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# STATE OF VERMONT
## OFFICE OF THE STATE TREASURER

**TO:** Governor Peter Shumlin
Shap Smith, Speaker of the House of Representatives
John Campbell, Senate President Pro Tempore
Alice Emmons, Chair, House Committee on Corrections and Institutions
Peg Flory, Chair, Senate Committee on Institutions
Stephen Klein and Members, Joint Fiscal Committee

**FROM:** Beth Pearce, State Treasurer Beth

**DATE:** September 30, 2015

**RE:** Capital Debt Affordability Advisory Committee Report for 2015

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Pursuant to 32 V.S.A. §1001, I am pleased to deliver on behalf of the Capital Debt Affordability Advisory Committee ("Committee" or "CDAAC") its "Recommended Annual Net Tax-Supported Debt Authorization" Report for 2015 ("Report").

This year is the second year of the FY2016-17 biennium, and the Committee is reaffirming its 2-year recommendation of an amount not to exceed $144,000,000, as was proposed by the Administration and adopted by the General Assembly in the 2015 Capital Bill.

As noted in the Report, debt issuance among Vermont's peer triple-A rated states and the fifty states generally has continued to decline, and for the first time in almost three decades, total debt outstanding has declined as well. This has resulted in a noticeable impact on Vermont's debt ratio rankings compared to other states, notwithstanding a need to consider the impact of capital spending on the economic conditions of the State. The Committee also notes that Vermont's projected debt issuance of $72 million per year exceeds scheduled debt retirements, meaning that the State's overall debt outstanding continues to rise. As a result, the Committee may potentially see pressure to consider further reductions in their recommendation for bond issuance in the next biennium.

On a positive note, pursuant to statutory changes made in 2012, the 2015 Capital Bill includes $11.559 million of additional debt authorization based upon the use of bond premium from the State's November 2014 General Obligation bond sale, for total biennium bond authorization of $155.559 million.

On a further positive note, in late September the State received a reaffirmation of its bond ratings, with stable outlooks, of Aaa (highest) from Moody's Investors Service, AAA (highest) from Fitch Ratings, and AA+ (second highest) from Standard & Poor's.

The rating agencies continue to express concern with Vermont's aging demographic profile and the long-term implications for its economy, as well as Vermont's larger-than-average unfunded pension and other post-employment benefits ("OPEB") liabilities. However, the agencies also uniformly praise Vermont's strong financial management, regular consensus revenue forecasting, funding the Annual Actuarially Required Pension Contributions, fiscal discipline and proactive steps to address budget gaps, and conservative debt management and affordability planning.

For the preservation of Vermont's excellent credit ratings, and all the attendant benefits those ratings provide, the Committee members and I urge the Governor and General assembly continue their unbroken 25-year record of adopting the Committee's debt recommendation. In addition, the most important steps the Governor and General Assembly can take to preserve Vermont's excellent ratings are to:

(1) fund the full annual required contributions ("ARCs") for the State Employees' and State Teachers' pension funds;

(2) maintain the full 5% statutory budget stabilization reserves for the General Fund, Education Fund and Transportation Fund; and

(3) fund the General Fund contribution to the newly-created Retired Teachers' Health and Medical Benefits Fund.

Finally, as I recommended last year, the State should try to build the General Fund Balance Reserve (i.e., "rainy day" fund) to 3% of the General Fund incrementally and over time, with the eventual goal of maintaining combined General Fund budget stabilization and "rainy day" reserves of 8%.

I remain convinced that preserving Vermont's triple-A credit ratings and excellent reputation with the financial markets is the best strategy to ensure market access, to maintain low borrowing costs, and ultimately to protect Vermont's taxpayers.

Maintaining the discipline required to keep our ratings can be very difficult, but it is within our collective control.

Please feel free to contact me with any questions.

# CAPITAL DEBT AFFORDABILITY ADVISORY COMMITTEE

# State of

# Vermont

## RECOMMENDED ANNUAL NET TAX-SUPPORTED DEBT AUTHORIZATION

**September 2015**

**Prepared by:**
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# TABLE OF CONTENTS

1. Overview.....1
2. State Debt.....4
3. Debt Guidelines.....16
4. Economic and Financial Forecasts.....31
5. State Guidelines and Recent Events.....36
6. Acknowledgements.....44
7. Appendices.....45

# 1. OVERVIEW

## Purpose

In accordance with 32 V.S.A., Chapter 13, Subchapter 8 "Management of State Debt," the Capital Debt Affordability Advisory Committee (the "Committee" or "CDAAC") is required to present to the Governor and the General Assembly each year, no later than September 30, an estimate of the maximum amount of new long-term net State tax-supported debt that Vermont may prudently authorize for the next fiscal year. In Sec. 1 of Act No. 104 of 2012, the General Assembly expressed its intent to move to a biennial capital budgeting cycle "to accelerate the construction dates of larger projects and thus create jobs for Vermonters sooner than would be possible under a one-year capital budgeting cycle." In response, starting with its 2012 Report the Committee has formally presented a two-year debt recommendation.

## Formal Recommendation

The Committee recommends that the State of Vermont maintain its current authorization of long-term net tax-supported debt for fiscal years 2016 and 2017 in an amount not to exceed $144,000,000, reflecting a reduction of 9.9% from the previous biennium recommendation of $159,900,000. CDAAC's formal recommended debt authorization complies with the State's triple-A debt affordability guidelines, is consistent with the current expectations of the rating agencies, and demonstrates that the State continues to manage its debt issuance program in a prudent and restrained manner.

From 2004 through 2011, the State was able to increase the amount of capital funding authorized, while at the same time improving or maintaining its position with regard to its debt guidelines. However, over the last few years, the State's relative position has slipped compared to other states. This was exacerbated in this year's calculation because total net-tax supported debt for US States declined in 2014. According to the Moody's State Debt Medians 2015 report this is the first drop in the 28 years Moody's has compiled such data. See Section 5, "State Debt Guidelines and Recent Events" for additional information.

The State's annual cost of debt service as a percentage of revenues is perhaps the single most important affordability metric, and a factor constraining this year's recommendation. See Section 5, "State Debt Guidelines and Recent Events" for a detailed discussion of CDAAC's analytical process.

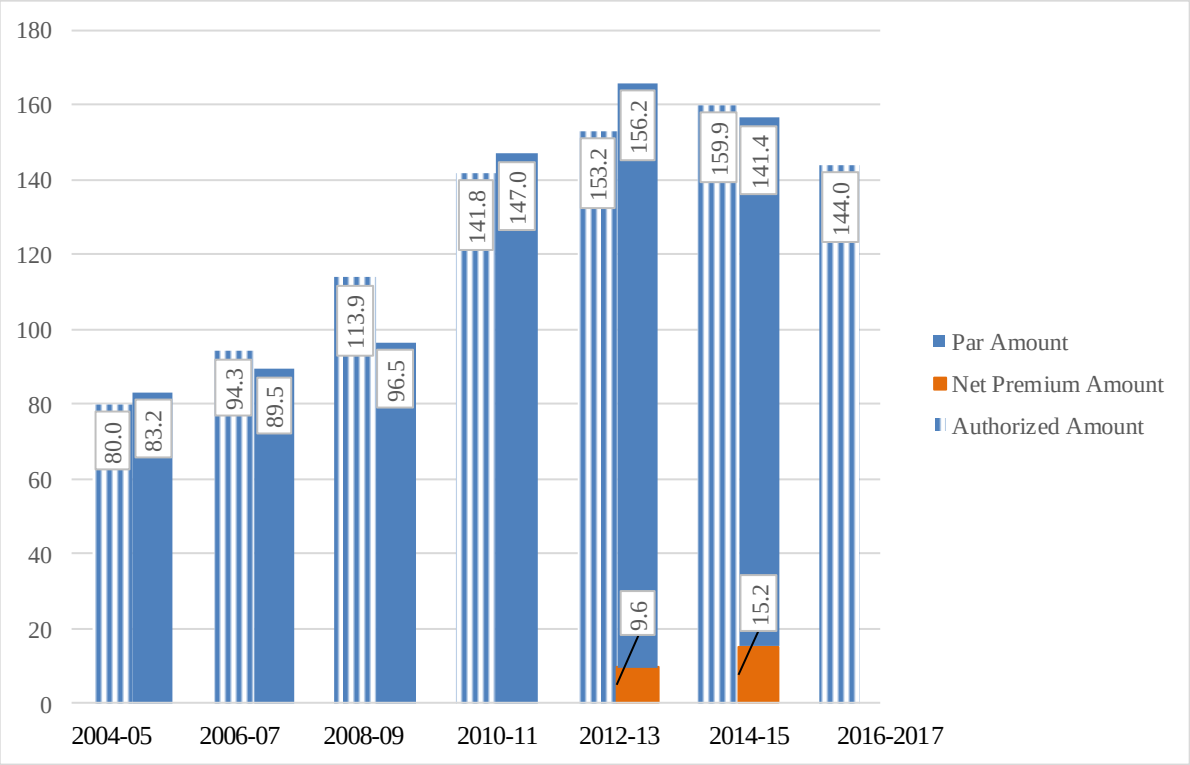
## Definition of Vermont's "Long-Term Net Tax-Supported Debt"

As a matter of practice, while the CDAAC legislation refers to an authorization of "net tax-supported debt," the amount of net tax-supported debt for the State means only general obligation (or "G.O.") debt, and this report assumes only G.O. debt for authorization purposes and in calculating its projected debt ratios. As indicated in Section 5 of this report, the rating agencies generally include the State's special obligation transportation infrastructure bonds ("TIBs"), issued by Vermont in 2010, 2012, and 2013, as part of net tax-supported debt, whereas the State treats this debt as self-supporting debt in its debt statement. While the CDAAC report includes "Dashboard Indicators" debt metrics calculated both with and without TIBs, it does not assume that such indebtedness is part of net tax-supported debt.

## Debt Authorizations and Issuance Amounts

The following chart presents the amounts of G.O. debt that have been authorized and issued by the State since fiscal year 2004 on a biennial basis. As shown below, the State has experienced a significant increase in debt authorizations and issuances over the last twelve years. For the period from 2004-2015, the biennial issuance has approximately doubled, and the compound annual growth rate in debt authorizations during this period has been 5.9%. Including the 2016-2017 recommended authorization amount, the compound annual growth rate in debt authorizations is 4.3%.

**STATE OF VERMONT**
**HISTORICAL GENERAL OBLIGATION. BOND AUTHORIZATIONS AND ISSUANCE BY BIENNIUM(1)(2)(3)**
**(IN MILLIONS OF DOLLARS)**




*Notes:*

1) Annual issuances do not include refunding bonds. Authorized but unissued debt has been carried forward and employed in subsequent years' bond issuances.

2) Pursuant to Section 34 of Act 104 of 2011, commencing in fiscal year 2013, premium received from the sale of bonds may be applied towards the purposes for which such bonds were authorized. Accordingly, the "Issuance" amount reflected above, commencing with fiscal year 2013, represents total proceeds (par plus net premium) of the bonds issued that were or are expected to be made available for capital purposes.

3) For fiscal years 2014-15, the "Authorized" amount reflects the two-year authorized amount of the General Assembly in the 2013 Capital Bill (Act 51), as amended by the 2014 Capital Bill (Act 178), and the "Issuance" amount includes $71.6 million of sale proceeds from the State's November 2013 bond issue, plus $85.0 million of sale proceeds of the State's December 2014 bond issue.

For fiscal years 2016-2017 the General Assembly has authorized $144,000,000 in new general obligation bonds, plus an additional $11,559,096.05 of prior year unissued bonds that were not needed due to the use of original issue bond premium to fund capital projects[1]. As of June 30, 2015 there were also $16,698,050.64 of unissued bonds from prior year capital bills. In order to model the 10-year projection of State debt, in the current biennium, $172,250,000 of debt is assumed to be sold, comprised of $99,735,000 during fiscal year 2016 and the remaining $72,515,000 for fiscal year 2017 ($99,737,843.96 and $72,519,303.00, each rounded down to the nearest $5,000 denomination, respectively).

## Capital Funding and Capital Plan

For fiscal years 2015-2016, the General Assembly in the 2015 Capital Bill (Act 26) authorized $157,207,752.05 in total revenues consisting of: $144,000,000 in new general obligation debt, and $11,559,096.05 from "unissued principal" and $1,648,656.00 from transfers. No more than $84,688,449 shall be appropriated in FY 2016 with the remaining $72,519,303 to be appropriated in FY 2017. The General Assembly created a formal review process by amending 32 V.S.A. § 701a to require Vermont's Department of Building and General Services to prepare a report on or before each January 15th to provide information on encumbrances, spending and project progress for authorized capital projects based on reporting received by the agencies that have received capital appropriations. CDAAC believes that this will result in a more efficient funding process for State capital projects.

With the passage of 32 V.S.A. § 310, the Administration will need to prepare and revise a ten-year State capital program plan on an annual basis, submitting it for approval by the general assembly. The plan will include a list of all recommended projects in the current fiscal year, as well as the five fiscal years thereafter. These recommendations will include an assessment, projection of capital need, and a comprehensive financial assessment. The Committee expects to annually review and consider future capital improvement program plans. Currently, the Agency of Transportation provides a capital improvement plan, which includes the current year appropriations and three years of projections. The web address is http://vtrans.vermont.gov/sites/aot/files/documents/aboutus/capprog/15a/FY15TransportationProgramAsPassed.pdf

[1] Effective in fiscal year 2013, 32 V.S.A. § 954 was amended to permit the use of bond premium received from the issuance of G.O. debt for capital purposes. Previously bond premium was used to pay debt service. In fiscal year 2013, the net bond premium was applied to capital appropriations, effectively reducing the par amount of the bonds issued, such that the par amount of the bonds plus the net original issue premium (bond proceeds) is applied to the capital appropriations amount and the difference (the net original issue premium) becomes additional bonding capacity and available for future years authorization. See Section 5, "State Guidelines and Recent Events, Statutory Change Relating to Use of Bond Premium and Effect on Affordability".

## 2. STATE DEBT

In general, the State has borrowed money by issuing G.O. bonds, the payment of which the full faith and credit of the State are pledged. The State has also borrowed money to finance qualifying transportation capital projects by issuing TIBs, the payment of which is not secured by the full faith and credit of the State. The State also has established certain statewide authorities that have the power to issue revenue bonds and to incur, under certain circumstances, indebtedness for which the State has contingent or limited liability.

### General Obligation Bonds

As stated above, the Committee includes only the State's G.O. debt as State net tax supported debt for purposes of its recommendation.

#### *Purpose*

The State has no constitutional or other limit on its power to issue G.O. bonds besides borrowing only for public purposes. Pursuant to various appropriation acts, the State has authorized and issued G.O. bonds for a variety of projects or purposes. Each appropriation act usually specifies projects or purposes and the amount of General Fund, Transportation Fund or Special Fund bonds to be issued, and provides that payment thereof is to be paid from the General, Transportation or Special Fund.

#### *Structure*

The State Treasurer, with the approval of the Governor, is authorized to issue and sell bonds that mature not later than twenty (20) years after the date of such bonds and such bonds must be payable in substantially equal or diminishing amounts annually. Under the General Obligation Bond Law, except with respect to refunding bonds, the first of such annual payments is to be made not later than five years after the date of the bonds. All terms of the bonds shall be determined by the State Treasurer with the approval of the Governor as he or she may deem for the best interests of the State.

### Capital Leases

The State must include capital leases in its total of net tax-supported debt. A capital lease is considered to have the economic characteristics of asset ownership, and is considered to be a purchased asset for accounting purposes. By comparison, an operating lease is treated as a rental for accounting purposes. A lease is considered to be a capital lease if any one of the following four criteria are met:

1. The life of the lease is 75% or longer than the asset's useful life;

2. The lease contains a purchase agreement for less than market value;

3. The lessee gains ownership at the end of the lease period; or

4. The present value of lease payments is greater than 90% of the asset's market value.

Historically the State has avoided capital leases, however, during the fiscal year 2015 audit, the lease for the State's office building at 27 Federal Street in St. Albans was deemed to be a

capital lease, having met criteria #4 above. This capital lease, with a fair market value of $10.646 million, is included as net tax-supported debt.

***Current Status***

G.O. Debt and Capital Leases Outstanding as of June 30, 2015: $595,797,368. Amount authorized but unissued at June 30, 2015 is $16,698,050.64. Furthermore, $11,559,096.05 of unissued principal has been appropriated due to the use of original issue bond premium that funded prior year capital projects.

***Ratings***

The State of Vermont's general obligation ratings were affirmed in August 2015 by each of the agencies that currently rate the State. The State enjoys triple-A ratings from both Fitch Ratings ("Fitch") and Moody's Investors Service ("Moody's"). Fitch raised the State's rating in conjunction with a recalibration (generally meaning increased ratings) conducted in 2010. Moody's raised the State's rating to triple-A in February 2007. S&P rates Vermont's G.O. bonds AA+ with a "stable" outlook. Approximately two years ago, S&P raised its rating outlook from "stable" to "positive." Following its most recent credit review, S&P revised its outlook back to "stable."

*"The outlook is revised to stable from positive reflecting Vermont's slower than average economic recovery which continues to pressure the budget in our view. In addition, pension and OPEB liabilities continue to be high relative to state peers. We believe that the state has a very strong budget management framework and should this lead to improved reserve levels in the future, a higher rating could be warranted. In addition, we believe that there has been progress in increasing pension contributions and certain actions have been taken to begin to address OPEB liability. Improved liability position could also translate to a higher rating level. While not envisioned at this time given the state's history of pro-actively managing its budget and recent actions to address post-retirement liabilities, substantial deterioration of budget reserves or a deteriorating liability position could pressure the current rating."*

## Net Tax-Supported Debt Outstanding

The State's aggregate net tax-supported principal amount of debt increased from $560.85 million as of June 30, 2014 to $595.7 million as of June 30, 2015, an increase of 4.3%. The table below sets forth the sources of the change in net tax-supported debt outstanding from fiscal year 2014 to fiscal year 2015 (in thousands):

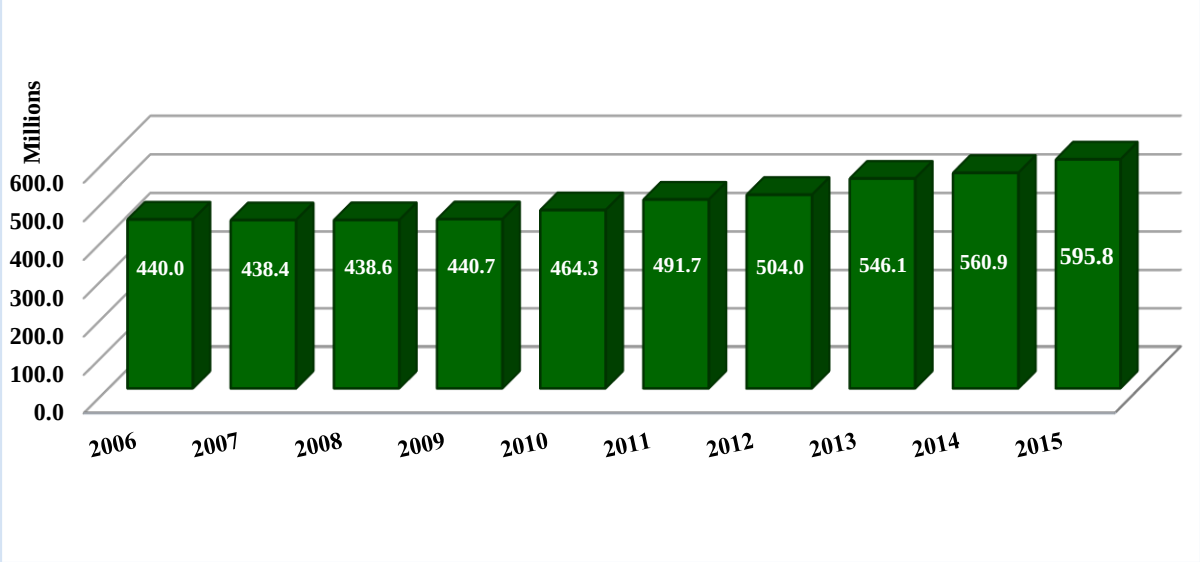
| | |
|---|---|
| Net Tax-Supported Debt as of 6/30/14 | $560,850 |
| G.O. New Money Bonds Issued | 73,555 |
| G.O. Refunding Bonds Issued | 36,205 |
| Less: Retired G.O. Bonds | (48,240) |
| Less: Refunded G.O. Bonds | (37,170) |
| Capital Lease | 10,646 |
| Less: Retired Capital Lease | (49) |
| Net Tax-Supported Debt as of 6/30/15 | $595,797 |

**STATE OF VERMONT**
**Debt Statement**
As of June 30, 2015 (In Thousands)

| | |
|---|---|
| **General Obligation Bonds:** | |
| General Fund | $575,087 |
| Transportation Fund | 9,203 |
| Special Fund | 910 |
| **Capital Leases:** | |
| 27 Federal Street, St. Albans | $10,597 |
| **Self-Supporting Debt:** | |
| Special Obligation Transportation Infrastructure Bonds (TIBs) | $31,395 |
| **Contingent Liabilities[2]:** | |
| VEDA Mortgage Insurance Program | $3,500 |
| VEDA Financial Access Program | 1,000 |
| VEDA Tech/Small Business Loan Program | 1,000 |
| **Reserve Fund Commitments[2]:** | |
| Vermont Municipal Bond Bank | $596,110 |
| Vermont Housing Finance Agency | 155,000 |
| VEDA Indebtedness | 130,000 |
| Vermont Student Assistance Corporation | 50,000 |
| Vermont Telecommunications Authority | 40,000 |
| Univ. of Vermont/State Colleges | 100,000 |
| **Gross Direct and Contingent Debt** | $1,703,802 |
| Less: | |
| Self-Supporting Debt | (31,395) |
| Contingent Liabilities | (5,500) |
| Reserve Fund Commitments | (1,071,110) |
| **Net Tax-Supported Debt** | **$595,797** |

[1]Does not include (i) the general obligation bonds proposed to be issued in October 2015, (ii) general obligation bonds that have been refunded, and (iii) the present value of outstanding capitalized leases in the amount of $1,229,101.
[2]Figures reflect the maximum amount permitted in statute. However, many of the Issuers have not issued debt or have not issued the maximum amount of debt permitted by statutes. See "Moral Obligation Indebtedness" herein for additional information.

**STATE OF VERMONT**
**GENERAL OBLIGATION BONDS OUTSTANDING FY 2006-2015**
**(in millions of dollars)**




The table below sets forth the State's existing principal amounts outstanding and annual debt service requirements, as of June 30, 2015, without the issuance of any additional G.O. debt. Rating agencies consider Vermont's rapid debt amortization, with almost 70% of current principal retired by 2026, to be a positive credit factor.

**OUTSTANDING GENERAL OBLIGATION NET TAX-SUPPORTED DEBT**
**(in thousands of dollars)**

| | GENERAL OBLIGATION BONDS (STATE DIRECT DEBT) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | General Fund | | Transportation Fund | | Special Fund | | Capital Leases | | Total | |
| Fiscal Year | Principal Outstanding | Debt Service* | Principal Outstanding | Debt Service | Principal Outstanding | Debt Service | Principal Outstanding | Debt Service | Principal Outstanding | Total Debt Service* |
| 2015 | 575,087 | 65,410 | 9,203 | 2,095 | 910 | 626 | 10,597 | 504 | 595,797 | 68,634 |
| 2016 | 528,733 | 67,334 | 7,652 | 1,947 | 320 | 628 | 10,488 | 886 | 547,193 | 70,796 |
| 2017 | 485,124 | 62,156 | 6,101 | 1,884 | - | 336 | 10,355 | 902 | 501,580 | 65,278 |
| 2018 | 443,806 | 58,385 | 4,649 | 1,709 | - | - | 10,192 | 922 | 458,647 | 61,017 |
| 2019 | 403,349 | 56,060 | 3,231 | 1,630 | - | - | 9,996 | 943 | 416,576 | 58,632 |
| 2020 | 363,662 | 53,816 | 2,813 | 560 | - | - | 9,764 | 964 | 376,239 | 55,340 |
| 2021 | 323,889 | 52,348 | 2,396 | 541 | - | - | 9,494 | 986 | 335,779 | 53,875 |
| 2022 | 286,837 | 48,132 | 1,978 | 522 | - | - | 9,182 | 1,008 | 297,997 | 49,662 |
| 2023 | 251,575 | 45,012 | 1,560 | 502 | - | - | 8,824 | 1,031 | 261,959 | 46,545 |
| 2024 | 218,685 | 41,431 | 1,300 | 327 | - | - | 8,417 | 1,054 | 228,402 | 42,812 |
| 2025 | 185,845 | 40,207 | 1,040 | 317 | - | - | 7,956 | 1,078 | 194,841 | 41,601 |
| 2026 | 155,005 | 37,069 | 780 | 306 | - | - | 7,437 | 1,102 | 163,222 | 38,477 |

* Debt service has been calculated using the net coupon rates on all Build America Bonds, taking into account the 35% interest subsidy from the federal government. The entire amount of the Build America Bonds is allocated to the General Fund. Totals may not agree due to rounding.

## General Obligation and General Fund Supported Bond Debt Service Projections

The State's projected annual general obligation ("G.O.") debt service and debt outstanding are presented on the following pages and summarized below. The projected debt service (at estimated interest rates ranging from 5% to 6.5%) assumes the issuance of $99,735,000 in FY 2016 and $72,515,000 in FY 2017 and $72,000,000 each fiscal year from 2018-2026.

