

COMMONWEALTH of VIRGINIA

Richard D. Brown Secretary of Finance P.O. Box 1475 Richmond, VA 23218

December 17, 2013

The Honorable Robert F. McDonnell Governor of Virginia Patrick Henry Building, 3rd Floor Richmond, Virginia 23219

The Honorable Paul G. Nardo Clerk of the House of Delegates Virginia House of Delegates State Capitol Building, 3rd Floor Richmond, Virginia 23219

The Honorable Susan Clarke Schaar Clerk of the Senate Senate of Virginia State Capitol Building, 3rd Floor Richmond, Virginia 23219

Dear Governor McDonnell, Ms. Schaar, and Mr. Nardo:

The Debt Capacity Advisory Committee ("Committee" or "DCAC") is required pursuant to Section 2.2-2713 of the Code of Virginia to annually review the Commonwealth's tax-supported debt and submit to the Governor and General Assembly an estimate of the maximum amount of new tax-supported debt that prudently may be authorized and issued for the next two years. I am pleased to present the report for 2013.

Based on the debt capacity model, the Committee estimates that up to \$560 million in additional debt could be authorized and issued in fiscal years 2014 and 2015. The Committee discussed at length the various economic challenges the Commonwealth faces such as federal uncertainty and the anticipated rise in interest rates. Given the real possibility of an increase in borrowing rates in the coming year, the Committee notes that a 1% increase in rates would result in a \$61 million decline in annual debt capacity. Therefore, the Committee urges the Governor and the General Assembly to exercise restraint when authorizing new tax-supported debt during the 2014 Session of the General Assembly.

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The report provides the Governor and the General Assembly with a basis to assess the impact of debt authorization and issuance on the Commonwealth's fiscal position and enables informed decision-making on capital spending priorities. The report also provides historical perspective on the Commonwealth's authorization and issuance of tax-supported debt over the last decade. The additional information regarding potential fiscal challenges and recent interest rate volatility added to this year's report also offers the Governor and the General Assembly with supplemental materials to consider should the amount of proposed debt approach the \$560 million capacity estimate.

Sincerely.

Richard D. Brown, Chairman

Debt Capacity Advisory Committee

Attachment

c: Debt Capacity Advisory Committee Members

Commonwealth of Virginia



Debt Capacity Advisory Committee

Report to the Governor and the General Assembly

December 17, 2013



Debt Capacity Advisory Committee Members

The Honorable Richard D. Brown – Chairman Secretary of Finance

William K. Butler Citizen Member

Elizabeth B. Daley Staff Director, Senate Finance Committee

Manju S. Ganeriwala State Treasurer

Harold E. Greer Director, Joint Legislative Audit & Review Commission

Martha S. Mavredes Auditor of Public Accounts

Ronald L. Tillett Citizen Member

Daniel S. Timberlake Director of the Department of Planning & Budget

Robert P. Vaughan Staff Director, House Appropriations Committee

David A. VonMoll State Comptroller



Background

To ensure proactive fiscal management, Governor Wilder issued Executive Order 38 (1991) which established the Debt Capacity Advisory Committee (Committee or DCAC). The DCAC was subsequently codified in Section 2.2-2712 of the Code of Virginia. The Committee was initially comprised of the Secretary of Finance, the State Treasurer, the Auditor of Public Accounts, the Director of Planning and Budget, the Director of the Joint Legislative Audit and Review Commission, and two citizen members appointed by the Governor. Legislation enacted in 2010 added three additional members to the Committee: the staff directors of the Senate Finance and House Appropriations Committees, and the State Comptroller. The Secretary of Finance serves as Chairman.

The Committee is vested with the power and duty to annually review the size and condition of the Commonwealth's tax-supported debt and to submit to the Governor and the General Assembly, by January 1st of each year, an estimate of the maximum amount of new tax-supported debt that prudently may be authorized for the next biennium. The Committee's recommendations must consider the projected debt service requirements over the current fiscal year and the following nine fiscal years. The Committee must also review annually the amount and condition of obligations for which the Commonwealth has a contingent or limited liability, or for which the Commonwealth is permitted to replenish reserve funds if deficiencies occur (i.e., "Moral Obligation" debt).

Control of debt burden is one of several key factors evaluated by rating agencies in their assessment of a state's credit quality. Other factors include: economic vitality and diversity, fiscal performance and flexibility, and administrative capabilities of government. The Commonwealth's triple-A bond rating, which it has held since 1938, facilitates access to the capital markets at the lowest borrowing cost. But the ability to take on additional debt while maintaining the triple-A ratings is limited, because higher debt service payments (a fixed expense) result in less flexibility to respond to economic cycles and address other budgetary needs. Because capacity is viewed with many other variables, there is no precise point at which increased debt levels result in a lower bond rating.

In 1991, after consideration of various alternatives to assess capacity, the Committee decided on a measure based on tax-supported debt service as a percent of revenues. This measure provides a direct comparison of the state's obligations to the resources available to pay them. Measuring the portion of the State's resources committed to debt-related fixed costs provides a measure of the State's budgetary flexibility and its ability to respond to economic downturns.

The target level selected by the Committee was five percent - that is, that debt service on tax-supported debt obligations should not exceed 5% of blended revenues. This measure is intended to ensure that annual debt service payments do not consume so much of the state's annual operating budget as to hinder the Commonwealth's ability to provide core government services. This basic measure has been endorsed by the DCAC in each subsequent year.



In the wake of the 2008 financial melt-down and the resulting economic downturn, coupled with the increased debt burden of several years of significant bonded debt authorizations, the December 18, 2009 DCAC Report to the Governor and the General Assembly conveyed there was no additional debt capacity. As a result of the findings in the 2009 DCAC Report, the Committee determined that a study should be completed to investigate a potential method to smooth the capacity results to facilitate capital planning and avoid dramatic changes in capacity, particularly in times of extraordinary fluctuations in revenues.

Following the 2010 study, the Committee considered various measures (e.g., debt per capita), as well as changes to the treatment of transportation debt in the model. Ultimately, the changes adopted by the Committee were the (i) inclusion in the model of the 0.25% sales tax enacted in 2004 and certain recurring transfers to the general fund from non-general funds, (ii) the reduction of debt service carried in the model for amounts expected to be paid from non-general fund sources, (iii) a change to the interest rate proxy used to estimate the debt service on future borrowings, and (iv) using a ten-year average capacity to arrive at the Committee's recommendation rather than basing it solely on the next two year period. This latter recommendation was an effort to smooth the effect of dramatic revenue fluctuations, and to facilitate long-term capital planning. The target measure of annual debt service payments to annual blended revenues remained unchanged at 5%.

It is important to note that maintaining debt service at less than 5% of revenues is merely a benchmark of affordability. Debt service requires annual appropriation and still must be considered with other budgetary needs.

Debt Capacity Model

The DCAC report is a resource that assists Commonwealth leaders with planning the issuance of future obligations within future resource constraints. The Committee's report provides elected officials with information to enable them to balance capital funding needs while maintaining fiscal discipline and budgetary flexibility. The DCAC report can guide decision-makers in the development and implementation of the capital budget. Report recommendations are all based on the Committee's analysis of the Debt Capacity Model results.

The Committee's Debt Capacity Model compares annual Blended Revenues from the Official Revenue Forecast to the (i) scheduled debt service payments on all outstanding tax-supported debt obligations, and (ii) estimates of the debt service payments on all currently authorized but yet to be issued tax-supported debt. A calculation is then made to determine the amount of additional debt that could be authorized and issued without causing total debt service to exceed 5% of the forecasted Blended Revenues.



Blended Revenues are comprised of general fund revenues, state revenues in the Transportation Trust Fund (TTF), and certain non-general fund transfers including ABC profits. Beginning with the 2010 Report, Blended Revenues also include the relevant portion of sales tax and certain recurring non-general fund Appropriation Act transfers.

Tax-supported debt obligations in the model include general obligation bonds (excluding those general obligation bonds issued pursuant to Article X, Section 9(c) of the Constitution of Virginia for which debt service is paid from project revenues), debt secured by the TTF, obligations issued by the Virginia Public Building Authority (VPBA) and the Virginia College Building Authority (VCBA) that are repaid from general fund appropriations, obligations payable under regional jail reimbursement agreements, bonded capital lease payments paid from a general fund appropriation, and other capital leases and installment purchases.

The impact of debt service related to authorized but not yet issued bond programs on future operating budgets is an important element of debt management and assessing the state's debt capacity. Accordingly, debt service estimates for those programs are included in the debt capacity calculations. These debt service estimates are based in part on draw schedules compiled by the Department of Planning and Budget or are based on information obtained from agencies on their authorized projects.

Potential Challenges to Fiscal Stability

The U.S. economy has been in recovery for nearly four years, but growth has continued to waiver due to relatively high unemployment and the continued risk of additional federal austerity measures. Although the recovery has been sustained, there are significant risks to continued growth, with federal fiscal policy looming as the biggest threat.

Federal Fiscal Policy

Fitch noted in their October 3, 2013 report, 2014 Outlook: U.S. States, "The federal government remains the most significant threat to state budgets." This threat is even more acute in Virginia. Federal fiscal policy challenges fall into two major categories: the budget debate (i.e., sequestration, debt ceiling, and government shut-down) and tax reform. Sequestration has led to reduced federal aid, and certain states, including Virginia, are more vulnerable to the negative effects of sequestration. Moody's noted in an August 20, 2013 report that, "States such as Maryland and Virginia, which rely heavily on federal jobs, may see lower sales tax collections as a result of lower federal employee disposable incomes. They are also likely to see accelerating declines in government-related employment as federal spending slows and government contracts decline." A study by The Pew Center on the States published a total jobs lost estimate of 122,800 in Virginia from defense cuts. Another round of uncertainty and another shutdown could further jeopardize the fragile economic recovery.



