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CREDIT OPINION
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Vermont (State of)

Update to credit analysis

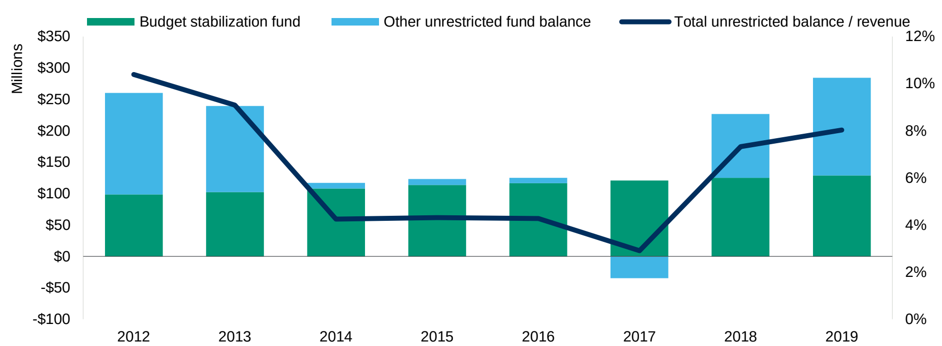
Summary

The State of Vermont (Aa1 stable) has enhanced its financial position over the past couple years, putting it in a good place to address the fiscal challenges brought about by the coronavirus outbreak. The state projects a notable loss in revenue for fiscal 2020, driven largely by the shift in the state's income tax filing deadline to July 15 from April 15. To plug the near-term gap caused by the shift in revenue collection, Vermont may tap into its budget reserves or borrow from its federal coronavirus relief aid. The state would replenish its reserves or repay any short-term borrowing once delayed income taxes are received in July. The state projects further revenue loss in fiscal 2021, but headed into this situation with very strong liquidity.

Vermont has the smallest US state economy and has the second smallest population, but resident income is above average and educational attainment is high. Over the long term, an aging population may be a drag on future growth and Vermont's performance on multiple economic measures has lagged that of the US for years.

With slower than average growth, Vermont's long-term liabilities will weigh more heavily on its economic base. Vermont's leverage, measured by combined debt and unfunded post-employment obligations relative to GDP, is high among US states. Still, we do not anticipate a major negative shift in the state's fixed cost burden in the coming years and, overall, we expect the state's credit standing to remain strong. As a US state, Vermont has broad flexibility to adjust its finances in response to operating challenges.

Exhibit 1
Budget stabilization reserves and other fund balance across Vermont's three primary operating funds



Balances and revenue reported in the state's general, transportation and education funds
Source: Vermont's comprehensive annual financial reports and Moody's Investors Service

We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety. We do not see any material immediate credit risks for Vermont. However, the situation surrounding coronavirus is rapidly evolving and the longer term impact will depend on both the severity and duration of the crisis. If our view of the credit quality of Vermont changes, we will update our opinion at that time.

Credit strengths

» Although Vermont's economy is the smallest of all US states, resident income is above average, educational attainment is high, and unemployment is low

» Financial operations and budget reserves are sound and stable, and liquidity is very healthy

Credit challenges

» The state's economic performance lags that of the US and many state peers, and an aging population may be a drag on future growth

» Relative to state GDP, Vermont's leverage (combined debt and unfunded post-employment liabilities) is higher than most states

Rating outlook

The stable outlook reflects the expectation that Vermont's economic fundamentals, financial position and fiscal management will remain strong and support the current rating.

Factors that could lead to an upgrade

» Improved demographic and economic trends that more closely track those of the nation and other highly rated states

» Moderated leverage, especially unfunded pensions and retiree health care liabilities, relative to state GDP

