MOODY'S INVESTORS SERVICE

CREDIT OPINION
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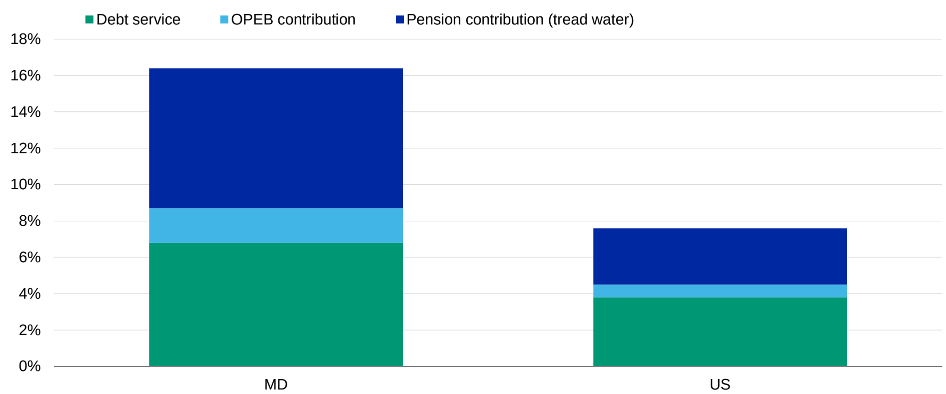
Maryland (State of)

Update to credit analysis

Summary

Maryland (Aaa stable) benefits from a significant federal presence and proximity to the nation's capital that provides well-paid civilian and national defense jobs and has generally led to a stable economic environment. The state has strong budgetary and financial management practices and a history of proactive initiatives in response to economic cycles, which will serve the state well as it continues to grapple with the coronavirus crisis. A relatively high debt and pension burden leads to high fixed costs compared with peers and will continue to test the state's commitment to reducing its long-term liabilities while providing the level of services expected by its residents.

Exhibit 1
High fixed costs reflect Maryland's support of local government
Fiscal 2019 fixed costs as % of own-source governmental revenue



The "tread water" contribution would be sufficient to keep liabilities from rising if all actuarial assumptions were met
Source: Maryland audited financial statements; Moody's Investors Service

The current coronavirus epidemic constitutes a social risk under our ESG framework, given the substantial implications for public health and safety. The longer-term impact will depend on both the severity and duration of the crisis. We do not see any material immediate credit risks for Maryland at this time, but the situation is evolving.

Credit strengths

» Proactive financial management

» Stable economy with high personal income levels

» Adequate budgetary reserves and strong liquidity

Credit challenges

» High net pension liabilities and above average debt burden compared with Maryland's Aaa peers, leading to high fixed costs

» Vulnerability to swings in federal spending priorities

Rating outlook

The outlook for Maryland's general obligation debt is stable. The state's proactive fiscal management enables it to make midcourse corrections and weather economic cycles. It has also taken often difficult actions to strengthen the foundation for long-term fiscal sustainability. Even so, growth in fixed costs for pensions, debt service and retiree health benefits will continue to be a challenge.

Factors that could lead to an upgrade

» Not applicable

Factors that could lead to a downgrade

» Economic and financial deterioration that results in deficits, fund transfers and reserve draws without a plan for near-term replenishment and structural balance

» Failure to adhere to policies to redress large unfunded pension liabilities

Key indicators

Maryland (State of)	2015	2016	2017	2018	2019	50-State Median (2019)
Operating Fund Revenues (000s)	$19,769,076	$20,471,039	$20,394,570	$21,492,002	$23,143,059	$12,439,906
Available Balances as % of Operating Fund Revenues	0.1%	1.6%	0.2%	1.8%	3.7%	9.1%
Nominal GDP (billions)	$370.8	$387.6	$399.7	$411.6	$426.7	$250.6
Nominal GDP Growth	5.0%	4.5%	3.1%	3.0%	3.7%	3.6%
Total Non-Farm Employment Growth	1.5%	1.3%	1.1%	0.9%	0.6%	0.9%
Fixed Costs as % of Own-Source Revenue	16.4%	17.3%	18.7%	17.8%	16.4%	7.8%
Adjusted Net Pension Liabilities (000s)	$45,790,041	$46,208,447	$67,240,080	$59,264,776	$53,509,910	$11,258,253
Net Tax-Supported Debt (000s)	$11,577,387	$12,558,200	$13,095,582	$14,157,927	$14,044,517	$3,864,531
(Adjusted Net Pension Liability + Net Tax-Supported Debt) / GDP	15.5%	15.2%	20.1%	17.8%	15.8%	6.9%

