monetary policy support and potential spillover effects from global geopolitical crisis. Population increase is also decelerating driven by lower birthrates and escalating housing costs that make the state less competitive than some of its neighbors.

Exhibit 3

Colorado has a well-diversified economy anchored by numerous skilled services and professional industries
Distribution of 2021 GDP

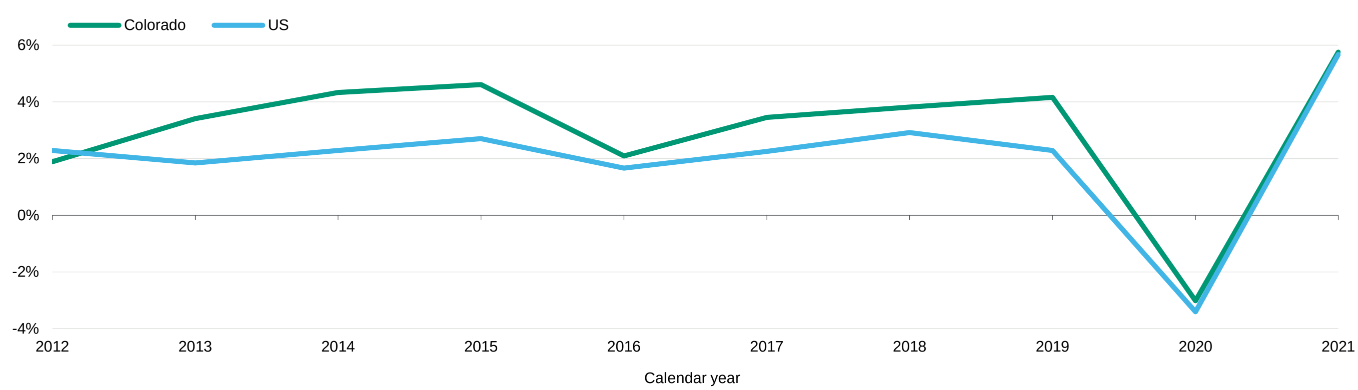


Source: US Bureau of Economic Analysis

The state's real GDP growth generally outpaced that of the nation leading up to the coronavirus pandemic. After contracting sharply as a result of the health crisis, the state's economy has been recovering quickly, consistent with the national trend (see Exhibit 4). The five year compound average growth rate of Colorado's real GDP over the period of 2016 to 2021 was 2.8%, the sixth highest of all 50-states and 90 basis points higher than that of the US (1.9%) over this period.

Exhibit 4

Colorado's real GDP growth outpaced that of the nation leading up to the pandemic
YOY real GDP growth



Chained 2012 dollars
Source: US Bureau of Economic Analysis

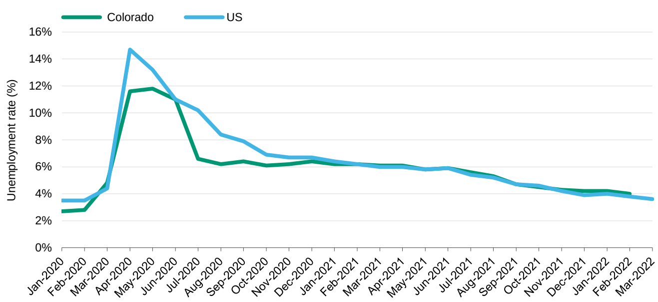
During the early months of the public health crisis, Colorado experienced a slightly more moderate loss in jobs (-13.1%) than the US (-14.4%). Steady hiring in its key professional services and leisure/hospitality industries has allowed the state to fully recover pandemic-induced job losses in February 2022, faster than the nation overall, which remained below its pre-pandemic peak as of April 2022.

The state's unemployment rate now tracks closely with that of the US (Exhibit 5), although Colorado consistently has a higher labor force participation rate that is also recovering at a faster pace than the US (Exhibit 6).

Exhibit 5

Colorado's unemployment rate tracks closely with that of the US ...

