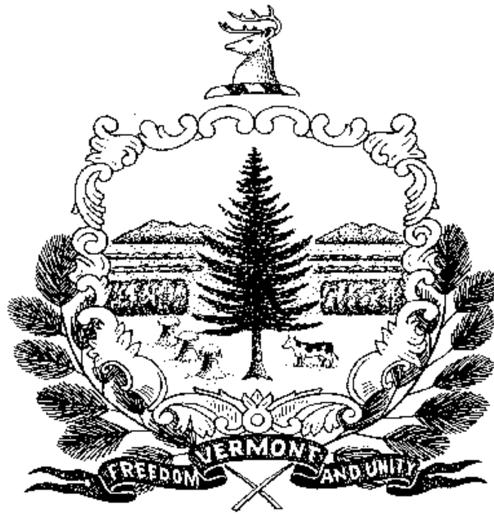
CAPITAL DEBT AFFORDABILITY ADVISORY COMMITTEE

State of



Vermont

RECOMMENDED ANNUAL NET TAX-SUPPORTED DEBT AUTHORIZATION

September 2013

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1. OVERVIEW

Purpose

In accordance with 32 V.S.A., Chapter 13, Subchapter 8, and Section 32 of Act 50 of 2009, as amended, creating the Capital Debt Affordability Advisory Committee of the State of Vermont (the "Committee" or "CDAAC"), the Committee is required to present to the Governor and the General Assembly each year, no later than September 30, a recommendation as to the maximum amount of net tax-supported debt that the State may prudently issue for the ensuing fiscal year. The recommendation is presented in accordance with certain debt affordability guidelines and other matters that may be relevant to the proposed debt to be authorized.

Recommendation

The Committee recommends that the State of Vermont maintain its current authorization of long-term net tax-supported debt for fiscal years 2014 and 2015 in an amount not to exceed $159,900,000. CDAAC proposes this debt authorization for fiscal years 2014-15 because:

1. It is consistent with the 2-year recommendation in the 2012 CDAAC Report.
2. It produces an increase in the amount of capital funding for State purposes, and is consistent with the level of past debt authorizations.
3. It is consistent with the two-year authorization adopted by the General Assembly during its 2013 session authorizing the State Treasurer to sell $159,900,000 of bonds for the purpose of funding appropriations for both fiscal years 2014 and 2015 (Act 51).
4. Authorization of this level of debt in fiscal years 2014-15 is consistent with the current expectations of the rating agencies, and we believe this authorization demonstrates that the State continues to manage its debt issuance program in a prudent and restrained manner.

From 2005 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. In reaffirming its recommendation for fiscal years 2014 and 2015, CDAAC cautions that, owing to several factors and most notably to reduced debt issuance by other triple-A states, future capital funding capacity recommendations may be constrained. See Section 6, "State Guidelines and Recent Events, Debt Per Capita State Guideline – Future Debt Capacity Risk."

Nature of Vermont "Net Tax-Supported Debt"

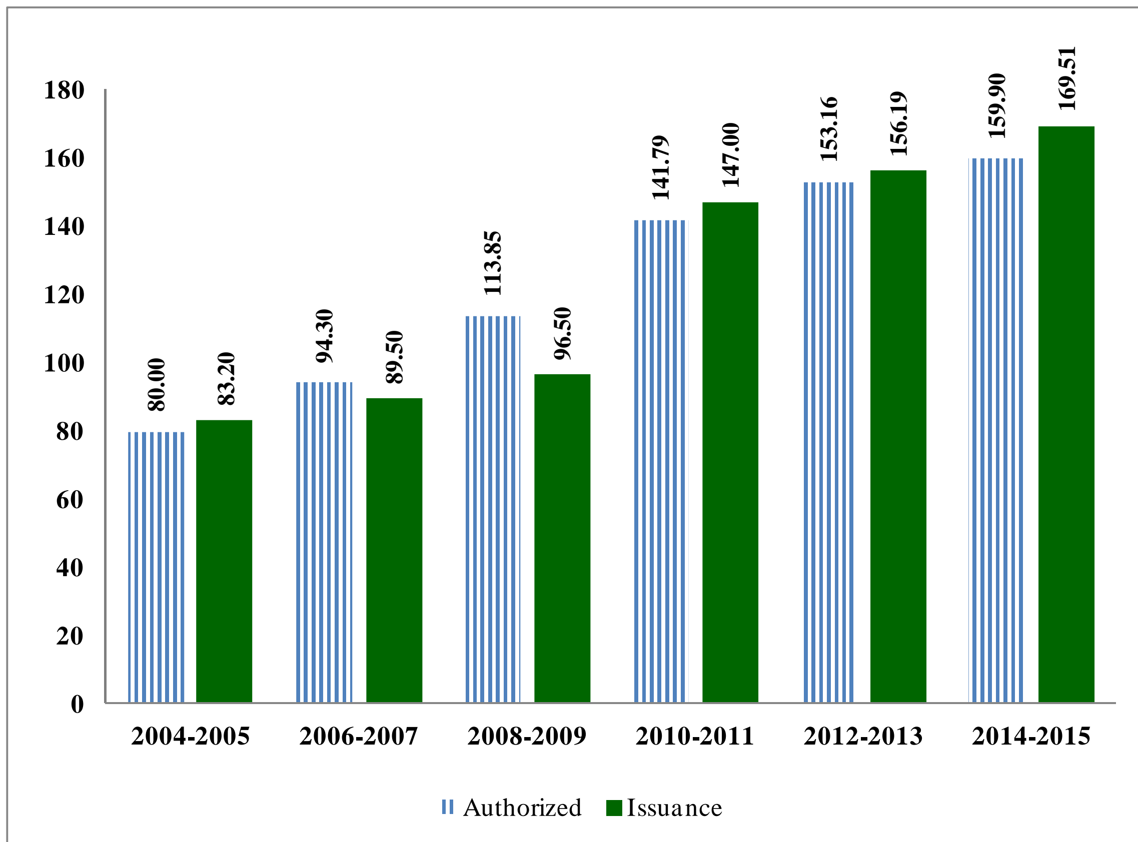
As a matter of practice, while the CDAAC legislation, as amended, refers to an authorization of "net tax-supported debt," the amount of net tax-supported debt for the State means only general obligation (or "G.O.") debt, and this report assumes only general obligation debt for authorization purposes 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. While the CDAAC report includes "dashboard" debt metrics calculated both with and without TIBs, it does not assume that such indebtedness is part of net tax-supported debt. CDAAC believes that the TIBs, as explicitly represented to

bondholders, are not general obligations of the State and are not supported by the full faith and credit of the State, but rather are payable only by funds pledged to repayment of bonds by a trust agreement, held in trust for the benefit of the bondholders. Further, unlike general obligation bonds, TIBs are subject to, and capacity-constrained by, both a debt service coverage ratio and an additional bonds test.

Debt Authorizations and Issuance Amounts

The following chart presents the amounts of general obligation debt that has been authorized and issued by the State since fiscal year 2004 on a biennium basis. As shown below, the State has experienced a significant increase in debt authorizations and issuances over the last twelve years. For the period, 2004-2015, the biennium issuance has approximately doubled, and the compound annual growth rate in debt authorizations during this period has been 6.5%.

STATE OF VERMONT
HISTORICAL GENERAL OBLIGATION BONDS AUTHORIZATION AND ISSUANCE BY BIENNIUM
(IN MILLIONS OF DOLLARS)



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

In the prior biennium, fiscal years 2012-2013, $156,185,000 of new money debt was issued ($63.0 million in 2012 and $93.185 million in 2013), compared to $153,160,000 authorized

for the prior biennium plus $12,630,839 of authorized but unissued debt remaining from prior years.

For fiscal years 2014-2015 the General Assembly has authorized $159,900,000 in new general obligation debt to fund capital projects, additionally $9,605,860 of prior years "unissued principal" authorization is available as described below. In the current biennium, $169,505,860 of debt is assumed to be sold – $84,624,556 during fiscal year 2014 and $84,881,303 for fiscal year 2015.

Project Funding Capacity Enhancements

Effective in fiscal year 2013, 32 V.S.A. § 954 was amended to permit the use of bond premium received from the issuance of general obligation 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 the net original issue premium) becomes additional bonding capacity and available for future years authorization. See Section 6, "State Guidelines and Recent Events, Statutory Change Relating to Use of Bond Premium and Effect on Affordability".

Prior to issuing bonds in fiscal year 2013, the available debt authorization totaled $102,790,860. In fiscal year 2013, the State Treasurer issued bonds with a par amount of $93,185,000 which generated $102,788,391 in bond proceeds – the difference between the par amount of bonds and the bond proceeds was the net original issuance premium of $9,605,860. As a result of this issuance, $9,605,860 became available for additional authorization as "unissued principal." The General Assembly had previously authorized $2,000,000 from "unissued principal" in the 2012 capital funding bill (Act 104), if any, to be applied to the Community College of Vermont's Brattleboro campus; this authorization had the effect of increasing the total 2012-2013 authorization from $153,160,000 to $155,160,000, and of reducing the net "unissued principal" available for the 2014-2015 biennium from $9,605,860 to $7,605,860.

For fiscal years 2014-2015, the General Assembly in the 2013 Capital Bill (Act 51) authorized $175,254,369 in projects consisting of: $159,900,000 in new general obligation debt, $5,728,049 of transfers and reallocation from previously approved projects, $2,023,000 from the sale of a State building (Building 617 in Essex), and $7,603,320 from "unissued principal."

The substantial amount of funding in Act 51 from transfers and reallocation from previously approved projects resulted from the Governor, Legislature and Treasurer recognizing the need to review authorized capital projects, which have not been ready for funding and effective in fiscal year 2013, 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.

Recent Changes to the State's Ratings:

General Obligation

Concurrent with the issuance of Vermont's 2012 Series E and F General Obligation Bonds in September 2012, Standard & Poor's Ratings Services ("S&P") revised its outlook on Vermont's general obligation debt rating to "positive" from "stable." In addition, S&P assigned its AA+ long-term rating to Vermont's 2012 Series E and F Bonds and affirmed its AA+ rating on the State's outstanding general obligation bonds. According to S&P's report:

"*The outlook revision reflects the potential for us to raise the rating if the state continues to make progress in improving its annual pension funding levels, strengthening its annual pension funded ratios, and increasing its budget reserve."*

S&P further indicates that this revised outlook represents strong financial management that has helped the State maintain a good financial position in an environment of declining revenue in addition to rapid G.O. debt amortization. This positive outlook is indicative of the possibility of a rating increase over S&P's two-year outlook horizon if the State continues improvement in the areas particularly stated above.

Special Obligation Transportation Infrastructure Bonds

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.

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2. DEBT GUIDELINES

The State of Vermont currently 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. As noted above, S&P rates Vermont's general obligation bonds AA+ and raised its rating outlook from "stable" to "positive" in September 2012.

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. Three of the most widely-employed guidelines are:

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

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. These guidelines are described in greater detail below.

Debt Per Capita

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 triple-A rated states (the "Peer Group"). At present, the targets of the 5-year average of the mean of the Peer Group is $941 and the 5-year average of the median of the Peer Group is $884. Based on data from Moody's, Vermont's 5-year average debt per capita figure is $750, 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. Last year the State authorized a two year authorization amount of $159,900,000 for fiscal year 2014-2015. Since the $159,900,000 was consistent with all the guidelines at that time, the Committee has reaffirmed this recommendation for fiscal year 2014-2015. However, the Committee cautions that given the methodology used to calculate the State guidelines (see Section 6, "State Guidelines and Recent Events"), and given the corresponding reduced debt issuance and lower debt per capita figures from Vermont's peer group of triple-A rated states, future debt recommendations may be correspondingly reduced as well.

It should be emphasized that the debt per capita numbers for Vermont have generally been stabilizing. 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 16th position in 2003 to 37th position in 2011 then down slightly to 34th in 2012 and 33rd in 2013 (rankings are in numerically descending order,

with the state having the highest debt per capita ranked 1st and the state having the lowest debt per capita ranked 50th).

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 triple-A rated states on the basis of debt as a percent of personal income. At present the targets are 2.5% for both the mean and the median (which also happen to be both the five-year average of Moody's Mean and Median for Triple-A States). Based on data from Moody's, Vermont's debt as a percent of personal income is better than the 5-year mean and 5-year median for triple-A rated states. Assuming that the State will issue $84,625,000 during fiscal year 2014 and $84,880,000 for fiscal year 2015 and $79,950,000 in each fiscal year from 2016-2024, Vermont should be able to comply with the 5-year mean and 5-year median for triple-A rated states (see "Historic and Projected Debt Ratios"). 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 17th position in 2003 to 36th position in 2010 where it remained in 2011 and 2012. In 2013 the State's relative ranking dropped slightly to 35th position, however, Vermont's metric of 1.9% actually improved from 2.0% the previous year.

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 general obligation debt service as a percent of the annual aggregate of General and Transportation Fund revenues. At present, this ratio equals approximately 4.6%, down from last year's ratio of 4.9%, assuming interest rates that range from 5.0% in fiscal year 2014, increasing annually by 0.5% to a maximum rate of 6.5% in fiscal years 2017 through 2024. With the projected issuance of general obligation debt of $84,625,000 during fiscal year 2014 and $84,880,000 for fiscal year 2015 and $79,950,000 in each fiscal year from 2016-2024, this ratio is estimated to vary from 4.3% to 5.2% over the next ten years. Therefore, at present and for the foreseeable future, it is anticipated that the State will satisfy this standard. 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 percent of operating revenues ("Debt Service Ratio"), and included the State's Education Fund as part of the State's operating revenue for purpose of this calculation (see Section 6, "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 Moody's ranking of 38th out of the 50 states.

STATE OF VERMONT
2013 TRIPLE-A RATED STATES
(as of July 25, 2013)

2013 Triple-A Rated States	Moody's	S&P	Fitch
Alaska	Yes	Yes	Yes
Delaware	Yes	Yes	Yes
Florida	No	Yes	Yes
Georgia	Yes	Yes	Yes
Indiana	Yes	Yes	Yes
Iowa	Yes	Yes	Yes
Maryland	Yes	Yes	Yes
Missouri	Yes	Yes	Yes
Nebraska	N/R	Yes	N/R
New Mexico	Yes	No	N/R
North Carolina	Yes	Yes	Yes
South Carolina	Yes	No	Yes
Tennessee	Yes	No	Yes
Texas[1]	Yes	No	Yes
Utah	Yes	Yes	Yes
Virginia	Yes	Yes	Yes
Wyoming	N/R	Yes	N/R
VERMONT	Yes	No	Yes

[1]Texas was upgraded by Standard and Poor's to AAA from AA+ on September 27, 2013.

STATE OF VERMONT
MEAN DEBT RATIOS

Per Capita	2009	2010	2011	2012	2013
All States	$1,195	$1,297	$1,408	$1,408	$1,416
Triple-A[1]	899	966	964	956	922
VERMONT	**692**	**709**	**747**	**792**	**811**

% of Personal Income	2009	2010	2011	2012	2013
All States	3.1%	3.2%	3.2%	3.4%	3.4%
Triple-A[1]	2.4	2.6	2.6	2.5	2.3
VERMONT	**1.8**	**1.8**	**1.9**	**2.0**	**1.9**

[1] These calculations exclude all Vermont numbers and include only states rated triple-A by any one 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

Triple-A Rated States (All states with at least one triple-A rating)
5-Year Average Mean and 5-Year Average Median Excluding Vermont:
MEAN: $942 MEDIAN: $884
5-Year Average Vermont: $750

Triple-A Rated States[1]	Moody's Ratings[2]	S&P Ratings[2]	Fitch Ratings[2]	Moody's Debt Per Capita 2009	2010	2011	2012	2013
Alaska	Aaa/Stable	AAA/Stable	AAA/Stable	$861*	$1,345*	$1,257	$1,454	$1,251
Delaware	Aaa/Stable	AAA/Stable	AAA/Stable	2,128	2,489	2,676	2,674	2,536
Florida	Aa1/Stable	AAA/Stable	AAA/Negative	1,115	1,123	1,150	1,167	1,087
Georgia	Aaa/Stable	AAA/Stable	AAA/Stable	984	1,120	1,103	1,099	1,061
Indiana	Aaa/Stable	AAA/Stable	AAA/Stable	482	492	471	446	424
Iowa	Aaa/Stable	AAA/Stable	AAA/Stable	79	73	270	310	287
Maryland	Aaa/Stable	AAA/Stable	AAA/Stable	1,507	1,608	1,681	1,742	1,799
Minnesota[3]	Aa1/Negative	AA+/Stable	AA+/Stable	866	1,037	1,159	1,148*	1,315*
Missouri	Aaa/Stable	AAA/Stable	AAA/Stable	670	780	775	741	699
Nebraska	NR/Stable	AAA/Stable	Not Rated	17*	15*	13	15	14
New Mexico	Aaa/Stable	AA+/Stable	Not Rated	1,394*	1,398	1,827	1,406	1,316
North Carolina	Aaa/Stable	AAA/Stable	AAA/Stable	832	765	782	815	853
South Carolina	Aaa/Stable	AA+/Stable	AAA/Stable	899	917	887	827	780
Tennessee	Aaa/Stable	AA+/Positive	AAA/Stable	233*	318	345	343	343
Texas[4]	Aaa/Stable	AA+/Stable	AAA/Stable	520*	520	612	588	580
Utah	Aaa/Stable	AAA/Stable	AAA/Stable	447	957	1,222	1,393	1,275
Virginia	Aaa/Stable	AAA/Stable	AAA/Stable	782	895	1,058	1,169	1,315
Wyoming	Not Rated	AAA/Stable	Not Rated	84*	77*	71	64	59
MEAN[5]	___________	___________	__________	**899**	**966**	**964**	**956**	**922**
MEDIAN[5]	___________	___________	__________	**849**	**917**	**973**	**827**	**853**
VERMONT	Aaa/Stable	AA+/Positive	AAA/Stable	692	709	747	792	811

[1]Indiana carries a Municipal Issuer Rating from S&P, assigned in 2008 and it is reflected in 2009 and 2010 numbers – this is a G.O. bond equivalent rating. The Fitch rating for Indiana (AAA) is implied from the AA+ rating on its lease revenue bonds. 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. Eighteen states are currently rated triple-A by one or more of the nationally recognized rating agencies. Triple-A ratings assigned as follows: Delaware and Florida (2005), Georgia, Maryland, Missouri, North Carolina, South Carolina, Utah, Virginia and Vermont (2007), Indiana (2008), Iowa (2009), New Mexico, Tennessee and Texas (2010), Alaska, Nebraska and Wyoming (2011).

[2] Ratings as of July 25, 2013.

[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 2009 to 2011.

[4]Texas, which also carries an Issuer rating from Standard & Poor's, was upgraded to AAA from AA+ on September 27, 2013.

[5] These calculations exclude all Vermont numbers.

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

In addition to comparing the State's debt per capita ratios to all states with at least one triple-A rating, the following chart indicates the State also compares favorably to the states that have triple-A ratings from all three national rating agencies ("Triple Triple-A States").

STATE OF VERMONT
DEBT PER CAPITA COMPARISON

Triple Triple-A Rated States (All states with three triple-A ratings)
5-Year Average Mean and 5-Year Average Median Excluding Vermont:
MEAN: $1,121 MEDIAN: $1,021
5-Year Average Vermont: $750

Triple Triple-A Rated States	Moody's[1]	S&P[1]	Fitch[1]	Moody's Debt Per Capita 2009	2010	2011	2012	2013
Alaska	Aaa/Stable	AAA/Stable	AAA/Stable	$861*	$1,345*	$1,257*	$1,454*	$1,251
Delaware	Aaa/Stable	AAA/Stable	AAA/Stable	2,128	2,489	2,676	2,674	2,536
Georgia	Aaa/Stable	AAA/Stable	AAA/Stable	984	1,120	1,103	1,099	1,061
Indiana	Aaa/Stable	AAA/Stable	AAA/Stable	482*	492*	471*	446*	424
Iowa	Aaa/Stable	AAA/Stable	AAA/Stable	79	73	270	310	287
Maryland	Aaa/Stable	AAA/Stable	AAA/Stable	1,507	1,608	1,681	1,742	1,799
Missouri	Aaa/Stable	AAA/Stable	AAA/Stable	670	780	775	741	699
North Carolina	Aaa/Stable	AAA/Stable	AAA/Stable	832	765	782	815	853
Utah	Aaa/Stable	AAA/Stable	AAA/Stable	447	957	1,222	1,393	1,275
Virginia	Aaa/Stable	AAA/Stable	AAA/Stable	782	895	1,058	1,169	1,315
MEAN[2]	————	————	————	**929**	**1,086**	**1,196**	**1,243**	**1,150**
MEDIAN[2]	————	————	————	**807**	**926**	**1,081**	**1,134**	**1,156**
VERMONT	Aaa/Stable	AA+/Positive	AAA/Stable	692	709	747	792	811

[1] Ratings as of July 25, 2013.

[2] These calculations exclude all Vermont numbers.

* Indicates that the state was not rated triple-A by all three 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
DEBT AS % OF PERSONAL INCOME COMPARISONS

Triple-A Rated States (All states with at least one triple-A rating)
5-Year Average Mean and 5-Year Average Median Excluding Vermont:
MEAN: 2.5% MEDIAN: 2.5%
5-Year Average Vermont: 1.9%

Triple-A Rated States	Moody's Debt as % 2011 Personal Income				
	2009	2010	2011	2012	2013
Alaska	2.2%*	3.2%*	3.0%	3.3%	2.8%
Delaware	5.4	6.2	6.8	6.8	6.2
Florida	2.9	2.9	3.0	3.0	2.8
Georgia	3.0	3.3	3.3	3.1	3.0
Indiana	1.5	1.5	1.4	1.3	1.2
Iowa	0.2	0.2	0.7	0.8	0.7
Maryland	3.3	3.4	3.5	3.6	3.6
Minnesota	2.1	2.4	2.8	2.7*	3.0*
Missouri	2.0	2.2	2.2	2.0	1.8
Nebraska	0.0*	0.0*	0.0	0.0	0.0
New Mexico	4.6	4.4	5.6	4.2	3.8
North Carolina	2.5	2.3	2.3	2.3	2.4
South Carolina	2.9	2.9	2.7	2.5	2.3
Tennessee	0.7*	0.9	1.0	1.0	0.9
Texas	1.4*	1.4	1.6	1.5	1.5
Utah	1.5	3.2	3.9	4.4	3.8
Virginia	1.9	2.1	2.4	2.6	2.9
Wyoming	0.2*	0.2*	0.1	0.1	0.1
MEAN[1]	**2.4**	**2.6**	**2.6**	**2.5**	**2.3**
MEDIAN[1]	**2.3**	**2.6**	**2.6**	**2.5**	**2.4**
VERMONT	1.8	1.8	1.9	2.0	1.9

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

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

In addition to comparing Vermont's debt as a percentage of personal income ratios to all states with at least one triple-A rating, the following chart indicates Vermont also compares favorably to the states that have triple-A ratings from all three national rating agencies ("Triple Triple-A States").

STATE OF VERMONT
DEBT AS % OF PERSONAL INCOME COMPARISONS

Triple Triple-A Rated States (All states with three triple-A ratings)
5-Year Average Mean and 5-Year Average Median Excluding Vermont:
MEAN: 2.9% MEDIAN: 2.7%
5-Year Average Vermont: 1.9%

Triple Triple-A Rated States	Moody's Debt as % 2011 Personal Income				
	2009	2010	2011	2012	2013
Alaska	2.2%*	3.2%*	3.0%*	3.3%*	2.8%
Delaware	5.4	6.2	6.8	6.8	6.2
Georgia	3.0	3.3	3.3	3.1	3.0
Indiana	1.5*	1.5*	1.4*	1.3*	1.2
Iowa	0.2	0.2	0.7	0.8	0.7
Maryland	3.3	3.4	3.5	3.6	3.6
Missouri	2.0	2.2	2.2	2.0	1.8
North Carolina	2.5	2.3	2.3	2.3	2.4
Utah	1.5	3.2	3.9	4.4	3.8
Virginia	1.9	2.1	2.4	2.6	2.9
MEAN[1]	**2.5**	**2.9**	**3.1**	**3.2**	**2.8**
MEDIAN[1]	**2.3**	**2.8**	**2.9**	**2.9**	**2.9**
VERMONT	1.8	1.8	1.9	2.0	1.9

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

* Indicates that the state was not rated triple-A by all three 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.
Current [2]	870	n.a.	n.a.	2.0	n.a.	n.a.	4.6	n.a.	n.a.
Projected (FYE 6/30) [3]		State Guideline [6]			State Guideline [7]			State Guideline	
2014	918	915		2.1	2.5		4.8	6.0	
2015	971	947		2.1	2.5		4.3	6.0	
2016	1,015	981		2.1	2.5		4.4	6.0	
2017	1,056	1,015		2.2	2.5		4.5	6.0	
2018	1,095	1,051		2.2	2.5		4.6	6.0	
2019	1,129	1,088		2.2	2.5		4.8	6.0	
2020	1,159	1,126		2.2	2.5		4.9	6.0	
2021	1,182	1,166		2.2	2.5		5.1	6.0	
2022	1,204	1,207		2.2	2.5		5.1	6.0	
2023	1,221	1,250		2.2	2.5		5.2	6.0	
2024	1,236	1,294		2.2	2.5		5.2	6.0	
5-Year Average of Moody's Mean for Triple-A States		941			2.5			n.a.	
5-Year Average of Moody's Median for Triple-A States		884			2.5			n.a.	

Note: Shaded figures in fiscal years 2015-2021 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 remaining two-year authorization (footnote (3)). See Section 6, "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.

(3) Projections are calculated by Public Resources Advisory Group and assume the issuance of $84,625,000 in fiscal year 2014, $84,880,000 in fiscal year 2015 and $79,950,000 of G.O. debt annually thereafter through 2024.

(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 triple-A states $884 increasing annually at 3.53%.

(7) The 5-year Moody's median for triple-A States (2.5%) has not been increased for the period 2014-2024 since the annual number is quite volatile, ranging from 2.3% to 2.6% over the last five years.

3. DEBT STATISTICS

"Dash Board" Indicators

	Vermont[a]	Median Triple-A States
Net Tax-Supported Debt:	$546,060,120	$3,640,480,000[c]
Debt As A Percent Of Gross State Product:	1.96%	1.89%[c]
Debt Per Capita:	$870	$853[c]
Debt As A Percent Of Personal Income:	2.01%	2.4%[c]
Debt As A Percent Of Operating Revenue[b]:	4.60%	N/A
Rapidity Of Debt Retirement:	39.10% (In 5 Years)	N/A
	68.40% (In 10 Years)	N/A
	90.20% (In 15 Years)	N/A
	100.00% (In 20 Years)	N/A
Proposed FY 2015 Debt Authorization:	$79,950,000[d]	N/A
Initial Year Biennium Limitation:	N/A[d]	N/A

[a] Debt statistics for Vermont are as of June 30, 2013. Estimates of Gross State Product, Population, Personal Income and Operating Revenue prepared by EPR. Source for Debt as Percent of GSP is Moody's Investor Service 2013 State Debt Medians Report.

[b] Aggregate of State's General Fund and Transportation Fund.

[c] Source: Moody's Investors Service, 2013 State Debt Medians Report calculated by Public Resources Advisory Group.

[d] Authorization amount equal to one-half of two year recommended authorization ($159,900,000). See Section 1 "OVERVIEW, Recommendation" above.

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Net Tax-Supported Debt Outstanding

The State's aggregate net tax-supported principal amount of debt increased from $504.0 million as of June 30, 2012 to $546.0 million as of June 30, 2013, an increase of 8.3%. The table below sets forth the sources of the change in net tax-supported debt outstanding from fiscal year 2012 to fiscal year 2013 (in thousands):

Net Tax-Supported Debt as of 6/30/12	$504,005
G.O. New Money Bonds Issued	93,185
G.O. Refunding Bonds Issued	0
Less: Retired G.O. Bonds	(51,130)
Less: Refunded G.O. Bonds	(0)
Net Tax-Supported Debt as of 6/30/13	$546,060

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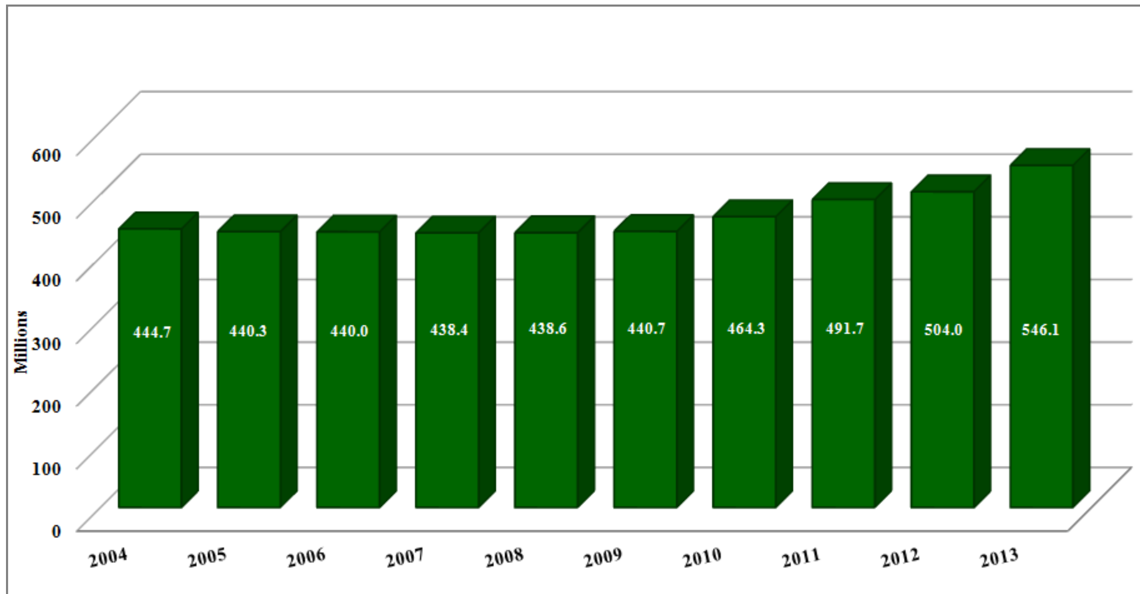
STATE OF VERMONT
Debt Statement
As of June 30, 2013 ($ Thousands)

General Obligation Bonds[1]:	
General Fund	$531,295
Transportation Fund	12,765
Special Fund	2,000
Contingent Liabilities:	
VEDA Mortgage Insurance Program	$9,000
VEDA Financial Access Program	1,000
VEDA Tech/Small Business Loan Program	1,000
Reserve Fund Commitments:	
Vermont Municipal Bond Bank	$554,395
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	$1,586,455
Less:	
Contingent Liabilities	(11,000)
Reserve Fund Commitments	(1,029,395)
Net Tax-Supported Debt	**$546,060**

[1] Includes original principal amounts of Capital Appreciation Bonds. Does not include (i) $1,320,722, which is the accreted value of capital appreciation bonds, less the original principal amount of such bonds, and (ii) the present value of outstanding capitalized leases in the amount of $2,053,974.

STATE OF VERMONT
GENERAL OBLIGATION BONDS OUTSTANDING FY 2004-2013
(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, 2013, without the issuance of any additional general obligation debt (the first row commences on June 30, 2014). Rating agencies consider Vermont's rapid debt amortization, with over 70% of current principal retired by 2024, 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		Total	
Fiscal Year	Beginning Principal Outstanding	Debt Service*	Beginning Principal Outstanding	Debt Service	Beginning Principal Outstanding	Debt Service	Beginning Principal Outstanding	Total Debt Service*
2014	481,262	71,775	10,853	2,415	1,470	629	493,585	74,819
2015	438,492	60,284	9,203	2,095	910	633	448,605	63,012
2016	398,893	55,623	7,652	1,947	320	636	406,865	58,205
2017	362,249	51,352	6,101	1,884	-	336	368,350	53,572
2018	327,861	47,782	4,649	1,709	-	-	332,510	49,491
2019	294,429	45,575	3,231	1,630	-	-	297,660	47,204
2020	261,792	43,563	2,813	560	-	-	264,605	44,123
2021	229,089	42,276	2,396	541	-	-	231,485	42,817
2022	199,107	38,282	1,978	522	-	-	201,085	38,803
2023	170,915	35,377	1,560	502	-	-	172,475	35,879
2024	144,960	32,167	1,300	327	-	-	146,260	32,494

* 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 $84,625,000 during fiscal year 2014, $84,880,000 for fiscal year 2015, and $79,950,000 in each fiscal year from 2016-2024.

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

Fiscal Year Ending	G.O. Debt Service	G.O. Bonds Outstanding
6/30/2013	69,099	546,060
6/30/2014	74,819	578,210
6/30/2015	71,473	613,880
6/30/2016	75,363	643,620
6/30/2017	79,083	672,585
6/30/2018	83,514	700,225
6/30/2019	89,479	724,855
6/30/2020	94,390	747,280
6/30/2021	100,815	765,640
6/30/2022	104,274	782,720
6/30/2023	108,562	797,590
6/30/2024	112,129	810,855

Note: This table sets forth the projected general obligation debt with the issuance of projected new debt during fiscal years 2014 through 2024, consistent with the assumptions presented on the table above "STATE OF VERMONT HISTORIC AND PROJECTED DEBT RATIOS"

On the following page is a table showing the projected G.O. debt service, G.O. bond principal payments, and G.O. bonds outstanding during each of the fiscal years 2014 through 2024, inclusive. This table shows the projected issuance of $84,625,000 during fiscal year 2014, $84,880,000 for fiscal year 2015, and $79,950,000 in each fiscal year from 2016-2024, inclusive.

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EXISTING AND PROJECTED NET TAX-SUPPORTED G.O. DEBT SERVICE ($000)													
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
	Current	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Est.
FY	D/S	$84.625M	84.880M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	D/S*
		5.00%	5.50%	6.00%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	6.50%	
2014	74,819	0	0	0	0	0	0	0	0	0	0	0	74,819
2015	63,012	8,461	0	0	0	0	0	0	0	0	0	0	71,473
2016	58,205	8,250	8,908	0	0	0	0	0	0	0	0	0	75,363
2017	53,572	8,038	8,675	8,797	0	0	0	0	0	0	0	0	79,083
2018	49,491	7,827	8,442	8,557	9,197	0	0	0	0	0	0	0	83,514
2019	47,204	7,615	8,209	8,317	8,937	9,197	0	0	0	0	0	0	89,479
2020	44,123	7,404	7,976	8,077	8,677	8,937	9,197	0	0	0	0	0	94,390
2021	42,817	7,192	7,742	7,837	8,417	8,677	8,937	9,197	0	0	0	0	100,815
2022	38,803	6,981	7,509	7,597	8,157	8,417	8,677	8,937	9,197	0	0	0	104,274
2023	35,879	6,769	7,276	7,357	7,897	8,157	8,417	8,677	8,937	9,197	0	0	108,562
2024	32,494	6,558	7,043	7,117	7,637	7,897	8,157	8,417	8,677	8,937	9,197	0	112,129

EXISTING AND PROJECTED NET TAX-SUPPORTED G.O. BOND PRINCIPAL PAYMENTS ($000)													
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
	Current	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Est.
FY	Principal	$84.625M	84.880M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	Principal*
2014	52,475	0	0	0	0	0	0	0	0	0	0	0	52,475
2015	44,980	4,230	0	0	0	0	0	0	0	0	0	0	49,210
2016	41,740	4,230	4,240	0	0	0	0	0	0	0	0	0	50,210
2017	38,515	4,230	4,240	4,000	0	0	0	0	0	0	0	0	50,985
2018	35,840	4,230	4,240	4,000	4,000	0	0	0	0	0	0	0	52,310
2019	34,850	4,230	4,240	4,000	4,000	4,000	0	0	0	0	0	0	55,320
2020	33,055	4,230	4,240	4,000	4,000	4,000	4,000	0	0	0	0	0	57,525
2021	33,120	4,230	4,240	4,000	4,000	4,000	4,000	4,000	0	0	0	0	61,590
2022	30,400	4,230	4,240	4,000	4,000	4,000	4,000	4,000	4,000	0	0	0	62,870
2023	28,610	4,230	4,240	4,000	4,000	4,000	4,000	4,000	4,000	4,000	0	0	65,080
2024	26,215	4,230	4,240	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	0	66,685

EXISTING AND PROJECTED NET TAX-SUPPORTED G.O. BONDS OUTSTANDING ($000)													
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Total
	Current	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Issue	Est.
FY	Debt	$84.625M	84.880M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	79.950M	Debt*
2013	546,060	0	0	0	0	0	0	0	0	0	0	0	546,060
2014	493,585	84,625	0	0	0	0	0	0	0	0	0	0	578,210
2015	448,605	80,395	84,880	0	0	0	0	0	0	0	0	0	613,880
2016	406,865	76,165	80,640	79,950	0	0	0	0	0	0	0	0	643,620
2017	368,350	71,935	76,400	75,950	79,950	0	0	0	0	0	0	0	672,585
2018	332,510	67,705	72,160	71,950	75,950	79,950	0	0	0	0	0	0	700,225
2019	297,660	63,475	67,920	67,950	71,950	75,950	79,950	0	0	0	0	0	724,855
2020	264,605	59,245	63,680	63,950	67,950	71,950	75,950	79,950	0	0	0	0	747,280
2021	231,485	55,015	59,440	59,950	63,950	67,950	71,950	75,950	79,950	0	0	0	765,640
2022	201,085	50,785	55,200	55,950	59,950	63,950	67,950	71,950	75,950	79,950	0	0	782,720
2023	172,475	46,555	50,960	51,950	55,950	59,950	63,950	67,950	71,950	75,950	79,950	0	797,590
2024	146,260	42,325	46,720	47,950	51,950	55,950	59,950	63,950	67,950	71,950	75,950	79,950	810,855

*Totals may not agree due to rounding.