**PROJECTED GENERAL OBLIGATION DEBT SERVICE AND DEBT OUTSTANDING**
**(in thousands of dollars)**

| Fiscal Year Ending | G.O. Debt Service | G.O. Bonds Outstanding |
|---|---|---|
| 6/30/2015 | 68,634 | 595,797 |
| 6/30/2016 | 70,796 | 646,928 |
| 6/30/2017 | 75,255 | 668,840 |
| 6/30/2018 | 78,363 | 689,287 |
| 6/30/2019 | 83,449 | 706,996 |
| 6/30/2020 | 87,771 | 722,839 |
| 6/30/2021 | 93,687 | 734,959 |
| 6/30/2022 | 96,621 | 746,157 |
| 6/30/2023 | 100,416 | 755,499 |
| 6/30/2024 | 103,363 | 763,722 |
| 6/30/2025 | 108,597 | 768,341 |
| 6/30/2026 | 111,684 | 771,302 |

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EXISTING AND PROJECTED NET TAX-SUPPORTED G.O. DEBT SERVICE ($000)

| FY | Current D/S | 2016 Issue $99.735M | 2017 Issue 72.515M | 2018 Issue 72.000M | 2019 Issue 72.000M | 2020 Issue 72.000M | 2021 Issue 72.000M | 2022 Issue 72.000M | 2023 Issue 72.000M | 2024 Issue 72.000M | 2025 Issue 72.000M | 2026 Issue 72.000M | Total Est. D/S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5.00% | 5.50% | 6.00% | 6.50% | 6.50% | 6.50% | 6.50% | 6.50% | 6.50% | 6.50% | 6.50% | |
| 2016 | 70,796 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 70,796 |
| 2017 | 65,278 | 9,977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 75,255 |
| 2018 | 61,017 | 9,727 | 7,618 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 78,363 |
| 2019 | 58,632 | 9,478 | 7,419 | 7,920 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 83,449 |
| 2020 | 55,340 | 9,228 | 7,219 | 7,704 | 8,280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87,771 |
| 2021 | 53,875 | 8,979 | 7,019 | 7,488 | 8,046 | 8,280 | 0 | 0 | 0 | 0 | 0 | 0 | 93,687 |
| 2022 | 49,662 | 8,729 | 6,820 | 7,272 | 7,812 | 8,046 | 8,280 | 0 | 0 | 0 | 0 | 0 | 96,621 |
| 2023 | 46,545 | 8,480 | 6,620 | 7,056 | 7,578 | 7,812 | 8,046 | 8,280 | 0 | 0 | 0 | 0 | 100,416 |
| 2024 | 42,812 | 8,230 | 6,420 | 6,840 | 7,344 | 7,578 | 7,812 | 8,046 | 8,280 | 0 | 0 | 0 | 103,363 |
| 2025 | 41,601 | 7,981 | 6,221 | 6,624 | 7,110 | 7,344 | 7,578 | 7,812 | 8,046 | 8,280 | 0 | 0 | 108,597 |
| 2026 | 38,477 | 7,731 | 6,021 | 6,408 | 6,876 | 7,110 | 7,344 | 7,578 | 7,812 | 8,046 | 8,280 | 0 | 111,684 |

EXISTING AND PROJECTED NET TAX-SUPPORTED G.O. BOND PRINCIPAL PAYMENTS ($000)

| FY | Current Principal | 2016 Issue $99.735M | 2017 Issue 72.515M | 2018 Issue 72.000M | 2019 Issue 72.000M | 2020 Issue 72.000M | 2021 Issue 72.000M | 2022 Issue 72.000M | 2023 Issue 72.000M | 2024 Issue 72.000M | 2025 Issue 72.000M | 2026 Issue 72.000M | Total Est. Principal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2016 | 48,604 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48,604 |
| 2017 | 45,613 | 4,990 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50,603 |
| 2018 | 42,933 | 4,990 | 3,630 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51,553 |
| 2019 | 42,071 | 4,990 | 3,630 | 3,600 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54,291 |
| 2020 | 40,337 | 4,990 | 3,630 | 3,600 | 3,600 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56,157 |
| 2021 | 40,460 | 4,990 | 3,630 | 3,600 | 3,600 | 3,600 | 0 | 0 | 0 | 0 | 0 | 0 | 59,880 |
| 2022 | 37,782 | 4,990 | 3,630 | 3,600 | 3,600 | 3,600 | 3,600 | 0 | 0 | 0 | 0 | 0 | 60,802 |
| 2023 | 36,038 | 4,990 | 3,630 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 0 | 0 | 0 | 0 | 62,658 |
| 2024 | 33,557 | 4,990 | 3,630 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 0 | 0 | 0 | 63,777 |
| 2025 | 33,561 | 4,990 | 3,630 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 0 | 0 | 67,381 |
| 2026 | 31,619 | 4,990 | 3,630 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 3,600 | 0 | 69,039 |

EXISTING AND PROJECTED NET TAX-SUPPORTED G.O. BONDS OUTSTANDING ($000)

| FY | Current Debt | 2016 Issue $99.735M | 2017 Issue 72.515M | 2018 Issue 72.000M | 2019 Issue 72.000M | 2020 Issue 72.000M | 2021 Issue 72.000M | 2022 Issue 72.000M | 2023 Issue 72.000M | 2024 Issue 72.000M | 2025 Issue 72.000M | 2026 Issue 72.000M | Total Est. Debt |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2015 | 595,797 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 595,797 |
| 2016 | 547,193 | 99,735 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 646,928 |
| 2017 | 501,580 | 94,745 | 72,515 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 668,840 |
| 2018 | 458,647 | 89,755 | 68,885 | 72,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 689,287 |
| 2019 | 416,576 | 84,765 | 65,255 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 706,996 |
| 2020 | 376,239 | 79,775 | 61,625 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 0 | 0 | 722,839 |
| 2021 | 335,779 | 74,785 | 57,995 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 0 | 734,959 |
| 2022 | 297,997 | 69,795 | 54,365 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 0 | 746,157 |
| 2023 | 261,959 | 64,805 | 50,735 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 0 | 755,499 |
| 2024 | 228,402 | 59,815 | 47,105 | 50,400 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 0 | 763,722 |
| 2025 | 194,841 | 54,825 | 43,475 | 46,800 | 50,400 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 0 | 768,341 |
| 2026 | 163,222 | 49,835 | 39,845 | 43,200 | 46,800 | 50,400 | 54,000 | 57,600 | 61,200 | 64,800 | 68,400 | 72,000 | 771,302 |

## Net Tax-Supported Debt Service by Fiscal Year

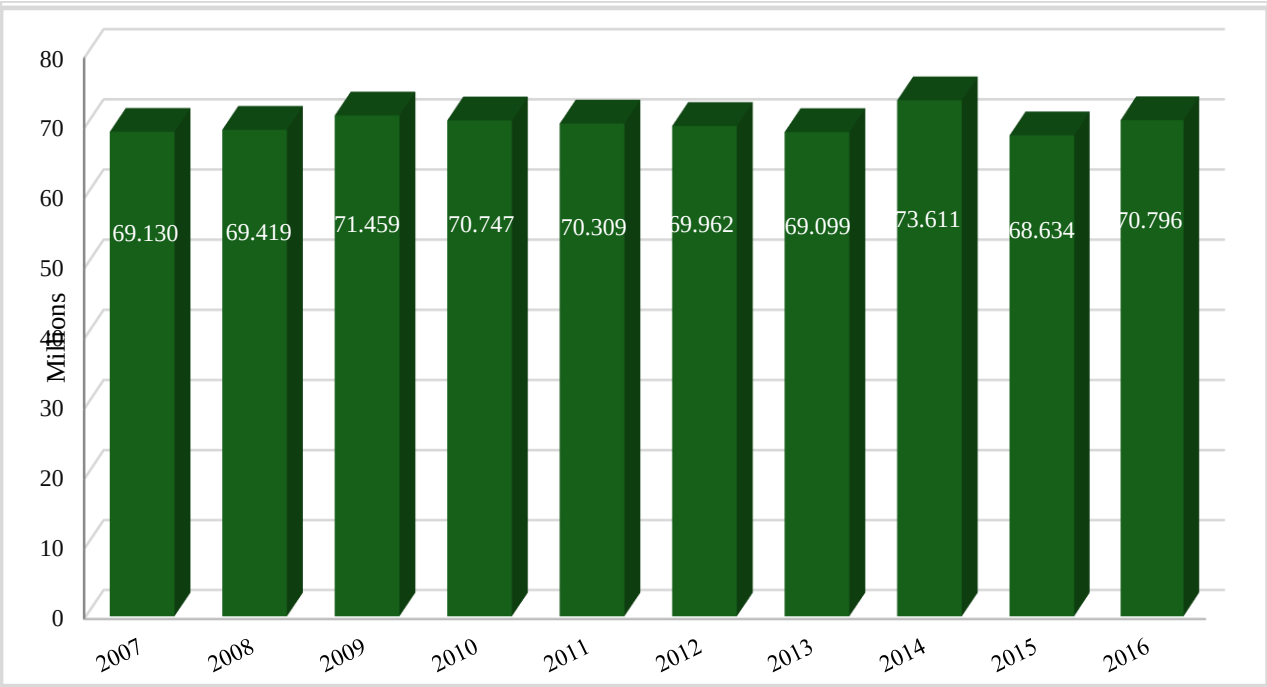
The State's scheduled G.O. net debt service requirement ("D/S") for fiscal year 2016 is $70.7 million, 3.2% more than the $68.6 million paid in fiscal year 2015.

(in $ thousands)

| | |
|---|---|
| Net Tax-Supported D/S Paid in FY 2015[1] | $68,634 |
| Decrease in D/S Requirement FY 2015 | (5,111) |
| D/S Decrease Due to G.O. Refunding in FY 2015 | (223) |
| D/S Increase Due to G.O. Debt Issued in FY 2015 | 7,496 |
| Net Tax-Supported D/S Due in FY 2016[1] | $ 70,796 |

[1] The debt service amount shown takes into account the 35% interest subsidy from the federal government (calculated to be $1,250,108 during FY 2015), payable on the $87,050,000 Build America Bonds as part of the 2010 Series A-2 and D-2 bond issues. See "Sequestration and Potential Impact on Build America Bonds Subsidy" herein for a discussion of the impact of sequestration on the State's subsidy.

**STATE OF VERMONT**
**HISTORICAL NET TAX-SUPPORTED DEBT SERVICE***
($'s in millions)




*Consists of G.O. Bonds. Fiscal Year 2014 debt service includes an additional principal amortization of $3,150,000 that was structured to expend bond funded original issuance premium within 12 months of the issue date to satisfy Internal Revenue Service requirements. Going forward this will not be necessary due to the 2012 amendment to 32 V.S.A. § 954 to permit the use of bond premium for capital projects.

## Authorized, But Unissued Debt

CDAAC believes the State's historical practice to annually extinguish all or a large portion of the authorized amount of debt to avoid a rising residual amount of authorized but unissued debt has enhanced the State's credit position as it is viewed favorably by the rating agencies.

As discussed in Section 6, "State Guidelines and Recent Events, Statutory Change Relating to Use of Bond Premium and Effect on Affordability" effective in fiscal year 2013, 32 V.S.A. § 954 was amended to permit the use of bond premium received from issuance of debt for capital purposes. The effect of this legislative change is that if future bonds are issued with a net original issuance premium, the par amount of bonds will be less than the authorized amount and the difference will become available for additional authorization as "unissued principal." CDAAC believes that the advantage of additional funding capacity associated with this legislative change far outweighs the additional unissued amounts that may result, and that the annual amount of unissued bonds will continue to be manageable.

## Special Obligation Transportation Infrastructure Bonds (TIBs)

The State has historically sold only G.O. bonds for its capital infrastructure purposes. Beginning in 2010, however, the State began issuing Special Obligation Transportation Infrastructure Bonds ("TIBs"). The bonds are payable from new assessments on motor vehicle gasoline and motor vehicle diesel fuel, and the State is not obligated to use any other funds to cover debt service on TIBs.

In 2012, S&P upgraded the State's Special Obligation Transportation Infrastructure Bonds from "AA" to "AA+" with a stable outlook. S&P indicated that the upgrade reflected strengthened debt service coverage, and further intention by the State to maintain coverage at no less than 3x, which is viewed as a strong level.

## Moral Obligation Indebtedness

Provided below is a summary of the State's moral obligation commitments as of June 30, 2015:

***Reserve Fund Commitments (all figures as of June 30, 2015):***

1. Vermont Municipal Bond Bank (VMBB): VMBB had $596.1 million of debt outstanding secured by reserve fund commitments from the State. At present, there is no limit on the amount of reserve fund ("moral obligation") debt that VMBB may issue and have outstanding. The General Assembly is legally authorized, but not legally obligated, to appropriate money to maintain the reserve funds at their required levels. Since participating borrowers have always met their obligations on bonds of the VMBB, the State has not been required to appropriate money to the reserve fund for this program. Based on the long history of the VMBB program, the rating agencies credit assessment of the underlying loans of the portfolio, the G.O. pledge of the underlying borrowers for a high percentage of the loan amounts and the State intercept provision for the payment of debt, it is not anticipated that it will be necessary for the State to appropriate money for the reserve fund.

2. Vermont Housing Finance Agency (VHFA): The VHFA had previously received a legislative commitment of $155 million of moral obligation debt secured by a reserve fund replenishment mechanism from the State. It has not been necessary, over the years, for the

State to appropriate money to fill up the debt service reserve fund. In 2009, the State authorized increased flexibility for VHFA's use of the moral obligation commitment specifically allowing for "pledged equity" contributions from the State's operating funds and increased flexibility in the use of the traditional debt service reserve structure. As of June 30, 2015, the principal amount of outstanding debt covered by this moral obligation was $46,900,000. As of June 30, 2015, the debt service reserve fund requirement for this debt was $3,335,646, and the value of the debt service reserve fund was $3,932,207.

3. Vermont Economic Development Authority (VEDA): VEDA has incurred indebtedness in an amount of $130 million secured by the State's reserve fund commitment. Based upon VEDA's historical performance and the quality of the loans it has provided and expects to provide, it is not anticipated that it will be necessary for the State to appropriate money for the reserve fund.

4. Vermont Telecommunications Authority (VTA): VTA was created in 2007 to facilitate broadband and related access to Vermonters, and received authorization for $40 million of debt with the State's moral obligation pledge. The passage of Act No. 190 of 2014 created the Division for Connectivity as the successor entity to the VTA. The VTA did not issue any debt prior to ceasing operations on July 1, 2015.

5. University of Vermont and the Vermont State Colleges: Legislation was passed in 2008 to provide a moral obligation pledge from the State to the University of Vermont in the amount of $66 million and to the Vermont State Colleges in the amount of $34 million. No bonds have been issued to date. Currently, if bonds are issued, it is not expected that the State will need to appropriate money to the respective reserve funds for these purposes.

6. Vermont Student Assistance Corporation (VSAC): The State has provided $50 million of moral obligation commitment by the State to VSAC. Like VHFA, in 2009, the State authorized increased flexibility for VSAC's use of the moral obligation commitment specifically allowing for "pledged equity" contributions from the State's operating funds and increased flexibility in the use of the traditional debt service reserve structure. In 2011, VSAC issued $15 million of moral obligation supported bonds, of which $10.89 million is outstanding. It is not expected that the State will need to appropriate money to the respective reserve funds for VSAC.

Importantly, there has been a substantial increase in the State's moral obligation commitments over the past five (5) years. For the period ended June 30, 2009 the total amount of moral obligation commitment was approximately $903.6 million. Currently the moral obligation commitment stands at a total of $1,071.1 million, with the VMBB and VEDA granted most of the difference. It should be noted that the actual amount of moral obligation debt outstanding in the amount of $783.13 million is less than the amount authorized and the total commitment as of fiscal year 2009 ($903.6 million). See the table on the next page for a summary of the total reserve fund commitments and the outstanding bond amounts:

### *Reserve Fund Commitments (all figures as of June 30, 2015):*

**State of Vermont**
**Moral Obligation Commitments and Debt Outstanding**
**As of June 30, 2015**

| Issuer Name | Amount Provided In Statute | Actual Par Amount Outstanding |
|---|---|---|
| Vermont Municipal Bond Bank | $596,110,000 | $596,110,000 |
| Vermont Economic Development Authority | 130,000,000 | 130,000,000 |
| Vermont Housing Finance Agency | 155,000,000 | 46,900,000 |
| Vermont Student Assistance Corporation | 50,000,000 | 10,120,000 |
| University of Vermont | 66,000,000 | 0 |
| Vermont State Colleges | 34,000,000 | 0 |
| Vermont Telecommunications Authority | 40,000,000 | 0 |
| | $1,071,110,000 | $783,130,000 |

As the State's rating has improved, the value of its moral obligation has also grown. It is therefore apparent that there has been greater pressure on the State to raise the size of its existing moral obligation commitments and/or to assign the moral obligation pledges to State borrowers. However, without some form of containment, it is possible that an ever-increasing moral obligation debt load could erode the State's credit position.

In accordance with the appropriate provisions from the enabling statute that created CDAAC, the Committee has already been authorized to consider "any other long-term debt of instrumentalities of the state not secured by the full faith and credit of the state, or for which the state legislature is permitted to replenish reserve funds." Therefore, it is appropriate for CDAAC to develop guidelines for Vermont regarding the size and use of the State's moral obligation debt.

In recent years, CDAAC has adjusted its debt load guidelines to take into account the comparative debt load statistics for triple-A rated states throughout the country. Unfortunately, none of the rating agencies prepare comparative data on the respective triple-A rated states on moral obligation or contingent debt. Moreover, there is little consistency among the triple-A rated states regarding the size, nature and role of such debt. The types of contingent debt are quite varied among the states, including state guarantees of local school debt, back-up support for revenue obligations, etc. Because of the mixture of contingent debt applied by triple-A states, it would not be possible to employ guidelines that are similar to the G.O. guidelines that have been utilized by CDAAC in connection with its annual recommendation of long-term G.O. debt to be authorized by the legislature.

There had been, for several years, discussions within CDAAC regarding the establishment of guidelines for limiting the amount of moral obligation debt that the State should authorize. In an accompanying chart, the State's net tax-supported debt statement, consisting entirely of the State's G.O. outstanding indebtedness, is presented, as of June 30, 2015, at $595,797,368. Using 225% of G.O. debt for establishing a limit of moral obligation debt, the State would have had $269,434,078 in additional moral obligation capacity. Using 200% of G.O. debt for establishing a limit of moral obligation debt, the State would have had $120,484,736 in additional capacity. Using a more conservative 195%, the State still has $90,694,868 in additional capacity.

At this point, CDAAC believes that a range of 200-225% is appropriate in determining the amount of moral obligation commitments that should be outstanding in comparison to the State's G.O. debt. Since CDAAC has not recommended legislative action to codify any statutory limits on the incurrence of moral obligation debt, CDAAC will continuously monitor the developing size of moral obligation commitments and report the results.

At some point, should a major infrastructure requirement or other critical financing need arise that would be appropriately funded through a financing agency, the State may, as appropriate, consider rescinding the existing but unused moral obligation authority and have it transferred – taking into account the limited availability for the State to provide additional moral obligation capability as a result of the 200-225% administrative limits.

Ultimately, the effect of contingent liabilities and reserve fund commitments on the State's debt affordability is a function of the level of dependency for the repayment of this particular debt on the State's general operating revenues. With respect to this matter, the principle that the rating agencies follow give us relevant guidance: Until such time that the State's guarantee or contingent obligation becomes actual (through a payment or a replenishment obligation being made), then such debt or guarantee is not included in the State's net tax-supported indebtedness. To the extent that the State has not been called upon to pay for the debt components, as envisioned in Subparagraph (5) of the CDAAC legislation, then those items should not become quantifiable factors included in the affordability analysis.

Information on the principal amount and the debt service associated with the moral obligation commitments is found in the comprehensive annual financial statements for each of the entities:

Vermont Municipal Bond Bank*:
http://www.vmbb.org/about/annual-reports-audits/

Vermont Economic Development Authority:
http://www.veda.org/about-veda/annual-reports/

Vermont Housing Finance Authority:
http://www.vhfa.org/about/financial/annual_statements.php

Vermont Student Assistance Corporation
http://services.vsac.org/wps/wcm/connect/VSAC/VSAC/Investor+Relations/Audited+Financial+Statements/

*Financials are based on a December 31 year end.

***Contingent or Limited Liability Obligations (all figures as of June 30, 2015):***

1. VEDA Mortgage Insurance Program: The State had a contingent liability of $3.5 million with respect to this Program. As of June 30, 2015, the Authority had mortgage insurance contracts outstanding of $1,105,077.
2. VEDA Financial Access Program: The State had a contingent liability of $1.0 million with respect to this Program. The State's contingent liability at June 30, 2015 was $127,484.
3. VEDA Tech/Small Business Loan Program: The State had a contingent liability of $0.7 million with respect to this Program. The State's contingent liability at June 30, 2015 was $691,300.

***Municipal Debt***

In conformance with the standards followed by the rating agencies, this evaluation does not set forth or incorporate any debt obligations of Vermont municipalities. Should any such obligations be required to be payable by the State (e.g., through assumption or support of local debt as part of a financial emergency), a corresponding and appropriate amount related to the State's contribution would then be required to be included in the analysis. At present, no such liability has occurred, and, therefore, none has been included in this review.

***Analysis of Types of Debt and Structure.***

CDAAC annually goes through an extensive analysis to determine the "cost-benefit of various levels of debt financing." The cost-benefit is demonstrated by CDAAC's determination of the amount of debt that the State should annually authorize and still achieve compliance with CDAAC's articulated affordability guidelines. This evaluation is fundamental to CDAAC's responsibility in recommending annually the amount of net tax-supported indebtedness (i.e., G.O., at present) that should be authorized by the State.

Second, with respect to the "types of debt," Vermont and its financing agencies have utilized a great variety of debt types. At present, revenue bonds are sold by the State (TIBs), VSAC, VHFA and VEDA, among others. The State Treasurer's office has looked at a series of options for possible revenue bond issuance, but, because of Vermont's special circumstances, revenue bonds have generally not appeared to be a comprehensive answer to the State's direct infrastructure needs. Notwithstanding the fact that there have been no new revenue bond uses recently for funding Vermont infrastructure requirements, with the exception of TIBs, the State will continue to explore possible opportunities in this respect that would not cause debt load or debt management difficulties for Vermont. CDAAC and the State Treasurer's Office are constantly reviewing prospects for funding of required infrastructure through approaches that will not add to the State's net tax-supported indebtedness.

The maturity schedules employed for State indebtedness are directly tied to State statute. Moreover, as indicated elsewhere herein, Vermont's current debt repayment for its G.O. bonds allows the State to recapture debt capacity at an attractive pace. Shortening the debt service payments would have the effect of placing more fixed costs in the State's annual operating budget, leaving less funds available for discretionary spending. Lengthening debt payments would increase the aggregate amount of the State's outstanding indebtedness, which would cause Vermont's debt per capita and debt as a percentage of personal income to rise, reducing the State's ability to comply with its affordability guidelines. Notwithstanding these

limitations, there may be opportunities for the State in the future to adjust the maturity of its indebtedness to achieve various debt management goals over time.

## 3. DEBT GUIDELINES

For a number of years Vermont has pursued a strategy to achieve a triple-A rating from all three nationally recognized credit rating agencies. To facilitate this goal, CDAAC and the State have employed conservative debt load guidelines that are consistent with the measures that the rating agencies use to measure debt burden. The most widely-employed guidelines are:

1. Debt Per Capita;
2. Debt as a Percentage of Personal Income;
3. Debt Service as a Percentage of Revenues; and
4. Debt as a Percentage of Gross State Product

CDAAC notes that Debt as a Percentage of Personal Income and Debt Service as a Percentage of Revenues are generally understood to be the better credit indicators of the State's ability to pay; however, the rating agencies continue to calculate and monitor the State's Debt Per Capita and Debt as a Percentage of Gross State Product. These guidelines are described in greater detail below. CDAAC has not used Debt as a Percentage of Gross State Product as a specific guideline due to the fact that this measure has a high correlation and tracks the trend of the Debt as a Percentage of Personal Income. Since 2011, CDAAC has tracked this information and included it on the "Dashboard Indicators." This report contains current and historical information on Vermont's Debt as a Percentage of Gross State Product compared to a peer group of other triple-A states.

At present, CDAAC uses a peer group made up of all states that have at least <u>two</u> triple-A ratings from the national rating agencies (the "Peer Group"). The Committee over time reviews the composition of the Peer Group. Similar to many of the U.S. States in 2014, the majority of the Peer Group reduced their debt levels, consequently improving the median debt statistics for the Peer Group. The Peer Group's Debt Per Capita decreased from $907 in 2014 to $856 in 2015, Debt as a Percentage of Personal Income decreased from 2.4% in 2014 to 2.2% in 2015 and Debt as a Percentage of Gross State Product decreased from 2.1% in 2014 to 1.8% in 2015. Vermont was in the minority of states that increased debt levels in 2014. As a result of the improvement in the Peer Group's median debt statistics and Vermont's increased debt levels the State's relative rankings deteriorated. If the State continues to increase authorized debt levels in future years it is at risk of further declines in its relative ranking to its triple-A Peer Group. See "State Guidelines and Recent Events" for more information.

In addition, both Moody's and S&P have developed rating scorecards for state issuers which include an assigned specific criteria and weighting for "debt" as one of their factors in the overall rating of a state. The rationale given by the rating agencies for the score card process is to provide more transparency for state ratings. The specific criteria are described in greater detail below.

## Debt Per Capita

Since, 2004, the Committee has adopted a guideline for the State to equal or perform better than the 5-year average of the mean and median debt per capita of a peer group of triple-A rated states over the nine year projection period. The 5-year average of the mean of the Peer Group is $1,013 and the 5-year average of the median of the Peer Group is $904. Based on data from Moody's, Vermont's 5-year average debt per capita figure is $836, which is below the 5-year mean and median for triple-A rated states. This guideline of debt per capita relative to its Peer Group has been the State's limiting factor in terms of calculating debt capacity over the past few years.

It should be emphasized that Vermont's debt per capita relative ranking, after improving for a number of years, has slipped modestly recently. According to Moody's most recent information, the State's relative position among states improved during the period 2003 through 2011 with respect to net tax-supported debt per capita, improving from 16$^{th}$ position in 2003 to 37$^{th}$ position in 2011. From 2011 through 2015 the State's position slipped gradually each year and in 2015$^{th}$ the State ranked 28$^{th}$ (rankings are in numerically descending order, with the state having the highest debt per capita ranked 1$^{st}$ and the state having the lowest debt per capita ranked 50$^{th}$).

## Debt as a Percent of Personal Income

The Committee also adopted a guideline for the State to equal or perform better than the 5-year mean and 5-year median of the Peer Group on the basis of debt as a percent of personal income. At present the targets are 2.3% and 2.2% for the mean and the median respectively (the five-year average of Moody's Mean and Moody's Median for the Peer Group is 2.5% and 2.4%, respectively). Based on data from Moody's, Vermont's 2015 net tax supported debt as a percent of personal income is 2.1% - better than the 5-year mean and 5-year median for triple-A rated states. According to Moody's most recent information, the State's relative position among states improved during the period 2003 through 2010 with respect to net tax-supported debt as a percent of personal income, improving from 17$^{th}$ position in 2003 to 36$^{th}$ position in 2010 where it remained in 2011 and 2012. The State's relative ranking dropped slightly in the years 2013 to 2015 and the State is currently ranked in the 31$^{st}$ position.

## Debt Service as a Percentage of Revenues

This guideline does not create a compliance requirement for triple-A rated states. Rather, it is an absolute guideline, not a comparative one. CDAAC's adopted standard is a ratio of no greater than 6% for annual G.O. debt service as a percent of the annual aggregate of General and Transportation Funds revenue. At present, this ratio equals approximately 4.1%. Looking back, Vermont's debt service as a percentage of revenues improved from the 2002-2004 period where it was over 6%, to 5.4% in 2005. Since 2005, the State's debt service as a percent of revenue has been less than 5.1% except for the recession years of 2009 and 2010, where the statistic increased to 5.5% and 5.7%. Although CDAAC has maintained a standard of a 6.0% limit for debt service as a percent of revenues, the effect of the recent recession on this ratio has been taken into account. CDAAC notices the 0.4% to 0.6% increase in the ratio immediately after the start of the recession and believes that a comparable amount of cushion is appropriate for its final recommendation.

In terms of the debt service projections, the analysis assumes future interest rates (coupons) range on pro forma bond issues from 5.0% in fiscal year 2016, increasing annually by 0.5% to a maximum rate of 6.5% in fiscal years 2019 through 2026.

The CDAAC statute defines operating revenues as General and Transportation Fund revenues based upon the historic general flexibility in their uses of these funds for meeting financial operations of the State. In 2012, Moody's reintroduced a Moody's Median for debt service as a percent of operating revenues ("Debt Service Ratio"), and included the State's Education Fund as part of the State's operating revenue for purposes of this calculation (see Section 5, "State Guidelines and Recent Events"). Because Moody's uses a much larger revenue base in its analysis, Moody's Debt Service Ratio for Vermont, at 2.8%, is substantially lower than the CDAAC guideline, and results in Vermont's comparatively high (favorable) Moody's ranking of 38$^{th}$ out of the 50 states.

**Debt as a Percent of Gross State Product**

At present the 2015 Moody's mean and median for debt as a percentage of gross state product for the Peer Group is 1.8% and 1.8%, respectively. (Moody's calculates their 2015 statistics based on 2014 net tax supported debt as a percentage of 2013 state gross domestic product.) Based on data from Moody's, Vermont's 2014 net tax supported debt as a percentage of gross state product is 2.0%, which is slightly higher than the median and the mean for the Peer Group states. However it is still lower than the five year average of the mean and the median of 2.1% for the Peer Group. According to Moody's most recent information, the State's relative position among states was 32 in 2013 and 2014 and slipped to 30$^{th}$ in 2015.

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## STATE OF VERMONT
## 2015 STATES RATED TRIPLE-A BY TWO OR MORE RATING AGENCIES
## (as of August 18, 2015)

| 2015 Triple-A Rated States(1) | Moody's | S&P | Fitch |
|---|---|---|---|
| Alaska | Yes | Yes | Yes |
| Delaware | Yes | Yes | Yes |
| Florida | No | Yes | Yes |
| Georgia | Yes | Yes | Yes |
| Indiana(2) | Yes | Yes | Yes |
| Iowa(2) | Yes | Yes | Yes |
| Maryland | Yes | Yes | Yes |
| Missouri | Yes | Yes | Yes |
| North Carolina | Yes | Yes | Yes |
| South Carolina | Yes | No | Yes |
| Tennessee | Yes | No | Yes |
| Texas | Yes | Yes (2) | Yes |
| Utah | Yes | Yes | Yes |
| Virginia | Yes | Yes | Yes |
| VERMONT | Yes | No | Yes |

(1) Fitch raised Florida, Iowa, Vermont, Tennessee and Texas to triple-A in 2010 as part of their Ratings Recalibration effort. Moody's raised Indiana, Iowa, New Mexico, Tennessee and Texas to triple-A in 2010 as part of their Ratings Recalibration effort. Twenty states are currently rated triple-A by one or more of the nationally recognized rating agencies. Fifteen states are currently rated triple-A by two or more of the nationally recognized rating agencies.

(2) Indicates issuer credit rating since state does not have any G.O. debt or the rating agency does not provide a rating on the state's G.O. debt.

