COMMONWEALTH of VIRGINIA

Richard D. Brown
Secretary of Finance

P.O. Box 1475
Richmond, VA 23218

December 19, 2016

The Honorable Terence R. McAuliffe
Governor of Virginia
Patrick Henry Building, 3rd Floor
Richmond, Virginia 23219

The Honorable G. Paul 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 McAuliffe, 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. In addition, the Committee is required to annually review the Commonwealth's moral obligation debt and other debt for which the Commonwealth has a contingent or limited liability. I am pleased to present the report for 2016.

Based on the debt capacity model, the Committee estimates that up to $446 million in additional debt could be authorized and issued in fiscal years 2017 and 2018. While this is the average amount that will allow the projection of debt service as a percentage of blended revenues to remain at or below five-percent during the 10-year model horizon, it will also mean that projected debt service will exceed five-percent in the next eight years and fall below that threshold in the last two years. This solution is based on a number of issuance assumptions contained in the model. Accordingly, if the assumptions change, the resulting capacity will also change.

The Committee discussed at length the volatility in the financial markets and the anticipated continued rise in interest rates. Following a decline in interest rates into the third quarter of calendar year 2016, interest rates have abruptly reversed course and have increased rapidly through fall 2016. Tax-exempt bond interest rates are approximately 50–60 basis points higher across the yield curve compared to rates as of January 1, 2016. Market participants anticipate the Federal Open Market Committee will continue to raise the target federal funds rate through calendar year 2017 and beyond.

While the Committee recognizes that the Commonwealth has attempted to be cautious and conservative in its revenue projections which should act to counter future risks inherent in the DCAC Model assumptions, the Committee notes there is a real possibility of increased borrowing rates in the coming calendar year. This trend could result in actual borrowing rates higher than the DCAC Model's interest rate. A one-percent increase in the DCAC Model's interest rate would result in a $61 million decline in annual capacity to $385 million. Accordingly, the Committee urges the Governor and the General Assembly to consider the implications of said rise in interest rates when authorizing any new tax-supported debt during the 2017 Session of the General Assembly.

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. Additionally included is information regarding potential fiscal challenges that could impact debt capacity.

Sincerely,

Richard D. Brown, Chairman
Debt Capacity Advisory Committee

Attachment

CC: Debt Capacity Advisory Committee Members

Commonwealth of Virginia

Debt Capacity Advisory Committee

Report to the Governor and the General Assembly

December 19, 2016

Debt Capacity Advisory Committee Members

The Honorable Richard D. Brown – Chairman
Secretary of Finance

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. Vaughn
Staff Director, House Appropriations Committee

David A. VonMoll
State Comptroller

Jody M. Wagner
Citizen Member

Background

Following the Commonwealth's increased use of debt in the 1980's, Governor Wilder issued Executive Order 38 (1991) which established the Debt Capacity Advisory Committee (Committee or DCAC). Subsequent to the Executive Order, the DCAC was 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, and 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 not unlimited. Higher debt service payments (a fixed expense) mean 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 will 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 in 1991 was five percent - that is, 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 reevaluate the model and consider ways to smooth dramatic changes in capacity in times of extraordinary revenue fluctuations.

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 to the extent debt is authorized and issued, debt service will limit the amounts available for 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, certain recurring non-general fund transfers including ABC profits, state revenues in the Transportation Trust Fund (TTF), and Virginia Healthcare Fund revenues. 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 leases 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 Risks to Underlying Forecast

While Virginia's economic outlook remains positive, there are three potential risks that could impact the underlying forecast and debt capacity. These risks include a continued rise in interest rates, the unknowns of future federal fiscal policy, and unanticipated external shocks to the financial markets.

Bond yields rose significantly during fall of 2016. While much of the initial increase was only a recovery of yields from record lows experienced in summer of this year, the continued increase in yields during the weeks following the election have caused tax-exempt rates to increase approximately 50-60 basis points across the yield curve compared to January 1 of this year. On December 14, 2016, the Federal Open Market Committee increased the Federal Funds rate by 25 basis points and communicated to the financial markets that three increases to the Federal Funds rate are anticipated to occur in calendar year 2017. Future changes in interest rates, in general, will be impacted by the actual amount and timing of additional FOMC adjustments to rates. Most market participants believe interest rates will continue to rise in calendar year 2017, as communicated by FOMC. With the DCAC Model interest rate at such a low level due to favorable borrowing rates experienced the last three years, there is a possibility, that should interest rates continue to rise, Virginia's actual borrowing rate could exceed the DCAC Model interest rate of 3.61%. It is important to note that based on current DCAC Model conditions, a 1% rise in the Model interest rate will cause a decline in capacity of $61 million annually.

Just as future interest rates are an unknown variable that can significantly impact debt service costs and capacity, potential changes to federal fiscal policy could have significant positive or negative impacts on Virginia's economy. President-Elect Trump's stated plan to undertake a review of regulatory items could result in a reduction in both federal regulations and a reduction in the number of employees enforcing those regulations. If such cuts were enacted, Virginia and Maryland could be faced with further negative impacts to the tax bases. However, if federal spending is increased or realigned to focus on cyber-security and military spending, Virginia is poised to benefit and especially so given the Governor's efforts to grow these business sectors.

The final risk to the underlying forecast is an uncontrollable and unexpected shock to the financial markets. Today's Virginia economy isn't contained to its physical borders. Virginia has successfully expanded its virtual borders through effective trade missions, growing tourism, and an extremely efficient port system that is undergoing significant expansions to increase its import and export capabilities. Virginia is truly a part of not only the national economy but also the global economy. As a major economic participant, Virginia's economy and revenues are subject to both national and global events and shocks that could include changes to domestic and foreign energy policies, changes to trade policies and agreements, and fluctuations in global currencies and financial markets. Virginia remains optimistic that the economy will continue its expansion.

2016 Debt Capacity Recommendations

The 2016 Base Model Solution – Average debt capacity calculation (Appendix A-6) shows that an additional $446 million in debt could be authorized and issued in each 2017 and 2018. This amount will cause projections of debt service as a percent of Blended Revenues to exceed five percent in eight years and to be at or below five percent in the last two years.

Other Recommendations

a) The Committee recognizes that a significant amount of 9(d) projects have been authorized in recent years and that many project needs have been met with the earlier bond authorizations. Once significant project needs return and debt capacity increases, the Committee will express its support in seeking the approval of 9(b) general obligation bonds, which must be approved by a voter referendum. With a higher bond rating than 9(d) appropriation-backed debt, general obligation bonds have lesser interest costs. The growing proportion of 9(d) debt compared to general obligation bonds has caught the attention of the bond rating agencies and in the past has resulted in comments in ratings of the Commonwealth. Please see the chart on page 9 for more information regarding the growing proportion of 9(d) debt.

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 bonded 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.). The GO pledge for 9(c) Bonds 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 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 receives 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.

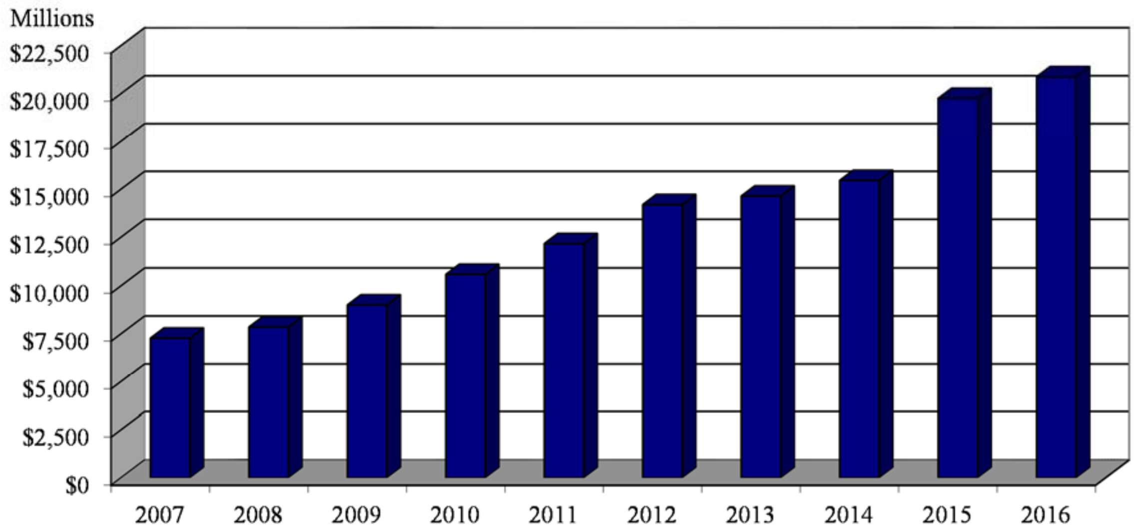
Transportation debt has been authorized and issued with a pledge that other available amounts, including the general fund, may be appropriated for their repayment. Since repayment is not limited solely to the TTF (though in practice, payments are made from the TTF), these bonds are viewed by ratings 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 authorized 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