Net Tax-Supported Debt Service by Fiscal Year

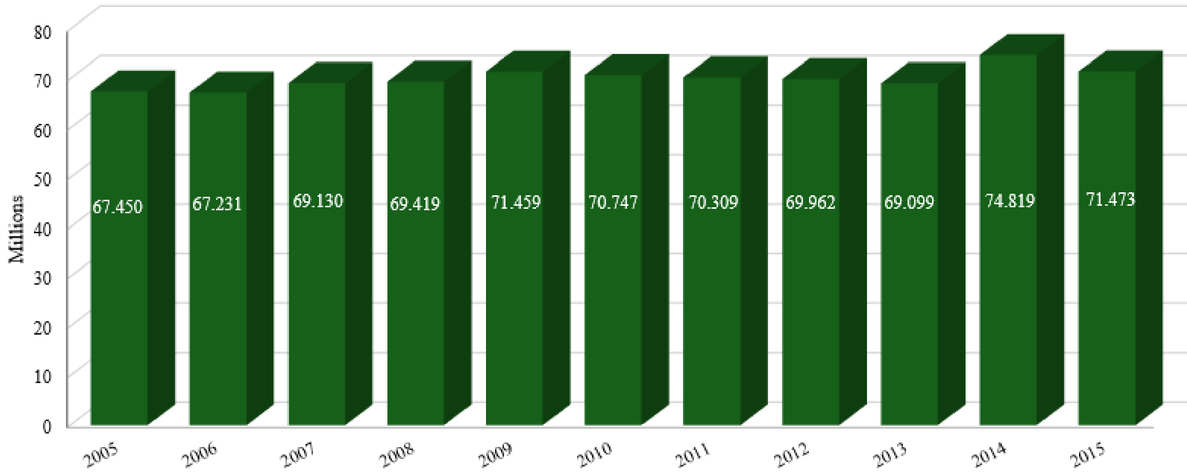
The State's scheduled general obligation debt service requirement ("D/S") for fiscal year 2014 is $74.82 million, 8.3% more than the $69.1 million paid in fiscal year 2013.

(in $ thousands)

Net Tax-Supported D/S Paid in FY 2013[1]	$69,099
Decrease in D/S Requirement FY 2013-2014	(4,440)
D/S Decrease Due to G.O. Refunding in FY 2013	(0)
D/S Increase Due to G.O. Debt Issued in FY 2013	10,160
Net Tax-Supported D/S Due in FY 2014[1]	$74,819

[1] The debt service amount shown takes into account the 35% interest subsidy from the federal government (calculated to be $1,253,280 during FY 2014), payable on the $87,050,000 Build America Bonds as part of the 2010 Series A-2 and D-2 bond issues.

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



*Consists of General Obligation 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.

4. ECONOMIC AND FINANCIAL FORECASTS

This section of the report is based on the economic analysis provided by the New England Economic Partnership ("NEEP") for the State of Vermont and certain projections provided by Economic and Policy Resources, Inc. ("EPR"). NEEP's report, "Vermont Economic Outlook," dated May 6, 2013 (a copy of which is included in the appendices), states that "The Vermont near-term economic outlook includes a Vermont economy that will follow a similar path to the U.S. economy's progression throughout the calendar year 2013-17 period."

"Looking at the U.S. economy, developments over the past month and the first quarter of calendar year 2013 were characterized by a generally strengthening private sector which has been coping with an increasing amount of fiscal drag from sequestration—layered on top of the government sector that already was in retrenchment even before sequestration. However, the U.S. economy is clearly poised to slow as federal sequestration inevitably restrains activity across the U.S. economy. Add to that the latest with respect to Syria and Europe, and the headwinds for the U.S. and Vermont economies will likely increase during the next two to four fiscal quarters. Vermont has continued to make modest recovery progress over the past six months since the last NEEP outlook revision, despite the uncertainty regarding the fiscal cliff and other fiscal policy issues and the overall global economic slowdown—particularly in Europe and some parts of Asia. Through March, the state has recovered roughly 11,000 of the nearly 15,000 payroll jobs lost during the last economic downturn—a rate of recapture of 77.9%."

"The continuing Vermont economic upswing over the next five years is expected to be fueled by a revival in the pace of progress in the global economy, good niche market positioning by major Vermont firms to take advantage of that growth, a return to more normally functioning financial markets, the expected firming in Vermont's residential and second home markets, and the maintenance of existing stable job and business activity levels at key "economic driver" employers. Looking at the major macro variables, the updated forecast calls for the current state economic upturn to proceed along a modest recovery/expansion path for real output (as measured by Gross State Product or GSP), for inflation-adjusted or real personal income, and for its labor market recovery. This restrained rate of recovery in Vermont is an artifact of the less than average rate of output, income, and job decline for the Vermont economy during the "Great Recession" relative to its U.S. and New England counterparts."

"Improvement in the state's unemployment rate will continue over the forecast period but at an initially slower pace than either the U.S. or New England economies as a whole—then at a relatively medium pace in the mid to long term portions of the forecast with expected rates between New England's and the US's. Average annual unemployment rate in Vermont is expected to drop over 1.5 percentage points over the calendar 2013-17 forecast period, settling in at an average annual rate of 3.4% by calendar 2017. Positive job gains are expected in all North American Industry Classification System (NAICS) supersectors except Government, according to this Spring 2013 NEEP outlook revision. Among the notable gaining sectors are the Construction sector (at a +5.3% annual average over the calendar year 2013-17 period) and the Leisure and Hospitality sector (at a +3.1% annual average over the

calendar year 2013-17 period). Although initial growth in the Construction sector will be restrained, most of the increases in employment are expected to occur in 2015-2016."

"The Vermont manufacturing sector was a significant contributor to earnings growth during calendar year 2012, contributing nearly a quarter (24.2%) of the total earnings growth in the state last calendar year. The Vermont manufacturing sector also is highly integrated into the fabric of the Vermont economy—with strong supply chain linkages and strong induced job effects as generally higher paid factory workers spend their pay and generate indirect jobs throughout the Vermont economy. Even though there are lingering challenges which may limit a significant rise in manufacturing activity and jobs over the near-term, the long-term outlook for manufacturing has recently taken on a brighter tone. Buoyed by the weak U.S. dollar (which has boosted export activity) and buoyed by successful product differentiation in the marketplace associated with the Vermont Brand, Vermont manufacturing has recently come off the bottom and now appears to have recently been staging a bit of a comeback. Barring any significant, negative layoffs or business setbacks at key Vermont manufacturers and any of the state's key resource processing firms, the brighter hue of the manufacturing sector's outlook comes as a welcome development after years of struggle in this key good producing sector in the Vermont economy."

PRIOR YEAR, CURRENT AND PROJECTED ECONOMIC DATA[1]

Year	Population (in thousands)	Personal Income (in $ billions)	Nominal GSP (in $ billions)
2012	626.0	26.9	27.3
2013	628.0	27.2	28.1
2014	630.0	27.9	29.5
2015	632.1	29.1	31.4
2016	634.4	30.2	33.0
2017	636.7	30.9	34.4
2018	639.3	31.6	35.8
2019	642.0	32.4	37.2
2020	644.8	33.4	38.7
2021	647.5	34.3	40.3
2022	650.2	35.3	41.9
2023	653.0	36.4	43.6
2024	656.1	37.4	45.4

[1] These figures were prepared by EPR.

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As shown in the table below, total revenue for fiscal year 2013 is $98.01 million more than in fiscal year 2012, an increase of 6.9%. Fiscal year 2014 total revenue is forecast to increase by $58.4 million, or 3.9%; the average annual revenue growth rate during the fiscal year period, 2014 through 2024, inclusive, is projected to be approximately 3.21%.

Prior Year, Current and Projected Revenue[1]
(in millions of dollars)

Fiscal Year	General Fund	Transportation Fund	Total Revenue [2]
2012	1,197.0	221.7	1,418.7
2013	1,288.5	228.2	1,516.7
2014	1,324.2	250.9	1,575.1
2015	1,397.1	261.8	1,658.9
2016	1,451.2	268.5	1,719.7
2017	1,496.3	273.5	1,769.8
2018	1,539.5	278.1	1,817.6
2019	1,584.4	283.9	1,868.3
2020	1,630.0	290.1	1,920.1
2021	1,678.3	296.2	1,974.5
2022	1,727.8	303.0	2,030.8
2023	1,778.1	310.1	2,088.2
2024	1,829.9	317.3	2,147.2

[1] Amounts shown are "current law" revenue forecasts, based on a consensus between the State's administration and legislature. The official forecast is shown as of May 6, 2013.

[2] Totals may not agree due to rounding.

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5. OTHER DEBT FACTORS

Moral Obligation Indebtedness

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 general obligation guidelines that have been utilized by CDAAC in connection with its annual recommendation of long-term general obligation debt to be authorized by the legislature.

Over the last four years, a number of actions have been taken by the legislature that increased the State's moral obligation exposure, consisting of the following:

$55,000,000 increase for Vermont Housing Finance Agency ("VHFA")
$50,000,000 program for Vermont Student Assistance Corporation ("VSAC")
$40,000,000 program for Vermont Telecommunications Authority ("VTA")
$65,000,000 program for University of Vermont ("UVM")
$35,000,000 program for Vermont State Colleges ("VSC")
$60,000,000 increase for Vermont Economic Development Authority ("VEDA")

A new form of moral obligation support was created in 2009 for both VHFA and VSAC. Normally, the State's moral obligation support attaches to a debt service reserve fund that must be filled up by the State if the agency draws down on the fund. However, for both VSAC and VHFA, the State is committed to increase certain reserves if individual trusts do not provide requisite parity levels. This provision for a pledged equity moral obligation for VHFA was constrained within VHFA's overall ($155 million) moral obligation authority. The pledged equity program for the two agencies was adopted to allow each agency to more effectively deal with the market problems that surfaced in 2008.

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, 2013, at $546,060,120. Using 225% of G.O. debt for establishing a limit of moral obligation debt, the State would have had $188,240,270 in additional moral obligation capacity. Using 200% of G.O. debt for establishing a limit of moral obligation debt, the State would have had $51,725,240 in additional capacity. Using a more conservative 195%, the State still has $24,422,234 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 general obligation 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.

With the exception of VEDA, which has specific plans for utilizing its enhanced moral obligation commitment, the new authorizations shown above have not been part of financing strategies for the particular agencies. 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.

Contingent or Limited Liability Obligations (all figures as of June 30, 2013):

1. VEDA Mortgage Insurance Program: The State had a contingent liability of $9.0 million with respect to this Program.

2. VEDA Financial Access Program: The State had a contingent liability of $1.0 million with respect to this Program.

3. VEDA Tech/Small Business Loan Program: The State had a contingent liability of $1.0 million with respect to this Program.

Reserve Fund Commitments (all figures as of June 30, 2013):

1. Vermont Municipal Bond Bank: The Bank had $554.40 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 the Bank 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 Bank, the State has not been required to appropriate money to the reserve fund for this program. Based on the long history of the bond bank program, the rating agencies credit assessment of the underlying loans of the portfolio, the general obligation pledge of the underlying borrowers for a high percentage of the loan amounts and the State intercept provision for the payment 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: The VHFA had previously received a legislative commitment of $155 million of moral obligation debt secured by reserve fund fill-up 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.

3. It should also be noted that the State has authorized the VEDA to incur 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. Legislation was passed in 2007 to create the Vermont Telecommunications Authority to facilitate broadband and related access to an increased number of Vermonters. In this connection, the State has authorized $40 million of debt that has a moral obligation pledge from the State. The legislation requires that projects must be self-supporting in order to utilize the moral obligation support. Considering the fact that no debt has yet been issued by the Authority, the report has not included any portion of such debt in the State's net tax-supported debt computations.

5. 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. It is not expected that the State will need to appropriate money to the respective reserve funds for these purposes.

6. As described in "Moral Obligation Indebtedness," the State has provided $50 million of moral obligation commitment by the State to VSAC. In 2011, VSAC issued $15 million of moral obligation supported bonds.

Finally, it should be noted that the actual amount of moral obligation debt outstanding is somewhat less than the amount authorized, as shown in the table below:

State of Vermont
Moral Obligation Commitments and Debt Oustanding
As of June 30, 2013

Issuer Name	Amount Provided In Statute	Actual Par Amount Outstanding	Credit Ratings With Moral Obligation (Moody's/S&P/Fitch)	Assumed Underlying Credit Ratings (Moody's/S&P/Fitch)
Vermont Municipal Bond Bank*	$554,395,000	$554,395,000	Aa2/AA+/--	A3/--/--
Vermont Economic Development Authority	130,000,000	115,000,000	n/a	n/a
Vermont Housing Finance Agency	155,000,000	62,435,000	Aa3/A+/--	--/BBB+/--
Vermont Student Assistance Authority	50,000,000	11,500,000	Aa2/--/AA	--/--/A+
University of Vermont	66,000,000	0	n/a	n/a
Vermont State Colleges	34,000,000	0	n/a	n/a
Vermont Telecommunications Authority	40,000,000	0	n/a	n/a
	$1,029,395,000	$743,330,000		

* The Vermont Municicpal Bond Bank's debt obligations are secured first by the general obligation pledge of the participating municipalities, and second by State intercept of payments to municipalities, before the moral obligation is utilized.

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 will be, 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.

Information and Technology Indebtedness

In December of 2010, the Commissioner of the Department of Information and Innovation, the Commissioner of Finance and Management, and the State Treasurer delivered a report to the Legislature entitled “Information Technology Infrastructure Needs – A Study of Financing Options,” that enumerated several strategies for financing capital costs of information technology improvements, and Sec. 39 of Act 104 of 2012 required the Secretary of Administration, working in collaboration with the State Treasurer, to present alternatives

for funding information technology projects to the House Committee on Corrections and Institutions, and the Senate Committee on Institutions. This effort is ongoing, with a report to be delivered in January 2014.

CDAAC does not have concerns about debt financing for information technology projects in general, but emphasizes that over the years, the State has sold 20-year debt for capital projects that have had useful economic lives significantly exceeding the period of the related debt repayment. Since the useful lives of information systems and technology innovation may be somewhat shorter than those of traditional capital projects for which Vermont has issued long-term debt in the past, it will be crucial for the State to continue to relate its debt repayment structure to the overall useful life profile for the underlying capital projects that are being financed.

Special Obligation Transportation Infrastructure Bonds (TIBs)

The State has historically sold only general obligation 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. 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, 2013

	With TIBs	Without TIBs
Net Tax-Supported Debt:	$569,150,120	$546,060,120
Debt As A Percent of Gross State Product:	2.03%	1.95%
Debt Per Capita:	$906	$870
Debt As A Percent of Personal Income:	2.09%	2.01%

* As of June 30, 2013 the outstanding principal amount of the State's Special Obligation Transportation Infrastructure Bonds, 2010 Series A and 2012 Series A, was $12,675,000 and $10,415,000 respectively. On August 8, 2013 the State issued an additional $11,165,000 of Special Obligation Transportation Infrastructure Bonds, 2013 Series A, this amount is not included in the above numbers. Debt statistics for Vermont are as of June 30, 2013. Estimates of Gross State Product, Population, Personal Income and Operating Revenue prepared by EPR.

For additional information on the Vermont's TIBs revenue bond debt capacity, please see Appendix G, which contains the Feasibility Study Associated with State of Vermont Special Obligation Transportation Infrastructure Bonds, 2013 Series A, prepared by Kavet, Rockler & Associates. See Chart 6 of the Feasibility Study for a summary of the revenue bond debt capacity.

6. 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 to Vermont's peer group, (iii) substantial increases and decreases in the amount of debt issued due to market disruptions and tax law changes and (iv) 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 triple-A ratings remained fairly constant between eight and eleven states, compared to the current 18 states having at least one triple-A rating.

In terms of market disruptions, the past six years since the summer 2007 beginnings of the global financial crisis have been memorable for the state and local credit markets. At one point in late 2008, the tax-exempt bond market actually closed down in most respects, a phenomenon that had not been experienced in modern times. Moreover, major new, taxable financing options were available for state and local borrowers between 2009 and 2010. In calendar year 2011, U.S. municipal bond issuance volume was approximately 34% lower than the volume from 2010 according to the Securities Industry and Financial Markets Association (SIFMA). This is the most dramatic year-over-year reduction in bond issuance since the acceleration of bonding in 1985, and subsequent halving of bond issuance the following year with the passage of the Tax Reform Act of 1986. The primary reasons for the drop include issuers avoiding incurring more debt in the face of economic weakness and uncertainty, and also that 2010 was a record issuance year as issuers accelerated bond sales ahead of the expiration of American Recovery and Reinvestment Act (ARRA) bond programs, primarily Build America Bonds (BABs), on December 31, 2010. Finally, 2011 saw the unprecedented downgrade of the United States' AAA long term debt rating by S&P, as well as one of the worst natural disasters in Vermont's history. 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 – Future Debt Capacity Risk

Using the 5-year average median for the Peer Group and increasing it by 3.53% annually (the ten-year average of the annual growth rates for the Peer Group), combined with the assumption that the State will issue $84,625,000 during fiscal year 2014, $84,880,000 for

fiscal year 2015 and $79,950,000 in each fiscal year from 2016-2024, *Vermont's projected debt per capita is projected to exceed the projected Moody's median for its Peer Group during fiscal years 2015-2021*, inclusive (see "Historic and Projected Debt Ratios" on page 12). Based upon a very preliminary analysis, this implies that to stay in compliance with the debt per capita guideline the State would need to otherwise decrease its current and future issuances to approximately $134,760,000 for the fiscal year 2016-2017 biennium and $67,380,000 annually in years 2018- 2024. This corresponds to a $25.140 million or 15.7% reduction compared to the current 2014-2015 biennium authorization. Looking forward to next year's report, assuming the Peer Group's 2013 debt per capita figures are the same in 2014, the 5-year median of the Peer Group is projected at $885 for 2014 rather than the $915, which is the projected debt per capita for 2014 in this report. Rolling figures forward for 2014 also decreases the inflator significantly from the current level of 3.53% to 2.79%. The reduction in the inflator occurs due to fact that the Peer Group's debt per capita rose 10.6% from 2003 to 2004. Using the 10 year rolling average of the growth rates to calculate the inflator and losing this large growth year has a significant impact on the inflator. The implied result of this preliminary analysis rolling forward the 2013 Moody's figures for the Peer Group to 2014 is that the State would need to decrease its fiscal year 2016-2017 biennium issuance to $107.65 million, and $52,250,000 annually in years 2018- 2024. This corresponds to a $52.25 million or 32.7% reduction compared to the current 2014-2015 biennium authorization.

Debt Per Capita State Guideline – Adjustment to Debt Per Capita State Guideline

As indicated above, the debt per capita statistics, among the various debt guidelines, is used to establish the recommended limitations on the amount of general obligation 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 triple-A states, and an annual inflation factor, in order to achieve a realistic perspective on the future direction debt per capita median for 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. Therefore, CDAAC believes that it was imperative 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 affect 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 we intend to keep the methodology consistent with the one used in 2012. For the current year, the 5-year average of the Peer Group medians is 884 (starting point) and the 10-year average annual growth factor of the triple-A states Peer Group is 3.53%. See Appendix F, "Detailed Calculations for Debt Per Capita Debt Guideline State Guideline."

Moody's Reconstituted Debt Service as a Percentage of Operating Revenues Median

On January 26, 2012, Moody's published a Special Comment report titled U.S. State Debt Service Ratios which calculated ratios of debt service to operating revenues. The report indicated that the ratio was an important measure of budgetary flexibility and was being issued to enhance comparability across states, improve the transparency of Moody's adjustments to reported financial data, and clarify the rating agency's use of the ratios in terms of opinions on credit quality. Moody's also stated that the debt service ratio would be included in future Debt Median reports. Moody's had previously published debt service medians, but ended the publications in 1996.

On May 29, 2013, Moody's published its 2013 State Debt Medians Report. The report contained the calculated Vermont Debt Service Ratio and the State Medians for both 2011 and 2012. After reviewing the report, the Treasurer's Office confirmed that Moody's calculated their Debt Service Ratio using the General Fund, the Transportation Fund and the Education Fund as operating revenues and included both General Obligation and Transportation Infrastructure Bonds debt in their debt service calculation. As mentioned above, the CDAAC statute defines operating revenues as General and Transportation Funds based upon the historic general flexibility in their uses of these funds for meeting financial operations of the State. CDAAC will continue to calculate debt service as percentage of operating revenue consistent with the CDAAC statute, and will monitor its ratios against the Moody's Debt Service Ratio on a year to year basis. Moody's Debt Service Ratio statistics for FY 2011 and FY 2012 are provided below and are generally consistent with the debt service as a percentage of revenues provided above.

STATE OF VERMONT
MOODY'S 2013 DEBT SERVICE RATIOS*

	FY 2011	FY 2012
Vermont:	2.9%	2.8%
Mean:	5.3%	5.2%
Median:	4.9%	4.9%
Vermont's State Rank	38	38

* As calculated by Moody's and provided in the 2013 State Debt Median Report.

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 by 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.

The legislature recognized this possibility in its 2012 capital bill (Act 104) and authorized an additional capital appropriation of up to $2,000,000 from any original issue premium generated from the State's upcoming bond sale. In the 2013 capital bill (Act 51) the State authorized the remaining $7,603,320 of unissued par amount.

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 program. This reduced the subsidy payments that Vermont received on

August 15, 2013 for its 2010 Series A-2 and 2010 Series D-2 taxable General Obligation Bonds by a total of $54,517.69 (which fell in State fiscal year 2014, given that the State's fiscal year ends June 30).

If the 5.1% reduction continues, the subsidy will be reduced by another $31,958.64 on February 15, 2014, for a total reduction of $86,476.33 in State fiscal year 2014, with declining annual amounts through fiscal year 2031 totaling $784,542.08 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, an $86,476.33 reduction in fiscal year 2014 equates to approximately 0.16% of the projected $74.819 million of debt service payments due that year.

Threat of Reduction or Removal of Tax Exemption for State and Local Government Bonds

2013 saw two proposals at the federal level to either remove or cap the tax-exemption for municipal bonds, which has existed for the more than 100 years since federal income tax was established. Any step toward removing or capping this exemption would increase borrowing costs for the State of Vermont and its agencies and municipalities; increase costs to Vermont's taxpayers; and negatively impact economic growth as a result.

First, in April, President Obama's budget for federal fiscal year 2014 included a provision to limit deductions, including the exemption for municipal bond interest, at 28% (versus the current top federal income tax rate of 39.6%). Then, in a June 27th memorandum, U.S. Senators Max Baucus and Orrin Hatch, respectively the chair and ranking member of the Senate Finance Committee, proposed taking a "blank slate" approach to tax reform. This approach would eliminate all "tax expenditures," including tax exemption for both governmental and private activity bond interest.

The Committee is very concerned that either of these proposals, and in particular the latter approach, would increase the cost of borrowing for the State of Vermont and its agencies and municipalities; increase costs to Vermont taxpayers; and negatively impact economic growth as a result. Capping the tax exemption at 28% would have a disruptive effect on the bond market, immediately increase borrowing costs to compensate investors for a lower deduction. Further, if such a cap were applied retroactively, it would immediately reduce the value of bonds held by investors, and reduce the expected return on their investment. Additionally, a tax risk premium would be built into interest rates demanded by future investors, again increasing the costs to taxpayers.

Removing the tax exemption would be even worse; the State Treasurer's Office estimates that Vermont's taxpayers have saved over $85 million in interest costs over the past ten years on the State's bonds alone, and this number would be substantially larger if the 300+ Vermont cities, towns, school districts, colleges, hospitals and other agencies that also use municipal bonds were included in that number.

Finally, it should be emphasized that any reduction to or elimination of the tax-exempt status of municipal bonds will have negative impacts to debt affordability; as such, the Committee will continue to monitor these developments.

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. Four major areas of adjustments were proposed: 1) individual governments would be broken out of multiple employer plans; 2) accrued liabilities would be adjusted to a return based on a high-grade corporate bond index; 3) asset smoothing would be replaced with market value; 4) required annual contributions would be based on a 17-year amortization schedule. The first three were adopted either without change or no substantive change. The adjustment to the annual contribution will be based on amortization of Moody's adjusted net pension liability over a period of 20 years.

Moody's has also made the decision to consider debt and pension liabilities separately and has incorporated this decision into its US States Rating Methodology. For states, a scorecard has been introduced. It is intended to allow approximate credit profiles and will be based 20% on the economy, 30% on governance, 30% on finances and 20% on debt. 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.

Moody's states that neither the pension adjustments nor the scorecard is expected to result in any rating change at this point.

The most obvious outcome of the pension adjustments will be to increase pension liabilities and decrease funding levels. When all states are compared, it may make a difference if some are revealed to be outliers (i.e., most likely if a very high rate of return has been used). However, if liabilities generally increase by about the same rate, it would seem that any penalty would apply to all and not selectively.

The inclusion of pension liabilities in the scorecard with the same weight attributed to debt is likely to be a meaningful change. 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, 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.

STATE OF VERMONT
STATES' PENSION LIABILITIES COMPARED TO VARIOUS 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	32.1	20.6	$14,652	55.2
Delaware	7.5	4.3	3,105	48.2
Florida	1.7	1.7	677	19.2
Georgia	4.0	3.4	1,437	42.0
Indiana	7.1	6.0	2,547	61.3
Iowa	1.9	1.6	767	16.1
Maryland	9.7	9.5	4,908	99.5
Missouri	2.9	2.6	1,083	27.7
Nebraska	0.7	0.6	286	6.8
New Mexico	7.1	6.3	2,423	37.8
North Carolina	2.1	1.7	775	18.3
South Carolina	7.4	7.0	2,490	59.7
Tennessee	2.3	2.0	843	19.2
Texas	8.9	7.0	3,577	92.5
Utah	3.4	2.5	1,124	30.8
Virginia	3.0	2.6	1,372	35.5
Wyoming	8.1	5.9	3,897	39.9
MEAN[1]	**6.5**	**5.0**	**2,704**	**41.7**
MEDIAN[1]	**4.0**	**3.4**	**1,437**	**37.8**
VERMONT's ANPL[2]	9.4	9.4	3,888	49.2
VERMONT's 50 State Rank[3]	15	14	17	24

Source: Moody's Investors Service 2013 Median Report - Adjusted Pension Liability Medians for US States.

[1] Calculated by Public Resources Advisory Group. These calculations exclude all Vermont numbers and include only states rated triple-A by any one of the three 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

According to Moody's report, the State's relative position among states with respect to its pension liability is a follows: in 2013 the state's ranked 15th position for ANPL as a percentage of personal income, 14th position for ANPL as a percentage state gross domestic

product, 17th position for ANPL as a percentage of personal per capita, and 24th position for ANPL as a percentage of State revenues.

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. In recent years 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 sited "Available Balances greater than 10%, with Requirements to Rebuild Rainy Day Fund if drawn upon" for their subfactor Finances Measurement of "Available Balances as % of Operating Revenue (5-year average)". Additionally, the State's most recent Standard and Poor's report received in September 2012 in which the State's outlook was changed from Stable to Positive, S&P cited increasing reserve fund levels as one of the three factors that would lead to a triple-A rating for the State from S&P. The table below shows the fiscal year 2012 and 2013 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 2012**	**Fiscal 2013**
Alaska	226.4	213.9
Delaware	5.2	5.5
Florida	2.1	2.8
Georgia	2.2	2.1
Indiana	2.6	2.5
Iowa	10.0	10.0
Maryland	4.5	4.8
Missouri	3.2	3.3
Nebraska	12.4	10.6
New Mexico	12.8	10.8
No. Carolina	2.1	2.0
So. Carolina	5.2	6.6
Tennessee	2.7	3.0
Texas	13.8	18.6
Utah	5.7	5.6
Virginia	1.9	2.5
Wyoming	48.4	53.1
Median[1]	5.2	5.5
VERMONT	4.6	4.8

Source: The Fiscal Survey of States 2013. A report by the National Governors Association and the National Association of State Budget Officers. Fiscal Year 2012 are "Actuals" and Fiscal Year 2013 are "Estimated."

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

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 affordable and sustainable manner.

Previous studies, including one prepared by an economist then with the Federal Reserve Bank of Chicago (Aschauer, 1989), concluded that capital investment in core areas such as streets, highways, airports, mass transit, sewers, water systems, and others were important factors in determining productivity. Later studies by the same author (1998) suggested "there is a nonlinear relationship between public capital and economic growth. If there is too little public capital, there are too few roads, railways, and waterways to transport the nation's goods; too few schools to train the nation's workforce; and too few fire and police stations to protect the nation's citizens. But, if there is too much public capital, taxes will be too high for private industry to take full advantage of the public infrastructure" (Papadimitriou, in Aschauer, 1998). This implies that public policy should be to identify and achieve the proper balance to maximize affordable and sustainable growth.

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.

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.

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7. ACKNOWLEDGEMENTS

We would like to express our gratitude to the State Treasurer's Office, the Department of Finance and Management, EPR, NEEP, 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 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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8. PROVISIONS OF ENABLING LEGISLATION AND METHODOLOGY

The Committee is responsible for the submission of a recommendation to the Governor and the General Assembly of the maximum amount of new long-term, net tax-supported indebtedness (at this point, general obligation debt) that the State may prudently issue for the ensuing fiscal year. Such recommendation includes guidelines and other matters that may be relevant to the proposed debt to be authorized. The deadline for the Committee's annual recommendation is September 30th.

In 2008, the legislature, among other changes, replaced in the enabling legislation, "general obligation," with "net tax-supported indebtedness." At this point, all of the State's net tax-supported indebtedness actually consists of only general obligation debt. However, in practical terms, the State's debt load, as computed by the nationally recognized rating agencies, in determining the overall State debt, as reflected in the comparative debt statistics, is based, not just on a state's general obligation debt, but on its net tax-supported indebtedness. Now that the State has transportation infrastructure bonds ("TIBs") outstanding, the use of "net tax-supported indebtedness," instead of "general obligation," becomes more relevant; indeed, it is likely that more of the rating agencies will, in fact, start to include TIBs in the State's debt statement, although the State will likely decide, over time, not to include such indebtedness.

In making its recommendation, CDAAC has the responsibility to consider the following provisions of the enabling legislation:

SUBPARAGRAPH (1):

The amount of state 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) have been authorized but not yet issued.

SUBPARAGRAPH (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.

SUBPARAGRAPH (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.

SUBPARAGRAPH (4)

The criteria that recognized bond rating agencies use to judge the quality of issues of state bonds, including but not limited to:

(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.

SUBPARAGRAPH (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.

In regards to (A) and (B) above, see section 5. OTHER DEBT FACTORS, Moral Obligation Bonds.

<u>Municipal Debt:</u>

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.

SUBPARAGRAPH (6):

The impact of capital spending upon the economic conditions and outlook for the state.

In 2008, new language, "impact of capital spending upon the," was added to this subparagraph. It should be noted that CDAAC routinely considers this factor in the context of its deliberations. Indeed, in the early 1990s, CDAAC recommended significantly higher debt authorization during an economic downturn. 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.

SUBPARAGRAPH (7):

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

This subparagraph was added to the enabling legislation in 2008.

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., general obligation, 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 (see "Transportation Infrastructure Bonds ("TIBs")" elsewhere in this document), VSAC, VHFA, 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.

Further, quasi-revenue bonds, such as moral obligation or reserve fund commitments, have also been employed by VMBB, VEDA, and VHFA, and such debt is now authorized for issuance by VTA, VSAC, UVM and State Colleges. There is a more extensive discussion of the State's moral obligation commitments elsewhere in this report. In addition, the State, in the past, has directly employed capital lease debt, largely in the form of certificates of participation; however, this type of debt was proven to be expensive and created an undue complexity for the State's net tax-supported debt statement, and the State decided in the late 1990s to refund the certificate of participation indebtedness with general obligation debt – with the rating agencies indicating at the time and subsequently their pleasure with the State's actions. At present, as indicated in a footnote to the State's debt statement, Vermont does have a \$4.7 million capitalized lease, but the debt service payments on this lease are funded from energy savings, which are guaranteed by the contractor; as a result, this debt is not added to the State's net tax-supported indebtedness. The State will continue to review the

extent to which efficient employment of lease financings can be achieved in Vermont's debt program without adversely affecting the State's debt management operations or credit position.

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 general obligation 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.

SUBPARAGRAPH (8):

Any projections of capital needs authorized or prepared by the agency of transportation, the joint fiscal office, or other agencies or departments.

This subparagraph was added to the enabling legislation in 2008.

CDAAC is proceeding in its compliance with this provision. Material on various infrastructure capital requirements will be considered as this information is provided to CDAAC over time.

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.

There are numerous factors that can affect the State's affordability to incur future indebtedness, including the prospective State economy and the availability of adequate financial resources. Of course, it should be recognized that even though the debt load indices employed in this report are generally also used by the rating agencies for determining the amount of net tax-supported indebtedness that the State can effectively support, these indices do not take into consideration the possibility for deterioration in the State's financial results. For example, if the State were to confront a significantly increased or new financial liability that was not contemplated in the context of this analysis, the appropriateness of this debt load

would become less certain. Similarly, if the State were to incur serious deficits or face a dangerously eroding economy, the ability of the State to incur debt in the future could be affected. These managerial and unpredictable aspects of debt affordability have not been considered in this analysis. It will be important for State officials to monitor Vermont's annual financial condition and results, together with the State's economic trends, in order to evaluate the State's credit position to determine whether annual issuance of debt should be adjusted to reflect a changing financial outlook and credit condition for the State under altered circumstances.

With respect to the interest rate and credit ratings assumed in the evaluation, the report has made conservative assumptions. For anticipated debt issuances, the interest rate on future State G.O. indebtedness ranges from 5.00% to 6.50%, which is well above the interest rate at which the State could currently sell long-term general obligation bonds.

At the same time, we have assumed that the State will maintain its current ratings: "Aaa" from Moody's, "AA+" from S&P, and "AAA" from Fitch. Of course, a negative change in the State's ratings in the future could adversely affect the comparative interest rates that Vermont pays on its bond issues, thereby increasing the amount of the State's annual fixed costs for debt service. This effect could reduce the amount of long-term, net tax-supported indebtedness that the State can annually afford to issue.

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9. APPENDICES

A. 2013 State Debt Medians (Moody's Investors Service)

B. Fitch Ratings Credit Report

C. Moody's Investors Service Credit Report

D. Standard & Poor's Credit Report

E. Vermont Economic Outlook (New England Economic Partnership)

F. Detailed Calculations for Debt Per Capita Debt Guideline State Guideline

G. Feasibility Study Associated with State of Vermont Special Obligation Transportation Infrastructure Bonds 2013 Series A, Prepared by Kavet, Rockler & Associates

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

APPENDIX A

MOODY'S
INVESTORS SERVICE

MEDIAN REPORT

2013 State Debt Medians Report

Slowest increase in debt in over 20 years

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Growth in outstanding state debt slowed for the third consecutive year to 1.3% in calendar year 2012. The nearly flat growth in outstanding net tax-supported debt (NTSD) is well-below the 7% average annual growth over the past 10 years, as well as the recent peak of 10% in 2009. The combined 2012 NTSD for all 50 states increased to $516 billion from $510 billion in 2011. This report presents both the calendar 2012 data and ratios measuring state NTSD, as well as the associated debt service costs and ratios for the fiscal year. Among our findings:

» **2012 state debt levels remained relatively flat, as concerns about the economy and federal fiscal policy persist.** Legal debt limitations, state-level austerity spending, and anti-debt sentiment have reduced states' appetite for new money borrowing. Debt appetite has also declined in some previously high-growth states that saw population growth stall during the recession. Additionally, debt plans have been influenced by uncertainty regarding federal fiscal policy and the impact of federal budget austerity on the national economy.