## STATE OF VERMONT
## MEAN DEBT RATIOS

| Per Capita | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| All States | $1,408 | $1,408 | $1,416 | $1,436 | $1,419 |
| Triple-A[1] | 1,014 | 1,024 | 1,021 | 1,027 | 980 |
| VERMONT | **747** | **792** | **811** | **878** | **954** |

| % of Personal Income | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| All States | 3.2% | 3.4% | 3.4% | 3.2% | 3.1% |
| Triple-A[1] | 2.7 | 2.7 | 2.6 | 2.4 | 2.3 |
| VERMONT | **1.9** | **2.0** | **1.9** | **2.0** | **2.1** |

[1] These calculations exclude all Vermont numbers and include only states rated triple-A by two or more of the three rating agencies during the year shown. See chart "Debt Per Capita Comparison" for complete listing of triple-A states and respective ratings and triple-A time periods.

## STATE OF VERMONT
## DEBT PER CAPITA COMPARISON

**Peer Group States (All states with at least two triple-A rating)**
**5-Year Average Mean and 5-Year Average Median Excluding Vermont:**
**MEAN: $1,013 MEDIAN: $904**
**5-Year Average Vermont: $836**

| Triple-A Rated States[1] | Moody's Ratings[2] | S&P Ratings[2] | Fitch Ratings[2] | Moody's Debt Per Capita 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|
| Alaska | Aaa/Negative | AAA/Negative | AAA/Stable | 1,257* | 1,454* | $1,251 | $1,573 | $1,489 |
| Delaware | Aaa/Stable | AAA/Stable | AAA/Stable | 2,676 | 2,674 | 2,536 | 2,485 | 2,438 |
| Florida | Aa1/Stable | AAA/Stable | AAA/Stable | 1,150 | 1,167 | 1,087 | 1,008 | 973 |
| Georgia | Aaa/Stable | AAA/Stable | AAA/Stable | 1,103 | 1,099 | 1,061 | 1,064 | 1,043 |
| Indiana | Aaa/Stable | AAA/Stable | AAA/Stable | 471 | 446 | 424 | 533 | 474 |
| Iowa | Aaa/Stable | AAA/Stable | AAA/Stable | 270 | 310 | 287 | 275 | 250 |
| Maryland | Aaa/Stable | AAA/Stable | AAA/Stable | 1,681 | 1,742 | 1,799 | 1,791 | 1,889 |
| Minnesota[3] | Aa1/Stable | AA+/Positive | AA+/Stable | 1,159 | 1,148* | 1,315* | 1,402* | 1,538* |
| Missouri | Aaa/Stable | AAA/Stable | AAA/Stable | 775 | 741 | 699 | 668 | 606 |
| North Carolina | Aaa/Stable | AAA/Stable | AAA/Stable | 782 | 815 | 853 | 806 | 739 |
| South Carolina | Aaa/Stable | AA+/Stable | AAA/Stable | 887 | 827 | 780 | 749 | 672 |
| Tennessee | Aaa/Stable | AA+/Stable | AAA/Stable | 345 | 343 | 343 | 324 | 327 |
| Texas | Aaa/Stable | AAA/Stable[4] | AAA/Stable | 612 | 588 | 580 | 614 | 406 |
| Utah | Aaa/Stable | AAA/Stable | AAA/Stable | 1,222 | 1,393 | 1,275 | 1,187 | 1,060 |
| Virginia | Aaa/Stable | AAA/Stable | AAA/Stable | 1,058 | 1,169 | 1,315 | 1,302 | 1,356 |
| **MEAN[5]** | _____ | _____ | _____ | **1,014** | **1,024** | **1,021** | **1,027** | **980** |
| **MEDIAN[5]** | _____ | _____ | _____ | **973** | **827** | **957** | **907** | **856** |
| VERMONT | Aaa/Stable | AA+/Stable | AAA/Stable | 747 | 792 | 811 | 878 | 954 |

[1] States that carry at least two triple A ratings.

[2] Ratings as of August 18, 2015.

[3] Minnesota was downgraded by Fitch to AA+ from AAA on July 7, 2011 and it was downgraded by Standard and Poor's to AA+ from AAA on September 23, 2011. Minnesota is included in calculating the means and medians in the years from 2010 to 2011.

[4] Texas was upgraded by S&P to AAA from AA+ on September 27, 2013.

[5] These calculations exclude all Vermont numbers.

*Indicates that the state was not rated triple-A thereby two or more of this rating agencies during the year shown. Amount not used in calculating the mean or median for the year.

## STATE OF VERMONT
## DEBT AS % OF PERSONAL INCOME COMPARISONS

**Peer Group States (All states with at least two triple-A ratings)**
**5-Year Average Mean and 5-Year Average Median Excluding Vermont:**
**MEAN: 2.5% MEDIAN: 2.4%**
**5-Year Average Vermont: 2.0%**

| Triple-A Rated States | Moody's Debt as % of 2013 Personal Income | | | | |
|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2015 |
| Alaska | 3.0%* | 3.3%* | 2.8% | 3.2% | 3.0% |
| Delaware | 6.8 | 6.8 | 6.2 | 5.7 | 5.5 |
| Florida | 3.0 | 3.0 | 2.8 | 2.5 | 2.4 |
| Georgia | 3.3 | 3.1 | 3.0 | 2.9 | 2.8 |
| Indiana | 1.4 | 1.3 | 1.2 | 1.4 | 1.2 |
| Iowa | 0.7 | 0.8 | 0.7 | 0.6 | 0.6 |
| Maryland | 3.5 | 3.6 | 3.6 | 3.4 | 3.5 |
| Minnesota | 2.8 | 2.7* | 3.0* | 3.0* | 3.2* |
| Missouri | 2.2 | 2.0 | 1.8 | 1.7 | 1.5 |
| North Carolina | 2.3 | 2.3 | 2.4 | 2.1 | 1.9 |
| South Carolina | 2.7 | 2.5 | 2.3 | 2.2 | 1.9 |
| Tennessee | 1.0 | 1.0 | 0.9 | 0.8 | 0.8 |
| Texas | 1.6 | 1.5 | 1.5 | 1.5 | 1.0 |
| Utah | 3.9 | 4.4 | 3.8 | 3.4 | 3.0 |
| Virginia | 2.4 | 2.6 | 2.9 | 2.7 | 2.8 |
| **MEAN[1]** | **2.7** | **2.7** | **2.6** | **2.4** | **2.3** |
| **MEDIAN[1]** | **2.6** | **2.5** | **2.6** | **2.4** | **2.2** |
| VERMONT | 1.9 | 2.0 | 1.9 | 2.0 | 2.1 |

[1] These calculations exclude all Vermont numbers and include only states rated triple-A by two or more of the rating agencies during the periods shown, year ended June 30th.

* Indicates that the state was not rated triple-A by two or more of the rating agencies during the year shown. Amount not used in calculating the mean or median for the year.

## STATE OF VERMONT
## DEBT AS % OF GROSS STATE DOMESTIC PRODUCT

**Peer Group States (All states with at least two triple-A ratings)**
**5-Year Average Mean and 5-Year Average Median Excluding Vermont:**
**MEAN: 2.1% MEDIAN: 2.1%**
**5-Year Average Vermont: 2.0%**

| Moody's Debt as % 2013 Gross State Domestic Product | | | | | |
|---|---|---|---|---|---|
| **Triple-A Rated States** | **2011** | **2012** | **2013** | **2014** | **2015** |
| Alaska | 1.9%* | 2.1%* | 1.8% | 2.2% | 1.9% |
| Delaware | 4.0 | 3.9 | 3.5 | 3.5 | 3.6 |
| Florida | 2.9 | 3.0 | 2.8 | 2.5 | 2.4 |
| Georgia | 2.8 | 2.7 | 2.5 | 2.5 | 2.3 |
| Indiana | 1.2 | 1.1 | 1.0 | 1.2 | 1.0 |
| Iowa | 0.6 | 0.7 | 0.6 | 0.6 | 0.5 |
| Maryland | 3.4 | 3.4 | 3.5 | 3.3 | 3.3 |
| Minnesota | 2.4 | 2.3* | 2.5* | 2.6* | 2.7* |
| Missouri | 2.0 | 1.8 | 1.7 | 1.6 | 1.3 |
| North Carolina | 1.9 | 1.9 | 1.9 | 1.7 | 1.6 |
| South Carolina | 2.6 | 2.4 | 2.2 | 2.0 | 1.8 |
| Tennessee | 0.9 | 0.9 | 0.8 | 0.8 | 0.7 |
| Texas | 1.4 | 1.3 | 1.2 | 1.2 | 0.7 |
| Utah | 3.1 | 3.4 | 2.9 | 2.6 | 2.2 |
| Virginia | 2.1 | 2.2 | 2.5 | 2.4 | 2.5 |
| **MEAN[1]** | **2.2** | **2.2** | **2.1** | **2.0** | **1.8** |
| **MEDIAN[1]** | **2.3** | **2.2** | **2.1** | **2.1** | **1.8** |
| VERMONT | 1.9 | 1.9 | 2.0 | 2.0 | 2.0 |

[1] These calculations exclude all Vermont numbers and include only states rated triple-A by two or more of the rating agencies during the periods shown, year ended June 30th.

*Indicates that the state was not rated triple-A by two or more of the rating agencies during the year shown. Amount not used in calculating the mean or median for the year.

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## STATE OF VERMONT
## HISTORIC AND PROJECTED DEBT RATIOS

| | Net Tax-Supported Debt Per Capita (in $) | | | Net Tax-Supported Debt as Percent of Personal Income | | | Net Tax-Supported Debt Service as Percent of Revenues [5] | | |
|---|---|---|---|---|---|---|---|---|---|
| Fiscal Year (ending 6/30) | State of Vermont | Moody's Median | State's Rank [4] | State of Vermont | Moody's Median | State's Rank [4] | State of Vermont [5] | Moody's Median | State's Rank [4] |
| Actual [1] | | | | | | | | | |
| 2002 | 813 | 573 | 18 | 3.0 | 2.3 | 14 | 6.5 | n.a. | n.a. |
| 2003 | 861 | 606 | 16 | 3.0 | 2.2 | 17 | 6.7 | n.a. | n.a. |
| 2004 | 724 | 701 | 24 | 2.5 | 2.4 | 25 | 6.0 | n.a. | n.a. |
| 2005 | 716 | 703 | 25 | 2.3 | 2.4 | 27 | 5.4 | n.a. | n.a. |
| 2006 | 707 | 754 | 29 | 2.2 | 2.5 | 28 | 5.1 | n.a. | n.a. |
| 2007 | 706 | 787 | 28 | 2.1 | 2.4 | 30 | 5.1 | n.a. | n.a. |
| 2008 | 707 | 889 | 32 | 2.0 | 2.6 | 33 | 5.0 | n.a. | n.a. |
| 2009 | 692 | 865 | 34 | 1.8 | 2.5 | 35 | 5.5 | n.a. | n.a. |
| 2010 | 709 | 936 | 36 | 1.8 | 2.5 | 36 | 5.7 | n.a. | n.a. |
| 2011 | 747 | 1066 | 37 | 1.9 | 2.8 | 36 | 5.1 | n.a. | n.a. |
| 2012 | 792 | 1117 | 34 | 2.0 | 2.8 | 36 | 4.9 | n.a. | n.a. |
| 2013 | 811 | 1074 | 33 | 1.9 | 2.8 | 35 | 4.6 | n.a. | n.a. |
| 2014 | 878 | 1054 | 30 | 2.0 | 2.6 | 34 | 4.7 | n.a. | n.a. |
| 2015 | 954 | 1012 | 28 | 2.1 | 2.5 | 31 | 4.2 | n.a. | n.a. |
| Current [2] | 947 | n.a. | n.a. | 1.9 | n.a. | n.a. | 4.2 | n.a. | n.a. |
| Projected (FYE 6/30) [3] | | State Guideline [6] | | | State Guideline [7] | | | State Guideline | |
| 2016 | 1,029 | 929 | | 2.0 | 2.4 | | 4.2 | 6.0 | |
| 2017 | 1,061 | 955 | | 2.0 | 2.4 | | 4.3 | 6.0 | |
| 2018 | 1,091 | 982 | | 2.0 | 2.4 | | 4.3 | 6.0 | |
| 2019 | 1,117 | 1,009 | | 1.9 | 2.4 | | 4.5 | 6.0 | |
| 2020 | 1,140 | 1,037 | | 1.9 | 2.4 | | 4.6 | 6.0 | |
| 2021 | 1,156 | 1,066 | | 1.9 | 2.4 | | 4.8 | 6.0 | |
| 2022 | 1,171 | 1,095 | | 1.9 | 2.4 | | 4.8 | 6.0 | |
| 2023 | 1,183 | 1,126 | | 1.8 | 2.4 | | 4.8 | 6.0 | |
| 2024 | 1,193 | 1,157 | | 1.8 | 2.4 | | 4.8 | 6.0 | |
| 2025 | 1,197 | 1,189 | | 1.8 | 2.4 | | 4.9 | 6.0 | |
| 2026 | 1,199 | 1,222 | | 1.7 | 2.4 | | 4.9 | 6.0 | |

Note: Shaded figures in fiscal years 2016-2025 represent the period when Vermont's debt per capita is projected to exceed the projected State Guideline consistent with the current debt per capita guideline calculation methodology and the assumption that the State will issue bonds consistent with the proposed two-year authorization (footnote (3)). See Section 5, "State Guidelines and Recent Events, Debt Per Capita State Guideline – Future Debt Capacity Risk."

(1) Actual data compiled by Moody's Investors Service, reflective of all 50 states. Moody's uses states' prior year figures to calculate the "Actual" year numbers in the table.

(2) Calculated by Public Resources Advisory Group, using outstanding G.O. debt of $595.8 million as of 6/30/15 divided by Vermont's 2015 population of 627,477 as projected by EPR.

(3) Projections assume issuance of $99.735 million in FY 2016 and $72.515 million of G.O. debt in FY2017 and $72.000 million in FY 2018 through FY2026.

(4) Rankings are in numerically descending order (i.e., from high to low debt).

(5) Revenues are adjusted reflecting "current law" revenue forecasts based on a consensus between the State's administration and legislature. Current debt service is net of the 35% federal interest subsidies on the Build America Bond issues, and projected debt service is based on estimated interest rates ranging from 5% to 6.5% over the project period. Calculated by Public Resources Advisory Group.

(6) State Guideline equals the 5 year average of Moody's median for States with two triple-A ratings $904 increasing annually at 2.78% (average increase for these states over the last 10 years).

(7) The 5-year Moody's median for triple-A States (2.4%) has not been increased for the period 2016-2026 since the annual number is quite volatile, ranging from 2.2% to 2.6% over the last five years.

## "Dashboard" Indicators

| | Vermont[a] | Median Triple-A States[d] |
|---|---|---|
| Net Tax-Supported Debt: | $595,797,368 | $3,459,931,000[c] |
| Debt As A Percent Of Gross State Product: | 1.95% | 1.8%[c] |
| Debt Per Capita: | $950 | $856[c] |
| Debt As A Percent Of Personal Income: | 1.94% | 2.2%[c] |
| Debt Service As A Percent Of Operating Revenue[b]: | 4.19% | N/A |
| Rapidity Of Debt Retirement: | 36.9% (In 5 Years) | N/A |
| | 67.3% (In 10 Years) | N/A |
| | 90.4% (In 15 Years) | N/A |
| | 100.00% (In 20 Years) | N/A |

(a) Debt statistics for Vermont are as of June 30, 2015. Estimates of FY 2015 Gross State Product, Population, Personal Income and Operating Revenue prepared by EPR.
(b) Aggregate of State's General Fund and Transportation Fund.
(c) Source: Moody's Investors Service, 2015 State Debt Medians Report calculated by Public Resources Advisory Group.
(d) These calculations exclude all Vermont numbers and include only states rated triple-A by two or more of the rating agencies during the periods shown, year ended June 30th.

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## Standard & Poor's Methodology for U.S. State Ratings

On January 3, 2011, Standard & Poor's released the final version of its "U.S. State Ratings Methodology." A copy of the methodology was included in the Appendices to the CDAAC 2011 report. This methodology provides, for the first time, a comprehensive presentation that sets forth in a systematic way a quantification approach to rating states. By assigning numerical values to its various rating criteria, the agency has moved closer to the establishment of state ratings through a quantification approach. The methodology includes the important categories of review, referred to as "factors," by Standard & Poor's:

(i) Government Framework,
(ii) Financial Management,
(iii) Economy,
(iv) Budgetary Performance and Flexibility, and
(v) Debt and Liability Profile.

In addition, the sub-categories, or "metrics" within each factor are weighed. Specifically, S&P assigns a score of 1 (strongest) to 4 (weakest) for twenty-eight metrics, grouped into the five factors listed above. Each of the metrics is given equal weight within the category, and then each factor is given equal weight in an overall 1 through 4 score. The overall scores correspond to the following indicative credit levels for the highest three ratings categories:

| Score | Indicative Credit Level |
|---|---|
| 1.0-1.5 | AAA |
| 1.6-1.8 | AA+ |
| 1.9-2.0 | AA |
| 2.1-2.2 | AA- |
| 2.3-2.5 | A+ |
| 2.5-2.6 | A |
| 2.7-3.0 | A- |
| 3.1-4 | BBB category |

In 2011, S&P reported that Vermont's score was approximately 1.7, corresponding to the State's AA+ rating from S&P. The major metrics where Vermont could improve, that to varying degrees are within the State's control, were consistent with what S&P outlined when they placed the State on positive outlook: (a) increasing formal budget-based reserves to 8%; (b) increasing pension funded ratios, and (c) planning for and accumulating assets to address other post-employment benefits.

In October 2013, S&P's most recent report, Vermont's composite scope was 1.6, a slight improvement over the 2011 report. The scores for each factor are as follows:

| | |
|---|---|
| 1.6 | Government Framework |
| 1.0 | Financial Management, |
| 1.6 | Economy, |
| 1.4 | Budgetary Performance and Flexibility, and |
| 2.4 | Debt and Liability Profile. |

The debt and liability profile is the fifth of the five major factors in S&P's assessment of the indicative credit level. S&P notes that they review debt service expenditures and how debt payments are prioritized versus funding of other long-term liabilities and operating costs for future tax streams and other revenue sources. They evaluate three key metrics which they score individually and weight equally: debt burden, pension liabilities, and other post-employment benefits. For each metric there may be multiple indicators (as they are for the debt metric) that they score separately and then average to develop the overall score for the metric.

In terms of debt, the CDAAC reports since 2011 have incorporated certain new pieces of information such as debt as a percent of state domestic product and relative rapidity of debt retirement (See the "Dashboard Indicators). Provided below is a table with S&P debt statistics and scores for Vermont.

**S&P' Debt Score Card Metrics**

| | Low Ranking (Score of 1) | Moderate Ranking (Score of 2) | Vermont's Statistics[1] | Vermont's Score |
|---|---|---|---|---|
| Debt per Capita | Below $500 | $500 - $2,000 | 950 | 2 |
| Debt as a % of Personal Income | Below 2% | 2% - 4% | 2% | 2 |
| Debt Service as a % of Spending | Below 2% | 2%- 6% | 2% | 2 |
| Debt as a % of Gross State Product | Below 2% | 2% - 4% | 2% | 2 |
| Debt Amortization (10 year) | 80% - 100% | 60%-80% | 67% | 2 |
| | | | | |

[1] As calculated and reported by S&P.

**Moody's US States Rating Methodology**

On April 17, 2013, Moody's Investors Services released the final version of its "US States Rating Methodology."

This methodology provides an updated explanation of how Moody's assigns ratings to US State G.O.s or their equivalents. The report provides market participants with insight into the factors Moody's considers being most important to their state ratings. The report also introduces a new state methodology scorecard. The scorecard's purpose is to provide a reference tool that can be used to approximate credit profiles for US states.

The methodology includes the following "key factors" and "sub-factors" as referred to by Moody's:

| Broad Rating Factors | Factor Weighting | Rating Sub-Factors | Sub-Factor Weighting |
|---|---|---|---|
| Economy | 20% | Income | 10% |
| | | Industrial Diversity | 5% |
| | | Employment Volatility | 5% |
| Governance | 30% | Financial Best Practices | 15% |
| | | Financial Flexibility/Constitutional Constraints | 15% |
| Finances | 30% | Revenues | 10% |
| | | Balances and Reserves | 10% |
| | | Liquidity | 10% |
| Debt | 20% | Bonded Debt | 10% |
| | | Adjusted Net Pension Liability | 10% |
| **Total** | **100%** | **Total** | **100%** |

Debt is the fourth factor of the four major factors in Moody's scorecard. The debt factor captures both debt and other long-term liabilities, such as unfunded pension liabilities. Moody's treats pension liabilities as a form of debt, and looks at the state's unfunded pension liabilities as a percent of state revenues.

In terms of Moody's scorecard they look at debt and pension liability compared to revenues to measure the relative affordability of the state's debt obligations based on current revenues sources.

| Sub-Factor | Measurement | Aaa | Aa1 | Aa2 | Aa3 | A | Baa and below |
|---|---|---|---|---|---|---|---|
| Debt Measure | NTSD/Total Governmental Fund Revenues | Less than 15% | 15%-30% | 30%-50% | 50%-90% | 90%-130% | Greater than 130% |
| Pension Measure | 3 year Average Adjusted Net Pension Liability/Total Governmental Funds Revenues | Less than 25% | 25%-40% | 40-80% | 80-120% | 120-180% | Greater than 180% |

For the debt measure Moody's uses net-tax supported debt (NTSD) divided by total governmental fund revenues. Moody's includes the State's Education Fund as part of the State's operating revenue for purpose of this calculation and its calculation of debt service as a percentage of operating revenues. See Section 5, "State Guidelines and Recent Events". Also as discussed in the "Special Obligation Transportation Infrastructure Bonds (TIBs)" section of the report, the credit rating agencies include TIBs in their calculation of NTSD. Based on this assumption Moody's debt measure for Vermont for FY 2014 is approximately 19%.

Based on the Moody's Median report titled "US Pension Medians Increase in Fiscal 2012" dated January 30, 2014, Vermont's 3 year Average Adjusted Net Pension Liability (ANPL) was $3.0 billion. This as a percentage of 2012 governmental revenues was 80.6%, ranking Vermont 19 of the 50 states, with 1 being the worst and 50 being the best. See "Moody's Adjustment to Pension Data and Adjusted State Pension Liability Medians" herein for additional information regarding Vermont's relative standing to other triple-A states regarding pensions.

Moody's fundamental analytical framework also includes the following additional key rating factors and sub-factors that do not fall into the overall rating scorecard, but could shift a rating up or down anywhere from a half a notch to multiple notches from what the scorecard suggests. These factors include:

*I. Additional Economic Factors*

- A very narrow economy, with little expectation of growth and/or diversification, and/or shrinking
- Population due to outmigration (could bring rating down)
- A poverty rate that is greater than 30% (could bring rating down)
- Expected future status as a growth state (could bring rating up)

*II. Additional Governance Factors*

- Political polarization that makes budgeting and financial decisions difficult (could bring rating down)
- Lack of congressional representation (in the case of commonwealth or US territories) (could bring rating down)
- Weakness in fiscal best practices, such as late CAFR's, weakness in consensus revenue estimating process, etc. (could bring rating down)
- Heightened risk of lack of appropriation for debt service, or other nonpayment of debt service (could bring rating down)
- Long history of conservative financial management, and/or frequent revenues estimating (at least four times a year) (could bring rating up)

*III. Additional Financial Factors*

- Large structural imbalance, even in economic upswings (could bring rating down)
- Cash flow notes or other cash management tools used due to severe liquidity strain, may cross fiscal years or be rolled (could bring rating down)
- Lack of market access (could bring rating down)
- Delaying vendor payments due to cash flow strain (could bring rating down)

*IV. Additional Debt Factors*

- Significantly strong or weak pension characteristics (could bring rating up or down)
- Inflexible or risky debt structure, including high variable-rate and swap exposure relative to liquidity (could bring rating down)
- Extremely high debt ratios (debt/personal income greater than 50%, for example) (could bring rating down)
- Any structural subordination of GO debt (could bring rating down)
- Consolidated borrowing on behalf of local governments (could bring rating up)

*V. Additional Other Factors*

- Other factors specific to a state or credit that may affect rating
- Operating Environment

## Fitch Rating's Exposure Draft for Revisions to its Rating Criteria for US State and Local Governments

On September 10, 2015, Fitch Ratings published an exposure draft for revisions it is proposing to its criteria for U.S. state and local governments.

One of the major changes relates to the fundamental role that a government's economy plays in analysis. 'Whereas it was a standalone bucket in the past, we now propose incorporating the economy into the analysis of four focused key rating factors,' said Managing Director Laura Porter. 'We are introducing scenario analysis to explicitly consider the economic cycle in order to better communicate our expectations for state and local government rating stability through cycles.'

The four key rating factors driving state and local government ratings include:

--Revenues;
--Expenditures;
--Long-term liabilities;
--Operating performance.

As part of its revised criteria, Fitch plans to create scenarios that consider how a government's revenues may be affected in a cyclical downturn and the options available to address the resulting budget gap. Also under the revised criteria, Fitch will also provide more in-depth opinions on reserve adequacy related to individual issuers' inherent budget flexibility and revenue volatility.

Fitch does not expect the proposed criteria revisions to trigger widespread rating changes. Rating actions would likely not exceed 10% of the government credits covered by the criteria, with a roughly equal mix of upgrades and downgrades. Upgrades would likely result from the more focused consideration of the economy while downgrades would center around the more integrated consideration of the adequacy of reserve funding.

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## Special Obligation Transportation Infrastructure Bonds (TIBs)

The rating agencies have effectively indicated the TIB debt, supported by the assessments, should be considered as part of the State's general indebtedness. CDAAC has considered TIBs self-supporting revenue bonds, and not net tax-supported indebtedness of the State. For purposes of illustration, however, it is relevant to quantify the impact of TIBs inclusion in the more critical debt ratios, as shown below:

**STATE OF VERMONT**
**DEBT RATIOS WITH AND WITHOUT CONSIDERING TIBS***
**As of June 30, 2015**

| | With TIBs[(a)(b)] | Without TIBs[(b)] |
|---|---|---|
| Net Tax-Supported Debt: | $627,192,368 | $595,797,368 |
| Debt As A Percent of Gross State Product: | 2.05% | 1.95% |
| Debt Per Capita: | $1,000 | $950 |
| Debt As A Percent of Personal Income: | 2.04% | 1.94% |
| Debt Service as a Percent of Operating Revenue[(c)]: | 4.35% | 4.19% |

(a) As of June 30, 2015 the outstanding principal amount of the State's Special Obligation Transportation Infrastructure Bonds, 2010 Series A, 2012 Series A and 2013 Series A, was $11,465,000, $9,505,000 and $10,425,000 respectively.
(b) Debt statistics for Vermont are as of June 30, 2015. Estimates of Gross State Product, Population, Personal Income and Operating Revenue were prepared by EPR.
(c) Aggregate of State's General Fund and Transportation Fund.

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# 4. ECONOMIC AND FINANCIAL FORECASTS

This section of the report includes excerpts from the "The Revised Fiscal 2016-17 Revenue Outlook" prepared by Economic and Policy Resources, Inc. ("EPR") dated July 29, 2015.

"Following yet another mid-Winter softening in domestic production, the U.S. and Vermont economies continue to make forward progress toward more "normal" state of affairs for output, job, and income growth. The staff recommended consensus forecast update for July 2015 reflects a mix of: (1) technical adjustments and re-specifications across all three funds (including the results of this past year's "April Surprise" in the Personal Income Tax), (2) the revenue effects the tax and fee changes as passed during the 2015 Vermont General Assembly, (3) the on-going effects of structural changes in key revenues sources in each fund aggregate (e.g. the Personal Income Tax, the Sales & Use Tax, the Corporate Income Tax, and the principal fuel taxes)."

"While it is true there are always uncertainties in any forecast, foreign economic and political developments pose a greater than normal level of risk to this consensus forecast. Most notably, the situation in the 3 Euro Zone with respect to the situation in Greece is a particular cause for concern, even though recent developments seem to have moved the "Grexit Watch" past the immediate crisis phase—although this situation is not entirely "out of the woods." The uncertain global situation also includes recent developments in China—the world's second largest economy—which continues to deal with the effects of high levels of debt, weakening property values, and volatility in its financial and equity markets. Further, energy prices remain well below where they were a year ago. While this has been helpful in reducing the energy cost bills of many businesses and households and has also had at least a mild uplifting effect on the state's consumption taxes, this lower energy price environment has also adversely impacted state revenue receipts in the State's fuel taxes and the TIB Fund."

