

2019 Debt Capacity Report

West Virginia State Treasurer's Office
John D. Perdue, Treasurer



EXECUTIVE SUMMARY

All data contained in this report is as of June 30, 2018. The most notable issuance of debt in the 2018 fiscal year was \$800 million in general obligation (GO) bonds for the Roads to Prosperity initiative. The goal of this investment is to capitalize on the following opportunities:

- to spur economic growth with an influx of capital investments;
- to replace the state's previous GO debt, which is quickly maturing, with new investment in West Virginia;
- to retain and create jobs with good pay; and
- to move West Virginia into an arena where it can compete with the best globally.

An additional \$800 million in GO bonds has been authorized over the next four (4) years. This will increase the state's overall debt service payments. However, careful consideration has been given to the revenues tied to servicing this debt. If fiscal prudence is exercised in managing the proceeds and carefully monitoring the state's economy, then this investment will pay dividends for many years to come.

This Debt Capacity Report is one tool to be used to monitor the fiscal prudence in managing the proceeds along with the state's economy. Pursuant to West Virginia Code §12-6A-6(e), the West Virginia State Treasurer is required to annually submit this Report to the Governor, the President of the Senate, the Speaker of the House of Delegates, the members of the Joint Committee on Government and Finance, the Legislative Auditor, and upon request to any other legislative committee and any other member of the Legislature. Additionally, the Report is posted to the West Virginia State Treasurer's website located at <https://www.wvsto.com/> for inspection by any citizen of the state. West Virginia Code requires this Report to examine the following:

- The amount of net tax supported debt outstanding and debt authorized but not issued during the current and next fiscal year and annually for the following ten fiscal years;
- Debt service requirements during the current and next fiscal year and annually for the following ten fiscal years based upon existing outstanding debt, previously authorized but unissued debt and projected bond authorizations;
- Any information available from the budget office of the department of revenue in connection with projected revenues and anticipated capital expenditures projected for at least the next five fiscal years;
- The amount of debt the state and its spending units may prudently issue;
- What is needed to keep West Virginia within an average to low range of nationally recognized debt limits;
- The debt ratios rating agencies and analysts use; and
- The effect of authorizations of new tax supported debt on each of the considerations in this subsection.

The Tax Cuts and Jobs Act of 2017 directly impacted municipal bonds, and therefore the types of some bonds issued by the State of West Virginia, by repealing authority to issue advance refunding bonds as tax credit and direct pay bonds after December 31, 2017. This will eliminate the opportunity to reduce the amount of debt the state and its many issuers owe. However, current refunding bonds may still be issued for callable bonds.

Net tax supported debt outstanding – To assist in analyzing the amount of the state’s debt capacity, *Table 1 - West Virginia Net Tax Supported Debt Outstanding as of June 30, 2018* is included on page 3. This table shows the breakdown of the state’s \$2.29 billion in outstanding net tax supported debt as of June 30, 2018. Net tax supported debt outstanding includes:

- General Obligation (GO) Bonds;
- Lottery Revenue Bonds;
- Bonds with debt service that is subject to an annual appropriation from the state’s General Revenue Fund; and
- Lease and Note Payable Obligations.

DISCLAIMER

Pursuant to W.Va. Code §12-6A-6, every state spending unit is required to report quarterly on its debt to the West Virginia State Treasurer’s Office. The Treasurer’s Office prepares this Report using information provided by the spending units and information from other sources considered reliable. This report is unaudited and may be amended when updated information is provided to the Treasurer’s Office.

**Table 1 - West Virginia Net Tax Supported Debt Outstanding
as of June 30, 2018**

Type of Debt	Principal Outstanding June 30, 2018
GENERAL OBLIGATION BONDS	
Safe Road Bonds	\$ 135,175,000
Roads to Prosperity Bonds	800,000,000
Infrastructure Improvement Bonds	<u>146,005,144</u>
Total General Obligation Bonds	\$ 1,081,180,144
REVENUE BONDS	
School Building Authority Capital Improvement Bonds	22,265,000
Economic Development Authority, Lottery Revenue Bonds	277,500,000
Economic Development Authority, Excess Lottery Revenue Bonds	147,195,000
Higher Education Policy Commission, Excess Lottery Revenue Bonds	271,820,000
Higher Education Policy Commission, Excess Lottery Revenue Bonds (BABs)	50,265,000
School Building Authority, Lottery Revenue Bonds	137,875,000
School Building Authority, Excess Lottery Revenue Bonds	83,490,000
School Building Authority, Excess Lottery Revenue Bonds(QSCBs)	150,480,000
West Virginia Infrastructure & Jobs Development Council, Excess Lottery Revenue Bonds	<u>67,610,000</u>
Total Revenue Bonds	1,208,500,000
TOTAL LEASE / NOTE OBLIGATIONS	<u>334,888,107</u>
GROSS TAX SUPPORTED DEBT	2,624,568,251
DEDUCTIONS FOR ESCROW/SINKING FUND/RESERVE FUNDS	
Economic Development Authority, Excess Lottery Revenue Bonds	(21,282,185)
Infrastructure Improvement Bonds, General Obligation Bonds	(26,100,000)
Economic Development Authority, Lottery Revenue Bonds	(135,940,000)
Higher Education Policy Commission Excess Lottery Revenue Bonds	(79,220,000)
School Building Authority, Excess Lottery Revenue Bonds(QSCBs)	<u>(76,852,628)</u>
Total Deductions	<u>(339,394,813)</u>
NET TAX SUPPORTED DEBT	<u>\$ 2,285,173,438</u>

The debt service, which includes both principal and interest payments, on the \$2.29 billion in net tax supported debt represented 5.21% of the state's General Revenue Fund receipts and 4.05% of specified revenue sources for Fiscal Year 2018. The specified revenue sources include the State Road Fund, lottery funds and certain dedicated severance taxes (see *Appendix B - Revenue Information* for more information on the revenues included in this calculation). Both of these ratios are below the recommended caps.

Another important factor when determining debt capacity and the health of the state's debt is amortization – or how rapidly is the state's debt maturing. With all scenarios remaining constant, the state will see a 5.18% decrease in its net tax supported debt outstanding within the next year. This does not include the authorized \$800 million to be issued over the next four (4) years for the Roads to Prosperity initiative. Please see pages 6-7 of this report for further explanation. The recommended caps noted below are for the following year for various debt ratios:

Table 2 - Recommended Ratio Caps as of June 30, 2018

Ratio	Recommended Cap	June 30, 2018 Level	Projected Highest Level (FY19-29)
Net Tax Supported Debt Service as a percentage of the General Revenue Fund	6.00%	5.21%	6.54% (June 30, 2019)
Net Tax Supported Debt Service as a percentage of Revenues	5.00%	4.05%	5.17% (June 30, 2019)
Net Tax Supported Debt as a percentage of Personal Income	3.00%	3.16%	2.89% (June 30, 2019)
Net Tax Supported Debt Per Capita	\$980	\$1,265	\$1,200 (June 30, 2019)
Net Tax Supported Debt as a Percentage of Assessed Valuation	2.0%	2.40%	2.22% (June 30, 2019)

Conclusion

The most important indicators of debt capacity include ratios, which account for the state's revenues, and how much of those revenues are dedicated to make payments on the state's debt burden. With the issuance of \$800 million in GO debt this fiscal year and another authorized \$800 million over the next four (4) years for the Roads to Prosperity initiative, state leaders must carefully monitor the state's ratios and be ready to take action, if necessary, to keep the state on the road to prosperity.

Debt Capacity

The legislative purpose of this report is to perform the following tasks:

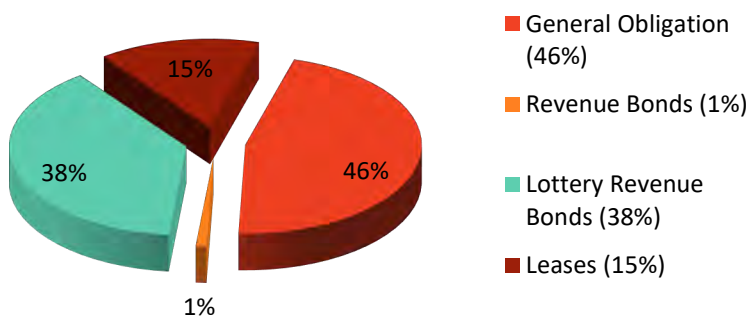
1. determine the amount of net tax supported debt outstanding;
2. calculate key ratios that are commonly used to examine debt; and
3. make recommendations which will attempt to keep the state within an average-to-low range of national recognized debt limits.

1. Determine the amount of net tax supported debt outstanding

The calculation of net tax supported debt is shown in *Table 1 - West Virginia Net Tax Supported Debt Outstanding as of June 30, 2018*, page 3. This \$2.29 billion figure includes General Obligation (GO) Bonds, Revenue Bonds of the School Building Authority of West Virginia that are subject to an annual appropriation from the General Revenue Fund, Lottery Revenue Bonds and Lease and Notes Payable Obligations of state spending units, including state colleges and universities.

The highest quality bonds the State can issue are GO Bonds because these bonds pledge the full faith and credit of the state and are authorized only by a constitutional amendment. Currently, GO Bonds constitute the largest portion of the state's net tax supported debt outstanding at approximately 46% (see chart titled *West Virginia Net Tax Supported Debt by Type as of June 30, 2018* below). The State of West Virginia issued a "new money" GO Bond in June 2018 with the Roads to Prosperity Bonds totaling \$800 million.

West Virginia Net Tax Supported Debt by Type as of June 30, 2018



The second largest type of debt consists of bonds backed by various pledges of revenue generated from the West Virginia Lottery. Revenues from the West Virginia Lottery are anticipated to remain consistent between fiscal year 2019 to 2020. Projections show the revenues increase approximately \$25 million for fiscal year 2021. See *Appendix B - Revenue Information* for revenue projections. During the 2014 West Virginia legislative session,

the Legislature approved statutory changes which addressed adequate debt service coverage ratio limits on the Excess Lottery Fund and provided a cross-collateral mechanism for lottery revenue bonds.

There are also several spending units with outstanding Revenue Bonds at June 30, 2018 (see *Table 3 – Various Revenue Bonds Outstanding*, page 8). These Revenue Bonds are excluded from the calculation

of net tax supported debt because they are self-supporting. For example, the bonds issued by the Tobacco Settlement Financing Authority of West Virginia are excluded because the debt service is paid from tobacco settlement funds.

