Moody's
INVESTORS SERVICE

CREDIT OPINION
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Vermont (State of)

Update to credit analysis

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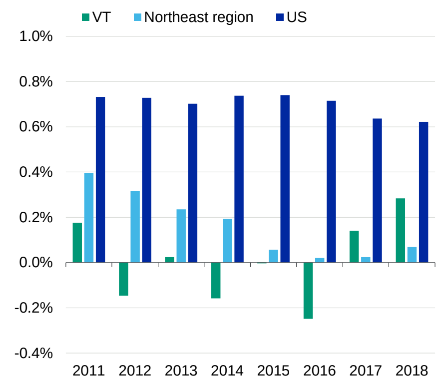
Summary

The State of Vermont (Aa1 stable) has a healthy economic profile, stable finances and strong fiscal management. It is the smallest US state economy and has the second smallest population, but unemployment is low, resident income is above average and educational attainment is high. At the same time, Vermont's performance on multiple economic measures lags that of the US and its state peers, and an aging population may remain a modest drag on future growth. Further, the state's leverage, measured by combined debt and unfunded post-employment obligations relative to GDP, is high among US states.

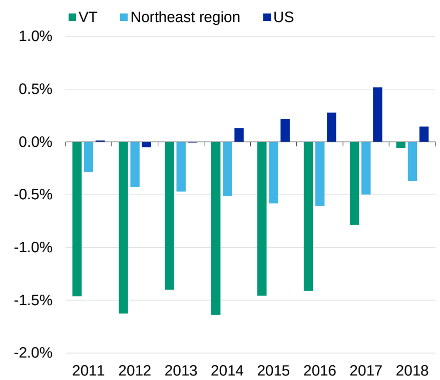
With slower than average growth, Vermont's long-term liabilities will weigh more heavily on its economic base. Overall, however, we expect the state's credit standing to remain strong. As a US state, Vermont has broad flexibility to adjust its finances in response to operating challenges. Further, Vermont's ample liquidity, operational stability and prudent management will remain credit factors that mitigate economic and leverage challenges relative to highly rated states.

Exhibit 1
Population growth in Vermont improved over the last two years, but still lags the US
Annual growth in total population



Source: Moody's Analytics

Exhibit 2
The trend in prime working age population is also improving, but remains negative for now
Annual growth in prime working age population



Source: Moody's Analytics

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

» Liquidity is healthy and stable

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 pensions) 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 3

Vermont (State of)	2014	2015	2016	2017	2018	50-State Median (2017)
Operating Fund Revenues (000s)	$2,748,223	$2,858,148	$2,927,613	$2,963,227	$3,093,639	$10,869,281
Available Balances as % of Operating Fund Revenues	4.3%	4.3%	4.3%	2.9%	7.3%	4.6%
Nominal GDP (billions)	$29.7	$30.7	$31.6	$32.6	$33.7	$224.0
Nominal GDP Growth	2.1%	3.3%	3.0%	3.1%	3.4%	3.9%
Total Non-Farm Employment Growth	0.9%	0.8%	0.3%	0.6%	0.1%	1.1%
Fixed Costs as % of Own-Source Revenue	6.8%	6.6%	7.6%	8.1%	8.2%	8.9%
Adjusted Net Pension Liabilities (000s)	$3,715,067	$3,689,889	$4,034,179	$5,123,076	$4,882,266	$12,033,341
Net Tax-Supported Debt (000s)	$597,520	$627,192	$666,935	$615,759	$713,886	$4,412,204
(Adjusted Net Pension Liability + Net Tax-Supported Debt) / GDP	14.5%	14.1%	14.9%	17.6%	16.6%	8.2%

Source: Vermont's 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 2018 gross domestic product of $33.7 billion.

Detailed credit considerations

Economy

Vermont's economic profile is solid, but the state lags its peers along several metrics and demographic weaknesses will keep Vermont a below average performer on factors such as job and income growth.