Unemployment rate

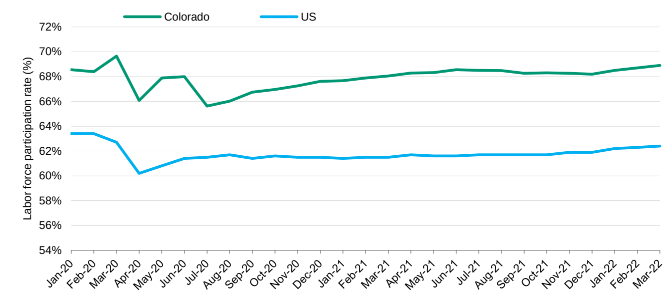


Source: US Bureau of Labor Statistics

Exhibit 6

... but the state benefits from higher labor force participation rate

Labor force participation rate



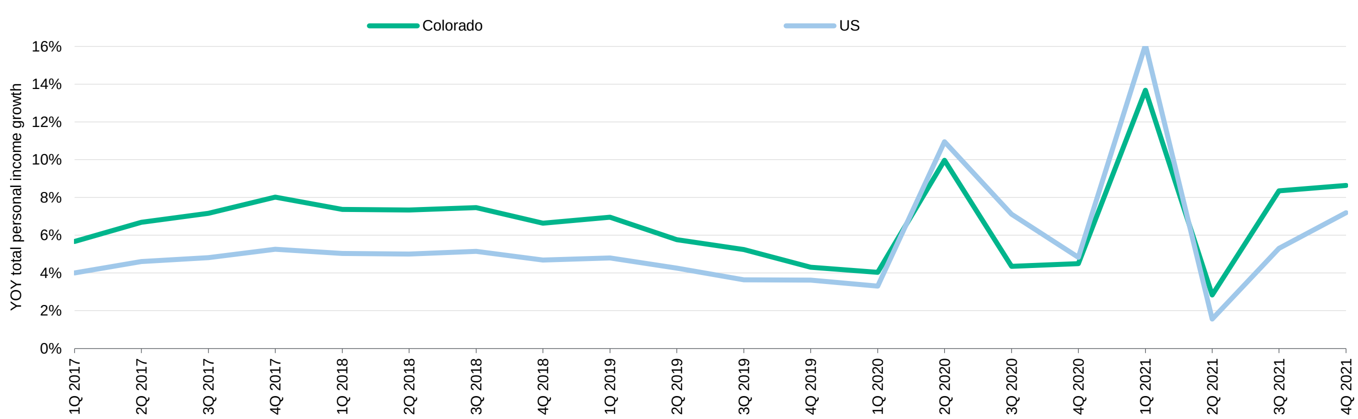
Source: US Bureau of Labor Statistics

Colorado's per capita personal income is above average, at 104.2% of the US level after adjusting for regional cost of living. The state's income has generally risen at a faster pace than the nation in recent years (see Exhibit 7). The state's highly educated population gives it a competitive edge in skilled services and high wage jobs, which will continue to provide the largest avenue of growth.