Comparison between Actual Debt Service Payments and Estimated Debt Service Payments Assuming the Issuance of the Additional Authorized \$800 million in GO Bonds

While the current net tax supported debt is \$2.29 billion, this does not include the \$800 million authorized to be issued over the next four (4) years as part of the Roads to Prosperity initiative. The authorized amounts are as follows:

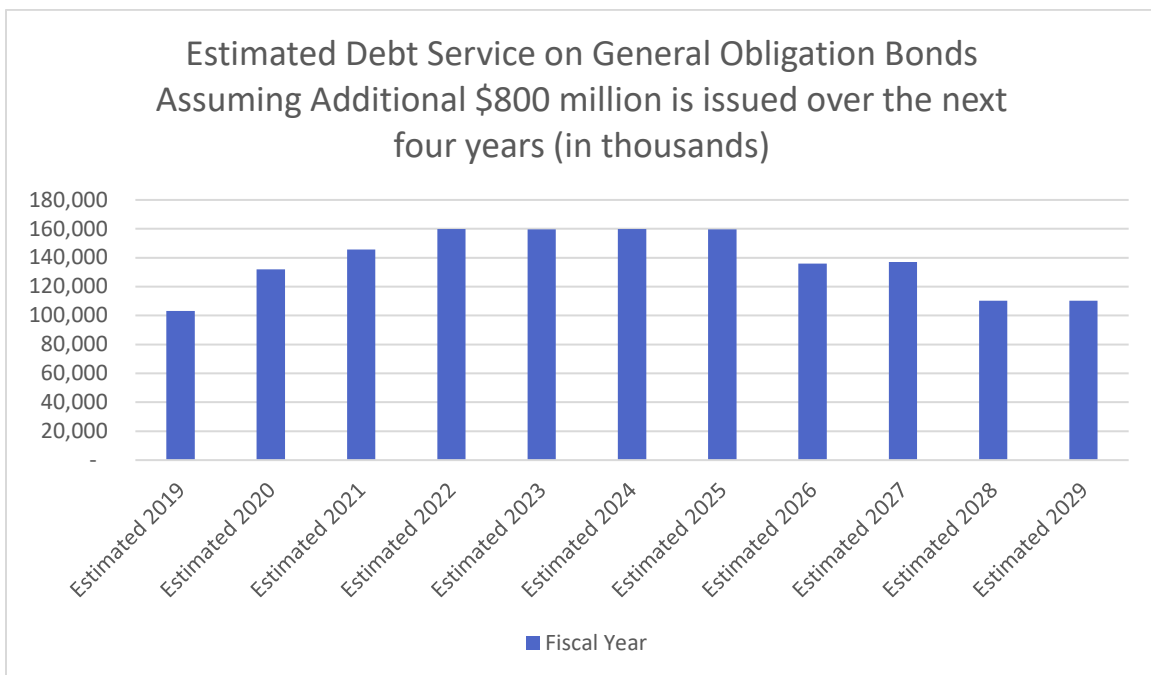
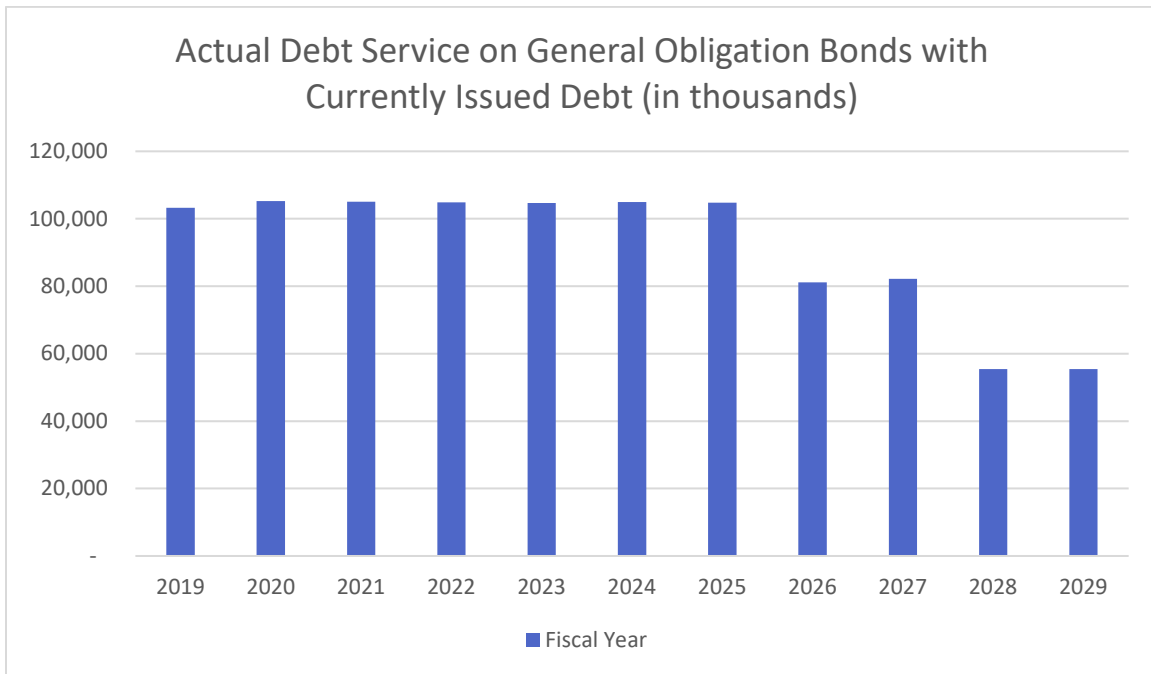
- July 1, 2018, an amount not to exceed \$400 million;
- July 1, 2019, an amount not to exceed \$200 million; and
- July 1, 2020, an amount not to exceed \$200 million.

As previously mentioned, the issuance of this debt will be an investment in the future of the State, as well as a potential burden with the required debt service payments to be supported by the taxpayers.

This report gives recommendations for the State to maintain a “moderate-to-low” debt burden. As one might anticipate, the issuance of this debt will most likely put the State outside the recommended ratios.

Assuming the issuances occur as noted above, this Debt Capacity Report projects an additional \$12 million in principal payments and an additional \$15 million in interest payments, for a total of \$27 million in fiscal year 2020. Furthering on the assumed issuances noted above, this Debt Capacity Report projects an additional \$18 million in principal payments and an additional \$23 million in interest payments, for a total of \$41 million in fiscal year 2021. Finally, assuming the issuances as stated above, this Debt Capacity Report projects an additional \$26 million in principal payments and an additional \$30 million in interest payments, for a total of \$55 million in fiscal year 2022. These assumptions are based on a projected True Interest Cost (TIC) in the range of 4.07% to 4.17%. The total projected debt service payments for fiscal year 2023 to 2029 would remain at \$55 million per year.

The next two graphs, *Actual Debt Service on General Obligation Bonds with Currently Issued Debt (in thousands)* and *Estimated Debt Service on General Obligation Bonds Assuming Additional \$800 million is issued over the next four (4) years (in thousands)*, depict the current debt service requirements as well as the projected debt service requirements assuming the issuance of all \$800 million over the next four (4) years.



Although certain bonds of the West Virginia Water Development Authority and the West Virginia Housing Development Fund are considered moral obligations of the state, these bonds are currently self-supporting and are excluded from the calculation of net tax supported debt.

Table 3 – Various Revenue Bonds Outstanding June 30, 2018	
Entity	Principal Outstanding
Concord University	\$ 15,800,000
Economic Development Authority	2,116,528,779
Fairmont State University	71,955,040
Glenville State College	39,109,038
Higher Education Policy Commission	61,826,088
Highways, Division of	219,985,000
Hospital Finance Authority	1,913,360,216
Housing Development Fund	287,825,000
Infrastructure & Jobs Development Council	95,185,000
Marshall University	76,685,000
Mountwest Community and Technical College	1,515,606
Parkways Authority	10,285,000
* Regional Jail Authority	31,190,000
Shepherd University	38,172,916
Tobacco Settlement Finance Authority of West Virginia	782,538,000
Water Development Authority	170,111,000
West Liberty University	15,110,482
West Virginia State University	12,024,083
West Virginia University	576,685,429
NON TAX SUPPORTED DEBT	<u>\$6,535,891,677</u>

* - does not include lease-backed bonds issued by the Economic Development Authority. The lease-backed bonds are included in net tax supported debt as lease obligations.

Calculations of the net tax supported debt and debt service of the State of West Virginia for fiscal years 2013 through 2029 are contained in Table 4 and Table 5 (*Table 4 – Net Tax Supported Debt Outstanding for Fiscal Years 2013-2029* and *Table 5 - Net Tax Supported Debt Services for Fiscal Years 2019-2029*, pages 10 – 13). Fiscal years 2013 through 2017 are included to show the historical perspective of the actual debt issued and the debt service requirements for those obligations. The most recent and next ten fiscal years, 2018 through 2029, are included to show expected debt levels as existing obligations mature.

Revenue information included in Table 4 and Table 5 (*Table 4 – Net Tax Supported Debt Outstanding for Fiscal Years 2013-2029* and *Table 5 - Net Tax Supported Debt Services for Fiscal Years 2019-2029*, pages 10 – 13) was compiled and provided by the West Virginia Department of Revenue and is included in *Appendix B - Revenue Information*. The projected values of personal income were obtained from IHS Markit (“WV Annual Long-Term Forecast” November 2018).