» **Lower overall borrowing in 2012 leads to flat or declining median leverage ratios.** Median NTSD per capita decreased by 3.8% to $1,074 despite slow population growth, and NTSD as a percentage of personal income was flat at 2.8%. NTSD as a percentage of gross state product was almost flat, increasing to 2.5% from 2.4%.

» **The growth in states' total debt service costs slowed to 3% in 2012** in correlation with two consecutive years of slowing new debt issuance. In addition, the extended period of low interest rates has led to lower costs on new debt and an increased level of refundings that further reduces debt service costs. With 4.1% total revenue growth, the median debt service ratio remained almost flat at 4.9%.

- **Growth in state NTSD is expected to remain low, but increase slightly in 2013.** Growth will remain low as states wait to understand the economic impact of sequestration and federal fiscal policy. However, new debt issuance could rise late in the year in anticipation of the expiration of federal transportation funding authorization (MAP-21) and potential policy changes regarding the municipal bond tax exemption.
- **State debt growth will slow if alternative financings increase.** There has been renewed state interest in financing capital needs through non-traditional means instead of debt secured by traditional taxes and fees. Some states have leveraged toll road enterprises to finance state-wide transportation projects and others will consider public private partnerships. Depending on the structure, these alternative financings may not be captured in net tax-supported debt.

This report examines states' net state tax-supported debt as of calendar year-end 2012. As in prior years' reports, the presentation of debt trend data (Figures 1, 2, 3 and Table 6) incorporates a one-year lag (i.e. the data labeled 2013 reflect debt as of calendar year-end 2012).

Net Tax-Supported Debt Compared to Gross Tax-Supported Debt

Net Tax-Supported Debt is defined as debt secured by state taxes or other operating resources which could otherwise be used for state operations, net of obligations that are self-supporting from pledged sources other than state taxes or operating resources.

Analysts commonly use three measures of debt to compare state debt burdens: debt per capita, debt as a percentage of personal income, and debt as a percentage of gross state product. In considering debt burden, the focus is largely on net tax-supported debt, which we characterize as debt secured by state 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 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).

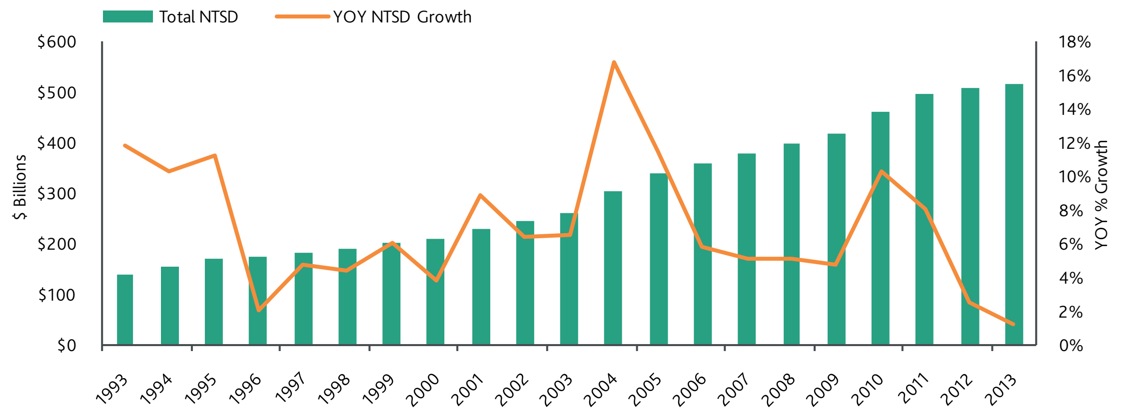
For additional detail on our distinctions between net tax-supported debt and gross tax-supported debt, please refer to Appendix B.

Nearly Flat Growth in Net Tax-Supported Debt in 2012

Despite the extremely low interest rate environment, total state net tax-supported debt growth slowed for the third consecutive year to 1.3% in 2012. The nearly flat growth is well-below the 7% average annual growth over the past 10 years, as well as the recent peak of 10% in 2009.

FIGURE 1

Slowest NTSD Growth in 20 Years



Source: Moody's Investors Service

Map of U.S. State NTSD as a Percentage of Personal Income

>8%
5.5%-8%
3%-5.5%
1%-3%
<1%

Source: Moody's Investors Service

The slowdown in NTSD growth is partially due to the continued constraint put on some states by their formal or informal debt policies. Many states set debt limits relative to revenue or personal income, and as these measures declined or stagnated during the recession, so did states' debt issuing capacity. While revenue growth has returned for many states, personal income has been slower to recover. For states that issue debt supported by specific revenues, debt issuance is also constrained by additional bonds tests or other leverage measures. States like Florida and Nevada have slowed their debt issuance in response to volatility in revenues like gross receipts and documentary stamp taxes, and property taxes, respectively.

Since the 2008 recession, states have generally moved to a more conservative approach to debt. Budgetary imbalances and expanding fixed cost obligations have forced many states to raise revenues or severely cut services, especially in education spending. This state-level austerity spending has discouraged some states from adding new debt service to their budgets, and led to increased anti-debt sentiment. In addition, rising costs for pension and other post-employment benefit (OPEB) obligations has added to state's long-term liabilities and pressured budgets, leaving less appetite for bonded debt. Debt appetite has also declined in states that experienced significant declines in population growth during the recession. In some cases, like Florida and New Mexico that had strong pre-recession growth, sizeable bond programs for school construction and highway projects have neared or reached completion and no additional borrowing is planned at this time.

The slow NTSD growth also reflects states' reaction to uncertainty about federal fiscal policy and the impact on the national economy. While we expect sequestration to have limited direct impact on state budgets, economic recovery could slow. Many states, particularly those with concentrations of defense procurement contracting, could see slower economic growth, reducing their flexibility for additional debt. Although most states' revenues grew healthily in 2012, uncertainty regarding future revenues, and the capacity and affordability of debt going forward, has dampened borrowing plans.

In several states, NTSD growth has slowed as capital funding for transportation was shifted towards the toll road enterprise. With stagnating gas tax and motor vehicle revenues and uncertain Federal funding, some states have turned to toll road enterprise debt as a new funding source. To the extent that this enterprise debt substitutes traditional state-supported debt, this would lower the state's future NTSD growth. For example, Pennsylvania (rated Aa2/stable) has financed state-wide mass transit and transportation projects with annual transfers from the Pennsylvania Turnpike Commission (Sr. lien rated A1/stable) rather than issuing commonwealth debt. These transfers are funded with debt secured by and paid from turnpike toll revenues. Although this debt is additionally backed by an appropriation from the commonwealth's Motor License Fund, it is excluded from Pennsylvania's NTSD due to the self-supporting nature of the bonds. Ohio is also considering funding state infrastructure projects with new toll road enterprise debt, issued through the Ohio Turnpike Commission. Over the next five years, Ohio plans to finance nearly $1.4 billion of state infrastructure projects, some of which may benefit the turnpike, with turnpike enterprise debt that will not be included in the state's NTSD.

Large Unemployment Insurance Issuances not included in NTSD

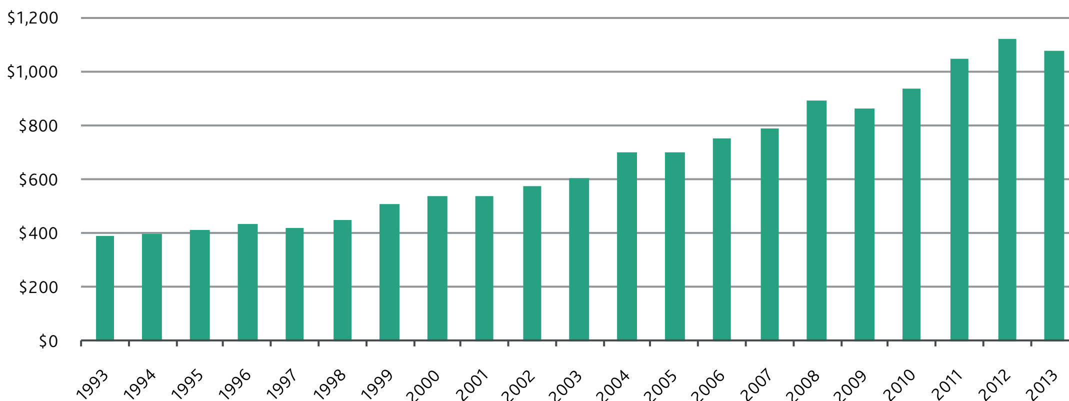
Although not included in NTSD or our debt ratios, there was a significant increase in the issuance of unemployment insurance obligation bonds in 2012. Four states issued bonds secured by special employer assessments to repay unemployment insurance advances from the federal government, taking advantage of the low interest rate environment to reduce their borrowing costs. Colorado, Illinois, Michigan and Pennsylvania issued a total of $7.8 billion of unemployment insurance obligation bonds in 2012. The bonds are generally secured by unemployment compensation assessments levied on employers in each state. The assessments are levied only as long as the bonds are outstanding and are not part of the state's operating revenues; therefore, we exclude the bonds from net tax-supported debt.

Median Leverage Ratios Decline or Remain Flat

The reduction in NTSD growth resulted in lower or unchanged median leverage ratios. Median NTSD per capita decreased 3.8% to $1,074, the first decline in this ratio since 2009. The decline reflects the fact that population growth, although slow, outpaced the growth in most states' NTSD. According to Census data, the aggregate population of the 50 states grew 0.7% in 2012 to 314 million, the slowest growth in more than 70 years. Median NTSD as a percent of personal income, however, remained flat for the third consecutive year at 2.8%, reflecting the fact that most states experienced continued economic recovery in line with their NTSD growth. According to Bureau of Economic Analysis data, 2012 U.S. personal income grew to $13.4 trillion, 3.2% higher than estimated 2011 personal income at the time of last year's report. Median NTSD as a percent of gross state product increased slightly to 2.5% in 2012.

FIGURE 2

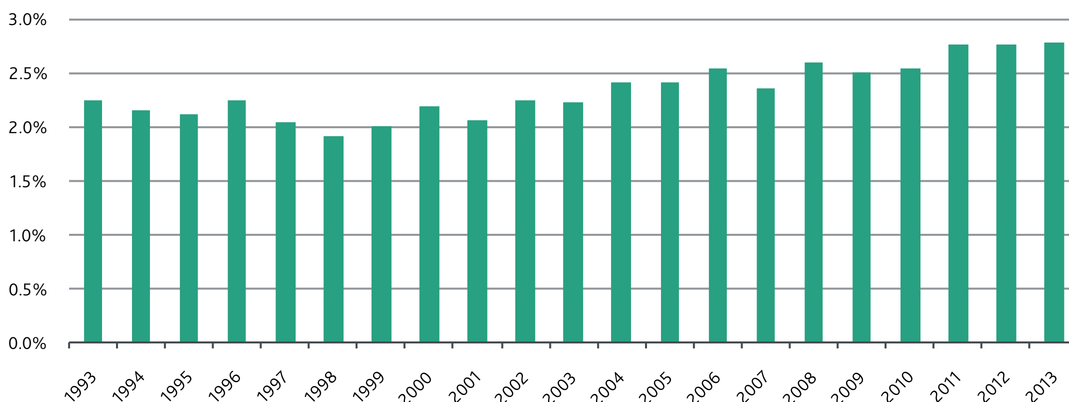
Median NTSD Per Capita Declines 4%



Source: Moody's Investors Service

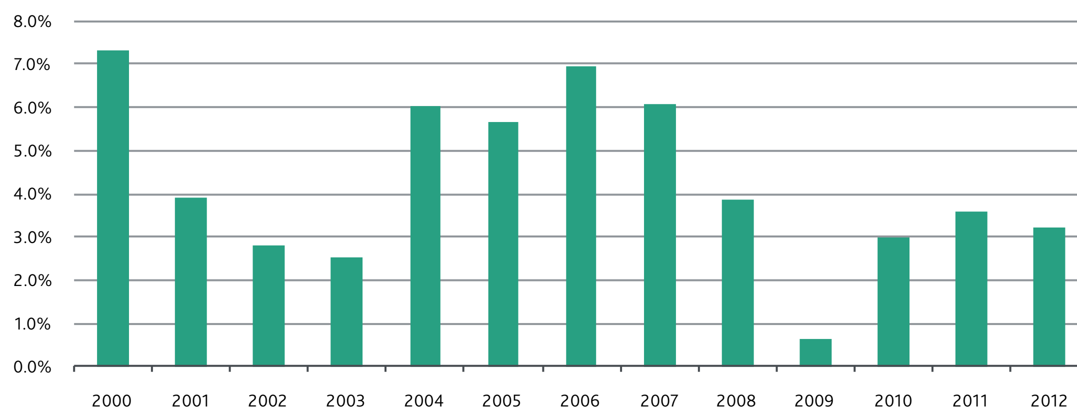
FIGURE 3

Median NTSD as Percent of Personal Income Remains Flat



Source: Moody's Investors Service

FIGURE 4
YOY % Change in Personal Income at Time of Medians Report



Source: Bureau of Economic Analysis; Moody's Investors Service

Key States Influencing Changes in Net Tax-Supported Debt

The largest contributors to growth in NTSD in 2011 were California, Massachusetts, Virginia and Washington, with each adding between $1.2 billion and $1.7 billion of NTSD, net of principal repayments. While the growth in California and Massachusetts' debt was low on a percentage basis (1% and 4%, respectively), other states that saw double-digit increases include Arkansas, Minnesota, Hawaii, and New Hampshire. Accordingly, among the top 25 leveraged states, Hawaii, Minnesota, Washington, and Virginia saw the largest increases in their leverage ratios from 2011 to 2012. Among these large borrowers, Virginia saw the highest percentage growth in NTSD, a 14% increase, which marks the commonwealth's fourth consecutive year of double-digit debt growth. The majority of the new debt has been issued through the Virginia Commonwealth Transportation Board and the Virginia College Building Authority for transportation and higher education capital projects, respectively. As a result of this increase, since 2010 Virginia has moved from being the state with the 26th highest debt per capita to the 19th highest.

Seven states saw notable declines in NTSD (on a dollar basis), the largest being in Arizona, Florida, Illinois and New York. Among these top seven, Kansas and Utah saw the largest declines on a percentage basis, at 8% and 7%, respectively.

State Debt Service Costs Rise but Remain Stable Relative to Revenues

State debt service costs increased by 3.0% in 2012, much slower than the 8.6% growth experienced in 2011. The declining growth is related to lower new debt issuance in the past two years and the extremely low interest rate environment. The low interest rate environment has both reduced the cost of new debt and triggered a high level of refunding. Refundings have lowered the ongoing debt service costs as well as created near term debt service declines when savings are all taken up front. Although at a much lower level, there was also a small amount of debt restructuring for budgetary relief in 2012. The modest debt service growth was balanced by recovering revenues, which grew 4.1%. As a result, the median 2012 debt service ratio remained almost flat at 4.8%.

We define the debt service ratio as our calculation of aggregate debt service for all state net tax-supported debt as a percentage of pledged revenues. Revenues include all Moody's-defined operating

fund revenues (primarily the General Fund for most states) and revenues pledged to any special tax bonds or other bonds that are not included in our calculation of operating revenue.

$$Debt\ Service\ Ratio = \frac{Debt\ Service\ on\ Net\ Tax\ Supported\ Debt}{Operating\ Fund\ Revenues\ +\ Pledged\ Revenues}$$

The most notable increase in the debt service ratio was in Hawaii, which increased to 10.4% in 2012 from 8.7% in 2011. Although Hawaii's revenue available for debt service grew 5% in 2012, debt service costs increased 26% to $581 million. As a result of the increase, Hawaii has moved from the seventh highest debt service ratio in 2011 to the fifth highest in 2012. On the other hand, Connecticut's debt service ratio decreased for the second consecutive year to 12.7% from 14.8% in 2011 and 16.1% in 2010. The 2012 ratio improvement was due to strong 18% revenue growth, partially related to a tax increase. Despite the decrease, Connecticut's debt service ratio remains the highest of the fifty states.

2013 State Debt Outlook: New Debt Issuance Will Remain Low; Will Be Influenced by Federal Policy Decisions

State new money debt issuance is expected to remain low in 2013 due to ongoing uncertainty about the impact of Federal fiscal policy on the economy, anti-debt political sentiment, and continued debt limit constraints. Uncertainty regarding U.S. federal fiscal policy and the impact on the national economy are contributing to a generally debt averse attitude. States will continue to defer debt plans until the impact of federal budget balancing efforts are better understood. In addition, despite recent revenue growth, states are experiencing a protracted recovery from several consecutive years of large budget gaps and austerity spending. This will dampen states' political appetite for debt in 2013. New money debt issuance may increase at the end of 2013 in response to potential changes in the municipal bond tax-exemption and the September 2014 expiration of Federal transportation funding authorization (Moving Ahead for Progress in the 21st Century, MAP-21).

We also expect states' 2013 new money borrowing to be constrained by debt policies and greater fiscal conservatism. States' overall leverage position may be limited by measures set to personal income or operating revenues, and bond secured by specific revenue streams are further limited by additional bonds tests (ABT). Many such special tax bonds are secured by more limited, volatile revenue streams and will remain constrained by their ABT or by states' concerns about future volatility. Although revenue growth has resumed, most states remain below their pre-recession peak, therefore their debt limits are tighter than planned. In addition, personal income has had a slower recovery, therefore low debt capacity and heightened fiscal management concerns will result in less new borrowing than experienced in the past several years.

Generally, growth in next year's debt service expenditures will be flat in conjunction with this year's slowdown in new borrowing and the expectation that interest rates will remain low through 2013. The debt service ratio will remain flat or decrease slightly for most states as revenues continue to recover. However, this trend will vary depending on how states have managed the economic recovery. States that have issued or restructured debt for budgetary relief in the near term will experience spikes in their debt service ratios, while states with above-average revenue recovery will see larger declines in their ratios. In addition, in the low interest rate environment of the past several years, there has been an above-average amount of refunding for net present value savings. States that have taken these savings in the first year or two, will see artificially lower debt service for the next few years. Economic recovery

will also influence debt service ratio trends, particularly for states with a concentration of federal defense procurement contracting. These states may see above-average economic slackening that slows revenue growth and inflates debt service ratios.

In response to tight funding and low debt appetite, more states are exploring debt secured by revenues other than state taxes and fees. Although there has been little issuance in this area to date, there is increased interest in public private partnerships to finance projects that traditional state debt has financed in the past. Although not directly secured by state taxes or fees, we will include P3s in NTSD if debt service is supported by a long-term contractual obligation of the state to make concession payments to the private partner. For example, Florida's NTSD includes debt issued for the Miami Tunnel Project due to the state's contractual commitment to make concession payments.

Although states have relatively low exposure to variable rate debt, market volatility stemming from bank rating changes or other disruptions to the variable rate market could moderately affect debt service costs in the next year. Market disruption would increase state's interest costs as they restructure variable rate debt to fixed rates, trigger higher interest rates on unremarketed variable rate bonds, or result in more expensive replacement liquidity facilities.

Debt Tables and Comparative Measures

The following tables 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 their ratings. The 50 state-medians exclude Puerto Rico, which is shown for comparison purposes only. Debt ratios are generally calculated using calendar year 2012 data, while the debt service ratio uses fiscal year figures.

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. In addition, states that have issued pension obligation bonds have increased their debt ratios but offset this with slightly lower pension liabilities-a trade-off which is not fully captured in this report. 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 their internal policies.

Appendix A: Debt Tables and Comparative Measures

TABLE 1

Net Tax-Supported Debt Per Capita

1	Connecticut	$5,185	Aa3
2	Massachusetts	$4,968	Aa1
3	Hawaii	$4,246	Aa2
4	New Jersey	$4,023	Aa3
5	New York	$3,174	Aa2
6	Washington	$2,817	Aa1
7	California	$2,565	A1
8	Delaware	$2,536	Aaa
9	Illinois	$2,526	A2
10	Rhode Island	$2,085	Aa2
11	Kentucky	$1,998	Aa2*
12	Oregon	$1,945	Aa1
13	Wisconsin	$1,874	Aa2
14	Maryland	$1,799	Aaa
15	Mississippi	$1,735	Aa2
16	Louisiana	$1,411	Aa2
17	New Mexico	$1,316	Aaa
18	Minnesota	$1,315	Aa1
19	Virginia	$1,315	Aaa
20	Utah	$1,275	Aaa
21	Alaska	$1,251	Aaa
22	Pennsylvania	$1,208	Aa2
23	West Virginia	$1,118	Aa1
24	Kansas	$1,112	Aa1*
25	Florida	$1,087	Aa1
26	Georgia	$1,061	Aaa
27	Ohio	$1,047	Aa1
28	Arizona	$902	Aa3
29	Alabama	$867	Aa1
30	New Hampshire	$862	Aa1
31	North Carolina	$853	Aaa
32	Maine	$814	Aa2
33	Vermont	$811	Aaa
34	Michigan	$800	Aa2
35	South Carolina	$780	Aaa
36	Nevada	$730	Aa2
37	Missouri	$699	Aaa
38	Oklahoma	$604	Aa2
39	Texas	$580	Aaa
40	Colorado	$525	Aa1*
41	Idaho	$515	Aa1*
42	Indiana	$424	Aaa*
43	Arkansas	$404	Aa1
44	South Dakota	$355	NGO**
45	Tennessee	$343	Aaa
46	Montana	$311	Aa1
47	North Dakota	$292	Aa1*
48	Iowa	$287	Aaa*
49	Wyoming	$59	NGO**
50	Nebraska	$14	NGO**
	MEAN:	$1,416	Aa1
	MEDIAN:	$1,074	Aa2
	Puerto Rico	$14,053	Baa3***

TABLE 2

Net Tax-Supported Debt as a % of 2011 Personal Income

1	Hawaii	10.0%
2	Massachusetts	9.3%
3	Connecticut	9.1%
4	New Jersey	7.6%
5	Washington	6.4%
6	New York	6.3%
7	Delaware	6.2%
8	Kentucky	5.9%
9	California	5.8%
10	Illinois	5.7%
11	Mississippi	5.4%
12	Oregon	5.2%
13	Rhode Island	4.7%
14	Wisconsin	4.7%
15	Utah	3.8%
16	New Mexico	3.8%
17	Louisiana	3.7%
18	Maryland	3.6%
19	West Virginia	3.3%
20	Georgia	3.0%
21	Minnesota	3.0%
22	Virginia	2.9%
23	Pennsylvania	2.8%
24	Florida	2.8%
25	Alaska	2.8%
26	Ohio	2.8%
27	Kansas	2.8%
28	Arizona	2.5%
29	Alabama	2.5%
30	North Carolina	2.4%
31	South Carolina	2.3%
32	Michigan	2.2%
33	Maine	2.1%
34	Nevada	1.9%
35	Vermont	1.9%
36	New Hampshire	1.9%
37	Missouri	1.8%
38	Oklahoma	1.6%
39	Idaho	1.6%
40	Texas	1.5%
41	Colorado	1.2%
42	Indiana	1.2%
43	Arkansas	1.2%
44	Tennessee	0.9%
45	South Dakota	0.9%
46	Montana	0.9%
47	Iowa	0.7%
48	North Dakota	0.7%
49	Wyoming	0.1%
50	Nebraska	0.0%
	MEAN:	3.4%
	MEDIAN:	2.8%
	Puerto Rico	88.9%***

* 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.

TABLE 3

Total Net Tax Supported Debt ($000's)

			Rating
1	California	$97,593,690	A1
2	New York	$62,117,200	Aa2
3	New Jersey	$35,662,286	Aa3
4	Massachusetts	$33,019,222	Aa1
5	Illinois	$32,526,104	A2
6	Florida	$20,989,300	Aa1
7	Washington	$19,425,533	Aa1
8	Connecticut	$18,615,067	Aa3
9	Pennsylvania	$15,421,700	Aa2
10	Texas	$15,113,497	Aaa
11	Ohio	$12,089,413	Aa1
12	Virginia	$10,761,603	Aaa
13	Wisconsin	$10,730,964	Aa2
14	Maryland	$10,585,600	Aaa
15	Georgia	$10,523,033	Aaa
16	Kentucky	$8,750,517	Aa2*
17	North Carolina	$8,323,389	Aaa
18	Michigan	$7,905,000	Aa2
19	Oregon	$7,585,606	Aa1
20	Minnesota	$7,073,450	Aa1
21	Louisiana	$6,492,125	Aa2
22	Arizona	$5,912,106	Aa3
23	Hawaii	$5,912,089	Aa2
24	Mississippi	$5,179,091	Aa2
25	Missouri	$4,211,128	Aaa
26	Alabama	$4,181,421	Aa1
27	South Carolina	$3,686,636	Aaa
28	Utah	$3,640,480	Aaa
29	Kansas	$3,210,010	Aa1*
30	Indiana	$2,771,794	Aaa*
31	New Mexico	$2,745,360	Aaa
32	Colorado	$2,722,343	Aa1*
33	Delaware	$2,325,311	Aaa
34	Oklahoma	$2,304,183	Aa2
35	Tennessee	$2,216,729	Aaa
36	Rhode Island	$2,189,339	Aa2
37	West Virginia	$2,073,482	Aa1
38	Nevada	$2,014,310	Aa2
39	Arkansas	$1,191,581	Aa1
40	New Hampshire	$1,138,391	Aa1
41	Maine	$1,081,935	Aa2
42	Alaska	$914,900	Aaa
43	Iowa	$883,155	Aaa*
44	Idaho	$821,572	Aa1*
45	Vermont	$507,624	Aaa
46	Montana	$312,680	Aa1
47	South Dakota	$296,081	NGO**
48	North Dakota	$204,364	Aa1*
49	Wyoming	$33,819	NGO**
50	Nebraska	$25,358	NGO**
	Totals	$516,011,571	
	MEAN:	$10,320,231	
	MEDIAN:	$4,196,275	
	Puerto Rico	$52,991,000	Baa3***

TABLE 4

Gross Tax Supported Debt ($000's)

			Gross to Net Ratio
1	California	$103,418,690	1.06
2	New York	$62,218,900	1.00
3	New Jersey	$41,570,354	1.17
4	Illinois	$35,622,709	1.10
5	Massachusetts	$34,719,302	1.05
6	Florida	$32,019,200	1.53
7	Washington	$28,224,153	1.45
8	Connecticut	$25,813,842	1.39
9	Michigan	$25,465,835	3.22
10	Minnesota	$21,369,590	3.02
11	Texas	$20,901,063	1.38
12	Pennsylvania	$20,176,700	1.31
13	Ohio	$17,429,893	1.44
14	Oregon	$16,046,694	2.11
15	Virginia	$15,113,973	1.40
16	Kentucky	$11,771,430	1.35
17	Wisconsin	$11,051,784	1.03
18	Colorado	$10,912,343	4.01
19	Maryland	$10,585,600	1.00
20	Georgia	$10,523,033	1.00
21	Alabama	$8,794,315	2.10
22	Utah	$8,575,746	2.36
23	North Carolina	$8,323,389	1.00
24	Hawaii	$8,310,839	1.41
25	Louisiana	$7,645,110	1.18
26	Mississippi	$6,081,656	1.17
27	Tennessee	$6,050,137	2.73
28	Arizona	$6,032,576	1.02
29	Maine	$5,210,993	4.82
30	Indiana	$4,414,740	1.59
31	Missouri	$4,289,211	1.02
32	South Carolina	$3,998,467	1.08
33	Delaware	$3,682,729	1.58
34	West Virginia	$3,666,100	1.77
35	Kansas	$3,645,560	1.14
36	Alaska	$3,594,800	3.93
37	Rhode Island	$3,240,099	1.48
38	New Mexico	$2,745,360	1.00
39	Nevada	$2,614,375	1.30
40	New Hampshire	$2,560,107	2.25
41	Iowa	$2,374,505	2.69
42	Oklahoma	$2,313,288	1.00
43	Idaho	$1,925,384	2.34
44	Vermont	$1,534,814	3.02
45	North Dakota	$1,411,357	6.91
46	Arkansas	$1,191,581	1.00
47	Montana	$605,611	1.94
48	South Dakota	$479,656	1.62
49	Nebraska	$40,218	1.59
50	Wyoming	$33,819	1.00
	Totals	$ 670,341,630	
	MEAN:	13,406,833	1.82
	MEDIAN:	6,863,383	1.41
	Puerto Rico	$58,256,000	1.12

* 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.

TABLE 5

Net Tax-Supported Debt as % of Gross State Domestic Product

		2011 NTSD as % of 2010 State GDP
1	Massachusetts	8.37%
2	Hawaii	8.03%
3	Connecticut	7.69%
4	New Jersey	7.18%
5	Kentucky	5.45%
6	New York	5.38%
7	Mississippi	5.30%
8	Washington	5.19%
9	California	5.07%
10	Illinois	5.06%
11	Oregon	4.48%
12	Rhode Island	4.26%
13	Wisconsin	4.20%
14	Delaware	3.89%
15	New Mexico	3.67%
16	Maryland	3.44%
17	Utah	3.43%
18	West Virginia	3.35%
19	Florida	2.97%
20	Louisiana	2.92%
21	Kansas	2.74%
22	Georgia	2.68%
23	Pennsylvania	2.54%
24	Arizona	2.47%
25	Ohio	2.45%
26	South Carolina	2.35%
27	Alabama	2.34%
28	Minnesota	2.27%
29	Virginia	2.23%
30	Maine	2.17%
31	Alaska	2.14%
32	Michigan	2.02%
33	Vermont	1.94%
34	North Carolina	1.85%
35	Missouri	1.83%
36	Nevada	1.72%
37	New Hampshire	1.70%
38	Idaho	1.59%
39	Oklahoma	1.58%
40	Texas	1.25%
41	Indiana	1.05%
42	Colorado	1.05%
43	Montana	0.96%
44	Arkansas	0.95%
45	Tennessee	0.86%
46	South Dakota	0.74%
47	Iowa	0.66%
48	North Dakota	0.50%
49	Wyoming	0.09%
50	Nebraska	0.03%
	MEAN:	2.96%
	MEDIAN:	2.40%

		2012 NTSD as % of 2011 State GDP
1	Hawaii	8.83%
2	Massachusetts	8.43%
3	Connecticut	8.09%
4	New Jersey	7.32%
5	Washington	5.47%
6	New York	5.36%
7	Kentucky	5.31%
8	Mississippi	5.30%
9	California	4.98%
10	Illinois	4.85%
11	Rhode Island	4.37%
12	Wisconsin	4.21%
13	Oregon	3.90%
14	Delaware	3.54%
15	Maryland	3.52%
16	New Mexico	3.46%
17	West Virginia	3.10%
18	Utah	2.92%
19	Florida	2.78%
20	Pennsylvania	2.66%
21	Louisiana	2.62%
22	Georgia	2.51%
23	Minnesota	2.51%
24	Virginia	2.51%
25	Ohio	2.50%
26	Kansas	2.45%
27	Alabama	2.42%
28	Arizona	2.29%
29	South Carolina	2.22%
30	Maine	2.10%
31	Michigan	2.05%
32	Vermont	1.96%
33	North Carolina	1.89%
34	New Hampshire	1.79%
35	Alaska	1.78%
36	Missouri	1.69%
37	Nevada	1.55%
38	Oklahoma	1.49%
39	Idaho	1.42%
40	Texas	1.16%
41	Arkansas	1.13%
42	Colorado	1.03%
43	Indiana	1.00%
44	Tennessee	0.83%
45	Montana	0.82%
46	South Dakota	0.74%
47	Iowa	0.59%
48	North Dakota	0.51%
49	Wyoming	0.09%
50	Nebraska	0.03%
	MEAN:	2.92%
	MEDIAN:	2.47%

*State GDP numbers have a 1-year lag.

TABLE 6

Net Tax Supported Debt as a Percentage of Personal Income

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Alabama	2.0	2.0	2.2	2.0	2.8	2.6	2.4	2.6	2.5	2.5
Alaska	3.0	2.8	2.6	2.7	2.4	2.2	3.2	3.0	3.3	2.8
Arizona	2.3	2.6	2.2	2.0	2.0	2.5	2.3	2.8	2.8	2.5
Arkansas	1.8	1.6	1.6	1.4	1.7	1.3	1.0	1.1	1.0	1.2
California	3.2	4.7	4.6	4.4	4.3	4.4	5.6	6.0	6.0	5.8
Colorado	0.9	1.0	0.9	0.9	0.8	0.8	1.0	1.3	1.3	1.2
Connecticut	8.4	8.5	8.0	7.8	7.3	8.2	8.7	9.5	9.1	9.1
Delaware	5.6	5.5	5.3	5.5	5.2	5.4	6.2	6.8	6.8	6.2
Florida	3.5	3.4	3.2	3.1	2.8	2.9	2.9	3.0	3.0	2.8
Georgia	2.9	2.8	2.7	3.0	3.0	3.0	3.3	3.3	3.1	3.0
Hawaii	10.4	11.1	12.1	10.6	9.9	9.4	9.9	10.1	9.6	10.0
Idaho	0.5	0.6	0.6	0.6	1.2	1.6	1.7	1.6	1.7	1.6
Illinois	5.8	6.2	5.9	5.5	5.2	4.6	4.4	5.7	6.0	5.7
Indiana	1.3	1.4	1.6	2.1	1.5	1.5	1.5	1.4	1.3	1.2
Iowa	0.5	0.5	0.4	0.3	0.3	0.2	0.2	0.7	0.8	0.7
Kansas	3.3	4.0	3.8	3.7	3.5	3.2	3.0	3.2	3.1	2.8
Kentucky	4.4	4.0	4.5	4.3	4.7	4.8	5.4	6.1	6.1	5.9
Louisiana	2.6	2.4	3.1	4.9	4.3	3.3	3.6	3.5	3.7	3.7
Maine	1.8	2.2	2.0	1.9	1.9	2.2	2.2	2.4	2.3	2.1
Maryland	3.0	2.9	3.0	2.8	3.0	3.3	3.4	3.3	3.6	3.6
Massachusetts	8.5	8.5	9.8	9.4	9.8	8.9	9.2	9.2	9.4	9.3
Michigan	2.2	2.2	2.1	2.2	2.2	2.2	2.1	2.2	2.2	2.2
Minnesota	2.0	2.0	2.1	2.2	2.3	2.1	2.4	2.5	2.7	3.0
Mississippi	5.2	4.8	4.8	4.9	4.8	5.2	5.0	5.1	5.6	5.4
Missouri	1.6	1.5	1.6	1.9	2.1	2.0	2.2	2.2	2.0	1.8
Montana	1.3	1.1	1.4	1.5	1.2	1.2	1.1	1.1	1.0	0.9
Nebraska	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Nevada	2.0	2.0	2.2	1.7	2.0	2.2	2.3	2.4	2.2	1.9
New Hampshire	1.5	1.3	1.4	1.3	1.3	1.3	1.6	1.9	1.8	1.9
New Jersey	5.9	7.4	7.9	7.6	7.5	7.3	7.2	7.8	7.8	7.6
New Mexico	4.1	5.3	4.7	5.3	4.8	4.6	4.4	5.6	4.2	3.8
New York	6.7	7.2	6.7	6.7	6.3	6.3	6.5	6.7	6.6	6.3
North Carolina	2.0	2.5	2.8	2.4	2.8	2.5	2.3	2.3	2.3	2.4
North Dakota	0.9	0.6	1.2	1.0	1.1	1.0	0.8	0.8	0.6	0.7
Ohio	2.7	2.9	2.9	3.0	2.9	2.8	2.6	2.8	2.8	2.8
Oklahoma	1.2	1.2	1.4	1.5	1.5	1.5	1.6	1.8	1.7	1.6
Oregon	4.5	4.7	4.5	4.6	5.0	4.6	5.2	5.6	5.5	5.2
Pennsylvania	2.2	2.3	2.3	2.4	2.4	2.5	2.4	2.7	2.8	2.8
Rhode Island	4.4	4.3	4.1	4.6	4.7	4.5	5.2	5.3	4.7	4.7
South Carolina	2.4	2.2	2.5	2.3	3.3	2.9	2.9	2.7	2.5	2.3
South Dakota	0.9	0.9	0.7	0.8	0.9	0.8	0.4	0.9	0.9	0.9
Tennessee	0.8	0.7	0.8	0.7	0.7	0.7	0.9	1.0	1.0	0.9
Texas	0.8	1.0	1.0	1.3	1.4	1.4	1.4	1.6	1.5	1.5
Utah	3.5	3.2	2.7	2.3	1.9	1.5	3.2	4.1	4.4	3.8
Vermont	2.5	2.3	2.2	2.1	2.0	1.8	1.8	1.9	2.0	1.9
Virginia	1.7	1.8	1.7	1.8	1.9	1.9	2.1	2.4	2.6	2.9
Washington	4.9	4.9	4.9	5.1	5.1	5.1	5.3	6.2	6.0	6.4
West Virginia	3.6	4.6	4.4	3.9	3.9	3.6	3.5	3.8	3.6	3.3
Wisconsin	4.5	4.7	4.3	4.2	4.1	4.0	4.6	4.8	4.8	4.7
Wyoming	0.8	0.7	0.3	0.3	0.2	0.2	0.2	0.1	0.1	0.1
Median	2.5	2.5	2.5	2.4	2.6	2.5	2.5	2.8	2.8	2.8

TABLE 7

Debt Service Ratio

		FY2011
1	Connecticut	14.8%
2	Illinois*	11.8%
3	New York	11.3%
4	Massachusetts	10.9%
5	Oregon	9.3%
6	Washington	8.8%
7	Hawaii	8.7%
8	California	8.5%
9	New Jersey	8.4%
10	Delaware	8.2%
11	Rhode Island	8.1%
12	Florida	7.9%
13	Kentucky	7.8%
14	Mississippi	7.4%
15	Georgia	7.2%
16	Utah	7.0%
17	Nevada	6.1%
18	New Hampshire	5.9%
19	Maine	5.9%
20	Maryland	5.7%
21	Arizona	5.6%
22	New Mexico*	5.4%
23	Virginia	5.3%
24	South Carolina	5.0%
25	Kansas	5.0%
26	Pennsylvania	4.9%
27	Louisiana	4.6%
28	Missouri	4.5%
29	Ohio	4.4%
30	West Virginia	4.4%
31	Alabama	4.4%
32	Wisconsin	4.2%
33	North Carolina	3.6%
34	Texas	3.2%
35	Arkansas	3.2%
36	Minnesota	3.1%
37	Idaho	3.1%
38	Vermont	2.9%
39	Colorado	2.7%
40	Montana	2.4%
41	Oklahoma	2.4%
42	Michigan	2.3%
43	Indiana	2.0%
44	Tennessee	1.5%
45	South Dakota*	1.2%
46	North Dakota	1.2%
47	Alaska	1.2%
48	Iowa	0.9%
49	Wyoming	0.2%
50	Nebraska	0.2%
	Mean	5.3%
	Median	4.9%
	Puerto Rico	19.4%

		FY2012
1	Connecticut	12.7%
2	New York	11.5%
3	Massachusetts	11.3%
4	Illinois**	10.6%
5	Hawaii	10.4%
6	Oregon	9.5%
7	California	9.2%
8	Washington	9.0%
9	New Jersey	8.8%
10	Delaware	7.8%
11	Rhode Island	7.7%
12	Florida	7.6%
13	Utah	7.3%
14	Mississippi	7.2%
15	Kentucky	7.2%
16	Georgia	7.0%
17	New Hampshire	6.8%
18	Nevada	6.6%
19	Maine	6.4%
20	New Mexico**	5.9%
21	Maryland	5.7%
22	Virginia	5.2%
23	Arizona	5.1%
24	Pennsylvania	5.0%
25	Alabama	4.9%
26	South Carolina**	4.9%
27	Kansas	4.5%
28	Louisiana	4.5%
29	Ohio	4.1%
30	Missouri	3.9%
31	North Carolina	3.8%
32	Wisconsin	3.8%
33	West Virginia	3.6%
34	Texas	3.1%
35	Arkansas	3.0%
36	Colorado	2.8%
37	Idaho	2.8%
38	Vermont	2.8%
39	Minnesota	2.7%
40	Michigan	2.6%
41	Montana	2.4%
42	Oklahoma	2.2%
43	Indiana	1.9%
44	Tennessee	1.5%
45	Alaska	1.3%
46	South Dakota	1.2%
47	Iowa	0.9%
48	North Dakota	0.8%
49	Nebraska	0.2%
50	Wyoming	0.2%
	Mean	5.2%
	Median	4.9%
	Puerto Rico	19.9%

* Figures restated since last report to incorporate audited FY2011 revenues

** Figures based on estimated FY2012 revenues; audited financial statements not available at time of publication

Appendix B: Comparison of NTSD and Gross Tax-Supported Debt (GTSD)

Generally Included in NTSD	Generally Excluded from NTSD/ Included in GSTD
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	
P3's with state concession obligation	
Pension obligation bonds	

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INVESTORS SERVICE

APPENDIX B

Fitch Rates Vermont's $90MM GOs 'AAA'; Outlook Stable

Ratings Endorsement Policy

17 Sep 2012 3:52 PM (EDT)

Fitch Ratings-New York-17 September 2012: Fitch Ratings assigns an 'AAA' rating to the following State of Vermont general obligation (GO) bonds:

--$27.3 million GO bonds, 2012 series E (Vermont Citizen Bonds);
--$62.4 million GO bonds, 2012 series F.