Federal policymakers have been discussing a major overhaul of the U.S. tax code and there have been proposals to reduce or even eliminate the tax exemption on municipal bonds. Tax reform discussions have included proposals to establish a 28% limit on the value of deductions and exemptions, and these limits could be applied to existing bonds. The likely outcome would be that the demand for tax-exempt municipal bonds would deteriorate as the benefit for holding those bonds diminishes.

Borrowing costs for state and local governments would increase as investors demand higher yields. Estimates of higher yields range from 40 to 75 basis points. A higher rate of interest would utilize more debt capacity and create additional strains on the budget.

Spotlight on Retirement Liability

Despite better than expected revenue performance, pensions will continue to pressure some states' budgets. Implementation of GASB pension reporting will generally result in the reporting of a greater and more volatile unfunded pension liability. Pension funding has become an increasingly important factor in state credit ratings, with both Moody's and Standard and Poor's introducing new methodology scorecards. GASB implementation alone is not expected to trigger any rating changes, but it will focus the spotlight on unfunded liabilities.

Financial Markets Concerns over Bankruptcy and Default

Despite dire predictions of municipal defaults in 2010, municipals remain the safest security behind Treasuries. However, recent events in Detroit have shaken investor confidence in the safety of municipal bonds. Detroit's emergency manager has classified their General Obligation (GO) bonds as unsecured and on par with its pension obligations. On October 1, 2013, Detroit defaulted on its GO bonds. GO bonds have generally been perceived as the most secure of all municipal debt, as the obligations are secured by the government's pledge to levy additional taxes to pay the debt service. On December 3, 2013, a federal bankruptcy court judge ruled that Detroit is eligible for Chapter 9 bankruptcy. The outcome of the Detroit bankruptcy process could change the perception of the full faith and credit pledge backing GO bonds, and cause investors to demand a higher yield as compensation for the higher risk.

Financing Significant Infrastructure Needs

All states are faced with significant infrastructure needs, both maintaining existing assets and building new facilities, to ensure the safety and economic vitality of the state, county, city and region. Federal contributions toward these projects have been reduced – a trend that is likely to continue. Reduced federal contributions are forcing states and localities to fund a larger share of their critical infrastructure needs and are resulting in states and localities funding only their highest priority projects.



2013 Debt Capacity Recommendations

The 2013 Base Model Solution – Average debt capacity calculation (Appendix A-6) shows that an additional \$560.13 million in debt could be authorized and issued in each 2014 and 2015. This amount will cause projections of debt service as a percent of Blended Revenues to exceed five percent in 5 years and to be at or below five percent in the other 5 years.

Other Recommendations

- a) The Committee reiterates recommendations included in past reports for the General Assembly and the Governor to rescind any bond authorizations for projects that are not likely to be issued.
- b) The Committee expresses its continued support of the use of traditional financing methods for state projects such as those offered through the issuance of general obligation bonds, or appropriation-supported programs through the VCBA or the VPBA, since capital lease and other conduit borrowings typically result in higher financing costs, and are ultimately still viewed as tax-supported debt.

Review of Tax-Supported Debt

General Fund Supported Debt

The State issues two types of tax-supported debt: General Obligation Bonds and various kinds of appropriation-supported obligations. The Commonwealth's GO Bonds are secured by the full faith and credit of the Commonwealth and are rated in the highest rating category by the bond rating agencies. Several factors contribute to the high bond ratings, including the legal protections inherent in constitutionally-permitted debt, investor confidence in the pledge of the full faith and credit of the State, and the presumption of the availability of the government's full resources. GO bonds are the most transparent of the various types of State debt obligations and typically carry the lowest interest cost. GO bonds issued under Article X, Section 9(b) of the Constitution require approval by the voters through referendum.

Article X, Section 9(c) of the Constitution provides for the issuance of GO debt that is self-supporting (e.g. through tolls, dormitory fees, etc.) (9(c) Bonds). The GO pledge provides a back-stop in the event net project revenues are insufficient to service the debt. These bonds do not require voter approval, but do require a two-thirds majority approval by each house of the General Assembly. They also require the Governor to opine that net project revenues will be sufficient to pay debt service on the bonds. Because of the GO pledge, 9(c) debt is considered tax-supported debt for financial reporting purposes; however, it is not included in the debt capacity model. Only if the net revenues are insufficient and the GO pledge is invoked will that debt be incorporated in the model. This has not occurred since 9(c) debt was first issued in 1973.



Commonwealth appropriation-supported debt includes bonded debt as well as certain capital leases and installment purchase obligations. Such debt is authorized by the General Assembly. Principal and interest payments on these obligations are made from annual appropriations from the general fund or the TTF. These bonds are rated slightly lower than Virginia's GO bonds, reflecting the marginally higher risk that amounts will not be annually appropriated. Depending upon market conditions, interest rates on appropriation-supported debt on any given day may range from 5 to 20 basis points higher than comparable GO bonds. The Commonwealth has increasingly relied on the use of appropriation-supported debt (e.g. VPBA and VCBA) to provide financing for capital projects.

Transportation Debt

The rating agencies view all debt supported by state-wide, generally applied taxes and/or user fees to be "Tax-Supported Debt". The Transportation Trust Fund is funded primarily from incremental revenues generated by increases in the retail sales and use tax, motor fuels tax and motor vehicle related taxes and fees enacted in the 1986 Special Session Acts, as well as other tax revenues subsequently dedicated to the TTF (e.g. one-third of the insurance license tax in 2007). As a result of legislation passed by the 2013 session of the General Assembly, the state's \$0.175 per gallon on motor vehicle fuels tax on gasoline and diesel was eliminated and replaced with a tax of 3.5% on the wholesale price of gasoline and a 6.0% tax on the wholesale price of diesel (the fuel taxes). The TTF will receive 15% of the revenues generated from the fuel taxes and 4% of the fuel tax revenue will be deposited to the Priority Transportation Fund (a subset of the TTF). Those revenues, as well as the debt service supported by those revenues are included in the model calculation. Not included in the Debt Capacity Model are highway maintenance and operating revenues (HMO), federal transportation revenues, and debt related to Federal Revenue Anticipation Notes (FRANS) or Grant Anticipation Revenue Vehicles (GARVEEs) paid from federal transportation revenues.

Transportation debt has been authorized and issued with a pledge that other available amounts, including the general fund, may be appropriated for their repayment. Since repayment is not limited solely to the TTF (though in practice, payments are made from the TTF), these bonds are viewed by ratings agencies the same as other appropriation-supported obligations of the Commonwealth. The strength of the Commonwealth appropriation pledge and the depth of resources available for repayment may result in a higher rating than if secured by the TTF alone.

The Commonwealth Transportation Board (CTB) has issued bonds to be repaid from the TTF for construction projects involving U.S. Route 28, the U.S. Route 58 Corridor Development Program, the Northern Virginia Transportation District Program, the Oak Grove Connector in Chesapeake, and most recently, the Capital Projects Revenue (CPR) Bonds approved by the General Assembly in 2007. Currently, debt service on debt paid by the TTF exceeds 5% of TTF revenues. Accordingly, to the extent the 5% measure is exceeded, capacity derived from the general fund is being utilized. This does not mean that general fund dollars are supplementing debt service payments on TTF debt; rather, it means that capacity derived from the general fund

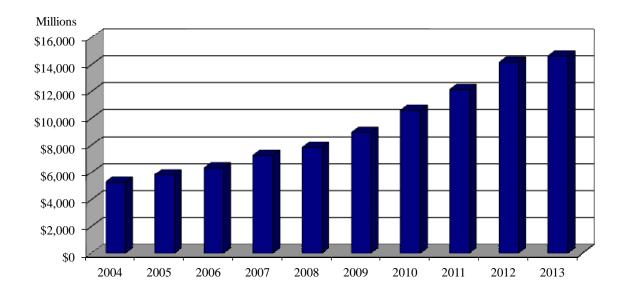


is being used to keep overall capacity for all tax-supported debt under the 5% target.

Trends in Tax-Supported Debt

Outstanding tax-supported debt of the Commonwealth increased by 178%, or \$9.37 billion, from fiscal year 2004 to fiscal year 2013. Between fiscal year 2012 and fiscal year 2013, outstanding tax-supported debt increased \$445 million, which is equivalent to 3% growth over the last fiscal year. The table below includes long-term obligations such as pension liabilities, other post-employment benefits (OPEB) and compensated absences. These obligations are generally evaluated by rating agencies as part of an issuer's overall debt profile, but are not part of their calculations of debt ratios. Accordingly, they are not included in the Commonwealth's debt capacity calculation. The following chart provides a historical perspective on the Commonwealth's outstanding tax-supported debt, including these other long-term obligations.