Exhibit 7

Colorado's personal income growth has generally outpaced the nation

YOY change in total personal income growth



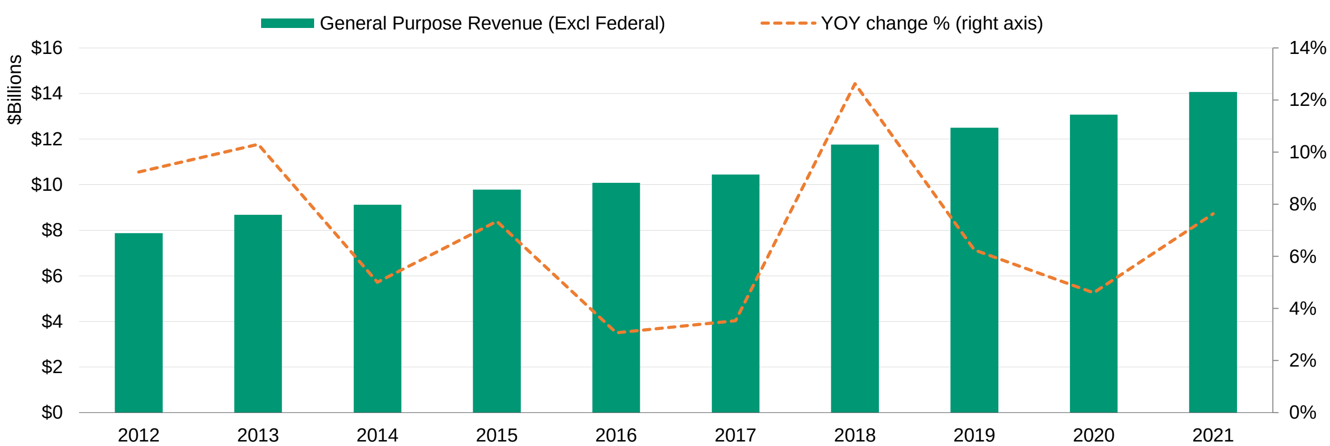
Source: US Bureau of Economic Analysis

Finances and Liquidity

Colorado's financial position has improved during the pandemic as a result of stronger than expected revenue performance as well as the availability of federal relief funds. The state's healthy reserve and liquidity position will increase budgetary flexibility through the economic recovery and high inflationary period.

On a GAAP basis, the state's non-federal general purpose revenue grew by 4.6% and 7.6% in fiscal 2020 and 2021, respectively (Exhibit 8), benefiting from an income boost from federal pandemic aid, capital gains, and consumer spending shifts from services to goods. Income taxes and excise taxes are major sources of the state's general purpose revenue. Fiscal 2021 revenue exceeded the Taxpayer Bill of Rights (TABOR) limit by $525.5 million, which will be refunded to taxpayers in the current fiscal 2022. The Governor's Office of State Planning and Budgeting's (OSPB) most recent March 2022 revenue forecast projects general fund revenue will grow by 13.1% in fiscal 2022, based on strong collections year to date. General fund revenue is projected to grow by a more moderate 2.8% in fiscal 2023 and 3.2% in fiscal 2024, respectively. However, the state's coffers will not fully benefit from its economic strength and revenue growth because of constitutional revenue limits (see "governance" under ESG section). Revenue is projected to be above the TABOR limit by $2.2 billion, $2.0 billion and $1.3 billion in fiscal 2022, 2023 and 2024, respectively, requiring tax refunds each year.

Exhibit 8
The state's revenue grew despite the coronavirus pandemic
GAAP basis



Source: State of Colorado annual comprehensive financial report

Strong state revenue growth resulted in a significant increase in reserves to levels well above pre-pandemic levels (see Exhibit 1). The state's budget-basis general fund reserve grew to $3.2 billion (28.9% of appropriations) as of fiscal end 2021, well above the unappropriated reserve requirement (2.86% of appropriations) and up from $1.3 billion (11.2% of appropriations) as of fiscal 2019. The state should end fiscal 2022 with further growth in reserves, as revenue collections remain strong fiscal year to date. After lowering its unappropriated reserve requirement to 3.07% and 2.86% of appropriations in fiscal 2020 and 2021, respectively, in reaction to the health crisis, the state increased the reserve requirement to 13.4% of appropriations in fiscal 2022 and 15.0% for years thereafter. The unappropriated reserve requirement is a statutorily defined amount of unrestricted general fund year-end balance that is required to be retained for each fiscal year that may be used for possible deficiencies in general fund revenue.

The state's fiscal 2023 budget was recently adopted and includes sizable spending increases, which will draw down the general fund to 16.4% of appropriations based on the latest revenue projections. Major spending increases include those for education and for the Department of Health Care Policy and Financing, as pandemic era enhanced federal funding for Medicaid expires and more responsibility for the subsidized healthcare program shifts back to the state.

Liquidity

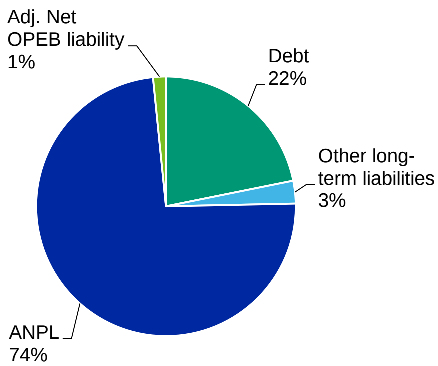
Colorado's liquidity position has also improved in recent years and will remain sound. The state's available operating reserves, which for the purpose of our analysis includes unassigned, committed and assigned governmental fund balances and internal services fund balance in the GAAP basis financial statements, totaled $8.7 billion as of fiscal end 2021, representing a strong 40.7% of revenue. Unrestricted operating cash totaled a strong $11.4 billion or 63.1% of revenue as of fiscal end 2021.