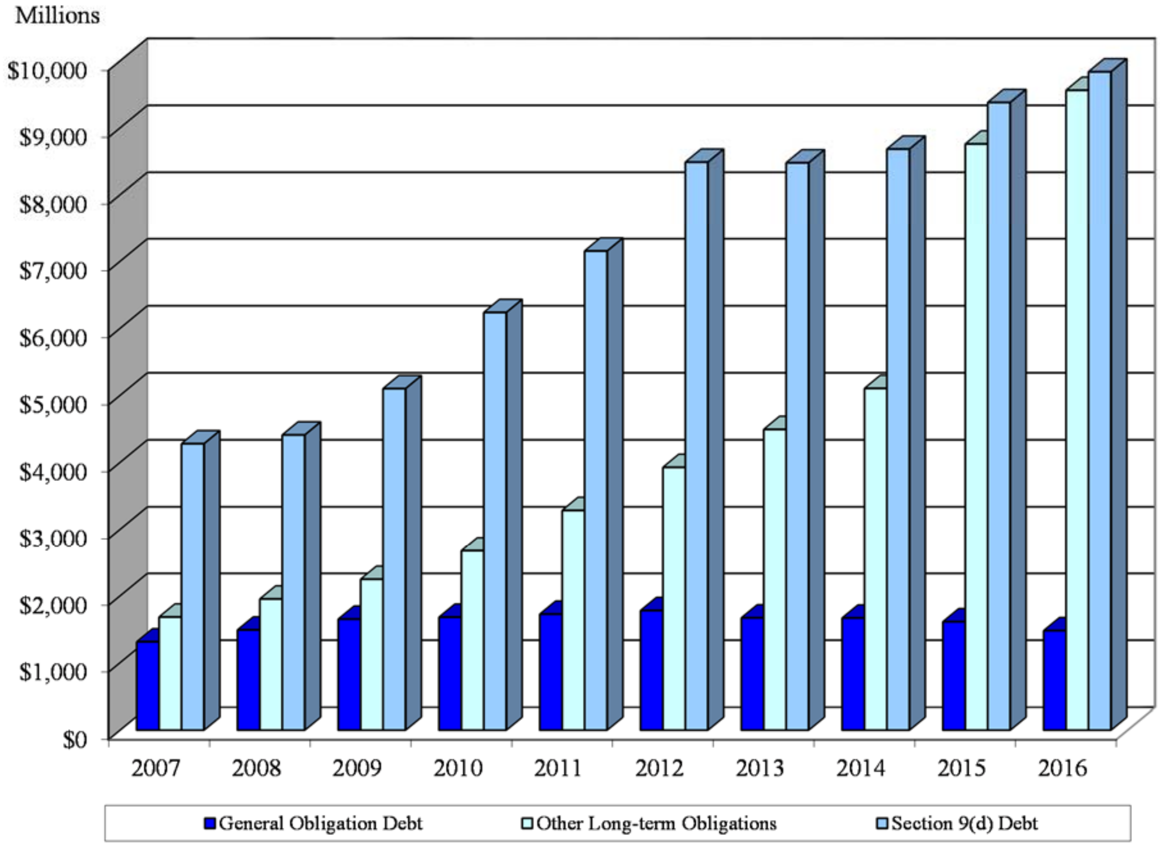
Outstanding tax-supported debt of the Commonwealth increased by 187%, or $13.6 billion, from $7.3 billion in fiscal year 2007 to $20.9 billion in fiscal year 2016. Between fiscal year 2015 and fiscal year 2016, outstanding tax-supported debt increased $1.1 billion, which is equivalent to 6% growth over the last fiscal year. The following graph 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 graph provides a historical perspective on the Commonwealth's outstanding tax-supported debt, including these other long-term obligations.

Outstanding Tax-Supported Debt
Fiscal Years 2007-2016(1), (2)



(1) Includes other long-term obligations such as pension liabilities, OPEBs and compensated absences.
(2) Implementation of GASB 68 occurred in FY2015, which impacted the reporting of net pension liabilities.

Outstanding Tax-Supported Debt by Category
Fiscal Years 2007-2016[(1), (2)]



(1) Includes other long-term obligations such as pension liabilities, OPEBs and compensated absences.
(2) Implementation of GASB 68 occurred in FY2015, which impacted the reporting of net pension liabilities in the Other Long-term Obligations bar.

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.

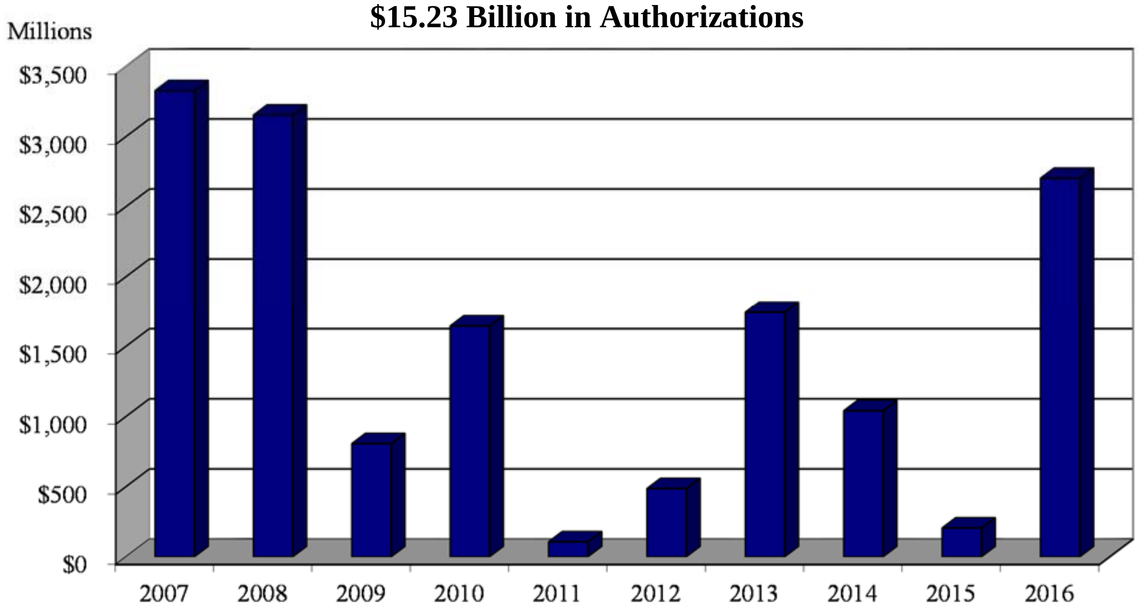
General obligation debt, which had a June 30, 2016 balance outstanding of $1.48 billion, has increased 13%, or $167 million, over the ten-year period. This is due in part to a $1 billion 9(b) general obligation bond referendum approved by the voters in 2002. Bonds from the 2002 authorization were issued 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) general obligation 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 9(c) bond authorizations and the issuance of those bonds and the continued payment of previously issued 9(b) and 9(c) debt, the 2016 outstanding GO balance declined 8%, or $133 million, from fiscal year 2015. Since fiscal year 2012, the outstanding GO balance has declined 17%, or $301 million.