The state derives stability from its high income and educated base. 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.

Despite these positive factors, Vermont will face more challenges than other states attracting the investments needed to generate new jobs and rising incomes. Job creation in Vermont lagged that of the entire US and the northeast region for the better part of the last decade (Exhibit 4). Employment growth in 2018 was particularly slow. This is largely a consequence of the state's slowly growing and aging population.

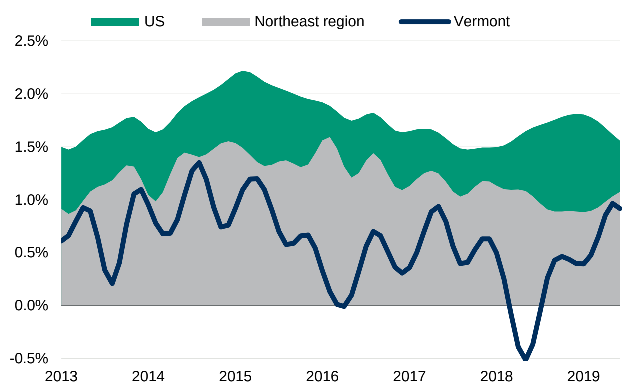
As Exhibits 1 and 2 above illustrate, Vermont has one of the slowest growing populations in the US and one of the most rapid declines in prime working age population (residents aged 25-54). Since 2000, the state's prime working age population fell just over 16%. Over the same period, the prime working age population in the US grew nearly 5%.

The healthcare sector will remain a key economic driver given rising demand for services from the state's older residents. But, even with an expanding healthcare sector, personal income across Vermont is rising more slowly than it is in the US and the state's northeast neighbors (Exhibit 5).

Exhibit 4

Vermont's employment growth persistently trails that of the US and the state's regional neighbors

Year-over-year growth in monthly nonfarm employment

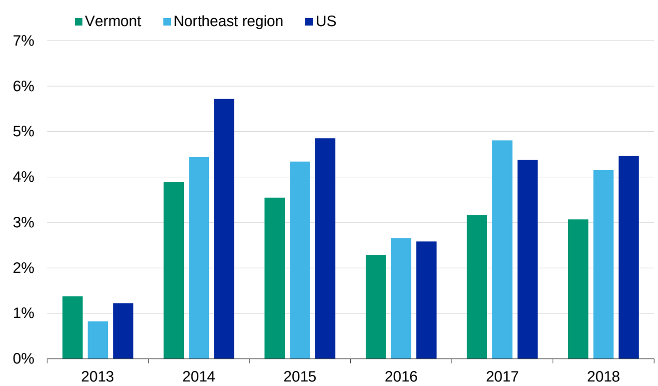


Source: Moody's Analytics

Exhibit 5

Vermont also falls behind the US and its neighbors in personal income growth

Annual growth in personal income



Source: Moody's Analytics

Other big drivers of Vermont's economy are tourism and hospitality. These sectors have benefited from strong consumer spending over the past several years, as indicated by average annual growth in meals and room taxes of about 5%. But, growth in this sector will not generate large gains in income given the lower wage nature of the jobs. These industries, which include many seasonal activities such as skiing in wintertime, could also face long-term challenges from changing weather patterns. Otherwise, Vermont's environmental risks, like those of US states in general, are modest compared to other sectors. 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.

Finances

Vermont's financial position remains healthy amid steady revenue growth and maintenance of reserves. At the close of fiscal 2018, the budget stabilization reserves in Vermont's major funds of operation - 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 budget stabilization reserves at 5% of the prior year's spending.

The state reports that fiscal 2019 (year-end June 30) revenue across the same three funds was up about 5% compared to the prior year. The biggest gain was in corporate income taxes, which were up 43%. Despite this tremendous growth, the impact on total revenue is slight given that corporate taxes typically make up only 6% of general fund revenue and only 3% of combined general, education and transportation fund revenue.