Factors that could lead to a downgrade

» Substantial growth in debt or unfunded post-employment liabilities

» A slowdown in economic expansion or revenue growth

» A departure from strong fiscal management practices

Key indicators

Exhibit 2

Vermont (State of)	2015	2016	2017	2018	2019	50-State Median (2018)
Operating Fund Revenues (000s)	2,858,148	2,927,613	2,963,227	3,093,639	3,542,301	11,520,082
Available Balances as % of Operating Fund Revenues	4.3%	4.3%	2.9%	7.3%	8.0%	7.8%
Nominal GDP (billions)	30.7	31.7	32.2	33.3	34.8	234.5
Nominal GDP Growth	4.5%	3.3%	1.6%	3.4%	4.5%	4.6%
Total Non-Farm Employment Growth	0.9%	0.3%	0.6%	0.2%	0.1%	1.1%
Fixed Costs as % of Own-Source Revenue	6.6%	7.6%	8.1%	8.2%	8.4%	8.2%
Adjusted Net Pension Liabilities (000s)	3,689,889	4,034,179	5,123,076	4,882,266	4,563,037	12,209,760
Net Tax-Supported Debt (000s)	627,192	666,935	615,759	716,626	661,983	4,146,966
(Adjusted Net Pension Liability + Net Tax-Supported Debt) / GDP	14.0%	14.8%	17.8%	16.8%	15.0%	7.8%

Source: Vermont's audited financial statements, the US Bureau of Economic Analysis and Moody's Investors Service

Profile

The State of Vermont is located in the northeast United States. Its population of just under 627,000 is the second lowest in the country. It has the smallest economy among US states, measured by a 2019 gross domestic product of about $35 billion.

Detailed credit considerations

Economy

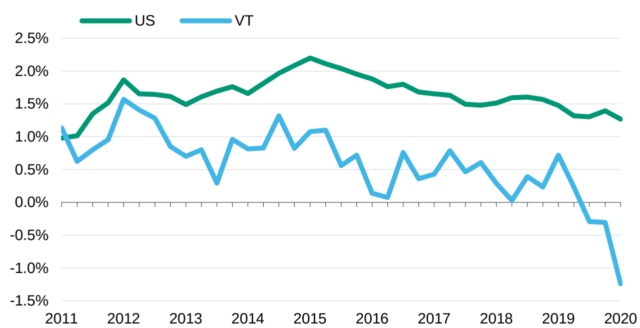
Since the second week of March, there have been about 65,000 new claims for unemployment insurance in the State of Vermont. This is 20% of the state's February 2020 nonfarm employment, a ratio that places Vermont in line with the average value for the nation (20%) on this measure. Vermont came under a governor-issued “stay-at-home” order on March 24. As in most states, this order is a big driver of the significant jump in unemployment insurance claims. The governor's order has been extended through June, though the state is beginning to relax certain restrictions.

The long-term economic impact of the coronavirus outbreak on Vermont is uncertain, as it is for the other forty-nine states. Vermont's underlying economic profile is healthy. Per capita and median household income in Vermont are slightly higher than those of the entire US, and rank 19th and 20th, respectively, among the 50 US states. Educational attainment in the state is high, with Vermont ranking 8th among states in the share of residents having earned a bachelor's degree or higher, according to the US Census Bureau.

At the same time, tourism and hospitality play important roles in the state's economy and those sectors could face persistent challenges returning to their prior levels of output even after the state's economy becomes more open. Further, weak demographic trends in Vermont have been a driver of economic performance that lagged the US for a good part of the last decade (see Exhibits 3-6) and could hamper the state's recovery and long-term growth.

Exhibit 3

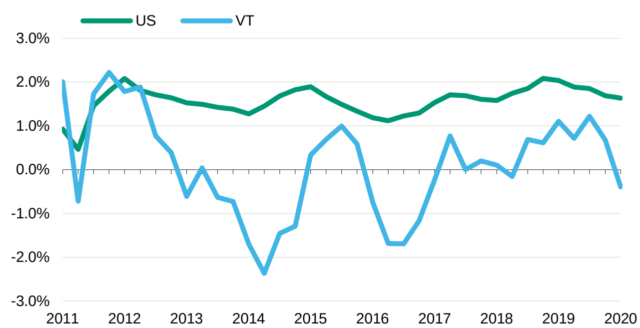
Year-over-year change in quarterly nonfarm employment



Source: Moody's Analytics

Exhibit 4

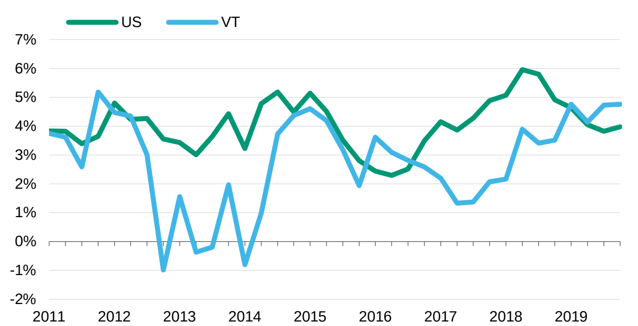
Year-over-year change in quarterly high wage jobs