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. This debt category has shown significant dollar growth over the last ten years, increasing $5.56 billion during the ten-year period. Total outstanding Section 9(d) debt at June 30, 2016 was $9.84 billion compared to $4.28 billion at fiscal year-end 2007, which is equivalent to a 130% 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, 2010, 2013 and 2014. An additional $139 million of VPBA and VCBA debt was authorized in fiscal year 2015 and then in fiscal year 2016, an additional $2.68 billion was authorized between VPBA and VCBA. Given the timing of authorizations versus issuances, the fiscal year 2016 authorizations haven’t impacted the currently outstanding 9(d) debt, but the authorizations will have a significant impact on the outstanding debt in future years. The outstanding balance of section 9(d) debt increased 5%, or $458 million, between fiscal year 2015 and fiscal year 2016.

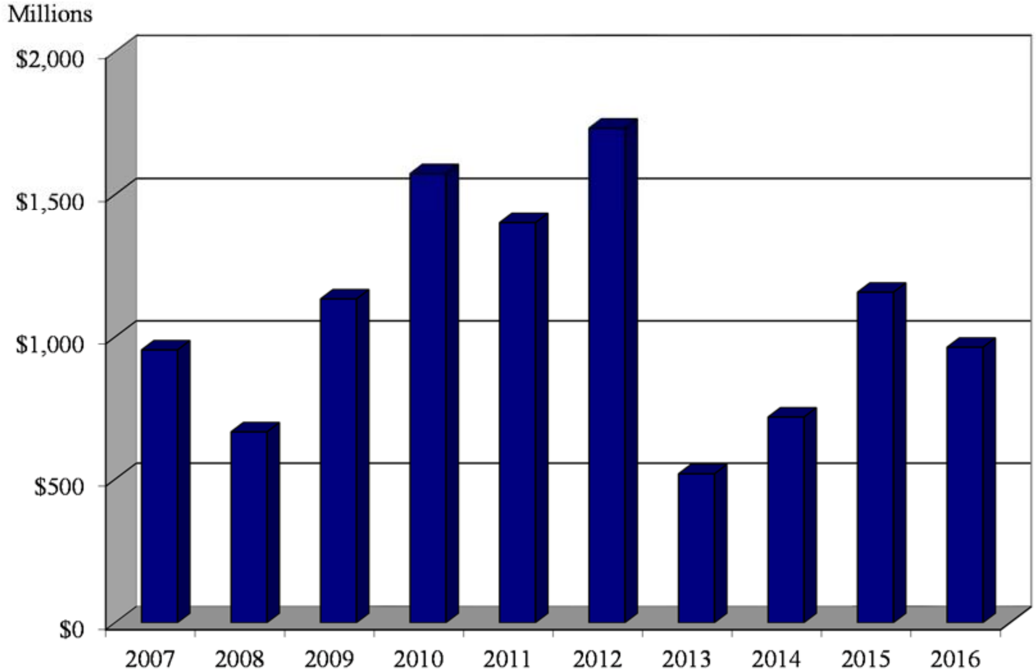
Other long-term obligations have experienced the most growth, increasing $7.88 billion, or 468%, from $1.68 billion at fiscal year-end 2007 to $9.56 billion at fiscal year-end 2016. The increase is partly due to the required inclusion of OPEB obligations beginning in 2008, but it is also related to increasing pension and OPEB obligations. The increase also reflects the implementation of GASB 68 in FY2015, which impacted the reporting of net pension liabilities. Between fiscal year 2015 and fiscal year 2016, other long-term obligations increased $802 million, which is equivalent to 9% growth over the last fiscal year. The increase over the last fiscal year was significantly related to growth in pension liabilities and OPEB liabilities which increased $567 million, or 9%, and $211 million, or 14%, respectively.

The following two charts illustrate the amounts of tax-supported debt authorized and issued from years 2007 to 2016. In 2007, $3 billion was authorized for the transportation CPR program. In 2008, an additional $3 billion was authorized for the VPBA and VCBA programs. Significant 9(d) authorization was provided again in 2010 with VPBA and VCBA receiving authorization of nearly $1.5 billion. The amount of debt authorized in 2011 and 2012 declined compared to the significant amounts authorized in the prior years. However, in 2013, $1.74 billion in additional tax-supported debt was authorized, of which $1.13 billion was for VPBA and VCBA 9(d) projects, $596 million was for U.S. Route 58 9(d) transportation projects and the remainder was for 9(c) projects. The large 2013 authorizations were followed by a lesser but still significant authorization of over $1 billion in fiscal year 2014, with VPBA and VCBA collectively receiving an authorization of $796 million and the $245 million balance being for 9(c) projects. In fiscal year 2015, the amount of net tax-supported debt authorized was $206 million, which was the result of $149 million of collective VPBA and VCBA authorizations, $68 million of 9(c) authorizations, and a $10 million rescinded authorization of VPBA bonds. Most recently, in fiscal year 2016, the amount of net tax-supported debt was $2.72 billion, which was the result of $2.68 billion of collective VPBA and VCBA authorizations, $41 million of 9(c) authorizations, and an $18 million rescinded authorization of VPBA bonds. Between fiscal year 2007 and fiscal year 2016, the General Assembly collectively authorized $15.23 billion of tax-supported debt.

Tax-Supported Debt Authorizations
Fiscal Years 2007-2016
$15.23 Billion in Authorizations



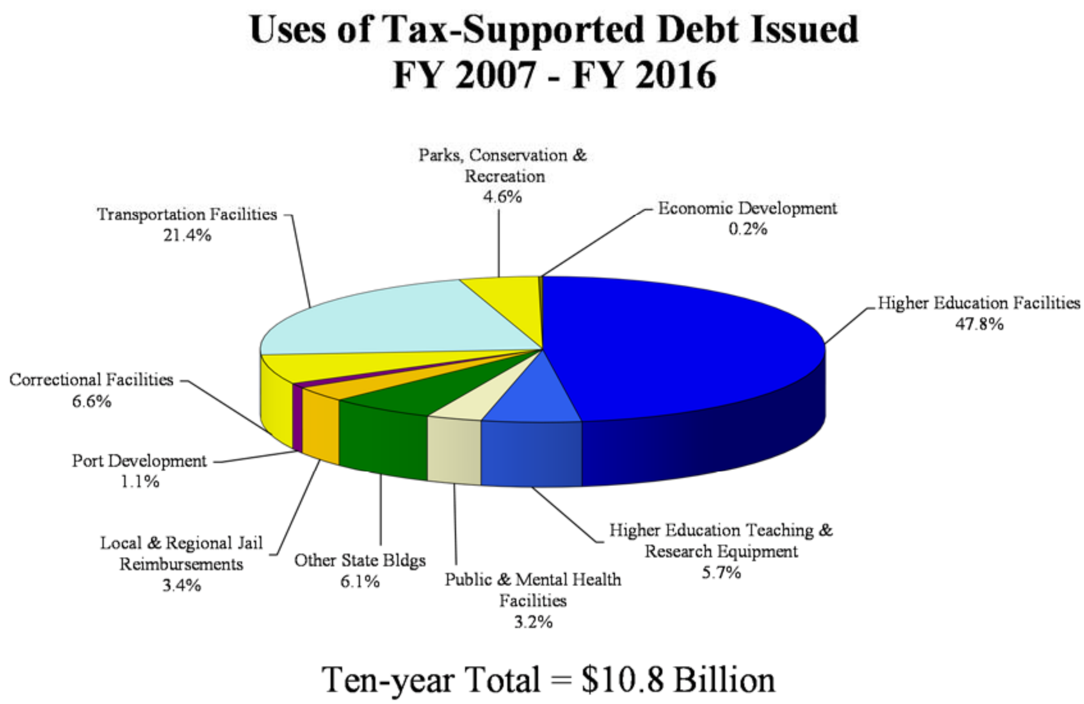
Tax-Supported Debt Issued
Fiscal Years 2007-2016
$10.82 Billion in Issuances



The amount of tax-supported debt issued in fiscal year 2016 was $964 million. The total 2016 tax-supported debt issuance amount was down from $1.16 billion in 2015, but the amount was up from the 2013 and 2014 levels of $519 million and $720 million, respectively. However, the 2016 level of issuance was below the four straight years of issuances between $1.13 and $1.73 billion between 2009 and 2012. The increase in 2014 through 2016 issuances over 2013 was largely the result of VCBA and VPBA utilizing portions of the $1.74 billion of authorizations in 2013 and $1.04 billion of authorizations in 2014 and transportation utilizing portions of a 2007 authorization. The fiscal year 2016 issuances were only below the fiscal year 2015 issuances because the VPBA issuance initially planned for spring 2016 was postponed until fall 2016. Between fiscal year 2007 and fiscal year 2016, $10.82 billion in tax-supported debt was issued. With the June 30, 2016 authorized and unissued debt amounting to $6.04 billion, of which $5.33 billion is for 9(d) projects, it is likely that significant issuances will continue over the next several years.

