MOODY'S
INVESTORS SERVICE

CREDIT OPINION
10 August 2017

New Issue

Rate this Research

Analyst Contacts

Dan Seymour, CFA 212-553-4871
VP-Senior Analyst
dan.seymour@moodys.com

Timothy Blake 212-553-4524
MD-Public Finance
timothy.blake@moodys.com

Emily Raimes 212-553-7203
VP-Sr Credit Officer/ Manager
emily.raimes@moodys.com

CLIENT SERVICES

Americas 1-212-553-1653

Asia Pacific 852-3551-3077

Japan 81-3-5408-4100

EMEA 44-20-7772-5454

State of Vermont

New Issue - Moody's Assigns Aaa to Vermont's GO Bonds; Outlook Stable

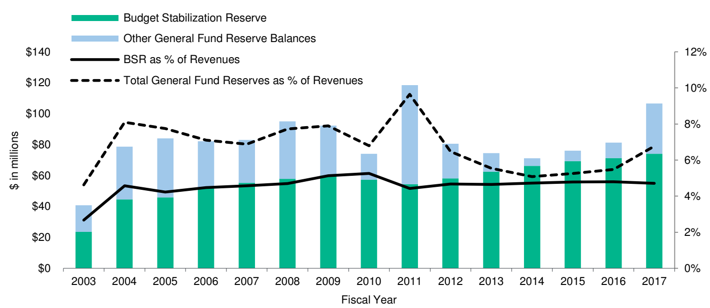
Summary Rating Rationale

Moody's Investors Service has assigned Aaa ratings to the State of Vermont's $33 million General Obligation Bonds 2017 Series A and $67 million General Obligation Bonds 2017 Series B. The outlook is stable. Moody's maintains an Aaa rating on Vermont's outstanding GO bonds.

The Aaa rating recognizes Vermont's strong fiscal management, a track record of running surpluses most years even when revenues do badly, modest debt, and a small but productive economy.

Vermont's primary credit challenge is its above-average net pension liability paired with an increasingly unfavorable demographic profile. We expect the state to maintain its commitment to balanced budgets even as this challenge poses some budget pressures in the next few decades.

Exhibit 1
Vermont Has Kept Reserves Steady Throughout Economic Cycles



Note: The spike in total general fund reserves in 2011 and drawdown in 2012 was primarily the Human Caseload Reserve, which relates to changes in federal Medicaid payments.
Source: State of Vermont

Credit Strengths

- Strong fiscal management leading to surpluses most years
- Good progress on funding pension liabilities
- Modest debt burden

Credit Challenges

- Above-average net pension liability
- Aging population and work force
- Slow economic and revenue growth

Rating Outlook

The stable outlook reflects the state's proven ability to balance its budget in a variety of operating environments. Having grown fund balance and liquidity substantially in the past few years, Vermont is financially well-positioned for the future.

Factors that Could Lead to an Upgrade

- Not applicable

Factors that Could Lead to a Downgrade

- Reversal of recent progress toward better funding of pension liabilities
- Reversal of historical track record of running budget surpluses even in bad years
- Protracted population loss, aging of population, and/or shrinkage of workforce leading to poor revenue trends and difficulty servicing liabilities

Key Indicators

Exhibit 2

Vermont	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Operating Fund Revenues (000s)	2,507,356	2,636,432	2,748,223	2,858,148	2,927,613
Balances as % of Operating Fund Revenues	7.6%	7.3%	2.5%	2.3%	0.6%
Net Tax-Supported Debt (000s)	507,624	549,995	597,520	627,192	666,935
Net Tax-Supported Debt/Personal Income	1.9%	2.0%	2.1%	2.1%	2.2%
Net Tax-Supported Debt/Personal Income 50 State Median	2.8%	2.6%	2.5%	2.5%	2.5%
Debt/Own-Source Governmental Funds Revenue	16.6%	16.9%	17.8%	18.1%	18.7%
Debt/Own-Source Governmental Funds Revenue Median	37.4%	36.1%	35.8%	34.4%	N/A
ANPL/Own-Source Govt Funds Revenue	129.7%	107.9%	110.6%	106.1%	N/A
ANPL/Own-Source Govt Funds Revenue Median	92.6%	87.6%	81.5%	83.1%	N/A
Total Non-Farm Employment Change (CY)	1.2%	0.7%	1.0%	0.8%	0.3%
Per Capita Income as a % of US (CY)	101.4%	102.5%	101.4%	100.8%	101.5%

Source: Moody's Investors Service

Recent Developments

Vermont ran another surplus in fiscal 2017 (ended 6/30/2017), increasing its total general fund reserve balances by about $25 million. The state achieved this despite a lackluster year for revenues. Personal income taxes and sales taxes each grew by less than 2% and came in below forecast, and corporate income taxes had a rough year because of a number of refund requests.