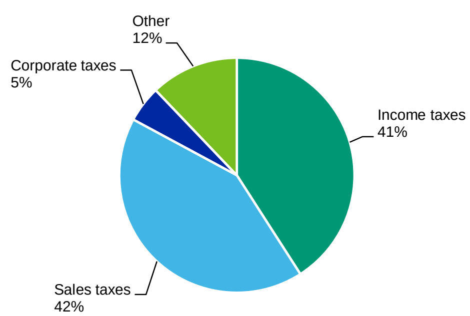
Personal income taxes were up 4.8% and sales taxes were up 3.6%. Together, these two taxes make up over 80% of Vermont's operating revenue, when excluding property taxes (Exhibit 6). The state accounts for school district property taxes in its financial statements because the taxes are pooled in the 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.

Vermont's GAAP-basis fund balance also improved in fiscal 2018 (Exhibit 7). Total fund balance across its major funds of operation grew to $300 million. Available fund balance - the sum of unassigned, committed and assigned balances - across these same funds rose to $227 million and just over 7% of these funds' combined nonfederal revenue. The available fund balance includes Vermont's budget-basis stabilization reserves. The 2018 fund balance also includes an outstanding loan receivable from the state's OPEB trust that declined very modestly in fiscal 2018 to $28 million from $29 million in fiscal 2017. Though it had planned to repay the loan by 2023, the state amended its fiscal 2019 budget to completely pay off the loan in the recently completed fiscal year.

Exhibit 6

Income tax and sales taxes make up more than 80% of Vermont's own-source operating revenue

Composition of operating revenue

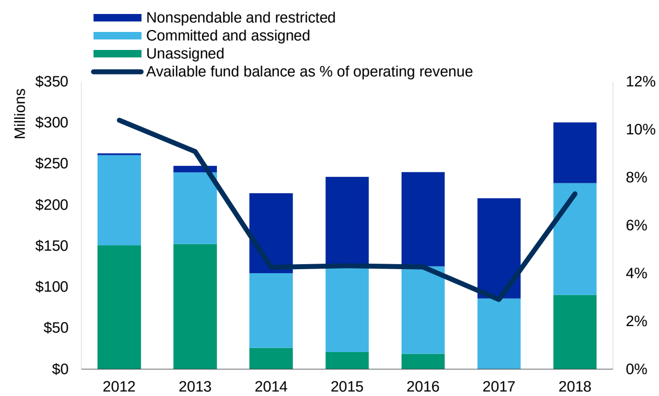


Sources are shown as percentages of combined general, transportation and education fund revenue less property taxes and federal funds.
Source: Vermont's fiscal 2019 budget

Exhibit 7

Vermont's fund balance remains healthy as a share of revenue

Composition of fund balance by fiscal year



Available fund balance is the sum of unassigned, committed and assigned fund balances.
Source: Vermont's audited financial statements

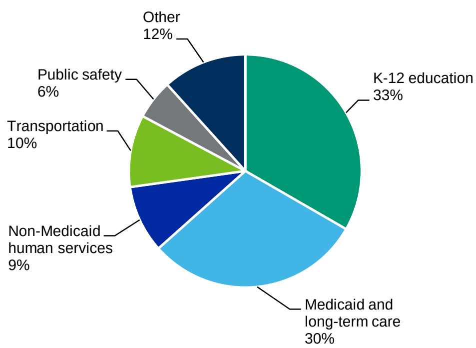
Vermont also holds balances outside its three core operating funds, the largest of which is its human services caseload reserve. The fiscal 2019 budget transferred the balance of the state's Global Commitment Fund into the human services caseload reserve. This boosted assets in the reserve from $22 million in fiscal 2018 to over $100 million in fiscal 2019. The Global Commitment Fund will continue to be used for Medicaid-eligible human services activities. Adding the caseload reserve to the state's fiscal 2018 available fund balance puts that balance just over 10% of revenue, which is closely aligned with average monthly cash classified as unrestricted by the state treasurer (see discussion below on liquidity).