Uses of Outstanding Tax-Supported Debt

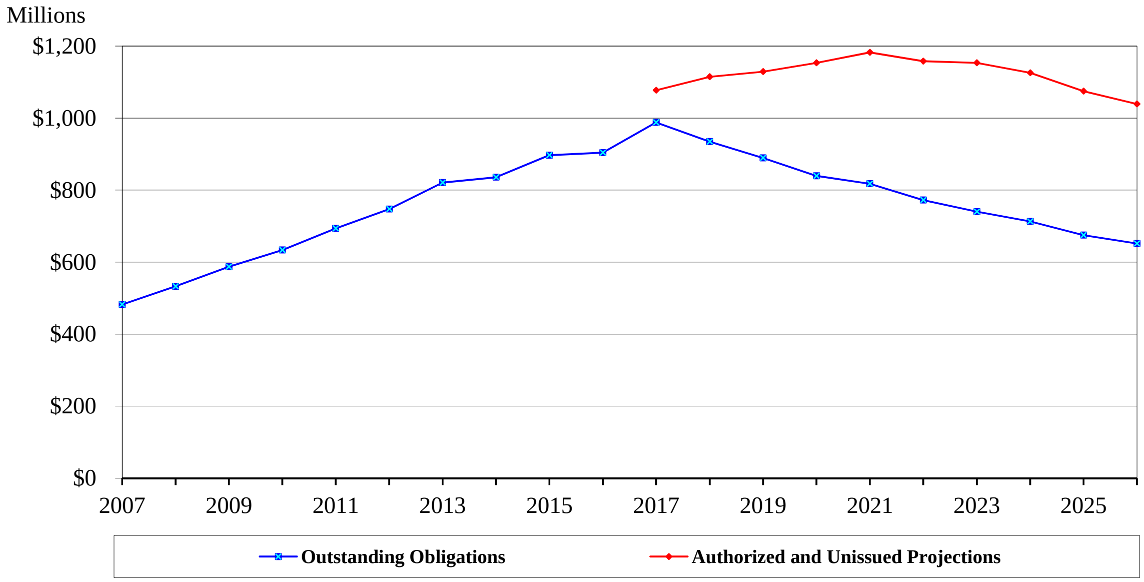
The following chart illustrates how the Commonwealth has utilized its tax-supported debt over the last ten years. Of the total $10.8 billion, 54% has been used for capital projects and teaching and research equipment at state institutions of higher education. Transportation projects paid from the TTF is the next highest category at 21%. (Note: transportation projects financed with federal revenues are not considered tax-supported debt and are not included.)



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 2007 – 2026[(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 and Newport News Industrial Development Authority.

Review of State Credit Ratings

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 Commonwealth is rated Aaa/Stable (Moody's), AAA/Stable (S&P), and AAA/Stable (Fitch).

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 carry a stable outlook from the three rating agencies.

Rating agencies continue to note many of the same credit strengths that have always been associated with Virginia; however, some of these strengths have been cautioned in more recent reports. While all rating agencies seem to agree that Virginia has "strong financial policies and practices" and that Virginia has had a "long history of proactive and conservative financial management", Standard & Poor's (S&P) recently followed the listing of these strengths with the caveat, "… despite structural misalignment over the past biennium". Prompt recognition of recent revenue shortfalls, revenue reforecasting and the proactive development of plans to address the shortfalls are noted as a fiscal management strength even though S&P has been critical of what it has seen as one-time gap closing measures. Fitch notes a "low and well managed long-term liability burden", while Moody's and S&P note debt levels as being "slightly above 50-state median levels" and "moderate", respectively. The rating agencies attribute the managed but growing debt burden to limits in place by the Virginia Constitution, strong fiscal policies and as Moody's describes, "a sophisticated debt affordability model". Fitch and S&P both note Virginia has a "strong and diverse economy", but each of the three rating agencies acknowledge the pressures federal sequestration has had on Virginia's growth given the large percentage of federal and federal contract related jobs. Fitch recently stated that the firm "expects the Commonwealth to absorb the negative effects of federal contraction and maintain economic growth." The rating agencies' attribute the reduced but still strong economy to Virginia's: "above average population growth"; "high education levels", Moody's notes that "as per the U.S. Census Bureau, approximately 40% of the population has completed an associate's degree or higher, compared with 35% for the U.S. as a whole"; and high wealth levels, Moody's notes that per capita income has declined from 113% of the nation in 2009 but still remains strong at 109%.

The challenge themes are similar across the three rating agencies. Moody's specifically mentions two items. The first is "managing the state's finances through a slow economic recovery and federal downsizing while trying to rebuild reserves". The second is "controlling spending pressures from education and transportation needs within the context of more limited resources".

Given Virginia's slow economic growth as it continues to recover from the effects of federal sequestration, the revenue shortfall in FY2016 and the forecasted shortfall for the 2016-2018 biennium will put stress on the Commonwealth's budget. The current biennium shortfall is planned to be addressed by budget cutting measures and the use of the Revenue Stabilization Fund. Moody's notes that one of the factors that could lead to a downgrade is "deterioration in the Commonwealth's financial position, including drawing down reserves to inadequate levels". The use of the Revenue Stabilization Fund is restricted by the Virginia Constitution and deposits to the fund are mandated based on certain revenue performance levels. These restrictions and the mandatory funding are seen as strengths by the rating agencies, but any withdrawals of the fund during times of economic growth, albeit slow growth, are being closely watched by the rating agencies, especially S&P.

Virginia cannot rely on a record of its past financial management decisions to sustain its AAA bond rating in the future. The rating agencies are closely watching the Commonwealth's actions and are analyzing its metamorphosis from an economy dependent upon federal spending to a diversifying economy that is growing through technology, health services, tourism, and agriculture exports. As the Commonwealth's new economy takes form, it will be important to ensure that prudent financial management practices remain at the forefront of spending decisions. It is these management practices that will continue to allow the Commonwealth to meet its needs in future downturns and are what will provide the Commonwealth with the flexibility to continue to diversify.

Review of Comparative Ratios

For nearly 30 years, Moody's Investors Service has compiled net tax-supported debt (NTSD) data for US states. Each year, Moody's releases a comparative NTSD ratios report, its *State Debt Medians Report* (Moody's Medians). Following the reporting of four consecutive declines in the annual growth of NTSD, last year Moody's noted in its *State Debt Medians 2015 Report* a first in its now 29 year history of reporting NTSD information. Due to "a reluctance to take on new debt with tight operating budgets, a slow economic recovery, and uncertainty over federal fiscal policy and health care funding" states experienced a decline in NTSD and Moody's predicted that "debt levels would remain stable or even decline again in 2015."

While Moody's *State Debt Medians 2016 Report*, did not find that total NTSD declined in the past year, Moody's prior prediction for stable debt levels was proven accurate. Moody's noted that in 2015 "state NTSD remained essentially flat, posting minimal year-over-year growth of 0.6%." The report stated:

> "The recent slowdown in debt levels highlights states' reluctance to take on new debt despite continued annual increases in tax revenue, including an estimated 6% rise in 2015. Several factors will likely suppress growth in state debt burdens in the next year, including the recent decline in commodity markets along with longer term trends of continued uncertainty over federal fiscal policy and healthcare funding."