The state typically issues General Fund Tax and Revenue Anticipation Notes (GTRANs) annually to fund temporary cash flow imbalances in the general fund. Because of the increase in reserve and cash balances, the state does not need to issue GTRANS in fiscal 2022 and does not anticipate issuing GTRANs in fiscal 2023.

Leverage and fixed costs

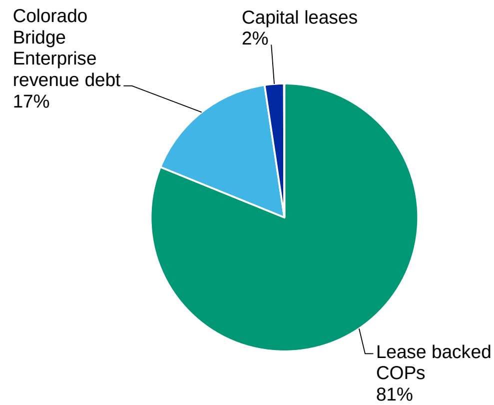
Colorado's overall leverage (total debt, pension, OPEB and other long-term liabilities) will continue to be moderate, supported by proactive management of pension liability, which represents the largest share of the state's long-term liabilities (see Exhibit 9).

Exhibit 9
Pension liability represent the largest component of Colorado's long-term liabilities
Fiscal 2021 long term liabilities



ANPL stands for Moody's adjusted net pension liability
Source: State of Colorado; Moody's Investors Service

Exhibit 10
Most of the state's net tax supported debt are leased backed certificates of participation
Fiscal 2021 net tax supported debt



Source: State of Colorado; Moody's Investors Service

As of fiscal 2021, the state's total leverage represented 129.0% of own source revenue. The fiscal 2021 median leverage figure for all states is not yet available because select states have not finalized the audit, but based on fiscal 2020 data, Colorado's leverage is roughly in line with the 50-state median.

The state's fixed costs are relatively manageable because of its low debt service and OPEB costs. Fiscal 2021 fixed costs (based on Moody's Tread Water metric) represented 4.4% of own-source revenue. The state's fixed costs burden is favorably lower than the 50-state median based on fiscal 2020 data, allowing for above average financial flexibility.

Debt structure

Colorado has no general obligation debt and overall has a low debt burden. Most of the state's debt consists of lease-backed certificates of participation (see Exhibit 10), rated Aa2. As of fiscal end 2021, the state had $5.1 billion in outstanding net tax-supported debt, representing 28% of own source operating revenue. Colorado's debt levels as a percent of personal income and on a per capita basis are both favorably well below median based on fiscal 2020 ranking, according to Moody's latest state debt medians report.

Legal security

The state's general fund certificates of participation (COPs) are secured by lease payments made from the state's general fund for use of the various lease properties. The lease payments are subject to annual appropriation by the state legislature.

The Building Excellent Schools Today (BEST) COPs are payable on a parity basis solely from gross lease payments annually appropriated by the legislature. The state has identified specific revenue streams from which it anticipates making these appropriations. These include revenue from the State School Land Trust, matching payments made by the local school districts participating in the program, certain excess lottery revenue and an allocation of marijuana excise tax revenue. The State School Land Trust receives rent and royalty payments from various land lease agreements in the state. Ultimate security for the COPs is provided by the state's ability to appropriate funds from any legally available source, including the state's general fund, if revenue from the State School Land Trust and other identified revenue are insufficient to make certificate payments. The obligation to make lease payments is absolute and unconditional, once appropriated and the availability of the state general fund, if needed, mitigates risk of any failure to receive participant matching payments.