After a downgraded revenue forecast in January, the state as usual adjusted its budget to its revenues.

The state in June passed its fiscal 2018 budget, totaling $1.5 billion for the general fund and $5.8 billion for all funds. The forecast is for both income and sales taxes to accelerate this year.

Detailed Rating Considerations

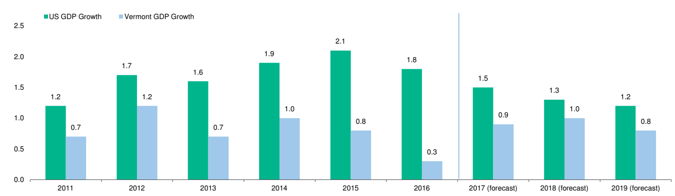
Economy

Vermont's small economy continues to experience demographic challenges familiar to the New England region. The state's population is declining modestly (down 0.2% last year) and aging (the median age of 42.7 is way above the US median age of 37.9), and its labor force is shrinking.

Vermont's economic growth and employment growth have tracked below US growth rates for most of this expansion, which is likely to continue given the demographic profile of the state.

Exhibit 3

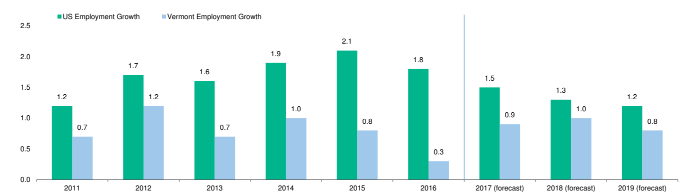
Vermont's Economic Growth is Lagging ..



Source: Vermont; Moody's Analytics

Exhibit 4

… as is Employment Growth



Source: Vermont; Moody's Analytics

That said, Vermont's population is well-educated and income in the state is above-average. The state's poverty and unemployment rates are both low. The median home in Vermont is worth 20% more than the median home in the United States. Receipts from the state's income tax and sales tax continue to grow steadily if modestly.

Advanced manufacturing, healthcare, and tourism will continue to drive the state economy overall.

Finances and Liquidity

Vermont's conservative fiscal management and healthy financial reserves are important strengths for the state.

We consider three of Vermont's funds to be operating funds: the general fund, the transportation fund, and the education fund. Of the state's $5.8 billion of total appropriations, roughly $3.5 billion are from state revenues (i.e., not federal aid), or what we call own-source revenues. The state's approximately $3 billion of tax revenue sources for these three funds are detailed below.

Exhibit 5

Vermont's Revenue Sources
($ in millions)

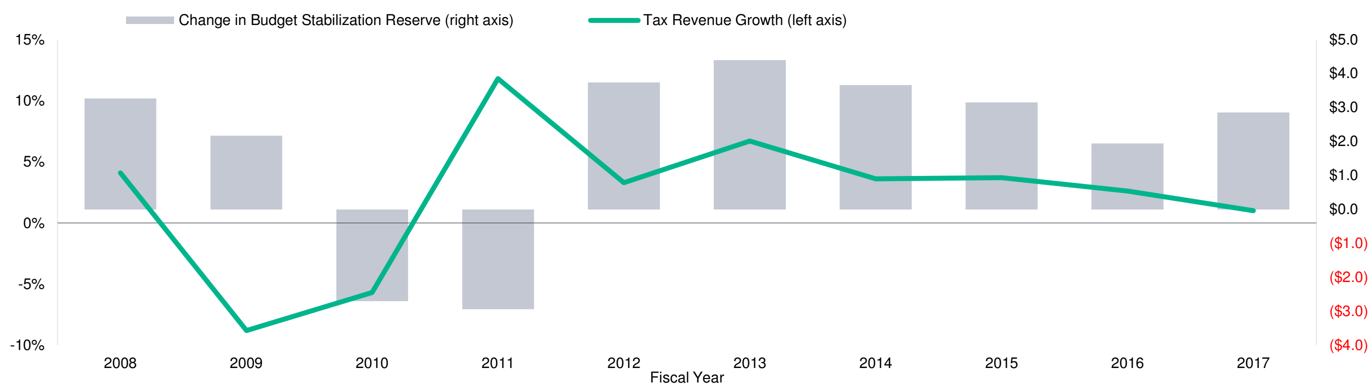
Revenue Source	2018 Budget	% of 2018 Tax Revenues	
Property Tax	$1,054	35%	Statewide property tax levy for education
Personal Income Tax	$795	26%	8.95% top marginal rate
Sales & Use Tax	$397	13%	6%
Gasoline Tax and Other Transportation Fees	$280	9%	2% of gasoline price subject to floor; other various fees
Meals & Rooms Tax	$172	6%	9%
Corporate Income Tax	$87	3%	8.5% top marginal rate
Insurance Tax	$58	2%	2% of premiums
Other	$211	7%	
Total	$3,054		