In its most recent report, Moody's identified that in 2015 34 states experienced a decline in absolute debt levels, while 16 states experienced an increase. This followed the prior year's report that 31 states experienced a decline in absolute debt levels in 2014. Moody's acknowledged the significant capital spending needs facing states and particularly the needs related to transportation. It is Moody's expectation that debt will be used in the future to finance these needs to the extent possible. However, with the 2016 Presidential Election occurring after the report's release, states will likely be closely watching the President-Elect's policy initiatives and any threats to municipal bond tax-exemption that may reduce states' future debt issuance plans.

Moody's reported 36 states experienced a decline in NTSD per capita. Nationwide, median NTSD per capita increased by 1.3% to $1,025 compared to $1,012 the prior year, which followed three previous declines. In the 2016 report, Virginia was ranked as having the 20th highest debt per capita compared to 19th highest the prior year. Although Virginia declined away from the highest debt per capita, Moody's reported 4.6% growth in Virginia's NTSD per capita which increased to $1,418 compared to $1,356 the prior year.

Moody's reported 38 states experienced a decline in NTSD as a percent of personal income. Nationwide, median NTSD as a percentage of personal income remained steady at 2.5% as personal income grew by 4.2%. Virginia experienced an increase in its NTSD as a percentage of personal income. In the 2016 report, Virginia's ranking rose to the 20th highest NTSD as a percentage of personal income compared to a ranking of 21st the prior year and 24th two years ago. In its 2016 report, Virginia was calculated by Moody's to have had a NTSD as a percentage of personal income of 2.9% compared to 2.8% in the prior year and 2.7% two years ago.

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

REPORT OF THE DEBT CAPACITY ADVISORY COMMITTEE
December 19, 2016

AAA/Aaa/AAA STATE DEBT BURDENS FROM 2007-2016
PROVIDED BY MOODY'S INVESTORS SERVICE

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

	2016 Ranking	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Delaware	8	$2,385	$2,438	$2,485	$2,536	$2,674	$2,676	$2,489	$2,128	$2,002	$1,998
Maryland	11	1,928	1,889	1,791	1,799	1,742	1,681	1,608	1,507	1,297	1,171
VIRGINIA	**20**	**1,418**	**1,356**	**1,302**	**1,315**	**1,169**	**1,058**	**895**	**782**	**764**	**692**
Georgia	25	1,029	1,043	1,064	1,061	1,099	1,103	1,120	984	954	916
Utah	29	921	1,060	1,187	1,275	1,393	1,222	957	447	542	621
North Carolina *	33	721	739	806	853	815	782	765	832 *	898	728
Missouri	39	574	606	668	699	741	775	780	670	675	613
Texas *	44	383	406	614	580 *	588 *	612 *	520 *	520 *	481 *	415 *
Tennessee*	45	298	327 *	324 *	343 *	343 *	345 *	318 *	233 *	221 *	213 *
Iowa *	47	239	250	275	287	310	270	73 *	79 *	98 *	104 *
Median All States		1,025	1,012	1,054	1,074	1,117	1,066	936	865	889	787
AAA Median		821	891	935	957	957	920	838	726	720	657
AAA Average		990	1,011	1,052	1,075	1,087	1,052	953	818	793	747

** State was not triple triple A during entire 2007-2016 period.*

(1) Population is based on Census data from one year prior to each respective year's 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
2007 – 2016

Source: Moody's Medians

REPORT OF THE DEBT CAPACITY ADVISORY COMMITTEE
December 19, 2016

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 2007-2016
PROVIDED BY MOODY'S INVESTORS SERVICE

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

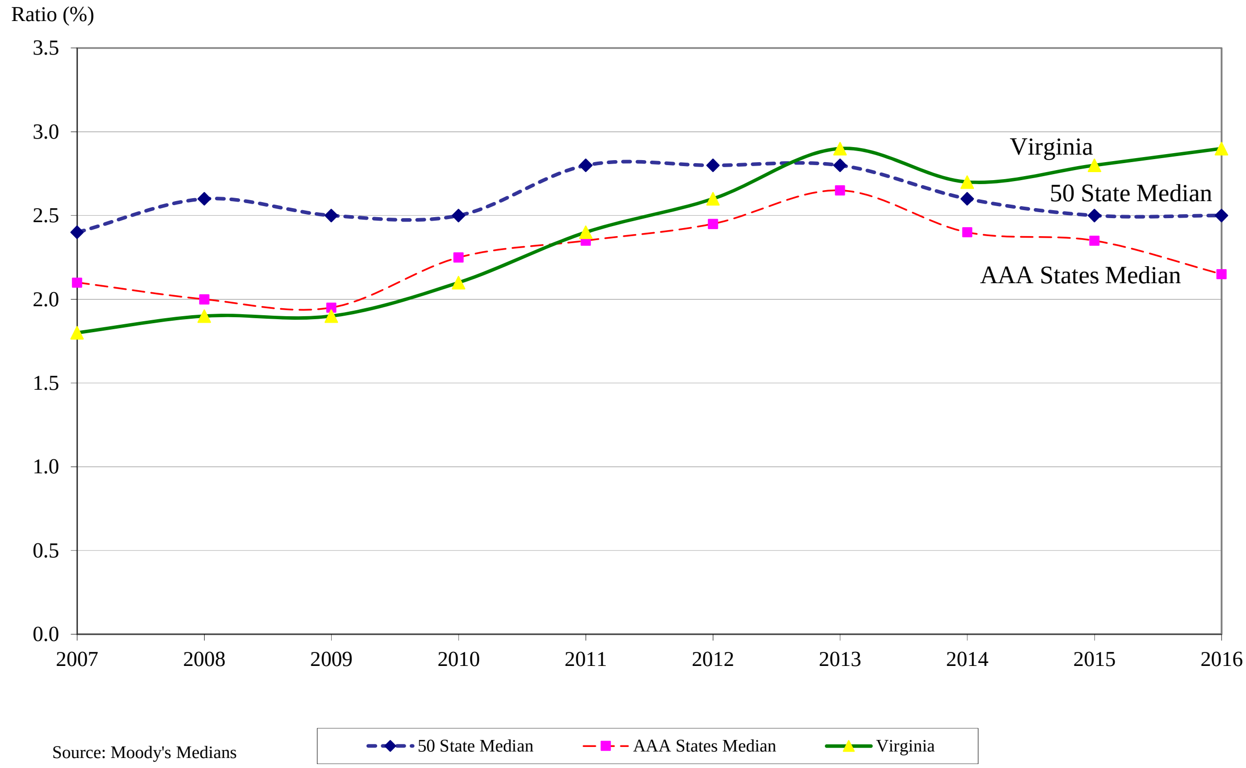
	2016 Ranking	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Delaware	7	5.2 %	5.5 %	5.7 %	6.2 %	6.8 %	6.8 %	6.2 %	5.4 %	5.2 %	5.5 %
Maryland	16	3.5	3.5	3.4	3.6	3.6	3.5	3.4	3.3	3.0	2.8
VIRGINIA	**20**	**2.9**	**2.8**	**2.7**	**2.9**	**2.6**	**2.4**	**2.1**	**1.9**	**1.9**	**1.8**
Georgia	23	2.7	2.8	2.9	3.0	3.1	3.3	3.3	3.0	3.0	3.0
Utah	25	2.5	3.0	3.4	3.8	4.4	3.9	3.2	1.5	1.9	2.3
North Carolina *	32	1.8	1.9	2.1	2.4	2.3	2.3	2.3	2.5 *	2.8	2.4
Missouri	39	1.4	1.5	1.7	1.8	2.0	2.2	2.2	2.0	2.1	1.9
Texas *	44	0.9	1.0	1.5	1.5 *	1.5 *	1.6 *	1.4 *	1.4 *	1.4 *	1.3 *
Tennessee*	45	0.7	0.8 *	0.8 *	0.9 *	1.0 *	1.0 *	0.9 *	0.7 *	0.7 *	0.7 *
Iowa *	47	0.5	0.6	0.6	0.7	0.8	0.7	0.2 *	0.2 *	0.3 *	0.3 *
Median All States		2.5 %	2.5 %	2.6 %	2.8 %	2.8 %	2.8 %	2.5 %	2.5 %	2.6 %	2.4 %
AAA Median		2.2	2.4	2.4	2.7	2.5	2.4	2.3	2.0	2.0	2.1
AAA Average		2.2	2.3	2.5	2.7	2.8	2.8	2.5	2.2	2.2	2.2