Sources: Moody's Investors Service, Maryland audited financial statements

Profile

Maryland is located on the East Coast of the United States and has 3,190 miles of shoreline, according to the National Oceanic and Atmospheric Administration. Its population of 6 million people places it 19th among the 50 states. Its state gross domestic product is 15th largest. The state has above average wealth, with per capita personal income equal to 115.9% of the US level in 2019.

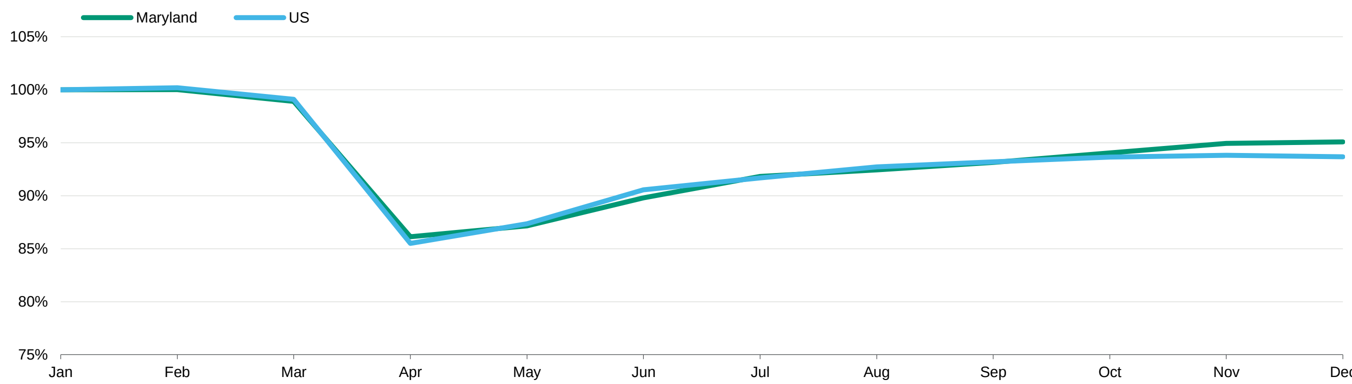
Detailed credit considerations

Economy

Maryland has recovered about two-thirds of the nearly 400,000 jobs lost from February to April of 2020 when the coronavirus pandemic led to nationwide shutdowns. The state's initial job loss and subsequent recovery has been in line with the national pattern, although the state has recovered a slightly greater proportion of its jobs as of December (see Exhibit 3). The unemployment rate never rose as high as the nation's (10.1% in Maryland vs 14.8% nationwide) and had fallen to 6.3% by December. Like the US, however, the state's labor force has contracted as some people have ceased looking for work for a variety of reasons, including limited child care options.

Exhibit 3

Maryland's payroll employment moved in concert with the US through the coronavirus pandemic
Payroll employment as % of January level