Source: Moody's Analytics

Exhibit 5

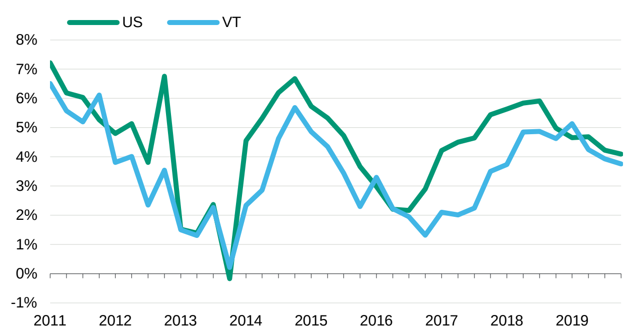
Year-over-year change in quarterly nominal GDP



Source: US Bureau of Economic Analysis

Exhibit 6

Year-over-year change in quarterly personal income



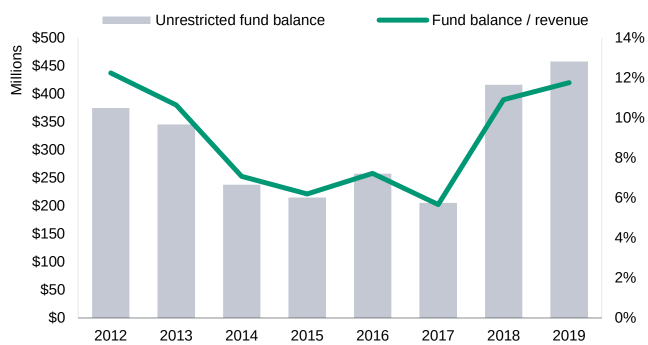
Source: US Bureau of Economic Analysis

Finances

Prior to the coronavirus outbreak, Vermont's financial position was healthy amid steady revenue growth and maintenance of reserves. Exhibit 1 above shows the unrestricted fund balance, including designated budget reserves, of the state's three primary operating funds. At the close of fiscal 2019, the budget stabilization reserves in these three major funds - general, education and transportation funds - were $77 million, $35 million and $13.5 million, respectively. In the aggregate, budget stabilization reserves were up $4 million relative to the prior year. The state maintains its formal budget stabilization reserves at 5% of the prior year's spending.

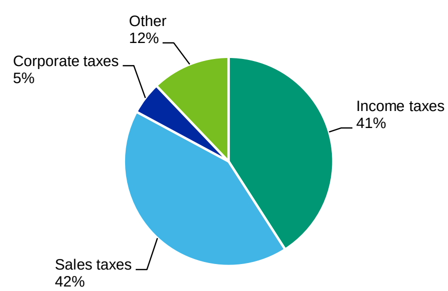
Vermont also holds unrestricted fund balance in other governmental funds and, across all governmental activities, fund balance remains strong as a share of the state's own-source revenue.

Exhibit 7
Fund balance across all governmental funds



Unrestricted fund balance is the sum of reported unassigned, assigned and committed balances across all governmental funds. Revenue is governmental funds own-source revenue.
Source: Vermont's comprehensive annual financial reports and Moody's Investors Service

Exhibit 8
Composition of revenue in Vermont's three primary operating funds



Sources are shown as percentages of combined general, transportation and education fund revenue less property taxes and federal funds.
Source: State of Vermont

Vermont relies most heavily on personal income and sales taxes (see Exhibit 8), which will fall below prior expectations for the forthcoming fiscal 2021 given the recent economic disruption. The state also accounts for school district property taxes in its financial statements because the taxes are pooled in the state's education fund. However, the property taxes are restricted for education and levied, per statute, as an education tax. The state cannot use the property taxes to cover state spending other than education.

The state's most recent financial forecast assumes fiscal 2020 revenue across its three primary operating funds will be nearly 6% below January projections. A large portion of this is driven by an expected shift in income taxes. On a cash basis, this means the state may dip into its budgetary reserves by the close of fiscal 2020 with expectations to replenish reserves in July once income taxes are received. On an accrual basis, however, the state anticipates it will ultimately close fiscal 2020 without using its budget stabilization reserves.