** State was not triple triple A during entire 2007-2016 period.*

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

(2) Personal income is based on Census data from two years prior to each 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
2007 - 2016



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 $90.9 billion outstanding followed by New York with $59.8 billion; both states have continued to experience declines in their NTSD due to continued pay down of debt. Nebraska remains at the bottom of the list with only $15.5 million; they too have continued to experience declines from recent years. Virginia added approximately $600 million of NTSD taking Moody's total to $11.9 billion compared to $11.3 billion outstanding in the prior year. With Virginia's continued debt additions during a recent period of time when many states have been reducing or holding steady their debt levels, Virginia increased to the eleventh highest NTSD from twelfth the prior year.

Appendix A

Debt Capacity Calculation, Sensitivity Analysis and Moral Obligation Update

December 19, 2016

Debt Capacity Model – An Explanation of Model and Assumptions

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 (3.36%) plus 25 basis points for 9(d) debt (3.61%).

Model Includes:

- Blended Revenues from Official Forecast:
    - General fund revenues, certain recurring non-general fund transfers including ABC profits, state revenues in the Transportation Trust Fund, and Virginia Healthcare Fund revenues.
- Actual and Projected Debt Service:
    - Actual debt service on all issued tax-supported debt, including capital leases and installment purchases.
    - 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.
- 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 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 19, 2016
(Dollars in Millions)

	9(b)	VPBA	VCBA 21st Century Equipment	VCBA 21st Century Projects	CPR Transportation	NVTD Transportation	Route 58 Transportation	VPA	Total
Authorized & Unissued as of June 30, 2016	$ -	$ 1,732.2	$ 168.5	$ 1,919.5	$ 887.3	$ 24.7	$ 595.7	$ -	$ 5,327.9
Issued Jul 1 - Dec 31, 2016	$ -	$ 367.7	$ -	$ -	$ -	$ -	$ -	$ -	$ 367.7
Assumed Issued:									
FY 2017	$ -	$ -	$ 85.5	$ 653.3	$ 284.1	$ -	$ -	$ -	$ 1,022.9
FY 2018	$ -	$ 358.7	$ 83.0	$ 265.0	$ 122.9	$ -	$ -	$ -	$ 829.6
FY 2019	$ -	$ 401.2	$ -	$ 275.3	$ -	$ -	$ -	$ -	$ 676.5
FY 2020	$ -	$ 354.2	$ -	$ 275.3	$ 355.0	$ -	$ 150.9	$ -	$ 1,135.4
FY 2021	$ -	$ 128.9	$ -	$ 225.3	$ 125.3	$ -	$ 249.1	$ -	$ 728.6
FY 2022	$ -	$ 71.2	$ -	$ 225.3	$ -	$ -	$ -	$ -	$ 296.5
FY 2023	$ -	$ -	$ -	$ -	$ -	$ -	$ 195.7	$ -	$ 195.7
FY 2024	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FY 2025	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FY 2026	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Planned	$ -	$ 1,314.2	$ 168.5	$ 1,919.5	$ 887.3	$ -	$ 595.7	$ -	$ 4,885.2
Subtotal Issued & Planned	$ -	$ 1,681.9	$ 168.5	$ 1,919.5	$ 887.3	$ -	$ 595.7	$ -	$ 5,252.9
Authorized Debt Assumed Unissued[1]	$ -	$ 50.3	$ -	$ -	$ -	$ 24.7	$ -	$ -	$ 75.0

[1] Assumed funded from premium from bonds sold and for NVTD authorized debt is assumed not to be issued.

DEBT CAPACITY MODEL

(Dollars in Millions)
December 19, 2016
Base Model Solution

Debt Capacity Maximum Ratio
Debt Service as a % of Revenue = 5.0%

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
Fiscal Year	**Blended Revenues**	**Base Capacity to Pay Debt Service**	**Annual Payments for Debt Service on Debt Issued**	**Actual Outstanding Debt Service as a % of Revenues**	**Annual Payments for Debt Service on All Planned Debt Issuances**	**Actual & Projected Debt Service as a % of Revenues**	**Net Capacity to Pay Debt Service**	**Amount of Additional Debt that may Be Issued**	**Debt Service on Amount of Additional Debt that may Be Issued**	**Remaining Capacity to Pay Debt Service**	**Total Debt Service as a % of Revenues**
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	18,502.80	925.14	835.53	4.52%	N/A	4.52%	89.61	**N/A**	N/A	89.61	4.52%
2015	20,041.00	1,002.05	897.38	4.48%	N/A	4.48%	104.67	**N/A**	N/A	104.67	4.48%
2016	20,380.50	1,019.03	904.30	4.44%	N/A	4.44%	114.72	**N/A**	N/A	114.72	4.44%
2017	20,929.70	1,046.49	988.33	4.72%	89.22	5.15%	(31.06)	**0.00**	0.000	(31.06)	5.15%
2018	21,571.80	1,078.59	934.77	4.33%	180.36	5.17%	(36.53)	**0.00**	0.000	(36.53)	5.17%
2019	22,227.20	1,111.36	889.72	4.00%	239.54	5.08%	(17.90)	**0.00**	0.000	(17.90)	5.08%
2020	23,009.10	1,150.46	839.69	3.65%	314.05	5.01%	(3.29)	**0.00**	0.000	(3.29)	5.01%
2021	23,874.10	1,193.71	817.85	3.43%	364.88	4.95%	10.98	**157.12**	10.975	0.00	5.00%
2022	24,716.20	1,235.81	772.36	3.12%	385.59	4.68%	77.86	**514.86**	46.939	30.92	4.87%
2023	25,571.80	1,278.59	740.51	2.90%	413.14	4.51%	124.94	**823.79**	104.482	20.46	4.92%
2024	26,442.00	1,322.10	712.84	2.70%	413.14	4.26%	196.12	**955.33**	171.214	24.91	4.91%
2025	27,338.48	1,366.92	675.02	2.47%	400.11	3.93%	291.79	**998.54**	240.964	50.83	4.81%
2026	28,266.62	1,413.33	651.95	2.31%	387.47	3.68%	373.91	**1,011.12**	311.593	62.32	4.78%

10 Year Average:	$446.08	2 Yrs Excess Avg Capacity:	$892.15

2.0000

[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 2007-2016, Standard General Fund December Forecasts dated December 2016 which are based on US & Virginia economic outlook incorporating GACRE recommendations, including 0.25% sales tax increment adopted in 2004 through 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 Transfers Per the Appropriation Act, transfers from Alcoholic Beverage Control Board and certain Transportation Trust Fund revenues from the Commonwealth Transportation Fund Official December revenue forecasts dated December 2016.

[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 6/30/16, excluding 9(c) debt, Build America Bonds (BABs) interest subsidy, and Non-General Fund portion of debt service paid 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 but Unissued Tax-Supported Debt. Also includes debt service for long-term capital leases and installment purchase obligations.

[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 [5].