Source: State of Vermont

The state has proven its ability to maintain a good amount of liquidity and financial reserves even when revenues perform poorly. During the depths of the financial crisis, Vermont ran two deficits (indicated by a decline in the Budget Stabilization Reserve), each less than $3 million. Overall, Vermont has proven its ability to adjust its budget to its revenues even in bad years.

Exhibit 6

Vermont Runs Surpluses Most Years
$ in millions



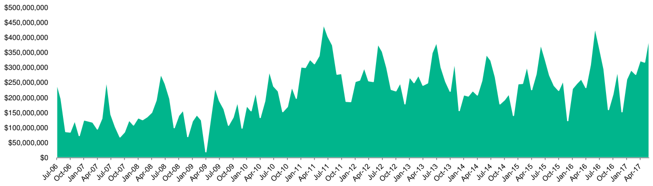
Source: State of Vermont

LIQUIDITY

Vermont's liquidity is good, and has improved over the past decade. The Vermont state treasurer is the custodian for state operating funds, as well as many non-operating funds.

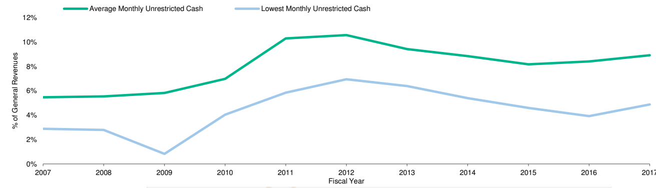
The treasurer reports a monthly unrestricted cash balance, which is a good proxy for the state's operating liquidity.

Exhibit 7
Monthly Unrestricted Cash



Source: Vermont State Treasurer

Exhibit 8
Cash as % of General Revenues



(Fiscal 2017 cash balances are as % of 2016 revenues)
Source: State of Vermont

Under state law, the treasurer can also at certain times of year borrow from certain segregated or restricted funds not shown in the above.

Debt and Pensions

Vermont's debt is modest and likely to stay that way.

Favorably, the state's Capital Debt Affordability Advisory Committee periodically recommends a borrowing authorization in an amount intentionally designed to help preserve the state's high credit rating. The state has adopted the committee's recommendations each year for 26 years.

Exhibit 9
Vermont's Debt is Modest Compared with Regional Peers
(A lower-number rank is a higher debt burden)

State	Debt to Personal Income (Rank)	Debt Per Capita (Rank)
Vermont (Aaa stable)	2.2% (27)	$1,068 (24)
US Median	2.5%	$1,006
Massachusetts (Aa1 stable)	9.8% (2)	$5,983 (2)
Connecticut (A1 stable)	9.7% (3)	$6,505 (1)
Rhode Island (Aa2 stable)	4.3% (12)	$2,131 (10)
Maine (Aa2 stable)	2.1% (30)	$889 (30)
New Hampshire (Aa1 stable)	1.6% (32)	$897 (29)

Source: Moody's Investors Service

DEBT STRUCTURE

Most of Vermont's capital borrowings are general obligation bonds.

Exhibit 10
Vermont's Debt Profile
$ in thousands

Debt	Outstanding 6/30/2017	Security
General Obligation Bonds	$577,060	Full Faith and Credit
Leases	$9,845	Lease Payments
Transportation Infrastructure Bonds	$28,340	Motor Fuels Tax
Net Tax Supported Debt	$615,245	

Source: State of Vermont

Vermont's debt service is $74 million a year, which is 2% of own-source revenues and about half the median debt service burden for a state.

In addition to the net tax supported debt shown above, Vermont has pledged its "moral obligation" commitment to cover debt service on a little more than $1 billion of debt, primarily municipal borrowings conducted through the Vermont Municipal Bond Bank (Aa1 stable).

As the borrowers for this moral obligation debt have always made their payments on time, we exclude this debt from the state's debt burden.

DEBT-RELATED DERIVATIVES

Vermont is not party to any debt-related derivatives.

PENSIONS AND OPEB

Vermont is an above-average pension state, and its net pension liability paired with its aging population remains the biggest credit weakness at the Aaa level. Nonetheless, Vermont's pension situation is nothing out of the ordinary for the New England region. Several neighboring states face similar pension challenges reflecting the demographic dynamics of an aging population and work force.