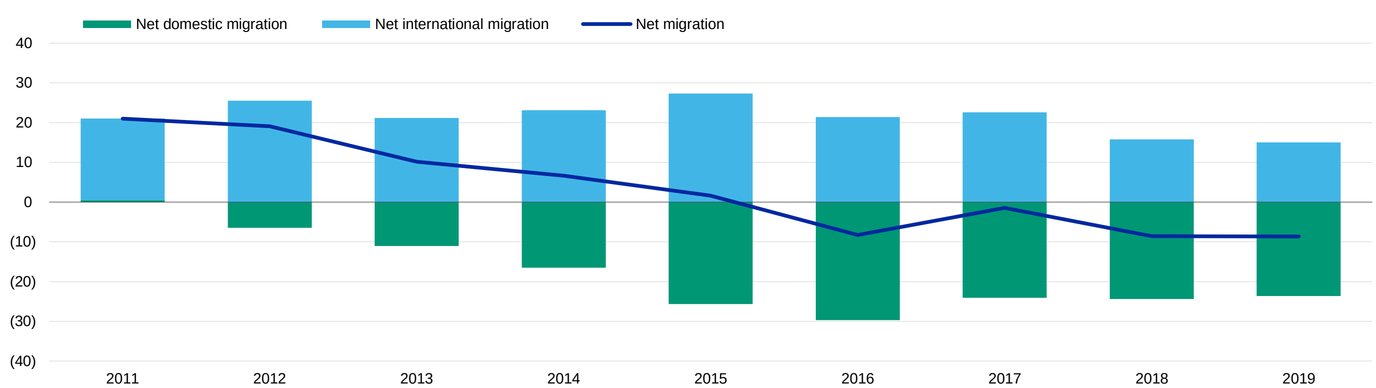
Source: US Bureau of Labor Statistics; Moody's Investors Service

The less dramatic initial rise in unemployment likely reflects the state's highly skilled workforce and concentration in business and professional services, health services and government, rather than dependence on leisure and hospitality jobs that were hardest hit by the pandemic.

About 40% of the population age 25 and older have at least a bachelor's degree, compared with about 32% nationwide. However, the state's population growth trend has been slowing more than the nation's, as the net migration component of population change has turned negative (see Exhibit 4).

Exhibit 4

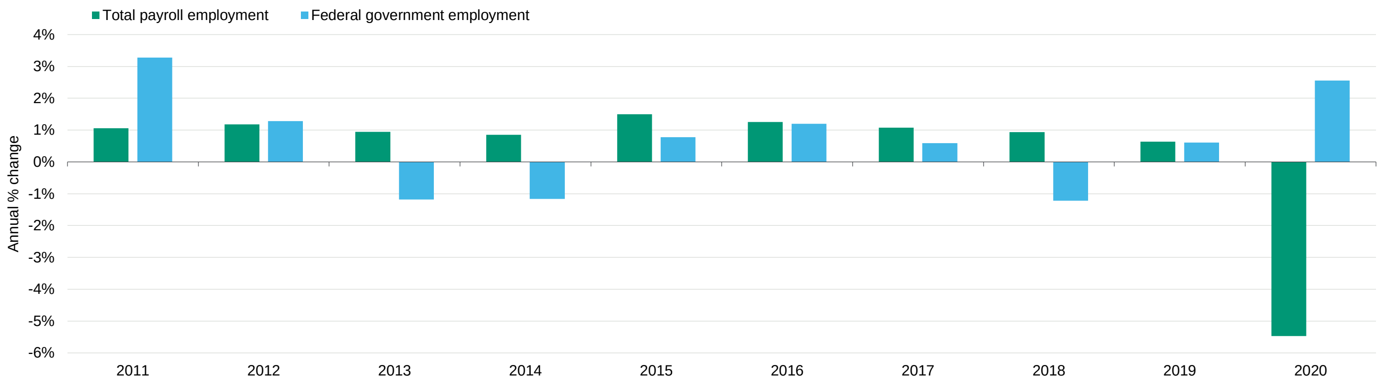
More domestic outmigration and less international inmigration contribute to slower population growth
Migration in thousands



Source: US Census Bureau

While historically a source of stability, the large federal presence in Maryland has in the past decade been a mixed blessing (see Exhibit 5). Federal jobs account for more than 5% of Maryland employment, compared with about 2% nationally. However, Federal sequestration early in the last decade followed by federal employment attrition – particularly in non-defense functions -- toward the end of the decade led to declines followed by relative stagnation in the state's federal employment trends. In 2020, a decennial census year, federal job growth picked up. With ambitious proposals for various federal programs by the Biden administration, this sector of Maryland's economy may gain momentum in coming years.