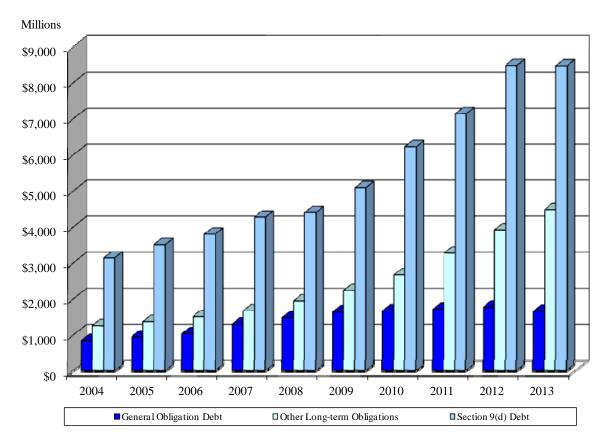
Outstanding Tax-Supported Debt Fiscal Years 2004-2013⁽¹⁾



⁽¹⁾ Includes other long-term obligations such as pension liabilities, OPEBs and compensated absences.



Tax-Supported Debt by Category Fiscal Years 2004-2013⁽¹⁾



⁽¹⁾ Includes other long-term obligations such as pension liabilities, OPEBs and compensated absences.

The chart above shows outstanding tax-supported debt separated into three major categories: GO bonds, debt obligations incurred pursuant to Article X, Section 9(d) of the Virginia Constitution (i.e. appropriation-supported debt), and other long-term obligations, which include pension liabilities and OPEB liabilities.

General obligation debt, which had a June 30, 2013 balance outstanding of \$1.67 billion, has increased 96%, or \$817 million, over the ten-year period. This is due in part to a \$1 billion general obligation bond referendum approved by the voters in 2002. Bonds from the 2002 authorization were issued as needed, with the final issuance occurring during fiscal year 2010. Between fiscal years 2010 and 2012, increases in the general obligation debt outstanding came from the issuance of 9(c) bonds, which are regularly authorized by the General Assembly for qualifying revenue-producing capital projects, and are not included in the debt capacity calculation. However, with a lag between the timing of new authorizations and the issuance of the bonds and the continued payment of previously issued debt, the 2013 outstanding GO balance actually declined 6%, or \$110 million, from fiscal year 2012.



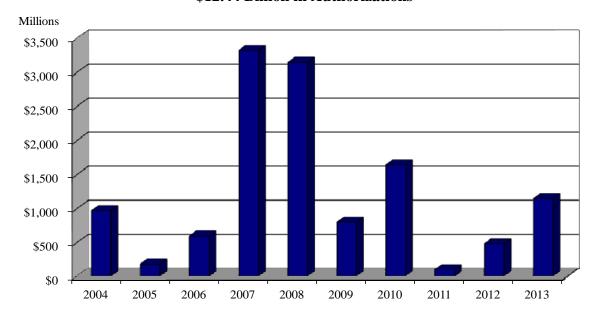
Section 9(d) debt includes tax-supported bonds issued by the VCBA, the VPBA, the CTB, and certain obligations of the Virginia Port Authority. It also includes bonded capital leases, other long-term capital leases and installment purchases, and payments related to regional jail agreements. This debt category has shown the most significant dollar growth over the last ten years, increasing \$5.33 billion during that period. Total outstanding Section 9(d) debt at June 30, 2013 was \$8.48 billion compared to \$3.15 billion at fiscal year-end 2004, which is equivalent to a 169% increase over the ten-year period. The increase is attributed to significant authorizations for transportation bonds in 2007, and VPBA and VCBA bonds in 2008, 2009, and 2010. An additional \$1.1 billion of VPBA and VCBA debt was authorized in fiscal year 2013; however, the 2013 authorizations have not yet had an impact on the outstanding balance of 9(d) debt. The outstanding balance of section 9(d) debt remained steady between fiscal year 2012 and fiscal year 2013 with a decline of 0.1%, or \$10 million, over the last fiscal year.

Other long-term obligations have also steadily increased, growing \$3.22 billion, or 253%, from \$1.27 billion at fiscal year-end 2004 to \$4.49 billion at fiscal year-end 2013. The increase is partly due to the required inclusion of OPEB obligations beginning in 2008, but it is also related to increasing pension and OPEB obligations. Between fiscal year 2012 and fiscal year 2013, other long-term obligations increased \$566 million, which is equivalent to 14% growth over the last fiscal year.

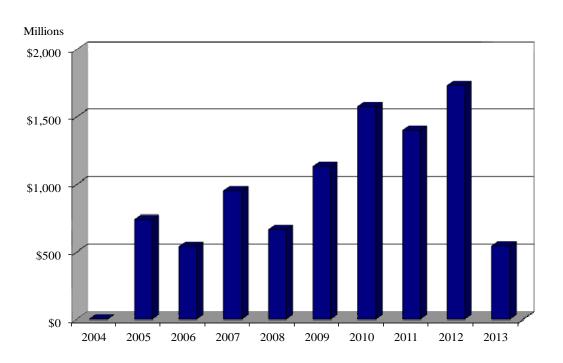
The following two charts illustrate the amounts of tax-supported debt authorized and issued from years 2004 to 2013. In 2007, \$3 billion was authorized for the transportation CPR program, and in 2008; \$3 billion was authorized for the VPBA and VCBA programs. The amount of debt authorized in 2011 and 2012 declined compared to the significant amounts authorized in the prior years. However, in 2013, \$1.15 billion in additional tax-supported debt was authorized, of which \$748 million was for VCBA 9(d) projects and \$382 million was for VPBA 9(d) projects. Between fiscal year 2004 and fiscal year 2013, the General Assembly collectively authorized \$12.44 billion of tax-supported debt.



Tax-Supported Debt Authorizations Fiscal Years 2004-2013 \$12.44 Billion in Authorizations



Tax Supported Debt Issued Fiscal Years 2004-2013 \$9.29 Billion in Issuances



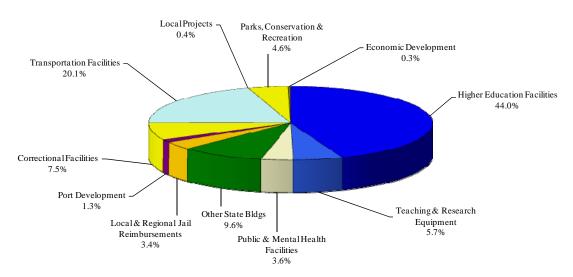


The amount of tax-supported debt issued in fiscal year 2013 was \$544 million, which was preceded by four straight years of issuances of between \$1.13 and \$1.73 billion. This decrease is largely a result of no new CPR bonds being issued in FY 2013. Between fiscal year 2004 and fiscal year 2013, \$9.29 billion in tax-supported debt was issued.

Uses of Outstanding Tax-Supported Debt

The following chart illustrates how the Commonwealth has utilized its tax-supported debt over the last ten years. Of the total \$9.3 billion, 50% has been used for capital projects and teaching and research equipment at state institutions of higher education. Transportation projects paid from the TTF is the next highest category at 20%. (Note: transportation projects financed with federal revenues are not considered tax-supported debt and are not included.)

Uses of Tax-Supported Debt Issued FY 2004 - FY 2013



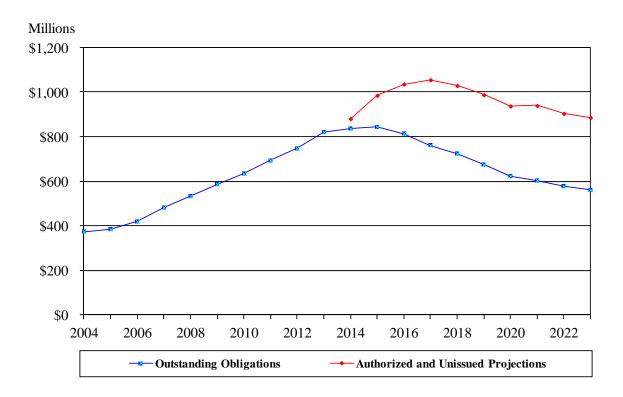
Ten-year Total = \$9.3 Billion



Debt Service

Amounts paid annually for debt service have increased, both on an absolute basis and as a percentage of Blended Revenues. This trend is expected to continue as currently authorized debt is issued, and the amount of outstanding debt increases. Annual debt service, including the estimated debt service on all currently authorized but unissued amounts, is illustrated below.

Tax-Supported Debt Service: Actual and Projected Fiscal Years 2004 – 2023⁽¹⁾



⁽¹⁾ Assumes authorized debt is issued in future periods in accordance with the Model's current assumptions. Past data includes lease revenue bonds issued by the Virginia Biotech Research Park Authority, Innovative Technology Authority and Newport News Industrial Development Authority.



Review of State Credit Ratings and Comparative Ratios

Credit ratings are the rating agencies' assessment of a governmental entity's ability and willingness to repay debt on a timely basis going forward. Credit ratings are an important factor in the public debt markets and generally influence the interest rates a borrower must pay. The prolonged fiscal policy debates on federal spending have resulted in actions relating to the U.S. sovereign rating, and in turn, the Commonwealth's bond rating.

In July 2011, Moody's placed the U.S. on review for possible downgrade. Due to their economic linkages to the federal government, the ratings of three states (Maryland, New Mexico and Virginia) remained on negative outlook much of 2013. Despite continued federal budget disputes, in July 2013, Moody's revised the U.S. and likewise the Commonwealth to a stable outlook.

Although Standard and Poor's (S&P) lowered the U.S.' sovereign rating from AAA/stable to AA+/negative in 2011, and placed the rating of certain issuers with a "direct link" to the U.S. sovereign rating (such as housing debt backed by federal agency securities) on Negative Credit Watch, S&P continues to rate Virginia's GO bonds as AAA/stable.