The bonds are expected to sell the week of Sept. 24, 2012, the series E bonds through negotiation and the series F bonds through competitive bid.

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

The Rating Outlook is Stable.

SECURITY

General obligations of the State of Vermont secured by the full faith and credit of the state.

KEY RATING DRIVERS

LOW DEBT LEVELS: Vermont's debt levels are low and are expected to remain so, as affordability planning is employed. The state's debt profile reflects nearly exclusive use of GO debt and rapid principal amortization.

CONSERVATIVE FINANCIAL MANAGEMENT: Vermont's revenue stream is diverse and revenue estimates are updated twice a year. The state takes timely action to maintain balance and reserves have been maintained at statutory maximum levels despite periods of declining revenue.

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, median resident age levels are well above the national average.

PENSION SYSTEM MODIFICATIONS IMPLEMENTED: The funded ratios for Vermont's pension systems have declined in recent years, though the state has funded its actuarially required contributions and has made modifications to benefits and employee contribution level.

CREDIT PROFILE

Vermont's 'AAA' rating reflects its low debt burden, which is maintained through adherence to debt affordability guidelines, as well as its conservative financial management and maintenance of sound reserves. Outstanding debt, which is nearly entirely GO and matures rapidly, has declined from previously moderate levels. The state budgets conservatively, and its diverse revenue stream includes a state property tax for education.

Reserves in each of the state's three major operating funds as of the close of fiscal 2012 were fully funded and are expected to remain so through the current fiscal 2013. In addition to the general fund budget stabilization reserve, sized at 5% of prior year appropriations, the state has set aside additional monies to offset potential federal funding reductions. Additionally, during the 2012 legislative session, the legislature established the general fund balance reserve, replacing the former revenue shortfall reserve effective July 1, 2012. The general fund balance reserve will be funded going forward with general fund surpluses, up to a 5% of prior year appropriations cap.

The relatively narrow state economy is supported by larger-than-average employment in tourism, health and educational services, and manufacturing. The state has a relatively small income base with an older and well-educated population.

During the recession, Vermont employment dropped 3.5%, well below the national decline of 5.6%; the state saw small year-over-year growth in 2010 as U.S. employment continued to fall. In 2011, Vermont experienced a year-over-year increase of 0.7% compared to the nation's 1.1%, and 2% growth in July 2012 versus 2011 was above the 1.4% U.S. growth rate. Unemployment levels remain well below those of the nation, at 5% in July compared to 8.3% for the country. Although manufacturing sector employment, led by an IBM facility near Burlington, still exceeds the national level on a percentage basis, both employment and personal income reliance on this sector have dropped in recent years. Per capita personal income in 2011 totaled $41,832, in line with the national level.

Heavy rains from Tropical Storm Irene, which passed through Vermont in late August 2011, resulted in heavy flooding throughout the state. As a result, the state's office complex and the Vermont State Hospital, both in Waterbury, were heavily damaged, and more than 500 miles of roads and 30 bridges were impassable or destroyed. The state estimates cost for the recovery at about $600 million, with much of that expected to be federally funded. A portion of the state's share of costs will be financed through reallocated capital funds over the next few years. All closed bridges and state roads were re-opened by Jan. 1, 2012.

Revenue performance from the state's major tax sources in fiscal years 2009 and 2010 was decidedly negative as a result of the national recession, though the state took prompt action to maintain balance through expenditure reductions, the use of carried forward balances, and application of stimulus funds; operating surpluses in the state's general fund were achieved in each year. Revenue performance improved markedly in fiscal 2011, with 11.1% growth in personal income tax revenues and 4.7% growth in sales tax revenues, and the state closed the fiscal year with a $65 million general fund operating surplus on a $1.2 billion budget.

The fiscal 2012 general fund budget addressed a $176 million budget gap through utilization of $29 million from the human services caseload reserve, which was funded with the prior year's surplus, a reduced contribution from the state's general fund for support of the Education Fund, increased health care provider taxes, realization of labor savings related to pensions, and agency spending reductions. Revenue recovery continued during the year, with personal income tax revenues up 7.9% and sales and use tax revenues up 5%.

The enacted general fund budget for fiscal 2013 addressed a smaller gap, projected at $50 million. General fund revenues are projected to rise by 5.3%, with growth of 6.1% in personal income taxes and 3.1% in sales and use taxes. Base appropriations rise 5.9%. As noted earlier, reserve levels across the state's three major operating funds are expected to remain at their statutory maximum levels.

Vermont's tax-supported debt is nearly exclusively GO, and it amortizes rapidly. The state's debt burden is low. As of June 30, 2012, net tax-supported debt equaled 2% of 2010 personal income. Debt has declined since the 1990s as a result of a focus on debt affordability, and while annual issuance levels are projected to grow, Fitch expects debt ratios to remain low to moderate. Vermont continues to appropriate required contributions to its pension systems although funded ratios declined in recent years in part due to asset valuation declines. The state in recent years has implemented a series of changes to benefits, employee contributions, and actuarial assumptions.

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Additional information is available at 'www.fitchratings.com'. The ratings above were solicited by, or on behalf of, the issuer, and therefore, Fitch has been compensated for the provision of the ratings.

In addition to the sources of information identified in the Tax-Supported Rating Criteria, this action was additionally informed by information from IHS Global Insight.

Applicable Criteria and Related Research:
--'Tax-Supported Rating Criteria' (Aug. 14, 2012);
--'U.S. State Government Tax-Supported Rating Criteria' (Aug. 14, 2012).

Applicable Criteria and Related Research:
Tax-Supported Rating Criteria
U.S. Local Government Tax-Supported Rating Criteria

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APPENDIX C

New Issue: Moody's assigns Aaa rating to the State of Vermont $89.7 million General Obligation Bonds 2012

Global Credit Research - 17 Sep 2012

Outlook is stable

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

Moody's Rating

ISSUE		RATING
General Obligation Bonds, 2012 Series F		Aaa
Sale Amount	$62,400,000	
Expected Sale Date	10/01/12	
Rating Description	General Obligation	
General Obligation Bonds, 2012 Series E (Vermont Citizen Bonds)		Aaa
Sale Amount	$27,300,000	
Expected Sale Date	10/01/12	
Rating Description	General Obligation	

Moody's Outlook

Opinion

NEW YORK, September 17, 2012 --Moody's Investors Service has assigned a Aaa rating and stable outlook to the State of Vermont's $89.7 million General Obligation Bonds 2012, consisting of Series E ($27.3 million) and Series F ($62.4 million). Proceeds of the Series 2012 bonds will be used to fund various capital projects around the state. The bonds are expected to sell the week of September 24th. The outlook is stable.

SUMMARY RATINGS RATIONALE

Moody's highest rating level reflects Vermont's strong history of financial management, which includes conservative fiscal policies and the maintenance of healthy reserve balances that continue to provide a cushion against any unexpected revenue declines; and manageable debt profile that reflects the state's focused efforts to reduce its debt ratios and maintain well-funded pension systems. The state's credit outlook is stable.

Credit strengths are:

*History of strong financial management and fiscal policies indicated by conservative budgeting practices.

*History of prompt action to reduce spending following revenue weakening.

*Maintenance of budget reserve levels at statutory limit.

*Steady progress in reducing previously high debt ratios and maintaining an affordable debt profile.

Credit challenges are:

*Potential service pressures due to a population that is aging at a relatively rapid pace.

*Decline in job growth.

DETAILED CREDIT DISCUSSION

ENACTED FY 2013 BUDGET ASSUMES REVENUE GROWTH OF 5.3%

The enacted fiscal 2013 general fund budget of $1.258 billion reflected an increase of 5.3% over fiscal 2012 revenues. The budget, based on the January 2012 economic and revenue forecast produced by the state, was subsequently revised upward by a slight $2.3 million (less than a percent) in the July 2012 consensus forecast. Year to date revenues through August 2012 were tracking slightly ahead of the updated forecast. Personal income tax receipts provide roughly 50% of the state's general fund revenue. The 5% growth rate projected for FY 2013 may be optimistic considering the expected slower rate of growth in the global economy., However, it should be noted that the year-over-year growth is off of a lower revenue base. The state has just returned to FY 2008 revenue levels, the revenue level reached right before the great recession's fiscal impact on the state. Looking ahead to fiscal 2014, the state is forecasting revenue growth of 5.6%, reflecting growth in personal income tax. While economic and fiscal uncertainty remain, we expect the state to move quickly to resolve any potential shortfalls in revenue performance.

ECONOMIC AND FISCAL UNCERTAINTY BALANCED BY STATE'S TREND OF PROACTIVE FINANCIAL MANAGEMENT

While Vermont moved quickly to address budget deficits during the recession, it could still face challenges in its out-year budgets. As in many states, persistent weakness in the global and national economy and political uncertainty at the national level could pose a threat to a strong economic recovery for the state. The governor has been proactive in managing out year costs. In 2010 he negotiated labor contracts that reduced wages by 3% for two years and was able to negotiate benefit changes in the state teachers retirement system. During the downturn, the state also increased the frequency of its revenue forecasting, which traditionally was performed on a semi-annual basis. From January 2008 to January 2010 the state published quarterly economic and revenue forecasts which enabled them to identify and provide solutions for any sudden revenue declines. Moody's expects that, like other Aaa-rated states, Vermont will continue its trend of conservative financial management and aggressive approach to dealing with budget shortfalls to manage its current fiscal challenges.

BUDGET RESERVE LEVELS MAINTAINED AT STATUTORY FUNDING LEVELS OF 5%

Vermont avoided using any of its fully funded budget stabilization reserve funds (BSR) during the recession. At the end of fiscal 2012, Vermont's General Fund BSR was $58.1 million which reflects the statutorily required funding level of 5% of prior year budgetary appropriations, a level that has been maintained since 2004. Vermont also maintains a fully funded Transportation Fund BSR, also at 5% of prior year appropriations ($10.7 million), Education Fund BSR at the statutory required level of 3.5% to 5% of prior year expenditures ($29.8 million), and the Human Services Caseload Reserve for purposes of Medicaid relief of $18.5 million, excluding General Fund transfers. Vermont expects to maintain its budget stabilization reserves at the statutory level through the end of fiscal 2013. During the 2012 legislative session, the state established an additional reserve fund, the General Fund Balance Reserve (GFBR). After satisfying the funding requirements for the General Fund BSR and other statutory reserves, any unreserved undesignated General Fund surplus at the end of the year will be placed in the new GFBR. The GFBR has a current balance of $3.8 million and is projected to end FY 2013 with a balance of $4.9 million. In total, the state has approximately $121 million (10% of total operating funds) to mititgate revenue fluctuations.

HURRICANE IRENE DAMAGE ESTIMATED BETWEEN $521 MILLION and $591 MILLION

Vermont was one of 13 states to be impacted by Hurricane Irene, which touched down in the state August 2011. The entire state was declared a disaster area by the Federal Emergency Management Agency (FEMA). Current damage estimates related to the hurricane range between $521 million and $591 million, of which $202 million is related to state transportation infrastructure. Federal funding will cover much of the estimated damage. The estimated total state share is $88 million, after accounting for federal funds. The state plans to fund its share of Irene related costs, through a combination of operating revenues and capital funds.

EMPLOYMENT GROWTH OUTPACES THE NATIONAL GROWTH RATE

Continuous job growth in education and health services, Vermont's largest employment sector, has helped offset persistent weakness in other areas of the economy, primarily manufacturing and construction. Vermont never fully recovered manufacturing job losses from the prior economic recession in 2001-2002, and so far the state has

recovered about 60% of the payroll jobs lost during the 2007-2010 economic recession. On a year-over-year basis through June 2012, the state has experienced 1.8% growth in private sector jobs, led by the professional and business services sector. 2013 full year employment growth is expected to yield similar results of 1.5%. The state's unemployment level, which has historically been low, rose rapidly during 2009 but has since stabilized at 5% (July 2012) versus 8.1% for the nation. The states largest private employers, IBM and Fletcher Allen, have continued to hire on an as needed basis which is also positive for the state's economy.

DEBT RATIOS ARE LOWER THAN THE U.S. MEDIANS

Vermont's debt levels have declined considerably over the past decade and are now below average relative to Moody's 50-state median, on both a per capita and personal income basis. Debt per capita of $792, compared to the state median of $1117, ranked Vermont 34th among the fifty states in Moody's 2012 state debt medians. Debt to total personal income of 2.0%, compared to the 2.8% state median ranked Vermont 36th. Both ratios represent steady improvement in Vermont's debt profile, reflecting efforts by the state's Capital Debt Affordability Advisory Committee which oversees long-term capital planning for the state.

Vermont's overall pension funding levels have historically been strong relative to other states. Due to the broad based market losses experienced in 2008, the state's two pension systems have seen a decline in funding ratios, particularly in 2009. As of June 30, 2011 the state employees' system had a 79.6% funding ratio, down from the 81.2% funded ratio reported June 30, 2010. The teachers' system had a funded ratio of 63.8% on June 30, 2011, down from 66.5% reported June 30, 2010. The declines in the funding ratio from 2010 to 2011 were largely due to lower actuarial assumed rates of return. The state continues to be committed to the full annual funding requirements. Vermont's assessment of its other post employment benefit (OPEB) liability reflects $998.6 million for state employees and $780 million for teachers. The state has not decided on a funding mechanism for either of the OPEB liabilities, however they have set up an irrevocable trust fund for the state employees to initially be funded with excess revenues from Medicaid part D reimbursements. As of June 30, 2011 this trust fund held $11.2 million of assets.

Outlook

The outlook for Vermont's general obligation debt is stable. Moody's expects that the state will continue its trend of proactive and conservative fiscal management in light of slower economic recovery. We believe that Vermont will continue to demonstrate the willingness and ability to respond with budget adjustments as needed to maintain budget balance.

What could make the rating go - DOWN

*A break from the states history of conservative fiscal management.

*Emergence of ongoing structurally imbalanced budgets.

*Depletion of budget reserves without swift replenishment.

*Liquidity strain resulting in multiyear cash flow borrowing.

RATING METHODOLOGY

The principal methodology used in this rating was Moody's State Rating Methodology published in November 2004. Please see the Credit Policy page on www.moodys.com for a copy of this methodology.

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APPENDIX D

S&P CAPITAL IQ Global Credit Portal®
RatingsDirect

Research

Vermont; General Obligation

18-Sep-2012

Current Ratings

Credit Profile		
US$62.425 mil GO bnds ser 2012 F due 08/15/2032		
Long Term Rating	AA+/Positive	New
US$27.3 mil GO bnds (Vermont Citizen Bonds) ser 2012 E due 08/15/2032		
Long Term Rating	AA+/Positive	New
Vermont GO		
Long Term Rating	AA+/Positive	Outlook Revised

Rationale

Standard & Poor's Ratings Services has revised its outlook on **Vermont**'s general obligation (GO) debt rating to positive from stable, reflecting the potential that we could raise the rating if the state continues to make progress in improving its annual pension funding levels, strengthening its annual pension funded ratios, and increasing its budget reserves through funding of a recently created additional general fund budget stabilization fund. In addition, Standard & Poor's has assigned its 'AA+' long-term rating to Vermont's series 2012 E and F GO bonds and affirmed its 'AA+' rating on the state's GO bonds outstanding.

The ratings reflect our opinion of the state's:

- Strong financial management that has helped Vermont maintain a good financial position in an environment of declining revenue; and
- Rapid GO debt amortization.

The state's GO bonds are secured by the state's full faith and credit pledge. The bond proceeds will be used for various capital projects.

Vermont, with a 2011 population of 626,000, is in northern New England, bordered by Canada to the north, and the U.S. states of New York, Massachusetts, and New Hampshire to the west, south, and east, respectively.

The state ended fiscal 2011 -- the last audited year -- with the reserves in the general fund, transportation fund, and education fund fully funded at their maximum statutory levels of 5% of the previous year's expenditures, and a general fund operating surplus of $65.6 million. These three funds' stabilization reserves were funded at their statutory maximums in fiscals 2009 through 2012, spanning the recent recession.

Unaudited budgetary basis results for fiscal 2012 indicate a slight $6.3 million operating loss, although officials estimate that the state again ended the year with the reserves at the three major funds again at their maximum levels. As well, there were additional general fund reserves funded at the end of fiscal 2012: $18.5 million in a human caseload reserve; $7.0 million to offset federal reductions; and $3.88 million in a revenue shortfall reserve. The slight loss is notable because the fiscal year included two significant events that negatively affected revenues or expenditures: Tropical Storm

Irene caused significant flooding in August 2011, which was followed by a mild winter that reduced ski lift ticket sales by an estimated 10%. The 2012 results included $16.5 million of one-time appropriations: $11.3 million to repair a state office building damaged by the storm and $5.1 million to replace reduced federal funds for a heating assistance program. An additional $16 million was transferred to the emergency relief fund for future storm-related capital expenditures. However, the results did include the appropriation of $41.7 million of funds from a human service caseload reserve fund that began the year at $60 million.

Fiscal 2012 general fund revenues were $7.6 million above the January 2012 consensus revenue forecast, with all but two major revenue sources ending the year above projections. The largest general fund revenue components are the personal income tax, which ended fiscal 2012 7.9% above the prior year, and the sales and use tax, which ended the year 5.0% above 2011.

The enacted fiscal 2013 budget closed a projected $50.5 million budget gap (4.0% of revenues) without the use of budget stabilization reserves or broad-based tax increases. To close the gap, the budget contains about $50 million of human services program reductions and appropriates $16.0 million of the $18.5 million 2012 year-end balance of the human services caseload fund. The fiscal 2013 general fund revenues are based on the January 2012 consensus forecast of $1.26 billion, which is 5.1% larger than the estimated 2012 actual level. The largest general revenue sources are the personal income tax (51% of general revenue), which is projected to grow by 7.6% from the 2012 actual, and sales and use taxes (19%), which are projected to grow by 3.2%. Personal income tax increased by 11.1% in fiscal 2011 and 7.9% in fiscal 2012, after declines of 14.8% in fiscal 2009 and 6.1% in fiscal 2010. The January forecast was updated in the July forecast, which increased the fiscal 2013 general fund projection by a slight, in our view, $2.3 million. The budget contains $1.31 billion of general fund appropriations, a 5.0% increase from the 2012 final budget, and includes a one-time transfer of $16.2 million from the human services caseload reserve fund that was funded with surpluses from recent years.

The legislature recently approved a second general fund budget reserve, called the General Fund Balance Reserve, and allowed it to be funded with budget surpluses after the existing budget stabilization fund and other statutory requirements are funded, up to a level of 5% of appropriations. The governor had included a proposal in the fiscal 2013 executive budget to increase the general fund stabilization fund to 5.25% from 5%, but instead, the legislature added this second general fund reserve fund.. Officials indicate that the legislature set this new reserve up to be easier to tap to provide for budget flexibility. The 2013 enacted budget projects a $4.9 million balance in this reserve at the end of fiscal 2013.

Through the first two months of fiscal 2013, officials indicate that general fund and education fund revenues are both about $200,000 above projections, but the transportation fund is about $150,000 below projections.

State officials are currently analyzing the impact that implementation of the Affordable Care Act (ACA) will have on the state's Medicaid expenditures. However, officials note that the state currently enrolls individuals who earn up to 350% of the poverty line in state health programs, and that the ACA eligibility expansion could result in increased recurring federal revenue to the state. In addition, Vermont has recently received more than $120 million in one-time federal grants to develop its health benefits exchange.

Although the state's annual pension funding levels have been less than 100% of the ARC in recent years, officials indicated that any shortfalls were trued-up in the subsequent year. In addition, officials have begun using more conservative payroll projections in an attempt to produce annual pension funding amounts that equal the actuarial required contributions (ARC). The actual pension contributions in fiscals 2010 and 2011 were 103% and 94%, respectively, of the ARCs for the state teachers' retirement system (VSTRS), and 81% of the fiscal 2010 and 2011 state employees' retirement system (VSRS) ARCs. Officials indicate that the state budgeted for full pension ARC payments in recent years but attribute the underfunding of the VSRS pension ARC to midyear payroll reductions that negatively affected the funding formulas. The state has a true-up process that increases the ARC in an amount equal to the underfunding from two years before, but despite that process, the VSRS ARC has continued to be underfunded in recent

years. However, officials project that the salary projections for fiscal 2013 are conservative enough to result in full ARC funding, including the prior year's underfunded amount.

Based on the analytical factors we evaluate for states, on a scale of '1' (strongest) to '4' (weakest), we have assigned a composite score of '1.6'.

Outlook

The positive outlook reflects our view that we could raise the rating over our two-year outlook horizon if Vermont continues to make progress in improving its annual pension funding levels, strengthening its annual pension funded ratios, and increasing its budget reserves through funding of a recently-created additional general fund budget stabilization fund. Sectorwide risk for the rating includes the economic and fiscal implications from the potential for significant reductions in federal funding that currently flows to the state. Standard & Poor's will continue to monitor the federal consolidation efforts stemming from the Budget Control Act. Once these are identified, we will evaluate their effect on the state's finances and officials' responses to these revenue reductions.

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.

Revenue structure

Vermont'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 largest general fund revenues in fiscal 2012 (unaudited) were:

- Personal income tax, which generated $597.0 million in fiscal 2012, or 50% of total general fund revenues, after a 7.9% increase, after an 11.0% increase for fiscal 2011, which followed declines in fiscals 2009 and 2010;
- Sales and use tax ($227.9 million or 19% of total general fund revenues), which increased by 5.0% from 2011, but had declines in fiscals 2009 and 2010; and
- Meals and rooms ($126.9 million or 11%), which rose by 3.5% from fiscal 2011.

The education fund relies primarily on a statewide property tax (70% of audited fiscal 2011 education fund revenues plus transfer from the general fund), and an appropriation from the general fund (20%). 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. The transportation budget stabilization fund ended fiscal 2011 at the statutory maximum of 5% of expenditures.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '1.6' to Vermont's government framework.

Financial Management

Financial Management Assessment: 'Strong'

Standard & Poor's considers Vermont's financial management practices "strong" under its FMA 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 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 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 have been held quarterly for about the past two years, 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 state also forecasts Medicaid revenues and spending.

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%, but instead, the legislature added a second general fund reserve fund with a separate cap of 5% of expenditures.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '1.0' to Vermont's financial management.

Economy

Vermont's population has recently grown more slowly than the nation as a whole; for 2000-2010, its population grew by 2.8% compared with the nation's 9.7%. State per capita personal income in 2011 was slightly above the nation's, at 100.4% of the national level. The state's nominal personal income declined by only 1.3% in calendar 2009, significantly better than the declines for New England (negative 4.0%) and the U.S. (negative 4.3%). Throughout the recent recession, Vermont's unemployment rates were better than national levels; the state's peak rate was 7.3% in May 2009, and the June 2012 rate dropped to 4.7%, which was more than three percentage points better than the U.S. rate and was the lowest in the six-state New England region. The 2011 full-year rate was 6.2%. The state's age dependency ratio was lower than that of the U.S., indicating a ratio of fewer children and elderly to each working-age adult, which we consider a positive factor.

IHS Global Insight Inc. projects that the state's average private-sector job growth between 2011 and 2017 will be the slowest in the nation at 1% per year, significantly lagging the 1.6% projection for the U.S. IHS also projects Vermont to

regain its pre-recession peak for nonfarm employment by 2014. State officials indicate that the state has currently regained 67% of the 13,000 jobs it loss in the recent recession. IHS projects the healthcare and professional and business sectors to be the strongest state employment sectors.

The major private employers in the state include Fletcher Allen Health Care, the operator of the largest hospital in the state (about 6,700 employees), and IBM (about 5,000). The IBM plant manufactures computer chips for consumer electronics. Other sectors with more than 1,000 employees include retail, retail banking, manufacturing, higher education, health care, and tourism. In addition, the University of Vermont system employs more than 3,000.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '1.6' to Vermont's economy.

Budgetary Performance

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 2004.

Vermont ended with the budget stabilization reserves for the general, transportation, and education funds fully funded at their statutory maximum levels of 5% of the prior year's appropriations. The internal service fund had an accumulated unreserved fund deficit of $22.7 million at the end of fiscal 2011, which is due to accounting for properties in the property management fund, and this deficit will be reduced over time.

On a scale of '1' (strongest) to '4' (weakest), we have assigned a '1.3' to Vermont's budgetary performance.

Debt And Liability Profile

Debt

As of June 30, 2012, Vermont's tax-supported debt was about $810 per capita, 1.9% of personal income, and 1.9% of gross state product. The fiscal 2011 tax-supported debt service was about 2.5% of general governmental expenditures. Vermont's debt portfolio is conservative, in our view, consisting of only fixed-rate debt and without any exposure to interest rate swaps. We consider the debt amortization to be rapid, with officials retiring more than 70% of GO 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. Officials do not expect debt issuance to increase significantly due to Tropical Storm Irene damage, but believe that the current authorizations can be reallocated for those uses within the current authorized amounts. Debt service can be paid without a budget, but there is no other priority for the payment of debt before other general state expenditures.

Pensions

Vermont maintains three statutory pension plans: the VSTRS, with about 10,500 active members; the VSRS, which includes general state employees and state police and has about 7,800 active members; and the municipal employees' retirement system, with about 6,600 active 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 teachers and state employee pension systems ratios declined somewhat as of June 30, 2011, to 70.4% from 72.7% a year earlier. The combined unfunded actuarial accrued liability was $1.2 billion.

The state implemented pension changes that reduced the VSTRS pension annual required contribution (ARC) for fiscal 2011 and future years. The primary changes were a longer eligibility period to qualify for normal retirement and an

increase in the retirement contribution made by all teachers. After these changes, officials project that the ARC for fiscal 2011 was reduced by about $15 million. Officials also projected the other postemployment benefits (OPEB) ARC to be reduced by these changes. Subsequent to these changes, the pension systems' actuaries updated the experience studies for the systems, and as a result, lowered the interest rate assumptions, which increased the ARC beginning in fiscal 2013. The new interest rate assumption is based on the "select and ultimate" method, which assumes a blend of annual interest earnings between 6.25% and 9.0%, and which results in an expected annual rate of return of 8.1% for VSRS and 7.9% for VSTRS.

Other postemployment benefit liabilities

Vermont offers postemployment medical insurance, dental insurance, and life insurance benefits to retirees of the single-employer VSRS and the multiemployer VSTRS. The unfunded OPEB liability for VSRS as of June 30, 2011, was $998.6 million and for VSTRS was $780.0 million. The actuarial annual OPEB cost in fiscal 2011 was $68.3 million for VSRS, of which the state paid 40% under pay-as-you-go funding. The VSTRS also uses pay-as-you-go funding, but the state does not break out the actual employer contribution, instead including it through the pension fund without an explicit appropriation. The actuarial annual OPEB cost for VSTRS in fiscal 2011 was $43.5 million, a reduction of about $17 million from fiscal 2010, primarily due to benefits changes negotiated with the teachers' union that reduced the VSTRS OPEB cost by about $15 million for fiscal 2011. The state has established an OPEB trust fund for VSRS, but as of June 30, 2011, it only contained $11.2 million of assets, for a 1.1% actuarial asset funded ratio. 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' (strongest) to '4' (weakest), we have assigned a '2.4' to Vermont's debt and liability profile.

Related Criteria And Research

- USPF Criteria: **State Ratings Methodology**, Jan. 3, 2011
- **State And Local Government Ratings Are Not Directly Constrained By That Of The U.S. Sovereign**, Aug. 8, 2011

Ratings Detail (As Of 18-Sep-2012)

Vermont GO bnds		
Long Term Rating	AA+/Positive	Outlook Revised
Vermont GO bnds (Citizen bnds)		
Long Term Rating	AA+/Positive	Outlook Revised

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APPENDIX E

The May 2013 Revised NEEP[1] Outlook for Vermont

Executive Summary:

- Looking at the U.S. economy, developments over the past month and the first quarter of calendar year 2013 were characterized by a generally strengthening private sector which has been coping with an increasing amount of fiscal drag from sequestration—layered on top of the government sector that already was in retrenchment even before sequestration.
  - The BLS reported that 165,000 new nonfarm payroll jobs over the month of April, a decidedly positive data point amongst the unimpressive job growth recorded over the beginning of 2013.
  - Real GDP still appears "on track" for a roughly 2% real GDP growth rate for calendar year 2013.
- However, the U.S. economy is clearly poised to slow as federal sequestration inevitably restrains activity across the U.S. economy.
  - Allowing for normal lags between budget authority and actual reductions in expenditures, it is hard to imagine the already considerable fiscal drag from pre-sequestration spending reductions will not have additional and significant negative impacts on economic activity over at least the next 6-12 months (or into mid-fiscal year 2014).
  - Estimates are that sequestration could reduce U.S. payroll job growth by as much as 500,000 jobs by this time next year. This will very likely be a noticeable and negative impact on the economy—now that sequestration is a reality and is likely here to stay.
  - Add to that the latest with respect to Syria and Europe,[2] and the headwinds for the U.S. and Vermont economies will likely increase during the next two to four fiscal quarters—with the attendant restraining effect on the growth of revenues those factors suggest.
- For the most part, the continuing Vermont economic upswing over the next five years is expected to be fueled by a revival in the pace of progress in the global economy,[3] reflect good niche market positioning by major Vermont firms to take advantage of that growth, a return to more normally functioning financial markets, the expected firming in Vermont's residential and second home markets, and the maintenance of existing stable job and business activity levels at key "economic driver" employers like IBM, Green Mountain Coffee Roasters, Fletcher Allen Health Care, and other key employers.
  - Repairs and restoration activity related to Tropical Storm Irene are also expected to assist in providing some forward momentum continue through calendar year 2015—as local recovery activity continues.
- However, the revised NEEP outlook also reflects a modest downgrade in the overall economic forecast for the period relative to the NEEP forecast update published last December.

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[1] NEEP means New England Economic Partnership.
[2] For example, the latest developments in Cyprus.
[3] Including the addressing of the critical economic and financial issues in Europe.

- The slight forecast downgrade includes: (1) yet another 9 to 12 month delay in the expected timing of the return of more typical rates of recovery-growth in the Vermont economy (relative to last Fall's NEEP forecast), and (2) a slight improvement in the mid-term growth rates[4] for most Vermont economic benchmarks.

- Improvement in the state's unemployment rate will continue over the forecast period but at an initially slower pace than either the U.S. or New England economies as a whole—then at a relatively medium pace in the mid to long term portions of the forecast with expected rates between New England's and the US's.
  - Average annual unemployment rate in Vermont is expected to drop over 1.5 percentage points over the calendar 2013-17 forecast period, settling in at an average annual rate of 3.4% by calendar 2017.

- Positive job gains are expected in all NAICS supersectors[5] except Government, according to this Spring 2013 NEEP outlook revision.
  - Among the notable gaining sectors are the Construction sector (at a +5.3% annual average over the calendar year 2013-17 period) and the Leisure and Hospitality sector (at a +3.1% annual average over the calendar year 2013-17 period). Although initial growth in the Construction sector will be restrained, most of the increases in employment are expected to occur in 2015-2016.
  - Positive performances over the forecast period are also expected in the Professional and Business Services sector (at a +2.4% annual average over the calendar year 2013-17 period) and the Natural Resources and Mining sector (at a +1.9% annual average over the calendar year 2013-17 period).
  - The Government subsector is expected to contract by a -0.2% yearly average over the forecast timeline. Most of the five year decline is expected to occur over the rest of 2013 and 2014.

- The conference theme of this NEEP outlook update involves the changing outlook for the manufacturing sector in each New England state and whether or not New England is prepared to effectively respond to the recent and on-going shifts that are underway in this important goods-producing sector in all of our states.
  - Put simply, are our respective states prepared to meet the challenges and opportunities that this sector offers to the economy over the next five years and beyond?

- The answer to that provocative question involves a good understanding of the current environment impacting manufacturing's prospects and the relative importance of manufacturing to the state economy.
  - Regarding the first, buoyed by the weak U.S. dollar as well as by successful product differentiation in the marketplace associated with the Vermont Brand, Vermont manufacturing has recently come off the bottom and now appears to have been staging a bit of a comeback.

[4] For calendar years 2015 and 2016.

[5] NAICS means North American Industry Classification System. Labor data reported by the Bureau of Labor Statistics is classified by NAICS sector. Public and private reporting agencies follow this paradigm.

    - Regarding the second issue relating to the importance of manufacturing, there is no doubt that manufacturing is a vitally important contributor to the health and performance of the Vermont economy—accounting for 9.8 percent of the jobs and 12.0% of the earnings in calendar year 2011 and contributing nearly a quarter (24.2%) of the total earnings growth in the state in calendar year 2012 while again representing only about 10 percent of the job base.