"Recent developments regarding the Vermont economy continue to exhibit an "up and down" character. Seasonally adjusted payroll job changes in the state over the first half of calendar year 2015 (corresponding the second half of fiscal year 2015) continued to experience this now well-established "saw-toothed pattern." Month-to-month seasonally adjusted job changes overall have in fact made forward progress, but it is very difficult to know at the end of any single month just exactly what the status of Vermont's labor market really is. This persistent "up and down" trend strongly suggests that labor market conditions are never really as "good" as they appear during the "up" months and they likewise are never really as "bad" as they appear during the "down" months. Consistent with that view, the data how over the last year that Vermont has in fact made modest forward progress in its labor markets by adding 4,000 private sector jobs (and a total of 4,200 payroll jobs including the governmental sector) across many sectors of the economy. Over that time, the state's unemployment rate has declined by roughly ½ of a percentage point to 3.6% (seasonally adjusted). That rate, along with the increase of 2,000 employed Vermonters and a small amount of growth in the state labor force over the last year, indicates that Vermont labor markets continue to make forward progress—albeit somewhat slow."

"The data show that Vermont's labor market recovery progress over the first five years of the state's recovery from the "Great Recession" has occurred in both higher paying and lower

paying job categories. However, the larger portion (roughly two-thirds or 64%) of the Vermont economy's recovered jobs over that period has occurred in lower than average paying job categories."

"As the labor market has made progress, the U.S economy this Winter again experienced a notable softening in production, following a period where U.S. output increased by roughly 3½ percent over the July 2014 to December 2014 period (corresponding to the second half of calendar year 2014). Although the strike at West Coast ports and severe winter weather explain a part of this slowdown, the production data again appeared to have fallen out of line with the generally improving trends observed in most other major macro indicators."

"As this forecast update report has indicated in the past, it is difficult to imagine the U.S. economy (or the Vermont economy) sustaining a more typical expansionary pace without the full participation of the housing sector. These numbers suggest that national residential construction industry, which had previously been somewhat sluggish in the past, is now making some genuine progress towards a real recovery and full participation in the U.S. expansion."

"Looking ahead, the U.S. economic landscape looks to be favorable for further improvement overall. Continued low oil prices, ongoing job gains, and a favorable trend in consumer sentiment will likely underpin higher consumer spending. Financial market conditions remain supportive of future growth, and monetary policy remains accommodative—both domestically and abroad. Further, the adverse impact on U.S. trade by the strengthening U.S. dollar and the effect of lower oil prices on capital investment appear transitory in nature and should diminish over time. With the continued improvement in the underlying fundamentals of the U.S. economy, the expectation that economic activity will pick up and register "more typical rates of activity" as the economy moves through the middle of this decade remains unchanged from the consensus forecast update presented last January."

## STATE OF VERMONT
## POPULATION, PERSONAL INCOME AND REVENUE PROJECTIONS
## 2015 COMPARED TO 2014 PROJECTIONS

**Population (Thousands)**

| Year | 2014 | 2015 | Change | % Change |
|---|---|---|---|---|
| 2015 | 627.621 | 627.477 | -0.144 | -0.02% |
| 2016 | 628.346 | 628.858 | 0.512 | 0.08% |
| 2017 | 629.289 | 630.493 | 1.204 | 0.19% |
| 2018 | 630.398 | 631.817 | 1.419 | 0.23% |
| 2019 | 631.598 | 632.954 | 1.356 | 0.21% |
| 2020 | 632.913 | 634.283 | 1.370 | 0.22% |
| 2021 | 634.225 | 635.615 | 1.391 | 0.22% |
| 2022 | 635.618 | 637.014 | 1.396 | 0.22% |
| 2023 | 637.182 | 638.606 | 1.425 | 0.22% |
| 2024 | 638.707 | 640.139 | 1.432 | 0.22% |
| 2025 | 640.222 | 641.675 | 1.453 | 0.23% |
| 2026 | | 643.215 | n.a. | n.a. |

**Nominal Dollar Personal Income (Millions)**

| Year | 2014 | 2015 | Change | % Change |
|---|---|---|---|---|
| 2015 | 31,135.507 | 30,734.104 | -401.403 | -1.29% |
| 2016 | 32,816.825 | 32,270.810 | -546.015 | -1.66% |
| 2017 | 34,392.032 | 33,755.267 | -636.765 | -1.85% |
| 2018 | 35,905.282 | 35,139.233 | -766.049 | -2.13% |
| 2019 | 37,377.398 | 36,439.385 | -938.014 | -2.51% |
| 2020 | 38,947.249 | 37,605.445 | -1,341.804 | -3.45% |
| 2021 | 40,621.980 | 38,658.397 | -1,963.583 | -4.83% |
| 2022 | 42,449.970 | 39,740.832 | -2,709.137 | -6.38% |
| 2023 | 44,360.218 | 40,853.576 | -3,506.643 | -7.90% |
| 2024 | 46,312.068 | 42,038.329 | -4,273.738 | -9.23% |
| 2025 | 48,303.487 | 43,299.479 | -5,004.007 | -10.36% |
| 2026 | | 44,641.763 | n.a. | n.a. |

**General Fund and Transportation Fund Revenue (Millions)**

| Year | 2014 | 2015 | Change | % Change |
|---|---|---|---|---|
| 2015 | 1,628.356 | 1,637.188 | 8.831 | 0.54% |
| 2016 | 1,675.665 | 1,699.140 | 23.475 | 1.40% |
| 2017 | 1,728.204 | 1,752.830 | 24.626 | 1.42% |
| 2018 | 1,784.738 | 1,804.530 | 19.792 | 1.11% |
| 2019 | 1,840.144 | 1,854.620 | 14.476 | 0.79% |
| 2020 | 1,898.843 | 1,904.890 | 6.047 | 0.32% |
| 2021 | 1,961.994 | 1,960.236 | -1.758 | -0.09% |
| 2022 | 2,026.086 | 2,020.922 | -5.164 | -0.25% |
| 2023 | 2,094.446 | 2,085.040 | -9.406 | -0.45% |
| 2024 | 2,161.132 | 2,151.031 | -10.101 | -0.47% |
| 2025 | 2,229.849 | 2,217.399 | -12.450 | -0.56% |
| 2026 | | 2,286.246 | n.a. | n.a. |

**General Fund and Transportation Fund Revenue as Percent of Nominal Personal Income**

| Year | 2014 | 2015 | Change |
|---|---|---|---|
| 2015 | 5.2% | 5.3% | 0.1% |
| 2016 | 5.1% | 5.3% | 0.2% |
| 2017 | 5.0% | 5.2% | 0.2% |
| 2018 | 5.0% | 5.1% | 0.2% |
| 2019 | 4.9% | 5.1% | 0.2% |
| 2020 | 4.9% | 5.1% | 0.2% |
| 2021 | 4.8% | 5.1% | 0.2% |
| 2022 | 4.8% | 5.1% | 0.3% |
| 2023 | 4.7% | 5.1% | 0.4% |
| 2024 | 4.7% | 5.1% | 0.5% |
| 2025 | 4.6% | 5.1% | 0.5% |
| 2026 | | 5.1% | n.a. |

As shown above, the 2015 projections show a modest improvement in population in all years of the forecast. However the forecast for nominal personal income is down in every year of the forecast period with the out years significantly less. The 2015 General Fund and Transportation Fund revenue projections are slightly higher in the first six years of the forecast period and slightly lower in the out years of the forecast. Although the population and government revenue projections are substantially the same from the previous projection on a year by year basis, the 2015 nominal dollar personal income projections are significantly lower than the 2014 projections on a year by year basis. Looking at the columns that compare revenues as a percentage of nominal personal income suggests that the State's general and transportation fund are expected to collect a greater share of the state's personal income for government operations.

The growth reduction in projected personal income from the previous year forecast will impact Vermont's debt guideline of debt as a percentage of personal income. Lower personal income numbers will increase the State's debt as a percentage of personal income at a constant amount of debt. However even with the drop in forecasted personal income figures, the State is still well under its guidelines of 2.4%.

Provided below are the forecasts of population, personal income, and nominal gross State product. As shown in the table below, population for fiscal year 2015 and 2016 is 627.5 thousand and 628.9 thousand, respectively, initially a decrease of 0.14% and then an increase of 0.22% over the previous fiscal years. Personal income for fiscal year 2015 and 2016 is $30.7 billion and $32.3 billion, respectively, an increase of 3.5% and 5.0%, over the previous fiscal year, respectively. Nominal gross State product for fiscal year 2015 and 2016 is $30.6 billion and $32.0 billion, respectively, an increase of 3.3% and 4.7%, over the previous fiscal year, respectively.

**STATE OF VERMONT**
**PRIOR YEAR, CURRENT AND PROJECTED ECONOMIC DATA(1)**

| Year | Population (in thousands) | Personal Income (in $ billions) | Nominal GSP (in $ billions) |
|---|---|---|---|
| 2015 | 627.5 | 30.7 | 30.6 |
| 2016 | 628.9 | 32.3 | 32.0 |
| 2017 | 630.5 | 33.8 | 33.6 |
| 2018 | 631.8 | 35.1 | 35.2 |
| 2019 | 633.0 | 36.4 | 36.6 |
| 2020 | 634.3 | 37.6 | 37.9 |
| 2021 | 635.6 | 38.7 | 39.2 |
| 2022 | 637.0 | 39.7 | 40.5 |
| 2023 | 638.6 | 40.9 | 41.9 |
| 2024 | 640.1 | 42.0 | 43.3 |
| 2025 | 641.7 | 43.3 | 44.7 |
| 2026 | 643.2 | 44.6 | 46.2 |

(1) Administration-Legislative Consensus Long-Term Forecast (Calendar Years 2015-2026). These figures were prepared by EPR, as of September 5, 2015.

As shown in the table below, total revenue for fiscal year 2015 is $55.4 million more than in fiscal year 2014, an increase of 3.5%. Fiscal year 2016 total revenue is forecast to increase by $62.0 million, or 3.8%; the average annual revenue growth rate during the fiscal year period, 2016 through 2026, inclusive, is projected to be approximately 3.10%.

**STATE OF VERMONT**
**PRIOR YEAR, CURRENT AND PROJECTED STATE REVENUE [1]**
**(in millions of dollars)**

| Fiscal Year | General Fund | Transportation Fund | Total Revenue [2] |
|---|---|---|---|
| 2014 | 1,328.4 | 253.4 | 1,581.8 |
| 2015 | 1,375.8 | 261.4 | 1,637.2 |
| 2016 | 1,433.3 | 265.8 | 1,699.1 |
| 2017 | 1,482.6 | 270.2 | 1,752.8 |
| 2018 | 1,530.2 | 274.3 | 1,804.5 |
| 2019 | 1,577.1 | 277.5 | 1,854.6 |
| 2020 | 1,624.4 | 280.5 | 1,904.9 |
| 2021 | 1,676.3 | 283.9 | 1,960.2 |
| 2022 | 1,733.3 | 287.6 | 2,020.9 |
| 2023 | 1,794.0 | 291.0 | 2,085.0 |
| 2024 | 1,856.8 | 294.2 | 2,151.0 |
| 2025 | 1,919.9 | 297.5 | 2,217.4 |
| 2026 | 1,985.2 | 301.0 | 2,286.2 |

[1] Administration-Legislative Consensus Long-Term Forecast (Calendar Years 2016-2026). These figures were prepared by EPR. Amounts shown are "current law" revenue forecasts, based on a consensus between the State's administration and legislature. As of September 5, 2015.

[2] Totals may not agree due to rounding.

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# 5. STATE GUIDELINES AND RECENT EVENTS

In order to recommend to the Governor and the General Assembly a maximum amount of net tax-supported indebtedness that the State may prudently issue for the ensuing fiscal year, CDAAC has adjusted its State guidelines and the method of calculating its State guidelines over time based on factors such as (i) changes in the rating agencies' criteria, (ii) changes in Vermont's ratings, (iii) changes to Vermont's peer group, (iv) substantial increases and decreases in the amount of debt issued due to market disruptions and tax law changes and (v) Vermont's relative debt position.

Examples of changes in rating criteria include Moody's dropping its State medians for "net tax supported debt as a percentage of effective full valuation" and "net tax supported debt service as a percentage of operating revenues" in 1996, reintroducing its "net tax supported debt service as a percentage of operating revenues" in 2012, Moody's and Fitch's recalibration of ratings in 2010, and the 2012 comparative research analysis that has combined State debt and pension liabilities as a method of evaluating states' financial position. The recalibration of ratings by Moody's and Fitch in 2010 and S&P rating changes over the past five years have also affected Vermont's peer group. Between 2002 and 2008, the number of states with two triple-A ratings remained fairly constant between eight and eleven states, compared to the current 15 states having at least two triple-A ratings.

While CDAAC has continued to make adjustments to the State guidelines and the way it calculates State guidelines, it has been consistent in its overall approach of projecting future State debt issuances and measuring the effect against prudent State guidelines based on Peer Group analysis. The Committee does not believe that adjustments in the credit markets or other recent events should alter its process; however, the Committee realizes that it and the State will need to keep the changing debt finance environment and other current circumstances in mind as the State develops its capital funding and debt management program.

## Debt Per Capita State Guideline – Adjustments to Debt Per Capita State Guideline

The debt per capita statistics, among the various debt guidelines, is used to establish the recommended limitations on the amount of G.O. debt that the State should authorize annually. The debt per capita State guideline calculation is based on a starting point, which since 2006 has consisted of a five-year average or median of the debt per capita median of peer group (triple-A) states, and an annual inflation factor, in order to achieve a realistic perspective on the future direction of debt per capita median for the peer group states. As recently as 2007 CDAAC used an inflator of 2.7% or 90% of an assumed 3% inflation rate. As part of the development of the 2009 report, CDAAC determined that it would be most appropriate to adopt an inflator based upon a percentage of the averaging of the annual increases in the median debt per capita of the triple-A States for the last five years. As the resulting five year average was 5.35%, it was determined that an inflator of less than 100% of Vermont's triple-A peers was deemed appropriate and an inflation number representing only 60% of the growth factor, or 3.18%, was used in order to be consistent with the expectations of the rating agencies and financial community and consistent with the State's debt management practices and the prior year's report. The 2009 through 2011 CDAAC reports noted that the approach in calculating the inflator should not be considered fixed as there are too many variables that could conceivably alter this number. First, should the

agencies continue to change the number of triple-A rated states, the composition of Vermont's peer group could be altered. Second, the amount of relative bond issuance by other triple-A states could affect the per capita median for the State's peer group which could alter the per capita growth rate. Third, Moody's has stated consistently in its credit reports that if the rating agency were to see a deterioration in the State's relative rankings with respect to debt per capita and debt as a percent of personal income, Vermont's triple-A rating could fall. CDAAC believes that it is imperative to continue to monitor the State's performance in these comparisons annually to determine if the inflation factor should be adjusted from time to time.

In conducting preliminary calculations for the 2012 report it was determined that two of the factors mentioned above were having a pronounced effect on the calculation of the State guideline. The Committee reviewed analysis of the possible effect on the starting point and the inflator based on the drop in total calendar year 2011 municipal bond issuance and the change in the Peer Group as a result of the State of Minnesota losing its two triple-A ratings. The analysis indicated that each of these factors significantly affected the State guideline calculation and modifications were necessary in order to maintain a stable and reliable recommendation.

With the goal of limiting volatility in the State guideline calculation, it was determined to adjust the starting point calculation to be the five-year average of the medians of the triple-A Peer Group (instead of the median of the five-year Peer Group medians) and increase the time horizon from five years to ten years for the inflator, without adjustment. The Committee also reviewed other scenarios for adjusting the Peer Group, such as excluding states with the two highest and two lowest statistics and excluding states with a single triple-A rating. These scenarios resulted in State guidelines that were substantially the same as the recommended approach, indicating possible improvement in the reliability and stability of the methodology.

For the 2013 report, the methodology used was consistent with the one used in 2012. In the 2014 report, the group of triple-A states that make up the peer group was adjusted. After again reviewing the states with only one triple-A a determination was made that these states should not be part of the comparison, mainly due to differences in their capital funding mechanisms and the natural resource dependent nature of their revenue and debt funding mix. Thus for the 2014 and this report (2015), all the states with <u>two</u> triple-A ratings are included as Peer Group states.

## Statutory Change Relating to Use of Bond Premium and Effect on Affordability

Effective in fiscal year 2013, 32 V.S.A. § 954 was amended to permit the use of bond premium received from issuance of debt for capital purposes. Previously bond premium was used to pay debt service. In fiscal year 2013, the net bond premium became available to pay capital appropriations, effectively reducing the par amount of bonds issued such that the par amount of bond plus the net original issue premium equals the capital appropriations amount.

The effect of this legislative change on the CDAAC numbers is as follows: if future bonds are issued with a net original issuance premium, the par amount of bonds will be less than estimated by the CDAAC report; however, the higher the original issue premium, the higher the average interest rate on the lower amount of debt. Due to the lower nominal

interest rates in the market and the institutional investors' preference for higher coupon debt, the State expects to sell bonds with some original issue premium and reduce the size of its bond sales. To the extent that occurs, the State could authorize future additional capital appropriations in an amount equal to or less than the premium generated and still be in compliance with the CDAAC bond issuance recommendation.

## Total State Debt Falls for First Time in Almost 30 Years

According to the Moody's State Debt Medians 2015 report published June 24, 2015, total net tax-supported debt for US States declined in 2014. This is the first drop in state debt levels in the 28 years Moody's has been compiling the data. According to the report "The decrease comes as states continue to be reluctant to take on new debt with tight operating budgets, a slow economic recovery, and uncertainty over federal fiscal policy and health care funding." Moody's expects debt levels to remain stable or even further decline in 2015.

## Sequestration and Potential Impact on Build America Bonds Subsidy

On September 14, 2012, the Office of Management and Budget ("OMB") released its Report Pursuant to the Sequestration Transparency Act of 2012, which detailed, among its $1.2 trillion of enumerated reductions to the federal budget, an ongoing cut of 5.1% (which resulting in an 8.7% cut in federal fiscal 2013 due to the fact that only 7 months remained in that year ending September 30) to the interest payment subsidy associated with the Build America Bonds (BABs) program. In February 2014, Congress voted to extend sequestration of BABs subsidies through 2024. The Internal Revenue Service has annually published guidance reducing subsidy payments as follows: 7.2% for federal fiscal 2014, 7.3% for federal fiscal 2015, and most recently, 6.8% for federal fiscal 2016.

Through August of 2015, sequestration has reduced the subsidy payments that Vermont received for its 2010 Series A-2 and 2010 Series D-2 taxable G.O. Bonds by a total of $181,262.51.85. If the 6.8% reduction continues, the subsidy will be reduced by another $42,120.65 on February 15, 2016, for a total reduction of $87,633.82 in State fiscal year 2016, with declining annual amounts through fiscal year 2024 totaling $809,414.12 overall. While this sequestration impact is a very unfortunate development, it does not materially alter Vermont's projected debt service as a percentage of revenue ratios; specifically, a $87,633.82 reduction in fiscal year 2016 equates to approximately 0.13% of the projected $69.910 million of debt service payments due that year.

## Moody's Adjustment to Pension Data and Adjusted State Pension Liability Medians

On July 12, 2012, Moody's published a Request for Comments regarding proposed adjustments to pension data. On April 17, 2013, the adopted adjustments were published. The adjustments are intended to enhance transparency and comparability. As discussed above, Moody's considers debt and pension liabilities separately and has incorporated this decision into its US States Rating Methodology. The "debt" category reflects both bonded debt and adjusted net pension liabilities, with each accounting for half of the category, or, 10% each of the total score. While rating agencies have always taken pension funding into consideration, recent moves have involved increasing quantification. The measures used

in the scorecard are not the conventional asset/liability of the debt related to tax base but instead are the debt related to total governmental revenue. At the present time, there is no indication that the new pension treatment or the scorecard will threaten existing ratings. However, it is indicative of the spotlight being placed on pension funding from several different sources.

On June 27, 2013 Moody's published "Adjusted Pension Liability Medians for US States." This inaugural report presents adjusted pension data for the 50 individual states for fiscal year 2011, based on Moody's recently published methodology for analyzing state and local government pension liabilities. The report ranks states based on ratios measuring the size of their adjusted net pension liabilities (ANPL) relative to several measures of economic capacity: state revenues, GDP and personal income.

On November 20, 2014 Moody's published its third annual report titled "Adjusted Net Pension Liabilities Show Improvement" which updated Moody's ANPL for fiscal year 2013 for the 50 states. Key takeaways of the report are summarized below:

- ANPL decreased for 27 states in fiscal 2013
- The median ratio of ANPL to governmental revenues decreased from 63.9% for fiscal year 2012 to 60.3% in fiscal year 2013.
- The State's relative position among the 50 states with respect to its ANPL for 2012 and 2013 is as follows:

| Moody's Pension Ratios | State of Vermont Rankings 2012[1] | 2013[1] |
|---|---|---|
| ANPL as % of Personal Income | 11 | 15 |
| ANPL as % of State Gross Domestic Product | 11 | 15 |
| ANPL Per Capita | 11 | 15 |
| ANPL as % of State Government Revenues | 19 | 23 |
| Three-year Average ANPL as a % of State Government Revenues | N.A. | 22[2] |

Source: Moody's *Adjusted Net Pension Liabilities Show Improvement*, November 20, 2014.

[1]Rankings are in numerically descending order, with the state having the highest Moody's Adjusted Net Pension Liability statistic ranked 1st and the state having the lowest Adjusted Net Pension Liability statistic ranked 50th

[2]Moody's 2013 report was the first report to include the three year average statistics.

## STATE OF VERMONT AND PEER GROUP STATES' MOODY'S PENSION LIABILITIES METRICS

| Triple-A Rated States | Moody's Adjusted Net Pension Liability (ANPL) | | | |
|---|---|---|---|---|
| | As % of PI | As % of State GDP | Per Capita | As % of Revenues |
| Alaska | 42.6% | 26.4% | $21,352 | 99.3% |
| Delaware | 11.3 | 7.5 | 5,076 | 76.6 |
| Florida | 2.3 | 2.3 | 954 | 27.3 |
| Georgia | 5.8 | 4.9 | 2,212 | 60.4 |
| Indiana | 7.2 | 5.8 | 2,793 | 63.6 |
| Iowa | 2.7 | 2.3 | 1,211 | 25.1 |
| Maryland | 13.3 | 12.4 | 7,133 | 142.0 |
| Missouri | 3.7 | 3.3 | 1,487 | 39.1 |
| North Carolina | 3.8 | 3.1 | 1,485 | 34.9 |
| South Carolina | 8.5 | 8.0 | 3,058 | 74.1 |
| Tennessee | 2.3 | 2.0 | 899 | 20.9 |
| Texas | 9 | 6.8 | 3,948 | 102.8 |
| Utah | 3.8 | 2.9 | 1,395 | 36.6 |
| Virginia | 4.8 | 4.3 | 2,336 | 60.2 |
| **MEAN[1]** | **8.7** | **6.6** | **3953** | **61.6** |
| **MEDIAN[1]** | **5.3** | **4.6** | **2274** | **60.3** |
| **VERMONT** | 12.3 | 11.9 | 5,587 | 68.8 |
| **VERMONT's 50 STATE RANK** | 15 | 15 | 15 | 23 |

Source: Moody's *Adjusted Net Pension Liabilities Show Improvement*, November 20, 2014.

[1] Calculated by Public Resources Advisory Group. These calculations exclude all Vermont numbers and include only states rated triple-A by two or more of the rating agencies, year ended June 30th, 2013.

[2] Vermont numbers include the combined defined benefits plans of the Vermont State Employees' Retirement System and the Vermont State Teachers' Retirement System.

[3] Rankings are in numerically descending order, with the state having the highest Moody's Adjusted Net Pension Liability statistic ranked 1st and the state having the lowest Adjusted Net Pension Liability statistic ranked 50th

## Reserve or Rainy Day Fund Balances

The rating agencies are also putting greater emphasis on the importance of having robust general fund reserve fund balances, commonly referred to as rainy day funds. Historically a rainy day fund target of 5% of general fund expenditures was considered conservative and a credit positive by the rating agencies, but more recently the rating agencies have indicated that higher reserve funds are more consistent with triple-A ratings. In fact, Moody's US States Rating Methodology cited "Available Balances greater than 10%, with Requirements to Rebuild Rainy Day Fund if drawn upon" for their sub-factor Finances Measurement of "Available Balances as % of Operating Revenue (5-year average)." Additionally, the State's most recent Standard and Poor's report published in September 2015, S&P cited increasing reserve fund levels as one of the two factors that could translate into a triple-A rating for the State from S&P. The table below shows the fiscal year 2013, 2014, and 2015 rainy day fund balances of the other triple-A states.

**Rainy Day Fund Balances**
**As a Percentage of General Government Expenditures**

| **Triple-A** Rated States | **Fiscal 2013** | **Fiscal 2014** | **Fiscal 2015** |
|---|---|---|---|
| Alaska | 209.9 | 213 | 146.4 |
| Delaware | 5.4 | 5.3 | 5.6 |
| Florida | 2.9 | 3.4 | 4 |
| Georgia | 3.9 | 4.5 | 4.5 |
| Indiana | 3.6 | 6.7 | 8.4 |
| Iowa | 9.5 | 10.1 | 10 |
| Maryland | 4.6 | 4.9 | 4.9 |
| Missouri | 3.1 | 3.3 | 3.2 |
| No. Carolina | 3.2 | 3.1 | 3.2 |
| So. Carolina | 6.4 | 6.4 | 6.8 |
| Tennessee | 3.1 | 3.8 | 3.9 |
| Texas | 15.1 | 14.3 | 15.5 |
| Utah | 7.8 | 8 | 7.5 |
| Virginia | 2.6 | 3.9 | 2.6 |
| **Median**[1] | 4.3 | 5.1 | 5.3 |
| VERMONT | 5.6 | 5.1 | 5.4 |

Source: "The Fiscal Survey of States 2015. A report by the National Governors Association and the National Association of State Budget Officers." Fiscal Year 2013 and 2014 are "Actuals" and Fiscal Year 2015 are "Estimated."

[1] Calculated by Public Resources Advisory Group. These calculations exclude all Vermont numbers and include only states rated triple-A by any two of the three rating agencies, year ended June 30th, 2015.

[2] Information for Georgia's FY 2015 rainy day fund balance was not provided in the report. Rainy day fund balance was assumed to stay constant at the FY 2014 level.

## Capital Planning Program and the Impact of Capital Spending Upon the Economic Conditions of the State

All three rating agencies include the condition of Vermont's economy as a significant factor in their respective ratings. Capital improvements – whether financed through the use of debt, funded through direct appropriation or federal funds, or advanced through public private collaboration - have a significant impact on the State's economy. Further, the link between investment in infrastructure and economic development is widely accepted. As noted in a March 2012 report prepared by the United States Department of Treasury with the Council of Economic Advisors, titled *A New Economic Analysis of Infrastructure Investment*, states that "well-designed infrastructure investments can raise economic growth, productivity, and land values, while also providing significant positive spillovers to areas such as economic development, energy efficiency, public health, and manufacturing." These points notwithstanding, the report also states that not every infrastructure project is worth the investment. Metrics are needed to ensure that economic growth through infrastructure investment is done in an affordable and sustainable manner.

For several years, the Committee has discussed at length the need for a multi-year capital planning process to identify and prioritize Vermont's capital needs. The Committee applauds the General Assembly for implementing first a six-year, and now ten-year State capital program plan in its latest capital construction and State bonding adjustment act. 32 V.S.A. § 310 thus provides that the Governor prepare and revise a plan on an annual basis, submitting it for approval by the general assembly. The plan will include a list of all recommended projects in the current fiscal year, as well as the five fiscal years thereafter. These recommendations will include an assessment, projection of capital need, and a comprehensive financial assessment. The Committee expects to annually review and consider future capital improvement program plans.

The Committee also recognizes that the process set forth in 32 V.S.A. § 310 must also incorporate a comprehensive review of our current capital stock, its condition, and future replacement needs. Significant efforts have been made in this area. The Department of Buildings and General Services (BGS) has undertaken such efforts with State buildings. The Agency of Transportation (AOT) has studied road infrastructure needs, including the condition of Vermont bridges. In 2009 the General Assembly charged the Treasurer and AOT to prepare a report containing a long-term needs assessment for repair, maintenance, and rehabilitation of bridges and culverts in the state with funding options for such long-term needs. This ultimately led to the creation of the Special Obligation Transportation Infrastructure Bond Program and the substantial leveraging of federal matching funds. While this increased funding corresponded with transportation infrastructure funding from other sources – namely ARRA and federal highway funds after Tropical Storm Irene – the condition of the State's transportation infrastructure has improved dramatically since 2007. In particular, the percentage of federal, State and municipal bridges deemed "structurally deficient" decreased by half - from approximately 20% to approximately 10% - from 2007 through 2012.