[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)

December 19, 2016

Debt Capacity Maximum Ratio

Debt Service as a % of Revenue = **5.0%**

Base Model Solution - Average

Fiscal Year	[1] Blended Revenues	[2] Base Capacity to Pay Debt Service	[3] Annual Payments for Debt Service on Debt Issued	[4] Actual Outstanding Debt Service as a % of Revenues	[5] Annual Payments for Debt Service on All Planned Debt Issuances	[6] Actual & Projected Debt Service as a % of Revenues	[7] Net Capacity to Pay Debt Service	[8] Amount of Additional Debt that may Be Issued	[9] Debt Service on Amount of Additional Debt that may Be Issued	[10] Remaining Capacity to Pay Debt Service	[11] Total Debt Service as a % of Revenues
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	18,502.80	925.14	835.53	4.52%	N/A	4.52%	89.61	**N/A**	N/A	89.61	4.52%
2015	20,041.00	1,002.05	897.38	4.48%	N/A	4.48%	104.67	**N/A**	N/A	104.67	4.48%
2016	20,380.50	1,019.03	904.30	4.44%	N/A	4.44%	114.72	**N/A**	N/A	114.72	4.44%
2017	20,929.70	1,046.49	988.33	4.72%	89.22	5.15%	(31.06)	**0.00**	0.000	(31.06)	5.15%
2018	21,571.80	1,078.59	934.77	4.33%	180.36	5.17%	(36.53)	**446.08**	31.159	(67.69)	5.31%
2019	22,227.20	1,111.36	889.72	4.00%	239.54	5.08%	(17.90)	**446.08**	62.319	(80.22)	5.36%
2020	23,009.10	1,150.46	839.69	3.65%	314.05	5.01%	(3.29)	**446.08**	93.478	(96.77)	5.42%
2021	23,874.10	1,193.71	817.85	3.43%	364.88	4.95%	10.98	**446.08**	124.637	(113.66)	5.48%
2022	24,716.20	1,235.81	772.36	3.12%	385.59	4.68%	77.86	**446.08**	155.796	(77.94)	5.32%
2023	25,571.80	1,278.59	740.51	2.90%	413.14	4.51%	124.94	**446.08**	186.956	(62.02)	5.24%
2024	26,442.00	1,322.10	712.84	2.70%	413.14	4.26%	196.12	**446.08**	218.115	(21.99)	5.08%
2025	27,338.48	1,366.92	675.02	2.47%	400.11	3.93%	291.79	**446.08**	249.274	42.52	4.84%
2026	28,266.62	1,413.33	651.95	2.31%	387.47	3.68%	373.91	**446.08**	280.434	93.48	4.67%

10 Year Average:	$446.08	2 Yrs Excess Avg Capacity:	$1,338.23

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

Column Descriptions:

(1) Blended Revenues include all general fund revenues, certain recurring non-general fund transfers including ABC profits, state tax revenues in the Transportation Trust Fund, and Virginia Healthcare Fund revenues.

(2) Base Capacity to Pay Debt Service is calculated as 5% of Blended Revenues.
(Column 2 = Column 1 x .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 (6/30/16), 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 and issued.

(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) ÷ 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 $446.08 million.
- Accordingly, the Committee finds the additional tax supported debt that may prudently be authorized in each 2017 and 2018 is $446.08 million.

DEBT CAPACITY MODEL REVENUE DATA
December 2016
(Dollars In Millions)

Fiscal Year	General Fund		Transportation Trust Fund [4]		General Fund Growth		Transportation Trust Fund Growth		Virginia Health Care Fund		Total Blended Revenue [9]	Blended Revenue Growth 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%
Actual 2014	16,949.10	(1)	1,189.00	(1)	-0.94%	(1)	9.73%	(1)	364.70	(1)	18,502.80	-0.66%
Actual 2015	18,369.50	(1)	1,324.50	(1)	8.38%	(1)	11.40%	(1)	347.00	(1)	20,041.00	8.31%
Actual 2016	18,601.70	(1)	1,367.50	(1)	1.26%	(1)	3.25%	(1)	411.30	(1)	20,380.50	1.69%
Forecasted for 2017	19,157.30	(2)	1,416.90	(5)	2.99%	(2)	3.61%	(5)	355.50	(7)	20,929.70	2.69%
Forecasted for 2018	19,767.80	(2)	1,445.80	(5)	3.19%	(2)	2.04%	(5)	358.20	(7)	21,571.80	3.07%
Forecasted for 2019	20,399.90	(2)	1,470.20	(5)	3.20%	(2)	1.69%	(5)	357.10	(7)	22,227.20	3.04%
Forecasted for 2020	21,156.30	(2)	1,496.70	(5)	3.71%	(2)	1.80%	(5)	356.10	(7)	23,009.10	3.52%
Forecasted for 2021	21,992.20	(2)	1,526.80	(5)	3.95%	(2)	2.01%	(5)	355.10	(7)	23,874.10	3.76%
Forecasted for 2022	22,807.50	(2)	1,554.50	(5)	3.71%	(2)	1.81%	(5)	354.20	(7)	24,716.20	3.53%
Forecasted for 2023	23,636.00	(2)	1,582.48	(6)	3.63%	(2)	1.80%	(6)	353.31	(8)	25,571.80	3.46%
Forecasted for 2024	24,478.60	(2)	1,610.97	(6)	3.56%	(2)	1.80%	(6)	352.43	(8)	26,442.00	3.40%
Forecasted for 2025	25,346.97	(3)	1,639.96	(6)	3.55%	(3)	1.80%	(6)	351.55	(8)	27,338.48	3.39%
Forecasted for 2026	26,246.47	(3)	1,669.48	(6)	3.55%	(3)	1.80%	(6)	350.67	(8)	28,266.62	3.40%

(1) Department of Taxation.
(2) December General Fund Forecast for FY 2017-2024, including A.B.C. Profits, 0.375% sales tax (enacted 2013), and certain recurring Transfers per the Appropriation Act.
(3) Based on flat growth rates of 3.6% for General Fund Revenues and 2.4% for Sales Tax Transfers. A.B.C. Profits and recurring Transfers per Appropriation Act held flat at $102.4 million and $110.5 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 2017-2022, includes only Transportation Trust Fund Revenues.
(6) Based on flat growth rate of 1.80% for years 2023-2026, per Department of Taxation.
(7) December Virginia Health Care Fund Forecast for FY 2017-2022.
(8) Based on flat growth rate of -0.25% 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 $446.08 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 $486.63 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 $535.29 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 $5.96 million.
    - Assuming a 1% change of revenues in each and every year, the incremental change is $16.86 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 $385.34 million.
    - Subtract 100 basis points from base rate, and average capacity increases to $515.29 million.

Debt of the Commonwealth
(Dollars in Thousands)

	As of June 30, 2016	As of June 30, 2015
Tax-Supported Debt		
9(b) General Obligation [1]	$ 571,915	$ 642,181
9(c) General Obligation - Higher Education [2]	877,118	936,857
9(c) General Obligation - Transportation [2]	14,562	17,154
9(c) General Obligation - Parking Facilities [2]	15,155	16,036
Commonwealth Transportation Board	2,722,238	2,552,123
Virginia Public Building Authority	2,441,413	2,623,447
Virginia Port Authority	275,256	288,446
Virginia College Building Authority - 21st Century & Equip	4,049,060	3,520,214
Virginia Biotechnology Research Park Authority	26,743	30,619
Capital Leases	117,927	135,404
Installment Purchases	159,702	177,185
Virginia Aviation Board	114	307
Economic Development Authority Obligations [3]	44,712	51,249
Subtotal Tax Supported Debt	$ 11,315,915	$ 10,991,222
Other Tax-Supported Debt		
Compensated Absences [2]	$ 610,079	$ 599,726
Pension Liability [2]	7,196,277	6,629,296
OPEB Liability[2]	1,695,972	1,484,680
Pollution Remediation Liability [2]	11,308	11,954
Other Liabilities [2]	47,657	33,155
Subtotal Tax Supported Debt Not Included in Capacity Model	$ 9,561,293	$ 8,758,811
Total Tax-Supported Debt	$ 20,877,208	$ 19,750,033

Source: Department of the Treasury and Department of Accounts

[1] Voter approved

[2] Not Included in Debt Capacity Model

[3] Fairfax County Economic Development Authority Joint Venture with VDOT for Camp 30 Project