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Table 4. NET TAX SUPPORTED DEBT OUTSTANDING FOR FISCAL YEARS 2013 - 2029

	6/30/2013 FY13	6/30/2014 FY14	6/30/2015 FY15	6/30/2016 FY16	6/30/2017 FY17	6/30/2018 FY18
General Obligation						
Safe Roads of 1996	245,365,000	220,525,000	168,845,000	166,385,000	151,160,000	135,175,000
Roads to Prosperity of 2017	-	-	-	-	-	800,000,000
(1) Infrastructure of 1994	<u>186,474,763</u>	<u>174,735,525</u>	<u>158,633,538</u>	<u>146,294,132</u>	<u>130,360,960</u>	<u>119,905,144</u>
Total General Obligation	431,839,763	395,260,525	327,478,538	312,679,132	281,520,960	1,055,080,144
Moral Obligations						
Economic Development Authority - Excess Lottery	173,070,000	163,830,000	154,170,000	144,065,000	133,415,000	147,195,000
Economic Development Authority - Lottery	148,250,000	145,370,000	142,360,000	139,230,000	135,940,000	141,560,000
(5) Higher Education Policy Commission - Excess Lottery	235,375,000	227,675,000	219,640,000	211,255,000	203,650,000	192,600,000
Higher Education Policy Commission - Excess Lottery (BABs)	50,265,000	50,265,000	50,265,000	50,265,000	50,265,000	50,265,000
(2) School Building Authority - Appropriation	142,535,000	126,190,000	109,075,000	91,040,000	72,105,000	22,265,000
(2) School Building Authority - Lottery	67,360,000	76,055,000	72,010,000	89,100,000	104,930,000	137,875,000
(3) School Building Authority - Excess Lottery	108,060,000	103,520,000	98,780,000	94,250,000	88,990,000	83,490,000
School Building Authority - Excess Lottery (QSCBs)	150,480,000	150,480,000	150,480,000	150,480,000	150,480,000	150,480,000
West Virginia Infrastructure & Jobs Development Council - Excess Lottery	-	-	75,790,000	72,475,000	70,100,000	67,610,000
Total Moral Obligations	1,075,395,000	1,043,385,000	1,072,570,000	1,042,160,000	1,009,875,000	993,340,000
Leases and Notes Payables						
(4) Leases	<u>322,874,298</u>	<u>302,462,341</u>	<u>316,784,254</u>	<u>353,187,239</u>	<u>340,488,736</u>	<u>334,888,107</u>
Total Leases	322,874,298	302,462,341	316,784,254	353,187,239	340,488,736	334,888,107
Deductions for debt service reserve accounts						
Economic Development Authority - Excess Lottery	(24,077,819)	(24,941,484)	(25,160,499)	(25,192,359)	(19,782,648)	(21,282,185)
School Building Authority	(23,020,801)	(23,020,801)	(23,020,801)	(23,020,801)	(23,020,801)	-
School Building Authority - Lottery	(14,180,000)	-	-	-	-	-
School Building Authority - Excess Lottery (QSCBs) - debt service sinking fund	(30,877,898)	(40,072,844)	(49,267,790)	(58,462,736)	(67,657,682)	(76,852,628)
Net Tax Supported Debt Outstanding	<u>1,737,952,543</u>	<u>1,653,072,737</u>	<u>1,619,383,702</u>	<u>1,601,350,475</u>	<u>1,521,423,565</u>	<u>2,285,173,438</u>
Assessed value (in thousands)	86,578,234	88,238,953	92,273,972	95,155,186	93,757,123	95,153,945
Net tax supported debt as a percentage of assessed value	2.01%	1.87%	1.75%	1.68%	1.62%	2.40%
Income (in thousands)	64,792,619	66,679,676	67,736,679	67,582,876	69,872,741	72,317,879
Net tax supported debt as a percentage of personal income	2.68%	2.48%	2.39%	2.37%	2.18%	3.16%
Population	1,853,595	1,850,326	1,844,128	1,831,102	1,815,857	1,805,832
Net tax supported debt per capita	937.61	893.40	878.13	874.53	837.85	1,265.44

Income and Assessed value information and projections provided by the West Virginia Department of Revenue
Population information obtained from the U.S. Census Bureau

- (1) - Cash basis and net of escrowed bonds
(2) - Reported as paid from the School Building Authority to the Trustee
(3) - FY17 & FY18 are reported as "net" outstanding due to an advance refunding.
(4) - Compiled by the Division of Debt Management. Does not match the State's CAFR due to differences in the leases that are included
(5) - The Higher Education Excess Lottery Revenue Bonds, Series 2004B were incorrectly reported in the 2014 Annual Debt Position Report. The FY2014 amount outstanding has been properly updated.

6/30/2019 FY19	6/30/2020 FY20	6/30/2021 FY21	6/30/2022 FY22	6/30/2023 FY23	6/30/2024 FY24	6/30/2025 FY25	6/30/2026 FY26	6/30/2027 FY27	6/30/2028 FY28	6/30/2029 FY29
118,390,000	100,830,000	82,460,000	63,240,000	43,130,000	22,090,000	-	-	-	-	-
782,305,000	764,455,000	745,795,000	726,475,000	706,205,000	684,930,000	662,585,000	639,105,000	614,450,000	588,550,000	561,335,000
108,002,634	95,487,884	82,771,968	69,768,844	56,374,103	42,812,275	28,892,329	14,573,054	-	-	-
1,008,697,634	960,772,884	911,026,968	859,483,844	805,709,103	749,832,275	691,477,329	653,678,054	614,450,000	588,550,000	561,335,000
134,970,000	121,655,000	107,655,000	92,930,000	77,320,000	60,775,000	43,230,000	24,635,000	16,855,000	15,670,000	14,425,000
137,765,000	133,780,000	129,595,000	125,200,000	120,585,000	115,740,000	110,650,000	105,310,000	99,700,000	93,810,000	87,630,000
186,050,000	177,430,000	168,430,000	158,990,000	149,090,000	138,700,000	127,790,000	116,350,000	106,715,000	96,610,000	86,000,000
50,265,000	50,265,000	50,265,000	50,265,000	50,265,000	50,265,000	50,265,000	50,265,000	47,755,000	45,120,000	42,360,000
-	-	-	-	-	-	-	-	-	-	-
129,105,000	119,965,000	110,375,000	100,335,000	89,805,000	78,730,000	67,130,000	54,990,000	42,300,000	31,585,000	22,770,000
77,760,000	71,800,000	65,550,000	59,005,000	52,135,000	44,925,000	37,365,000	29,435,000	18,700,000	7,430,000	3,805,000
150,480,000	150,480,000	150,480,000	150,480,000	150,480,000	120,480,000	120,480,000	72,280,000	-	-	-
64,995,000	62,245,000	59,360,000	56,330,000	53,150,000	49,810,000	46,305,000	42,625,000	38,760,000	34,700,000	30,440,000
931,390,000	887,620,000	841,710,000	793,535,000	742,830,000	659,425,000	603,215,000	495,890,000	370,785,000	324,925,000	287,430,000
334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000
334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000	334,000,000
(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)	(21,282,185)
-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-
(86,047,574)	(95,242,520)	(104,437,466)	(113,632,412)	(122,827,358)	(101,822,304)	(109,017,250)	(68,012,196)	-	-	-
2,166,757,875	2,065,868,179	1,961,017,317	1,852,104,247	1,738,429,560	1,620,152,786	1,498,392,894	1,394,273,673	1,297,952,815	1,226,192,815	1,161,482,815
97,532,794	99,971,113	102,470,391	105,032,151	107,657,955	110,349,404	113,108,139	115,935,842	118,834,238	121,805,094	121,805,094
2.22%	2.07%	1.91%	1.76%	1.61%	1.47%	1.32%	1.20%	1.09%	1.01%	0.95%
75,100,589	78,251,722	81,182,492	84,228,783	87,328,664	90,517,522	93,475,018	97,118,421	100,691,492	104,497,590	104,497,590
2.89%	2.64%	2.42%	2.20%	1.99%	1.79%	1.60%	1.44%	1.29%	1.17%	1.11%
1,805,832	1,805,832	1,805,832	1,805,832	1,805,832	1,805,832	1,805,832	1,805,832	1,805,832	1,805,832	1,805,832
1,199.87	1,144.00	1,085.94	1,025.62	962.68	897.18	829.75	772.09	718.76	679.02	643.18

Table 5. NET TAX SUPPORTED DEBT SERVICE FOR FISCAL YEARS 2013 - 2029

	6/30/2013 FY13	6/30/2014 FY14	6/30/2015 FY15	6/30/2016 FY16	6/30/2017 FY17	6/30/2018 FY18
General Obligation Debt Service						
Safe Roads of 1996	38,402,531	36,756,900	6,040,150	11,163,738	23,192,900	23,191,650
Roads to Prosperity of 2017	-	-	-	-	-	-
Infrastructure of 1994	<u>22,755,699</u>	<u>22,769,275</u>	<u>21,616,903</u>	<u>22,068,153</u>	<u>21,656,353</u>	<u>19,377,313</u>
Total General Obligation Debt Service	61,158,230	59,526,175	27,657,053	33,231,891	44,849,253	42,568,963
Moral Obligation Debt Service						
Economic Development Authority - Excess Lottery	18,794,224	18,778,390	18,764,110	18,714,645	18,702,373	19,085,664
Economic Development Authority - Lottery	9,999,813	9,999,013	9,995,513	9,995,113	9,998,613	6,184,369
Higher Education Policy Commission - Excess Lottery	19,238,324	19,012,939	18,784,515	18,652,971	17,466,532	16,136,902
Higher Education Policy Commission - Excess Lottery (BABs)	3,823,673	3,823,673	3,823,673	3,823,673	3,823,673	3,823,673
School Building Authority - Appropriation	23,308,645	23,308,582	23,312,770	23,423,270	23,421,520	17,537,208
School Building Authority - Lottery	17,996,910	17,995,460	7,513,455	7,906,094	9,549,613	11,911,709
School Building Authority - Excess Lottery	9,797,631	9,797,581	9,798,831	8,508,661	9,797,513	9,799,888
School Building Authority - Excess Lottery (QSCBs)	9,194,946	9,194,946	9,194,946	9,194,946	9,194,946	9,194,946
State Building Commission - Lottery	-	-	-	-	-	-
West Virginia Infrastructure & Jobs Development Council - Excess Lottery	-	-	789,479	7,021,625	5,939,375	5,932,750
Total Moral Obligation Debt Service	112,154,166	111,910,584	101,977,291	107,240,997	107,894,158	99,607,109
Leases and Notes Payables Debt Service						
Leases	<u>45,368,773</u>	<u>43,169,782</u>	<u>38,905,103</u>	<u>41,109,711</u>	<u>50,307,343</u>	<u>79,144,998</u>
Total Lease debt service	45,368,773	43,169,782	38,905,103	41,109,711	50,307,343	79,144,998
Net Tax Supported Debt Service						
	<u>218,681,169</u>	<u>214,606,540</u>	<u>168,539,448</u>	<u>181,582,599</u>	<u>203,050,753</u>	<u>221,321,070</u>
General revenue fund (expressed in thousands)	4,059,121	4,106,106	4,193,310	4,102,679	4,166,510	4,245,258
Debt service as a percentage of general revenue fund	5.39%	5.23%	4.02%	4.43%	4.87%	5.21%
Revenue (expressed in thousands and as defined in the rule)	5,150,746	5,201,032	5,364,708	5,220,305	5,266,423	5,460,235
Debt as a percentage of revenue (as defined in the rule)	4.25%	4.13%	3.14%	3.48%	3.86%	4.05%

Revenue information provided by the West Virginia
Department of Revenue (see Appendix B).