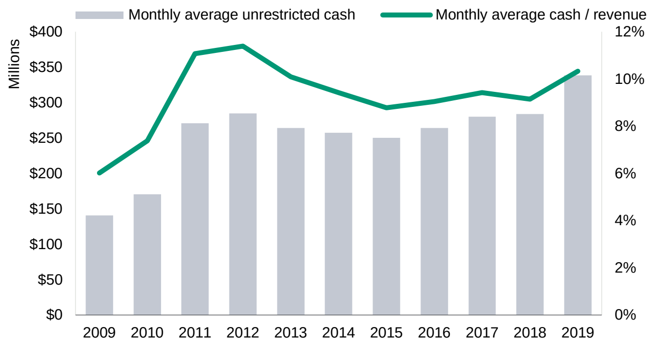
The legislature has passed a 3-month budget for fiscal 2021 that provides state agencies spending authority through September 2020. The budget has not yet been enacted. The appropriations act would, however, provide full year funding of debt service and pension contributions. The state expects revisiting its spending plan in late summer once it has further information on how revenue is performing.

LIQUIDITY

Across government activities, Vermont's cash is healthy. Vermont rapidly rebuilt its cash reserves after the 2007-09 recession and has kept liquidity at a strong level. Exhibit 9 below shows the monthly average of unrestricted cash held for core operations by fiscal year as reported by the state treasurer. Exhibit 10 shows year-end cash and investments held across all governmental funds as reported in the state's comprehensive annual financial reports.

Exhibit 9

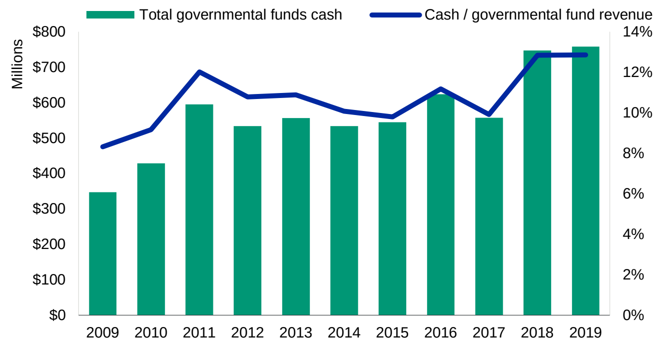
Unrestricted cash across Vermont's three primary operating funds



Source: State of Vermont and Moody's Investors Service

Exhibit 10

Cash and investments across total governmental funds



Source: Vermont's comprehensive annual financial reports and Moody's Investors Service

Debt and pensions

Vermont's debt burden will remain moderate, but it carries a heavy post-employment liability burden and slower economic expansion could weaken the state's leverage ratios over time.

Vermont's net tax supported debt (NTSD) ratios are very close to state medians. However, as a share of state nominal GDP, Vermont's adjusted net pension liability (ANPL) is consistently among the ten highest of the 50 states. The ANPL is our measure of a state or local government's pension burden that uses a market-based interest rate to value accrued liabilities.

Exhibit 11

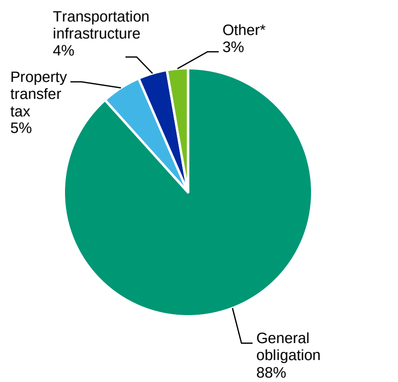
Vermont's debt statement ($million)
As of June 30, 2019

General obligation bonds	$584
Property transfer tax bonds	$34
Transportation infrastructure bonds	$25
Other*	$18
Total net tax-supported debt	**$662**
Moral obligations	
Vermont Municipal Bond Bank	$597
Vermont Econ. Dev. Auth.	$155
Vermont Housing Finance Auth.	$35
Vermont Student Assistance Corp.	$5
Total moral obligations	**$793**
Gross tax-supported debt	**$1,455**