Like Moody's, Fitch had placed the U.S. government rating on negative outlook. As a result of the federal budget debates that occurred this fall, Fitch increased its scrutiny of the U.S. and placed the U.S. government rating on Ratings Watch Negative. Like S&P, they have indicated that state and local ratings will not necessarily move in lock-step with the U.S. rating since state and local governments have considerable autonomy and possess their own taxing power and borrowing authority. However, Fitch noted in a December 3, 2013 report, "The federal government remains the most significant threat to state budgets in 2014." Fitch continues to rate the Commonwealth AAA/stable.

All three rating agencies continue to note Virginia's credit strengths: long-standing history of pro-active and conservative financial management, a manageable debt burden controlled through a debt affordability model, strong financial policies and practices, pension reform and a diverse economy that has fared better than the nation. They also cite as challenges: spending pressures from education and transportation needs, managing the effects of a sluggish economy, and the state economy's direct linkage to the U.S. government. Ratings on the Commonwealth's appropriation-supported programs are "one notch" below the general obligation rating: Aa1 (Moody's), AA+ (S&P) and AA+ (Fitch). Like the GO ratings, the appropriation-supported bonds now carry a stable outlook from the three rating agencies.

In its <u>2013 State Debt Medians Report</u> (Moody's Medians), Moody's notes that nationally outstanding net tax-supported debt grew at an average annual rate of 7% over the last ten years. However, after reaching a high of 10% growth in 2009, the annual growth has declined consecutively in each of the last three years and was just 1.3% during calendar year 2012. They attribute the slowing growth to states reaching legal debt limitations, spending reductions,



uncertainty over the national economy, and a change in attitudes towards debt. Nationwide, median net tax-supported debt per capita actually decreased by 3.8% to \$1,074 compared to \$1,117 in the prior year. Net tax-supported debt as a percentage of personal income remained flat again at 2.8%. Moody's also noted that total debt service costs slowed to 3% in 2012 as a result of limited new debt issuances and the lower interest rates achieved on those issuances as well as the savings that have been achieved on refunding bonds.

While the Moody's report highlighted that debt issuance growth has slowed or even declined for many states, it stated, "among these large borrowers, Virginia saw the highest percentage growth in net tax-supported debt, a 14% increase, which marks the Commonwealth's fourth consecutive year of double-digit growth." Moody's further expounded that the growth is largely attributed to debt issued through the CTB and the VCBA and that Virginia has now slid from being ranked as the 26th highest debt per capita state in 2010 to the 19th highest debt per capita.

The following table and chart illustrate how Virginia compares to other triple-A states based on net tax-supported debt per capita.

AAA/Aaa/AAA STATE DEBT BURDENS FROM 2004-2013 PROVIDED BY MOODY'S INVESTORS SERVICE

Net Tax-Supported Debt per Capita (1)(2)

	2013 <u>Ranking</u>	2013	2012	<u>2011</u>	<u>2010</u>	2009	2008	2007	2006	2005	2004
Delaware	8	\$2,536	\$2,674	\$2,676	\$2,489	\$2,128	\$2,002	\$1,998	\$1,845	\$1,865	\$1,800
Maryland	14	1,799	1,742	1,681	1,608	1,507	1,297	1,171	1,169	1,064	1,077
VIRGINIA	19	1,315	1,169	1,058	895	782	764	692	601	589	546
Utah	20	1,275	1,393	1,222	957	447	542	621	707	792	846
Alaska *	21	1,251 *	1,454 *	1,257 *	1,345 *	861 *	924 *	939 *	880 *	933 *	962 *
Georgia	26	1,061	1,099	1,103	1,120	984	954	916	784	803	827
North Carolina *	31	853	815	782	765	832 *	898	728	804 *	682 *	556 *
Missouri	37	699	741	775	780	670	675	613	496	449	461
Texas *	39	580 *	588 *	612 *	520 *	520 *	481 *	415 *	307 *	279 *	220 *
Iowa *	48	287	310	270	73 *	79 *	98 *	104 *	110 *	130 *	139 *
Median All States AAA Median AAA Average		1,074 1,156 1,166	1,117 1,134 1,199	1,066 1,081 1,144	936 926 1,055	865 807 881	889 831 864	787 710 820	754 746 770	703 737 759	701 692 743

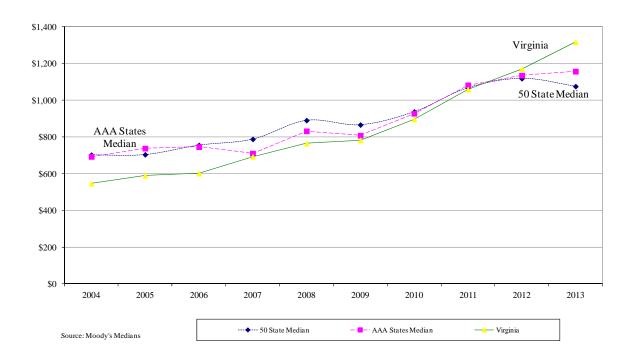
 $^{*\} State\ was\ not\ triple\ A\ during\ entire\ 2004-2013\ period.\ A lask a\ and\ Texas\ were\ not\ triple-A\ until\ after\ Moody's\ Medians\ compilation\ date.$



 $^{(1) \}textit{Population is based on Census data from one year prior to each respective year's \textit{debt analyzed}.}$

⁽²⁾ Year refers to prior calendar year-end.

Net Tax-Supported Debt Per Capita Virginia Versus Moody's U.S. 50-State Median and other AAA States 2004 – 2013





The following table and chart compare Virginia's net tax-supported debt as a percentage of personal income with that of other triple-A states.

AAA/Aaa/AAA STATE DEBT BURDENS FROM 2004-2013 PROVIDED BY MOODY'S INVESTORS SERVICE

Net Tax-Supported Debt as Percent of Personal Income (1) (2)

	2013																				
	Ranking	2013		<u>2012</u>		<u>2011</u>		<u>2010</u>		2009		2008		2007		2006		<u>2005</u>		2004	
Delaware	7	6.2	%	6.8	%	6.8	%	6.2	%	5.4	%	5.2	%	5.5	%	5.3	%	5.5	%	5.6	%
Utah	15	3.8		4.4		3.9		3.2		1.5		1.9		2.3		2.7		3.2		3.5	
Maryland	18	3.6		3.6		3.5		3.4		3.3		3.0		2.8		3.0		2.9		3.0	
Georgia	20	3.0		3.1		3.3		3.3		3.0		3.0		3.0		2.7		2.8		2.9	
VIRGINIA	22	2.9		2.6		2.4		2.1		1.9		1.9		1.8		1.7		1.8		1.7	
Alaska *	25	2.8	*	3.3	*	3.0	*	3.2	*	2.2	*	2.4	*	2.7	*	2.6	*	2.8	*	3.0	*
North Carolina *	30	2.4		2.3		2.3		2.3		2.5	*	2.8		2.4		2.8	*	2.5	*	2.0	*
Missouri	37	1.8		2.0		2.2		2.2		2.0		2.1		1.9		1.6		1.5		1.6	
Texas *	40	1.5	*	1.5	*	1.6	*	1.4	*	1.4	*	1.4	*	1.3	*	1.0	*	1.0	*	0.8	*
Iowa *	47	0.7		0.8		0.7		0.2	*	0.2	*	0.3	*	0.3	*	0.4	*	0.5	*	0.5	*
Median All States		2.8	%	2.8	%	2.8	%	2.5	%	2.5	%	2.6	%	2.4	%	2.5	%	2.4	%	2.4	%
AAA Median		2.9	70	2.9	70	2.7	70		70	2.3	70	2.3	70	2.4	70		70	2.7	70	2.5	70
			F							•				0							
AAA Average		2.9		3.0		3.0		2.8		2.3		2.4		2.4		2.4		2.5		2.5	

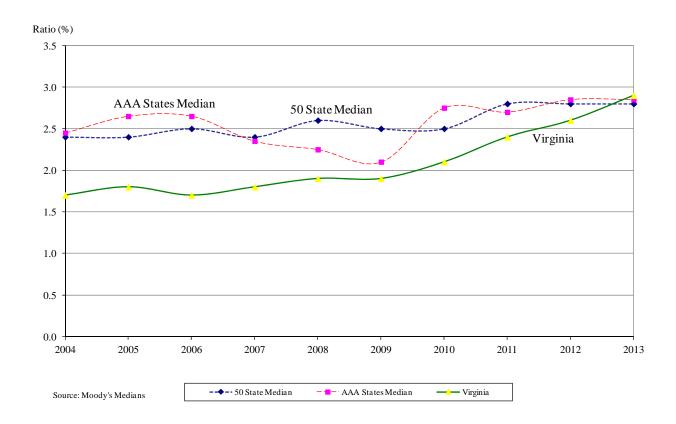
^{*} State was not triple triple A during entire 2004-2013 period. Alaska and Texas were not triple-A until after Moody's Medians compilation date.



⁽¹⁾ Year refers to prior calendar year-end.

 $^{(2) \}textit{ Personal income is based on Census data from two years prior to each \textit{ respective year's debt analyzed}.$

Net Tax-Supported Debt as Percentage of Personal Income Virginia Versus Moody's U.S. 50-State Median and other AAA States 2004-2013



While these rankings are useful for comparison purposes, it is important to note that many other factors contribute to a state's overall credit rating. For example, while ratios for Delaware appear high compared to other triple-A states, a statutory requirement for a short amortization of debt mitigates the effect of the higher debt levels.