Exhibit 5
Maryland's federal employment trend picks up in 2020 after weak decade
Annual % change in payroll employment



Source: US Bureau of Labor Statistics

The state's Board of Revenue Estimates produced its latest forecast in December. The forecast reflects a "V-shaped" recovery, with a calendar year 2020 employment decline of 5.7% followed by 3.4% growth in 2021. From there, the forecast through 2024 tails off to recent historical norms of less than 1% annually. At 4.9%, personal income growth is robust in 2020 because of the impacts of federal stimulus payments. For 2021, personal income growth is expected to be muted at 0.6% before resuming an annual pace in the 4% range.

Finances and Liquidity

The budgetary flexibility afforded to Maryland by its Board of Public Works (BPW), which is empowered to make mid-year budget adjustments, has been on display throughout the coronavirus pandemic. In late fiscal 2020, the BPW cut $120.8 million from fiscal 2020 spending in response to the pandemic. The savings helped bolster general fund ending balances by more than $500 million to create a balance of more than $700 million, which is being applied to close gaps in fiscal years 2021 and 2022. In early fiscal 2021, the BPW approved spending reductions of an additional $413 million, most of focused on general fund spending. Remaining shortfalls in the fiscal 2021 budget will be more than made up by federal funding increases in response to the pandemic, primarily CARES Act funding and the extended enhanced federal reimbursements for Medicaid. Currently the state projects it will end fiscal 2021 with a general fund balance of $264 million.

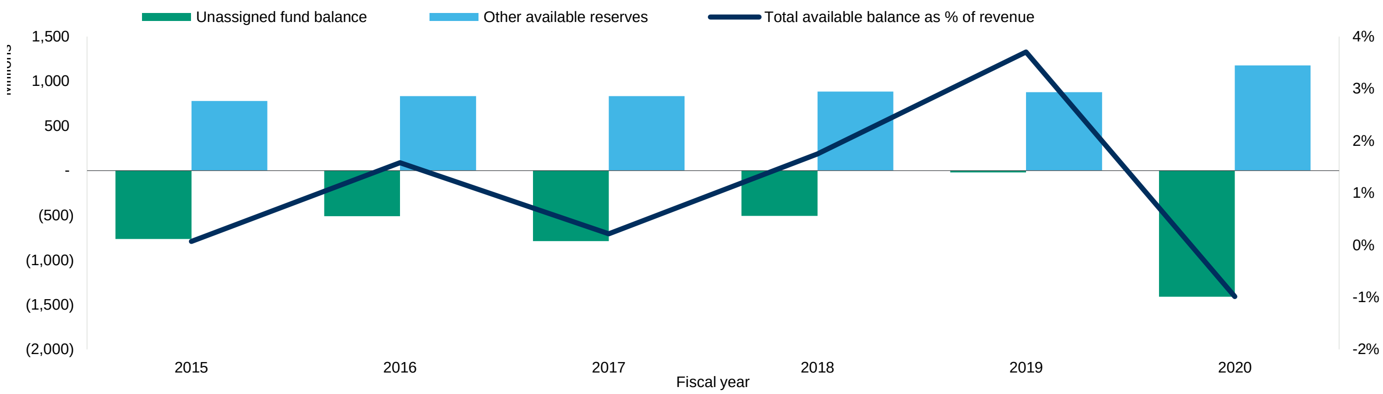
The state has applied some of its resources toward pandemic relief to its residents. In fiscal 2021, the state used $250 million of its rainy day fund to provide assistance to Marylanders and businesses. The proposed fiscal 2022 budget includes a $1 billion program to provide further stimulus to businesses and relief to residents through such measures as repealing the income tax on unemployment insurance benefits, partially funding the plan by reducing the expected contribution to the rainy day fund. Nonetheless, the proposed budget will increase the rainy day fund to nearly $1 billion from its $884 million projected fiscal 2021 ending balance, 5% of general fund revenue.