As part of its discussions in 2014 and again in 2015, the Committee reviewed information prepared by the Auditor of Accounts' Office showing Vermont's rankings on a series of measures both of economic health and quality of life compared to other triple-A rated

states. Vermont scores quite well in most categories, and with respect to the economic data, this is reflected in Vermont's favorable rankings relative to other triple-A rated states based upon several rating agencies' assessments, with Standard & Poor's in particular stating that "Vermont's quality of life and well-educated workforce provide economic development opportunities." These charts are included as Appendix E to this Report.

There is always a concern at the rating agencies when a state meaningfully enlarges its debt program to ameliorate periodic economic downturns. The rating agencies will often advise that long-term annual costs, in the form of higher debt service and frequently higher administrative and operating expenses, can accompany such an increased debt program. The Committee believes it is of critical importance to strike the correct balance between infrastructure investment and economic growth on the one hand, and maintaining affordable and sustainable levels of debt authorizations and capital spending on the other.

## Implementation of Financial Reporting Webpage

In September of 2014, the Treasurer's Office launched the State of Vermont's Financial Reporting Web Page. This page organizes, in one location, ten items that the National Association of State Auditors, Comptrollers and Treasurers (NASACT) recommend that state government's provide for interim disclosure. NASACT represents the elected or appointed government officials tasked with the management of state finances.

These ten items are: tax revenues, budget updates, cash flow, debt outstanding, economic forecasts, pension and other post-employment benefits (OPEBs), interest rate swaps and bank liquidity, investments, debt management policies, and filings made to the Electronic Municipal Market Access (EMMA) system. The page may be accessed at:

http://www.vermonttreasurer.gov/cash-investments/financial-reporting/disclaimer

At the time of publication, NASACT indicated that Vermont's web page was the first statewide reporting site incorporating all ten of NASACT's recommendations, and at NASACT's 100th Anniversary Conference, Vermont's State Treasurer received the President's Award for exceptional efforts in government financial management and accountability, in part for her leadership in developing the disclosure web site.

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## 6. ACKNOWLEDGEMENTS

We would like to express our gratitude to the State Treasurer's Office, the Department of Finance and Management, EPR, and various officers and staff members of the State, whose assistance has been invaluable in completing this report. Certain computations and projections were made based on interim population, personal income, and revenue projections provided by EPR. The numbers presented herein have not been audited and are, therefore, subject to change, possibly in a substantial manner.

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# 7. APPENDICES

A. 2015 State Debt Medians (Moody's Investors Service)

B. 2015 Fitch Ratings Credit Report

C. 2015 Moody's Investors Service Credit Report

D. 2015 Standard & Poor's Credit Report

E. Comparison of Triple-A States with Various Economic Data, Prepared by the Office of Douglas R. Hoffer, Auditor of Accounts.

F. Full Text of 32 V.S.A. §1001, Capital Debt Affordability Advisory Committee

# APPENDIX A

MOODY'S
INVESTORS SERVICE

SECTOR IN-DEPTH
24 JUNE 2015

Rate this Research


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State Debt Medians 2015

# Total Debt Falls for First Time in Almost 30 Years

Total net tax-supported debt (NTSD) for US states declined in 2014, the first drop in the 28 years we have compiled the data. The decrease comes as states continue to be reluctant to take on new debt with tight operating budgets, a slow economic recovery, and uncertainty over federal fiscal policy and health care funding. With those factors, we expect debt levels to remain stable or even decline again in 2015.

» **State debt levels drop**. Following three years of only minimal growth, total NTSD fell by $6.2 billion, or 1.2%, to $509.6 billion in 2014. Excluding a reclassification of Texas' (Aaa stable) general obligation (GO) mobility fund debt to self-supporting, the absolute decline was nearly $1 billion.

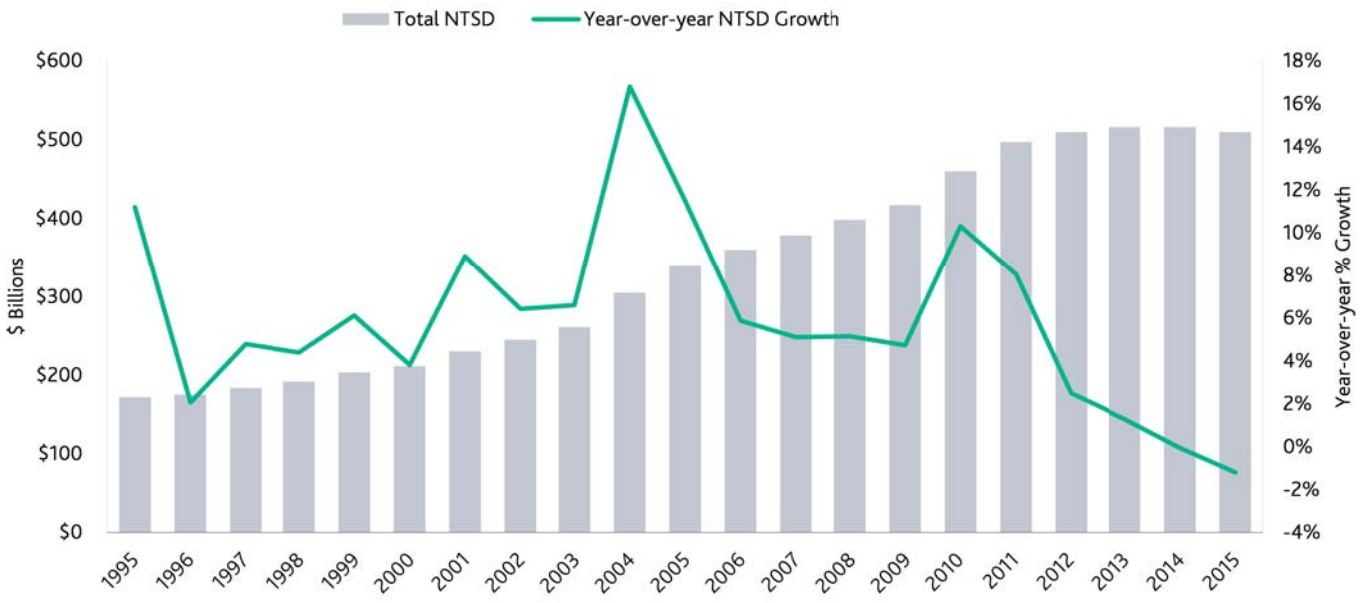
» **Key debt ratios decline**. NTSD per capita fell 4% to $1,012, the third decline in a row. NTSD as a percent of personal income fell 2.5%, the second decline in a row.

» **Reliance on GO debt varies widely across states**. Due to constitutional limitations and political considerations, many states rely on alternative financing methods including lease financings and special-tax bonds. Nationwide, GO bonds account for 52% of total state debt.

» **Debt levels will stay flat or even decrease again in 2015**. Few states have announced large new borrowing initiatives. Longer term, however, we expect debt levels to rise again as states seek to address deferred infrastructure needs at a time of stagnant federal transportation aid.

## State debt levels drop

Exhibit 1
**Total Net Tax-Supported Debt (NTSD) Falls**




*Source: Moody's Investors Service*

Total net tax-supported debt (NTSD) of US states fell by $6.2 billion to $509.6 billion in 2014. Approximately $5.3 billion of the decline was due to our reclassification of the Texas general obligation mobility fund debt to self-supporting. Even absent this reclassification, the absolute debt level declined by $900 million, the first drop in total debt levels in the 28 years we have compiled these data.

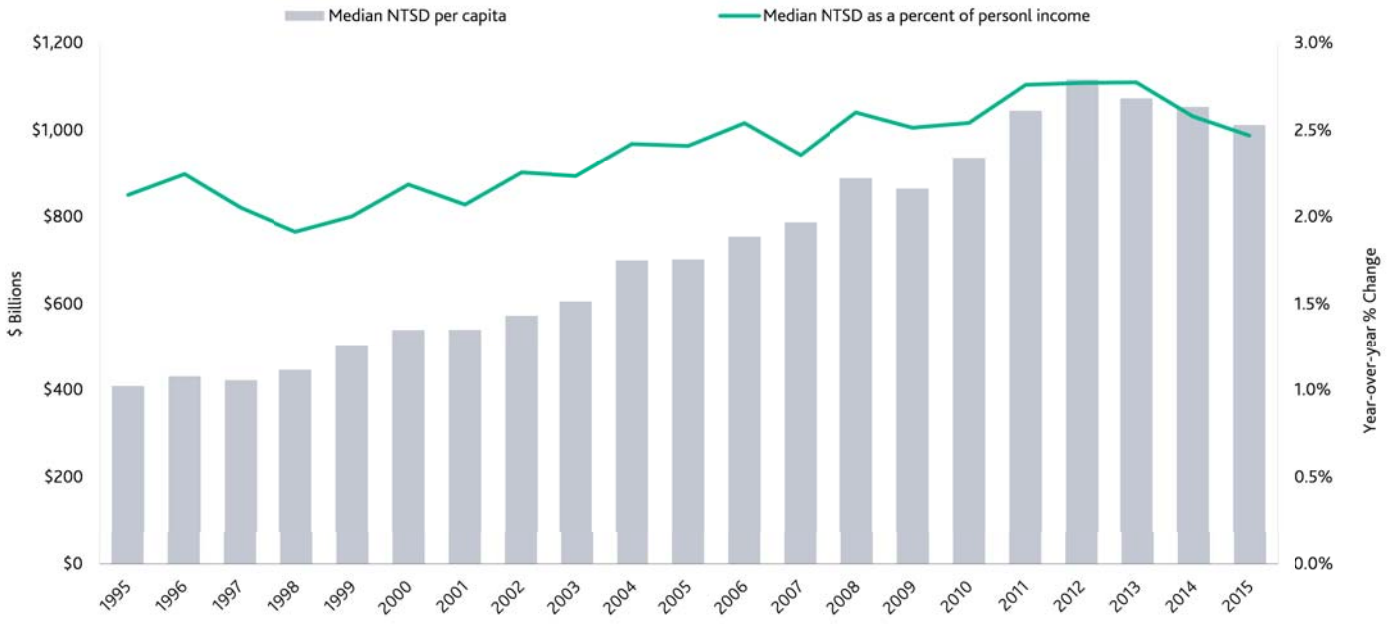
Thirty-one states experienced a decline in absolute debt levels. Other than Texas, the largest decreases were in New York (Aa1 stable) and California (Aa3 stable) as these two states continued to pay down debt. Of the 19 states experiencing an increase in NTSD, the largest increases were in New Jersey (A2 negative) and Illinois (A3 negative) due to the issuance of new debt for transportation and other capital projects.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

## Key debt ratios decline

Exhibit 2

**Key Ratios for Net Tax-Supported Debt (NTSD) Decline, Signaling Easing of Debt Pressure on States**




*Sources: Moody's Investors Service, US Census Bureau and US Bureau of Economic Analysis*

Our key state debt ratios, NTSD per capita and NTSD as a percent of personal income, both fell in 2014, reflecting the decline in absolute debt levels combined with continued growth in population and personal income. The decreases signal an easing of debt pressure for many states going forward.

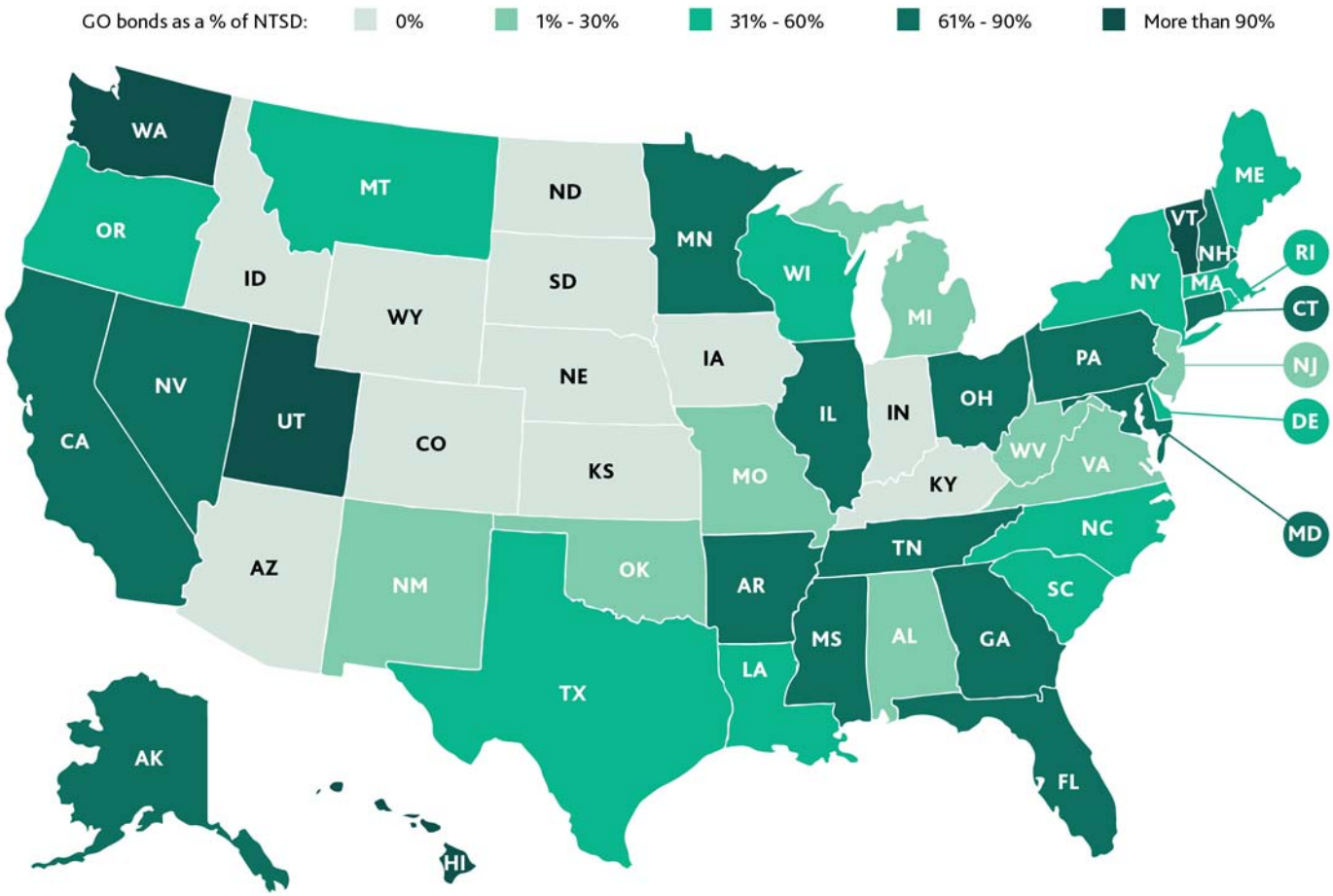
The 50-state median for NTSD per capita fell to $1,012, the third decline in a row. Thirty-three states experienced a decline in NTSD per capita.

The median for NTSD as a percent of personal income dropped to 2.5%, the second decline in a row, as personal income grew by 4.5%. Thirty-eight states saw a decline in NTSD as percent of personal income.

The debt service ratio represented the one exception to the trend of declining debt ratios. The median value for this ratio increased slightly to 5.3% from 5.1%, driven by borrowing in prior years combined with the tepid growth in state revenues.

## Reliance on general obligation (GO) debt varies widely across states

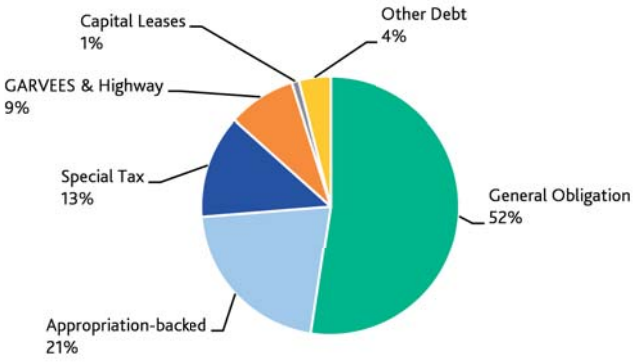
Exhibit 3
**Use of General Obligation by States Varies Greatly**




*Source: Moody's Investors Service*

In many states, constitutional provisions prohibit or severely limit the issuance of general obligation (GO) bonds. In other states, taxpayer concerns and other political considerations often make it easier to gain approval for other forms of debt, such as lease revenue, appropriation-backed or special tax debt. As a result, the reliance on GO bonds varies widely from state to state, ranging from 94% in Vermont (Aaa stable) to 0% in 11 other states. Nationwide, GO debt accounts for 52% of total NTSD.

Exhibit 4
**General Obligation (GO) Debt Accounts for about Half of Total State Debt**




*Source: Moody's Investors Service*

Most state debt remains fixed rate and publicly offered. Variable rate demand debt totaled $19.4 billion, a decline from $21.6 billion one year earlier and representing less than 3.8% of total NTSD. Direct bank loans and private financings continue to account for less than 1%.

## Debt levels will stay flat or even decrease again in 2015

We expect that state debt levels will be flat or even decrease again in 2015. Most states will continue to avoid major new debt service commitments in the face of moderate revenue growth and continuing pressure for increased education and health care spending. Few states have announced large new borrowing initiatives. While many states are also grappling with funding large pension liabilities, we expect that states' use of pension obligation bonds (POBs) will remain limited.

Over the longer term, we expect debt levels to rise again as states seek to address a backlog of deferred infrastructure needs at a time of stagnant federal transportation aid. We believe that public private partnerships (P3s) will play an increasing, but still relatively limited, role in how states address these needs.

## Basis for state debt medians

Moody's 2015 state debt medians are based on our analysis of calendar year 2014 debt issuance and fiscal year 2014 debt service. As in prior year reports, the presentation of debt trend data incorporates a one-year lag (i.e., the data labeled 2015 reflect debt as of calendar year-end 2014).

In considering debt burden, our focus is largely on net tax-supported debt, which we characterize as debt secured by statewide taxes and other general resources, net of obligations that are self-supporting from pledged sources other than state taxes or operating resources – such as utility or local government revenues. We also examine gross debt, which captures debt supported by revenues other than state taxes and general resources. This includes self-supporting general obligation (GO) debt, special assessment bonds, and contingent debt liabilities that may not have direct tax support but represent commitments to make debt service payments under certain conditions (e.g., state guarantees and bonds backed by state moral obligation pledges that have never been tapped).

The debt and debt service ratios of some states are relatively high because they issue debt for purposes that in other states would be financed at the local level, such as for schools or mass transit. Some states' debt service ratios rank higher than their debt ratios due to conservative debt management practices, such as rapid debt amortization. Conversely, some states' debt service ratios rank relatively lower due to the use of capital appreciation bonds or long maturity schedules.

These ratios have been calculated based on our definition of net tax-supported debt, debt service and operating revenues, and in most cases will differ from a state's own published calculations of debt limits or debt affordability. There is no correlation between our ratios and a state's compliance with its internal policies.

Exhibit 5

**Comparison of NTSD and Gross Tax-Supported Debt (GTSD)**

| Generally Included in NTSD | Generally Excluded from NTSD/ Included in GTSD |
|---|---|
| General obligation debt paid from statewide taxes and fees | Self-supporting general obligation debt with an established history of being paid from sources other than taxes or general revenues |
| Appropriation-backed bonds | Moral obligation debt with an established history of being paid from sources other than taxes or general revenues |
| Lease revenue bonds | Tobacco securitization bonds, with no state backup |
| Special tax bonds secured by statewide taxes and fees | Unemployment insurance obligation bonds |
| Highway bonds, secured by gas taxes and DMV fees | Debt guaranteed, but not paid, by the state |
| GARVEE bonds | Special assessment bonds |
| Lottery bonds | Revenue bonds of state enterprise (ex. toll roads) |
| Moral obligation debt paid from statewide taxes and fees | |
| Capital leases | |
| P3s with state concession obligation | |
| Pension obligation bonds | |

*Source: Moody's Investors Service*

The following Exhibits summarize our calculation of key debt metrics and rank the states accordingly. Debt burden – both on a state's balance sheet and in the context of budgetary flexibility – is one of many factors that we use to determine state credit quality. Therefore these metrics and rankings do not correlate directly to state GO ratings. The 50-state medians exclude Puerto Rico, which is shown for comparison purposes only.

Exhibit 6

**Net Tax-Supported Debt – Per Capita and Percent of Personal Income**

| | Net Tax-Supported Debt Per Capita | | Rating | | Net Tax-Supported Debt as a % of 2013 Personal Income | |
|---|---|---|---|---|---|---|
| 1 | Connecticut | $5,491 | Aa3 | 1 | Hawaii | 10.8% |
| 2 | Massachusetts | $4,887 | Aa1 | 2 | Connecticut | 9.0% |
| 3 | Hawaii | $4,867 | Aa2 | 3 | Massachusetts | 8.7% |
| 4 | New Jersey | $4,138 | A2 | 4 | New Jersey | 7.4% |
| 5 | New York | $3,092 | Aa1 | 5 | Washington | 6.2% |
| 6 | Washington | $2,892 | Aa1 | 6 | New York | 5.7% |
| 7 | Illinois | $2,681 | A3 | 7 | Illinois | 5.7% |
| 8 | Delaware | $2,438 | Aaa | 8 | Delaware | 5.5% |
| 9 | California | $2,407 | Aa3 | 9 | Kentucky | 5.3% |
| 10 | Rhode Island | $1,985 | Aa2 | 10 | California | 5.1% |
| 11 | Kentucky | $1,921 | Aa2* | 11 | Mississippi | 5.1% |
| 12 | Maryland | $1,889 | Aaa | 12 | Rhode Island | 4.2% |
| 13 | Wisconsin | $1,794 | Aa2 | 13 | Wisconsin | 4.2% |
| 14 | Mississippi | $1,747 | Aa2 | 14 | Oregon | 4.1% |
| 15 | Oregon | $1,636 | Aa1 | 15 | Louisiana | 3.9% |
| 16 | Louisiana | $1,566 | Aa2 | 16 | Maryland | 3.5% |
| 17 | Minnesota | $1,538 | Aa1 | 17 | New Mexico | 3.5% |
| 18 | Alaska | $1,489 | Aaa | 18 | Minnesota | 3.2% |
| 19 | Virginia | $1,356 | Aaa | 19 | Alaska | 3.0% |
| 20 | New Mexico | $1,258 | Aaa | 20 | Utah | 3.0% |
| 21 | Pennsylvania | $1,117 | Aa3 | 21 | Virginia | 2.8% |
| 22 | Ohio | $1,109 | Aa1 | 22 | Georgia | 2.8% |
| 23 | Kansas | $1,099 | Aa2* | 23 | West Virginia | 2.7% |
| 24 | Utah | $1,060 | Aaa | 24 | Ohio | 2.7% |
| 25 | Georgia | $1,043 | Aaa | 25 | Kansas | 2.5% |
| 26 | West Virginia | $980 | Aa1 | 26 | Pennsylvania | 2.4% |
| 27 | Florida | $973 | Aa1 | 27 | Florida | 2.4% |
| 28 | Vermont | $954 | Aaa | 28 | Arizona | 2.3% |
| 29 | Maine | $942 | Aa2 | 29 | Maine | 2.3% |
| 30 | New Hampshire | $848 | Aa1 | 30 | Alabama | 2.3% |
| 31 | Arizona | $846 | Aa2* | 31 | Vermont | 2.1% |
| 32 | Alabama | $824 | Aa1 | 32 | North Carolina | 1.9% |
| 33 | Michigan | $758 | Aa2 | 33 | Michigan | 1.9% |
| 34 | North Carolina | $739 | Aaa | 34 | South Carolina | 1.9% |
| 35 | South Carolina | $672 | Aaa | 35 | Arkansas | 1.9% |
| 36 | Arkansas | $669 | Aa1 | 36 | Nevada | 1.7% |
| 37 | Nevada | $665 | Aa2 | 37 | New Hampshire | 1.7% |
| 38 | Missouri | $606 | Aaa | 38 | Missouri | 1.5% |
| 39 | South Dakota | $547 | NGO** | 39 | Idaho | 1.4% |
| 40 | Idaho | $494 | Aa1* | 40 | Indiana | 1.2% |
| 41 | Oklahoma | $493 | Aa2 | 41 | South Dakota | 1.2% |
| 42 | Colorado | $478 | Aa1* | 42 | Oklahoma | 1.2% |
| 43 | Indiana | $474 | Aaa* | 43 | Colorado | 1.0% |
| 44 | Texas | $406 | Aaa | 44 | Texas | 1.0% |
| 45 | Tennessee | $327 | Aaa | 45 | Tennessee | 0.8% |
| 46 | Montana | $254 | Aa1 | 46 | Montana | 0.7% |
| 47 | Iowa | $250 | Aaa* | 47 | Iowa | 0.6% |
| 48 | North Dakota | $193 | Aa1* | 48 | North Dakota | 0.3% |
| 49 | Wyoming | $50 | NGO** | 49 | Wyoming | 0.1% |
| 50 | Nebraska | $10 | NGO** | 50 | Nebraska | 0.0% |
| | **MEAN:** | **$1,419** | | | MEAN: | 3.1% |
| | **MEDIAN:** | **$1,012** | | | MEDIAN: | 2.5% |
| | Puerto Rico *** | $15,637 | Caa2 | | Puerto Rico ** | 87.5% |

* Issuer Rating (No G.O. Debt)
** No General Obligation Debt
*** This figure is not included in any totals, means, or median calculations but is provided for comparison purposes only

*Sources: Moody's Investors Service, US Census Bureau, US Bureau of Economic Analysis*