In terms of total net tax-supported debt, California remains at the top of the list with \$97.6 billion outstanding followed by New York with \$62.1 billion. Nebraska remains at the bottom of the list with only \$25 million, which is actually a decline from \$27 million the prior year. Virginia has increased from fifteenth last year to twelfth this year with \$10.8 billion outstanding.



Review of Recent Interest Rate Volatility and Impact on the Model

During the onset of the 2008 financial crisis, bond issuers had difficulty accessing the markets. However, due to a sluggish economy and the resulting Federal Reserve policies that have been put in place to reduce interest rates in an attempt to stimulate economic growth, municipal issuers have benefited from rates that have been historically low. While rates remain low from a historical perspective, they have seen much volatility since the 2012 DCAC report. Over the last year, uncertainty over potential changes in Federal Reserve policies, the ongoing federal budget disputes, headline defaults, and questions over tax reform have, in combination, triggered a rise in interest rates. Municipal bond funds experienced record outflows as investors shifted focus to the equity markets, which further raised municipal yields. In recent months, with the yields becoming more attractive, municipal bond funds have seen recent inflows and yields have declined slightly in municipal issuers' favor.

The interest rate used to estimate debt service for future issuances in the DCAC Model is based on a twelve-quarter average of the Bond Buyer 11 Bond Index plus 25 basis points. The adjustment is made since the DCAC Model is used to calculate appropriation-backed debt service and the Bond Buyer 11 Bond Index is based on equivalently rated GO bonds, which would be expected to price more favorably than appropriation-backed debt. Since last year's report, this index has trended higher and experienced volatility based on the above mentioned factors. By June 27th of this year, the index had increased over 100 basis points from December 20, 2012 and a peak of 136 additional basis points was reached on September 5th. By the end of October, the rate had fallen to 81 basis points higher than last year, but more than a half-percent lower than a month and a half earlier. However, interest rates recently trended higher in November and early December. As of December 5th, the Bond Buyer 11 Bond Index rate was slightly more than 100 basis points higher than last year.

In an effort to predict the future direction of municipal interest rates, the Bond Buyer 11 Bond Index was analyzed and compared with the 30-Year Treasury Bond Yields. Following the inversion of these benchmarks that occurred during the 2008 financial crisis, the movement of 30-Year Treasury Bond Yields has become highly correlated with the Bond Buyer 11 Bond Index. Over the last 12 quarters, the 30-Year Treasury Bond Yields and the Bond Buyer 11 Bond Index have experienced a correlation of 0.89. The average ratio of the Bond Buyer 11 Bond Index compared to the 30-Year Treasury Bond Yields, over the same period, was 115.1%. Applying that ratio to the Bloomberg Economic Survey of predictions for 30-Year Treasury Bond Yields produces a forecast of the Bond Buyer 11 Bond Index rate over the coming year.

The following chart depicts interest rates over the last three years, the recent volatility and increasing trend experienced over the past calendar year, Bloomberg's Economic Survey predictions of the 30-Year Treasury Bond Yields and the extrapolated forecast of the Bond Buyer 11 Bond Index rates through December of 2014.



Historic and Forecasted Treasury Yields and DCAC Model Interest Rates



As mentioned earlier in this section, the Debt Capacity Model uses a twelve-quarter average to produce the interest rate that is used to calculate debt service estimates. The 2013 DCAC Model Interest Rate shown in the above graph represents the quarterly average rate being used in this report, which is 4.17%. However, the adjusted Bond Buyer 11 Bond Index rate reached 5% during calendar year 2013 and the adjusted rate as of December 5th was 4.65%. With the anticipation of steadily rising interest rates, there is a risk that actual debt service will be higher than the debt service estimated by the Debt Capacity Model. The potential for a continued trend in rising yields should be considered when making a decision on debt capacity.



Appendix A

Debt Capacity Calculation, Sensitivity Analysis and Moral Obligation Update

December 17, 2013

<u>Debt Capacity Model – An Explanation of Model and Assumptions</u>

Virginia's Debt Capacity Measure:

- Calculation:
 - Tax-Supported Debt Service < 5% of Blended Revenues.
- Recommendation:
 - Expressed in terms of a ten-year average.

Model Characteristics:

- Covers a 10-year issuance period.
- Incorporates currently authorized but unissued debt.
- Uses Blended Revenues from Official Forecast.

Model Assumptions:

- Term and structure:
 - 20-year bonds with level debt service payments.
 - Interest rate based on the average of the last twelve quarters of The Bond Buyer 11 Bond Index for GO debt (3.92%) plus 25 basis points for 9(d) debt (4.17%).

Model Includes:

- Blended Revenues from Official Forecast:
 - General fund revenues, state revenues in Transportation Trust Fund, transfers of ABC profits and certain recurring non-general fund transfers.
- Actual and Projected Debt Service:
 - Actual debt service on all issued tax-supported debt, including capital leases, installment purchases and regional jail reimbursement agreements.
 - Debt service on authorized but unissued tax-supported debt.
 - Level debt service payments (except 9(b) General Obligation debt).
 - 9(b) General Obligation debt is amortized on a level principal basis.
 - VCBA Equipment Notes amortized over 7-year term.
 - CTB Bonds amortized over 25-year term.

Outstanding Tax-supported Debt as Determined by the DCAC includes:

- General obligation bonds (Section 9(a) and 9(b)). Self-supporting 9(c) projects are not included.
- Obligations issued by the Commonwealth Transportation Board or Virginia Port Authority that are secured by the Transportation Trust Fund.
- Obligations issued by the Virginia Public Building Authority and the Virginia College Building Authority secured, in whole or in part, by general fund appropriations.
- Obligations payable under regional jail reimbursement agreements between the Treasury Board and localities or regional jail authorities.
- Capital leases (80% of total of first year amounts in Commonwealth CAFR for both primary government and component units).

- Installment purchases (80% of total of first year amounts in Commonwealth CAFR for both primary government and component units).
- Obligations for which the debt service is derived from payments received from the Commonwealth on a capital lease.
- That portion of outstanding moral obligation debt for which the underlying debt service reserve fund has been utilized to pay all or a portion of debt service, and for which the General Assembly has appropriated funds to replenish all or a portion of such debt service reserve.

Authorized but Unissued Tax-supported Debt Included in the DCAC Model:

• Must be authorized by an Act of the General Assembly with no contingency for subsequent General Assembly approval.

Moral Obligation Debt:

- In the event a moral obligation issuer has experienced an event of a default on an underlying revenue stream and been forced to draw on the debt service reserve fund to pay debt service, the Committee shall immediately meet and review the circumstances surrounding such event and report its findings to the Governor and the General Assembly.
- In the event this section is invoked, the Committee's Report to the Governor and General Assembly shall include a Model scenario showing annual debt capacity including that portion of the moral obligation debt.
- Inclusion of the moral obligation debt in the Model is in no way intended to bind the Governor or General Assembly to make future appropriations to replenish future draws on the debt service reserve fund(s).
- The subject debt will be removed from the Model once the General Assembly has not appropriated funds to replenish the debt service reserve fund(s).

Currently Authorized Tax-Supported Debt Issuance Assumptions December 17, 2013

(Dollars in Millions)

	<u>9(b)</u>	3	<u> PBA</u>	21st	CBA Century <u>iipment</u>	21s	VCBA t Century rojects	Tran	CPR asportation	VTD portation	1 2	<u>VPA</u>	<u>Total</u>
Authorized & Unissued as of June 30, 2013	\$ -	\$	613.8	\$	126.4	\$	1,832.7	\$	1,487.3	\$ 24.7	\$	65.0	\$ 4,149.9
Issued Jul 1 - Dec 31, 2013	\$ -	\$	-	\$	53.9	\$	277.8	\$		\$ 	\$	-	\$ 331.7
Assumed Issued:	 									 			
FY 2014	\$ -	\$	149.2	\$	64.2	\$	288.6	\$	400.0	\$ -	\$	-	\$ 902.0
FY 2015	\$ -	\$	240.3	\$	-	\$	607.6	\$	200.0	\$ 24.7	\$	65.0	\$ 1,137.6
FY 2016	\$ -	\$	203.8	\$	-	\$	521.0	\$	284.1	\$ -	\$	-	\$ 1,008.9
FY 2017	\$ -	\$	20.5	\$	-	\$	137.7	\$	-	\$ -	\$	-	\$ 158.2
FY 2018	\$ -	\$	-	\$	-	\$	-	\$	122.9	\$ -	\$	-	\$ 122.9
FY 2019	\$ -	\$	-	\$	-	\$	-	\$	-	\$ -	\$	-	\$ -
FY 2020	\$ -	\$	-	\$	-	\$	-	\$	355.0	\$ -	\$	-	\$ 355.0
FY 2021	\$ -	\$	-	\$	-	\$	-	\$	125.3	\$ -	\$	-	\$ 125.3
Total Planned	\$ -	\$	613.8	\$	64.2	\$	1,554.9	\$	1,487.3	\$ 24.7	\$	65.0	\$ 3,809.9
Subtotal Issued & Planned	\$ -	\$	613.8	\$	118.1	\$	1,832.7	\$	1,487.3	\$ 24.7	\$	65.0	\$ 4,141.6
Authorized Debt													
Assumed Unissued ⁽¹⁾	\$ -	\$	-	\$	8.3	\$	-	\$	-	\$ -	\$	-	\$ 8.3

 $^{^{(1)}}$ Assumed funded from premium from bonds sold.