- What is needed for the state's manufacturing sector to succeed in the future involves an understanding of the following: (1) a recognition of the dynamic globally competitive environment that manufacturing finds itself in today—including what challenges and opportunities that implies for the future, (2) what factors have enabled Vermont manufacturer's to succeed in the past, and (3) how these factors will evolve and interact in an iterative way over both the near-term and long-term future.

    - Regarding the first, the world continues to become more integrated economically and the State has become far less insulated from national and global economic events. State manufacturers compete head-on in this global arena, while at the same time many of the operating expenses they pay that are part of their cost structure are determined by state, regional and local factors and policies.

    - Regarding the second, it is no secret that the State of Vermont—indeed the entire New England region—is not exactly the lowest cost place in the union in which to conduct business. Since Vermont manufacturers are likely never going to be able to compete as the "lowest cost provider," the State's factories need to compete in markets where "lowest price" is not the key deciding factor for the purchase.

    - Instead, successful manufacturers in Vermont must: (1) produce high "value-added" products, (2) Achieve high levels of labor productivity through specialized and innovative applications of technology and/or knowledge to the production process, (3) maintain a continuous capital investment program aimed at improvement of productive capacity and efficiency, and (4) utilize the State's natural resource endowment to gain competitive advantage and/or to attract-maintain skilled workers.

- Combining the evolving environment of manufacturing with the characteristics of successful Vermont manufacturers, policy in Vermont should be focused on the provision of the necessary public infrastructure that allows the state's factories to effectively compete in the global market place, the provision of customized educational and training programs to allow Vermont's manufacturers to effectively compete with lower cost production facilities in faraway places, and a global view of the implications of both existing and future policies.

    - Policymakers that ignore the globally competitive implications of current and future policies are "at risk" for undermining a vibrant and high-paying manufacturing sector that would otherwise be an important fiscal supporter of the very social and environmental safety net policymakers are seeking to provide.

The U.S. Economic Situation:

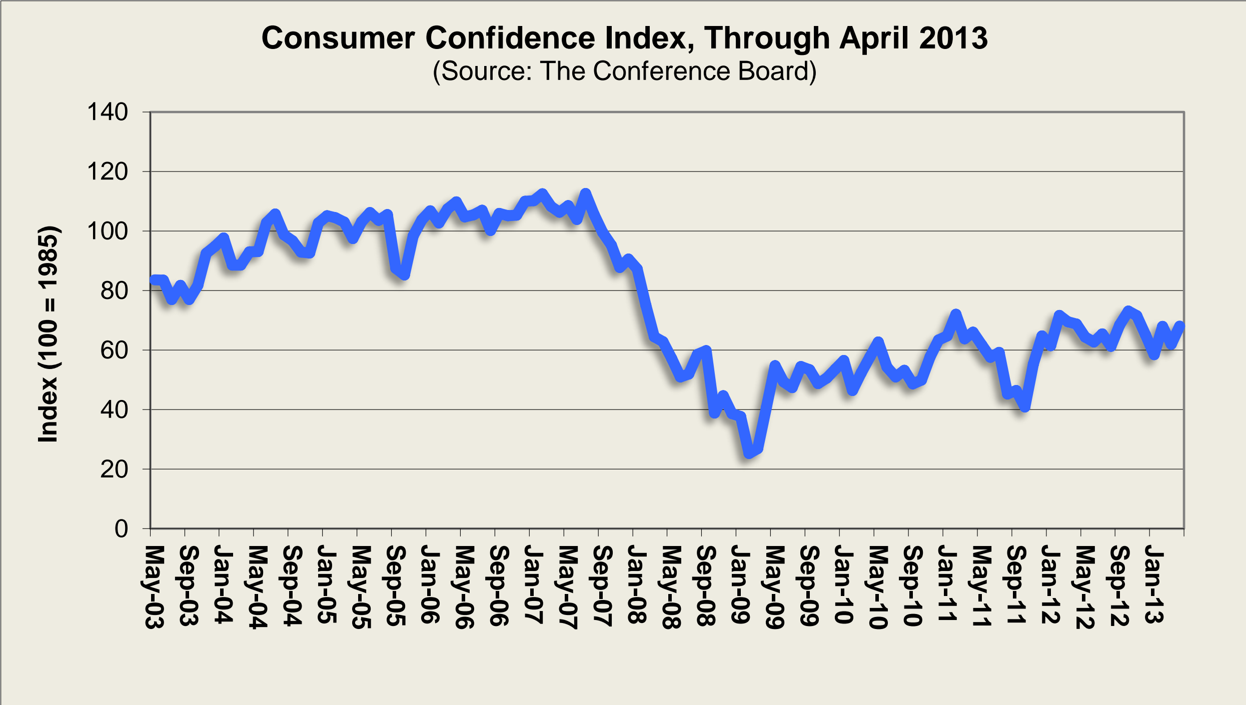
For the most part, developments in the U.S. and Vermont economies over the last six months reflect a strengthening private sector, which was helping the rest of the economy cope with increasing drag resulting from federal fiscal policy. Monetary policy has been helping—by lifting stock prices and housing prices—which has bolstered household wealth. This, in turn, has helped the household sector

cope with the FICA tax increase in January, the fiscal policy uncertainties at home, and the still developing economic (in Europe) and global security issues (e.g. Korea, Syria, and Iran) abroad. So far, the helpful boost from monetary policy has come without any real signs of asset bubbles in stock or housing prices that can sometimes follow a long period of low interest rate policy from monetary policy.

Earlier this year, the Administration and Congress were not able to avoid sequestration, which according to a recent estimate by Moody's Analytics is expected to take an estimated $85 billion in across-the-board spending cuts in federal fiscal year 2013 which ends next September. The sequestration cuts will result in a significant level of fiscal policy drag on the U.S. economy, reducing GDP growth by an estimated 0.5 percentage points and reducing nonfarm payroll job gains by an estimated 500,000 by this time next year—versus where each would have been without the sequestration cuts. Estimates are this drag will increase the U.S. unemployment rate by about ¼ of a percentage point by this time next year—again above where the U.S. unemployment rate would have been without the sequestration cuts.

According to Moody's Analytics, the above effects relating to sequestration come on top of an already significant amount of fiscal drag related to past policy measures. These measures include the fiscal cliff deal —which raised taxes by $200 billion in calendar year 2013 and will reduce GDP growth by an estimated 0.8 percentage points in calendar year 2013, and other congressional expenditure reduction decisions such as those related to the 2011 debt ceiling agreement and the reduction of Hurricane Sandy relief—which will reduce GDP growth by another 0.2 percentage points in calendar year 2013. In total, Moody's Analytics estimates these measures are expected to reduce GDP growth in the U.S economy by 1.5 percentage points overall during calendar year 2013. Overall, these measures are expected to exert the greatest amount of drag on the economy during the late Spring and Summer of 2013. Considering the lagged effects between budget authority and actual expenditures in the federal budget, at least some of the effects of federal sequestration will spill over into next federal and state fiscal years.

Given the above, it is likely that the pace of forward progress in the U.S. and Vermont economies will slow over the coming months—despite the very accommodative monetary policy posture by the Fed. Any slowdown of any appreciable magnitude will weigh heavily on the already fragile collective psyche of households, businesses, and investors, as evidenced by the Consumer Confidence Index (below). This will leave the current, still somewhat fragile pace of forward progress in the economy vulnerable to any one or a combination of adverse developments in the economy or in international politics either in Europe or among a plethora of hot spots-security threats around the globe (e.g. Syrian Civil War, the nuclear program in Iran, and the changeover in leadership in China).



While it sounds like a familiar refrain, the U.S. and Vermont economies should begin to strengthen by the end of calendar year 2013—if events of the next 6-9 months do not "upset the applecart." The private sector component of the economy is building strength, and consumer spending, business investment and now even housing will add to the economy this year. This will be more evident as the drags from fiscal policy and the struggling parts of the globe work themselves out. While the economy's performance over the past two years has clearly been sub-par, the memory of the "Great Recession" is fading. In the absence of a policy mistake domestically, a sudden and adverse development in the global economy and/or a global political meltdown, the shackles that have restrained the economy over the first part of the current recovery-expansion will be eventually shed. Then economic progress will once again begin to reflect a more normal pace and profile and the qualifiers that have hampered the current upturn will fade into memory.

The Vermont Situation:

Turning to the Vermont economy, the state has continued to make modest recovery progress over the past six months since the last NEEP outlook revision, despite the uncertainty regarding the fiscal cliff and other fiscal policy issues and the overall global economic slowdown—particularly in Europe and some parts of Asia. Through March, the state has recovered roughly 11,000 of the nearly 15,000 payroll jobs lost during the last economic downturn—a rate of recapture of 77.9%.[6] However, the character of the state's labor market recovery has been uneven, following what previous NEEP forecast revisions have referred to as a "saw-toothed" pattern. In each case, whether the state was on the upside or the downside of this uneven pattern, it was clear that economic conditions were not as positive (when on the upside of the pattern) or not as poor (when on the downside of the pattern) as the labor market reading was indicating.

[6] This compares favorably to the 66.1% re-capture rate for the New England regional Economy as a whole and the 71.0% job re-capture rate for the U.S. economy through April—or including one additional month relative to Vermont and New England.

The U.S economy gained 165,000 nonfarm jobs over the month of April, and the unemployment rate moved down slightly to 7.5%. Total private jobs increased by 176,000, while the public sector shed 11,000 jobs. The Professional and Business Services industry had the largest gain with 73,000 jobs.

When looking at the latest State data available from March 2013, employment gain performance for Vermont ranks the state 34th out of 50 states in total nonfarm employment change versus March 2012. Vermont gained 0.9% over the year, and was also ranked 35th nationally in year-over-year job change for total private sector payroll jobs, also with a 0.9% gain. Vermont's ranking was in the middle of the six New England states for both payroll job aggregates.[7]

Table 1: Year-Over-Year Job Change by State
Total Payroll Jobs (Mar 2012-Mar 2013)

Rank	State	
1	North Dakota	4.3%
2	Utah	4.0%
3	Texas	3.0%
4	Idaho	2.7%
5	Colorado	2.7%
11	Florida	1.9%
14	Minnesota	1.7%
19	South Carolina	1.3%
28	Massachusetts	1.0%
30	New Hampshire	1.0%
32	New York	0.9%
34	**Vermont**	**0.9%**
44	Rhode Island	0.2%
46	Connecticut	0.2%
47	Ohio	0.1%
48	Maine	0.1%
49	Pennsylvania	0.0%
50	Wyoming	-0.2%
Source: U.S. Department of Labor, BLS		

Table 2: Year-Over-Year Job Change by State
Private Sector Payroll Jobs (Mar 2012-Mar 2013)

Rank	State	% Change
1	North Dakota	5.2%
2	Utah	4.9%
3	Texas	3.5%
4	Idaho	3.2%
5	Colorado	3.0%
7	California	2.7%
14	Hawaii	2.1%
19	Mississippi	1.7%
24	New York	1.3%
26	New Hampshire	1.3%
32	Massachusetts	1.1%
35	**Vermont**	**0.9%**
43	Rhode Island	0.4%
46	Maine	0.4%
47	Connecticut	0.3%
48	West Virginia	0.1%
49	Pennsylvania	0.1%
50	Wyoming	-0.3%
Source: U.S. Department of Labor, BLS		

Using the most recent state employment statistics, on a year over year basis since March of 2012 Vermont has made considerably positive progress in the Education and Health Services sector, at +2.6%, as well as Trade, Transportations, and Utilities, at +1.3%, over the same time period. The state's Construction sector contracted by a strong -5.0%, ranking Vermont near the bottom of the New England and 45th in the 50 states in construction employment growth over the past year. One likely cause of this sector's contraction is the completion of many of the public infrastructure or building repairs related to Tropical Storm Irene, as workers are no longer needed following the large amount of repair work inherent in disaster relief for a storm of that magnitude. However, the 5.0% year-over-year job decline in the Construction sector was the only declining sector, although both the Information and Financial Activities subsectors experienced no change in employment levels over the past year. Despite an

[7] Note that the Table1 represents total nonfarm jobs and Table 2 represents private sector nonfarm payroll jobs.

expected continuation of Public Sector de-leveraging by way of Sequestration and other Federal Fiscal Policy - related layoffs, Government employment in Vermont has experienced a positive 0.7% change for the year ended March 2012.

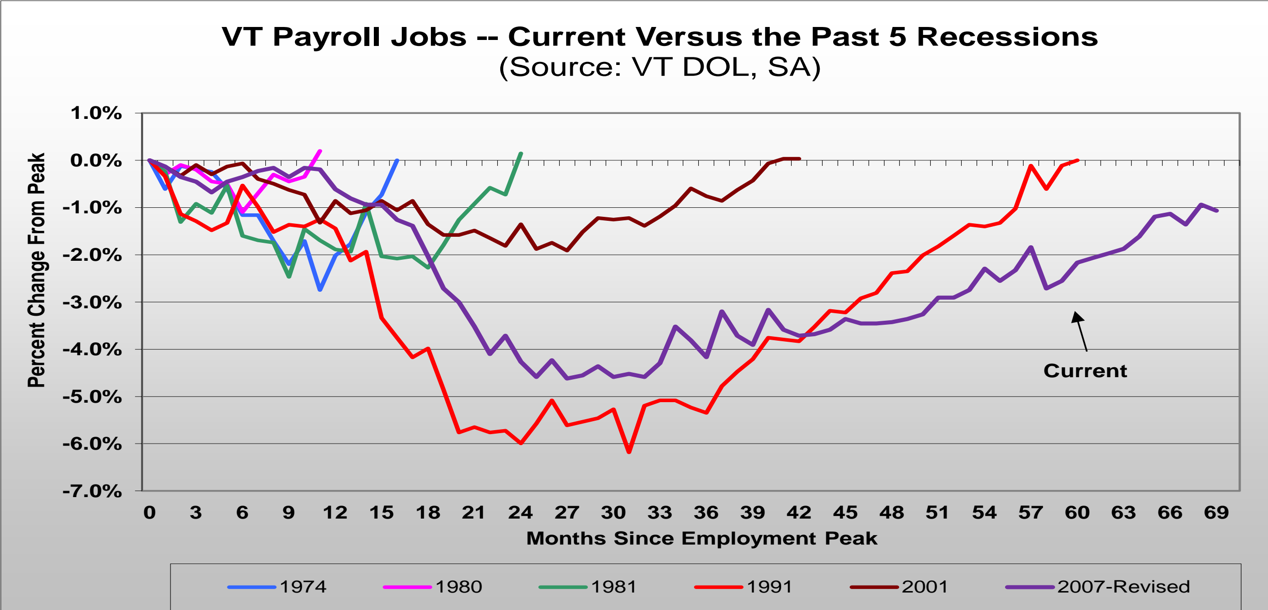
Relative to the other New England states by major sector, Vermont's year-over-year job change performance, Vermont's highest ranked performances are found in the Trade, Transportation, and Utilities (1st in New England and 24th nationally) and Government (1st in New England and 12th nationally). The State's lowest ranked performers are the Construction sector, ranked 43rd nationally (and 5th in New England) and in the Financial Activities sector (at 41st nationally and 5th in New England). Vermont also ranks 12th nationally and 2nd in New England in the Education and Health Services sector.

Table 3: Payroll Job Performance By NAICS Supersector March 2012 vs. March 2013

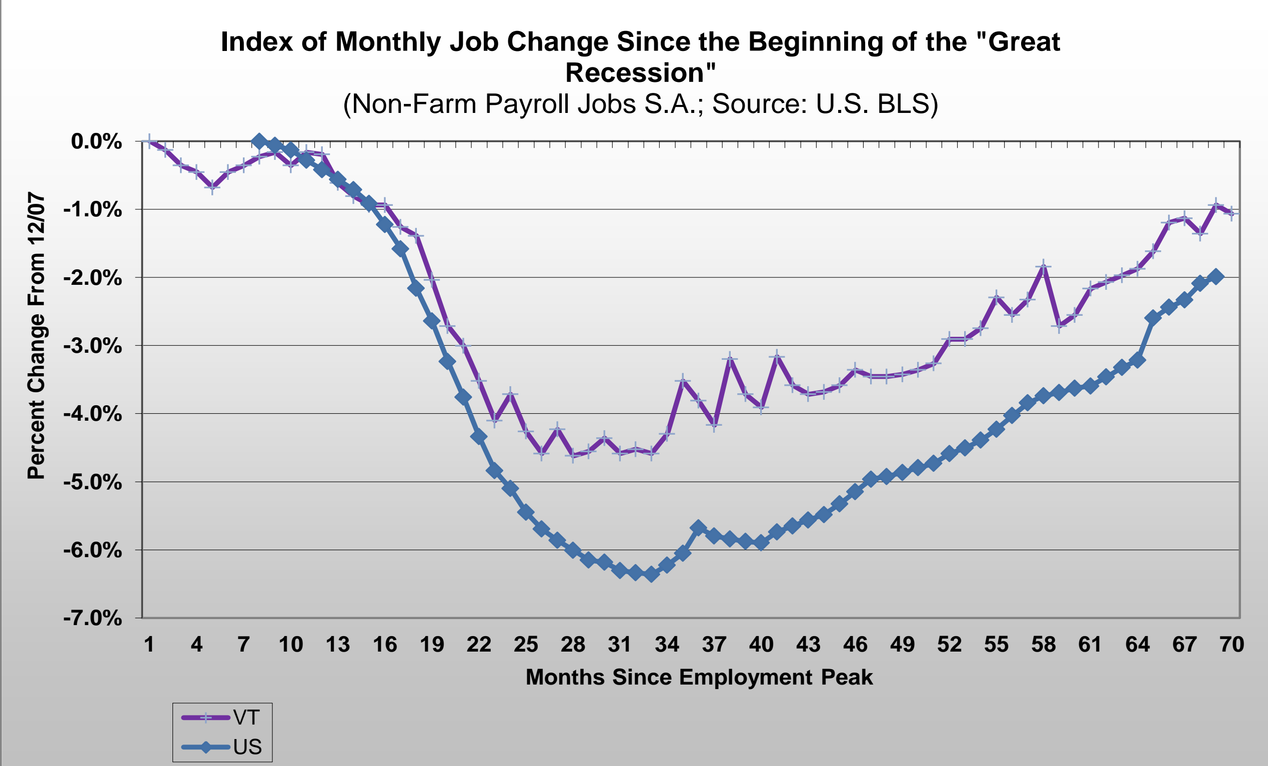
Industry Supersector	% Change in VT	VT Rank in New England	VT Rank in U.S.	Highest Ranked New England State	# of States Reporting Job Losses
Total Nonfarm	**0.9%**	**3rd**	**34**	**MA (28th)**	**1**
Total Private	**0.9%**	**3rd**	**35**	**NH (26th)**	**1**
Construction	-5.0%	5th	43	ME (14th)	19
Manufacturing	0.9%	2nd	24	RI (10th)	16
Information	0.0%	3rd	20	MA (11th)	29
Financial Activities	0.0%	3rd	41	RI (4th)	7
Trade, Transportation, Utilities	1.3%	1st	24	VT (24th)	9
Leisure and Hospitality	0.6%	5th	37	CT (10th)	8
Education and Health Services	2.6%	2nd	12	NH (10th)	1
Professional and Business Services	0.4%	5th	36	NH (8th)	6
Government	0.7%	1st	12	VT (12th)	28

Notes:
NAICS means North American Industry Classification System
Source: U.S. Bureau of Labor Statistics

The chart below highlights more recent developments and the increased volatility graphically through the month March for Vermont, comparing the level of payroll job loss and recovery versus the job count peak for the current and previous recessions. The chart shows that job market recoveries in recent recessions are generally growing in length, and it also shows quite vividly the unusual saw-toothed pattern to Vermont recovery with its recent upward tick (and the occasional downward falls in the recent months). The month of March registered a decline of roughly 400 jobs from February—another month to month blip. Through March, Vermont nonfarm employment remains approximately 1% below its peak, or 3,300 jobs—which is about ½ of the U.S. gap (from corresponding March 2013 statistics).

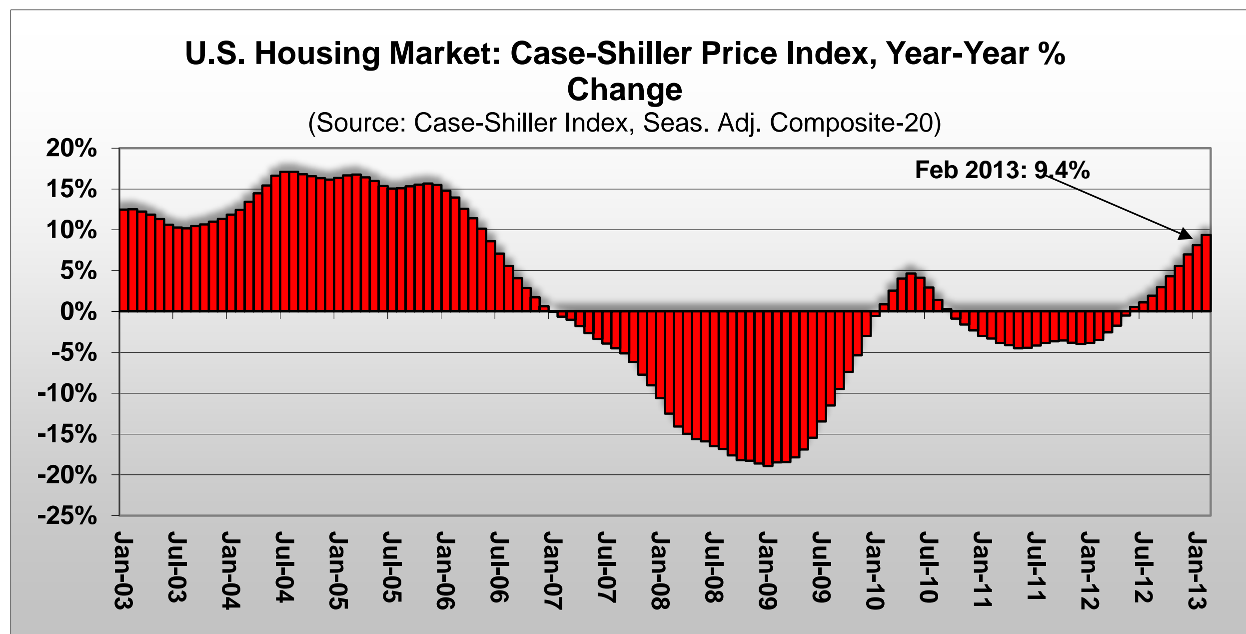


At the present time, the state's labor market recovery appears to be on the downside of this recurring "up and down" pattern. As a result, the state's comparative job change record has appeared to slip somewhat from its "up-side" position that Vermont occupied during the NEEP forecast revision last fall. Despite Vermont's saw-toothed employment growth over the past 40 months, employment gains continue to outpace US job recovery since the beginning of the Great Recession.



On the housing front, signs of a housing market turnaround continued as the Case-Shiller Housing Price Index rose 9.4% compared to a year ago. This marks the ninth consecutive monthly year-over-year increase registered by this key indicator of housing prices, beginning in June 2012. Some of this sizeable

price increase is due to a strong cyclical correction in some of the harder hit metro areas which saw nearly 50% price declines.



Moody's Analytics National Economic Forecast Assumptions: The economic outlook for Vermont for the calendar year 2013–18 period is based on a comprehensive national economic outlook assembled by Moody's Analytics, a respected national economic forecasting firm. Moody's Analytics is the supplier of the background U.S. macro forecast which services as the background, starting baseline forecast for the individual New England states that participate in the NEEP outlook forecast. The statistics in this NEEP forecast update reflect the underlying Moody's Analytics national economic forecast for the March 2013. This forecast includes a significant amount of restraint on national economic growth through mid-calendar year 2013, resulting primarily from fiscal policy developments related to sequestration (which reflects reduced Federal spending). Fiscal policy decisions in Washington DC are estimated by Moody's to have subtracted 1.1% from 2013's annual GDP growth. Overall, the forecast calls for a moderate, but still historically restrained pace of output growth for the U.S. economy during the rest of calendar year 2013, averaging 2.0%, and a more robust calendar year 2014, expected to average 3.8% GDP growth. The baseline growth rate for Gross Domestic Product (GDP) across the calendar year 2015–17 forecast period include 4.4% for calendar year 2015, 3.6% for calendar year 2016, slowing to a 2.9% rate of growth for calendar year 2017.

The Moody's Analytics national outlook for U.S. labor Markets calls for an annual average increase in payroll jobs of 1.3% in calendar year 2013 and a continuation of high U.S. unemployment rate expected to average 7.7%. The national forecast also expects only a modest rate of payroll job additions in calendar year 2014 of 1.8%, rising to 2.6% for calendar year 2015 as the U.S. economy builds some momentum and fiscal policy begins to normalize. Following its peak in CY 2015, employment growth will roll back slightly in CY 2016 to a 2.3% rate of growth, and is expected to fall further to 1.4% in 2017. The national rate of unemployment is expected to decrease steadily throughout calendar years 2013–2015, achieving 5.8% over the course of 2016, a rate which has not been achieved since the beginning of the Great Recession in 2008.

Consumer prices, as measured by the Consumer Price Index (CPI), are expected in this forecast to increase by 1.9% in calendar year 2013, increasing to a 2.1% rate of inflation for both calendar year

2014. Consumer prices are expected to continue to inflate at a rate above 2.0% for the remainder of the forecast horizon, increasing at 2.4% for calendar year 2015 and 2.3% in 2016, with the forecast horizon ending at 2.2% inflation by 2017. The Moody's Analytics forecast for monetary policy takes into account the Fed's stated expectations, which call for a tightening after calendar year 2015 when the National Unemployment Rate is expected to be 6.5%.

The Moody's Analytics forecast includes an outlook for global prices for West Texas Intermediate Crude Oil near $90, not exceeding $100 through the forecast horizon. Brent Crude Oil prices are expected to be slightly higher, trading at $110 for the forecasted period. The West Texas Intermediate Crude Oil price is an important benchmark price for a key commodity that is expected to have a significant cost-push effect on the general inflation rate. Brent Crude is a more important benchmark for European energy, but since the baseline NEEP forecast for this spring weighs European risk heavily this commodity's price is significant in this forecast.

The key risks to the Moody's Analytics five-year outlook include uncertainty regarding fiscal policy, primarily how Sequestration will influence employment and output in the next 9-18 months, the improving, but still weak condition of national housing markets, the seemingly never-ending sovereign debt, banking, and currency crisis in Europe, and international political stability regarding US relations with the Middle East and East Asia. In addition, this past recession was unique in that it was a synchronized global downturn and involved an unprecedented level of banking, private sector, and now public sector financial de-leveraging—particularly that Federal employment which was affected by Sequestration.

In light of these risks, the short-term and longer-term economic forecast calls for a below trend rate of output and income growth and similarly below trend rate of labor market recovery for an extended period—at least until the lingering effects of the persistent European financial crises work through their adjustment processes and sequestration runs its course. Of all the risks, the expectation of a rational policy outcome on the U.S. fiscal policy front (even considering the situation in Europe) is perhaps the largest risk (see below) and is perhaps the single largest factor that will be impacting the near-term performance of the U.S. economy for the rest of calendar year 2013 and into the beginning of 2014.

The Vermont Economic Outlook:

The Vermont near-term economic outlook, which is based on the Moody's Analytics, Inc. national "Control" forecast as described above, includes a Vermont economy that will follow a similar path to the U.S. economy's progression throughout the calendar year 2013-17 period. Looking at the major macro variables, the updated forecast calls for the current state economic upturn to proceed along a modest recovery/expansion path for real output (as measured by Gross State Product or GSP), for inflation-adjusted or real personal income, and for its labor market recovery. This restrained rate of recovery in Vermont is an artifact of the less than average rate of output, income, and job decline for the Vermont economy during the "Great Recession" relative to its U.S. and New England counterparts.

For the most part, the continuing Vermont economic upswing is expected to be fueled by a revival in the pace of progress in the global economy.[8] This reflects good niche market positioning by major Vermont firms to take advantage of that growth, a return to more normally functioning financial markets, the expected firming in Vermont's residential and second home markets, and the continuation of business activity at key employers in the state like IBM, Green Mountain Coffee Roasters, Fletcher Allen Health Care, and others. However, the revised NEEP outlook also reports a modest downgrade in the overall economic forecast for the period relative to the NEEP forecast update published last May. The slight

[8] This includes the avoidance of an actual economic-financial implosion in Europe.

forecast downgrade includes: (1) yet another 9 to 12 months of stunted growth due to fiscal policy decisions from Washington (2) a mid-forecast (2015 and 2016) spike in major macro indicators, propelling the economy to what might be thought of as "normalized" growth patterns before returning to the protracted pace of progress we've recently become accustomed to for the final year of the forecast horizon.

In terms of Vermont's key economic variables, the NEEP forecast update for Vermont expects an annualized 1.9% increase in output through the remainder of calendar year 2013. Calendar year 2014's output is then expected to follow a more normal 3.6% annual rate of increase, subsequently leading to a 4.4% rate of growth for calendar year 2015. For calendar year 2016, GSP growth is expected to pull back slightly, reaching 3.2%, while GSP growth in 2017 is expected to be further restrained to 2.7%, as the economy slows in the final year of the five year forecast time horizon. The rate of payroll job growth is expected to be 0.8% in calendar year 2013—followed by increases of 1.3% in calendar year 2014 and 2.3% in calendar year 2015. The rate of payroll job increase is expected to creep back to 1.9% in calendar year 2016, before tailing off to a 1.2% rate in calendar year 2017.

Nominal dollar personal income is expected to post a performance similar to GSP and employment growth, ballooning in the initial years of the forecast horizon then tapering off to a more restrained level of growth. For the remainder of calendar year 2013, nominal dollar personal income is expected to increase by 0.4%, followed by increases of 1.5% in calendar year 2014, with Personal Income growth peaking in 2015 at 2.3%. The final two years of the forecast horizon show this metric steadily declining, at 1.8% in 2016 and 0.6% in 2017. The state's unemployment rate is expected to continue to perform consistently superior to US Unemployment rates throughout the CY 2013–17 forecast timeline. The Vermont FHFA Housing Price Index is also expected to post a more modest and restrained rate of increase in this forecast timeline than in previous analyses, reflecting the anticipated summer slowdown and the resulting effect on employment and personal wealth.

The sector-by-sector breakdown shows that all major job categories except the Governmental Sectors[9] will be adding jobs over the calendar year 2013-17 forecast update period. Among the sectors contributing significantly to Vermont's economic and labor market growth-recovery during the forecast period are: the Construction sector (at an average 5.0% per year over the calendar year 2013-17 period), the Leisure and Hospitality Services sector (at an average 3.1% per year over the calendar year 2013-17 period), and the Professional and Business Services sector (at an average 2.4% per year over the calendar year 2013-17 period). The best performer in the forecast, the Construction sector, is expected to end 2013 averaging 1.7% annually. Employment in this sector is then expected to grow at a significantly higher pace of 7.2%, 8.4%, 5.4%, and 3.7% through the remainder of, the forecast horizon in 2014, 2015, 2016, and 2017, respectively.

Manufacturing sector employment is expected to show a modest overall increase, averaging 0.8% change over the forecast timeline—assuming no major employer hiccups in this sector[10]. Initial and near-term employment growth in the sector begins with 2013's average of 1.6%. 2014 and 2015 is expected to experience average yearly employment growth of 0.4% and 1.3% respectively. In 2016,

[9] Meaning all private Sector industry groups are expected to add jobs over the forecast period.

[10] As this forecast goes to press, the IBM layoff rumor mill is again in "high gear." This lay off concern in Vermont revolves around public statements by IBM management following what was described as disappointing first quarter of 2013 profit results indicating that the company would take a $1.0 billion write off this year for "resource balancing," which in the past has indicated some layoffs. IBM executives also indicated that the majority of the company's resource balancing would occur during the April to June quarter of this calendar year—whereas last year this resource balancing occurred over all four quarters and was not concentrated as appears to be the case this year.

employment in Manufacturing will increase by 1.0%, followed by 2017's annual average growth of 0.0%, neither growing nor contracting in the final year of the forecast timeline. The most significant growth within the Manufacturing sector is expected to occur in Food and Beverage Manufacturing, averaging 3.5% job growth in the calendar 2013-2017 forecast. However, the negative pressure restraining the overall Manufacturing sector forecast for job growth comes from anticipated employment contractions in Furniture and Miscellaneous Manufacturing and Metals and Mining-based Manufacturing, each experiencing an employment contraction of -0.1% and -0.2%, respectively.

Although the state's economic performance is expected to be moderately positive over the calendar year 2012 to 2016 period, the updated December 2012 NEEP forecast for Vermont also expects that labor market conditions will remain "tight" throughout the state and there will be a modest recovery in housing prices in the Vermont housing market—reflecting the long slow boat to recovery in the aftermath of the prolonged, deep housing market recession. The state's annual average unemployment rate is expected to fall through the forecast period, registering a 4.7% annual rate for calendar year 2013, a 4.3% annual average in calendar year 2014—followed by a decline to a 3.9% annual average in calendar year 2015, to a 3.6% annual average in calendar year 2016, and rounding out the forecast period with a projected 3.4% annual average unemployment rate in calendar year 2017 for the State of Vermont. This forecast, if achieved, would result in a Vermont unemployment rate at the end of calendar year 2017 being a full 2.0 percentage points below the U.S. unemployment rate and 1.4 percentage points below the New England average unemployment rate at that time.

Turning to the state's housing market recovery, the May 2013 revised NEEP forecast for Vermont expects there will be improvement in sales and construction activity in the Vermont housing market, but these improvements will occur very slowly. According to the FHFA Price Index, the prices in Vermont reached the anticipated turning point in the 3rd Quarter of calendar year 2012, when the index began to report a sustained increase in value. Having reached a "bottom" in the market, housing prices are expected to continue recovering, with more consistently positive movement. This forecast update calls for prices to realize a schedule of annual increases: 1.2% increase in calendar year 2013, 1.7% increase in calendar year 2014, 2.0% increase in calendar year 2015, 3.3% increase in calendar year 2016, and a 3.6% increase in calendar year 2017, closing the forecasted horizon. While the Vermont housing price performance has been decidedly superior to the U.S. and New England averages over the calendar year 2007 to calendar year 2012 time frame, the more restrained housing price growth in Vermont over the calendar year 2013 through 2017 time frame is expected given the fact that Vermont housing prices as measured by the Federal Housing Finance Agency index did not experience nearly the rate of housing price decline that was experienced in many other states and relative to the New England and U.S. averages during the deep recession in the housing market.[11]

Near-term economic prospects and the pace of economic recovery in Vermont will also likely continue to be affected by the lingering effects of Tropical Storm Irene. This storm, which hit the state at the end of August 2011, resulted in heavy rains and record flooding, and caused significant destruction throughout the state. The widespread flooding cause by this storm was the second greatest natural disaster in the 20th and 21st centuries (the largest being the November 1927 Flood) for Vermont.

Most of the recovery and disaster relief activities which mitigated the effects of infrastructural and property damage have been complete for months. As a result, the positive economic impact of this repair effort has already been distributed throughout the Vermont economy. However, the reconstruction of the Waterbury State Office Complex in Waterbury, VT, which was destroyed by the flooding cause by the storm, has yet to begin. On May 8, 2013, Vermont was "verbally cleared" by

[11] Moreover, it is highly questionable that other markets will experience as sharp a bounce-back as is expected in the forecast—given the still very tight lending practices for housing in the market place.

FEMA to begin demolishing and rebuilding the Waterbury complex. The new office complex will be built on the same site and will ultimately cost $125 million. However, what remains to be seen is how much of the requested reimbursement the state will receive from any FEMA payments, and, how much of the ultimate bill for Irene recovery, claimed by both the State and individual Vermont residents who experienced damage to homes and businesses, will be covered by the Federal Government. However, like disaster recovery experience elsewhere, it is likely that the economic impacts associated with the recovery from Tropical Storm Irene have in fact been slightly positive due to the influx of out-of-state relief workers, the effect of which appears to mimic increased tourism.

Looking at the major macro variables for revised December 2012 NEEP Outlook for Vermont, Table 2 (below) presents the comparative major macro variables for the U.S. economy, the New England regional economy, and the Vermont economy. From the table, the forecast is consistent with the labor market and personal income growth experience of the state during the early 2000s, where the Vermont economy underwent a generally milder economic downturn during the period relative to both the U.S. and the New England region as a whole. The state's rate of job recovery and income recovery/growth performance following the 2001 downturn was slightly below the U.S. average, which continued during the mid-2000s and into the later stages of the economic upturn during that period. However, despite its labor markets peaking earlier than the U.S. and New England economies leading into the "Great Recession," the state's non-farm payroll jobs fell at a slower pace and declined less deeply than either New England or the U.S. on average during the most recent deep and prolonged period of economic recession.