Exhibit 7

**State Net Tax-Supported Debt and Gross Tax-Supported Debt**

| | Net Tax-Supported Debt | | Rating | | Gross Tax-Supported Debt | | Gross to Net Ratio |
|---|---|---|---|---|---|---|---|
| 1 | California | $93,406,000 | Aa3 | 1 | California | $99,844,000 | 1.07 |
| 2 | New York | $61,048,530 | Aa1 | 2 | New York | $61,493,530 | 1.01 |
| 3 | New Jersey | $36,990,047 | A2 | 3 | New Jersey | $42,675,220 | 1.15 |
| 4 | Illinois | $34,533,312 | A3 | 4 | Illinois | $36,854,813 | 1.07 |
| 5 | Massachusetts | $32,966,753 | Aa1 | 5 | Massachusetts | $34,024,553 | 1.03 |
| 6 | Washington | $20,422,165 | Aa1 | 6 | Washington | $29,369,422 | 1.44 |
| 7 | Connecticut | $19,748,617 | Aa3 | 7 | Texas | $27,425,171 | 2.51 |
| 8 | Florida | $19,365,100 | Aa1 | 8 | Michigan | $24,032,100 | 3.20 |
| 9 | Pennsylvania | $14,279,200 | Aa3 | 9 | Connecticut | $23,582,787 | 1.19 |
| 10 | Ohio | $12,856,609 | Aa1 | 10 | Pennsylvania | $21,798,900 | 1.53 |
| 11 | Maryland | $11,290,500 | Aaa | 11 | Florida | $20,186,900 | 1.04 |
| 12 | Virginia | $11,286,410 | Aaa | 12 | Minnesota | $19,615,365 | 2.34 |
| 13 | Texas | $10,947,292 | Aaa | 13 | Ohio | $18,404,070 | 1.43 |
| 14 | Georgia | $10,533,130 | Aaa | 14 | Oregon | $16,168,478 | 2.49 |
| 15 | Wisconsin | $10,331,182 | Aa2 | 15 | Virginia | $15,689,870 | 1.39 |
| 16 | Kentucky | $8,478,928 | Aa2* | 16 | Wisconsin | $13,502,101 | 1.31 |
| 17 | Minnesota | $8,391,884 | Aa1 | 17 | Kentucky | $11,530,315 | 1.36 |
| 18 | Michigan | $7,510,200 | Aa2 | 18 | Maryland | $11,290,500 | 1.00 |
| 19 | North Carolina | $7,345,660 | Aaa | 19 | Georgia | $10,533,130 | 1.00 |
| 20 | Louisiana | $7,281,761 | Aa2 | 20 | Colorado | $10,042,681 | 3.92 |
| 21 | Hawaii | $6,908,297 | Aa2 | 21 | Louisiana | $9,248,500 | 1.27 |
| 22 | Oregon | $6,495,201 | Aa1 | 22 | Alabama | $8,919,371 | 2.23 |
| 23 | Arizona | $5,696,536 | Aa2* | 23 | Utah | $8,227,349 | 2.64 |
| 24 | Mississippi | $5,230,599 | Aa2 | 24 | North Carolina | $7,345,660 | 1.00 |
| 25 | Alabama | $3,994,554 | Aa1 | 25 | Hawaii | $6,908,852 | 1.00 |
| 26 | Missouri | $3,674,045 | Aaa | 26 | Mississippi | $6,095,138 | 1.17 |
| 27 | South Carolina | $3,245,817 | Aaa | 27 | Arizona | $5,696,536 | 1.00 |
| 28 | Kansas | $3,190,772 | Aa2* | 28 | Maine | $4,942,194 | 3.94 |
| 29 | Indiana | $3,127,400 | Aaa* | 29 | Tennessee | $4,685,916 | 2.19 |
| 30 | Utah | $3,118,204 | Aaa | 30 | Indiana | $4,553,168 | 1.46 |
| 31 | New Mexico | $2,622,700 | Aaa | 31 | Kansas | $3,905,815 | 1.22 |
| 32 | Colorado | $2,562,681 | Aa1* | 32 | Alaska | $3,832,700 | 3.49 |
| 33 | Delaware | $2,280,579 | Aaa | 33 | Missouri | $3,674,045 | 1.00 |
| 34 | Tennessee | $2,142,316 | Aaa | 34 | South Carolina | $3,572,436 | 1.10 |
| 35 | Rhode Island | $2,094,732 | Aa2 | 35 | West Virginia | $3,248,331 | 1.79 |
| 36 | Arkansas | $1,985,697 | Aa1 | 36 | Nevada | $3,078,649 | 1.63 |
| 37 | Oklahoma | $1,913,369 | Aa2 | 37 | Rhode Island | $3,015,154 | 1.44 |
| 38 | Nevada | $1,887,084 | Aa2 | 38 | Delaware | $2,818,890 | 1.24 |
| 39 | West Virginia | $1,813,268 | Aa1 | 39 | New Mexico | $2,622,700 | 1.00 |
| 40 | Maine | $1,253,100 | Aa2 | 40 | New Hampshire | $2,574,473 | 2.29 |
| 41 | New Hampshire | $1,125,535 | Aa1 | 41 | Iowa | $2,184,095 | 2.81 |
| 42 | Alaska | $1,097,200 | Aaa | 42 | Idaho | $2,102,287 | 2.60 |
| 43 | Idaho | $807,023 | Aa1* | 43 | Arkansas | $1,985,697 | 1.00 |
| 44 | Iowa | $777,765 | Aaa* | 44 | Oklahoma | $1,958,254 | 1.02 |
| 45 | Vermont | $597,520 | Aaa | 45 | Vermont | $1,668,771 | 2.79 |
| 46 | South Dakota | $466,291 | NGO** | 46 | North Dakota | $1,416,698 | 9.94 |
| 47 | Montana | $259,835 | Aa1 | 47 | South Dakota | $603,141 | 1.29 |
| 48 | North Dakota | $142,467 | Aa1* | 48 | Montana | $593,948 | 2.29 |
| 49 | Wyoming | $29,020 | NGO** | 49 | Wyoming | $29,020 | 1.00 |
| 50 | Nebraska | $18,175 | NGO** | 50 | Nebraska | $23,740 | 1.31 |
| | **Totals** | **$509,571,062** | | | **Totals** | **$659,595,435** | |
| | **MEAN:** | **$10,191,421** | | | **MEAN:** | **13,191,909** | **1.85** |
| | **MEDIAN:** | **$3,834,300** | | | **MEDIAN:** | **6,501,995** | **1.33** |
| | Puerto Rico | $55,486,941 | Caa2*** | | Puerto Rico | $61,823,528 | 1.11 |

* Issuer Rating (No G.O. Debt), ** No General Obligation Debt, *** This figure is not included in any totals, means, or median calculations but is provided for comparison purposes only

*Source: Moody's Investors Service*

Exhibit 8

**Net Tax-Supported Debt as Percent of Gross State Domestic Product**

| | 2012 NTSD as % of 2011 State GDP | | | 2013 NTSD as % of 2012 State GDP | | | 2014 NTSD as % of 2013 State GDP | |
|---|---|---|---|---|---|---|---|---|
| 1 | Hawaii | 8.83% | 1 | Hawaii | 9.16% | 1 | Hawaii | 9.18% |
| 2 | Massachusetts | 8.43% | 2 | Connecticut | 8.56% | 2 | Connecticut | 7.92% |
| 3 | Connecticut | 8.09% | 3 | Massachusetts | 8.28% | 3 | Massachusetts | 7.39% |
| 4 | New Jersey | 7.32% | 4 | New Jersey | 6.99% | 4 | New Jersey | 6.81% |
| 5 | Washington | 5.47% | 5 | Washington | 5.43% | 5 | Washington | 5.00% |
| 6 | New York | 5.36% | 6 | Kentucky | 5.16% | 6 | Mississippi | 4.97% |
| 7 | Kentucky | 5.31% | 7 | New York | 5.15% | 7 | Illinois | 4.79% |
| 8 | Mississippi | 5.30% | 8 | Mississippi | 5.15% | 8 | New York | 4.66% |
| 9 | California | 4.98% | 9 | Illinois | 4.78% | 9 | Kentucky | 4.62% |
| 10 | Illinois | 4.85% | 10 | California | 4.72% | 10 | California | 4.24% |
| 11 | Rhode Island | 4.37% | 11 | Rhode Island | 4.26% | 11 | Rhode Island | 3.94% |
| 12 | Wisconsin | 4.21% | 12 | Wisconsin | 4.05% | 12 | Wisconsin | 3.66% |
| 13 | Oregon | 3.90% | 13 | Delaware | 3.49% | 13 | Delaware | 3.64% |
| 14 | Delaware | 3.54% | 14 | Maryland | 3.34% | 14 | Maryland | 3.30% |
| 15 | Maryland | 3.52% | 15 | Oregon | 3.13% | 15 | Oregon | 2.96% |
| 16 | New Mexico | 3.46% | 16 | New Mexico | 3.13% | 16 | Louisiana | 2.87% |
| 17 | West Virginia | 3.10% | 17 | West Virginia | 2.79% | 17 | New Mexico | 2.84% |
| 18 | Utah | 2.92% | 18 | Louisiana | 2.78% | 18 | Minnesota | 2.69% |
| 19 | Florida | 2.78% | 19 | Utah | 2.64% | 19 | Virginia | 2.49% |
| 20 | Pennsylvania | 2.66% | 20 | Minnesota | 2.58% | 20 | West Virginia | 2.45% |
| 21 | Louisiana | 2.62% | 21 | Florida | 2.54% | 21 | Florida | 2.42% |
| 22 | Georgia | 2.51% | 22 | Pennsylvania | 2.49% | 22 | Georgia | 2.32% |
| 23 | Minnesota | 2.51% | 23 | Ohio | 2.47% | 23 | Maine | 2.29% |
| 24 | Virginia | 2.51% | 24 | Georgia | 2.45% | 24 | Ohio | 2.27% |
| 25 | Ohio | 2.50% | 25 | Virginia | 2.41% | 25 | Kansas | 2.21% |
| 26 | Kansas | 2.45% | 26 | Maine | 2.35% | 26 | Pennsylvania | 2.21% |
| 27 | Alabama | 2.42% | 27 | Alabama | 2.31% | 27 | Utah | 2.21% |
| 28 | Arizona | 2.29% | 28 | Kansas | 2.28% | 28 | Alabama | 2.06% |
| 29 | South Carolina | 2.22% | 29 | Alaska | 2.23% | 29 | Arizona | 2.04% |
| 30 | Maine | 2.10% | 30 | Arizona | 2.21% | 30 | Vermont | 2.02% |
| 31 | Michigan | 2.05% | 31 | South Carolina | 2.03% | 31 | Alaska | 1.85% |
| 32 | Vermont | 1.96% | 32 | Vermont | 2.01% | 32 | South Carolina | 1.77% |
| 33 | North Carolina | 1.89% | 33 | Michigan | 1.94% | 33 | Michigan | 1.74% |
| 34 | New Hampshire | 1.79% | 34 | New Hampshire | 1.77% | 34 | New Hampshire | 1.66% |
| 35 | Alaska | 1.78% | 35 | North Carolina | 1.74% | 35 | Arkansas | 1.60% |
| 36 | Missouri | 1.69% | 36 | Arkansas | 1.59% | 36 | North Carolina | 1.56% |
| 37 | Nevada | 1.55% | 37 | Missouri | 1.56% | 37 | Nevada | 1.43% |
| 38 | Oklahoma | 1.49% | 38 | Idaho | 1.39% | 38 | Missouri | 1.33% |
| 39 | Idaho | 1.42% | 39 | Nevada | 1.34% | 39 | Idaho | 1.30% |
| 40 | Texas | 1.16% | 40 | Oklahoma | 1.26% | 40 | Oklahoma | 1.05% |
| 41 | Arkansas | 1.13% | 41 | Indiana | 1.17% | 41 | South Dakota | 1.00% |
| 42 | Colorado | 1.03% | 42 | Texas | 1.16% | 42 | Indiana | 0.99% |
| 43 | Indiana | 1.00% | 43 | Colorado | 0.99% | 43 | Colorado | 0.87% |
| 44 | Tennessee | 0.83% | 44 | South Dakota | 0.78% | 44 | Tennessee | 0.74% |
| 45 | Montana | 0.82% | 45 | Tennessee | 0.76% | 45 | Texas | 0.71% |
| 46 | South Dakota | 0.74% | 46 | Montana | 0.69% | 46 | Montana | 0.59% |
| 47 | Iowa | 0.59% | 47 | Iowa | 0.56% | 47 | Iowa | 0.47% |
| 48 | North Dakota | 0.51% | 48 | North Dakota | 0.39% | 48 | North Dakota | 0.25% |
| 49 | Wyoming | 0.09% | 49 | Wyoming | 0.08% | 49 | Wyoming | 0.06% |
| 50 | Nebraska | 0.03% | 50 | Nebraska | 0.02% | 50 | Nebraska | 0.02% |
| | **MEAN:** | **2.92%** | | **MEAN:** | **2.85%** | | **MEAN:** | **2.67%** |
| | **MEDIAN:** | **2.47%** | | **MEDIAN:** | **2.38%** | | **MEDIAN:** | **2.21%** |
| | Puerto Rico** | 52.90% | | Puerto Rico** | 54.00% | | Puerto Rico** | 53.85% |

* State GDP numbers have a 1-year lag.

*Sources: Moody's Analytics and US Bureau of Economic Analysis*

Exhibit 9

**Net Tax-Supported Debt as a Percentage of Personal Income**

| | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | 2.0% | 2.2% | 2.0% | 2.8% | 2.6% | 2.4% | 2.6% | 2.5% | 2.5% | 2.4% | 2.3% |
| Alaska | 2.8% | 2.6% | 2.7% | 2.4% | 2.2% | 3.2% | 3.0% | 3.3% | 2.8% | 3.2% | 3.0% |
| Arizona | 2.6% | 2.2% | 2.0% | 2.0% | 2.5% | 2.3% | 2.8% | 2.8% | 2.5% | 2.5% | 2.3% |
| Arkansas | 1.6% | 1.6% | 1.4% | 1.7% | 1.3% | 1.0% | 1.1% | 1.0% | 1.2% | 1.7% | 1.9% |
| California | 4.7% | 4.6% | 4.4% | 4.3% | 4.4% | 5.6% | 6.0% | 6.0% | 5.8% | 5.4% | 5.1% |
| Colorado | 1.0% | 0.9% | 0.9% | 0.8% | 0.8% | 1.0% | 1.3% | 1.3% | 1.2% | 1.1% | 1.0% |
| Connecticut | 8.5% | 8.0% | 7.8% | 7.3% | 8.2% | 8.7% | 9.5% | 9.1% | 9.1% | 9.2% | 9.0% |
| Delaware | 5.5% | 5.3% | 5.5% | 5.2% | 5.4% | 6.2% | 6.8% | 6.8% | 6.2% | 5.7% | 5.5% |
| Florida | 3.4% | 3.2% | 3.1% | 2.8% | 2.9% | 2.9% | 3.0% | 3.0% | 2.8% | 2.5% | 2.4% |
| Georgia | 2.8% | 2.7% | 3.0% | 3.0% | 3.0% | 3.3% | 3.3% | 3.1% | 3.0% | 2.9% | 2.8% |
| Hawaii | 11.1% | 12.1% | 10.6% | 9.9% | 9.4% | 9.9% | 10.1% | 9.6% | 10.0% | 10.6% | 10.8% |
| Idaho | 0.6% | 0.6% | 0.6% | 1.2% | 1.6% | 1.7% | 1.6% | 1.7% | 1.6% | 1.5% | 1.4% |
| Illinois | 6.2% | 5.9% | 5.5% | 5.2% | 4.6% | 4.4% | 5.7% | 6.0% | 5.7% | 5.6% | 5.7% |
| Indiana | 1.4% | 1.6% | 2.1% | 1.5% | 1.5% | 1.5% | 1.4% | 1.3% | 1.2% | 1.4% | 1.2% |
| Iowa | 0.5% | 0.4% | 0.3% | 0.3% | 0.2% | 0.2% | 0.7% | 0.8% | 0.7% | 0.6% | 0.6% |
| Kansas | 4.0% | 3.8% | 3.7% | 3.5% | 3.2% | 3.0% | 3.2% | 3.1% | 2.8% | 2.6% | 2.5% |
| Kentucky | 4.0% | 4.5% | 4.3% | 4.7% | 4.8% | 5.4% | 6.1% | 6.1% | 5.9% | 5.7% | 5.3% |
| Louisiana | 2.4% | 3.1% | 4.9% | 4.3% | 3.3% | 3.6% | 3.5% | 3.7% | 3.7% | 3.7% | 3.9% |
| Maine | 2.2% | 2.0% | 1.9% | 1.9% | 2.2% | 2.2% | 2.4% | 2.3% | 2.1% | 2.4% | 2.3% |
| Maryland | 2.9% | 3.0% | 2.8% | 3.0% | 3.3% | 3.4% | 3.3% | 3.6% | 3.6% | 3.4% | 3.5% |
| Massachusetts | 8.5% | 9.8% | 9.4% | 9.8% | 8.9% | 9.2% | 9.2% | 9.4% | 9.3% | 9.0% | 8.7% |
| Michigan | 2.2% | 2.1% | 2.2% | 2.2% | 2.2% | 2.1% | 2.2% | 2.2% | 2.2% | 2.1% | 1.9% |
| Minnesota | 2.0% | 2.1% | 2.2% | 2.3% | 2.1% | 2.4% | 2.5% | 2.7% | 3.0% | 3.0% | 3.2% |
| Mississippi | 4.8% | 4.8% | 4.9% | 4.8% | 5.2% | 5.0% | 5.1% | 5.6% | 5.4% | 5.2% | 5.1% |
| Missouri | 1.5% | 1.6% | 1.9% | 2.1% | 2.0% | 2.2% | 2.2% | 2.0% | 1.8% | 1.7% | 1.5% |
| Montana | 1.1% | 1.4% | 1.5% | 1.2% | 1.2% | 1.1% | 1.1% | 1.0% | 0.9% | 0.7% | 0.7% |
| Nebraska | 0.1% | 0.1% | 0.1% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Nevada | 2.0% | 2.2% | 1.7% | 2.0% | 2.2% | 2.3% | 2.4% | 2.2% | 1.9% | 1.7% | 1.7% |
| New Hampshire | 1.3% | 1.4% | 1.3% | 1.3% | 1.3% | 1.6% | 1.9% | 1.8% | 1.9% | 1.8% | 1.7% |
| New Jersey | 7.4% | 7.9% | 7.6% | 7.5% | 7.3% | 7.2% | 7.8% | 7.8% | 7.6% | 7.3% | 7.4% |
| New Mexico | 5.3% | 4.7% | 5.3% | 4.8% | 4.6% | 4.4% | 5.6% | 4.2% | 3.8% | 3.4% | 3.5% |
| New York | 7.2% | 6.7% | 6.7% | 6.3% | 6.3% | 6.5% | 6.7% | 6.6% | 6.3% | 6.0% | 5.7% |
| North Carolina | 2.5% | 2.8% | 2.4% | 2.8% | 2.5% | 2.3% | 2.3% | 2.3% | 2.4% | 2.1% | 1.9% |
| North Dakota | 0.6% | 1.2% | 1.0% | 1.1% | 1.0% | 0.8% | 0.8% | 0.6% | 0.7% | 0.5% | 0.3% |
| Ohio | 2.9% | 2.9% | 3.0% | 2.9% | 2.8% | 2.6% | 2.8% | 2.8% | 2.8% | 2.7% | 2.7% |
| Oklahoma | 1.2% | 1.4% | 1.5% | 1.5% | 1.5% | 1.6% | 1.8% | 1.7% | 1.6% | 1.3% | 1.2% |
| Oregon | 4.7% | 4.5% | 4.6% | 5.0% | 4.6% | 5.2% | 5.6% | 5.5% | 5.2% | 4.9% | 4.1% |
| Pennsylvania | 2.3% | 2.3% | 2.4% | 2.4% | 2.5% | 2.4% | 2.7% | 2.8% | 2.8% | 2.6% | 2.4% |
| Rhode Island | 4.3% | 4.1% | 4.6% | 4.7% | 4.5% | 5.2% | 5.3% | 4.7% | 4.7% | 4.5% | 4.2% |
| South Carolina | 2.2% | 2.5% | 2.3% | 3.3% | 2.9% | 2.9% | 2.7% | 2.5% | 2.3% | 2.2% | 1.9% |
| South Dakota | 0.9% | 0.7% | 0.8% | 0.9% | 0.8% | 0.4% | 0.9% | 0.9% | 0.9% | 0.9% | 1.2% |
| Tennessee | 0.7% | 0.8% | 0.7% | 0.7% | 0.7% | 0.9% | 1.0% | 1.0% | 0.9% | 0.8% | 0.8% |
| Texas | 1.0% | 1.0% | 1.3% | 1.4% | 1.4% | 1.4% | 1.6% | 1.5% | 1.5% | 1.5% | 1.0% |
| Utah | 3.2% | 2.7% | 2.3% | 1.9% | 1.5% | 3.2% | 4.1% | 4.4% | 3.8% | 3.4% | 3.0% |
| Vermont | 2.3% | 2.2% | 2.1% | 2.0% | 1.8% | 1.8% | 1.9% | 2.0% | 1.9% | 2.0% | 2.1% |
| Virginia | 1.8% | 1.7% | 1.8% | 1.9% | 1.9% | 2.1% | 2.4% | 2.6% | 2.9% | 2.7% | 2.8% |
| Washington | 4.9% | 4.9% | 5.1% | 5.1% | 5.1% | 5.3% | 6.2% | 6.0% | 6.4% | 6.4% | 6.2% |
| West Virginia | 4.6% | 4.4% | 3.9% | 3.9% | 3.6% | 3.5% | 3.8% | 3.6% | 3.3% | 3.0% | 2.7% |
| Wisconsin | 4.7% | 4.3% | 4.2% | 4.1% | 4.0% | 4.6% | 4.8% | 4.8% | 4.7% | 4.4% | 4.2% |
| Wyoming | 0.7% | 0.3% | 0.3% | 0.2% | 0.2% | 0.2% | 0.1% | 0.1% | 0.1% | 0.1% | 0.1% |
| **Median** | **2.5%** | **2.5%** | **2.4%** | **2.6%** | **2.5%** | **2.5%** | **2.8%** | **2.8%** | **2.8%** | **2.6%** | **2.5%** |

*Sources: Moody's Investors Service and US Bureau of Economic Analysis*

Exhibit 10

**Debt Service Ratio**

| | | FY2012 | | | FY2013 | | | FY2014 |
|---|---|---|---|---|---|---|---|---|
| 1 | Connecticut | 12.7% | 1 | Connecticut | 13.5% | 1 | Hawaii | 13.0% |
| 2 | New York | 11.5% | 2 | New York | 11.4% | 2 | Connecticut | 12.4% |
| 3 | Massachusetts | 11.3% | 3 | Hawaii | 11.1% | 3 | New York | 11.4% |
| 4 | Hawaii | 10.4% | 4 | Massachusetts | 10.5% | 4 | Utah | 10.5% |
| 5 | Illinois | 10.4% | 5 | Illinois | 10.1% | 5 | West Virginia** | 10.5% |
| 6 | Oregon | 9.5% | 6 | California | 9.4% | 6 | Massachusetts | 10.4% |
| 7 | California | 9.2% | 7 | Washington | 9.1% | 7 | Illinois | 10.3% |
| 8 | Washington | 9.0% | 8 | New Jersey | 8.9% | 8 | Washington | 9.8% |
| 9 | New Jersey | 8.8% | 9 | Oregon | 8.9% | 9 | Kentucky | 9.1% |
| 10 | Delaware | 7.8% | 10 | Kentucky | 8.8% | 10 | New Jersey | 8.9% |
| 11 | Rhode Island | 7.7% | 11 | Nevada | 8.1% | 11 | Oregon | 8.6% |
| 12 | Florida | 7.6% | 12 | Rhode Island | 7.8% | 12 | Wisconsin | 7.9% |
| 13 | Utah | 7.3% | 13 | Delaware | 7.6% | 13 | California | 7.9% |
| 14 | Mississippi | 7.2% | 14 | Utah | 7.5% | 14 | Delaware | 7.6% |
| 15 | Kentucky | 7.2% | 15 | Florida | 7.1% | 15 | Rhode Island | 7.5% |
| 16 | Georgia | 7.0% | 16 | Mississippi | 6.9% | 16 | Georgia | 6.7% |
| 17 | New Hampshire | 6.8% | 17 | Wisconsin | 6.7% | 17 | Mississippi | 6.2% |
| 18 | Nevada | 6.6% | 18 | Georgia | 6.7% | 18 | Nevada | 6.1% |
| 19 | Maine | 6.4% | 19 | Maine | 6.1% | 19 | Alabama | 5.9% |
| 20 | Maryland | 5.7% | 20 | Alabama | 5.6% | 20 | Maryland | 5.8% |
| 21 | Virginia | 5.2% | 21 | Ohio | 5.5% | 21 | Ohio | 5.8% |
| 22 | Arizona | 5.1% | 22 | Maryland | 5.5% | 22 | Maine | 5.7% |
| 23 | New Mexico | 5.1% | 23 | Virginia | 5.4% | 23 | Arizona | 5.6% |
| 24 | Pennsylvania | 5.0% | 24 | Arizona | 5.3% | 24 | Florida | 5.5% |
| 25 | Alabama | 4.9% | 25 | Pennsylvania | 5.1% | 25 | Virginia | 5.4% |
| 26 | South Carolina | 4.8% | 26 | New Mexico* | 5.1% | 26 | New Hampshire | 5.3% |
| 27 | Kansas | 4.5% | 27 | Louisiana | 4.9% | 27 | Pennsylvania | 5.2% |
| 28 | Louisiana | 4.5% | 28 | New Hampshire | 4.9% | 28 | New Mexico** | 4.9% |
| 29 | Ohio | 4.1% | 29 | South Carolina | 4.6% | 29 | Louisiana | 4.7% |
| 30 | Missouri | 3.9% | 30 | Kansas | 4.5% | 30 | South Carolina | 4.6%, |
| 31 | North Carolina | 3.8% | 31 | North Carolina | 3.7% | 31 | North Carolina | 4.3% |
| 32 | Wisconsin | 3.8% | 32 | West Virginia | 3.7% | 32 | Minnesota | 4.2% |
| 33 | West Virginia | 3.6% | 33 | Missouri | 3.6% | 33 | Missouri | 4.0% |
| 34 | Texas | 3.1% | 34 | Texas | 3.0% | 34 | Kansas | 3.3% |
| 35 | Arkansas | 3.0% | 35 | Colorado | 2.8% | 35 | Michigan | 3.2% |
| 36 | Colorado | 2.8% | 36 | Michigan | 2.8% | 36 | South Dakota | 3.0% |
| 37 | Idaho | 2.8% | 37 | Idaho | 2.7% | 37 | Colorado | 2.9% |
| 38 | Vermont | 2.8% | 38 | Vermont | 2.7% | 38 | Vermont | 2.8% |
| 39 | Minnesota | 2.7% | 39 | Oklahoma | 2.3% | 39 | Idaho | 2.7% |
| 40 | Michigan | 2.6% | 40 | Arkansas | 2.2% | 40 | Texas | 2.6% |
| 41 | Montana | 2.4% | 41 | Montana | 2.1% | 41 | Arkansas | 2.6% |
| 42 | Oklahoma | 2.2% | 42 | Minnesota | 2.1% | 42 | Oklahoma | 2.4% |
| 43 | Indiana | 1.9% | 43 | Indiana | 1.9% | 43 | Montana | 2.0% |
| 44 | South Dakota | 1.6% | 44 | Alaska | 1.6% | 44 | Alaska | 1.7% |
| 45 | Tennessee | 1.5% | 45 | South Dakota | 1.5% | 45 | Tennessee | 1.7% |
| 46 | Alaska | 1.3% | 46 | Tennessee | 1.5% | 46 | Indiana | 1.6% |
| 47 | Iowa | 0.9% | 47 | Iowa | 0.9% | 47 | North Dakota | 0.6% |
| 48 | North Dakota | 0.8% | 48 | North Dakota | 0.7% | 48 | Iowa | 0.4% |
| 49 | Nebraska | 0.2% | 49 | Nebraska | 0.2% | 49 | Wyoming | 0.1% |
| 50 | Wyoming | 0.2% | 50 | Wyoming | 0.2% | 50 | Nebraska | 0.1% |
| | **Mean** | **5.2%** | | **Mean** | **5.3%** | | **Mean** | **5.5%** |
| | **Median** | **4.8%** | | **Median** | **5.1%** | | **Median** | **5.3%** |
| | Puerto Rico | 21.7% | | Puerto Rico | | | Puerto Rico** | 26.8% |

* Figures restated since last report to incorporate FY2013 revenues.

** Figures based on estimated FY2014 revenues; audited financial statements not available at time of publication. Figures for Puerto Rico are not included in any totals, means, or median calculations but is provided for comparison use only.