* Other net tax-supported debt consists of bonds secured by contractual payments to disability service providers.
Source: State of Vermont

Exhibit 12

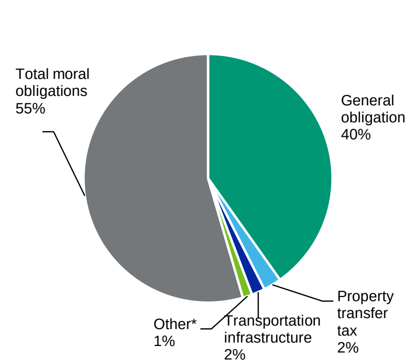
The majority of net tax-supported debt consists of general obligation bonds



* Other net tax-supported debt consists of bonds secured by contractual payments to disability service providers.
Source: State of Vermont

Exhibit 13

Moral obligations are a big component of Vermont's gross tax-supported debt



* Other net tax-supported debt consists of bonds secured by contractual payments to disability service providers.
Source: State of Vermont

DEBT STRUCTURE

All of Vermont's debt is fixed rate.

DEBT-RELATED DERIVATIVES

Vermont is not party to any debt-related derivatives.

PENSIONS AND OPEB

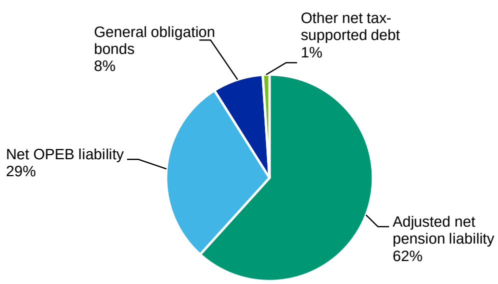
Vermont's unfunded pension liability, as measured by our ANPL, is the principal component of its leverage (Exhibit 14) and Exhibit 15 shows how Vermont's combined debt and pension burden, as a percentage of GDP, compares to the annual state median back to 2012. Despite remaining above the annual state median, Vermont's combined debt and pension burden is not on a rapidly growing path. And, as discussed above, the state's contribution practices are sound. The state's current funding policy, established in statute, is to fully amortize the unfunded liabilities of VSERS and VSTRS by 2038.

Vermont's pension ratios improved in both fiscal 2018 and 2019, following the trajectory in other states given strong investment returns. Available financial statements of the state's two pension plans indicate the state's ANPL increased in the plans' most recently completed fiscal year. This ANPL will be reported in the state's fiscal 2020 financial statements. The growth in the ANPL is largely due to a reduction in the market-based interest rate we use to discount accrued pension liabilities and the decline in the discount rate will have a similar effect on other governments' ANPLs.

Exhibit 14

Unfunded post-employment benefits liabilities (pensions and OPEB) dominate Vermont's leverage

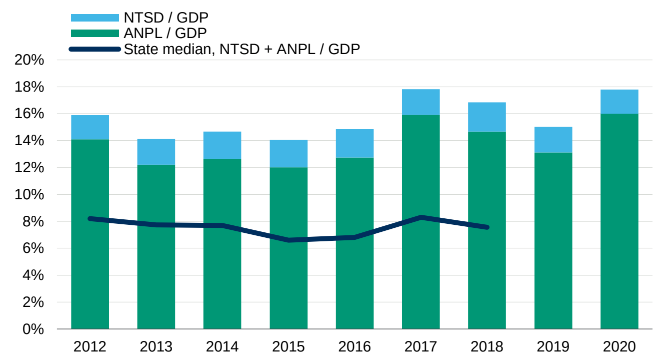
Composition of leverage, excluding non-tax supported debt



Source: State of Vermont and Moody's Investors Service

Exhibit 15

Net tax-supported debt and adjusted net pension liabilities relative to state GDP



2020 ratios assume growth in state GDP equal to the average growth rate of the past three years. Sufficient information is not yet available for all states to compute medians for 2019 and 2020.

Source: Vermont's audited financial statements, reports of VSERS and VSTRS, and Moody's Investors Service

Vermont's debt and pension burden is still much lower than those of the most highly leveraged states. And, importantly, Vermont's pension burden incorporates all liabilities associated with statewide school districts because the state accounts for all primary and secondary education financial activities in its own financial statements. This is a big driver of Vermont's high pension burden relative to other states.