DEBT CAPACITY MODEL

(Dollars in Millions)

Debt Capacity Maximum Ratio December 17, 2013

5.0% Debt Service as a % of Revenue = **Base Model Solution** [1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11] Debt Service Actual Annual Actual & Base Outstanding Payments for on Amount of Remaining Total Annual Projected Net Amount of Capacity Payments for Debt Service Debt Service Debt Service Capacity Additional Additional Capacity Debt Service Blended to Pay Debt Service as a % of on All Planned to Pay Debt that may Debt that may to Pay as a % of Fiscal Year on Debt Issued **Debt Issuances** Debt Service Be Issued Debt Service Revenues Revenues Debt Service Revenues Revenues Be Issued 2004 13,142.20 657.11 373.55 2.84% N/A 2.84% 283.56 N/A N/A 283 56 2.84% 14,982.20 749.11 384.50 2005 2.57% N/A 2.57% 364.61 N/A N/A 364.61 2.57% 2006 16,520.10 826.01 419.01 2.54% N/A 2.54% 407.00 N/A N/A 407.00 2.54% 17,282.60 864.13 482.33 2.79% 2.79% 381.80 N/A 381.80 2.79% 2007 N/A N/A 17,528.90 876.45 532.95 3.04% 343.50 N/A 3.04% 2008 N/A 3.04% N/A 343.50 2009 15,680.90 784.05 587.33 3.75% N/A 3.75% 196.72 N/A N/A 196.72 3.75% 2010 16,085.70 804.29 633.45 3.94% 3.94% 170.83 N/A N/A 170.83 3.94% N/A 837.56 693.64 143.92 2011 16,751.10 4.14% N/A 4.14% N/A N/A 143.92 4.14% N/A 2012 17,787.10 889.36 747.02 4.20% N/A 4.20% 142.34 N/A 142.34 4.20% 2013 18,626,30 931.32 820.77 4.41% N/A 4.41% 110.55 N/A N/A 110.55 4.41% 19.090.90 954.55 835.53 4.61% 0.000 2014 4.38% 45.18 73.83 0.00 73.83 4.61% 2015 19,866,40 993.32 844.24 4.25% 140.79 4.96% 8.30 0.000 8.30 4.96% 0.002016 20,591.80 1,029.59 813.79 3.95% 222.17 5.03% (6.37)0.000.000 (6.37)5.03% 4.99% 21,489.00 1,074.45 19.59 18.213 2017 761.52 3.54% 293.34 4.91% 248.89 1.37 2018 22,352.60 1,117.63 724.16 3.24% 304.92 4.60% 88.55 587.78 61.227 27.32 4.88% 23,264.10 674.87 2.90% 312.77 4.25% 175.57 821.35 121.332 4.77% 2019 1,163.21 54.24 2.58% 2020 24,215.90 1,210.80 624.18 312.77 3.87% 273.85 937.56 189.941 83.91 4.65% 2021 25,279,95 1.264.00 603.88 2.39% 335.43 3.72% 324.69 986.95 262,165 62.53 4.75% 2022 26,391.21 1,319.56 578.05 2.19% 325.54 3.42% 415.96 1.006.02 335.784 80.18 4.70% 2023 27,551.79 1,377.59 560.17 2.03% 325.54 491.88 409.898 4.70% 3.21% 1,012.79 81.98 10 Year 2 Yrs Excess

\$1,120.27

[1] Blended Revenues include the actual fiscal year revenues as reported in the Official December General Fund, Commonwealth Transportation Fund and VA Health Care Fund forecasts presented in years 2004-2013, Standard General Fund December Forecasts dated December 2013 which are based on US & Virginia economic outlook incorporating GACRE recommendations, including 0.25% sales tax increment adopted in 2004 t FY 2013 and 0.375% sales tax increment beginning in FY 2014 as adopted in 2013, the Virginia Health Care Fund forecast revenues as permitted by Section 32.1-366 of the Code of Virginia, certain recurring Trans Appropriation Act, transfers from Alcoholic Beverage Control Board and certain Transportation Trust Fund revenues from the Commonwealth Transportation Fund Official December revenue forecasts dated Dece

Average:

\$560.13

Avg Capacity:

^[2] Base Capacity to Pay Debt Service equals 5% of the Blended Revenues listed in Column [1].

^[3] Equals the annual payments of principal and interest for outstanding tax-supported debt as of 6/30/13, excluding 9(c) debt, Build America Bonds (BABs) interest subsidy, and Non-General Fund portion of debt service on certain Virginia College Building Authority (VCBA) Bonds.

^[4] Equals Annual Payments for Debt Service on Debt Issued as a percentage of Blended Revenues. Column [3] / Column [1].

^[5] Equals the annual estimated payments of principal and interest for all currently authorized tax-supported debt planned for issuance within the next ten fiscal years. See Assumed Issuances of Currently Authorized by Unissued Tax-Supported Debt. Also includes debt service for long-term capital leases, installment purchase obligations and regional jail reimbursements Per Treasury Board Reimbursement Agreements.

^[6] Equals annual payments for debt service on debt issued and planned debt issuances, divided by Blended Revenues. (Column [3] + Column [5]) / Column [1].

^[7] Equals the amount of revenue available to pay additional debt service after principal and interest on all outstanding and all planned issuances of tax-supported debt has been paid. Column [2] - Column [3] - Column [7] - Column [8] - Co

^[8] Equal to annual amount of additional principal that may be issued without violating the parameters of the model.

^[9] Equal to annual estimated payments of principal and interest related to the amounts of additional debt that may be issued as noted in Column [8].

^[10] Equals Column [7] minus Column [9].

 $^{[11] \ \} Equals \ the \ sum \ of \ all \ debt \ service \ payments \ divided \ by \ Blended \ Revenues. \ (Column \ [3] + Column \ [5] + Column \ [9]) \ / \ Column \ [1].$

DEBT CAPACITY MODEL

(Dollars in Millions)

Debt Capacity Maximum Ratio December 17, 2013

Debt Service as a % of Revenue = 5.0% Base Model Solution - Average

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
	Blended	Base Capacity to Pay	Annual Payments for Debt Service	Actual Outstanding Debt Service as a % of	Annual Payments for Debt Service on All Planned		Net Capacity to Pay	Amount of Additional	Debt Service on Amount of Additional Debt that may	Remaining Capacity to Pay	Total Debt Service as a % of
Fiscal Year	Revenues	Debt Service	_	Revenues	Debt Issuances	Revenues	Debt Service		Be Issued	Debt Service	Revenues
2004	13,142.20	657.11	373.55	2.84%	N/A	2.84%	283.56	N/A	N/A	283.56	2.84%
2005	14,982.20	749.11	384.50	2.57%	N/A	2.57%	364.61	N/A	N/A	364.61	2.57%
2006	16,520.10	826.01	419.01	2.54%	N/A	2.54%	407.00	N/A	N/A	407.00	2.54%
2007	17,282.60	864.13	482.33	2.79%	N/A	2.79%	381.80	N/A	N/A	381.80	2.79%
2008	17,528.90	876.45	532.95	3.04%	N/A	3.04%	343.50	N/A	N/A	343.50	3.04%
2009	15,680.90	784.05	587.33	3.75%	N/A	3.75%	196.72	N/A	N/A	196.72	3.75%
2010	16,085.70	804.29	633.45	3.94%	N/A	3.94%	170.83	N/A	N/A	170.83	3.94%
2011	16,751.10	837.56	693.64	4.14%	N/A	4.14%	143.92	N/A	N/A	143.92	4.14%
2012	17,787.10	889.36	747.02	4.20%	N/A	4.20%	142.34	N/A	N/A	142.34	4.20%
2013	18,626.30	931.32	820.77	4.41%	N/A	4.41%	110.55	N/A	N/A	110.55	4.41%
2014	19,090.90	954.55	835.53	4.38%	45.18	4.61%	73.83	0.00	0.000	73.83	4.61%
2015	19,866.40	993.32	844.24	4.25%	140.79	4.96%	8.30	560.13	40.990	(32.69)	5.16%
2016	20,591.80	1,029.59	813.79	3.95%	222.17	5.03%	(6.37)	560.13	81.980	(88.34)	5.43%
2017	21,489.00	1,074.45	761.52	3.54%	293.34	4.91%	19.59	560.13	122.969	(103.38)	5.48%
2018	22,352.60	1,117.63	724.16	3.24%	304.92	4.60%	88.55	560.13	163.959	(75.41)	5.34%
2019	23,264.10	1,163.21	674.87	2.90%	312.77	4.25%	175.57	560.13	204.949	(29.38)	5.13%
2020	24,215.90	1,210.80	624.18	2.58%	312.77	3.87%	273.85	560.13	245.939	27.91	4.88%
2021	25,279.95	1,264.00	603.88	2.39%	335.43	3.72%	324.69	560.13	286.929	37.76	4.85%
2022	26,391.21	1,319.56	578.05	2.19%	325.54	3.42%	415.96	560.13	327.919	88.05	4.67%
2023	27,551.79	1,377.59	560.17	2.03%	325.54	3.21%	491.88	560.13	368.908	122.97	4.55%
							10 3/2 22		2 Van Errana		1

10 Year 2 Yrs Excess Average: \$560.13 Avg Capacity: \$1,680.40

3.0000

<u>Debt Capacity Model – An Explanation of Results Page</u>

Column Descriptions:

- (1) **Blended Revenues** include all general fund revenues, ABC profits transferred to the general fund, state tax revenues in the Transportation Trust Fund, the relevant portion of the sales tax and certain recurring non-general fund transfers.
- (2) Base Capacity to Pay Debt Service is calculated as 5% of Blended Revenues. (Column $2 = \text{Column } 1 \times .05$)
- (3) Annual Payments for Debt Service on Debt Issued is actual debt service on all tax-supported debt outstanding at the end of the most recent fiscal year (6/30/13), excluding (i) 9(c) debt, (ii) the subsidized portion of interest on Build America Bonds and (iii) non-general fund portion of debt service paid on certain VCBA bonds.
- (4) Actual Outstanding Debt Service as a % of Revenues is the percentage of Blended Revenues required for payments on currently issued tax-supported debt included in the model. (Column 4 = Column 3 ÷ Column 1)
- (5) Annual Payments for Debt Service on All Planned Debt Issuances is the estimated amount of debt service for currently authorized and unissued tax-supported debt to be issued within the ten-year period.
- (6) Actual and Planned Debt Service as a % of Revenues is the sum of Annual Payments for Debt Service on Debt Issued and Annual Payments for Debt Service on All Planned Debt Issuances as a percentage of Blended Revenues.