*Source: Moody's Investors Service*

Exhibit 11

**Demand Debt and Direct Loans/Private Placements**

| State | NTSD $000 | Demand Debt ($000) | Direct Loans/ Private Placements ($000) | # Direct Loans/ Private Placements |
|---|---|---|---|---|
| Alabama | $3,994,554 | $- | $ 263,312 | 6 |
| Alaska | $1,097,200 | $- | $- | 0 |
| Arizona | $5,696,536 | $- | $- | 0 |
| Arkansas | $1,985,697 | $- | $1,500 | 1 |
| California | $93,406,000 | $5,681,150 | $500 | 1 |
| Colorado | $2,562,681 | $- | $- | 0 |
| Connecticut | $19,748,617 | $- | $- | 0 |
| Delaware | $2,280,579 | $- | $3,325 | 4 |
| Florida | $19,365,100 | $74,290 | $- | 0 |
| Georgia | $10,533,130 | $- | $127,305 | 1 |
| Hawaii | $6,908,297 | $- | $- | 0 |
| Idaho | $807,023 | $- | $671 | 1 |
| Illinois | $34,533,312 | $600,000 | $- | 0 |
| Indiana | $3,127,400 | $458,175 | $310,000 | 4 |
| Iowa | $777,765 | $- | $11,005 | 1 |
| Kansas | $3,190,772 | $147,000 | $- | 0 |
| Kentucky | $8,478,928 | $- | $- | 0 |
| Louisiana | $7,281,761 | $- | $325,755 | 6 |
| Maine | $1,253,100 | $- | $38,150 | 1 |
| Maryland | $11,290,500 | $59,450 | $56,409 | 8 |
| Massachusetts | $32,966,753 | $3,075,390 | $441,115 | 3 |
| Michigan | $7,510,200 | $181,380 | $- | 0 |
| Minnesota | $8,391,884 | $- | $- | 0 |
| Mississippi | $5,230,599 | $- | $- | 0 |
| Missouri | $3,674,045 | $30,625 | $- | 0 |
| Montana | $259,835 | $- | $- | 0 |
| Nebraska | $18,175 | $- | $- | 0 |
| Nevada | $1,887,084 | $- | $9,450 | 2 |
| New Hampshire | $1,125,535 | $- | $20,599 | 7 |
| New Jersey | $36,990,047 | $290,115 | $324,070 | 4 |
| New Mexico | $2,622,700 | $420,000 | $284,800 | 3 |
| New York | $61,048,530 | $2,206,165 | $- | 0 |
| North Carolina | $7,345,660 | $- | $- | 0 |
| North Dakota | $142,467 | $- | $- | 0 |
| Ohio | $12,856,609 | $553,210 | $- | 0 |
| Oklahoma | $1,913,369 | $- | $1,146 | 1 |
| Oregon | $6,495,201 | $159,205 | $265,515 | 1 |
| Pennsylvania | $14,279,200 | $231,425 | $73,475 | 1 |
| Rhode Island | $2,094,732 | $38,400 | $43,510 | 3 |
| South Carolina | $3,245,817 | $- | $359,903 | 4 |
| South Dakota | $466,291 | $- | $- | 0 |
| Tennessee | $2,142,316 | $350,000 | $- | 0 |
| Texas | $10,947,292 | $3,181,098 | $750,000 | 3 |
| Utah | $3,118,204 | $- | $- | 0 |
| Vermont | $597,520 | $- | $- | 0 |
| Virginia | $11,286,410 | $139,555 | $12,348 | 4 |
| Washington | $20,422,165 | $- | $- | 0 |
| West Virginia | $1,813,268 | $25,000 | $25,000 | 2 |
| Wisconsin | $10,331,182 | $1,513,028 | $279,800 | 5 |
| Wyoming | $29,020 | $- | $- | 0 |
| **TOTAL** | **$509,571,062** | **$19,414,661** | **$4,028,663** | **77** |
| | | | | |
| Puerto Rico* | $55,486,941 | $709,725 | $476,000 | 2 |

* state has not confirmed figure

*Source: Moody's Investors Service*

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# APPENDIX B

FitchRatings

# Fitch Rates Vermont's $102MM GOs 'AAA'; Outlook Stable

Fitch Ratings-New York-23 September 2015: Fitch Ratings has assigned an 'AAA' rating to the following state of Vermont general obligation (GO) bonds:

--$26.565 million GO bonds, 2015 series A (Vermont Citizen Bonds) (negotiated);
--$50.765 million GO bonds, 2015 series B (competitive);
--$24.46 million GO refunding bonds, 2015 series C (competitive).

The bonds are expected to sell the week of Oct. 5, 2015; the series A bonds through negotiation and the series B and C bonds through competitive bid.

In addition, Fitch affirms the 'AAA' rating on the state's outstanding $585.2 million GO bonds.

The Rating Outlook is Stable.

SECURITY

The bonds are general obligations of the state of Vermont backed by the state's full faith and credit.

KEY RATING DRIVERS

CONSERVATIVE FINANCIAL MANAGEMENT: Vermont's strong fiscal management practices anchor the state's credit quality and offset risks posed by its relatively narrow economy. The state's revenue stream is diverse and estimates are updated at least twice a year. The state takes timely action to maintain balance, and budget stabilization reserves have been maintained at statutory maximum levels despite periods of declining revenue.

MODERATE LONG-TERM LIABILITY BURDEN: Vermont's debt levels are at the low end of the moderate range and are expected to remain so based on the state's careful affordability planning process. Funded ratios for Vermont's pension systems declined in recent years. Positively, the state regularly budgets for its full projected actuarially calculated annual required contribution (ARC) and has enacted plan modifications with the goal of gradually improving the funded status of the plans. The state's combined debt and unfunded pension liabilities pose a slightly above-average burden, but one that Fitch views as manageable.

RELATIVELY NARROW ECONOMY: Vermont's economy has diversified but remains narrow with above-average exposure to the cyclical manufacturing sector. While statewide educational attainment and unemployment levels compare favorably to the nation, the state's median age is well above the national level.

RATING SENSITIVITIES

The rating is sensitive to shifts in Vermont's fundamental credit characteristics, particularly its moderate long-term liability profile and fiscal discipline.

CREDIT PROFILE

Vermont's 'AAA' rating reflects its moderate debt burden, maintained through adherence to debt affordability guidelines, as well as conservative financial management and maintenance of sound reserves. Outstanding debt, which is nearly entirely GO and matures rapidly, has increased slightly in recent years but the debt burden remains moderately low. Debt plus unfunded state pension liabilities as percentage of personal income is slightly above the states' median, but the burden is very manageable as the state regularly budgets its full projected pension ARC payments. Vermont budgets conservatively, taking prompt action to address projected budget gaps. Its diverse revenue stream includes a state property tax for education, a relatively unique feature for state governments.

LIMITED ECONOMY, STILL RECOVERING

The relatively narrow state economy is characterized by larger-than-average reliance on tourism, health and educational services, and manufacturing, and performance is exposed to several key large employers. The state's population is older, but more well-educated than the national average. During the recession, Vermont's peak-to-trough monthly employment loss of 4.8% (seasonally adjusted levels) was less severe than the national 6.3% decline. The recovery has been in line with the national trend, as through August, the state had recovered 135% of the jobs it lost while the national rate was 145%. On a non-seasonally adjusted basis, Vermont's 1.4% three-month moving average of year-over-year (yoy) employment growth trailed the national 2.1% rate.

Unemployment levels remain well below those of the nation, at 3.6% in August 2015 compared to 5.1% for the country, but the state's labor force has been flat to declining indicating some weakness in the labor market. The recent sale by IBM of its chip manufacturing business to GlobalFoundries is a positive for the state as it should stabilize employment at one of the state's largest factories. Wealth levels are on par with the nation as 2014 per capita personal income of $47,330 was just slightly ahead of the U.S. Vermont's total personal income growth has been line with national growth in recent years.

STABLE FISCAL PROFILE

Fiscal management practices are strong, including a consensus revenue process that forecasts revenues at least twice a year, monthly revenue monitoring and a practice of accumulating excess resources in separate reserve funds for each of the state's three major operating funds.

Vermont's fiscal profile remains stable with recent performance indicating solid yoy growth, despite a downward revenue forecast revision at the start of fiscal 2015. Consistent with Fitch's expectations, the state took prompt action to address the modest shortfall at the start of fiscal 2015. Within three weeks of the $28 million general fund negative forecast revision (2.1% of forecast revenues) in July 2014, the state enacted a rescission plan to address the gap with a mix of one-time and recurring revenue and expense actions.

In January 2015, the state further revised its revenue forecast downward by another $10 million. Ultimately, preliminary fiscal 2015 general fund revenues ended 1.3%, or $17.9 million, ahead of the January 2015 forecast. Versus fiscal 2014, general fund revenues grew 3.6% and personal income tax (PIT) revenues notched particularly strong growth of 5.2%. This contrasts with fiscal 2014 when year-end results fell short of the January forecast and contributed to a notable downward forecast revision in July 2014.

For fiscal 2016, the state's consensus forecast from July 2015 is for continued general fund revenue growth of 4.2%. PIT growth is again particularly robust at 8.2% - excluding the effects of tax law changes, Fitch estimates the baseline growth forecast at a still-healthy 5%, reflecting the consensus economic outlook for continued economic improvement. Fitch notes the tax law changes, while general modest in dollar amount, add an element of uncertainty to the revenue forecast. Monthly revenue monitoring and the annual January forecast update should provide the state with ample time to make adjustments to maintain balance if necessary.

Budget stabilization reserves (BSR) in each of the state's three major operating funds as of the close of fiscal 2015 remained fully funded and are expected to remain so through the current fiscal year ending June 30, 2016. In addition to the general fund BSR, capped at 5% of prior year appropriations, Vermont also maintains a general fund balance reserve (BR; replacing the former revenue shortfall reserve). The BR also has a cap of 5% of prior year appropriations, and stood well below that at $6.8 million (or 0.5%) at the end of fiscal 2015. Vermont projects the BR will increase notably to $10.1 million at the end of the current fiscal year. The state also projects the BSRs for the education and transportation funds, its other major operating funds, will remain fully funded at 5% of appropriations at fiscal year-end 2016.

LOW DEBT, HIGHER PENSION LIABILITIES

Vermont's net tax-supported debt profile reflects a moderate burden, straightforward structure, and rapid amortization. As of June 30, 2015, pro forma net tax-supported debt (including the 2015 series A and B) equaled 2.3% of 2014 personal income, which is in line with the states' median.

In 1990, the state established a Capital Debt Affordability Advisory Committee (CDAAC), establishing an important policy mechanism to manage the state's debt burden. The committee annually recommends proposed debt authorizations, based on analysis of the state's capacity. After recommending a modest decrease in the recommended authorization for fiscal 2016 and 2017, at its September 2015 meeting, the committee recommended keeping authorization stable. The state has never exceeded the committee's recommended levels. Fitch views the CDAAC as a useful check as the state has no other constitutional or statutory limitations on debt issuance.

Vermont has budgeted and appropriated full projected ARC payments into its pension systems since fiscal 2007, but the unfunded liability remains above-average relative to the state's economic resources. The state assumes responsibility for retirement pensions not only of state workers, but of local school teachers. In recent years, the state implemented a series of changes to benefits, employee contributions, and actuarial assumptions to improve the funded status and reduce the long-term liabilities; these include closing the amortization periods of both plans. As of June 30, 2014, the state's Vermont State Retirement System (VSRS) was 68.7% funded on a Fitch-adjusted basis (77.9% reported). Similarly, the teachers' plan was just 53.2% funded on a Fitch-adjusted basis (59.9% reported). Fitch anticipates funded ratios will remain relatively stable and gradually improve, subject to investment performance, as the state continues to make full ARC payments. Combined net-tax-supported debt plus unfunded pension liabilities (as of Fitch's 2014 state pension update report) was an above-average, but still manageable, 9.7% of personal income.

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Fitch recently published an exposure draft of state and local government tax-supported criteria (Exposure Draft: U.S. Tax-Supported Rating Criteria, dated Sept. 10, 2015). The draft includes a number of proposed revisions to existing criteria. If applied in the proposed form, Fitch estimates the revised criteria would result in changes to fewer than 10% of existing tax-supported ratings. Fitch expects that final criteria will be approved and published by Jan. 20, 2016. Once approved, the criteria will be applied immediately to any new issue and surveillance rating review. Fitch anticipates the criteria to be applied to all ratings that fall under the criteria within a 12-month period from the final approval date.

In addition to the sources of information identified in the applicable criteria specified below, this action was informed by information from CreditScope, IHS, and FRED, Federal Reserve Bank of St. Louis.

**Applicable Criteria**
Exposure Draft: U.S. Tax-Supported Rating Criteria (pub. 10 Sep 2015)
(https://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=869942)
Tax-Supported Rating Criteria (pub. 14 Aug 2012)
(https://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=686015)
U.S. State Government Tax-Supported Rating Criteria (pub. 14 Aug 2012)
(https://www.fitchratings.com/creditdesk/reports/report_frame.cfm?rpt_id=686033)

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# APPENDIX C

MOODY'S
INVESTORS SERVICE

# New Issue: Moody's assigns Aaa to Vermont's $100M 2015 GO Bonds

Global Credit Research - 23 Sep 2015

**Maintains Aaa on $585M GO bonds**

VERMONT (STATE OF)
State Governments (including Puerto Rico and US Territories)
VT

**Moody's Rating**

| ISSUE | | RATING |
|---|---|---|
| General Obligation Refunding Bonds Series 2015C | | Aaa |
| **Sale Amount** | $25,000,000 | |
| **Expected Sale Date** | 10/05/15 | |
| **Rating Description** | General Obligation | |
| General Obligation Bonds, 2015 Series A (Vermont Citizen Bonds) | | Aaa |
| **Sale Amount** | $25,000,000 | |
| **Expected Sale Date** | 10/05/15 | |
| **Rating Description** | General Obligation | |
| General Obligation Bonds Series 2015B | | Aaa |
| **Sale Amount** | $50,000,000 | |
| **Expected Sale Date** | 10/05/15 | |
| **Rating Description** | General Obligation | |

**Moody's Outlook** STA

NEW YORK, September 23, 2015 --Moody's Investors Service has assigned a Aaa rating to the State of Vermont's $25 million Series 2015A General Obligation Bonds (Vermont Citizen Bonds), $50 million Series 2015B General Obligation Bonds, and $25 million Series 2015C General Obligation Refunding Bonds. The outlook is stable.

Moody's maintains a Aaa rating on roughly $585.2 million of GO debt.

The 2015 bonds are scheduled to price the week of Oct. 5.

SUMMARY RATING RATIONALE

The Aaa rating reflects Vermont's strong financial management, which features conservative fiscal policies, consistent governance, and a proven commitment to maintaining healthy reserve balances. The state's debt is modest, and its economy, while small for a state, is vibrant. The rating also recognizes Vermont's sizeable unfunded pension liabilities, which we consider the state's biggest long-term challenge.

OUTLOOK

The stable outlook reflects the state's proven ability to continue operating on a balanced basis and maintaining a solid rainy day fund balance regardless of economic cycles. The outlook also anticipates slow progress toward achieving stronger funding of the state's pension liabilities.

WHAT COULD MAKE THE RATING GO DOWN

Slower-than-actuarially scheduled progress in improving pension funding

Faster-than-anticipated growth in unfunded pension liabilities

Departure from the state's history of conservative financial management

Emergence of structurally imbalanced budgets

STRENGTHS

Proven track record of maintaining healthy reserves regardless of economic cycles

Vibrant economy

Moderate debt profile

CHALLENGES

Large unfunded pension liabilities

Likely slow progress toward improving pension funding

Small economy relative to other states

RECENT DEVELOPMENTS

Recent developments are incorporated in the Detailed Rating Rationale.

DETAILED RATING RATIONALE

ECONOMY: SMALL BUT VIBRANT ECONOMY

Vermont's economy, while small, is vibrant. Bolstered by key industries including health care, tourism, technology-related manufacturing, and food and agriculture, Vermont has the third-lowest unemployment rate in the US (3.6% as of July, compared with 5.3% nationwide).

The $30 billion economy (by far the smallest among 50 states) in this state of roughly 625,000 people is robust. Per capita income is above-average at roughly 103% of US PCI, and income growth is moving in a positive direction; Vermont's PCI was below US PCI as recently as 2010.

We expect moderate growth in gross state product over the next few years as the state's economy remains in expansion mode. Longer term, unfavorable demographics and high business costs will be difficult hurdles to overcome, and Vermont will underperform the nation in job and income growth.

FINANCIAL OPERATIONS AND RESERVES: PROVEN RECORD OF MAINTAINING STRONG RESERVES

The state's commitment to maintaining healthy reserves is a key credit strength and one of the main pillars of its Aaa rating. The state funds a budget stabilization reserve at 5% of appropriations for its operating funds (general, transportation, and education), the statutory maximum.

Notably, the state has funded reserves to the statutory maximum since 2004, avoiding any draws throughout the recession, and continuing to build them as revenues grow.

The state's roughly $2.7 billion of operating funds revenues consist mainly of a statewide education property tax (36% of revenues), a personal income tax (24%), and a 6-cent sales tax (13%). These tax revenues are growing: the income tax is forecast to climb 8% in fiscal 2016 after a 5% rise in 2015, and the sales tax projected to grow nearly 5% in 2016 following 3% growth in 2015.

Although Vermont's revenues are subject to economic volatility, we expect the state to adjust well to economic cycles thanks to a comprehensive consensus planning regime as well as a firm commitment to a sound fiscal position.

Liquidity

Vermont's strong budget stabilization reserves help to ensure ample cash. The state does not resort to cash-flow borrowing to provide liquidity throughout the year.

The state's unrestricted cash position for all funds on a pooled basis throughout the year averages about $250 million, or nearly 10% of operating fund revenues. As of June 30, unrestricted cash of $379 million was equal to 14% of operating fund revenues.

DEBT AND PENSIONS: MODERATE DEBT, HEAVY UNFUNDED PENSIONS

Vermont's $585 million of General Obligation debt, plus roughly $33 million of highway revenue bonds secured by gasoline taxes, equate to a modest $954 per capita, which is below-average. Debt is also modest measured relative to gross state product (2% versus 2.2% median) and relative to per capita income (2.1% versus 2.5% median).

Debt is likely to remain modest. The state's Capital Debt Affordability Advisory Committee has recommended new-money borrowing of $72 million annually, implying small increases to debt outstanding as current debt matures at a rate of roughly $45 million annually.

Debt Structure

The state's GO debt is all fixed rate.

Debt-related Derivatives

The state is not party to any debt-related derivatives.

Pensions and OPEB

Vermont's net pension liabilities are on the high side, and this is the one factor where the state scores poorly relative to peers in the top rating category.

The state contributes to two defined-benefit pension plans, one for state employees and one for teachers. All employer contributions to these plans come from the state (the state makes no contributions to the municipal pension plan).

As of the 6/30/2014 actuarial valuation, the actuarial accrued liabilities of the state's two plans totaled $4.7 billion while the actuarial value of assets totaled $3.2 billion, implying an unfunded actuarial liability of $1.5 billion.

Based on standard Moody's adjustments to pension liabilities, we estimate the adjusted net pension liability as of fiscal 2013 at $3.5 billion. The three-year average adjusted net pension liability is roughly 65% of governmental revenues, which is above the state median of 53%.

Positively, Vermont is on a path to achieve full funding of its actuarial pension liability by 2038. Like many paths to full funding that are based on a fixed share of payroll, Vermont's plan assumes larger contributions in later years than in early years. The state's funding plan will result in unfunded liabilities growing through negative amortization until 2022 before the unfunded liability begins to decline as contributions increase. As such, the ANPL score is likely to worsen over the next few years.

OPEB

The state also provides other post-employment benefits (OPEB), which have an actuarial unfunded liability of about $1.8 billion. The annual OPEB cost is $110 million, or 4% of operating revenues.

GOVERNANCE

We consider Vermont's fiscal management to be strong. It utilizes consensus forecasting for estimating revenues, has increased the frequency of its forecasting during economic downturns, and passes on-time budgets. The state's willingness to continue allocating money to its rainy day funds also reflects well on management.

KEY STATISTICS

Per capita income relative to US average: 103%

Industrial diversity: 0.73

Employment volatility: 71

Available balances as % of operating revenues (5-year average): 8%

Net tax supported debt to governmental revenues: 11%

3-year average adjusted net pension liability to governmental revenues: 69%

OBLIGOR PROFILE

Vermont is the second-smallest state by population, which is about 625,000. Located in the New England region, Vermont is primarily rural. Its gross state product of $30 billion is by far the smallest among the 50 states.

LEGAL SECURITY

The 2015 bonds are general obligations of the state. The full faith and credit of the state are pledged to payment of debt service on the bonds.

USE OF PROCEEDS

Proceeds of the Series 2015A and Series 2015B bonds will provide new money for a variety of purposes including state buildings, education, and public safety. The 2015C bonds will be used to advance refund the state's 2005C, 2007A, and 2007D bonds for estimated net present value savings of 4.9%.

PRINCIPAL METHODOLOGY

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

REGULATORY DISCLOSURES

For ratings issued on a program, series or category/class of debt, this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series or category/class of debt or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the rating action on the support provider and in relation to each particular rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on www.moodys.com.

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# APPENDIX D

STANDARD & POOR'S RATINGS SERVICES
McGRAW HILL FINANCIAL

Research

# Vermont; General Obligation

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## Table Of Contents

Rationale

Outlook

Government Framework

Financial Management Assessment: 'Strong'

Budget Management Framework

Economy

Budgetary Performance

Debt And Liability Profile

Other Postemployment Benefits

Related Criteria And Research



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# Vermont; General Obligation

| Credit Profile | | |
|---|---|---|
| US$ 50.765 mil GO bnds ser 2015 B due 08/15/2035 | | |
| *Long Term Rating* | AA+/Stable | New |
| US$28.46 mil GO rfdg bnds ser 2015 C due 08/15/2028 | | |
| *Long Term Rating* | AA+/Stable | New |
| US$26.565 mil GO bnds (Vt Citizens Bnds) ser 2015 A due 08/15/2035 | | |
| *Long Term Rating* | AA+/Stable | New |
| Vermont GO | | |
| *Long Term Rating* | AA+/Stable | Affirmed |

## Rationale

Standard & Poor's Ratings Services assigned its 'AA+' rating and stable outlook to Vermont's series 2015A (Vermont citizen bonds), B, and C general obligation (GO) bonds. At the same time, Standard & Poor's affirmed its 'AA+' rating on Vermont's GO bonds. The outlook is stable.

The ratings reflect our opinion of the state's:

- An employment composition reflective of the U.S. economy that is characterized by above-average income levels and low unemployment rates, but a recent slower-than-average pace of growth by most measures;
- Strong financial and budget management policies that have contributed to consistent reserve and liquidity levels over time;
- Well-defined debt affordability and capital planning processes, in our view, that have limited leverage and contributed to a modest tax-supported debt burden with rapid amortization of tax-supported debt; and
- Significant pension and other postemployment benefits (OPEB), which remain sizable relative to those of state peers despite some recent reform efforts.

The state's GO bonds are secured by Vermont's full faith and credit pledge. We understand that the bond proceeds will be used for various capital projects and refunding of certain debt outstanding for interest cost savings.

Demographic trends for Vermont have recently been weak relative for the region and national trends. The estimated population of 627,000 in 2014 is only 0.1% above 2010 levels. Despite this weaker demographic pattern, income levels have expanded at a healthy pace and per capita personal income has been above that of the U.S. for the past four years. However, Vermont's pace of economic recovery has been uneven and more recently, growth has lagged that the U.S., a trend we expect to continue.

The state has actively managed its budget over time, which is a credit strength, and has consistently maintained financial reserves, providing flexibility to address midyear budget imbalance. Unaudited budgetary basis results for fiscal 2015 indicate a $25.2 million operating surplus in the general fund before transfers. General fund tax revenues for fiscal 2015 of $1.38 billion were 3.6% above those of fiscal 2014 and total revenues increased by a healthy 3.6%. After transfers, the state projects an increase in the total fiscal 2015 general fund reserve balance to $76.11 million (5% of



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general fund expenditures) from $71.16 million in fiscal 2014.

For the general fund, the budget stabilization reserve increased to $69.3 million and an additional $6.8 million was available in the reserve for general fund surplus/revenue shortfall reserve. This additional reserve was established by the legislature in 2012. This reserve can be funded with budget surpluses after the existing budget stabilization fund and other statutory requirements are funded, up to a level of 5% of prior-year appropriations. The education and transportation fund reserves were also maintained at their statutory maximum of 5% at year-end.

The revenue projection for the fiscal 2016 general fund budget is now $1.43 billion, a total increase in tax revenue of $40.2 million; of which $31.6 million is new revenue adopted during the 2015 legislative session. According to the state, there was a $113 million gap in the 2016 budget, which Vermont closed through new revenues, adjustments in funding sources, and a small amount of one-time resources. The used of one-time revenues was a minimal 2% of operations, which we do not consider material and the amount is actually down from previous years. The budgets for the general, education, and transportation funds project ending balances at statutory maximums at the end of fiscal 2016.

The state has expanded Medicaid under the Affordable Care Act (ACA) and has established a health benefits exchange, Vermont Health Connect (VHC). Vermont currently enrolls individuals who earn up to 350% of the poverty line in state health programs so the ACA eligibility expansion has resulted in some recurring federal revenue to the state as well as federal funds for other elements of implementation including grants to develop its health benefits exchange. The state has had some technical and security issues with the exchange but officials indicate they have the highest per capita enrollment of any state-based exchange to date. As of July 2015, Vermont had more than 213,000 enrolled (about one-third of the population) in VHC health plans, Qualified Health Plans, and Medicaid for Children and Adults through either the marketplace, the state's legacy ACCESS system, or directly through an insurance carrier. The majority of the cost of operating VHC is covered by federal funding, at present; however, we believe that ACA implementation and general caseload activity could pressure the state's budget in the future. Recently, the state's reform efforts have focused on moving to value-based payments from fee-for-service payments across all payers, including Medicare.

Vermont's debt burden is moderate overall, in our view, and all tax-supported debt issuance is governed by a comprehensive capital and debt affordability process. Pension liabilities have grown considerably in the past several years and funded ratios steadily deteriorated through fiscal 2014. The state has increased pension funding toward annual required contribution (ARC) levels, and contributions in fiscal years 2012-2014 were significantly above the actuarially determined annual pension costs of the two pension systems. We expect that these higher contributions should improve funding levels in future years. The updated pension valuations for fiscal 2014 indicate that funding levels improved under the new Governmental Accounting Standards Board (GASB) 67 reporting requirements with assets reported on a market value basis. Despite this improvement, funded ratios have been below those of state peers. OPEB liabilities also remain high, with limited asset accumulation despite the creation of a trust fund.

Based on the analytical factors we evaluate for states, on a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned Vermont a composite score of '1.7'.



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## Outlook

The stable outlook reflects Vermont's slower-than-average economic recovery, which continues to pressure the budget, in our view. In addition, pension and OPEB liabilities remain high relative to those of state peers. We believe that Vermont has a very strong budget management framework and should this lead to improved reserve levels in the future, a higher rating could be warranted. In addition, we believe that there has been progress in increasing pension contributions and the state has taken certain actions to begin to address OPEB liability. A demonstrated improvement in the pension and OPEB liability position could also translate to a higher rating. Although we do not envision it at this time, given Vermont's history of proactively managing its budget and recent actions to address retirement liabilities, substantial deterioration of budget reserves, or a deteriorating liability position could negatively pressure the rating.

## Government Framework

Vermont does not have a constitutional or statutory requirement to enact or maintain a balanced budget, but it has consistently maintained sound finances. In our view, the state has significant flexibility to increase the rate and base of its major tax revenues, which include income taxes, sales taxes, and a statewide property tax that funds the state's support of local education. We view the state's revenue sources as diverse. Voter initiatives cannot affect the state. Vermont maintains the ability to adjust disbursements in order to maintain sufficient liquidity. Debt service can be paid without a budget, but there is no other legal priority for debt.

The state's tax structure is broad, and its revenue sources are diverse across several operating funds. The general fund relies primarily on unrestricted revenues from personal and corporate income, sales and use, and meal taxes.

The education fund relies primarily on a statewide property tax, and an appropriation from the general fund. The education stabilization reserve ended the year at the statutory maximum of 5% of expenditures. The transportation fund relies primarily on federal-match grant revenues, a motor vehicle license fee, and a motor fuel tax.

On a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a '1.6' to Vermont's government framework.

## Financial Management Assessment: 'Strong'

Standard & Poor's considers Vermont's financial management practices "strong" under its financial management assessment methodology, indicating financial practices are strong, well embedded, and likely sustainable.

Much of Vermont's debt and financial management practices are embedded in state statute. These, along with internally developed policies, guide the state's long-term budget and capital planning, debt management, and investing practices. The state has a well-established consensus revenue-estimating process. According to statute, the joint fiscal office and administration provide their respective revenue estimates for the general, transportation, and federal funds for the current and next succeeding fiscal year to the Vermont Emergency Board.

Vermont law also requires a long-term capital plan. The governor submits a capital budget annually to the General



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Assembly based on debt management provisions outlined by the state's capital debt affordability advisory committee. The committee's estimate is nonbinding, but the state legislature has never authorized new long-term GO debt in excess of the committee's estimated amount. The state has formal debt management policies, including a statutory debt affordability analysis developed by the capital debt affordability advisory committee that Vermont integrates into the operating budget development process and updates at least annually. Vermont has not entered into any interest rate swaps and thus does not have an adopted swap management policy. Statutory restrictions and adopted administrative policies govern investment management, and the office of the state treasurer monitors compliance.

## Budget Management Framework

The state has multiple tools to assist financial management. Vermont monitors revenues and publishes results monthly; and the emergency board meets at least twice annually, in July and January, to evaluate the revenue forecast and make adjustments, if necessary. The state forecasts also include Medicaid revenues and spending. These consensus forecasting meetings can be convened more frequently, and were held quarterly during fiscal years 2008 through 2010, due to the recession and the potential impact on revenues and expenditures. The emergency board includes the governor and the legislative chairs of the house and senate fiscal appropriations committees. The forecasting process includes traditional economic and revenue forecasting, which Vermont performs with the assistance of outside economists, for the current and next succeeding fiscal year, as well as a less detailed forecast for the next eight years.