- FY14 debt service does NOT include bonds that had been advance refunded and were called on April 1, 2014

6/30/2019 FY19	6/30/2020 FY20	6/30/2021 FY21	6/30/2022 FY22	6/30/2023 FY23	6/30/2024 FY24	6/30/2025 FY25	6/30/2026 FY26	6/30/2027 FY27	6/30/2028 FY28	6/30/2029 FY29
23,192,400	23,193,000	23,192,450	23,194,100	23,196,100	23,196,500	23,194,500	-	-	-	-
55,419,152	55,425,031	55,422,881	55,425,106	55,423,356	55,421,131	55,417,531	55,421,281	55,424,656	55,421,531	55,425,281
20,556,969	21,947,475	21,935,925	21,954,900	21,937,975	22,201,225	22,210,175	22,201,375	22,201,000	-	-
99,168,521	100,565,506	100,551,256	100,574,106	100,557,431	100,818,856	100,822,206	77,622,656	77,625,656	55,421,531	55,425,281
20,250,210	20,677,891	20,655,484	20,572,727	20,546,770	20,516,058	20,492,126	20,456,512	8,852,828	1,998,125	1,997,375
9,993,400	9,993,650	9,994,400	9,995,150	9,995,400	9,994,650	9,997,400	9,992,900	9,995,900	9,995,400	9,990,900
15,632,684	17,354,984	17,322,234	17,317,821	17,310,971	17,310,471	17,314,576	17,302,420	14,928,070	14,918,920	14,920,625
3,823,673	3,823,673	3,823,673	3,823,673	3,823,673	3,823,673	3,823,673	3,823,673	6,333,673	6,271,678	6,200,370
23,378,250	-	-	-	-	-	-	-	-	-	-
15,233,863	15,230,163	15,239,013	15,232,713	15,220,713	15,239,213	15,227,900	15,234,900	15,223,275	12,657,350	10,221,600
9,793,800	9,797,850	9,799,075	9,792,000	9,796,900	9,800,850	9,798,150	9,798,250	12,206,750	12,205,000	3,996,500
9,194,946	9,194,946	9,194,946	9,194,946	9,194,946	8,994,946	7,194,946	7,194,946	4,267,804	-	-
-	-	-	-	-	-	-	-	-	-	-
5,930,125	5,931,000	5,925,125	5,922,250	5,917,000	5,914,000	5,907,875	5,903,250	5,899,625	5,896,500	5,885,500
113,230,951	92,004,157	91,953,950	91,851,280	91,806,373	91,593,861	89,756,646	89,706,851	77,707,924	63,942,973	53,212,870
78,000,000	78,000,000	75,000,000	75,000,000	75,000,000	73,000,000	73,000,000	73,000,000	70,000,000	70,000,000	70,000,000
78,000,000	78,000,000	75,000,000	75,000,000	75,000,000	73,000,000	73,000,000	73,000,000	70,000,000	70,000,000	70,000,000
290,399,472	270,569,663	267,505,206	267,425,386	267,363,804	265,412,717	263,578,852	240,329,507	225,333,580	189,364,504	178,638,151
4,439,920	4,725,820	4,855,600	4,976,430	5,128,250	5,290,580	5,422,845	5,558,416	5,697,376	5,862,011	6,008,561
6.54%	5.73%	5.51%	5.37%	5.21%	5.02%	4.86%	4.32%	3.96%	3.23%	2.97%
5,620,118	5,915,125	6,059,892	6,167,842	6,305,655	6,467,027	6,605,951	6,741,513	6,880,473	7,022,907	7,169,457
5.17%	4.57%	4.41%	4.34%	4.24%	4.10%	3.99%	3.56%	3.27%	2.70%	2.49%

General Obligation Bonds

Safe Roads Amendment of 1996 and Roads to Prosperity Amendment of 2017

As of June 30, 2018

Principal outstanding: \$935,175,000

Authorization remains for \$800,000,000 in "new money"

- FY 2019
 - Principal due: \$34,480,000
 - Interest due: \$44,131,552
 - Principal Outstanding: \$900,695,000
- FY 2020
 - Principal due: \$35,410,000
 - Interest due: \$43,208,031
 - Principal Outstanding: \$865,285,000
- FY2021
 - Principal due: \$37,030,000
 - Interest due: \$41,585,331
 - Principal Outstanding: \$828,255,000
- FY 2022
 - Principal due: \$38,540,000
 - Interest due: \$40,079,206
 - Principal Outstanding: \$789,715,000
- FY 2023
 - Principal due: \$40,380,000
 - Interest due: \$38,239,456
 - Principal Outstanding: \$749,355,000
- FY 2024
 - Principal due: \$42,315,000
 - Interest due: \$36,302,631
 - Principal Outstanding: \$707,020,000
- FY 2025
 - Principal due: \$44,435,000
 - Interest due: \$34,177,031
 - Principal Outstanding: \$662,585,000
- FY 2026
 - Principal due: \$23,480,000
 - Interest due: \$31,941,281
 - Principal Outstanding: \$639,105,000
- FY 2027
 - Principal due: \$24,655,000
 - Interest due: \$30,769,656
 - Principal Outstanding: \$614,450,000
- FY 2028
 - Principal due: \$25,900,000
 - Interest due: \$29,521,531
 - Principal Outstanding: \$588,500,000
- FY 2029
 - Principal due: \$27,215,000
 - Interest due: \$28,210,281
 - Principal Outstanding: \$561,335,000

Components of net tax supported debt as of June 30, 2018 General Obligation Bonds

Safe Road Amendment of 1996 and Roads to Prosperity

Amendment of 2017 – The Safe Road Amendment of 1996

authorized bonds to be issued in an amount not to exceed \$550 million. All of these bonds will be completely retired by June 1, 2025. The Roads to Prosperity Amendment of 2017 authorized bonds to be issued in an amount not to exceed \$1.6 billion. All of the currently issued bonds will be completely retired by June 1, 2043.

The Safe Road and Roads to Prosperity bonds are paid from the state's Road Fund. The following table shows the debt service burden on the Road Fund, which will peak during fiscal year 2024. After 2024, the debt service burden is expected to drop from 9.67% in fiscal year 2024 through maturity in fiscal year 2043. This does not include the authorized \$800 million to be issued over the next four (4) years. Please see pages 6-7 for further explanation.

Table 6 – Debt Service Burden, State Road Fund as of June 30, 2018

Fiscal Year	Debt Service	Road Fund Revenue	Debt Service as % of
			Road Fund
2013	38,402,531	688,327,000	5.58%
2014	36,756,900	734,717,000	5.00%
2015 *	6,040,150	742,998,000	0.81%
2016 *	11,163,738	691,481,000	1.61%
2017	23,192,900	691,645,000	3.35%
2018	23,191,650	797,088,000	2.91%
2019	78,611,552	818,745,000	9.60%
2020	78,618,031	826,462,000	9.51%
2021	78,615,331	816,460,000	9.63%
2022	78,619,206	817,561,000	9.62%
2023	78,619,456	814,571,000	9.65%
2024	78,617,631	813,350,000	9.67%
2025	78,612,031	820,000,000	9.59%
2026	55,421,281	820,000,000	6.76%
2027	55,424,656	820,000,000	6.76%
2028	55,421,531	820,000,000	6.76%
2029	55,425,281	820,000,000	6.76%

*Does not include amounts paid through refunding.

General Obligation Bonds Continued

General Obligation Bonds

Infrastructure Improvement Amendment of 1994

As of June 30, 2018

Principal outstanding: \$119,905,144

No remaining authorization for "new money" debt

- FY 2019
 - Principal due: \$11,902,510
 - Interest due: \$8,654,459
 - Principal Outstanding: \$108,002,634
- FY 2020
 - Principal due: \$12,514,750
 - Interest due: \$9,432,725
 - Principal Outstanding: \$95,487,884
- FY 2021
 - Principal due: \$12,715,916
 - Interest due: \$9,220,009
 - Principal Outstanding: \$82,771,968
- FY 2022
 - Principal due: \$13,003,124
 - Interest due: \$8,951,777
 - Principal Outstanding: \$69,768,844
- FY 2023
 - Principal due: \$13,394,741
 - Interest due: \$8,543,234
 - Principal Outstanding: \$56,374,103
- FY 2024
 - Principal due: \$13,561,828
 - Interest due: \$8,639,397
 - Principal Outstanding: \$42,812,275
- FY 2025
 - Principal due: \$13,919,946
 - Interest due: \$8,290,229
 - Principal Outstanding: \$28,892,329
- FY 2026
 - Principal due: \$14,319,275
 - Interest due: \$7,882,100
 - Principal Outstanding: \$14,573,054
- FY 2027
 - Principal due: \$14,573,054
 - Interest due: \$7,627,946
 - Principal Outstanding: \$0

Infrastructure Improvement Amendment of 1994 – The Infrastructure Improvement Amendment of 1994 authorized bonds to be issued in an amount not to exceed \$300 million for water supply and sewage treatment systems and economic development sites. The bonds are secured by the first collections of severance taxes. Beginning in April 2016, the annual dedication of collections will be based on an amortization schedule published by the West Virginia State Treasurer, not to exceed \$22.25 million per year. All of the bonds issued will be retired by November 1, 2026. Table 7 (*Table 7 – Debt Service Infrastructure GO Bonds as of June 30, 2018*) shows the debt service on all Infrastructure GO Bonds and the appropriation of dedicated severance tax collections as of June 30, 2018.

Table 7 – Debt Service Infrastructure GO Bonds as of June 30, 2018

Fiscal Year	Debt Service	Annual Appropriation
2016	22,068,153	22,500,000
2017	21,656,353	21,656,000
2018	19,377,313	19,377,000
2019	20,556,969	20,557,000
2020	21,947,475	21,947,000
2021	21,935,925	21,936,000
2022	21,954,900	21,955,000
2023	21,937,975	21,938,000
2024	22,201,225	22,201,000
2025	22,210,175	22,210,000
2026	22,201,375	22,201,000
2027	22,201,000	22,201,000

Authorized but unissued – Vietnam Veterans Bonus Amendment of 1973, Veterans Bonus Amendment of 1992 and Veterans Bonus Amendment of 2004 authorized the sale of bonds of not more than \$40 million, \$4 million and \$8 million, respectively, for the purpose of paying a bonus to the veterans serving in foreign conflicts. General Revenue funds were used to pay all of these bonuses and no bonds were issued.

Qualified Veterans Housing Bonds Amendment of 1984 – The Qualified Veterans Housing Bonds Amendment of 1984 authorized the sale of bonds to provide financing for owner-occupied residences for persons determined by the Legislature to be qualified veterans. The amount of bonds that may be issued is limited to bonds in which the annual principal and interest do not exceed a total of \$35 million in any fiscal year.

Components of net tax supported debt as of June 30, 2018 Revenue Bonds

Bonds subject to an annual appropriation from the General Revenue Fund (School Building Authority of West Virginia) –

There is currently one outstanding issue utilizing this funding source for repayment and it is a refunding. All of the bonds in this issuance will mature by July 1, 2019. The debt service is paid through an annual appropriation from the West Virginia Legislature. Debt service and debt outstanding information is included on *Table 5 - Net Tax Supported Debt Services for Fiscal Years 2019-2029*, page 12.