The forecasted payroll job gains would have Vermont's total nonfarm employment back at its peak level (last achieved in June 2007) during the fourth quarter of calendar year 2013. For calendar year 2013, Vermont is forecast to see inflation-adjusted output and Personal Income rebound, following the recovery patterns of New England and the US as a whole. Payroll Jobs in Vermont will grow a pace in between the rest of New England and the US. The state's unemployment rate, in contrast, continually stays lower than both the U.S. and New England averages, tracking down from the 6.9% annual average peak in calendar year 2009 to a 3.4% annual average level forecasted for calendar year 2017. The housing market, as evidenced by the FHFA housing price index, is expected to post a more moderate performance in Vermont relative to the rest of the United States and New England, reflecting the more moderate level of price declines experienced in Vermont over the calendar year 2007-12 time frame and the more modest rate of recovery that typically accompany housing price turnarounds in constrained lending environments—which is generally expected to be the case during the five year forecast time frame.

Table 2: Forecast Comparison: U.S., New England, and Vermont.

	Actual					Forecast				
	2008	2009	2010	2011 [2]	2012 [2]	2013	2014	2015	2016	2017
Real Output ($2000-% Change)										
U.S. Gross Domestic Product	-0.3	-3.1	2.4	1.8	2.2	2.0	3.8	4.4	3.6	2.9
N.E. Gross Domestic Product	-0.8	-3.2	3.5	1.8	1.9	2.2	3.4	4.2	3.5	2.8
Vermont Gross State Product	-0.2	-3.5	4.1	0.5	1.8	1.9	3.6	4.4	3.2	2.7
Non-Farm Payroll Jobs (% Change)										
U.S.	-0.6	-4.4	-0.7	1.2	1.7	1.3	1.8	2.6	2.3	1.4
New England	0.0	-3.6	-0.2	1.0	1.1	0.8	1.1	2.0	1.8	1.1
Vermont	-0.4	-3.3	0.2	0.7	1.2	0.8	1.3	2.3	1.9	1.2
Inflation-Adjusted Personal Income										
%Change (2000 Dollars)										
U.S.	1.3	0.2	-0.3	-1.8	-0.8	-0.1	1.2	2.0	1.2	0.8
New England	0.3	-4.4	2.0	2.3	1.1	1.1	4.0	4.6	4.1	2.9
Vermont	1.1	-2.2	1.4	2.2	2.3	0.4	1.5	2.3	1.8	0.6
Unemployment (Percent)										
U.S.	5.8	9.3	9.6	8.9	8.1	7.7	7.0	6.2	5.8	5.4
New England	5.4	8.1	8.5	7.8	7.2	6.8	6.2	5.8	5.4	5.1
Vermont	4.6	6.9	6.4	5.6	5.0	4.7	4.3	3.9	3.6	3.4
FHFA Housing Price Index [3]										
U.S.	-4.7	-5.2	-3.8	-3.6	-0.2	1.3	4.3	4.7	2.8	1.8
New England	-4.1	-4.8	-2.6	-2.2	-0.9	0.0	2.9	3.9	4.5	4.5
Vermont	0.0	-1.9	-1.0	-0.5	0.5	1.2	1.7	2.0	3.3	3.6

Notes:
[1] U.S. data reflect the Moody's Analytics Baseline Forecast for March 2013.
[2] 2011 and 2012 variables are subject to further revision, and 2013 through 2017 values in this table reflect projected data as of March 2013.
[3] FHFA refers to the Federal Housing Finance Agency (formerly the Office of Federal Housing and Enterprise Oversight).

Sources: Moody's Analytics (U.S.), New England Economic Partnership Forecast May 2013 Update (U.S., New England, Vermont)

Conference Theme: Manufacturing is Changing: Is New England Ready?

The conference theme of this NEEP outlook update involves the changing outlook for the manufacturing sector in each New England state and whether or not New England is prepared to effectively respond to the recent and on-going shifts that are underway in this important good-producing sector in all of our states. Put simply, are our respective states prepared to meet the challenges and opportunities that this sector offers to the economy over the next five years and beyond?

Before delving into that question, it is important to understand the current environment impacting manufacturing's prospects and the relative importance of manufacturing to the state economy. Regarding the former in Vermont, even though there are lingering challenges which may limit a significant rise in manufacturing activity and jobs over the near-term, the long-term outlook for manufacturing has recently taken on a brighter tone. Buoyed by the weak U.S. dollar (which has boosted export activity) and buoyed by successful product differentiation in the marketplace associated with the Vermont Brand, Vermont manufacturing has recently come off the bottom and now appears to have recently been staging a bit of a comeback. Barring any significant, negative layoffs or business setbacks at key Vermont manufacturers like IBM (see above), Green Mountain Coffee Roasters, and any of the state's key resource processing firms like Ethan Allen, the brighter hue of the manufacturing sector's outlook comes as a welcome development after years of struggle in this key good producing sector in the Vermont economy.

Recent job data support this view, with seasonally adjusted payroll jobs in manufacturing has recently come off the bottom through March of 2013 by a total of 2,200 jobs or by 7.3% of its February 2010 cyclical low. However, there is a bit of a contrast between the Durable Goods aggregate and the Nondurable Goods category—with a significantly brighter recent performance in the Nondurables category (at 1,700 payroll jobs added through March 2013 since the most recent February 2010 cyclical low) and a relatively flat but still positive turnaround of 600 jobs or +2.8% "off the bottom" payroll job gain through March 2013 in the Durable Goods category from its most recent cyclical low registered in January 2010 .

Regarding the second issue relating to the importance of manufacturing, there is no doubt that manufacturing is a vitally important contributor to the overall health and performance of the Vermont economy. Using 2011 annual average data (the latest year as of this writing where both employment and earnings data are available from the Bureau of Economic Analysis), manufacturing accounted for 9.8% of the jobs and 12.0% of the earnings. The Manufacturing sector was the 2nd largest private sector NAICS supersector in terms of earnings by industry—second only to the rapidly rising Heath Care and Social Services supersector. The Vermont manufacturing sector also was a significant contributor to earnings growth during calendar year 2012, contributing nearly a quarter (24.2%) of the total earnings growth in the state last calendar year, while again representing only about 10% of the job base.[12]

The Vermont manufacturing sector also is highly integrated into the fabric of the Vermont economy—with strong supply chain linkages and strong induced job effects as generally higher paid factory workers spend their pay and generate indirect jobs throughout the Vermont economy. The table below demonstrates the indirect job impacts and five year cumulative output, disposable income, and household earnings effects of adding (or losing) 100 manufacturing jobs by selected 3-digit NAICS sectors in the Vermont economy. The table shows that among these selected 11 manufacturing sectors, indirect jobs impacts range from a low of 60 jobs in the Furniture sector (NAICS 337) to a high of 178 in the Beverage and TobaccoManufacturing sector (NAICS 312). Output impacts among these 11 selected factory sectors are highest in the Computer and Electronic Machinery Manufacturing sector (NAICS 334), while five year cumulative disposable personal income and household earnings impacts are highest in the Beverage and Tobacco Products Manufacturing (NAICS 312). Given the outsized contribution that manufacturing provides in terms of jobs, output and income, the NEEP conference theme is "on-point" as the State of Vermont looks to both its short-term and long-term economic future.

[12] Calendar year 2012 job count data from the Bureau of Economic Analysis of the U.S. Department of Commerce was not available as of the time of this writing.

Table 3: Five Year State Impacts of a 100 Job Change in Key Manufacturing Sectors in Vermont[1]

Manufacturing Sector	NAICS Category	Indirect or Induced Jobs [2]	Gross State Product	Disposable Income	Household Earnings
Selected Durable Goods Sectors:					
Wood Products	321	205	$ 195,017.5	$ 58,481.6	$ 49,886.4
Fabricated Metal Products	332	183	$ 157,946.3	$ 64,703.3	$ 55,193.7
Machinery Manufacturing	333	195	$ 180,622.3	$ 72,170.3	$ 61,563.2
Computer Electronics	334	224	$ 308,748.5	$ 93,298.1	$ 79,585.8
Transportation Equipment	336	235	$ 289,110.5	$ 89,652.5	$ 76,476.1
Furniture	337	160	$ 108,477.4	$ 42,376.4	$ 36,148.2
Selected Nondurable Goods Sectors:					
Food	311	229	$ 357,281.5	$ 68,334.1	$ 58,290.9
Beverage & Tobacco	312	278	$ 541,506.4	$ 100,604.6	$ 85,818.5
Apparel Manufacturing	315	170	$ 196,523.1	$ 42,623.2	$ 36,358.8
Paper Products	322	262	$ 408,218.9	$ 93,633.8	$ 79,872.2
Plastics & Rubber	326	188	$ 190,128.3	$ 61,539.4	$ 52,494.8

Notes:
[1] All dollar values are presented in Thousands of dollars, in nominal 2013 dollars
[2] Reflects average annual job impact over 5 years.

Prepared By: Economic & Policy Resources, Inc.

Understanding the needs of a state manufacturing base that produces a broad range of products from semiconductor chips and pharmaceuticals to furniture, machine tools, cheese and beer can be daunting—even in the state of Vermont which is not known for its factory base's diversity. Further, understanding just what the common needs are for makers of the above referenced projects is not always straight-forward or clear.

For the most part, what is needed for the state's factory sector to succeed in the future involves an understanding of the following: (1) a recognition of the dynamic globally competitive environment that manufacturing finds itself in today—including what challenges and opportunities that implies for the future, (2) what factors have enabled Vermont manufacturer's to succeed in the past, and (3) how these factors will evolve and interact in an iterative way over both the near-term and long-term future. While there are no "silver bullets" to a successful future in manufacturing in Vermont, there are concrete steps that can be taken that also do not involve "rocket science."

Regarding item (1) above, the world continues to become more integrated economically and the State has become far less insulated from national and global economic events. Today, manufacturers in Vermont increasingly compete with companies in previously faraway places like China, Korea, Brazil, and a whole host of heretofore places that were not imaginable just 20 years ago. State manufacturers compete head-on in this global arena, while at the same time many of the operating expenses they pay that are part of their cost structure are determined by state, regional and local factors and policies that often involves policies that are developed without the full recognition of this important competitive dynamic that affects this key good producing sector of the State economy. Lastly in this area, technological innovation is advancing more rapidly each year, and the increasingly rapid pace of change has and continues to transform the operating environment of virtually all manufacturers in the State. This is compelling successful manufacturers in Vermont to use their work forces and investments to "accomplish more with less." The ability to continue to continue to increase productivity of labor and

capital is vital to the success of the State's factory base. This will be particularly challenging as the State's population and work force continues to age. As the "baby-boom" generation reaches what has historically been a "retirement age," a reasonable question to contemplate is just where are the future workers in the State's factories going to come from?

Regarding item (2) above, it is no secret that the State of Vermont—indeed the entire New England region—is not exactly the lowest cost place in the union in which to conduct business (see the chart below). Located in the upper left hand corner of the country, geography says that Vermont's lack of geographic proximity to many key national consumer markets means that manufacturers in Vermont and in her sister states in New England are never going to be able to compete as the "absolute lowest cost provider" for goods and services at any time for the foreseeable future. Instead, the State's factories need to compete in ways that where "lowest price" is not the key deciding factor for the prospective goods purchase.

Comparative Unit Labor Costs (100=U.S. Average)

A list of the essential characteristics of a successful Vermont manufacturer would include the following in Vermont:

1. The firm produces high value-added products,

2. The firm achieves high levels labor productivity through specialized and innovative applications of technology or knowledge to the production process,

3. The firm maintains a continuous capital investment program aimed at improvement of productive capacity and efficiency,

4. The firm utilizes the State's natural resource endowment to gain competitive advantage and/or to attract-maintain skilled workers.

From the standpoint of public policy, combining the environmental factors impacting the task of strategic economic development with the key attributes of a successful Vermont manufacturer, there are at least three principal areas of focus that will help prepare State manufacturers to compete in the future. The first involves the provision of the necessary public infrastructure that allows the state's factories to effectively compete in the global market place. This principally includes the provision of access to good roads, bridges, rail, and air transportation links and access to a state-of-the-art telecommunications system that allows for the efficient and timely movement of people, things and information in today's increasingly competitive global economy.

The second involves providing customized educational and training needed to allow Vermont's manufacturers to effectively compete with lower cost production facilities in faraway places. This likely involves forging additional strategic partnerships between employers, economic development organizations, and grades K-12 education providers, and post-secondary educational institutions and providers that would be designed to help assure that the State's manufacturers have access to the type of educated and trained work force needed for today's cut-throat competition in the global market place.

Thirdly, policy on all levels—including federal, State, regional and local—needs to be mindful of the broader, global view of the implications of both existing and future policy. This sensitivity involves both the cost of those policies as well as the other broader objectives. Good public policy inevitably means balancing the objectives with the implications and cost burdens of the taxpayers that support them. Policymakers that ignore the globally competitive implications of current and future policies for manufacturers are "at risk" of undermining a vibrant and high-paying manufacturing sector that would otherwise be an important fiscal supporter of the very social and environmental safety net initiatives policymakers are seeking to implement.

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APPENDIX F

APPENDIX F- DETAILED CALCULATIONS FOR DEBT PER CAPITA STATE GUIDELINE

Triple-A Rated States	Moody's Ratings	S&P Ratings	Fitch Ratings	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
Alaska	Aaa/Stable	AAA/Stable	AAA/Stable									1,257	1,454	1,251	
Delaware	Aaa/Stable	AAA/Stable	AAA/Stable	1,599	1,800	1,865	1,845	1,998	2,002	2,128	2,489	2,676	2,674	2,536	
Florida	Aa1/Stable	AAA/Stable	AAA/Negative				976	1,020	1,005	1,115	1,123	1,150	1,167	1,087	
Georgia	Aaa/Stable	AAA/Stable	AAA/Stable	802	827	803	784	916	954	984	1,120	1,103	1,099	1,061	
Indiana	Aaa/Stable	AAA/Stable	AAA/Stable						478	482	492	471	446	424	
Iowa	Aaa/Stable	AAA/Stable	AAA/Stable							79	73	270	310	287	
Maryland	Aaa/Stable	AAA/Stable	AAA/Stable	977	1,077	1,064	1,169	1,171	1,297	1,507	1,608	1,681	1,742	1,799	
Minnesota	Aa1/Negative	AA+/Stable	AA+/Stable	625	691	679	746	827	879	866	1,037	1,159			
Missouri	Aaa/Stable	AAA/Stable	AAA/Stable	368	461	449	496	613	675	670	780	775	741	699	
Nebraska	NR/Stable	AAA/Stable	Not Rated									13	15	14	
New Mexico	Aaa/Stable	AA+/Stable	Not Rated								1,398	1,827	1,406	1,316	
No. Carolina	Aaa/Stable	AAA/Stable	AAA/Stable	429	556	682	804	728	898	832	765	782	815	853	
So. Carolina	Aaa/Stable	AA+/Stable	AAA/Stable	587	599	558	661	630	966	899	917	887	827	780	
Tennessee	Aaa/Stable	AA+/Positive	AAA/Stable								318	345	343	343	
Texas	Aaa/Stable	AA+/Stable	AAA/Stable								520	612	588	580	
Utah	Aaa/Stable	AAA/Stable	AAA/Stable	682	846	792	707	621	542	447	957	1,222	1,393	1,275	
Virginia	Aaa/Stable	AAA/Stable	AAA/Stable	546	546	589	601	692	764	782	895	1,058	1,169	1,315	
Wyoming	Not Rated	AAA/Stable	Not Rated									71	64	59	
															5-Year Average of Mean/Medians
Mean				735	823	831	879	922	951	**899**	**966**	**964**	**956**	**922**	942
Median				625	691	682	765	778	898	**849**	**917**	**973**	**827**	**853**	**884**
Vermont	Aaa/Stable	AA+/Positive	AAA/Stable	861	724	716	707	706	707	**692**	**709**	**747**	**792**	**811**	750
															10-Year Average of Growth Rates
Annual Growth Rate of Mean					11.9%	1.1%	5.7%	4.9%	3.2%	-5.4%	7.4%	-0.2%	-0.9%	-3.5%	2.42%
Annual Growth Rate of Median					10.6%	-1.3%	12.2%	1.6%	15.5%	-5.5%	8.0%	6.1%	-15.0%	3.1%	**3.53%**

APPENDIX G

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Feasibility Study Associated With State of Vermont Special Obligation Transportation Infrastructure Bonds - 2013 Series A

Prepared for the
Office of the Vermont State Treasurer
Elizabeth A. Pearce, Treasurer

July 23, 2013

Feasibility Study Associated With State of Vermont Special Obligation Transportation Infrastructure Bonds 2013 Series A

Prepared by Kavet, Rockler & Associates, LLC – July 23, 2013

1) Background and Study Purpose

The purpose of this analysis is to evaluate the likely future revenue streams, relative to expected debt service and other bond-related costs, associated with (i) the $11.095 million[1] State of Vermont Special Obligation Transportation Infrastructure Bonds, 2013 Series A (hereafter, 2013A TIBs), as authorized in Vermont Statute, Title 32, Chapter 13, 32 V.S.A. § 972 (hereafter, the TIB Statute), and (ii) the previously issued State of Vermont Special Obligation Transportation Infrastructure Bonds, 2010 Series A (hereafter, 2010A TIBs) and 2012 Series A (hereafter, 2012A TIBs), which are currently outstanding in the amount of $12.675 million and $10.415 million, respectively, for a combined bonding amount totaling $34.185 million.[2]

The TIB Statute authorizes the State Treasurer to issue bonds supported by certain revenues as detailed below for transportation projects in the State of Vermont (the "State") that include the rehabilitation, reconstruction or replacement of State and municipal bridges and culverts and State roads, railroads, airports and necessary buildings, which, after such work, have a remaining useful life of 30 years or more.

The Transportation Infrastructure Bond Fund (hereafter, the TIB Fund) was created as a special account of the State's Transportation Fund pursuant to Vermont Statute, Title 19, Section 11f. Monies in the TIB Fund are available to pay principal, interest and related costs of bonds issued pursuant to the TIB Statute (Transportation Infrastructure Bonds, hereafter, TIBs), including the 2013A TIBs, the 2012A TIBs and the 2010A TIBs.

The TIB Fund contains revenues derived from an assessment of 2% of the retail price per gallon of regular motor vehicle gasoline sold in the State and a 3 cent per gallon assessment on motor vehicle diesel fuel sold in the State.[3] This blend of revenue sources makes future revenue streams dependent upon both the volume of gasoline and diesel fuel sold in the State, as well as the retail price of gasoline.

[1] Preliminary; subject to change.
[2] Preliminary; subject to change.
[3] These assessments on gasoline and diesel fuel have been collected in the TIB Fund since July 2009 with respect to the assessment on gasoline and since December 2009 with respect to the assessment on diesel fuel.

At the request of the Vermont State Treasurer, this study provides revenue projections supporting the issuance of the 2013A TIBs,[4] which are expected to be issued in early fiscal year 2014, outlines forecast methodologies, considers risks to the forecasts and assesses the capacity of this revenue stream to cover debt service and other bond-related costs of both these bonds and other bonds previously issued under the TIB Statute.

Although this study focuses on the 2013A TIBs, the State previously issued the 2010A TIBs in fiscal year 2011 and the 2012A TIBs in fiscal year 2013, which are currently outstanding in the aggregate principal amount of $12.675 million and $10.415 million, respectively, and are supported by the TIB Fund. Further, the State currently anticipates issuing additional TIBs pursuant to the TIB Statute, on parity with the 2010A TIBs, the 2012A TIBs and the 2013A TIBs, from time to time in amounts as authorized by the General Assembly, as part of the State's transportation program. Although the actual amount and timing of any such issuance is not currently known, the State has provided a pro forma cumulative issuance schedule of $99.625 million aggregate par amount of additional TIBs through fiscal year 2018, including the 2010A TIBs, the 2012A TIBs and the 2013A TIBs.

The issuance of additional TIBs will have the effect of reducing debt service coverage below the levels projected for the 2010A TIBs, the 2012A TIBs and 2013A TIBs alone. Appendix B presents a pro forma schedule of debt service requirements and debt service coverage through fiscal year 2037 for the $99.625 million Transportation Infrastructure Bond program, based on the State's anticipated issuance of TIBs during the period and certain assumptions further noted in this report and in Appendices A and B. The State is not obligated to follow the pro forma schedule shown in Appendix B and, subject to compliance with the terms of the Trust Agreement, may choose to issue more or less additional TIBs and do so at different times than shown in the schedule.

2) Revenue Projections

Data Sources and Modeling Overview

The revenue projections generated in connection with this analysis are based on more than 25 years of monthly revenue and related Vermont-specific data from the Vermont Department of Motor Vehicles, the Vermont Department of Taxes, the Vermont Joint Fiscal Office, the Vermont Public Service Department and the Vermont Department of

[4] Although additional offerings are expected in subsequent fiscal years and analysis of expected costs and revenues of all anticipated TIB bonding is presented in an appendix to this report, this analysis is confined to the 2010A TIBs outstanding in the aggregate principal amount of $12.675M, the 2012A TIBs outstanding in the aggregate principal amount of $10.415M, and the proposed issuance of $11.095M of 2013A TIBs, for a total of $34.185M in bonds to be currently supported by the TIB Fund.

Finance and Management. The analyses in support of the revenue projections herein are based on statistical and econometric models and professional analytic judgment.[5]

The primary external macroeconomic forecasts used in this analysis were prepared by Moody's Analytics, the New England Economic Partnership (NEEP), the Vermont Legislative Joint Fiscal Office (JFO) and the U.S. Energy Information Administration (EIA). Moody's U.S. and Vermont economic forecasts are used as the basis for the official State economic and revenue projections prepared by the JFO and the Vermont Agency of Administration and are the primary inputs to the NEEP forecasts.

Revenue streams in this analysis were projected through calendar year 2040 in order to assess capacity for the 2010A TIBs, the 2012A TIBs and the 2013A TIBs, and expected subsequent offerings. It should be noted that the further into the future a forecast extends, the larger the potential error. Long term forecasts such as these are best understood as "reasonable" projections of events, given specific assumptions. Major unforeseen events, structural change in industries and factors of production, and other fundamental changes in social, political, technological and environmental conditions could have a significant impact on the revenue projections and other assumptions employed herein.[6]

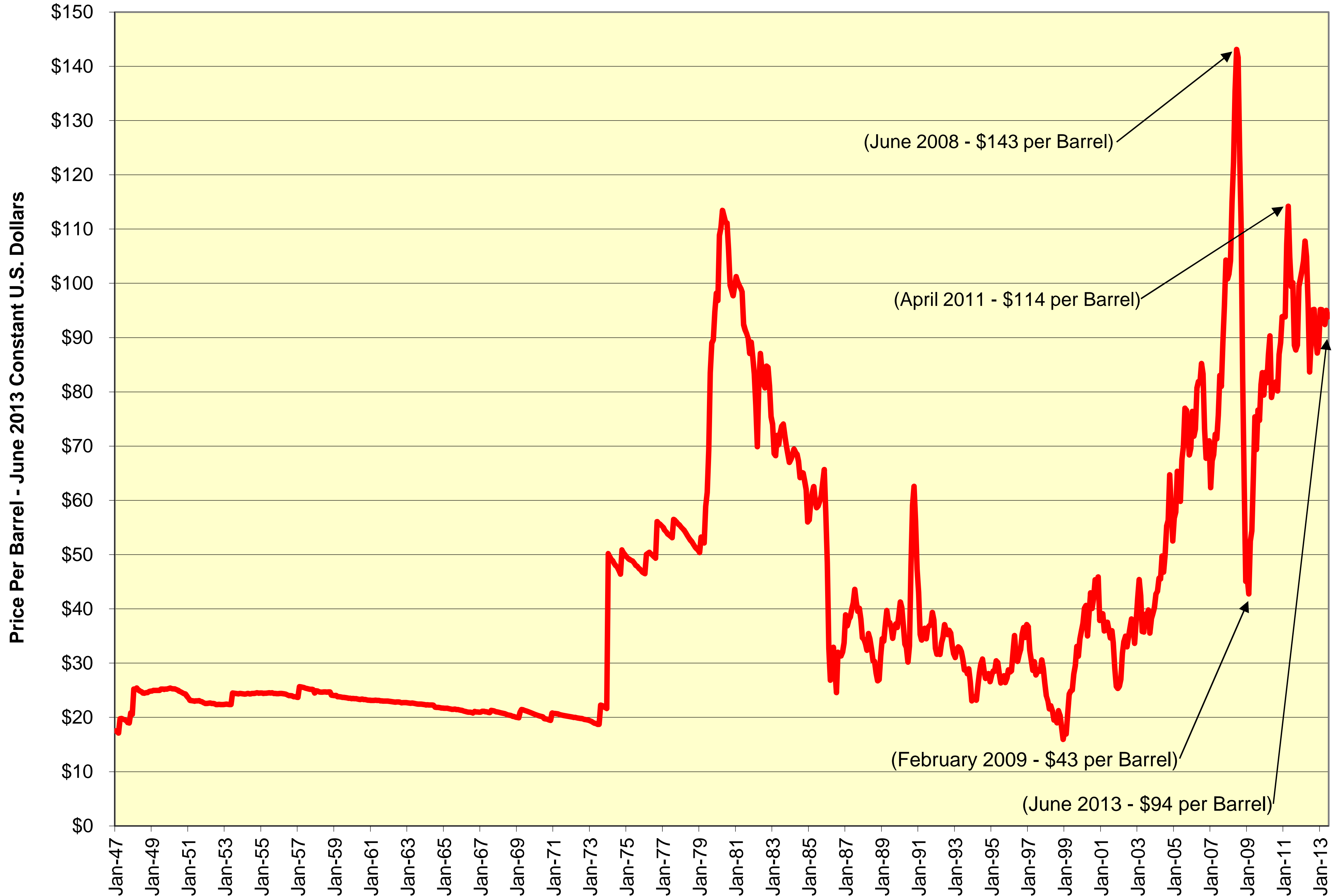
Oil and derivative gasoline prices, upon which these forecasts are based in part, are subject to considerable volatility, as evidenced over the past 30 years and especially in the past decade (see charts on following two pages). Market concentration in oil production and cartels, such as OPEC (which can artificially constrict supply), speculative investment (which can exacerbate market fluctuations), and supply disruption vulnerability from both political and natural causes, all serve to amplify oil price volatility. Even short term oil price projections can have relatively wide potential error ranges, as measured by the statistical concept known as "confidence intervals."

Confidence intervals provide a range within which an expected outcome is likely to occur with a given confidence level or probability (often 95% in forecasting applications), based on a given set of data. The EIA has developed a set of confidence intervals for various energy prices, including those for West Texas Intermediate Crude Oil (WTI), based on data derived from New York Mercantile Exchange (NYMEX) options markets[7] at various

[5] Kavet, Rockler & Associates (KRA) has been the State Economist and Principal Economic Advisor to the Vermont State Legislature for the past 17 years and prepares all official State revenue forecasts and revenue impact analyses for the State legislature. Prior to forming KRA, the principals in the firm were senior economists and executives with Data Resources, Inc./McGraw-Hill, now IHS Global Insight, the nation's largest economic consulting and forecasting firm. For more information on KRA professional experience and related analyses performed by KRA, see: www.kavetrockler.com.

[6] Moody's projections are generally available through 2033 and were extended to 2040 using extrapolations of longer term trend growth rates, NEEP projections are generally available through 2018, JFO projections are available through 2018, and EIA projections are available through 2040, with shorter term 2-year projections updated more frequently, but not integrated into longer term EIA forecasts on a regular basis.

[7] EIA quantifies market uncertainty and risk by using a concept they call "implied volatilities." Implied volatility is calculated from trading option prices using the Black commodity option pricing model. The confidence intervals reflect the range in which those prices are likely to trade. For more information, see: http://www.eia.doe.gov/emeu/steo/pub/special/2009_sp_05.html



Real Oil Prices Exhibit Pronounced Historical Volatility
(West Texas Intermediate Crude Oil, PPB in June 2013 Constant Dollars)
Price Per Barrel - June 2013 Constant U.S. Dollars
$150
$140
$130
$120
$110
$100
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
(June 2008 - $143 per Barrel)
(April 2011 - $114 per Barrel)
(February 2009 - $43 per Barrel)
(June 2013 - $94 per Barrel)
Jan-47
Jan-49
Jan-51
Jan-53
Jan-55
Jan-57
Jan-59
Jan-61
Jan-63
Jan-65
Jan-67
Jan-69
Jan-71
Jan-73
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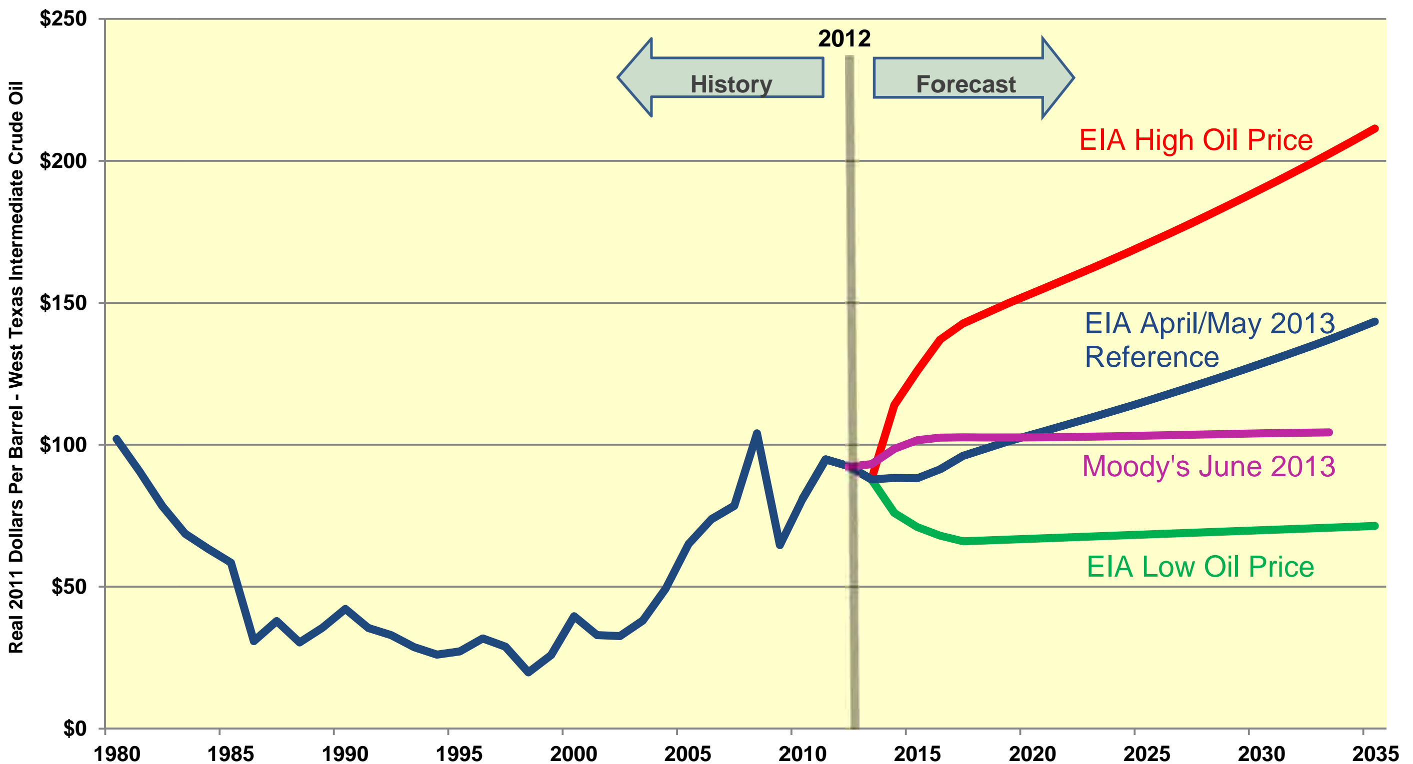
Jan-83
Jan-85
Jan-87
Jan-89
Jan-91
Jan-93
Jan-95
Jan-97
Jan-99
Jan-01
Jan-03
Jan-05
Jan-07
Jan-09
Jan-11
Jan-13
Sources: Wall Street Journal, Moody's Analytics, KRA

confidence levels.[8] As the EIA notes, "*Confidence intervals for oil and derivative products tend to be wide, in part because even small imbalances in oil markets can trigger large movements in prices given that both the production and use of oil tend to be relatively insensitive to price changes in the short-run. Increased uncertainty in consumption, production, or other factors influencing oil prices tend to induce an increase in implied volatility and a widening of the confidence intervals.*"[9]

The chart below shows April/May 2013 EIA WTI crude oil forecast ranges consistent with 95% confidence intervals through 2040 and June 2013 Moody's Analytics control forecasts of the same through 2033. The EIA alternative projections illustrate the wide range of possible prices at this confidence interval. Based on this, the real price in 2011 dollars of a barrel of crude oil could vary by a factor of two ($68 vs. $137) by 2016, and by a factor of three ($71 vs. $211) by 2035. Moody's Analytics forecasts are slightly higher than EIA projections through 2019, but then diverge in the opposite direction, ending their forecast period in 2033 more than $30 below EIA estimates. The inherent volatility in oil and gas prices could make actual year-to-year TIB revenue changes more erratic than those derived from the control forecast assumptions used herein.



[8] EIA confidence levels represent the probability that the final market price for a particular futures contract will fall somewhere within the upper and lower limits of the range of prices predicted. For example, if a confidence level of 95% is specified, then a range of prices can be estimated within which there is a 95% probability the delivered price for the commodity in the contract's delivery month will fall within that range. The higher the specified confidence level, the wider the range between the lower and upper limits.

[9] See: http://www.eia.doe.gov/emeu/steo/pub/special/2009_sp_05.html

Economic Model Construct

There are two revenue sources modeled as a part of this analysis. The largest, which is projected to represent more than 90% of all TIB revenues in most years forecast herein, is based on expenditures in Vermont on taxable motor fuel gasoline (affected by both the volume of gallons sold and the average State retail price excluding taxes in the preceding quarter). The other is based on the volume of diesel fuel sold (gallonage).

The revenue assessment on gasoline that supports the TIB bonds is a departure from most gasoline taxes in that it is levied as a percentage (2%) of total gasoline sales, collected by distributors, rather than a cents per gallon tax. Despite potential price volatility, this tax structure will probably enhance both the revenue potential and longer term growth of this revenue source. Traditional gasoline taxes are most commonly assessed as a per gallon charge, and thus do not grow with public infrastructure needs as gasoline prices rise.[10] This often necessitates rate increases over time as general inflation and, in particular, oil prices escalate. Because higher gasoline prices are a primary variable in reducing gasoline consumption, the TIB gas tax structure provides some protection against revenue loss from declining consumption over time caused by rising gas prices. Despite expectations of very low gasoline demand growth over the forecast period (0.5% per year), revenue growth is expected to be more than 3% (at compound average annual rates), due to expected continued upward price pressure.

The TIB diesel assessment is a more traditional per gallon tax (3 cents) that relies on the volume of diesel fuel sold. Both taxes are collected at the distributor level, which can accentuate month to month volatility in revenues due to inventory swings, but which generally enhances compliance, due to the size and relatively small number of taxpayers.

TIB revenues are currently monitored and forecast by the State as part of a regular consensus forecasting process that is updated at least every six months.[11] These forecasts allow for constant adjustment based on changing economic conditions and are available for the current and subsequent four fiscal years (currently through FY2018).

As illustrated in the table on the following page, TIB Fund revenues have been relatively close to near- term projections, with fluctuations in gasoline prices primarily responsible for the variance in actual vs. forecast revenues.

Based on preliminary data, TIB revenues for FY2013 are expected to end the fiscal year very close to prior projections (-1.0% variance). Relatively flat oil and gasoline prices projected during the next 12 months will leave FY2014 TIB Fund revenues slightly below

[10] In the 2013-2014 legislative session, however, Vermont enacted a hybrid gasoline tax that combines a per gallon tax and a variable rate tax based on the price of gasoline, with a floor and cap on the effective variable rate. While this tax law change does not affect the structure or collection of the TIB assessments, by raising the effective retail price of gasoline, it is expected to have a slight negative impact on gasoline consumption and therefore the TIB gasoline revenues forecast herein.

[11] The regular revenue forecasting process is conducted in January and July of each year; however, in times of elevated economic uncertainty, such as during the Great Recession and its immediate aftermath, forecasts are updated more frequently, usually four times per year. These forecasts are performed as a part of a consensus revenue estimation process involving economists for the Agency of Administration and the JFO. KRA is the State Economist in this process for the JFO.