The governor has statutory authorization to adjust the budget within certain revenue and expenditure change limits when the Vermont Legislature is not in session. Vermont maintains stabilization reserve funds at statutory levels to reduce their effect on annual revenue variations. In 1993, the state created separate budget stabilization reserves within the general and transportation funds. The amount in each of these reserves is not to exceed 5% of previous-year appropriations. In fiscal 1999, the state created an education fund budget stabilization reserve, which is to fund in a range between 3.5%-5.0% of expenditures. Vermont statute requires annual funding of such reserves. The governor included a proposal in the fiscal 2013 executive budget to increase the general fund stabilization fund to 5.25% from 5.00%, but instead, the legislature added a second general fund reserve fund with a separate cap of 5.00% of expenditures.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '1.' to Vermont's financial management.

## Economy

Vermont's economy is driven by tourism, higher education, computer and electronics manufacturing, consumer-goods manufacturing and agriculture. Exports continue to be an important part of the state's economy at 16% of gross state product (GSP), with a substantial portion going to Canada according to IHS Global Insight Inc. Exports were primarily made up of computer and electronic products (68.6%) followed by food manufactures (5.7%), and machinery (4.4%). In 2014, Vermont's exports totaled $3.6 billion of which 44.2% was with Canada; however, along with the strong dollar demand is likely to weaken as the fall in oil prices has damaged Canada's heavily oil-extraction reliant economy, thus



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in our view likely contributing to a weaker demand in the near term for Vermont's exports. Recent data from the International Trade Administration show that the state's export performance deteriorated in 2014, with total exports shrinking by 10% from 2013.

Vermont's employment diversity by sector is generally in line with the nation's, in our view, and has not demonstrated more cyclicality than when the U.S. Global Foundries completed its acquisition of IBM, which is the second-largest private-sector employer in the state and accounts for a large portion of the state's manufacturing employment and exports. Global Foundries employs about 3,000 at its Essex Junction plant, which manufactures semiconductors for consumer electronic products, including chips for cell phones and other devices. According to IHS Global Insight, a large portion of the state's manufacturing exports includes computers and electronics products from the facility. The Vermont Yankee nuclear power plant ceased power production at the end of 2014 and the facility is in the process of placing spent fuel into dry cast storage. Employment levels in 2015 reflects that development. The transition to site restoration will take multiple years, and state officials indicate that this close is not expected to immediately affect power prices, given that Vermont power companies do not purchase power from this plant. However, according to IHS Global Insight the facility's closure is expected to lead to layoffs of about 600 highly compensated employees in the medium term.

The state reports it was the second state in New England to complete its labor market recovery from the last recession--following the State of Massachusetts. Health care employment, in particular, will be a growth driver; however, IHS Global Insight forecasts very slow total employment growth of 1% in 2014 and an average annual growth rate of 0.98% between 2015 and 2018, which is well below forecast national employment growth rates. Despite the slow forecast employment growth, IHS projects unemployment rates to remain low in the next few years at about 3.4%, as labor force growth will be stagnant. It projects real GSP and personal income growth to average 2.0% and 4.3%, respectively, from 2015 to 2018 period. Although Vermont housing starts declined in 2014, and growth is projected to be uneven and not expected to return to its prerecession levels in the near future, home prices continue to appreciate in the near term similar to trends in the New England region.

Vermont's quality of life and well-educated workforce provide economic development opportunities; however, the state ranks low among the states in its business tax and regulatory environment and its slow labor force growth could stifle future economic growth prospects. The state's demographic trends continue to weaken with the Census Bureau estimating a population decrease from July 1, 2013, to July 1, 2014, of about 0.1% (293 people). This is below both the New England and national trends of an increase of 0.3% and 0.7%, respectively, over the same period. Vermont's population has grown more slowly than the nation as a whole; for 2000-2010, its population increased by only 0.26% compared with the nation's 0.9%. Furthermore, the state's aging population--31.7% over 55 and 16.4% over 65, compared with 26.6% and 14.2%, respectively, for the nation--will continue to be a drag on the state's growth potential in our view.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '2' to Vermont's economy.



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## Budgetary Performance

The fiscal 2016 general fund consensus revenue forecast was $1.39 billion for the fiscal 2016 budget. The budget that passed included $32.14 million in additional tax revenues a result of law change and $44.28 million in revenue enhancements, primarily from direct applications from special funds. Appropriations total $1.7 billion and the budget projected a budget stabilization reserve of $71.25 million and an ending general fund balance reserve of $10 million. The general fund consensus revenue forecast in July 2015, increased the general fund revenue estimate for fiscal 2016 by $40.2 million to $1.43 billion. This increase, according to the state, is due to updated economic information, technical re-specifications of the forecasting models, and tax changes enacted in the 2015 General Assembly.

The state ended fiscal 2015 with general fund revenues of $1.376 billion creating an operating gain of $25.2 million, which was offset by net transfers out to other funds of $10.27 million and transfers to reserves of $9.95 million. The fiscal 2015 general fund revenues were -1.52% below the January 2014 revenue forecast. Vermont ended fiscal 2014--the last audited year--with the budget stabilization reserves in the general fund, transportation fund, and education fund fully funded at their maximum statutory levels of 5% of the previous year's budgetary appropriations, along with some additional reserves in the general fund. These three funds' stabilization reserves remained funded at their statutory maximums through the recent recession. The total general fund balance decreased by $34 million after transfers to $125 million, a still-solid 14.6% of operating expenditures.

The state maintains separate budget stabilization funds in its general, transportation, and education funds that are available to offset undesignated fund deficits. The statutory maximum for the three stabilization reserves is 5% of the prior-year budgetary appropriations, and the education stabilization fund also has a statutory minimum of 3.5% of the prior-year appropriation. The three stabilization funds have been at their statutory maximums since fiscal 2007. Vermont pools the cash reserves for these major funds, which results in sufficient liquidity for operations during the fiscal year. Officials indicated that the state has not externally borrowed for liquidity since fiscal 2004.

On a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a '1.4' to Vermont's budgetary performance.

## Debt And Liability Profile

### Debt

Vermont's total tax-supported debt is moderate about $950 per capita, or 2% of personal income and 2% of GSP. The fiscal 2014 tax-supported debt service was low, in our view, at about 2% of general governmental expenditures. Vermont's debt portfolio consists of only fixed-rate debt, without any exposure to interest rate swaps. The state also does not have any direct placement debt. We consider the debt amortization to be rapid, with officials retiring more than 67% of tax-supported debt over the next 10 years. The state has a debt affordability committee that annually recommends a maximum amount of debt issuance for the next fiscal year, and while the committee's recommendations are not binding, Vermont has consistently adhered to them. The authorization for fiscal years 2015 and 2016 totals $144 million, of which $83 million is expected to be issued in fiscal 2016 from the new Capital Bill and $17 million is previous authorized but unissued debt. State projections show debt levels remaining well within the state affordability guidelines through 2026. Debt service can be paid without a budget, but there is no other priority for the



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payment of debt before other general state expenditures.

### Pensions

Vermont maintains three statutory pension plans: the Vermont State Teachers' Retirement System (VSTRS), with about 9,950 active members; the Vermont State Retirement System (VSRS), which includes general state employees and state police and has about 8,300 active members; and the municipal employees' retirement system (6,664 members). The state appropriates funding for the first two systems; the municipal system is supported entirely by municipal employers and employees.

The pension systems' funded ratio for the combined VSTRS and VSRS systems is below average, in our view, at 67.6% as of June 30, 2014, and has declined from 72.7% as of June 30, 2010. The valuation uses a "select and ultimate" method for developing interest rate assumptions, which results in an effective expected rate of return of 8.1% for VSRS and 7.9% for VSTRS, which is somewhat high relative to state peers. The combined unfunded actuarial accrued liability (UAAL) at June 30, 2014, was $1.5 billion, or $2,426 per capita, which we also view as below average; however, on the GASB 67 basis, the net pension liability is lower at $1.31 billion due to the higher actuarial value of assets based on market value and an assumed 8.2% rate of return.

The state budgets for pension contributions based on percentage rates of each member's annual earnable compensation and the actuarial valuations from the previous fiscal year. It budgets for the VSTRS ARC appropriation at the beginning of the year. The VSRS ARC accrues as a percent of salary expenses throughout the year and the state adjusts subsequent appropriations to reconcile variations in actual payroll from year to year to meet the projected ARC. Since fiscal 2012, actual annual contributions to the systems have exceeded the respective ARCs, which state officials attribute to conservative budgeting. In fiscal 2014, actual contributions of $56.5 million to VSRS represented 132% of the pension ARC. The actual contribution to the VSTRS system in fiscal 2014 represented 106% of the ARC, which included amounts to be used toward the payment of retiree health care expenses.

## Other Postemployment Benefits

The state's unfunded OPEB liability is relatively high, in our view, at $2,556 per capita, although the state has recently made plan adjustments to manage the liability. Vermont offers postemployment medical insurance, dental insurance, and life insurance benefits to retirees of the single-employer VSRS and the multiemployer VSTRS. The VSTRS plan's OPEB UAAL improved to $713 million as of June 30, 2013, from $827 million in June 2012, primarily reflecting a change to a Medicare Part D Employer Group Waiver Plan (EGWP) for prescription drug benefits from a retiree drug subsidy (RDS) program. As of June 30, 2014, however, the VSTRS OPEB UAAL increased to almost $767 million, reflecting recent demographic experience and other refinements of estimated savings related to the EGWP implementation. The fiscal 2015 OPEB cost is almost $45 million compared with $42.8 million in fiscal 2014. The VSTRS contributes to the liability on a pay-as-you-go basis, but Vermont did not historically break out the actual employer contribution, including it, instead, through the pension contribution without an explicit appropriation. In 2014, Vermont passed legislation to establish a separate retired teachers benefit fund to fund current-year health care expenses, which will receive funding from general fund appropriations, EGWP subsidies, and a future health care fee for new hires.



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The state has established an OPEB trust fund for the VSRS, but as of June 30, 2014, it contained only $18.9 million of assets, for a 1% actuarial asset funded ratio. The actuarial annual OPEB cost in fiscal 2014 was $67 million for the VSRS, of which Vermont paid almost 36% under pay-as-you-go funding. VSRS also began offering Medicare prescription drug benefits through an EGWP as of Jan. 1, 2015; according to the state this should reduce the liability by $116.2 million. Before this change, the VSRS actuarial valuation had assumed the system contributed Medicare Part D refunds from the RDS program into the irrevocable trust fund. Assuming no future contributions to the trust after implementation of EGWP, the June 30, 2014, OPEB valuation assumed a lower 4.00% discount rate (from 4.25%) which, along with rising assumed per capita costs and demographic experience--and despite the savings from the EGWP implementation--increased the estimated OPEB UAAL to about $1 billion from $932 million as of June 30, 2013. The separate multiemployer Vermont Municipal Employees Health Benefit Fund for local government is administered by the state, but has no liability to the state, and is not included in our OPEB calculations.

On a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a '2.5' to Vermont's debt and liability profile.

## Related Criteria And Research

### Related Criteria

- USPF Criteria: State Ratings Methodology, Jan. 3, 2011
- Criteria: Use of CreditWatch And Outlooks, Sept. 14, 2009
- USPF Criteria: GO Debt, Oct. 12, 2006
- USPF Criteria: Debt Statement Analysis, Aug. 22, 2006
- USPF Criteria: Financial Management Assessment, June 27, 2006

| Ratings Detail (As Of September 22, 2015) | | |
|---|---|---|
| Vermont GO bnds | | |
| *Long Term Rating* | AA+/Stable | Affirmed |
| **Vermont GO** | | |
| *Long Term Rating* | AA+/Stable | Affirmed |
| **Vermont GO bnds** | | |
| *Long Term Rating* | AA+/Stable | Affirmed |



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# APPENDIX E

## States With At Least Two Triple-A Ratings as of July 2015: Raw data

| Triple-A Rated States | Unemployment (July) | | % change in total jobs[3] | | % change in real per capita GSP[4] | Median HH income[6] | Median family income | Real per capita income[7] | | Poverty[8] | | | % w/BA or higher[9] | Bridges[10] | Roads | Housing: % Change in values from last peak[11] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-3[1] | U-6[2] | last 12 months | 2007 - 2015 | 2007 - 2013 | 2013 | | 2013 | change from 2008 | 2000 | 2013 | Δ | 2013 | Struct. Deficient | Poor or mediocre | |
| Alaska | 6.7% | 12.1% | 0.0% | 7.0% | -2.7% | $70,760 | $82,870 | $44,114 | 4.5% | 14.6% | 10.1% | -31% | 27.5% | 10.9% | 49% | 6.6% |
| Delaware | 4.7% | 10.4% | 1.7% | 1.4% | -8.8% | $59,878 | $71,811 | $41,202 | 1.3% | 8.7% | 12.9% | 48% | 28.9% | 6.1% | 36% | -15.1% |
| Florida | 5.4% | 12.3% | 3.5% | 1.4% | -11.6% | $46,956 | $56,738 | $39,159 | -0.8% | 11.7% | 17.1% | 46% | 26.4% | 2.2% | 26% | -29.3% |
| Georgia | 6.0% | 12.5% | 2.1% | 2.1% | -5.7% | $49,179 | $58,755 | $38,415 | 0.3% | 12.3% | 19.0% | 54% | 28.0% | 6.0% | 19% | -10.6% |
| Indiana | 4.7% | 10.3% | 2.1% | 1.8% | -1.1% | $48,248 | $59,911 | $39,397 | 2.5% | 8.8% | 15.8% | 80% | 23.2% | 10.8% | 17% | -0.3% |
| Iowa | 3.8% | 8.0% | 2.0% | 3.8% | 3.7% | $51,843 | $65,802 | $46,247 | 3.6% | 8.3% | 12.6% | 52% | 25.7% | 21.2% | 46% | 5.2% |
| Maryland | 5.2% | 10.0% | 2.1% | 2.4% | 0.8% | $73,538 | $88,738 | $45,280 | 0.2% | 7.9% | 10.2% | 29% | 36.8% | 7.0% | 55% | -19.1% |
| Missouri | 5.8% | 10.7% | 1.4% | -0.7% | 0.2% | $47,380 | $59,527 | $42,501 | -0.4% | 10.6% | 15.8% | 49% | 26.2% | 14.5% | 31% | -5.1% |
| N. Carolina | 5.9% | 11.6% | 2.0% | 2.7% | -2.4% | $46,334 | $56,928 | $39,341 | 1.1% | 11.7% | 17.8% | 52% | 27.3% | 12.1% | 45% | -5.5% |
| S. Carolina | 6.4% | 12.8% | 2.8% | 2.9% | -4.8% | $44,779 | $55,058 | $36,940 | 1.3% | 12.8% | 18.5% | 45% | 25.1% | 12.3% | 40% | -5.7% |
| Tennessee | 5.7% | 11.9% | 1.9% | 2.4% | 2.1% | $44,298 | $54,779 | $40,738 | 4.9% | 12.6% | 17.8% | 41% | 23.8% | 6.0% | 38% | 0.8% |
| Texas | 4.2% | 8.8% | 2.3% | 13.6% | 11.2% | $51,900 | $61,066 | $42,305 | 2.7% | 14.6% | 17.5% | 20% | 26.7% | 2.6% | 38% | 15.1% |
| Utah | 3.6% | 7.9% | 4.4% | 10.3% | -4.0% | $58,821 | $66,646 | $35,141 | -0.8% | 8.8% | 12.6% | 43% | 30.3% | 4.3% | 25% | -5.8% |
| **Vermont** | **3.6%** | **8.7%** | **1.5%** | **1.8%** | **4.8%** | **$54,267** | **$68,111** | **$42,337** | **5.7%** | **8.8%** | **12.3%** | **40%** | **34.8%** | **10.6%** | **45%** | **-2.9%** |
| Virginia | 4.8% | 10.0% | 1.1% | 1.2% | -2.5% | $63,907 | $76,754 | $44,233 | 1.1% | 8.9% | 11.7% | 31% | 35.2% | 9.1% | 47% | -10.7% |

1. **U-3** = total unemployed, as a percent of the civilian labor force (this is the definition used for the official unemployment rate);

2. **U-6** = total unemployed, plus all marginally attached workers, those employed PT for economic reasons, as a percent of the civilian labor force plus marginally attached workers

**Discouraged workers** are persons who are not in the labor force, want and are available for work, and had looked for a job sometime in the prior 12 months. They are not counted as unemployed because they had not searched for work in the prior 4 weeks, because they believed no jobs were available for them.

The **marginally attached** are a group that includes discouraged workers. The criteria for the marginally attached are the same as for discouraged workers, with the exception that any reason could have been cited for the lack of job search in the prior 4 weeks.

Persons employed **part time for economic reasons** are those working less than 35 hrs/wk who want to work FT, are available to do so, and gave an economic reason (hours had been cut back or they were unable to find a FT job) for working PT. These individuals are sometimes referred to as involuntary part-time workers.

3. Source: U.S. Dept. of Labor, Bureau of Labor Statistics, Current Employment Statistics, Total Non-Farm jobs, Seasonally Adjusted, June - June

4. Source: U.S. Dept. of Commerce, Bureau of Economic Analysis. Chose 2007 because it was just before the recession.

6. Source: Census Bureau, ACS, five-year average 2008 - 2012

7. Source: U.S. Dept. of Commerce, Bureau of Economic Analysis. Figures are chained 2008 dollars.

8. Source: Census Bureau, SAIPE

9. Source: Census Bureau, ACS, 2009 - 2013

10. Source: American Society of Civil Engineers, 2013 Report Card for America's Infrastructure

11. Source: July 2015 Revenue Forecas, Kavet Rockler

## States With At Least Two Triple-A Ratings as of July 2015: Rankings

| State | Unemployment | | % change in real per capita GSP | % change in total jobs (07 - 15) | median HH income | median family income | Per capita income | Poverty | | % w/BA or higher | Bridges | Roads | Housing; % Change in values from last peak | **Total** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | U-3 | U-6 | | | | | 2013 | 2013 | Change from 2000 | | Struct. Deficient | Poor or mediocre | | |
| Texas | 4 | 4 | 1 | 4 | 7 | 8 | 7 | 11 | 2 | 9 | 2 | 6 | 1 | **66** |
| Maryland | 8 | 5 | 5 | 5 | 1 | 1 | 2 | 2 | 3 | 1 | 7 | 15 | 14 | **69** |
| **Vermont** | **1** | **3** | **2** | **12** | **6** | **5** | **6** | **4** | **5** | **3** | **9** | **10** | **6** | **72** |
| Utah | **1** | 1 | 11 | 1 | 5 | 6 | 15 | 5 | 7 | 4 | 3 | 4 | 10 | **73** |
| Virginia | 7 | 5 | 9 | 14 | 3 | 3 | 3 | 3 | 4 | 2 | 8 | 5 | 12 | **78** |
| Alaska | 15 | 12 | 10 | 15 | 2 | 2 | 4 | 1 | 1 | 7 | 11 | 7 | 2 | **89** |
| Iowa | 3 | 2 | 3 | 8 | 8 | 7 | 1 | 5 | 12 | 12 | 15 | 13 | 3 | **92** |
| Delaware | 5 | 8 | 14 | 11 | 4 | 4 | 8 | 7 | 10 | 5 | 6 | 12 | 13 | **107** |
| Indiana | 5 | 7 | 7 | 5 | 10 | 9 | 10 | 8 | 15 | 15 | 10 | 9 | 5 | **115** |
| Tennessee | 10 | 11 | 4 | 10 | 15 | 15 | 9 | 12 | 6 | 14 | 5 | 1 | 4 | **116** |
| Missouri | 11 | 9 | 6 | 13 | 11 | 10 | 5 | 8 | 11 | 11 | 14 | 11 | 7 | **127** |
| Georgia | 13 | 14 | 13 | 5 | 9 | 11 | 13 | 15 | 14 | 6 | 4 | 2 | 11 | **130** |
| No. Carolina | 12 | 10 | 8 | 8 | 13 | 12 | 11 | 12 | 13 | 8 | 12 | 8 | 8 | **135** |
| Florida | 9 | 13 | 15 | 2 | 12 | 13 | 12 | 10 | 9 | 10 | 1 | 14 | 15 | **135** |
| So. Carolina | 14 | 15 | 12 | 3 | 14 | 14 | 14 | 14 | 8 | 13 | 13 | 3 | 9 | **146** |

Scoring: 1 is best, 15 is lowest.

## States With At Least Two Triple-A Ratings as of June 30, 2014: Quality of life - Raw data

| State | Violent crime[1] | Teen birth rate[2] | HS grad. rate[3] | Diabetes[4] | Per capita[5] $CO_2$ |
|---|---|---|---|---|---|
| Alaska | 603 | 34.5 | 68% | 7.2% | 52.71 |
| Delaware | 547 | 25.0 | 78% | 8.7% | 14.44 |
| Florida | 487 | 28.0 | 71% | 9.9% | 11.90 |
| Georgia | 379 | 33.8 | 67% | 9.6% | 15.69 |
| Indiana | 346 | 33.0 | 86% | 10.1% | 31.77 |
| Iowa | 264 | 24.1 | 88% | 8.6% | 28.53 |
| Maryland | 477 | 22.1 | 83% | 9.4% | 10.96 |
| Missouri | 451 | 32.2 | 81% | 9.6% | 22.56 |
| No. Carolina | 353 | 31.8 | 78% | 9.7% | 12.74 |
| So. Carolina | 559 | 36.6 | 74% | 10.6% | 17.16 |
| Tennessee | 644 | 38.5 | 86% | 10.9% | 16.09 |
| Texas | 409 | 44.4 | 86% | 10.6% | 25.59 |
| Utah | 206 | 23.3 | 76% | 7.9% | 22.74 |
| Vermont | 143 | 16.3 | 87% | 6.4% | 9.42 |
| Virginia | 190 | 22.9 | 82% | 9.8% | 11.97 |

1. Source: 2012 FBI Uniform Crime Reports, rate per 100,000 inhabitants
2. Source: CDC, 2012; births per 1,000 women in specified age group (15 - 19)
   http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_09.pdf#table02
3. Source: U.S. Dept. of Education, 2010 - 2011 four-year regulatory adjusted graduation rates
   http://www2.ed.gov/documents/press-releases/state-2010-11-graduation-rate-data.pdf
4. Source: CDC, 2011; age-adjusted rate of diagnosed diabetes
   http://www.cdc.gov/diabetes/atlas/obesityrisk/State_EXCELstatelistDM.html
5. Sources: EPA and EIA, metric tons of $CO_2$ per capita (from all sources)

**States With At Least Two Triple-A Ratings as of June 30, 2014:**
**Quality of Life Rankings**

| State | Violent crime | Teen birth rate | HS grad. Rate | Diabetes | Per capita $CO_2$ | **Total** |
|---|---|---|---|---|---|---|
| **Vermont** | **1** | **1** | **2** | **1** | **1** | **6** |
| Maryland | 10 | 2 | 6 | 6 | 2 | **26** |
| Virginia | 2 | 3 | 7 | 10 | 4 | **26** |
| Iowa | 4 | 5 | 1 | 4 | 13 | **27** |
| Utah | 3 | 4 | 11 | 3 | 11 | **32** |
| No. Carolina | 6 | 8 | 10 | 9 | 5 | **38** |
| Delaware | 12 | 6 | 9 | 5 | 6 | **38** |
| Missouri | 9 | 9 | 8 | 8 | 10 | **44** |
| Indiana | 5 | 10 | 3 | 12 | 14 | **44** |
| Florida | 11 | 7 | 13 | 11 | 3 | **45** |
| Georgia | 7 | 11 | 15 | 7 | 7 | **47** |
| Texas | 8 | 15 | 5 | 14 | 12 | **54** |
| Tennessee | 15 | 14 | 4 | 15 | 8 | **56** |
| Alaska | 14 | 12 | 14 | 2 | 15 | **57** |
| So. Carolina | 13 | 13 | 12 | 13 | 9 | **60** |

# APPENDIX F

# Title 32: Taxation and Finance

## *Chapter 13: DEBTS AND CLAIMS*

### *Sub-Chapter 08: Management Of State Debt*

## 32 V.S.A. § 1001. Capital Debt Affordability Advisory Committee

**§ 1001. Capital Debt Affordability Advisory Committee**

(a) Committee established. A Capital Debt Affordability Advisory Committee is hereby created with the duties and composition provided by this section.

(b)(1) Committee duties. The Committee shall review annually the size and affordability of the net State tax-supported indebtedness and submit to the Governor and to the General Assembly an estimate of the maximum amount of new long-term net State tax-supported debt that prudently may be authorized for the next fiscal year. The estimate of the Committee shall be advisory and in no way bind the Governor or the General Assembly.

(2) The Committee shall conduct ongoing reviews of the amount and condition of bonds, notes, and other obligations of instrumentalities of the State for which the State has a contingent or limited liability or for which the State Legislature is permitted to replenish reserve funds, and, when deemed appropriate, recommend limits on the occurrence of such additional obligations to the Governor and to the General Assembly.

(3) The Committee shall conduct ongoing reviews of the amount and condition of the Transportation Infrastructure Bond Fund established in 19 V.S.A. § 11f and of bonds and notes issued against the fund for which the state has a contingent or limited liability.

(c) Committee estimate of a prudent amount of net State tax-supported debt; affordability considerations. On or before September 30 of each year, the Committee shall submit to the Governor and the General Assembly the Committee's estimate of net State tax-supported debt which prudently may be authorized for the next fiscal year, together with a report explaining the basis for the estimate. In developing its annual estimate, and in preparing its annual report, the Committee shall consider:

(1) The amount of net State tax-supported indebtedness that, during the next fiscal year, and annually for the following nine fiscal years:

(A) will be outstanding; and

(B) has been authorized but not yet issued.

(2) A projected schedule of affordable State net state tax-supported bond authorizations, for the next fiscal year and annually for the following nine fiscal years. The assessment of the affordability of the projected authorizations shall be based on all of the remaining considerations specified in this section.

(3) Projected debt service requirements during the next fiscal year, and annually for the following nine fiscal years, based upon:

(A) existing outstanding debt;

(B) previously authorized but unissued debt; and

(C) projected bond authorizations.

(4) The criteria that recognized bond rating agencies use to judge the quality of issues of State bonds, including:

(A) existing and projected total debt service on net tax-supported debt as a percentage of combined General and Transportation Fund revenues, excluding surpluses in these revenues which may occur in an individual fiscal year; and

(B) existing and projected total net tax-supported debt outstanding as a percentage of total state personal income.

(5) The principal amounts currently outstanding, and balances for the next fiscal year, and annually for the following nine fiscal years, of existing:

(A) obligations of instrumentalities of the State for which the State has a contingent or limited liability;

(B) any other long-term debt of instrumentalities of the State not secured by the full faith and credit of the State, or for which the State Legislature is permitted to replenish reserve funds; and

(C) to the maximum extent obtainable, all long-term debt of municipal governments in Vermont which is secured by general tax or user fee revenues.

(6) The impact of capital spending upon the economic conditions and outlook for the State.

(7) The cost-benefit of various levels of debt financing, types of debt, and maturity schedules.

(8) Any projections of capital needs authorized or prepared by the Agency of Transportation, the Joint Fiscal Office, or other agencies or departments.

(9) Any other factor that is relevant to:

(A) the ability of the State to meet its projected debt service requirements for the next five fiscal years; or

(B) the interest rate to be borne by, the credit rating on, or other factors affecting the

marketability of State bonds.

(10) The effect of authorizations of new State debt on each of the considerations of this section.

(d) Committee composition.

(1) Membership. Committee membership shall consist of:

(A) As ex officio members:

(i) the State Treasurer;

(ii) the Secretary of Administration; and

(iii) a representative of the Vermont Municipal Bond Bank chosen by the directors of the Bank.

(B) Two individuals with experience in accounting or finance, who are not officials or employees of State government appointed by the Governor for six-year terms.

(C) The Auditor of Accounts who shall be a nonvoting ex officio member.

(D) One person who is not an official or employee of State government with experience in accounting or finance appointed by the State Treasurer for a six-year term.

(2) The State Treasurer shall be the Chairperson of the Committee.

(e) Other attendants of committee meetings. Staff of the Legislative Council and the Joint Fiscal Committee shall be invited to attend Committee meetings for the purpose of fostering a mutual understanding between the Executive and Legislative Branches on the appropriate statistics to be used in committee reviews, debt affordability considerations, and recommendations.

(f) Information. All public entities whose liabilities are to be considered by the Committee shall annually provide the State Treasurer with the information the Committee deems necessary for it to carry out the requirements of this subchapter. (Added 1989, No. 258 (Adj. Sess.), § 1; amended 2007, No. 121 (Adj. Sess.), § 28; 2007, No. 200 (Adj. Sess.), § 25, eff. June 9, 2008; 2009, No. 50, § 31.)

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