Exhibit 11

Vermont's Pension Liabilities are Big
(A lower-number rank is a bigger liability)

State	ANPL to Personal Income (rank)	ANPL Per Capita (rank)
Vermont (Aaa stable)	12.3% (10)	$5,873 (8)
US Median	5.8%	$2,393
New England Median	12.9%	$5,795
Connecticut (A1 stable)	22% (3)	$14,738 (3)
Massachusetts (Aa1 stable)	13.8% (6)	$8,419 (5)
Maine (Aa2 stable)	13.5% (8)	$5,717 (10)
Rhode Island (Aa2 stable)	9.7% (16)	$4,843 (14)
New Hampshire (Aa1 stable)	2.3% (46)	$1,267 (41)

ANPL stands for the Moody's Adjusted Net Pension Liability
Source: Moody's Investors Service

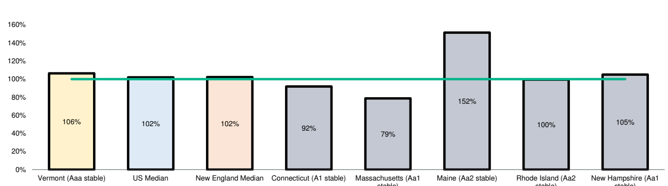
A few positives about Vermont's pension burden are important to note.

First, Vermont is aggressively funding its net pension liability, and has adopted several measures (such as lowering the assumed rate of return) to assure it remains on track to full funding by 2037.

As a proxy to measure whether a state's net pension liabilities are generally on track to grow or shrink, we look at the contribution it would need to make to "tread water" (meaning to keep net pension liabilities unchanged assuming all actuarial assumptions are met), and compare that to its actual contribution. Vermont's actual contributions are more than its tread water contribution, reflecting its path toward improving funded ratios over the coming years. This cannot be said about all states, and Vermont's pension contributions put it in a much better position than some of the states with the biggest pension problems.

Exhibit 12

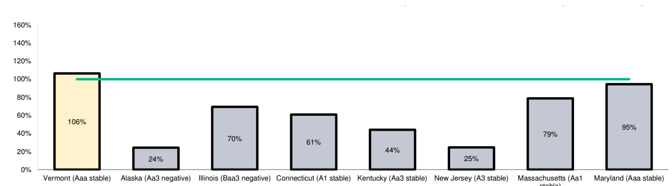
Actual Contribution Relative to "Tread Water" Contribution



Note: These figures are from our 2015 Pension Medians Report. The figures are likely to change each year.
Source: Moody's Investors Service

Exhibit 13

Vermont's Contributions Distinguish it from Biggest-Liability States



Note: This chart compares Vermont with the states with the biggest Moody's ANPL relative to personal income
Source: Moody's Investors Service

Crucially, we expect Vermont to continue servicing its pension liabilities with minimal budget stress, in contrast to some of the states shown in the above chart. Vermont's projected required contribution next year for the two plans the state contributes to is about $140 million. Those required contributions are projected to increase to about $320 million by 2037 – a big increase (and at risk of being higher if actuarial assumptions prove too optimistic), but nothing unmanageable for a state with more than $3 billion of projected tax revenues this year.

Overall, Vermont's pension liabilities are a weakness at the Aaa level, but a manageable one in concert with a low debt burden and a conservative fiscal approach.

Governance

Vermont's governance is a key strength. The state's financial management has demonstrated its ability to adjust its budget to revenue shortfalls. The state has run consistent surpluses in spite of lackluster revenue growth in some years and increasing pension contributions.

Legal Security

Vermont is pledging its full faith and credit to the payment of debt service on these general obligation bonds. State law requires the treasurer to pay debt service on the bonds whether or not the funds to do so have been appropriated.

Use of Proceeds

Proceeds of the bonds will be used for various capital projects.

Obligor Profile

Vermont is the second-smallest state by population (625,000). The state is primarily rural. Its gross state product of $30 billion is by far the smallest among the 50 states.

Methodology

The principal methodology used in this rating was US States Rating Methodology published in April 2013. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 14

Vermont (State of)

Issue	Rating
General Obligation Bonds 2017 Series A	Aaa
Rating Type	Underlying LT
Sale Amount	$33,465,000
Expected Sale Date	09/13/2017
Rating Description	General Obligation
General Obligation Bonds 2017 Series B	Aaa
Rating Type	Underlying LT
Sale Amount	$66,880,000
Expected Sale Date	09/13/2017
Rating Description	General Obligation

Source: Moody's Investors Service

REPORT NUMBER 1087349

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

MOODY'S INVESTORS SERVICE