As in most states, education and healthcare dominate Vermont's spending (Exhibit 8). As of 2017, 28% of Vermont residents were covered by Medicaid, which was the third highest share among the 50 states and far above the state median of 19%. The share of state spending on Medicaid has remained stable as a share of Vermont's own-source revenue (Exhibit 9), but, at 25%, it also is higher than the 50-state median of 17%. Federal funds cover most Medicaid spending, so a change in federal funding of Medicaid could present the state with difficult spending and policy decisions.

Exhibit 8

As in most states, education and health services dominate Vermont's state spending

Composition of total state spending

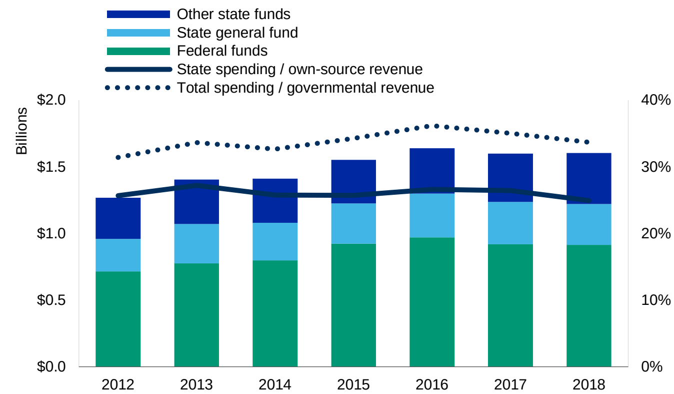


Source: State of Vermont

Exhibit 9

Vermont's Medicaid spending is stable but high relative to state revenue

Medicaid spending by funding source and relative to revenue



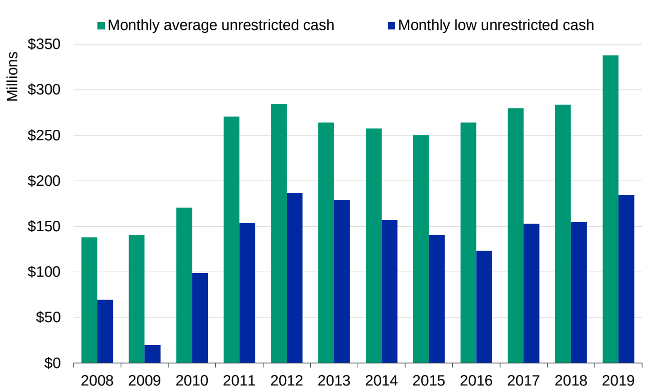
Source: National Association of State Budget Officers, Vermont's audited financial statements, and Moody's Investors Service

LIQUIDITY

Vermont rapidly rebuilt its cash reserves after the 2007-09 recession and has kept liquidity at a strong level (Exhibit 10). Monthly average unrestricted cash held by the state treasurer hovered around 9%-10% of combined general, education and transportation fund revenue over the past several years (Exhibit 11).

Exhibit 10

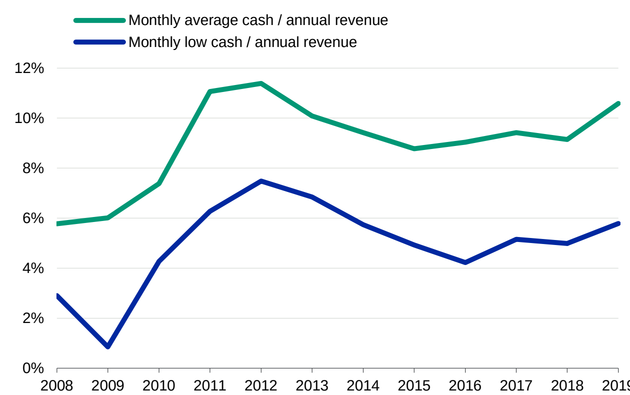
Available liquidity has remained stable since improving after the last recession



Source: State of Vermont

Exhibit 11

Available liquidity remains healthy as a share of state revenue



Source: State of Vermont

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 (Exhibit 12). However, as a share of state nominal GDP, Vermont's fiscal 2017 adjusted net pension liability (ANPL) was the 8th highest of the 50 states. As of fiscal 2017, Vermont ranked 10th in combined ANPL and NTSD as a percentage of GDP. 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.