The Colorado Department of Transportation (CDOT) COPs are payable from lease payments to be made by CDOT from the State Highway Fund (SHF) for use of the leased assets, including its headquarters facilities in Denver, Pueblo, Greeley and Aurora. Lease payments are not subject to appropriation by the legislature but are subject to allocation by the State Transportation Commission (STC) as part of its approval of CDOT's budget.

The Rural Colorado COPs are secured by lease payments to be made by the state for the use of certain existing state facilities. Annual lease payments are to be made, in part, from the state's General Fund and, in part, from the SHF. Payments from the General Fund are subject to annual appropriation by the state legislature. Payments from the SHF are not subject to appropriation, but are subject to annual allocation by the STC.

Colorado's net tax-supported debt also includes the Colorado Bridge Enterprise's Aa2-rated revenue bonds and its First Tier Subordinate Revenue Note (Central 70 Project) evidencing its obligation to make capital performance payments (availability payments) as part of the state's obligation under the Central 70 P3 agreement. The revenue bonds and the note are secured by senior and subordinate liens, respectively, on gross bridge surcharges, before any operating expenses. Bridge surcharges consists of annual vehicle fees based on vehicle type and weight, collected with annual vehicle registration fees.

Debt-related derivatives

Colorado has no variable rate debt and no debt-related derivatives.

Pensions and OPEB

The state's pension liabilities are slightly above median, based on Moody's latest 50-state medians, but manageable. Moody's Adjusted Net Pension Liability (ANPL) for the state for fiscal 2021 was $17.2 billion, representing 95% of own-source governmental revenue.

Positively, reforms adopted by the legislature in 2018 included increases in employer and employee contributions and caps on COLAs, designed to amortize the unfunded liability over 30 years. Notably, the reforms also included triggers which reduce COLAs and increase contributions if investment earnings fall short of targets. Senate Bill 18-200 further requires the State to make an annual direct distribution to PERA of $225 million from State funds beginning in Fiscal Year 2018-19 and continuing annually on July 1 until there are no unfunded actuarial accrued liabilities in the trust fund that receives such distribution. With the additional contributions, the state's governmental pension contribution fell just below Moody's tread water indicator level by less than 0.5% of operating revenue in recent years. The tread water level is the level of contribution that would prevent reported unfunded liabilities from growing under reported assumptions. While the state temporarily paused this $225 million contribution in fiscal 2021 as a result of pandemic driven economic uncertainty at that time, it recently passed legislation to make up for the missed payment on July 1, 2022.

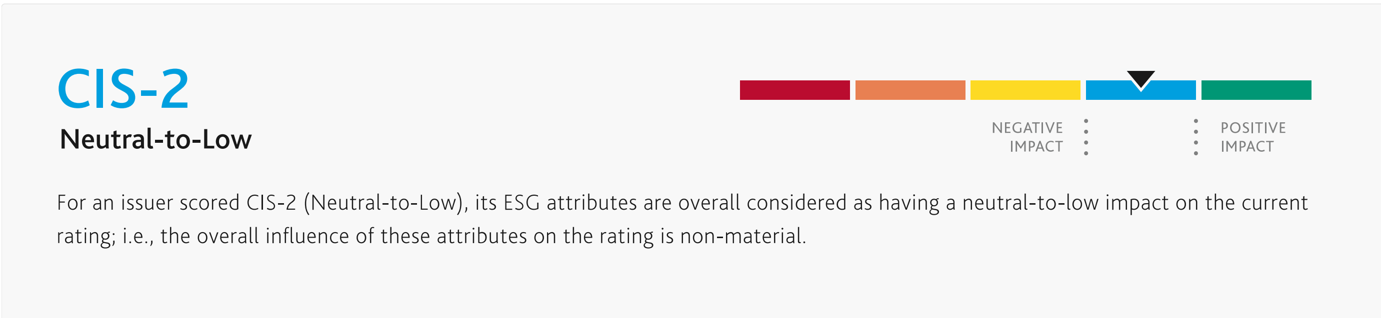
The state does not face significant cost pressure with respect to other post employment benefits (OPEB). This mainly reflects a relatively modest, fixed monthly subsidy benefit provided by the state.