Revenue Bonds

Bonds subject to an annual appropriation from the General Revenue Fund (School Building Authority of West Virginia)

As of June 30, 2018

Principal outstanding: \$22,265,000

No remaining authorization for “new money” debt

- FY 2019
 - Principal due: \$22,265,000
 - Interest due: \$1,113,250
 - Principal Outstanding: \$0

Revenue Bonds

The remaining authorization for all bonds is dependent upon legislation and available revenues.

Lottery and Excess Lottery Revenue Bonds – Economic Development Authority of West Virginia

Principal outstanding (net):
\$267,472,815

Lottery and Excess Lottery Revenue Bonds – West Virginia Higher Education Policy Commission

Principal outstanding (net):
\$242,865,000

Lottery and Excess Lottery Revenue Bonds – School Building Authority of West Virginia

Principal outstanding (net):
\$294,992,372

Excess Lottery Revenue Bonds – West Virginia Infrastructure & Jobs Development Council

Principal outstanding (net):
\$67,610,000

Revenue Bonds Continued

Lottery Revenue Bonds – Revenue Bonds backed by certain funds of the West Virginia Lottery have been issued for various reasons, such as economic development grants as well as “brick & mortar” projects at various primary and secondary schools and various colleges and universities through West Virginia. Lottery Revenue Bonds account for about 38% of the state’s net tax supported debt outstanding. The following table shows the debt service burden Lottery Revenue Bonds place on lottery funds. Lottery Fund numbers are provided by the Department of Revenue and are net of transfers to the state’s General Revenue Fund.

Table 8 - Debt Service Burden, Lottery Fund as of June 30, 2018

Fiscal Year	Debt Service	Lottery Fund Revenue	Debt Service as % of
			Lottery Fund
2013	88,845,520	380,298,000	23.36%
2014	88,602,001	337,209,000	26.28%
2015	78,664,521	405,400,000	19.40%
2016	83,817,727	403,645,000	20.77%
2017	84,472,638	386,612,000	21.85%
2018	82,069,901	398,512,000	20.59%
2019	89,852,701	340,896,000	26.36%
2020	92,004,157	340,896,000	26.99%
2021	91,953,950	365,896,000	25.13%
2022	91,851,280	340,896,000	26.94%
2023	91,806,373	340,896,000	26.93%
2024	91,593,861	340,896,000	26.87%
2025	89,756,646	340,896,000	26.33%
2026	89,706,851	340,896,000	26.32%
2027	77,707,924	340,896,000	22.80%
2028	63,942,973	340,896,000	18.76%
2029	53,212,870	340,896,000	15.61%

Lease and Note Payable Obligations

Various Lease and Note Payable Obligations

Principal outstanding: \$334,888,107

Remaining authorization is dependent upon legislation and available revenues.

Top 10 Spending Units with Leases and or Notes Outstanding (dollar value outstanding) as of June 30, 2018

1. Secretary of Administration: \$123.9 million
2. State Building Commission of West Virginia: \$85.8 million
3. Shepherd University: \$22.6 million
4. Department of Administrations, Travel Management: \$17.5 million
5. West Virginia Department of Environmental Protection: \$16.4 million
6. West Virginia University: \$14.2 million
7. Department of Health & Human Resources: \$12.6 million
8. West Virginia Division of Corrections \$11.5 million
9. West Virginia Department of Veterans Assistance: \$7.1 million
10. Marshall University: \$5.4 million

Components of net tax supported debt

as of June 30, 2018

Leases and Notes Payable

Approximately \$61.3 million of new leases were entered into during fiscal year 2018. This reflects an increase from fiscal year 2017, which had a total of \$26.0 million. The total amount of leases outstanding in this report is \$334.9 million and will differ from the figure reported in the state's Comprehensive Annual Financial Report (CAFR). This is due to several factors, including the materiality levels used.

Components of net tax supported debt as of June 30, 2018

Debt Service Reserve & Other Funds

The table below (*Table 9 – Escrow/Sinking Funds/Debt Service Reserve Accounts as of June 30, 2019*) shows debt service reserve, escrow and sinking funds available to pay debt service on various issues part of the state’s net tax supported debt. These amounts are deducted from the gross tax supported debt to calculate the net figure detailed in Table 1 (*Table 1 – West Virginia Net Tax Supported Debt Outstanding as of June 30, 2018*, page three). All figures are as of June 30, 2018.

Table 9 - Escrow/Sinking Funds/
Debt Service Reserve Accounts
as of June 30, 2018

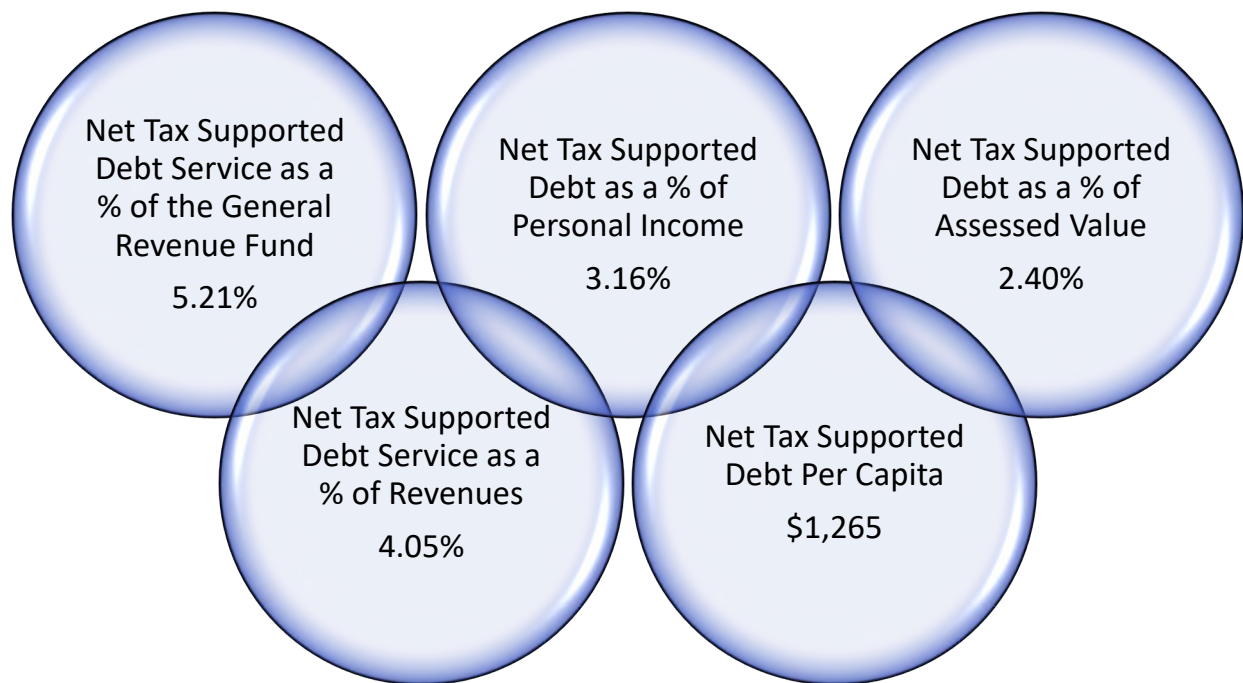
Issue / Spending Unit / Authority	Type of fund	Value at June 30, 2018
West Virginia Economic Development Authority Lottery Revenue	Reserve	\$21,282,185
GO Infrastructure Bonds	Escrow	\$26,100,000
School Building Authority of West Virginia Lottery Revenue (QSCBs)	Sinking Fund	\$76,852,628
West Virginia Economic Development Authority Lottery Revenue Bonds	Escrow	\$135,940,000
West Virginia Higher Education Policy Commission Lottery/Excess Lottery Revenue Bonds	Escrow	\$79,220,000

2. Calculate key ratios that are commonly used to examine debt

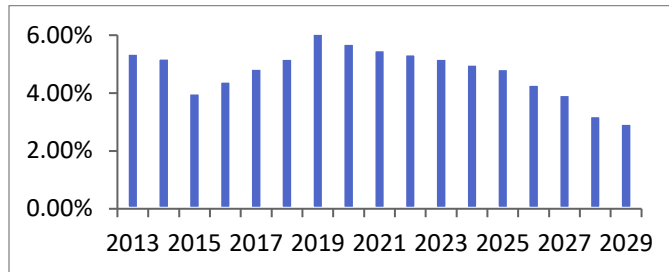
Key ratios establish benchmarks the municipal bond industry and other entities use to provide a measurement of a state's outstanding debt and the servicing (principal and interest payments) of that debt. Ratios are useful tools since they provide quantifiable measurements used when analyzing a state's fiscal position. Ratios can also provide insight into economic trends and a state's reliance on debt financing.

According to calculations based on net tax supported debt, revenue projections, personal income projections and population estimates, the ratios as of June 30, 2018 are shown below:

Various Debt Ratios as of June 30, 2018

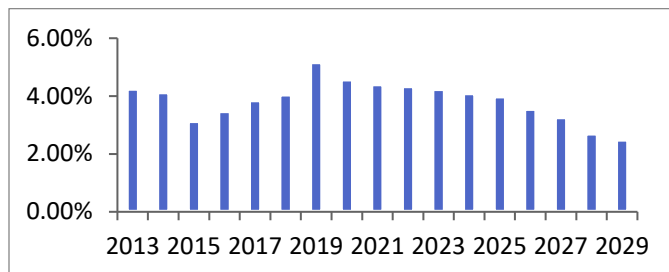


Historically, all of these ratios reached their peak at the end of fiscal year 2011. However, with the 2018 issuance of \$800 million in GO debt, the ratios will peak in fiscal year 2019. Following this time, there is a decrease as the debt service payments are made. This does not account for additional authorized \$800 million in GO Bonds or revenue bond debt, and assumes lease obligations outstanding for fiscal years 2019 to 2029 remain constant. See pages 6-7 for further explanation. The following charts show the historical and future projections of these ratios.