 (Column 6 = (Column 3 + Column 5) ÷ Column 1)
- (7) **Net Capacity to Pay Debt Service** is the capacity that remains to pay any additional debt service related to subsequent authorized and issued debt and is the Base Capacity to Pay Debt Service less Annual Payments for Debt Service on Debt Issued and less Annual Payments for Debt Service on All Planned Debt Issuances.

 (Column 7 = Column 2 Column 3 Column 5)
- (8) Amount of Additional Debt that May Be Issued is the amount of additional tax-supported debt (above and beyond that which is currently authorized but unissued) that may be issued in any given year without exceeding the Base Capacity to pay debt service.
- (9) Debt Service on the Amount of Additional Debt that May Be Issued is the estimated amount of debt service for the Amount of Additional Debt that May be Issued, given the amount is authorized.

(10) Remaining Capacity to Pay Debt Service is the residual amount derived from the Net Capacity to Pay Debt Service less Debt Service on the Amount of Additional Debt that May be Issued.

(Column 10 = Column 7 - Column 9)

(11) Total Debt Service as a % of Revenues is the percentage of Blended Revenues used for the sum of Annual Payments for Debt Service on Debt Issued, Annual Payments for Debt Service on All Planned Debt Issuances and Debt Service on Amount of Additional Debt that May be Issued.

(Column $11 = (Column 3 + Column 5 + Column 9) \div Column 1)$

Model Solution:

- Model solves for the additional annual capacity above and beyond amounts already authorized and assumed issued over the next ten fiscal years at the base capacity to pay debt service (5%), while maintaining two additional years of capacity at the end of the ten-year period.
- This solution results in an average annual capacity of \$560.13 million.
- Accordingly, the Committee finds the additional tax supported debt that may prudently be authorized in each 2014 and 2015 is \$560.13 million.

DEBT CAPACITY MODEL REVENUE DATA

December 2013

(Dollars In Millions)

		Transportation	General	Transportation Trust	Virginia	Total	Blended Revenue
	General	Trust	Fund	Fund	Health Care	Blended	Growth
Fiscal Year	Fund	Fund (4)	Growth	Growth	Fund	Revenue (9)	Rate (10)
Actual 2002	11,071.60 (1)	749.33 (1)	-5.24% (1)	-0.53% (1)	N/A (1)	11,820.93	-4.95%
Actual 2003	11,256.40 (1)	745.00 (1)	1.67% (1)	-0.58% (1)	N/A (1)	12,001.40	1.53%
Actual 2004	12,342.50 (1)	799.70 (1)	9.65% (1)	7.34% (1)	N/A (1)	13,142.20	9.51%
Actual 2005	14,135.70 (1)	846.50 (1)	14.53% (1)	5.85% (1)	N/A (1)	14,982.20	14.00%
Actual 2006	15,318.30 (1)	912.90 (1)	8.37% (1)	7.84% (1)	288.90 (1)	16,520.10	10.26%
Actual 2007	16,028.30 (1)	969.00 (1)	4.63% (1)	6.15% (1)	285.30 (1)	17,282.60	4.62%
Actual 2008	16,261.30 (1)	968.70 (1)	1.45% (1)	-0.03% (1)	298.90 (1)	17,528.90	1.43%
Actual 2009	14,359.20 (1)	1,014.20 (1)	-11.70% (1)	4.70% (1)	307.50 (1)	15,680.90	-10.54%
Actual 2010	14,786.70 (1)	1,006.20 (1)	2.98% (1)	-0.79% (1)	292.80 (1)	16,085.70	2.58%
Actual 2011	15,452.30 (1)	1,015.40 (1)	4.50% (1)	0.91% (1)	283.40 (1)	16,751.10	4.14%
Actual 2012	16,348.00 (1)	1,060.20 (1)	5.80% (1)	4.41% (1)	378.90 (1)	17,787.10	6.18%
Actual 2013	17,109.20 (1)	1,083.60 (1)	4.66% (1)	2.21% (1)	433.50 (1)	18,626.30	4.72%
Forecasted for 2014	17,493.70 (2)	1,204.50 (5)	2.25% (2)	11.16% (5)	392.70 (7)	19,090.90	2.49%
Forecasted for 2015	18,223.60 (2)	1,271.50 (5)	4.17% (2)	5.56% (5)	371.30 (7)	19,866.40	4.06%
Forecasted for 2016	18,908.70 (2)	1,323.90 (5)	3.76% (2)	4.12% (5)	359.20 (7)	20,591.80	3.65%
Forecasted for 2017	19,762.70 (2)	1,366.60 (5)	4.52% (2)	3.23% (5)	359.70 (7)	21,489.00	4.36%
Forecasted for 2018	20,583.20 (2)	1,409.20 (5)	4.15% (2)	3.12% (5)	360.20 (7)	22,352.60	4.02%
Forecasted for 2019	21,449.30 (2)	1,454.00 (5)	4.21% (2)	3.18% (5)	360.80 (7)	23,264.10	4.08%
Forecasted for 2020	22,356.70 (2)	1,497.90 (5)	4.23% (2)	3.02% (5)	361.30 (7)	24,215.90	4.09%
Forecasted for 2021	23,359.56 (3)	1,542.84 (6)	4.49% (3)	3.00% (6)	377.56 (8)	25,279.95	4.39%
Forecasted for 2022	24,407.54 (3)	1,589.12 (6)	4.49% (3)	3.00% (6)	394.55 (8)	26,391.21	4.40%
Forecasted for 2023	25,502.69 (3)	1,636.80 (6)	4.49% (3)	3.00% (6)	412.30 (8)	27,551.79	4.40%

(1) Department of Taxation.

(2) December Standard General Fund Forecast for FY 2014-2020, including A.B.C. Profits, 0.25% sales tax (enacted 2004) through FY 2013 and 0.375% sales tax beginning FY 2014 (enacted 2013), and certain recurring Transfers per the Appropriation Act.

(3) Based on flat growth rate of 4.50% for General Fund Revenues and Transfers, A.B.C. Profits excluded. A.B.C. Profits held flat at \$71 million, per Department of Taxation.

(4) Does not include Highway Maintenance and Operating Fund, Federal Grants and Contracts or Toll Revenues.

(5) December Commonwealth Transportation Fund Forecast for FY 2014-2020, includes only Transportation Trust Fund Revenues.

(6) Based on flat growth rate of 3.00% for years 2021-2023, per Department of Taxation.

(7) December Virginia Health Care Fund Forecast for FY 2014-2020.

(8) Based on flat growth rate of 4.50% for Virginia Health Care Fund Revenues, per Department of Taxation.

(9) Total Blended Revenue = GF + TTF + Virginia Health Care Fund.

(10) Blended Revenue Growth Rate = (Current FY Total Blended Revenue / Prior FY Total Blended Revenue) - 1.

Debt Capacity Model - Sensitivity Analysis

2-Year Reserve Excess Capacity Sensitivity

- The Base Model solution provides for average debt capacity of \$560.13 million over the model period, with two years of average capacity, beyond the 10-year model period.
 - If the Model solution is altered to reduce the two years of excess capacity to one year of excess capacity, the resulting debt capacity is \$611.06 million.
 - If the Model solution is altered to reduce the two years of excess capacity beyond the model period to no excess capacity, the resulting average debt capacity is \$672.16 million.

Revenue Sensitivity

- If the Model solution is altered to increase or decrease Blended Revenues, the following incremental average debt capacity changes occur:
 - Assuming a change of \$100 million in each and every year, the incremental change is \$5.69 million.
 - Assuming a 1% change of revenues in each and every year, the incremental change is \$15.69 million.

Interest Rate Sensitivity

- If the Model solution is altered to change interest rates, the following changes to average debt capacity occur:
 - Add 100 basis points to base rate, and average capacity decreases to \$498.85 million.
 - Subtract 100 basis points from base rate, and average capacity increases to \$629.84 million.