FY2013 levels (-0.6%), before strengthening global economic expansion in FY2015 and FY2016 create conditions for both stronger prices and increased consumption that will lead to above average TIB revenue growth for several years. As detailed in Table 5 in Appendix A hereto, longer-term average annual growth in State gasoline prices, at 2.7%, is conservatively estimated to only moderately exceed underlying rates of inflation as measured by the Consumer Price Index (CPI), at 2.1%.

PRIOR REVENUE FORECASTS VS. ACTUALS
($Millions)

		Gasoline	Diesel	Total
For FY11				
	Actual (final)	$16.5	$2.0	$18.5
	July 2010 Forecast	$16.1	$1.9	$18.0
	Variance %	*2.6%*	*3.3%*	*2.6%*
	January 2011 Forecast	$16.5	$1.9	$18.4
	Variance %	*0.1%*	*3.3%*	*0.4%*
For FY12				
	Actual (final)	$20.9	$1.9	$22.8
	July 2011 Forecast	$18.6	$1.9	$20.5
	Variance %	*12.3%*	*1.9%*	*11.3%*
	January 2012 Forecast	$20.6	$1.9	$22.5
	Variance %	*1.5%*	*1.9%*	*1.5%*
For FY13				
	Actual (preliminary)	$21.2	$1.8	$23.0
	July 2012 Forecast	$21.0	$2.1	$23.1
	Variance %	*0.8%*	*-13.9%*	*-0.6%*
	January 2013 Forecast	$21.3	$1.9	$23.2
	Variance %	*-0.6%*	*-5.7%*	*-1.0%*

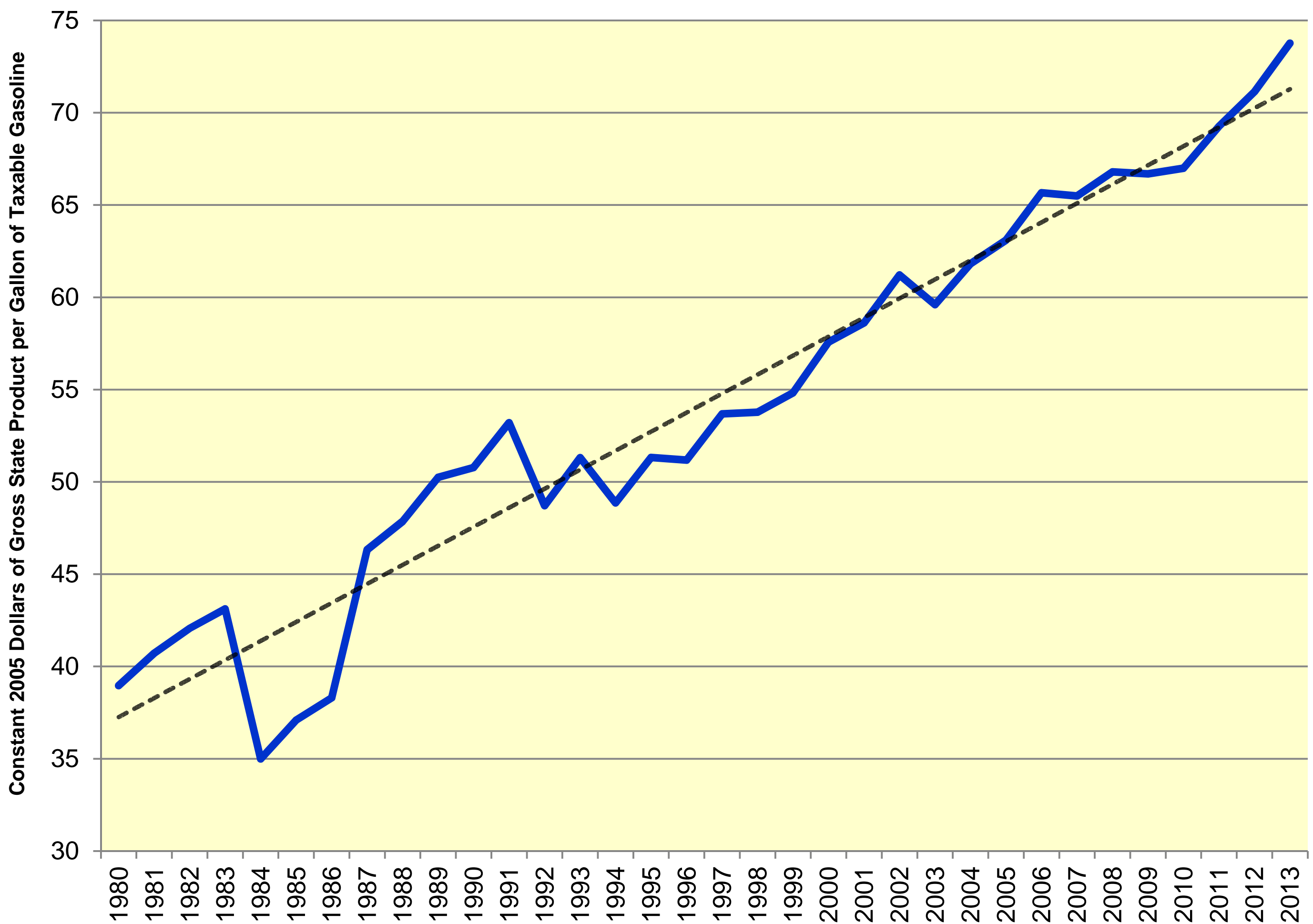
The basic forecasting models used in the State consensus forecasting process were employed in this analysis to generate the revenue projections herein. These models use Moody's and NEEP macroeconomic projections and a blended gasoline price forecast that considers both EIA and Moody's projections. Over the forecast period from 2013 to 2040, EIA assumes somewhat higher gasoline price increases (2.7% per year) than Moody's (2.6% per year). As noted above, the blended gasoline price assumption for the State of Vermont is detailed in Table 5 in Appendix A hereto.

Taxable gasoline consumption in Vermont has grown at a rate of approximately 1.0% per year (at compound average annual rates) between 1981 and 2012, which is slightly higher than State population growth at 0.6% per year over the same period, as detailed in Tables 1 and 3 in Appendix A hereto. Population growth over the forecast period from 2013 to 2040 is expected to slow to 0.4% per year, with growth in gasoline demand dropping to 0.5% per year. As a relatively rural state with few urban centers and limited public transportation availability, Vermont has among the highest per capita consumption

of motor fuel in the nation (see chart on page 9, which reflects the latest available data). Although the fuel efficiency of the vehicle fleet in the State will continue to improve, the disproportionate number of per capita miles driven due to the dispersed population and rural character of the State will continue to support slight growth in gasoline demand.

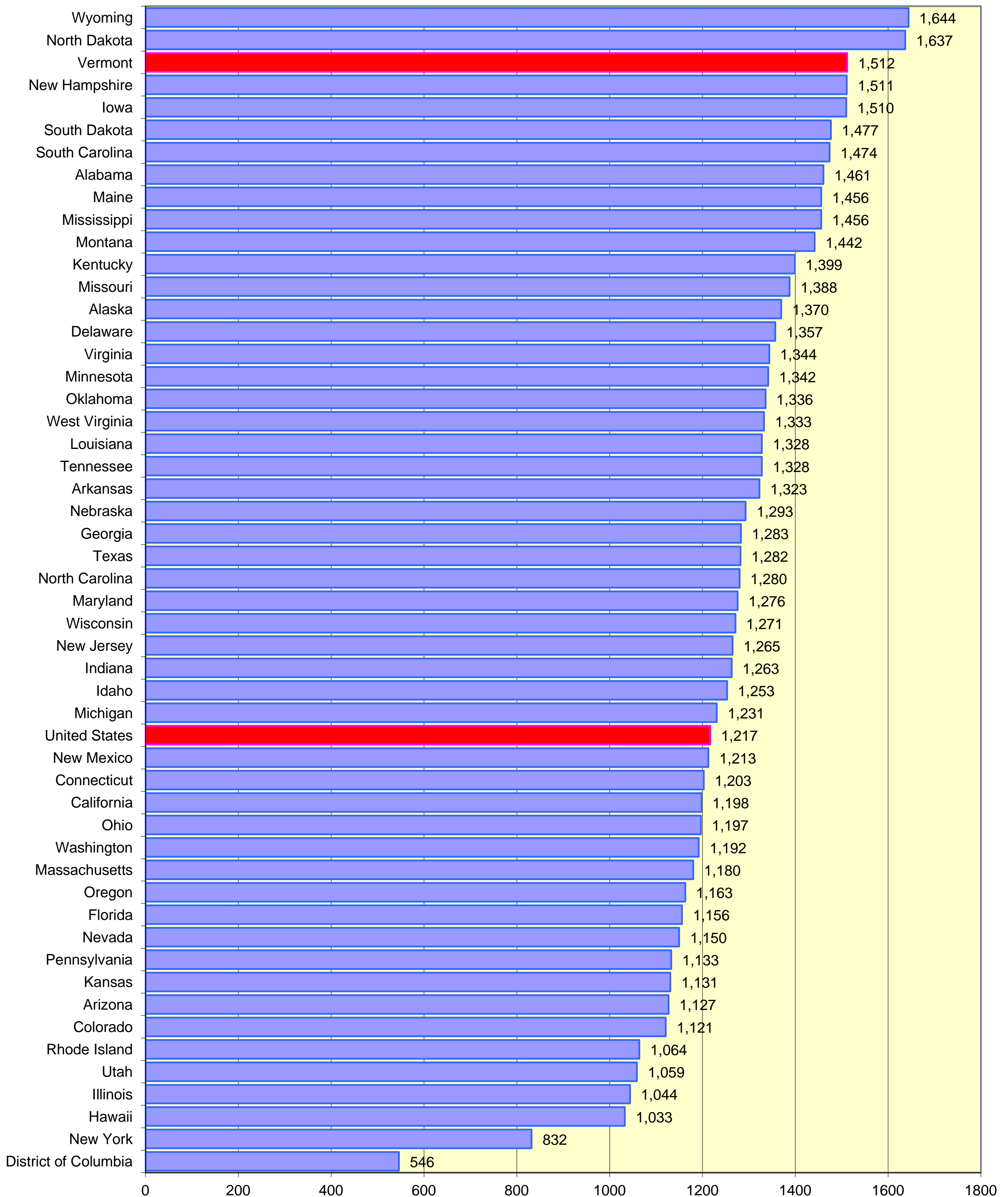
The variables influencing gasoline consumption in the State include population, economic output (as measured by Gross State Product), personal income, gasoline prices and the transportation vehicle efficiency mix employed in the State. Historical and forecasted values used in this analysis for selected economic, demographic and revenue metrics of relevance are illustrated in Tables 2-5 in Appendix A hereto.

As illustrated in the below chart, constant dollar Gross State Product per gallon of gasoline consumed in Vermont has grown steadily over the past 33 years, nearly doubling between 1980 and 2013. This response to rising real gasoline prices reflects both exceptional productivity and efficiency gains as well as broader economic restructuring away from energy-intensive manufacturing and agriculture, in favor of service sector and high value-added manufacturing growth.



Per Capita Motor Gasoline Expenditures - 2010

Source: U.S. Energy Information Administration



This improvement in productivity, expressed as the ratio of real output to gasoline consumption, is expected to continue and accelerate over the forecast period, as real gasoline prices continue to rise. Between 2013 and 2040, Vermont gasoline prices are expected to grow at a compound annual rate of about 2.7%, while general inflation is expected to grow 2.1% per year over the same period. This will result in very little growth in taxable gasoline gallonage, with total consumption in 2040 expected to exceed prior peak levels reached in 2005 by less than 3%.

Diesel fuel demand is also affected by many of the same variables as gasoline, although it tends to be more cyclically sensitive, due to the commercial and industrial functions associated with its use. Although there has been some productivity improvement over time, it has not been as pronounced as for gasoline. Smaller, more fuel efficient cars are more readily substituted for larger gas-guzzlers than smaller trucks can be for tractor trailers hauling goods. As a result, demand for diesel fuel is expected to grow at about 1.5% per year between 2013 and 2040, with TIB-related revenues growing in tandem.

Changes in the Economic Outlook

This study is the third TIB Feasibility Study prepared in connection with the issuance of Transportation Infrastructure Bonds by the State. Since the most recent TIB Feasibility Study, which was prepared in July 2012 in connection with the issuance of the 2012A TIBs, there have been relatively minor changes to the economic variables affecting TIB Fund revenues that are incorporated into the economic model and forecast. In particular, more aggressive efficiency growth assumptions, oil supply growth from domestic hydraulic fracturing and the delayed global economic recovery will combine to reduce near-term upward gasoline price pressures somewhat and also keep the demand for gasoline in check, reducing total TIB revenues slightly through about FY2036. However, higher longer-term gasoline price assumptions will result in slightly higher net TIB revenues in FY2037 and beyond.

Forecast Risks

Most of the revenue forecast risk is associated with lower gasoline prices than are currently assumed. In the baseline forecast, Vermont gasoline prices are expected to rise from an annual average of $3.77 per gallon in 2013 to $7.58 per gallon in 2040. Much of this upward price pressure is the result of strong projected international demand, especially in the developing economies of China, India and Brazil, and ever more expensive processes for extracting limited global oil supplies. If this demand fails to materialize or substantial new easily-accessed oil supplies are discovered, prices could rise more slowly or decline at some time during the forecast period.

Accelerated transportation energy efficiency efforts and unforeseen technological breakthroughs affecting alternative energy adoption and utilization rates could also negatively impact the gasoline price increases assumed herein – especially in the latter years of the forecast period.

Although much recent media attention has been given to the growth in new electric car sales and the potential impact of such growth on gasoline consumption and related tax revenues, the impact in Vermont has been miniscule to date. As of April 2013, only 238 electric passenger cars were registered in the State, less than 0.05% of the vehicle fleet. In general, adoption rates for electric vehicles have been lower in rural states like Vermont because: 1) distances between charging stations are greater than in more urbanized areas, 2) the average per trip travel distance is greater than in urban areas and in many cases is beyond the range of electric-only vehicles, 3) there is a relatively higher preference for light trucks versus cars in the vehicle mix and there are currently no mass-produced hybrid or electric trucks on the market, and 4) the absence to date of 4WD options for most electric vehicles limits their use in rural, and especially far northern, settings. The efficiency growth rates assumed herein are consistent with those articulated in the Vermont Public Service Department 2011 Comprehensive Energy Plan, which, in turn, are generally consistent with current Federal vehicle mileage standards and goals.

Although any alternative simulation would also need to take into account additional gasoline demand that would result from declining prices, a simple reduction in gasoline prices by 50%, without changing gasoline demand, would result in a concomitant 50% reduction in TIB gasoline revenues. Diesel revenues under such a scenario would be likely to increase slightly, as lower oil prices increase fuel demand and general economic activity.

As detailed in Table 1 on the following page and Table 6 in Appendix B hereto, however, even with a 50% reduction in revenues, there is ample revenue to service the 2010A TIBs, the 2012A TIBs and the 2013A TIBs, as well as the additional bond issuance outlined in Appendix B.

3) Summary

Debt Service Coverage Analysis

Table 1 on the following page presents the results of the debt service coverage analysis based on revenue projections herein and debt service calculations provided to KRA by Public Resources Advisory Group (PRAG). This analysis projects that in no fiscal year would available TIB revenues fall below nine times (9x) the projected debt service costs for the 2010A TIBs, the 2012A TIBs and the 2013A TIBs. This would mean that it is likely the entire annual debt service costs for the 2010A TIBs, the 2012A TIBs and the 2013A TIBs could be generated by revenues collected in less than just two average months of each fiscal year. This is sufficient capacity to cover debt service and other bond-related costs, even under extremely pessimistic forecast assumptions. Actual coverage, however, will be lower as a result of additional debt expected to be issued and could also be lower if there are variances from the assumptions used in these forecasts.

TABLE 1
State of Vermont
Transportation Infrastructure Revenue Bonds

2010A, 2012A and 2013A TIBs Debt Service Coverage

Maturity Date	Fiscal Year	2010A TIBs Debt Service* (Actual)	2012A TIBs Debt Service* (Actual)	2013A TIBs Debt Service** (Estimated)	Total Fiscal Year Debt Service (Estimated)	MFTIA Revenue (Projected)	Debt Service Coverage (Projected)
6/15/2013	2013					$22,971,842	
6/15/2014	2014	$993,363	$694,063	$706,562	$2,393,987	$22,833,353	9.54
6/15/2015	2015	$991,363	$695,063	$836,738	$2,523,163	$23,886,477	9.47
6/15/2016	2016	$994,163	$695,863	$836,738	$2,526,763	$25,762,194	10.20
6/15/2017	2017	$991,663	$696,463	$836,138	$2,524,263	$26,765,247	10.60
6/15/2018	2018	$990,788	$696,863	$839,938	$2,527,588	$27,459,239	10.86
6/15/2019	2019	$994,538	$697,063	$837,938	$2,529,538	$28,135,585	11.12
6/15/2020	2020	$991,113	$692,063	$840,938	$2,524,113	$28,745,017	11.39
6/15/2021	2021	$990,563	$696,963	$837,688	$2,525,213	$29,592,615	11.72
6/15/2022	2022	$994,413	$696,563	$838,438	$2,529,413	$30,588,088	12.09
6/15/2023	2023	$992,513	$695,963	$837,938	$2,526,413	$31,499,003	12.47
6/15/2024	2024	$995,013	$695,163	$836,188	$2,526,363	$32,295,853	12.78
6/15/2025	2025	$994,825	$696,413	$838,788	$2,530,025	$33,064,142	13.07
6/15/2026	2026	$991,825	$693,700	$840,388	$2,525,913	$33,858,426	13.40
6/15/2027	2027	$992,950	$694,325	$840,988	$2,528,263	$34,845,559	13.78
6/15/2028	2028	$990,888	$694,575	$840,588	$2,526,050	$35,877,730	14.20
6/15/2029	2029	$992,700	$694,450	$839,188	$2,526,338	$36,989,734	14.64
6/15/2030	2030	$993,200	$693,950	$836,788	$2,523,938	$38,156,162	15.12
6/15/2031	2031		$694,900	$838,388	$1,533,288	$39,337,498	25.66
6/15/2032	2032		$695,250	$836,938	$1,532,188	$40,564,702	26.48
6/15/2033	2033			$839,213	$839,213	$41,886,950	49.91
TOTAL		$16,875,875	$13,209,650	$16,636,500	$46,722,025	$665,115,416	

* Debt service schedule was provided to KRA by Public Resources Advisory Group, Inc. and reflects actual debt service on the 2010A TIBs and 2012A TIBs.

** Preliminary; subject to change. Debt service schedule was provided to KRA by Public Resources Advisory Group, Inc. and reflects an assumed rate of interest of approximately 4.11% on the 2013A TIBs.

Conclusion and Professional Opinion

In conclusion, based upon the baseline revenue forecast assumptions outlined in this analysis and debt service projections provided to KRA by PRAG, it is KRA's opinion that each fiscal year ending on June 30 of each forecast year will achieve an amount that is adequate to pay the aggregate debt service and bond-related costs associated with the 2010A TIBs, the 2012A TIBs and the 2013A TIBs.

4) Disclaimer

It should be noted that estimates and opinions included in this report are based on exploratory level analysis and the best available information at the time of the study. Current professional practices and procedures were used in the development of these findings. However, there is considerable uncertainty inherent in projecting future tax revenue collections for any governmental entity. There may be differences between forecasted and actual results caused by events and circumstances beyond the control or knowledge of the forecasters. These differences could be material. The tax revenue forecasts in this document are intended to reflect long-term trends based on specified assumptions. Actual experience in any given year may vary due to economic conditions and other factors.

APPENDIX A

TABLES 2-5:

SELECTED ECONOMIC, DEMOGRAPHIC AND REVENUE METRICS AND GRAPHIC DISPLAY OF PRO FORMA TIB ASSESSMENT REVENUES[12]

[12] The TIB assessments on gasoline and diesel fuel have been collected in the TIB Fund since July 2009 with respect to the assessment on gasoline and since December 2009 with respect to the assessment on diesel fuel. Table 3 and related charts in this Appendix contain pro forma estimates of what the revenue from such assessments would have been if such assessments had been collected prior to fiscal year 2010, based on available historical data relating to retail gasoline prices and gallons of gasoline and diesel fuel sold in the State. The pro forma estimates are provided in order to allow comparisons to other historical information in this study, but do not represent actual revenues of the State. If the assessments had been collected prior to fiscal year 2010, it is likely that the actual amounts collected would differ from the estimates.

TABLE 2
Selected Economic and Demographic Metrics
Transportation Infrastructure Bond Analysis - July 2013

Vermont Gross State Product (GSP) Constant 2005 Dollars Fiscal Year Basis			Vermont Gross State Product (GSP) Nominal Dollars Fiscal Year Basis			Total Population Vermont Fiscal Year Basis			Median Household Income Vermont Fiscal Year Basis		
	$Billions	%ch		$Billions	%ch		Thousands	%ch		$Thousands	%ch
1981	9.7		**1981**	5.0		**1981**	514.7		**1981**	17.9	
1982	9.8	1.6%	**1982**	5.5	9.0%	**1982**	517.7	0.6%	**1982**	18.6	4.1%
1983	9.9	1.1%	**1983**	5.9	6.7%	**1983**	521.8	0.8%	**1983**	18.4	-1.0%
1984	10.4	5.0%	**1984**	6.4	4.4%	**1984**	525.4	0.7%	**1984**	20.7	12.3%
1985	11.0	5.3%	**1985**	7.0	3.5%	**1985**	528.7	0.6%	**1985**	24.7	19.7%
1986	11.6	5.5%	**1986**	7.7	1.9%	**1986**	532.5	0.7%	**1986**	25.5	3.1%
1987	12.2	5.6%	**1987**	8.4	3.7%	**1987**	537.7	1.0%	**1987**	24.5	-3.9%
1988	13.4	9.5%	**1988**	9.5	12.6%	**1988**	546.1	1.6%	**1988**	27.2	10.9%
1989	14.5	8.1%	**1989**	10.6	4.8%	**1989**	554.8	1.6%	**1989**	30.4	11.8%
1990	14.8	2.3%	**1990**	11.2	5.4%	**1990**	562.3	1.3%	**1990**	31.5	3.6%
1991	14.5	-1.9%	**1991**	11.4	1.5%	**1991**	567.3	0.9%	**1991**	29.8	-5.3%
1992	14.7	1.4%	**1992**	11.9	4.1%	**1992**	571.1	0.7%	**1992**	30.9	3.5%
1993	15.2	3.1%	**1993**	12.5	5.3%	**1993**	575.8	0.8%	**1993**	31.9	3.5%
1994	15.7	3.1%	**1994**	13.2	5.5%	**1994**	581.5	1.0%	**1994**	33.3	4.3%
1995	15.8	1.0%	**1995**	13.5	2.6%	**1995**	587.1	1.0%	**1995**	35.5	6.6%
1996	16.2	2.1%	**1996**	14.0	2.9%	**1996**	592.0	0.8%	**1996**	32.6	-8.3%
1997	16.9	4.7%	**1997**	14.8	5.9%	**1997**	596.0	0.7%	**1997**	33.4	2.6%
1998	17.7	4.6%	**1998**	15.6	5.5%	**1998**	599.2	0.5%	**1998**	37.1	11.2%
1999	18.4	4.2%	**1999**	16.4	5.1%	**1999**	603.0	0.6%	**1999**	41.1	10.6%
2000	19.6	6.4%	**2000**	17.6	7.4%	**2000**	607.9	0.8%	**2000**	41.5	1.1%
2001	20.2	3.2%	**2001**	18.5	4.8%	**2001**	611.3	0.6%	**2001**	42.4	2.0%
2002	20.6	1.8%	**2002**	19.1	3.6%	**2002**	614.2	0.5%	**2002**	43.5	2.8%
2003	21.2	2.7%	**2003**	20.0	4.4%	**2003**	617.0	0.5%	**2003**	43.7	0.3%
2004	22.1	4.2%	**2004**	21.2	6.2%	**2004**	619.2	0.4%	**2004**	45.0	3.2%
2005	22.7	2.8%	**2005**	22.4	5.5%	**2005**	620.8	0.3%	**2005**	46.5	3.2%
2006	23.0	1.3%	**2006**	23.3	4.1%	**2006**	622.3	0.2%	**2006**	46.2	-0.6%
2007	22.8	-0.7%	**2007**	23.8	2.1%	**2007**	623.3	0.2%	**2007**	48.9	5.9%
2008	22.9	0.4%	**2008**	24.3	2.2%	**2008**	623.9	0.1%	**2008**	51.0	4.4%
2009	22.2	-3.1%	**2009**	24.2	-0.3%	**2009**	624.5	0.1%	**2009**	52.4	2.6%
2010	22.7	2.4%	**2010**	25.1	3.7%	**2010**	625.5	0.2%	**2010**	50.4	-3.7%
2011	23.6	4.0%	**2011**	26.3	4.8%	**2011**	626.4	0.1%	**2011**	49.3	-2.2%
2012	23.8	0.7%	**2012**	27.0	2.4%	**2012**	626.4	0.0%	**2012**	49.7	0.9%
2013	**24.0**	**0.7%**	**2013**	**27.6**	**2.3%**	**2013**	**627.2**	**0.1%**	**2013**	**50.1**	**0.7%**
2014	**24.5**	**2.3%**	**2014**	**28.7**	**4.0%**	**2014**	**629.2**	**0.3%**	**2014**	**50.4**	**0.8%**
2015	**25.5**	**4.0%**	**2015**	**30.4**	**6.1%**	**2015**	**631.3**	**0.3%**	**2015**	**51.6**	**2.3%**
2016	**26.4**	**3.6%**	**2016**	**32.2**	**5.8%**	**2016**	**633.5**	**0.3%**	**2016**	**53.1**	**3.0%**
2017	**27.1**	**2.6%**	**2017**	**33.7**	**4.8%**	**2017**	**635.8**	**0.4%**	**2017**	**54.5**	**2.5%**
2018	**27.6**	**2.0%**	**2018**	**35.1**	**4.2%**	**2018**	**638.3**	**0.4%**	**2018**	**55.6**	**2.2%**
2019	**28.1**	**1.8%**	**2019**	**36.5**	**3.9%**	**2019**	**641.0**	**0.4%**	**2019**	**56.9**	**2.2%**
2020	**28.6**	**1.8%**	**2020**	**37.9**	**3.7%**	**2020**	**643.8**	**0.4%**	**2020**	**58.0**	**2.1%**
2021	**29.2**	**2.0%**	**2021**	**39.4**	**3.9%**	**2021**	**646.5**	**0.4%**	**2021**	**59.2**	**2.1%**
2022	**29.8**	**2.1%**	**2022**	**41.0**	**4.0%**	**2022**	**649.2**	**0.4%**	**2022**	**60.5**	**2.1%**
2023	**30.4**	**2.1%**	**2023**	**42.6**	**4.1%**	**2023**	**651.9**	**0.4%**	**2023**	**61.8**	**2.1%**
2024	**31.1**	**2.0%**	**2024**	**44.3**	**4.0%**	**2024**	**654.7**	**0.4%**	**2024**	**63.1**	**2.1%**
2025	**31.7**	**2.0%**	**2025**	**46.1**	**4.0%**	**2025**	**657.5**	**0.4%**	**2025**	**64.5**	**2.1%**
2026	**32.3**	**2.0%**	**2026**	**47.9**	**4.0%**	**2026**	**660.2**	**0.4%**	**2026**	**65.8**	**2.1%**
2027	**33.0**	**2.1%**	**2027**	**49.9**	**4.1%**	**2027**	**662.7**	**0.4%**	**2027**	**67.1**	**2.0%**
2028	**33.7**	**2.2%**	**2028**	**52.0**	**4.2%**	**2028**	**665.2**	**0.4%**	**2028**	**68.5**	**2.0%**
2029	**34.5**	**2.2%**	**2029**	**54.1**	**4.2%**	**2029**	**667.8**	**0.4%**	**2029**	**69.8**	**1.9%**
2030	**35.2**	**2.2%**	**2030**	**56.4**	**4.2%**	**2030**	**670.5**	**0.4%**	**2030**	**71.2**	**2.0%**
2031	**36.0**	**2.2%**	**2031**	**58.7**	**4.1%**	**2031**	**673.0**	**0.4%**	**2031**	**72.6**	**2.0%**
2032	**36.8**	**2.1%**	**2032**	**61.1**	**4.0%**	**2032**	**675.4**	**0.4%**	**2032**	**74.0**	**2.0%**
2033	**37.6**	**2.2%**	**2033**	**63.5**	**4.0%**	**2033**	**678.1**	**0.4%**	**2033**	**75.6**	**2.1%**
2034	**38.4**	**2.2%**	**2034**	**66.1**	**4.1%**	**2034**	**680.8**	**0.4%**	**2034**	**77.2**	**2.1%**
2035	**39.3**	**2.2%**	**2035**	**68.8**	**4.1%**	**2035**	**683.5**	**0.4%**	**2035**	**78.8**	**2.1%**
2036	**40.2**	**2.2%**	**2036**	**71.7**	**4.1%**	**2036**	**686.2**	**0.4%**	**2036**	**80.5**	**2.1%**
2037	**41.0**	**2.2%**	**2037**	**74.6**	**4.1%**	**2037**	**688.9**	**0.4%**	**2037**	**82.2**	**2.1%**
2038	**42.0**	**2.2%**	**2038**	**77.6**	**4.1%**	**2038**	**691.6**	**0.4%**	**2038**	**83.9**	**2.1%**
2039	**42.9**	**2.2%**	**2039**	**80.8**	**4.1%**	**2039**	**694.3**	**0.4%**	**2039**	**85.7**	**2.1%**
2040	**43.9**	**2.2%**	**2040**	**84.1**	**4.1%**	**2040**	**697.0**	**0.4%**	**2040**	**87.5**	**2.1%**

Compound Average Annual Percent Change

	GSP Constant 2005 Dollars	GSP Nominal Dollars	Total Population	Median Household Income
1981-2012	***3.0%***	***5.6%***	***0.6%***	***3.4%***
2013-2040	***2.3%***	***4.2%***	***0.4%***	***2.1%***
Primary Source:	Moody's Analytics	Moody's Analytics	Moody's Analytics	Moody's Analytics

TABLE 3
Selected Economic and Revenue Metrics
Transportation Infrastructure Bond Analysis - July 2013

West Texas Intermediate Crude Price Per Barrel Fiscal Year Basis			U.S. Consumer Price Index Urban Consumer, All Items Fiscal Year Basis			Pro Forma VT TIB Revenues* from Gasoline Assessment Fiscal Year Basis			Pro Forma VT TIB Revenues* from Diesel Assessment Fiscal Year Basis		
	$ Per BBL	%ch		Index	%ch		$Millions	%ch		$Millions	%ch
1981	37.4		**1981**	86.6		**1981**			**1981**		
1982	34.4	-8.1%	**1982**	94.2	8.7%	**1982**			**1982**		
1983	32.2	-6.4%	**1983**	98.2	4.3%	**1983**			**1983**		
1984	30.5	-5.2%	**1984**	101.8	3.7%	**1984**			**1984**		
1985	27.9	-8.6%	**1985**	105.8	3.9%	**1985**	2.9		**1985**	0.6	
1986	22.0	-21.1%	**1986**	108.9	2.9%	**1986**	2.7	-6.4%	**1986**	0.6	8.7%
1987	16.7	-24.0%	**1987**	111.3	2.2%	**1987**	2.1	-23.3%	**1987**	0.7	12.3%
1988	18.3	9.3%	**1988**	115.9	4.1%	**1988**	2.3	10.0%	**1988**	0.7	2.7%
1989	17.2	-6.1%	**1989**	121.2	4.6%	**1989**	2.4	8.0%	**1989**	0.8	6.6%
1990	19.8	15.4%	**1990**	127.0	4.8%	**1990**	3.4	38.3%	**1990**	1.2	52.7%
1991	25.2	27.4%	**1991**	133.9	5.5%	**1991**	3.7	8.7%	**1991**	1.3	7.5%
1992	20.9	-17.2%	**1992**	138.2	3.2%	**1992**	4.0	8.0%	**1992**	1.2	-2.6%
1993	20.4	-2.1%	**1993**	142.5	3.1%	**1993**	3.6	-8.0%	**1993**	1.3	8.8%
1994	16.7	-18.2%	**1994**	146.2	2.6%	**1994**	3.7	1.9%	**1994**	1.3	-6.0%
1995	18.5	10.5%	**1995**	150.4	2.8%	**1995**	3.7	-0.2%	**1995**	1.3	5.9%
1996	19.4	5.0%	**1996**	154.5	2.7%	**1996**	4.0	8.2%	**1996**	1.3	-0.6%
1997	22.4	15.8%	**1997**	158.9	2.8%	**1997**	4.5	10.8%	**1997**	1.3	-1.3%
1998	17.6	-21.7%	**1998**	161.8	1.8%	**1998**	5.3	17.9%	**1998**	1.6	23.2%
1999	14.4	-17.9%	**1999**	164.5	1.7%	**1999**	4.2	-19.5%	**1999**	1.7	7.4%
2000	26.0	80.1%	**2000**	169.3	2.9%	**2000**	5.9	39.3%	**2000**	1.8	2.9%
2001	30.1	15.8%	**2001**	175.1	3.4%	**2001**	7.9	33.8%	**2001**	2.1	19.3%
2002	23.7	-21.1%	**2002**	178.2	1.8%	**2002**	6.8	-13.2%	**2002**	2.0	-6.7%
2003	29.9	26.1%	**2003**	182.1	2.2%	**2003**	7.4	8.5%	**2003**	2.0	-1.3%
2004	33.7	12.8%	**2004**	186.1	2.2%	**2004**	8.5	14.8%	**2004**	2.2	9.7%
2005	48.7	44.4%	**2005**	191.7	3.0%	**2005**	10.9	28.3%	**2005**	1.9	-13.8%
2006	64.2	31.8%	**2006**	198.9	3.8%	**2006**	13.7	25.5%	**2006**	2.1	14.0%
2007	63.4	-1.3%	**2007**	204.1	2.6%	**2007**	15.1	10.1%	**2007**	2.2	1.7%
2008	97.1	53.1%	**2008**	211.7	3.7%	**2008**	17.4	15.2%	**2008**	2.0	-7.8%
2009	69.7	-28.2%	**2009**	214.7	1.4%	**2009**	17.2	-1.3%	**2009**	1.9	-6.5%
2010	75.2	7.9%	**2010**	216.8	1.0%	**2010**	13.4	-22.2%	**2010**	1.8	-3.7%
2011	89.4	18.9%	**2011**	221.1	2.0%	**2011**	16.5	23.6%	**2011**	2.0	10.0%
2012	95.0	6.3%	**2012**	227.6	2.9%	**2012**	20.9	26.6%	**2012**	1.9	-2.1%
2013	**92.6**	**-2.6%**	**2013**	**231.6**	**1.8%**	**2013**	**21.2**	**1.4%**	**2013**	**1.8**	**-8.1%**
2014	**101.1**	**9.3%**	**2014**	**235.8**	**1.8%**	**2014**	**21.0**	**-0.9%**	**2014**	**1.8**	**3.3%**
2015	**107.4**	**6.2%**	**2015**	**241.2**	**2.3%**	**2015**	**22.0**	**4.6%**	**2015**	**1.9**	**5.3%**
2016	**112.0**	**4.3%**	**2016**	**247.0**	**2.4%**	**2016**	**23.7**	**8.1%**	**2016**	**2.0**	**4.5%**
2017	**115.6**	**3.2%**	**2017**	**253.1**	**2.5%**	**2017**	**24.7**	**4.1%**	**2017**	**2.1**	**1.8%**
2018	**118.3**	**2.3%**	**2018**	**259.3**	**2.4%**	**2018**	**25.4**	**2.7%**	**2018**	**2.1**	**1.2%**
2019	**121.0**	**2.3%**	**2019**	**265.5**	**2.4%**	**2019**	**26.0**	**2.6%**	**2019**	**2.1**	**0.8%**
2020	**123.7**	**2.3%**	**2020**	**271.4**	**2.3%**	**2020**	**26.6**	**2.3%**	**2020**	**2.1**	**0.9%**
2021	**126.5**	**2.3%**	**2021**	**277.4**	**2.2%**	**2021**	**27.5**	**3.1%**	**2021**	**2.1**	**1.1%**
2022	**129.4**	**2.3%**	**2022**	**283.3**	**2.2%**	**2022**	**28.4**	**3.5%**	**2022**	**2.2**	**1.2%**
2023	**132.3**	**2.3%**	**2023**	**289.3**	**2.1%**	**2023**	**29.3**	**3.1%**	**2023**	**2.2**	**1.3%**
2024	**135.3**	**2.3%**	**2024**	**295.5**	**2.1%**	**2024**	**30.1**	**2.6%**	**2024**	**2.2**	**1.2%**
2025	**138.3**	**2.3%**	**2025**	**301.7**	**2.1%**	**2025**	**30.8**	**2.5%**	**2025**	**2.2**	**1.2%**
2026	**141.4**	**2.2%**	**2026**	**308.0**	**2.1%**	**2026**	**31.6**	**2.5%**	**2026**	**2.3**	**1.3%**
2027	**144.6**	**2.2%**	**2027**	**314.3**	**2.1%**	**2027**	**32.5**	**3.0%**	**2027**	**2.3**	**1.3%**
2028	**147.8**	**2.2%**	**2028**	**320.8**	**2.0%**	**2028**	**33.5**	**3.1%**	**2028**	**2.3**	**1.3%**
2029	**151.0**	**2.2%**	**2029**	**327.3**	**2.0%**	**2029**	**34.6**	**3.2%**	**2029**	**2.4**	**1.3%**
2030	**154.3**	**2.2%**	**2030**	**333.9**	**2.0%**	**2030**	**35.8**	**3.3%**	**2030**	**2.4**	**1.3%**
2031	**157.6**	**2.2%**	**2031**	**340.8**	**2.0%**	**2031**	**36.9**	**3.2%**	**2031**	**2.4**	**1.3%**
2032	**161.1**	**2.2%**	**2032**	**347.8**	**2.1%**	**2032**	**38.1**	**3.2%**	**2032**	**2.5**	**1.3%**
2033	**164.6**	**2.2%**	**2033**	**355.0**	**2.1%**	**2033**	**39.4**	**3.4%**	**2033**	**2.5**	**1.3%**
2034	**168.2**	**2.2%**	**2034**	**362.4**	**2.1%**	**2034**	**40.8**	**3.5%**	**2034**	**2.5**	**1.3%**
2035	**172.0**	**2.2%**	**2035**	**369.9**	**2.1%**	**2035**	**42.2**	**3.5%**	**2035**	**2.5**	**1.3%**
2036	**175.7**	**2.2%**	**2036**	**377.6**	**2.1%**	**2036**	**43.7**	**3.6%**	**2036**	**2.6**	**1.3%**
2037	**179.6**	**2.2%**	**2037**	**385.5**	**2.1%**	**2037**	**45.3**	**3.6%**	**2037**	**2.6**	**1.3%**
2038	**183.6**	**2.2%**	**2038**	**393.5**	**2.1%**	**2038**	**46.9**	**3.6%**	**2038**	**2.7**	**1.3%**
2039	**187.6**	**2.2%**	**2039**	**401.6**	**2.1%**	**2039**	**48.6**	**3.6%**	**2039**	**2.7**	**1.3%**
2040	**191.8**	**2.2%**	**2040**	**410.0**	**2.1%**	**2040**	**50.4**	**3.7%**	**2040**	**2.7**	**1.3%**