ESG considerations

Colorado's ESG Credit Impact Score is Neutral-to-Low CIS-2

Colorado's ESG Credit Impact Score is neutral-to-low (**CIS-2**), reflecting moderately negative environmental exposures, positive social considerations and neutral-to-low governance profile.

Exhibit 11
ESG Credit Impact Score



Source: Moody's Investors Service

Exhibit 12
ESG Issuer Profile Scores

Source: Moody's Investors Service

Environmental

Colorado's E issuer profile score is moderately negative (**E-3)** primarily reflecting its above-average exposure to water stress. According to Moody's ESG Solutions, Colorado ranks fourth among all 50-states in terms of its vulnerability to this physical climate risk, with nearly all (99%) of its population and GDP exposed to “high” water stress. Most of the state is semi-arid and heavily dependent upon annual snowmelt and its runoff from the mountains to the plains, where the majority of the population resides and most of the state's water is used. With rising temperatures that reduce snowfall, the state will be facing more frequent and severe droughts, potentially hindering the state's population and economic growth.

Positively, the state has a history of proactively managing this long-term risks, including the construction of numerous reservoirs to hold water during plentiful times. The Colorado Water Conservation Board has a comprehensive Colorado Water Plan that is being updated periodically to ensure that the state meets its future water demand. The plan includes critical action steps to meet measurable objective such as reducing the projected 2050 municipal and industrial gap from 560,000 acre-feet to zero by 2030, ensuring that 75% of Coloradans live in communities that have incorporated water-saving actions into land-use planning by 2025 and attaining 400,000 acre-feet of water storage to manage and share conserved water by 2050.

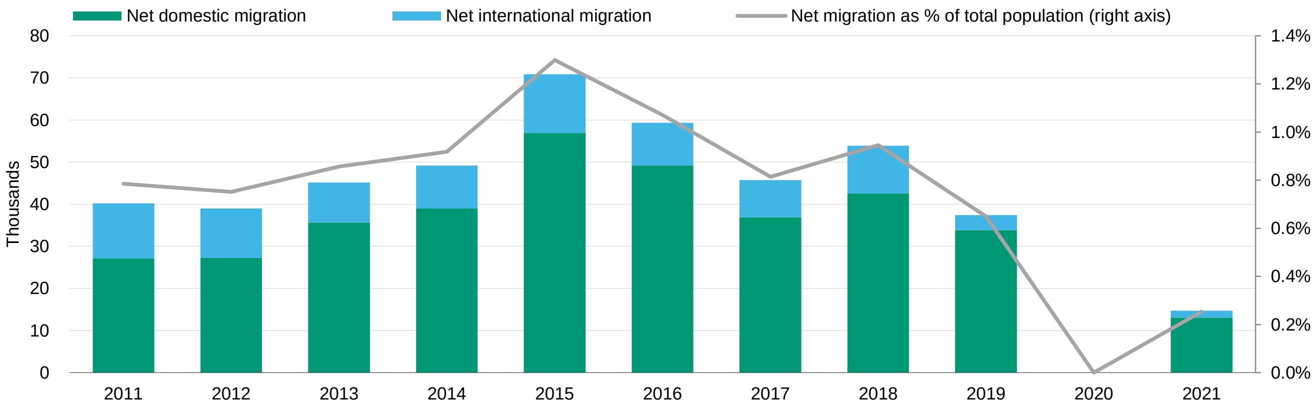
The state also has above average exposure to wildfire risks; around 45% of its population and GDP are exposed to high wildfire risks according to Moody's ESG Solutions. Global warming and dryer conditions will also increase wildfire frequency and severity. The state passed several legislation to address wildfire awareness, mitigation and financial recovery assistance for local governments and property owners.

Social

Colorado's S issuer profile score is positive (S-1). The state benefits from above average population growth, in part driven by strong domestic in-migration. The state's prime working age population is growing more rapidly than the nation's, and it has a lower old-age dependency ratio than the nation. Residents have above average educational attainment and the state's labor force participation rate is above average. All of these factors contribute to the state's strong economic fundamentals and income profile. However, housing affordability has eroded and has slowed down in-migration in recent years.