The state's latest tax revenue forecast for fiscal 2021 is about $600 million less than projected in March of 2020, and revenue for fiscal 2022 is about $300 million less. As a result, state revenue for fiscal 2021 grows just 0.7%. The forecast for fiscal 2022 presents a robust rebound, with revenue growing nearly 6%. These figures do not reflect the impact of a newly enacted tax on digital advertising, the first such tax in the nation. Revenue from the tax is earmarked for education.

On an audited GAAP basis, the state's available balances (unassigned balances plus the rainy day fund balance) have been low compared to peers since the last recession. Available balances dipped into negative territory in fiscal 2020 because coronavirus-related federal reimbursements lagged the state's outlays. Unassigned balances fell to -$1.4 billion from a small deficit of -$19 million at the end of fiscal 2019. This was partially but not entirely offset by the state's rainy day fund. During the previous decade the state built its GAAP-basis available balances to nearly $2.3 billion in 2007, a buffer of more than 15% of revenue.

Exhibit 6

The timing of federal coronavirus reimbursements resulted in a large negative unassigned balance in fiscal 2020



Source: Maryland audited financial statements; Moody's Investors Service

In 2017, the state enacted House Bill 503, which is designed to reduce the impact of volatility on state budgeting, including conservative treatment of revenue from personal income tax non-withholding collections and allocation of positive revenue variances to reduce long-term liabilities such as pensions and retiree health insurance or bolstering the state's rainy day reserves. If the state abides by the guidelines, the measures should strengthen the state's overall credit profile in the long run by supporting reserves and reducing leverage.

LIQUIDITY

Maryland's liquidity is strong, bolstered by unfettered access to the state's short-term investment pool. As of January 31, 2021, the market value was more than $10 billion. The state's very strong cash liquidity helps to mitigate its below-average GAAP basis fund balances.

Debt and Pensions

Maryland's debt levels compared with 50-state medians are high. Moody's 2019 state debt medians ranks Maryland 14th for debt as a percent of personal income and ninth on a per capita basis. The state's debt burden has historically remained within the recommendations of its Capital Debt Affordability Committee, which advises limiting total debt to within 4% of personal income and debt service to within 8% of revenue.

DEBT STRUCTURE

The state's net tax-supported debt is about $14 billion (see Exhibit 8). The state's debt, as of December 2019, consists primarily of general obligation bonds (68%) and consolidated transportation revenue bonds (24%). As of that time, the remaining debt consisted of GARVEEs, lease commitments and bay restoration bonds. However, the state's GARVEEs have since been retired. Included in the lease/appropriation debt is state liability in its public-private partnership for construction of the Purple Line, a transit project. Delays in the project have led to claims against the state by one of the contractors, which could result in up to an additional $300 million liability for the state if the dispute is not settled more favorably. Maryland has about $31.9 million of outstanding variable rate debt that was issued by the Maryland Stadium Authority for baseball stadium improvements.

Exhibit 7

Maryland's net tax-supported debt is dominated by GO and highway bonds

$ thousands

	2015	2016	2017	2018	2019
General Obligation Bonds	8,677,214	9,465,285	9,334,205	9,454,429	9,606,909
Lease Rental Bonds/Appropriation Debt	163,033	251,800	477,733	603,328	577,823
Highway Revenue Bonds:	2,020,250	2,146,085	2,578,385	3,488,800	3,342,945
Special Tax Bonds--Other:	129,980	301,615	292,880	273,590	253,375
GARVEES (since retired):	349,440	181,415	206,590	129,680	48,865
Capital Leases:	237,470	212,000	205,789	208,100	214,600
Total	11,577,387	12,558,200	13,095,582	14,157,927	14,044,517

Source: Moody's Investors Service; Maryland financial reports

Maryland's constitution requires a rapid 15-year amortization of tax-supported debt. This policy increases debt service as a percentage of revenue, but also quickly replenishes the state's debt capacity and helps restrain growth in the outstanding balance. The state ranked ninth in debt service as a percent of own-source governmental funds revenue adjusted for net transfers in our 2020 State Debt Medians report.