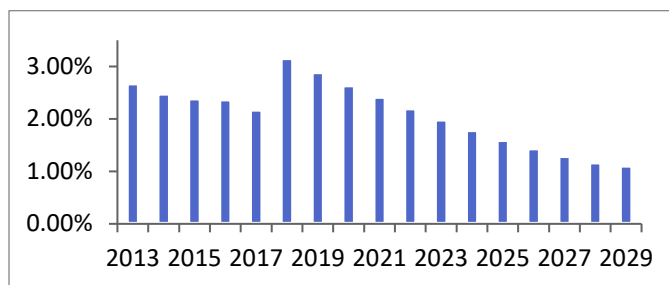
Net Tax Supported Debt Service as a Percentage of General Revenue Fund

Current Percentage: 5.21%



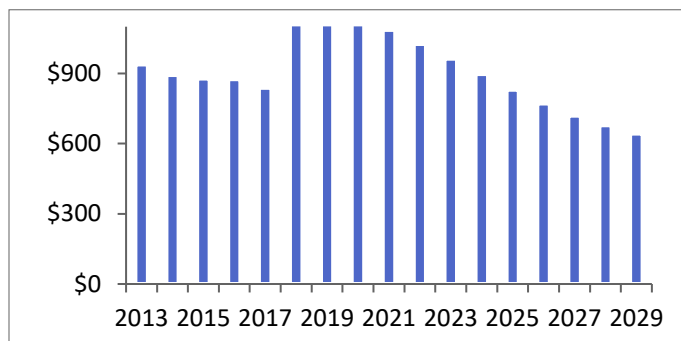
Net Tax Supported Debt Service as a Percentage of Revenues

Current Percentage: 4.05%



Net Tax Supported Debt as a Percentage of Personal Income

Current Percentage: 3.16%



Net Tax Supported Debt Per Capita

Current Level: \$1,265

3. Make recommendations which will attempt to keep the state within an average to low range of nationally recognized debt limits.

The final step in this analysis is making recommendations based on keeping the state within a certain range of debt ratios. Most ratios are easily accessible; therefore, making comparisons to other states and making recommendations of keeping the state in the average to low range is relatively easy. There are also certain industry practices recognized as prudent fiscal management. For example, many states have constitutional or statutory caps on how much of their General Fund can be obligated toward debt repayment. Other states use a combination of ratios with various parameters.

Each year, Moody's Investors Service produces a report ranking states according to various debt ratios. The 2018 report, titled *States – US – Medians – State Debt Continues Slow Growth Trend*, shows the average (or "mean"), the high and the low for two of the ratios examined in this report. This comparison is made to West Virginia ratios to carry out the legislative intent of this report, which is to make recommendations with the aim of keeping the state in the "average to low range of national recognized debt limits." The average debt per capita of the 50 states for 2018 was \$1,477. The average debt as a percentage of personal income was 2.9%

Table 10 – Various Statistics from Moody's 2018 Publication, States – US - Medians – State Debt Continues Slow Growth Trend

Ratio	Average	Highest	Lowest	West Virginia Ranking*
Net-Tax Supported Debt (NTSD) per capita	\$1,477	\$6,544	\$20	\$1,056
		Connecticut	Nebraska	#24
NTSD as a % of Personal Income	2.9%	10.4%	0.0%	2.9%
		Hawaii	Nebraska	#20
Total NTSD	\$10.5billion	\$87.0 billion	\$21.8 million	\$1.9 billion
		California	Wyoming	#37

** As reported by Moody's in April 2018. These figures do not necessarily match the amounts stated in this report by the West Virginia State Treasurer's Office, generally due to timing and the inclusion of certain obligations. For specific calculations of the West Virginia State Treasurer's Office, see tables 4 and 5, pages 10 through 13.*

Net Tax Supported Debt Service as a Percentage of the General Revenue Fund

Recommended Caps:

At June 30, 2018, the net tax supported debt service as a percentage of the General Revenue Fund was 5.21%, which is below the recommended cap of 6.00%. This report recommends a cap on this particular ratio each year. The following are the recommended caps in past reports and actual levels at the time the report was issued:

2013
Recommended cap: 6.00%
Actual Ratio: 5.39%

2014
Recommended cap: 6.00%
Actual Ratio: 5.23%

2015
Recommended cap: 6.00%
Actual ratio: 4.02%

2016
Recommended cap: 6.00%
Actual ratio: 4.43%

2017
Recommended cap: 6.00%
Actual ratio: 4.63%

2018
Recommended cap: 6.00%
Actual Ratio: 5.21%

Net Tax Supported Debt Service as a Percentage of the General Revenue Fund

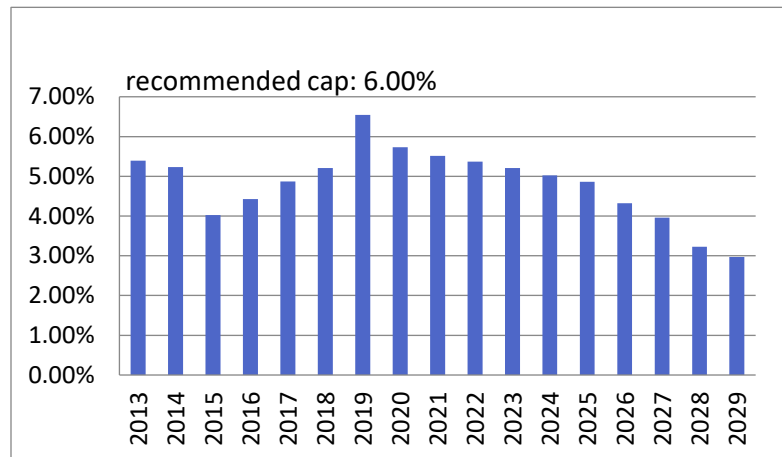
The net tax supported debt service as a percentage of the General Revenue Fund is perhaps the most important ratio measurement since it shows the potential strain on the General Revenue Fund if, for some reason, all other funds are insufficient to pay debt service.

As of the publication of this report, the General Revenue Fund is ahead of current revenue projections for fiscal year 2019.

Keeping the potential debt service burden on the state's General Revenue Fund below 6.00% is prudent fiscal management.

This does not include the authorized additional \$800 million to be issued over the next four (4) years. Please see pages 6-7 for further explanation.

Net Tax Supported Debt Service as a Percentage of the General Revenue Fund Fiscal Years 2013-2018 (actual), 2019-2029 (projected) as of June 30, 2018



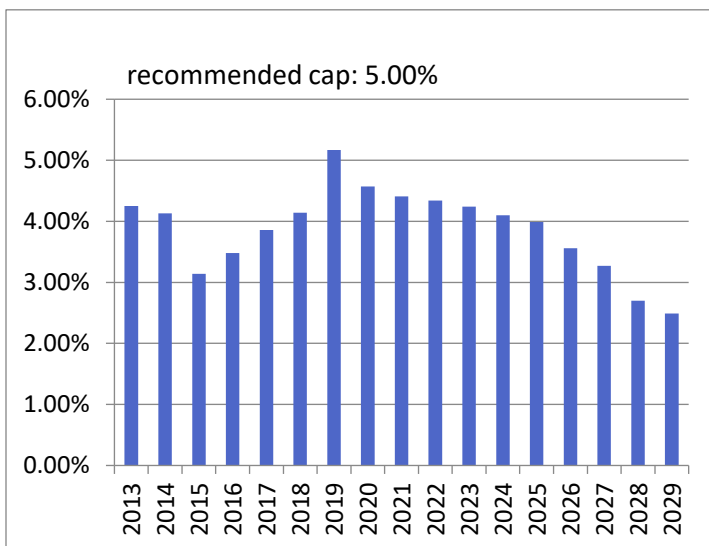
Net Tax Supported Debt Service as a Percentage of Revenues

The definition of revenues includes not only the General Revenue Fund but also the state's Road Fund, Lottery Fund and the dedicated stream of the state's coal severance tax collections. The annual dedication of collections for the Infrastructure General Obligation bonds is based on an amortization schedule published by the West Virginia State Treasurer, not to exceed \$22.25 million per year. The current and projected revenues are contained in *Table 5 - Net Tax Supported Debt Services for Fiscal Years 2019-2029*, pages twelve and thirteen, and also in *Appendix B - Revenue Information*.

The recommended level for this year's report remains at 5.00%. As mentioned in previous reports, the amount of bonds backed by a pledge of lottery revenue remains at a high level. As mentioned on page 6 of this report, the Legislature approved statutory changes addressing adequate debt service coverage ratio limits on the Excess Lottery Fund and provided a cross-collateral mechanism for Lottery Revenue Bonds.

The debt service on existing Lottery Revenue Bonds will peak at \$92 million during fiscal year 2020 and will remain constant for fiscal years 2020 through 2024.

Net Tax Supported Debt Service as a Percentage of Revenues
Fiscal Years 2013-2018 (actual), 2019-2029 (projected)
as of June 30, 2018



Net Tax Supported Debt Service as a Percentage of Revenues

Recommended Caps:

At June 30, 2018 the net tax supported debt service as a percentage of Revenues was 4.05% which is below the recommended cap of 5.00%. This report recommends a cap on this particular ratio each year. The following are the recommended caps in past reports and actual levels at the time the report was issued:

2013

Recommended cap: 5.00%

Actual Ratio: 4.25%

2014

Recommended cap: 5.00%

Actual Ratio: 4.13%

2015

Recommended cap: 5.00%

Actual Ratio: 3.14%

2016

Recommended cap: 5.00%

Actual Ratio: 3.48%

2017

Recommended cap: 5.00%

Actual Ratio: 3.66%

2018

Recommended cap: 5.00%

Actual Ratio: 4.05%

Net Tax Supported Debt as a Percentage of Personal Income

Recommended Caps:

At June 30, 2018, the net tax supported debt as a percentage of Personal Income was 3.16% which is above the recommended cap of 3.00%. This report recommends a cap on this particular ratio each year. The following are the recommended caps in past reports and actual levels at the time the report was issued:

2013 (personal income figures revised)
Recommended cap: 3.10%
Actual Ratio: 2.68%

2014 (personal income figures revised)
Recommended cap: 3.10%
Actual Ratio: 2.48%

2015 (personal income figures revised)
Recommended cap: 3.10%
Actual Ratio: 2.39%

2016 (personal income figures revised)
Recommended cap: 3.00%
Actual Ratio: 2.37%

2017 (personal income figures revised)
Recommended cap: 3.00%
Actual Ratio: 2.18%

2018 (personal income figures revised)
Recommended cap: 3.00%
Actual Ratio: 3.16%

Net Tax Supported Debt as a Percentage of Personal Income

This ratio has historically plagued West Virginia because the measurement of personal income of West Virginia residents has been below the national average. According to figures supplied from the West Virginia State Budget Office, with further reference to an IHS Markit report, West Virginia's personal income is forecasted to increase approximately 3.85% from 2018 to 2019, 4.20% from 2019 to 2020, and 3.75% from 2020 to 2021.