Exhibit 13

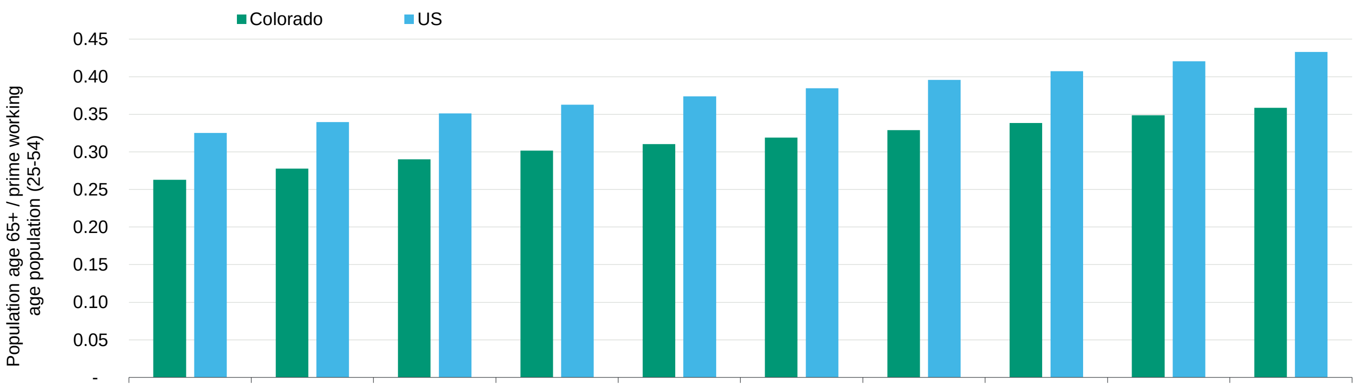
Colorado benefits from positive in-migration



Note: Data is not available in census years (eg, 2020)
Source: US Census Bureau

Exhibit 14

Colorado has a lower old age dependency ratio than US overall



Source: US Census Bureau

Governance

Colorado's G issuer profile score is neutral-to-low (**G-2**). Colorado has a number of strong financial management practices. Revenue forecasts are prepared by the executive branch quarterly and have generally proven to be conservative. The state has a statutory reserve requirement, provided that a portion of the unrestricted general fund year-end balance is to be retained as "unappropriated reserve" each fiscal year, although, in response to economic conditions and their effect on estimated general fund revenue, the General Assembly periodically modifies the required amount of the unappropriated reserve. If the revenue forecast indicates that appropriated expenditures will result in the use of one-half or more of the statutory reserve, the governor is required to enact spending cuts.

However, at the same time, state finances are strongly influenced by a number of statutory and constitutional limitations and requirements affecting spending and revenue growth. The most notable is the constitutional amendment known as TABOR (Taxpayer Bill of Rights), which was passed by voters in 1992. TABOR limits state revenue growth to the rate of population growth plus the rate of inflation. Any annual tax revenue that exceed the constitutional limit must be refunded (unless voters approve otherwise) in the following year. The state also has a statutory limitation on appropriations which is linked to personal income and property appraisals, but the limitation excludes certain appropriations stemming from federal mandates, court orders or voter-approved tax increases.

Rating methodology and scorecard factors

The US States and Territories Rating Methodology includes a scorecard, which summarizes the rating factors generally most important to state and territory credit profiles. Because the scorecard is a summary, and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned.

Exhibit 15

	Measure	Weight	Score
Economy			
Resident Income (PCI Adjusted for RPP / US PCI)	104.2%	15%	Aaa
Economic Growth (5-year CAGR real GDP - 5-year CAGR US real GDP)	0.9%	15%	Aaa
Financial performance			
Financial performance	Aaa	20%	Aaa
Governance/Institutional Framework			
Governance/Institutional Framework	Aa	20%	Aa
Leverage			
Long-term liabilities ratio (adjusted long-term liabilities / own-source revenue)	129.0%	20%	Aa
Fixed-costs ratio (adjusted fixed costs / own-source revenue)	4.6%	10%	Aaa
Notching factors			
Very limited and concentrated economy			
Scorecard-Indicated Outcome			Aaa
Assigned rating			Aa1

Source: US Bureau of Economic Analysis, State of Colorado, Moody's Investors Service

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