Maryland has a single series of variable rate demand bonds outstanding, issued through the Maryland Stadium Authority. Liquidity support for tenders is provided through an SBPA provided by Sumitomo Mitsui Banking Corporation (Counterparty Risk Assessment A1(cr)/P-1(cr)) that expires in 2022. The state also has about $64.4 million in privately placed loans under the Qualified Zone Academy Bond program as of June 30, 2020.

DEBT-RELATED DERIVATIVES

There is a swap with notional value of $31.78 million in conjunction with the Maryland Stadium Authority's variable rate debt. The mark-to-market value of the swap was about -$5.6 million as of January 31, 2021.

PENSIONS AND OPEB

The state's pension costs will continue to grow in coming years, reflecting the poor investment performance in several of the last five fiscal years. The financial condition of Maryland's retirement system represents the state's most significant credit challenge.

The state's reported net pension liability for fiscal 2019 is $20.6 billion, including the Maryland State Retirement and Pension System (MSRPS), the Maryland Transit Administration Pension Plan. When adjusted using a common market-based interest rate, its pension liabilities stood at $53.5 billion. This placed the state's adjusted net pension liability (ANPL) 10th highest among the states at 12.5% of GDP, more than twice the median of 4.8%. Our adjustments to reported state pension data are designed to improve comparability among state pension metrics.

Demonstrating its proactive management approach, the state has taken a number of steps to manage its pension burden that have included reductions in its liabilities and efforts to improve funding. It has enacted reforms to both pension and retiree health (OPEB) legislation and has shifted the responsibility for paying the normal cost of teacher pension to local governments. However, despite supplemental pension contributions intended to accelerate amortization of the state's liabilities, state contributions do not quite meet the level necessary to "tread water," that is, prevent the state's pension liabilities from growing by covering interest on the beginning of year net pension liability and annual service cost. Meeting the tread water threshold would cost the state less than 1% of its own-source revenue. The supplemental payment has been pared back from time to time to redirect the funds to balance the budget, with fiscal 2021 offering no exception.

The state's pension liabilities and resulting state contributions are exposed to asset volatility risk. For fiscal 2019, the state ranked second highest on our pension asset shock indicator, which estimates the probability that pension assets could decline by 25% or more of revenue. The high ranking is primarily attributable to pension assets that are high as a percent of state revenue because the state takes responsibility for the unfunded liabilities of the teachers retirement system.

The state's adjusted net OPEB (retiree health insurance) liability, including liabilities of the Maryland Transit Administration, was $15 billion or 3.5% of GDP as of June 30, 2019. The 50-state median was 1%. The state generally makes contributions to its retiree health system on a pay-go basis. While the state established a trust fund to accumulate assets to offset accrued OPEB liabilities, it does not regularly contribute to it. As of June 30, 2019, the fund held $351 million in assets. The state implemented OPEB reforms in 2011 that increased eligibility requirements to contain long-term growth in OPEB liabilities. A portion of that reform having to do with prescription drug benefits is under court injunction pending the outcome of litigation, and the General Assembly has created programs to limit certain retiree prescription costs. The legislation is estimated by the state's budget office to increase the state's net OPEB liability by at least $2.36 billion over 30 years.

Maryland ranks 11th highest in combined debt, pension and OPEB liabilities compared to state GDP, with these obligations posing the state's most notable credit challenge. The obligations measured nearly 20% of state GDP in fiscal 2019 and combined required 16% of the state's own-source revenue to service. Somewhat mitigating this burden is the lesser burden on lower levels of government due to the state assumption of some of those obligations. The state's pension liabilities, for example, are roughly at the 50-state median when taking into account combined state and local obligations. As a result, there is less competition for tax base between the state and its localities.