According to a Moody's Investors Service report, the average of this particular ratio is 2.9%, with the median being 2.3%. Comparing states that have a similar Moody's rating to that of West Virginia (Aa2), West Virginia was the fifth highest within the average range of this particular ratio as detailed in Table 11 *Debt as a Percentage of Personal Income (similarly rated states) as Presented in a 2018 report by Moody's Investors Service* on page 27.

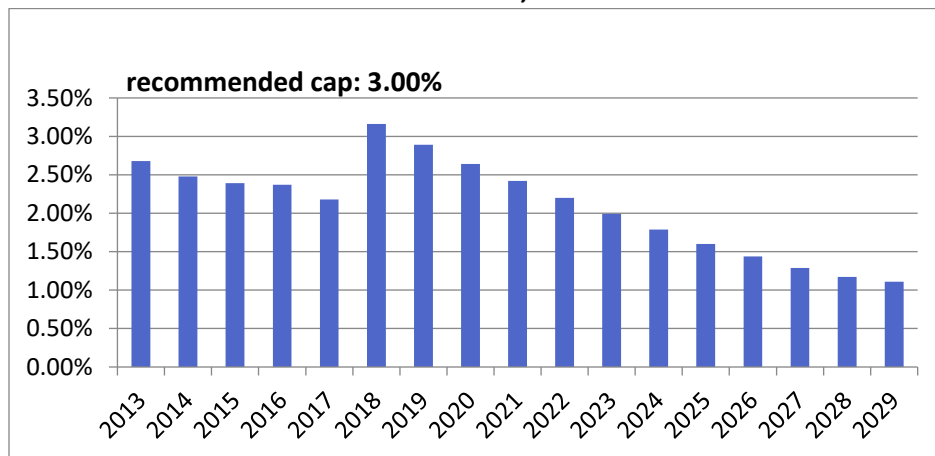
Historically, this report has recommended a cap of 3.00% for this particular ratio. The ratio was raised slightly in 2010 due to an increase in the national average, but lowered back to 3.0% in 2016. It is recommended the cap for this year be at 3.0%. Until the State of West Virginia is able to realize a greater increase in its personal income, careful attention should be paid to this important economic indicator.

Table 11 - Debt as a Percentage of Personal Income (similarly rated states)
as Presented in a 2018 report by Moody's Investors Service

State	Debt as a % of Personal Income*
Oklahoma	0.7 ⁰ %
Nevada	1.5 ⁰ %
Arizona	1.6 ⁰ %
Maine	2.1 ⁰ %
West Virginia	2.9 ⁰ %
Kansas	3.3 ⁰ %
Rhode Island	4.4 ⁰ %
Mississippi	5.2 ⁰ %

** As reported by Moody's in April 2018. These figures do not necessarily match with the amounts stated in this report by the West Virginia State Treasurer's Office, generally due to timing and the inclusion of certain obligations. For the specific calculations of the West Virginia State Treasurer's Office, see Table 4 and Table 5, pages 10 through 13.*

**West Virginia Debt as a percentage of personal income
Fiscal Years 2013-2018 (actual), 2019-2029 (projected)
as of June 30, 2018**



Net Tax Supported Debt Per Capita

Recommended Caps:

At June 30, 2018, the net tax supported debt per capita was \$1,265 which is above the recommended cap of \$980. This report recommends a cap on this particular ratio each year. The following are the recommended caps in past reports and actual levels at the time the report was issued:

2013

Recommended cap: \$1,100

Actual Ratio: \$938

2014

Recommended cap: \$1,100

Actual Ratio: \$893

2015

Recommended cap: \$1,100

Actual Ratio: \$878

2016

Recommended cap: \$1,100

Actual Ratio: \$875

2017

Recommended cap: \$1,100

Actual Ratio: \$838

2018

Recommended cap: \$980

Actual Ratio: \$1,265

Net Tax Supported Debt Per Capita

West Virginia's net tax supported debt per capita as calculated by the West Virginia State Treasurer's Office is \$1,265, well below the national average of \$1,477 listed in the Moody's Investors Service report.

Population figures are good economic measurements. For example, the ratio of "Net Tax Supported Debt Per Capita," indicates the possible debt burden on each West Virginia citizen. According to estimates from the United States Census Bureau, West Virginia's population in 2018 was 1.806 million, down by 0.6% (approximately 10,000) from 2017. The continued downward trend is not a positive indicator for the State West Virginia because the potential debt burden increases on the remaining population. It is also important to note that West Virginia's median age now stands at 42.3, about four (4) years higher than the national average. In addition, the population over 65 years of age continues to grow at a rate higher than the national average.

It is possible that the state's population may see positive growth as more jobs are anticipated with an influx of investment in infrastructure development. However, until this shift in declining population is realized, the recommended cap of net tax supported debt per capita should be \$980 as of June 30, 2018. This recommendation is below the national average of \$1,477. According to Moody's, the net tax supported debt per capita for West Virginia was \$1,056, the fifth highest ratio among other states with a Moody's rating of Aa2. This figure is different than the figure calculated by the West Virginia State Treasurer's Office (see note on page 28).

This does not include the authorized additional \$800 million to be issued over the next four (4) years. Please see pages 6-7 for further explanation.

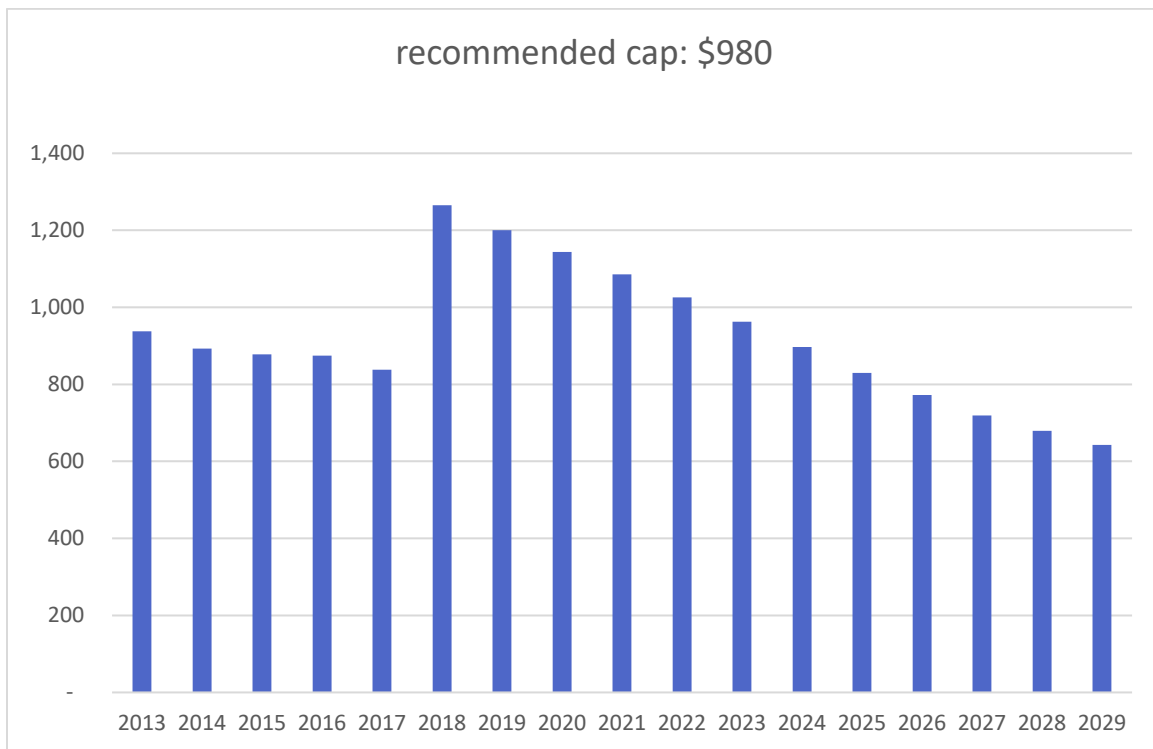
Table 12 - Debt Per Capita
(Similarly Rated States)
as Presented in a 2018 report by Moody's Investors Service

State	Debt Per Capita*
Oklahoma	\$303
Nevada	\$637
Arizona	\$651
Maine	\$900
West Virginia	\$1,056
Kansas	\$1,554
Mississippi	\$1,854
Rhode Island	\$2,188

** As reported by Moody's in April 2018. These figures do not necessarily match with the amounts stated in this report by the West Virginia State Treasurer's Office generally due to timing and the inclusion of certain obligations. For the West Virginia State Treasurer's Office specific calculations, see Table 4 and Table 5, pages 10 through 13.*

West Virginia Debt Per Capita

Fiscal Years 2013-2018 (Actual), 2019-2029 (Projected) as of June 30, 2018



Other Debt Ratios

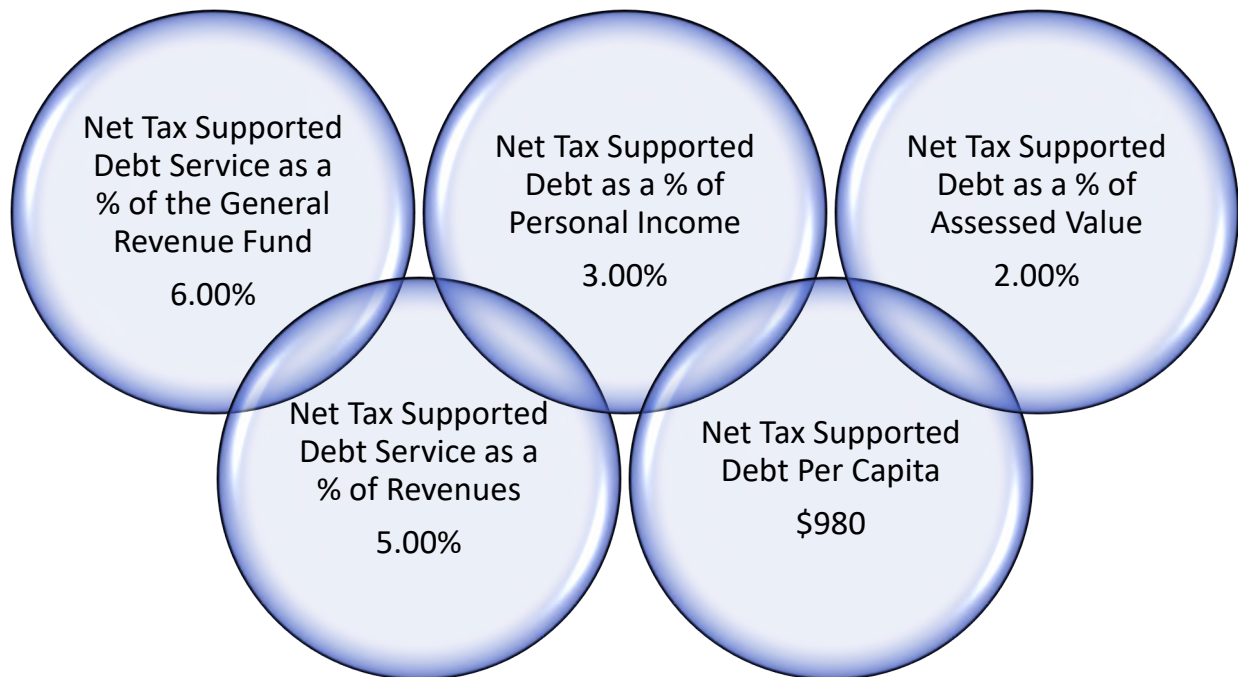
Net Tax Supported Debt as a Percentage of the Assessed Value of Taxable Property - Historically, the Debt Capacity Report has suggested a cap of 2.00% for this particular ratio. This recommendation has not been based on any particular research, but rather on the relationship to the other current debt ratios of the state. At June 30, 2018, the ratio was 2.40%.