Compound Average Annual Percent Change

	WTI Crude	U.S. CPI	VT TIB Gasoline	VT TIB Diesel
1981-2012	***3.1%***	***3.2%***	***7.0%*** **(1985-2011)**	***4.8%*** **(1985-2011)**
2013-2040	***2.7%***	***2.1%***	***3.3%***	***1.6%***
Primary Source:	Moody's Analytics	Moody's Analytics	KRA	KRA

** These estimates are for illustrative purposes only, since there were no TIB asessments prior to FY2010.*

TABLE 4
Selected Economic and Revenue Metrics
Transportation Infrastructure Bond Analysis - July 2013

Vermont Transportation Fund Gasoline Tax Revenue - FY Basis Excluding TIB Assessments*			Vermont Transportation Fund Diesel Tax Revenue - FY Basis Excluding TIB Assessments*			Vermont Transportation Fund Gasoline Tax Base (Implied**) Fiscal Year Basis			Vermont Transportation Fund Diesel Tax Base (Implied**) Fiscal Year Basis		
	$Millions	%ch		$Millions	%ch		Millions of Gallons	%ch		Millions of Gallons	%ch
1981	21.4		**1981**	0.0		**1981**	237.3		**1981**		
1982	25.4	18.8%	**1982**	0.0		**1982**	233.3	-1.7%	**1982**		
1983	25.3	-0.2%	**1983**	NM		**1983**	230.2	-1.3%	**1983**		
1984	32.8	29.5%	**1984**	4.2		**1984**	298.0	29.5%	**1984**	29.9	
1985	32.6	-0.7%	**1985**	4.8	15.4%	**1985**	296.0	-0.7%	**1985**	34.5	15.4%
1986	33.3	2.1%	**1986**	5.3	8.7%	**1986**	302.3	2.1%	**1986**	37.5	8.7%
1987	34.3	3.2%	**1987**	5.9	12.3%	**1987**	263.9	-12.7%	**1987**	42.2	12.3%
1988	36.4	6.0%	**1988**	6.1	2.7%	**1988**	279.8	6.0%	**1988**	43.3	2.7%
1989	37.4	2.9%	**1989**	6.5	6.6%	**1989**	288.0	2.9%	**1989**	46.1	6.6%
1990	43.7	16.8%	**1990**	9.9	52.7%	**1990**	291.4	1.2%	**1990**	49.3	6.8%
1991	40.9	-6.3%	**1991**	10.6	7.5%	**1991**	272.9	-6.3%	**1991**	48.2	-2.3%
1992	45.4	10.8%	**1992**	10.3	-2.6%	**1992**	302.4	10.8%	**1992**	46.9	-2.6%
1993	44.4	-2.1%	**1993**	11.2	8.8%	**1993**	296.0	-2.1%	**1993**	51.0	8.8%
1994	48.1	8.3%	**1994**	10.6	-6.0%	**1994**	320.5	8.3%	**1994**	48.0	-6.0%
1995	46.2	-3.9%	**1995**	11.2	5.9%	**1995**	308.2	-3.9%	**1995**	50.8	5.9%
1996	47.3	2.4%	**1996**	11.1	-0.6%	**1996**	315.6	2.4%	**1996**	50.5	-0.6%
1997	47.3	-0.1%	**1997**	11.0	-1.3%	**1997**	315.2	-0.1%	**1997**	49.8	-1.3%
1998	59.1	25.0%	**1998**	13.6	24.1%	**1998**	328.9	4.4%	**1998**	61.9	24.1%
1999	61.3	3.7%	**1999**	14.5	6.6%	**1999**	336.1	2.2%	**1999**	65.9	6.6%
2000	62.1	1.3%	**2000**	14.9	2.9%	**2000**	340.5	1.3%	**2000**	67.9	2.9%
2001	63.0	1.4%	**2001**	17.8	19.3%	**2001**	345.2	1.4%	**2001**	71.3	5.1%
2002	63.1	0.2%	**2002**	15.5	-12.9%	**2002**	336.6	-2.5%	**2002**	62.1	-12.9%
2003	64.8	2.6%	**2003**	16.4	5.7%	**2003**	355.2	5.5%	**2003**	65.7	5.7%
2004	65.1	0.5%	**2004**	17.2	4.6%	**2004**	356.8	0.5%	**2004**	68.7	4.6%
2005	65.5	0.7%	**2005**	16.4	-4.6%	**2005**	359.4	0.7%	**2005**	65.5	-4.6%
2006	63.8	-2.7%	**2006**	17.7	8.3%	**2006**	350.0	-2.6%	**2006**	70.9	8.3%
2007	63.6	-0.3%	**2007**	18.5	4.1%	**2007**	348.6	-0.4%	**2007**	73.9	4.1%
2008	62.6	-1.6%	**2008**	16.6	-10.2%	**2008**	343.0	-1.6%	**2008**	66.4	-10.2%
2009	60.6	-3.1%	**2009**	15.5	-6.5%	**2009**	332.4	-3.1%	**2009**	62.0	-6.5%
2010	61.0	0.6%	**2010**	15.1	-2.6%	**2010**	334.4	0.6%	**2010**	60.4	-2.6%
2011	60.6	-0.6%	**2011**	15.4	2.0%	**2011**	332.4	-0.6%	**2011**	61.6	2.0%
2012	59.3	-2.2%	**2012**	16.0	3.9%	**2012**	324.9	-2.2%	**2012**	64.0	3.9%
2013	**58.3**	**-1.6%**	**2013**	**15.6**	**-2.2%**	**2013**	**319.8**	**-1.6%**	**2013**	**62.6**	**-2.2%**
2014	**58.6**	**0.4%**	**2014**	**15.9**	**1.6%**	**2014**	**321.2**	**0.4%**	**2014**	**63.6**	**1.6%**
2015	**59.4**	**1.4%**	**2015**	**16.4**	**3.1%**	**2015**	**325.6**	**1.4%**	**2015**	**65.6**	**3.1%**
2016	**60.2**	**1.3%**	**2016**	**16.8**	**2.4%**	**2016**	**330.0**	**1.3%**	**2016**	**67.2**	**2.4%**
2017	**60.6**	**0.7%**	**2017**	**17.1**	**1.8%**	**2017**	**332.1**	**0.7%**	**2017**	**68.4**	**1.8%**
2018	**60.9**	**0.5%**	**2018**	**17.3**	**1.2%**	**2018**	**333.8**	**0.5%**	**2018**	**69.2**	**1.2%**
2019	**61.0**	**0.2%**	**2019**	**17.4**	**0.8%**	**2019**	**334.5**	**0.2%**	**2019**	**69.7**	**0.8%**
2020	**61.2**	**0.3%**	**2020**	**17.6**	**0.9%**	**2020**	**335.4**	**0.3%**	**2020**	**70.4**	**0.9%**
2021	**61.4**	**0.3%**	**2021**	**17.8**	**1.1%**	**2021**	**336.4**	**0.3%**	**2021**	**71.1**	**1.1%**
2022	**61.6**	**0.4%**	**2022**	**18.0**	**1.2%**	**2022**	**337.6**	**0.4%**	**2022**	**71.9**	**1.2%**
2023	**61.8**	**0.3%**	**2023**	**18.2**	**1.3%**	**2023**	**338.8**	**0.3%**	**2023**	**72.9**	**1.3%**
2024	**62.0**	**0.3%**	**2024**	**18.4**	**1.2%**	**2024**	**339.8**	**0.3%**	**2024**	**73.8**	**1.2%**
2025	**62.2**	**0.3%**	**2025**	**18.7**	**1.2%**	**2025**	**340.9**	**0.3%**	**2025**	**74.7**	**1.2%**
2026	**62.4**	**0.4%**	**2026**	**18.9**	**1.3%**	**2026**	**342.2**	**0.4%**	**2026**	**75.6**	**1.3%**
2027	**62.7**	**0.5%**	**2027**	**19.2**	**1.3%**	**2027**	**343.8**	**0.5%**	**2027**	**76.6**	**1.3%**
2028	**63.1**	**0.5%**	**2028**	**19.4**	**1.3%**	**2028**	**345.7**	**0.5%**	**2028**	**77.6**	**1.3%**
2029	**63.4**	**0.5%**	**2029**	**19.7**	**1.3%**	**2029**	**347.5**	**0.5%**	**2029**	**78.6**	**1.3%**
2030	**63.7**	**0.5%**	**2030**	**19.9**	**1.3%**	**2030**	**349.4**	**0.5%**	**2030**	**79.7**	**1.3%**
2031	**64.1**	**0.5%**	**2031**	**20.2**	**1.3%**	**2031**	**351.1**	**0.5%**	**2031**	**80.7**	**1.3%**
2032	**64.3**	**0.4%**	**2032**	**20.4**	**1.3%**	**2032**	**352.6**	**0.4%**	**2032**	**81.7**	**1.3%**
2033	**64.7**	**0.5%**	**2033**	**20.7**	**1.3%**	**2033**	**354.5**	**0.5%**	**2033**	**82.8**	**1.3%**
2034	**65.0**	**0.5%**	**2034**	**21.0**	**1.3%**	**2034**	**356.3**	**0.5%**	**2034**	**83.9**	**1.3%**
2035	**65.3**	**0.5%**	**2035**	**21.2**	**1.3%**	**2035**	**358.1**	**0.5%**	**2035**	**85.0**	**1.3%**
2036	**65.7**	**0.5%**	**2036**	**21.5**	**1.3%**	**2036**	**360.0**	**0.5%**	**2036**	**86.1**	**1.3%**
2037	**66.0**	**0.5%**	**2037**	**21.8**	**1.3%**	**2037**	**361.8**	**0.5%**	**2037**	**87.3**	**1.3%**
2038	**66.3**	**0.5%**	**2038**	**22.1**	**1.3%**	**2038**	**363.7**	**0.5%**	**2038**	**88.4**	**1.3%**
2039	**66.7**	**0.5%**	**2039**	**22.4**	**1.3%**	**2039**	**365.5**	**0.5%**	**2039**	**89.6**	**1.3%**
2040	**67.0**	**0.5%**	**2040**	**22.7**	**1.3%**	**2040**	**367.4**	**0.5%**	**2040**	**90.8**	**1.3%**

Compound Average Annual Percent Change

	Gasoline Tax Revenue	Diesel Tax Revenue	Gasoline Tax Base	Diesel Tax Base
1981-2012	***3.3%***	***4.9%*** **(1984-2012)**	***1.0%***	***2.8%*** **(1984-2012)**
2013-2040	***0.5%***	***1.4%***	***0.5%***	***1.4%***

Primary Sources: Vermont JFO and KRA | Vermont JFO and KRA | Vermont JFO and KRA | Vermont JFO and KRA

** Pro forma $0.18245 constant rate basis for Gasoline Tax. Excludes TIB assessments, which were first implemented in FY2010.*

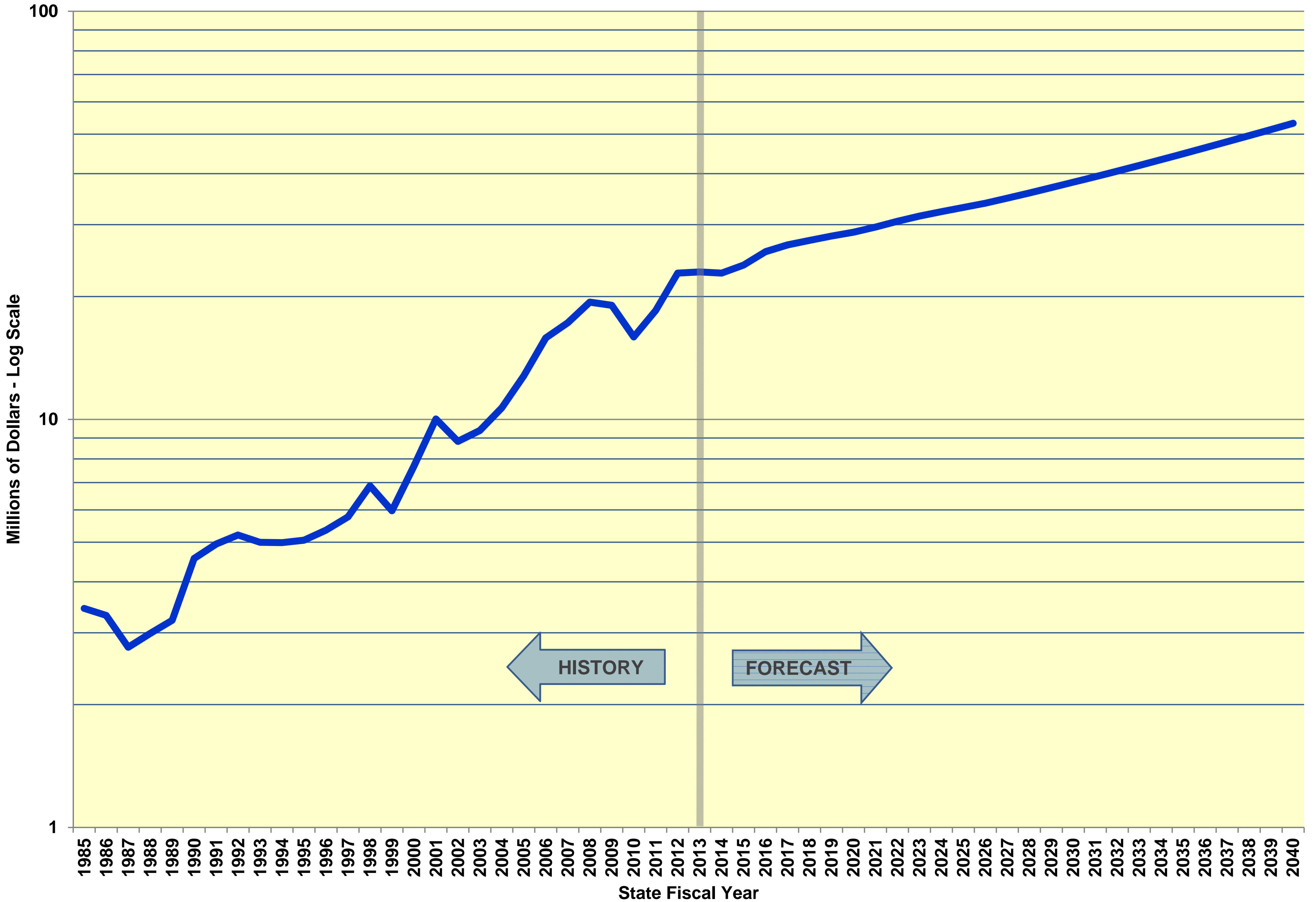
*** Taxable gallonage figures derived from actual revenue data.*

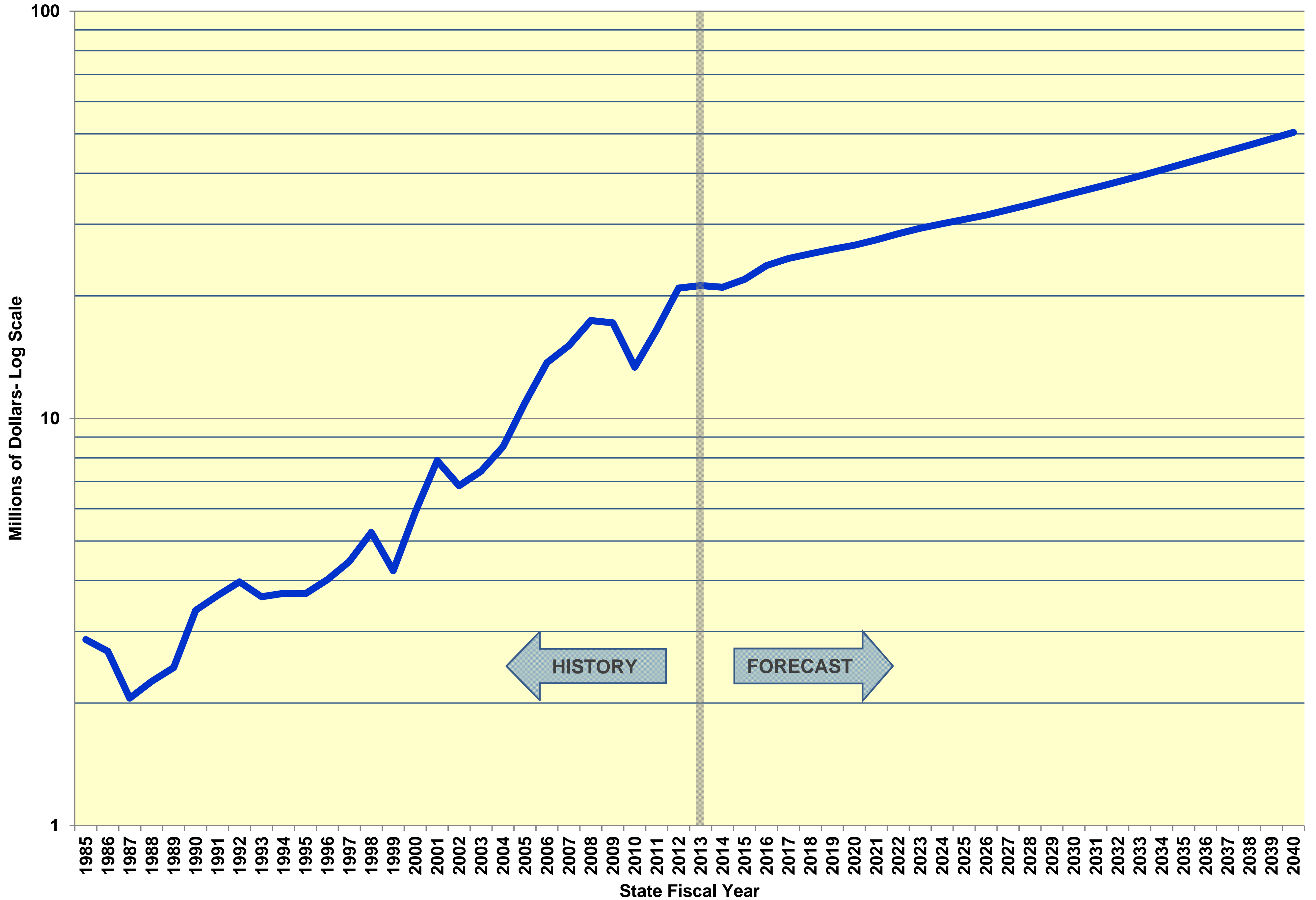
TABLE 5
Selected Economic and Revenue Metrics
Transportation Infrastructure Bond Analysis - July 2013

	Vermont "Blended" Average Gasoline Price Calendar Year Basis		Vermont TIB Revenues from Gasoline Assessment Fiscal Year Basis		Vermont TIB Revenues from Diesel Assessment Fiscal Year Basis		Vermont TIB Revenues Total Assessments Fiscal Year Basis	
	$ per Gallon	%ch	$Millions	%ch	$Millions	%ch	$Millions	%ch
1981								
1982								
1983								
1984								
1985	1.21							
1986	0.94	-22.2%						
1987	0.97	2.8%						
1988	0.97	0.6%						
1989	1.07	10.1%						
1990	1.23	14.8%						
1991	1.22	-0.8%						
1992	1.16	-4.6%						
1993	1.12	-3.5%						
1994	1.12	-0.2%						
1995	1.18	5.1%						
1996	1.24	4.9%						
1997	1.26	1.8%						
1998	1.07	-14.7%						
1999	1.16	8.0%						
2000	1.55	33.4%						
2001	1.47	-5.1%						
2002	1.36	-7.4%						
2003	1.59	17.3%						
2004	1.88	17.8%						
2005	2.31	23.2%						
2006	2.59	12.1%						
2007	2.81	8.4%						
2008	3.35	19.2%						
2009	2.34	-30.0%						
2010	2.82	20.4%	13.4		1.5		14.9	
2011	3.59	27.3%	16.5	23.6%	2.0	32.1%	18.5	24.4%
2012	3.74	4.2%	20.9	26.6%	1.9	-2.1%	22.8	23.5%
2013	**3.72**	**-0.7%**	**21.2**	**1.4%**	**1.8**	**-8.1%**	**23.0**	**0.6%**
2014	**3.77**	**1.4%**	**21.0**	**-0.9%**	**1.8**	**3.3%**	**22.8**	**-0.6%**
2015	**4.03**	**6.9%**	**22.0**	**4.6%**	**1.9**	**5.3%**	**23.9**	**4.6%**
2016	**4.17**	**3.5%**	**23.7**	**8.1%**	**2.0**	**4.5%**	**25.8**	**7.9%**
2017	**4.25**	**1.9%**	**24.7**	**4.1%**	**2.1**	**1.8%**	**26.8**	**3.9%**
2018	**4.35**	**2.4%**	**25.4**	**2.7%**	**2.1**	**1.2%**	**27.5**	**2.6%**
2019	**4.42**	**1.6%**	**26.0**	**2.6%**	**2.1**	**0.8%**	**28.1**	**2.5%**
2020	**4.53**	**2.4%**	**26.6**	**2.3%**	**2.1**	**0.9%**	**28.7**	**2.2%**
2021	**4.66**	**3.0%**	**27.5**	**3.1%**	**2.1**	**1.1%**	**29.6**	**2.9%**
2022	**4.79**	**2.6%**	**28.4**	**3.5%**	**2.2**	**1.2%**	**30.6**	**3.4%**
2023	**4.89**	**2.2%**	**29.3**	**3.1%**	**2.2**	**1.3%**	**31.5**	**3.0%**
2024	**4.99**	**2.0%**	**30.1**	**2.6%**	**2.2**	**1.2%**	**32.3**	**2.5%**
2025	**5.08**	**1.8%**	**30.8**	**2.5%**	**2.2**	**1.2%**	**33.1**	**2.4%**
2026	**5.20**	**2.4%**	**31.6**	**2.5%**	**2.3**	**1.3%**	**33.9**	**2.4%**
2027	**5.32**	**2.3%**	**32.5**	**3.0%**	**2.3**	**1.3%**	**34.8**	**2.9%**
2028	**5.45**	**2.4%**	**33.5**	**3.1%**	**2.3**	**1.3%**	**35.9**	**3.0%**
2029	**5.59**	**2.6%**	**34.6**	**3.2%**	**2.4**	**1.3%**	**37.0**	**3.1%**
2030	**5.73**	**2.5%**	**35.8**	**3.3%**	**2.4**	**1.3%**	**38.2**	**3.2%**
2031	**5.88**	**2.6%**	**36.9**	**3.2%**	**2.4**	**1.3%**	**39.3**	**3.1%**
2032	**6.03**	**2.6%**	**38.1**	**3.2%**	**2.5**	**1.3%**	**40.6**	**3.1%**
2033	**6.20**	**2.9%**	**39.4**	**3.4%**	**2.5**	**1.3%**	**41.9**	**3.3%**
2034	**6.37**	**2.7%**	**40.8**	**3.5%**	**2.5**	**1.3%**	**43.3**	**3.4%**
2035	**6.56**	**2.9%**	**42.2**	**3.5%**	**2.5**	**1.3%**	**44.8**	**3.3%**
2036	**6.75**	**2.9%**	**43.7**	**3.6%**	**2.6**	**1.3%**	**46.3**	**3.5%**
2037	**6.94**	**2.9%**	**45.3**	**3.6%**	**2.6**	**1.3%**	**47.9**	**3.5%**
2038	**7.14**	**2.9%**	**46.9**	**3.6%**	**2.7**	**1.3%**	**49.6**	**3.5%**
2039	**7.36**	**3.0%**	**48.6**	**3.6%**	**2.7**	**1.3%**	**51.3**	**3.5%**
2040	**7.58**	**3.0%**	**50.4**	**3.7%**	**2.7**	**1.3%**	**53.1**	**3.6%**

Compound Average Annual Percent Change

	Gasoline Price	Gasoline Assessment	Diesel Assessment	Total Assessments
1991-2012	***5.5%***	**NM**	**NM**	**NM**
2013-2040	***2.7%***	***3.3%***	***1.6%***	***3.2%***
Primary Sources:	VT PSD, Moody's, EIA, KRA	KRA	KRA	KRA


Pro Forma Vermont Total TIB Assessment Revenues
Sources: Vermont Joint Fiscal Office, KRA
100
10
1
Millions of Dollars - Log Scale
HISTORY
FORECAST
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040
State Fiscal Year


Pro Forma Vermont TIB Gasoline Assessment Revenues
Sources: Vermont Joint Fiscal Office, KRA
100
10
1
Millions of Dollars- Log Scale
HISTORY
FORECAST
1985
1986
1987
1988
1989
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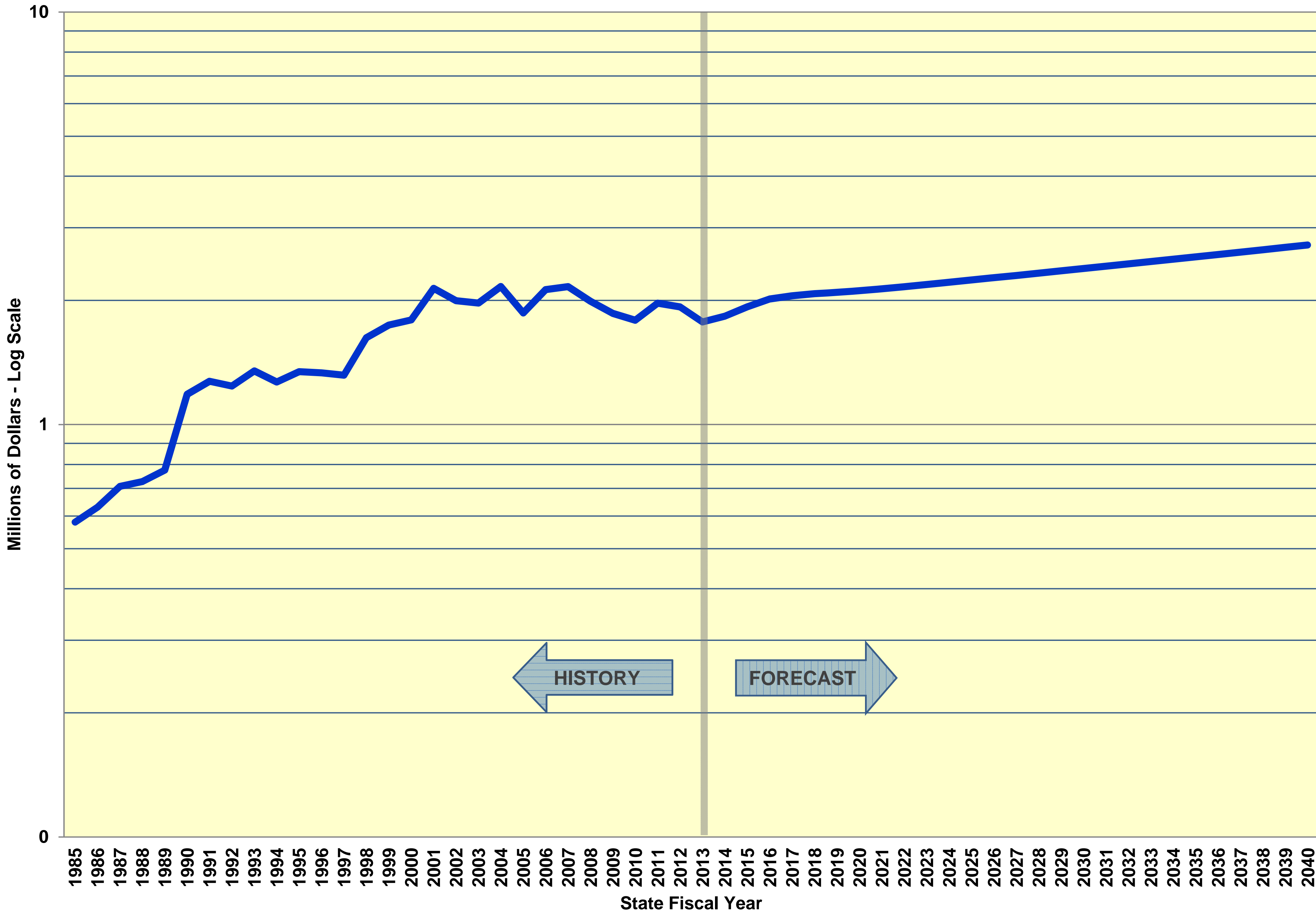
State Fiscal Year


Pro Forma Vermont TIB Diesel Assessment Revenues
Sources: Vermont Joint Fiscal Office, KRA
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1
0
Millions of Dollars - Log Scale
HISTORY
FORECAST
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040
State Fiscal Year

APPENDIX B

TABLE 6:

DEBT SERVICE CAPACITY SUMMARY
FOR PRO FORMA $99.625M
AGGREGATE PAR AMOUNT OF TIBS,
BASED ON REVENUE PROJECTIONS IN
FEASIBILITY STUDY ASSOCIATED WITH STATE OF VERMONT
TRANSPORTATION INFRASTRUCTURE BONDS
DATED JULY 23, 2013

TABLE 6

State of Vermont

Transportation Infrastructure Revenue Bonds

Pro Forma Debt Service Schedule for TIBs Issued Through FY2018*

Maturity Date	Fiscal Year	$23.09 Million** Existing TIBs Debt Service (Actual)	2013 Series A Debt Service (Estimated)	2014 Series A Debt Service (Projected)	2015 Series A Debt Service (Projected)	2016 Series A Debt Service (Projected)	2017 Series A Debt Service (Projected)	Grand Total Fiscal Year Debt Service (Projected)	MFTIA Revenue (FY13 Preliminary - All Other Projected)	Debt Service Coverage (Projected)
6/15/2013	2013								$22,971,842	
6/15/2014	2014	$1,687,425	$706,562					$2,393,987	$22,833,353	9.54
6/15/2015	2015	$1,686,425	$836,738	$1,104,880				$3,628,043	$23,886,477	6.58
6/15/2016	2016	$1,690,025	$836,738	$1,191,955	$1,148,611			$4,867,329	$25,762,194	5.29
6/15/2017	2017	$1,688,125	$836,138	$1,189,155	$1,250,890	$1,198,084		$6,162,392	$26,765,247	4.34
6/15/2018	2018	$1,687,650	$839,938	$1,188,870	$1,250,540	$1,310,895	$1,247,783	$7,525,676	$27,459,239	3.65
6/15/2019	2019	$1,691,600	$837,938	$1,191,570	$1,247,670	$1,308,245	$1,371,415	$7,648,438	$28,135,585	3.68
6/15/2020	2020	$1,683,175	$840,938	$1,191,450	$1,247,795	$1,308,125	$1,371,715	$7,643,198	$28,745,017	3.76
6/15/2021	2021	$1,687,525	$837,688	$1,189,035	$1,250,105	$1,310,875	$1,369,435	$7,644,663	$29,592,615	3.87
6/15/2022	2022	$1,690,975	$838,438	$1,189,235	$1,249,945	$1,310,645	$1,370,010	$7,649,248	$30,588,088	4.00
6/15/2023	2023	$1,688,475	$837,938	$1,191,795	$1,247,195	$1,307,890	$1,372,585	$7,645,878	$31,499,003	4.12
6/15/2024	2024	$1,690,175	$836,188	$1,191,415	$1,251,735	$1,312,490	$1,372,385	$7,654,388	$32,295,853	4.22
6/15/2025	2025	$1,691,238	$838,788	$1,188,675	$1,248,035	$1,308,895	$1,369,260	$7,644,890	$33,064,142	4.32
6/15/2026	2026	$1,685,525	$840,388	$1,193,475	$1,251,860	$1,312,155	$1,373,060	$7,656,463	$33,858,426	4.42
6/15/2027	2027	$1,687,275	$840,988	$1,191,085	$1,247,660	$1,307,355	$1,373,125	$7,647,488	$34,845,559	4.56
6/15/2028	2028	$1,685,463	$840,588	$1,190,825	$1,251,320	$1,309,605	$1,369,965	$7,647,765	$35,877,730	4.69
6/15/2029	2029	$1,687,150	$839,188	$1,192,350	$1,251,480	$1,309,060	$1,373,440	$7,652,668	$36,989,734	4.83
6/15/2030	2030	$1,687,150	$836,788	$1,191,180	$1,247,980	$1,309,805	$1,373,640	$7,646,543	$38,156,162	4.99
6/15/2031	2031	$694,900	$838,388	$1,192,235	$1,251,570	$1,311,405	$1,369,630	$6,658,128	$39,337,498	5.91
6/15/2032	2032	$695,250	$836,938	$1,189,215	$1,246,650	$1,309,325	$1,371,230	$6,648,608	$40,564,702	6.10
6/15/2033	2033		$839,213	$1,192,965	$1,247,380	$1,308,465	$1,373,585	$5,961,608	$41,886,950	7.03
6/15/2034	2034			$1,192,885	$1,249,080	$1,312,400	$1,371,275	$5,125,640	$43,314,254	8.45
6/15/2035	2035				$1,251,360	$1,311,400	$1,373,115	$3,935,875	$44,760,254	11.37
6/15/2036	2036					$1,310,335	$1,369,340	$2,679,675	$46,318,674	17.29
6/15/2037	2037						$1,369,810	$1,369,810	$47,931,240	34.99
TOTAL		$30,085,525	$16,636,500	$23,734,250	$24,888,861	$26,087,454	$27,305,803	$148,738,394	$847,439,838	

* Debt service schedule was provided to KRA by Public Resources Advisory Group, Inc. It reflects actual debt service on the 2010A and 2012A TIBs and estimated debt service on the 2013A TIBs assuming a par amount of $11.095 million and an assumed rate of interest of 4.11%. Projected debt service for Bonds to be issued subsequent to the 2013A TIBs is based upon bond par amounts sized to generate approximately $14.225 million in annual project fund proceeds and interest rates that are assumed to increase 50 basis points annually. The actual bond issues are also expected to fund debt service reserve fund deposits and costs of issuance. The State is not obligated to follow this pro forma schedule and, subject to compliance with the terms of the Trust Agreement, may choose to issue more or fewer Bonds and to do so at different times than shown in this table.

** Combined current outstanding aggregate principal amount of the 2010A TIBs originally issued in FY11 and the 2012A TIBs originally issued in FY13.

APPENDIX H

Title 32: Taxation and Finance

Chapter 13: DEBTS AND CLAIMS

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) have 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 but not limited to:

(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; No. 200 (Adj. Sess.), § 25, eff. June 9, 2008; 2009, No. 50, § 31.)