Debt of the Commonwealth (Dollars in Thousands)

	As of June 30, 2013		Ju	As of me 30, 2012
Tax-Supported Debt				<u> </u>
9(b) General Obligation (1)	\$	752,493	\$	831,148
9(c) General Obligation - Higher Education (2)		877,858		906,474
9(c) General Obligation - Transportation (2)		21,961		24,210
9(c) General Obligation - Parking Facilities (2)		17,538		18,383
Commonwealth Transportation Board		2,495,312		2,655,481
Virginia Public Building Authority		2,534,347		2,566,789
Virginia Port Authority		228,619		237,321
Virginia College Building Authority - 21st Century & Equip		2,725,259		2,470,589
Innovative & Entrepreneurship Investment Authority (3)		1,220		2,375
Virginia Biotechnology Research Park Authority		35,284		37,162
Transportation Notes Payable		8,000		8,000
Capital Leases		157,466		168,566
Installment Purchases		192,682		215,120
Regional Jail Reimbursement Agreements		837		2,748
Virginia Aviation Board		764		1,050
Economic Development Authority Obligations (4)		77,472		81,747
Subtotal Tax Supported Debt	\$	10,127,112	\$	10,227,163
Other Tax-Supported Debt				
Compensated Absences (2)	\$	582,774	\$	569,021
Pension Liability (2)		2,799,523		2,446,240
OPEB Liability ⁽²⁾		1,076,157		877,630
Tax Refund Note (2)		20,319		40,639
Pollution Remediation Liability (2)		3,494		5,171
Other Liabilities (2)		29,606		27,647
Subtotal Tax Supported Debt Not Included in Capacity Model	\$	4,511,873	\$	3,966,348
Total Tax-Supported Debt	\$	14,638,985	\$	14,193,511

Source: Department of the Treasury and Department of Accounts

⁽¹⁾ Voter approved

⁽²⁾ Not Included in Debt Capacity Model

⁽³⁾ Formally called the Innovative Technology Authority

 $^{^{(4)}}$ Fairfax County Economic Development Authority Joint Venture with VDOT for Camp 30 Project

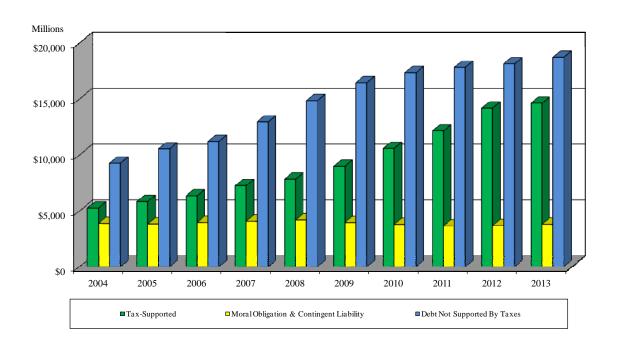
Debt of the Commonwealth (Dollars in Thousands)

	As of June 30, 2013		<u>Ju</u>	As of me 30, 2012
Debt Not Supported by Taxes (1)				
Moral Obligation / Contingent Liability Debt				
Virginia Resources Authority	\$	836,656	\$	801,384
Virginia Housing Development Authority		, -		, -
Virginia Public School Authority - 1997 Resolution		2,831,405		2,746,135
Virginia Public School Authority - Equipment Technology Notes		165,720		161,170
Total Moral Obligation/Contingent Liability Debt	\$	3,833,781	\$	3,708,689
Other Debt Not Supported By Taxes				
9(d) Higher Education	\$	1,538,395	\$	1,541,802
Virginia College Building Authority - Pooled Bond Program		1,773,190		1,715,515
Virginia Public School Authority - Stand Alone Program		244,527		244,682
Virginia Public School Authority - School Tax Credit Bond Program		353,400		330,135
Virginia Housing Development Authority		5,742,689		5,945,174
Virginia Port Authority		276,816		281,978
Hampton Roads Sanitation District		790,503		639,286
Virginia Biotechnology Research Park Authority		-		-
Virginia Resources Authority		2,582,923		2,478,243
Federal Highway Reimbursement Anticipation Notes		89,836		182,450
Grant Anticipation Notes (GARVEES)		473,733		298,728
Route 460 Funding Corporation of Virginia		314,662		-
Notes Payable		240,271		193,467
Bond Anticipation Notes		-		-
Other Long-Term Debt		285,813		295,913
Foundations		1,583,178		1,570,447
Pension Liability		48,798		42,249
OPEB Liability		15,688		12,751
Capital Lease Obligations		6,453		449
Compensated Absences		9,727		9,267
Installment Purchase Obligations		-		-
Tuition Benefits Payable		2,189,079		2,175,296
Lottery Prizes Payable		172,474		194,481
Total Other Debt Not Supported By Taxes	\$	18,732,155	\$	18,152,313
Grand Total of Tax Supported Debt and Debt Not Supported By Taxes	\$	37,204,921	\$	36,054,513

Source: Department of the Treasury and Department of Accounts

⁽¹⁾ Not Included In Debt Capacity Model

Outstanding Commonwealth Debt Fiscal Years 2004-2013



Tax-Supported Debt Issued Fiscal Year 2014 Through December 31, 2013

<u>Issuer</u>	Date Issued	Par Amount
Virginia College Building Authority	9/17/2013	\$331,705,000
Educational Facilities		
Revenue Bonds Series 2013A		

(21st Century College and Equipment Program)

Moral Obligation and Contingent Liability Debt

Moral Obligation Debt

Moral obligation debt refers to a bond issue structure originally created in the 1960s and utilized primarily by state housing finance agencies or state-administered municipal bond banks as additional credit enhancement for revenue bond issues. A government's moral obligation pledge provides a deficiency make-up for bondholders should underlying project revenues prove insufficient. The mechanics involve funding a debt service reserve fund when the bonds are issued. If a revenue deficiency exists, reserve fund monies are used to pay bondholders. The issuer then informs the legislative body and requests that it replenish the reserve fund before subsequent debt service is due. The legislative body "may", but is not legally required to, replenish the reserve fund. Rating agencies do not include moral obligation debt in tax-supported debt ratios as long as these bonds are self-supporting.

The Virginia Resources Authority (VRA) is the Commonwealth's only remaining moral obligation debt issuer. The VRA issues moral obligation bonds under its financing programs to provide low-cost financing to localities for water, wastewater, public safety, transportation, and other General Assembly authorized project categories. Due to increased demand for VRA's financing programs, the 2009 General Assembly approved an increase to VRA's moral obligation debt limit from \$900 million to \$1.5 billion.

Below are the statutory caps and outstanding amounts (in thousands):

Issuer	Statutory Cap	Outstanding at June 30, 2013	Available Authorization
Virginia Resources Authority	\$1,500,000	\$836,656	\$663,344
Virginia Housing Development Authority	\$1,500,000	\$0	\$1,500,000
Virginia Public School Authority	\$800,000	\$0	\$800,000
Total	\$3,800,000	\$836,656	\$2,963,344

Alternative financing programs were initiated by the Virginia Housing Development Authority and the Virginia Public School Authority. Neither of these entities expect to issue additional moral obligation debt.

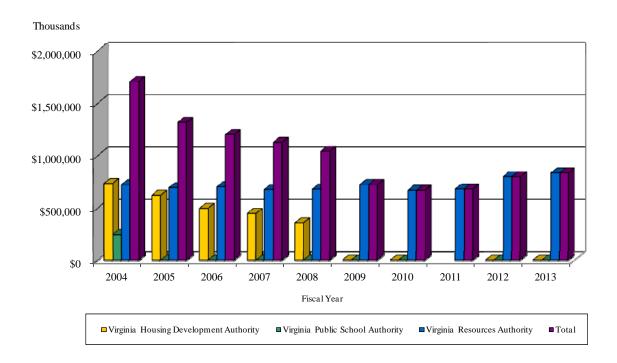
Moral Obligation Debt Sensitivity

A sensitivity analysis was completed for moral obligation debt. The analysis demonstrates the impact on tax-supported debt capacity as a result of the conversion of moral obligation debt to tax-supported debt. The sensitivity analysis is prepared using a worst-case scenario and shows the impact of the conversion of all moral obligation debt. However, conversion would only occur if the General Assembly appropriated funds to replenish a debt service reserve fund shortfall upon the request by a moral obligation issuer. Further, if any such debt were ever converted, it would be only

the amount necessary to cure the default of an underlying revenue stream (e.g., a locality participating in a pooled bond issue).

If the Model solution is altered to assume the conversion of all outstanding moral obligation debt as of June 30, 2013 to tax-supported debt, the resulting average debt capacity is \$490.41 million.

Outstanding Moral Obligation Debt Fiscal Years 2004-2013



Contingent or Limited Liability Debt

The Virginia Public School Authority (VPSA) under its 1997 Resolution, is the only issuer of non-tax-supported debt that utilizes a sum sufficient appropriation (SSA) as an additional credit enhancement. This represents a contingent liability for the Commonwealth. The Virginia Public School Authority had \$2.83 billion of 1997 Resolution bonds outstanding as of June 30, 2013.

The SSA was codified during the 2001 General Assembly session (§22.1-167.3, Code of Virginia) to authorize the use of SSA for certain revenue notes issued by the Virginia Public School Authority under its Educational Technology Program. Notes outstanding as of June 30, 2013 equal \$165.7 million.

Sum Sufficient Appropriation Sensitivity

A sensitivity analysis was completed for the VPSA's SSA debt. The analysis demonstrates the impact on tax-supported debt capacity as a result of the conversion of SSA debt to tax-supported debt.

If the Model solution is altered to assume the conversion of the VPSA's total outstanding debt secured by a sum sufficient appropriation as of June 30, 2013 to tax-supported debt, the resulting average debt capacity is \$310.37 million.