Across both of its retirement plans (the Vermont State Retirement System and State Teachers' Retirement System), Vermont's pension contribution of $185 million in fiscal 2019 consumed just under 5% of own-source revenue. This contribution was just higher than the $182 million we calculate as the state's aggregate pension “tread water” indicator. The “tread water” indicator, which we calculate based on pension plan disclosures, measures the annual employer contribution necessary to forestall growth in plan reported net pension liabilities, assuming other plan actuarial assumptions hold and after accounting for employee contributions. It is a measure of a government's capacity and willingness to control growth in unfunded liabilities.

Vermont reports a net OPEB liability of $2.2 billion under newly adopted GASB statement 74 in its fiscal 2019 financial statements. The net OPEB liability is another 6.5% of GDP, which is high among states. As with pensions, Vermont's net OPEB liability includes 100% of state teacher retiree health care liabilities. The state made $65 million in OPEB payments in fiscal 2019, which is incorporated in our calculation of the state's fixed cost burden (see Exhibit 2 above). Pursuant to a recently approved budget adjustment act, Vermont will transfer 50% of annual general fund surpluses to its VSERS OPEB plan.

ESG considerations

Environmental considerations

As a US state with a wealthy and diverse economy, the flexibility to raise revenue, and support from the federal government, Vermont will continue to demonstrate high resilience to environmental risks. In general, US states face low credit risk stemming from environmental events, the most likely to occur being natural disasters. Even among US states, Vermont's environmental risks are low. With no coastal exposure, Vermont counties are primarily exposed to extreme rainfall risk, according to data from Moody's affiliate Four Twenty Seven. Increased rainfall could result in more frequent local or regional flooding. We expect the state and most of its local governments have the resources and capacity to address flood events. Heavy storms have caused extensive flooding throughout the state, but the state is able to apply its own resources as well as funding from the federal government to address damages. The state is working to build up the flood resiliency of its floodplains and river corridors.

Social considerations

Key social considerations for US states include demographics, health services and housing. Vermont has one of the slowest growing populations in the US and the most rapid decline in prime working age population (residents aged 25-54). Since 2000, the state's prime working age population fell just over 16% and it has fallen nearly 10% since 2010. These are the highest rates of decline over these two periods among the 50 states and the District of Columbia (Aaa stable). Since 2010, the prime working age population in the US grew nearly 5%.

Support for health services by the federal government, mainly through Medicaid grants, represents a vulnerability for states and Vermont is no exception. Vermont is more vulnerable to a change in federal policy or funding than other states given that about 25% of its population is enrolled in Medicaid. This is far higher than the 17% of people enrolled across the US. Statewide, housing affordability has not fallen as much in Vermont as it has in many parts of the US. Though slow population growth could be a drag on future economic growth, it could keep housing affordable in most parts of the state.

Governance considerations

Governance is a material consideration for the sector and all of the state's ratings. Vermont's governance is strong. The state updates its consensus revenue forecast twice per year, in January and July. The January update covers the remainder of the current fiscal year as well as the two upcoming fiscal years. The July update then revises the forecast for the newly begun fiscal year and the immediately following fiscal year. The two forecast updates are required by statute. During economic downturns, such as the 2007-09 recession, the state has updated its revenue forecast more frequently to aid responses to weakened revenue performance.

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.

Exhibit 16

US state and territories rating methodology scorecard

Vermont (State of)

Rating Factors	Measure	Score
Factor 1: Economy (25%)		
a) Per Capita Income Relative to US Average [1]	100.0%	Aaa
b) Nominal Gross Domestic Product ($ billions) [1]	$34.8	A
Factor 2: Finances (30%)		
a) Structural Balance	Aa	Aa
b) Fixed Costs / State Own-Source Revenue [2]	8.4%	Aa
c) Liquidity and Fund Balance	Aa	Aa
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]	15.0%	Aa
Factors 5 - 10: Notching Factors [4]		
Adjustments Up: Financial Stability	0.5	
Adjustments Down: None	0	
Rating:		
a) Scorecard-Indicated Outcome		Aa1
b) Actual Rating Assigned		Aa1

[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 pension 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.
Source: US Bureau of Economic Analysis, Vermont's audited financial statements and Moody's Investors Service

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