Vermont's pension ratios improved a bit in fiscal 2018 and we estimate further improvement in fiscal 2019. This likely mirrors the trajectory in other states given stronger investment returns, in general, achieved by most states during their most recent fiscal year. On a comparative basis, Vermont's standing among the states may not change much with fiscal 2018 and fiscal 2019 data.

Still, Vermont's debt and pension burden is much lower than those of the most highly leveraged states. 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.

Exhibit 12

Vermont's debt burden is in line with state medians, but its pension burden is much higher

Net tax supported debt (NTSD) and adjusted net pension liability (ANPL)

NTSD…	as % of personal income	as % of GDP	per capita	as % of own-source revenue
Vermont (2018)	2.1%	2.1%	$1,140	19%
State median (2018)	2.2%	2.1%	$1,068	29%

ANPL…	as % of personal income	as % of GDP	per capita	as % of own-source revenue
Vermont (2018)	14.6%	14.6%	$7,850	129%
State median (2017)	6.9%	6.1%	$3,207	107%

Source: Moody's Investors Service

Exhibit 13

Vermont's debt statement ($million)

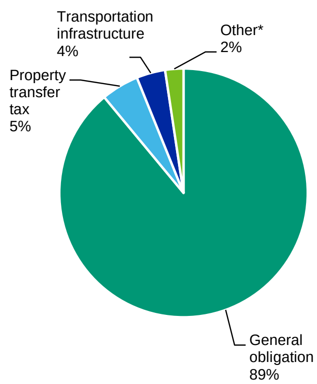
As of June 30, 2018

General obligation bonds	$636
Property transfer tax bonds	$35
Transportation infrastructure bonds	$27
Other*	$17
Total net tax-supported debt	**$714**
Moral obligations	
Vermont Municipal Bond Bank	$577
Vermont Econ. Dev. Auth.	$155
Vermont Housing Finance Auth.	$40
Vermont Student Assistance Corp.	$7
Total moral obligations	**$778**
Gross tax-supported debt	**$1,492**

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

Exhibit 14

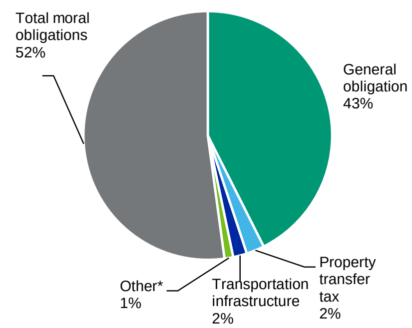
The majority of net tax-supported debt consists of general obligation bonds



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

Exhibit 15

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

Across both of its retirement plans (the Vermont State Retirement System and State Teachers' Retirement System), Vermont's pension contribution of $174 million in fiscal 2018 consumed just under 5% of own-source revenue. This contribution was just higher than the $173 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. In the couple years prior to fiscal 2018, Vermont's contributions fell below the "tread water" level, but the gap was a modest 0.5% of own-source revenue.

Vermont's unfunded pension liability, as measured by our ANPL, is the principal component of its leverage (Exhibit 16) and Exhibit 17 shows how Vermont's combined debt and pension burden, as a percentage of GDP, compares to the annual state median back to 2012.