Summary

The goal of this report is to continue the State of West Virginia's practice of fiscal conservatism by making recommendations to help the state maintain a "moderate-to-low" debt burden. This burden does not take into account the state's "soft" debts, such as pension liabilities or other post-employment benefits, but it does consider those debt issuances the state's citizens and its lawmakers have authorized.

The State of West Virginia is below two of the five recommended caps on the ratios examined in this report. It should be noted, as previously discussed, the state has issued \$800 million in new General Obligation (GO) Bonds and can issue an additional \$800 million in GO debt. This investment in the state's future must be carefully monitored to ensure that it pays the expected dividends of long-term income and population growth for the State of West Virginia and its citizens. Maintaining a fiscally conservative approach will guide the State of West Virginia on the road to prosperity.

Summary of Recommended Caps as of June 30, 2018



Appendix A

West Virginia State Code §12-6A-1, *et. seq.*

The Debt Management Act

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ARTICLE 6A. THE DEBT MANAGEMENT ACT

§12-6A-1. Short title.

This article shall be known and may be cited as “The Debt Management Act”.

§12-6A-2. Legislative findings and declaration of public necessity.

The Legislature hereby finds and declares that in order to maintain the strong financial management of the state, to meet the fiscal needs of state government and to facilitate financing essential capital projects at the lowest possible cost to the citizens of the state, the state must regularly monitor the amount of debt issued by the state and its spending units, ensure the state and its spending units meet all debt service requirements, monitor the credit rating of the state and analyze the acceptance of debt issued by the state and its spending units. The Legislature further finds that in order to meet these important goals, the Division of Debt Management needs to be continued.

§12-6A-3. Division of Debt Management continued; director.

(a) The Division of Debt Management is continued in the office of the State Treasurer.

(b) The Division shall serve as a central information source concerning the incurrence, recording and reporting of debt issued by the state and its spending units, and shall prepare reports pertaining to the capacity of the state and its spending units to issue debt.

(c) The Treasurer shall appoint a director, qualified by reason of exceptional training and experience in the field of activities of his or her respective Division, and who shall serve at the will and pleasure of the Treasurer.

§12-6A-4. Definitions.

For the purpose of this article:

“Debt” means bonds, notes, certificates of participation, certificate transactions, capital leases, debentures, lease purchases, mortgages, securitizations and all other forms of securities and indebtedness obligations evidencing specific amounts owed and payable on demand or on determinable dates.

“Debt impact report” means a report prepared by the division which includes information pertaining to a proposed issuance of debt by the state or its spending units.

“Division” means the Division of Debt Management.

“Moral obligation bond” means a debt obligation for which the state or a spending unit has made a nonbinding covenant to make up any deficiency in debt service.

“Net tax supported debt” means the amount of tax supported debt less any applicable refundings, defeasances, escrow accounts, reserve requirements and sinking funds.

“State” means the State of West Virginia.

“Spending unit” means a state department, agency, board, commission, committee, authority or other entity of the state with the power to issue and secure debt. Spending unit does not include local political subdivisions.

“Tax-supported debt” means: (1) General obligation bonds of the state; (2) moral obligation bonds of the state or a spending unit; (3) capital leases, installment purchases, lease purchases, mortgages, certificates of participation and any other similar debt financing transaction extending beyond one year issued by the state or its spending units; and (4) any other debt issued by the state or a spending unit which is not self-supporting. Debt issued by the West Virginia housing development fund, economic development authority, hospital finance authority, parkway authority, public energy authority, solid waste management board and water development authority, with the exception of debt secured by lottery revenues or secured by a lease with the Secretary of Administration, is not tax-supported debt.

§12-6A-5. Powers and duties.

The Division of Debt Management shall perform the following functions and duties:

(1) Continuously evaluate the current and projected debt and debt service requirements of the State and its spending units.

(2) Evaluate cash flow projections relative to proposed and existing revenue bond issues.

(3) Issue a debt impact report if requested by the Governor, the President of the Senate or the Speaker of the House of Delegates. The Division may request any additional information needed to issue a debt impact report. A debt impact report shall in no way restrict the Governor, the Legislature or the spending unit.

(4) Act as liaison with the Legislature on all debt matters, including, but not limited to, new debt issues and the status of debt issued by the State and its spending units.

- (5) Assist the State and its spending units regarding the issuance of debt if requested.
- (6) Establish reporting requirements for the issuance of debt by the State and its spending units pursuant to the provisions of this article.
- (7) Monitor continuing disclosure requirements and post-issuance compliance issues with federal and state tax and securities law, including, without limitation, arbitrage, rebate and remedial measures.
- (8) Make and execute contracts and other instruments and pay the reasonable value of services or commodities rendered to the division pursuant to those contracts.
- (9) Contract, cooperate or join with any one or more other governments or public agencies, with any political subdivision of the State, or with the United States, to perform any administrative service, activity or undertaking which the contracting party is authorized by law to perform, charge for providing services and expend any fees collected.
- (10) Do all things necessary or convenient to effectuate the intent of this article and to carry out its powers and functions.

§12-6A-6. Reporting.

- (a) Within fifteen days following the end of each calendar quarter, each state spending unit shall provide the division and the Legislative Auditor, in the manner provided by this article and in such form and detail as the State Treasurer may require, a report including, but not limited to, the name of the state spending unit, the amounts and types of debt incurred during the calendar quarter and outstanding at the end of the calendar quarter, the cost and expenses of incurring the debt, the maturity date of each debt, the terms and conditions of the debt, the current debt service on the debt, the interest rate on the debt, the source of the proceeds utilized for repayment of the debt, the amounts of repayment during the calendar quarter, the repayment schedule and the security for the debt. A state spending unit having no outstanding debt shall not be required to provide the quarterly report but shall file an annual report, on forms established by the Division of Debt Management: *Provided*, That the state spending unit shall immediately notify the Division of Debt Management of any change in the spending unit's outstanding debt or financial condition.
- (b) Not less than thirty days prior to a proposed offering of debt by the state or a state spending unit, written notice of the proposed offering and the terms thereof shall be given to the Division by the state spending unit in the form as the Division may require.
- (c) Within thirty days after closing on an offering, the responsible spending unit shall report to the division the information pertaining to the offering required by the division in the form the division may require.

(d) On or before January 31 and July 31 of each year, the division shall prepare and issue a report of all debt of the State and its spending units and of all proposed debt issuances of which the division has received notice and shall furnish a copy of the report to the Governor, the President of the Senate, the Speaker of the House of Delegates, the members of the Joint Committee on Government and Finance, the Legislative Auditor and upon request to any other legislative committee and any member of the Legislature. The report shall be kept available for inspection by any citizen of the state. The division shall also prepare updated reports of all debt of the state and its spending units as of March 31 and September 30 each year, which shall be available for inspection at the office of the state Treasurer within thirty days of the end of the respective calendar quarter.

(e) On or before January 15 each year, the division shall report to the Governor and to the Legislature on the capacity of the state to issue additional debt. In preparing its annual review and estimate, the division shall, at a minimum, consider:

(1) The amount of net tax supported debt outstanding and debt authorized but not issued during the current and next fiscal year and annually for the following ten fiscal years;

(2) Debt service requirements during the current and next fiscal year and annually for the following ten fiscal years based upon existing outstanding debt, previously authorized but unissued debt and projected bond authorizations;

(3) Any information available from the budget office of the department of revenue in connection with projected revenues and anticipated capital expenditures projected for at least the next five fiscal years;

(4) The amount of debt the state and its spending units may prudently issue;

(5) What is needed to keep West Virginia within an average to low range of nationally recognized debt limits;

(6) The debt ratios rating agencies and analysts use; and

(7) The effect of authorizations of new tax supported debt on each of the considerations in this subsection.

§12-6A-7. Promulgation of rules.

The Treasurer shall propose rules for legislative approval relating to the reporting requirements and duties under this article in accordance with the provisions of article three, chapter twenty-nine-a of this code.

Appendix B

Revenue Information

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Revenue & Revenue Projections
(thousands)
2019-2029 (projected)

<u>Year</u>	<u>General Revenue</u>	<u>Road Fund</u>	<u>Lottery**</u>	<u>Severance</u>	<u>Total</u>
2013	4,059,121	688,327	380,298	23,000	5,150,746
2014	4,106,106	734,717	337,209	23,000	5,201,032
2015	4,193,310	742,998	405,400	23,000	5,364,708
2016	4,102,679	691,481	403,645	22,500	5,220,305
2017	4,166,510	691,645	386,612	21,656	5,266,423
2018	4,245,258	797,088	398,512	19,377	5,460,235
*2019	4,439,920	818,745	340,896	20,557	5,620,118
*2020	4,725,820	826,462	340,896	21,947	5,915,125
*2021	4,855,600	816,460	365,896	21,936	6,059,892
*2022	4,976,430	817,561	340,896	32,955	6,167,842
*2023	5,128,250	814,571	340,896	21,938	6,305,655
*2024	5,290,580	813,350	340,896	22,201	6,467,027
*2025	5,422,845	820,000	340,896	22,210	6,605,951
*2026	5,558,416	820,000	340,896	22,201	6,741,513
*2027	5,697,376	820,000	340,896	22,201	6,880,473
*2028	5,862,011	820,000	340,896	-	7,022,907
*2029	6,008,561	820,000	340,896	-	7,169,457

Notes: Revenue information provided by the West Virginia Budget Office
FY2013 Actuals do not include \$45 million transfer from Income Tax Refund Reserve Account

Lottery fund does not include any revenue added to General State Revenue Fund

State Road Fund does not include federal reimbursements or miscellaneous funds

* Estimates

** Net of transfers to the General Revenue Fund

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