ESG considerations

Environmental

The US states sector overall has low exposure to environmental risks because of states' large and diverse economies, revenue-raising ability and federal government support for disaster recovery costs via FEMA. Maryland is moderately exposed to climate risk because of its location on the Atlantic Ocean and Chesapeake Bay, the nation's largest estuary. The state is a signatory to a series of agreements with neighboring states and the US Environmental Protection Agency to protect the watershed and counteract contamination of the bay that accompanied agriculture and economic development. The agreements address pollution rather than sea level rise.

The statewide property tax, which is dedicated to pay debt service on general obligation debt, is affected by coastal erosion and coastal storms that can adversely affect property values. However, the state has reported that coastal properties remain more valuable, on average, than non-coastal properties.

According to data from Moody's affiliate Four Twenty Seven, Maryland counties' average projected rate of change in five climate risk factors, when weighted by county GDP, is above average in the nation. Most of Maryland's counties have higher exposure to cyclone risk, and nearly half the counties are higher risk for water stress. However, data from the Bureau of Labor Statistics indicate that only 5% of Maryland's employment and wages are earned in hurricane storm surge flood zones. With its high wealth and strong economy, Maryland has economic capacity to withstand the effects of environmental event risk and to generate resources to invest in additional mitigation strategies.

The state is considering initiatives to reduce carbon emissions and increase resiliency to climate events. It has established a Climate Change Commission that is overseeing plans to reduce carbon emissions 40% by 2030 and is also developing requirements for major state projects to assess proposed projects' emissions and sustainability given projections for rising sea levels. In addition, the legislature is considering increasing the state's target for renewable energy sources.

Social

Social issues, such as demographics, labor force, income and education, are key influencers of a state's economy, governance stability and financial and leverage trends. Maryland benefits from a highly educated workforce. This contributes to the state's attractiveness to businesses looking to relocate or expand, which helps boost the state's economy and drives tax revenue. For more information on social factors, please see our Economy section.

Governance

The constitutional and legal framework governing a state, along with the financial management and budgeting practices a state employs, are material considerations in state credit quality. Generally, states adhere to balanced budget requirements and have significant flexibility over their revenue and expenditures, contributing to strong governance frameworks across the sector. Maryland's financial practices and flexibility are very strong. For example, the state has a binding consensus revenue forecast, multiyear financial planning, and its Board of Public Works, consisting of the Governor, the Comptroller and the Treasurer, is able to respond swiftly to midyear budget challenges. The state also has no tax and spending limitations or supermajority requirements limiting its flexibility.

Rating methodology and scorecard factors

The US States and Territories Rating Methodology includes a scorecard, which summarizes the 10 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. Maryland's Aaa rating is one notch higher than its scorecard-indicated outcome because of the state's strengths in aspects of its finances and governance, as discussed in this credit opinion, are not fully captured by the scorecard.

US states and territories rating methodology scorecard
Maryland (State of)

Rating Factors	Measure	Score
Factor 1: Economy (25%)		
a) Per Capita Income Relative to US Average [1]	114.4%	Aaa
b) Nominal Gross Domestic Product ($ billions) [1]	$426.7	Aaa
Factor 2: Finances (30%)		
a) Structural Balance	Aa	Aa
b) Fixed Costs / State Own-Source Revenue [2]	16.4%	A
c) Liquidity and Fund Balance	Aaa	Aaa
Factor 3: Governance (20%)		
a) Governance / Constitutional Framework	Aaa	Aaa
Factor 4: Debt and Pensions (25%)		
a) (Moody's ANPL + Net Tax-Supported Debt) / State GDP [2] [3]	15.8%	Aa
Factors 5 - 10: Notching Factors [4]		
Adjustments Up: None	0	
Adjustments Down: None	0	
Rating:		
a) Scorecard-Indicated Outcome		Aa1
b) Actual Rating Assigned		Aaa

[1] Economy measures are based on data from the most recent year available.
[2] Fixed costs and debt and pensions measures are based on data from the most recent debt and pensions medians report published by Moody's.
[3] ANPL stands for adjusted net pension liability.
[4] Notching factors 5-10 are specifically defined in the US States and Territories Rating Methodology.
Sources: US Bureau of Economic Analysis, State CAFRs, Moody's Investors Service

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