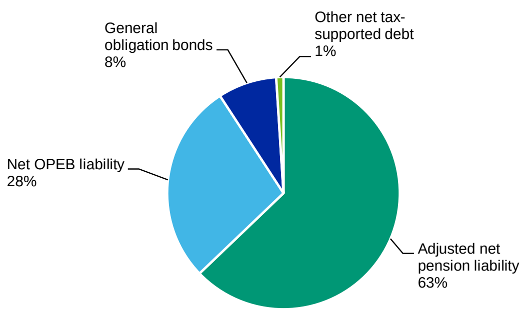
Despite remaining above the annual state median, Vermont's combined debt and pension burden is not on a rapidly growing path. And, as discussed above, the state's contribution practices are sound.

Available financial statements of VSERS and VSTRS indicate the state's ANPL declined moderately in the plans' fiscal 2018 to $4.6 billion from $4.9 billion. This will be reported in the state's fiscal 2019 financial statements.[1] Still, high leverage will remain a principal credit challenge of the state and a source of potentially rising expenditures.

Exhibit 16

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

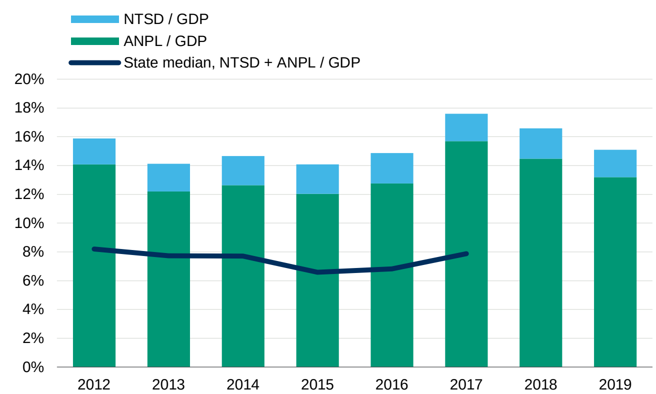
Composition of leverage, excluding non-tax supported debt



Source: State of Vermont and Moody's Investors Service

Exhibit 17

As a share of GDP, Vermont's debt and unfunded pensions are largely stable



2019 ratios assume growth in state GDP equal to the average growth rate of the past five years. Sufficient information is not yet available for all states to compute medians for 2018 and 2019.
Source: Vermont's audited financial statements, reports of VSERS and VSTRS, and Moody's Investors Service

The state's current funding policy, established in statute, is to fully amortize the unfunded liabilities of VSERS and VSTRS by 2038. In the past year, the state lowered the discount rate of both plans to 7.5% from 7.95%. To accommodate the lower investment return assumption and stay within the statutory funding target, the state plans to increase its contributions to VSERS in fiscal 2020 to 13.8% of payroll from 11.6% of payroll. The state will also increase contributions to VSTRS and those payments will approximate 19% of payroll compared to about 16% of payroll in the last year.

Vermont reports a net OPEB liability of $2.4 billion under newly adopted GASB statement 74 in its fiscal 2018 financial statements. The net OPEB liability is another 7% 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 $63 million in OPEB payments in fiscal 2018, which is incorporated in our calculation of the state's fixed cost burden (see Exhibit 3 above). Pursuant to a recently approved budget adjustment act, Vermont will transfer 50% of annual general fund surpluses to its VSERS OPEB plan.

Governance

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 18

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]	99.8%	Aa
b) Nominal Gross Domestic Product ($ billions) [1]	$33.7	A
Factor 2: Finances (30%)		
a) Structural Balance	Aa	Aa
b) Fixed Costs / State Own-Source Revenue [2]	8.2%	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]	16.6%	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 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.
Source: US Bureau of Economic Analysis, Vermont's audited financial statements and Moody's Investors Service

Endnotes

1 The state's pension reporting lags the financial reporting of VSERS and VSTRS by one year. The total pension liability and plan fiduciary statement included in the available fiscal 2018 audited financial statements of VSERS and VSTRS will be incorporated in the state's fiscal 2019 audited financial statements. We use the VSERS and VSTRS fiscal 2018 reports to calculate the state's fiscal 2019 ANPL.

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