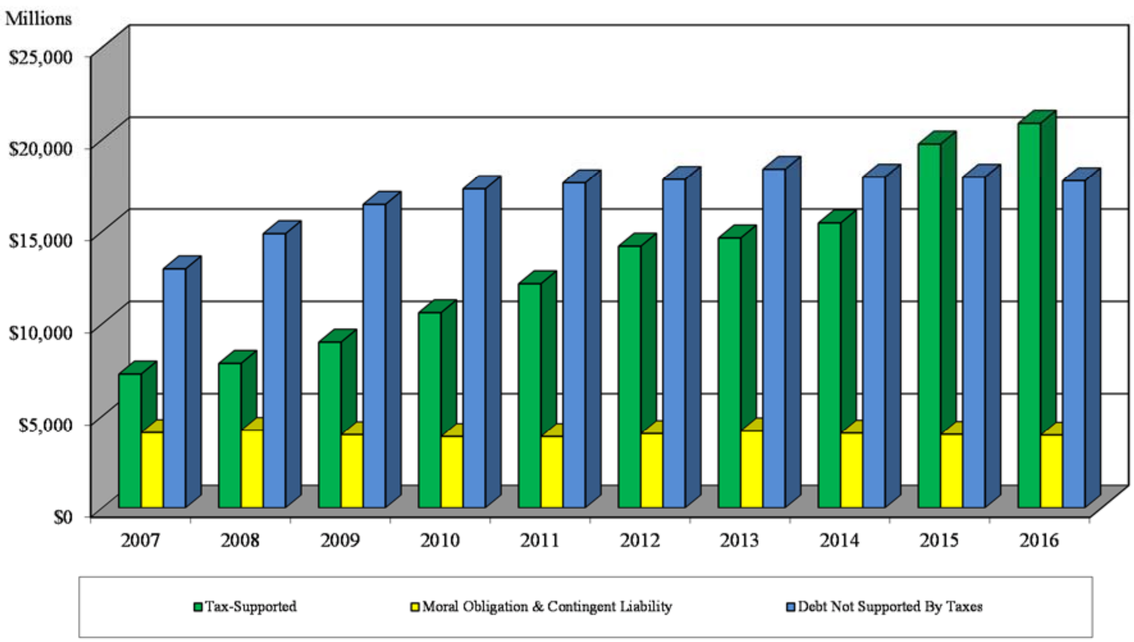
Debt of the Commonwealth
(Dollars in Thousands)

	As of June 30, 2016	As of June 30, 2015
Debt Not Supported by Taxes [1]		
Moral Obligation / Contingent Liability Debt		
Virginia Resources Authority	$ 907,209	$ 877,875
Virginia Housing Development Authority	-	-
Virginia Public School Authority - 1997 Resolution	2,499,705	2,577,310
Virginia Public School Authority - School Tax Credit Bond Program	353,400	353,400
Virginia Public School Authority - Equipment Technology Notes	193,865	185,850
Total Moral Obligation/Contingent Liability Debt	$ 3,954,179	$ 3,994,435
Other Debt Not Supported By Taxes		
9(d) Higher Education	$ 2,081,823	$ 2,038,579
Virginia College Building Authority - Pooled Bond Program	1,674,505	1,729,375
Virginia Public School Authority - Stand Alone Program	573,999	373,803
Virginia Housing Development Authority	4,320,935	4,498,847
Virginia Port Authority	252,631	256,656
Hampton Roads Sanitation District	879,294	748,397
Virginia Resources Authority	2,704,321	2,631,153
Federal Highway Reimbursement Anticipation Notes	-	30,624
Grant Anticipation Notes (GARVEES)	663,147	705,574
Route 460 Funding Corporation of Virginia	-	320,110
Notes Payable	173,356	168,394
Other Long-Term Debt	321,736	301,712
Foundations	1,714,748	1,685,948
Pension Liability	184,861	166,810
OPEB Liability	25,113	22,051
Capital Lease Obligations	5,359	5,708
Compensated Absences	10,003	10,123
Tuition Benefits Payable	2,035,608	2,116,769
Lottery Prizes Payable	129,895	136,222
Total Other Debt Not Supported By Taxes	$ 17,751,334	$ 17,946,855
Grand Total of Tax Supported Debt and Debt Not Supported By Taxes	**$ 42,582,721**	**$ 41,691,323**

Source: Department of the Treasury and Department of Accounts

[1] Not Included In Debt Capacity Model

Outstanding Commonwealth Debt
Fiscal Years 2007-2016



Tax-Supported Debt Issued Fiscal Year 2017
Through December 31, 2016

Issuer	**Date Issued**	**Par Amount**
Virginia Public Building Authority, Public Facilities Revenue and Revenue Refunding Bonds, Series 2016A, Series 2016B, Series 2016C (AMT), and Series 2016D (Taxable)	October 5, 2016	$546,625,000
Commonwealth of Virginia, General Obligation and Refunding Bonds, Series 2016A and Series 2016B	November 10, 2016	$188,275,000

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, 2016	Available Authorization
Virginia Resources Authority	$1,500,000	$907,209	$592,791
Virginia Housing Development Authority	$1,500,000	$0	$1,500,000
Virginia Public School Authority	$800,000	$0	$800,000
Total	$3,800,000	$907,209	$2,892,791

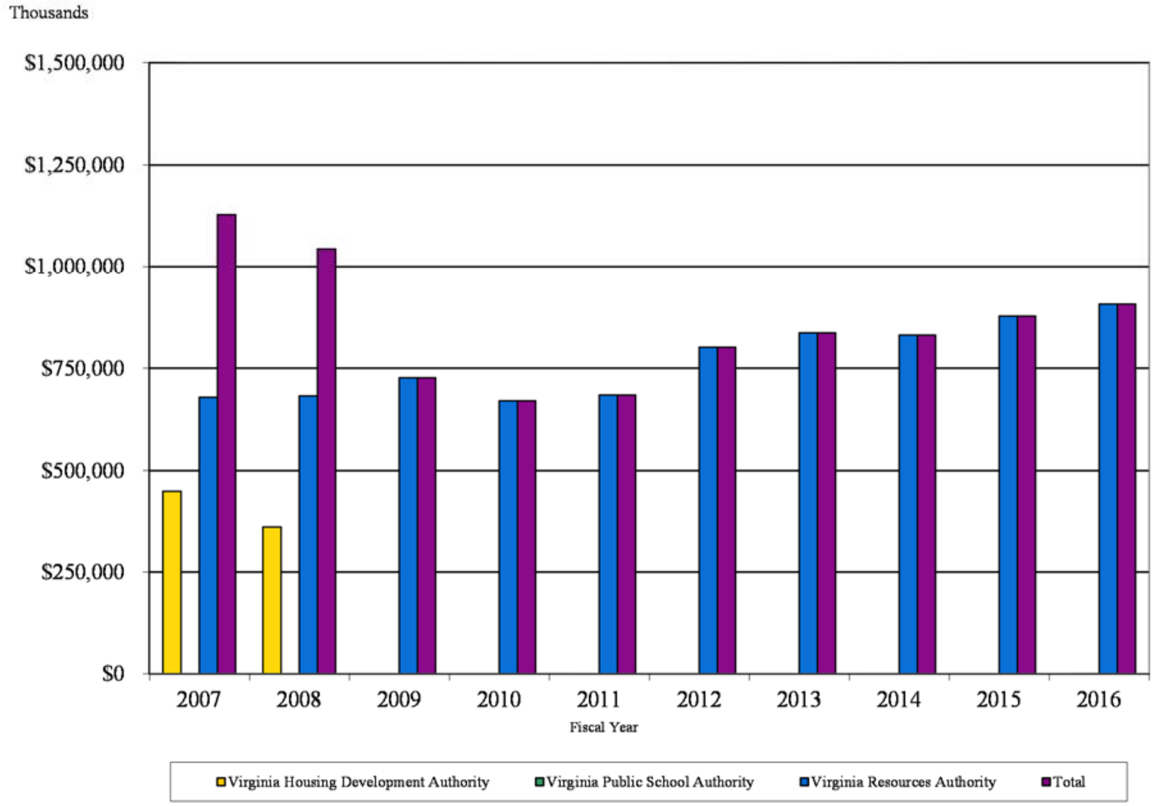
Alternative financing programs were initiated by the Virginia Housing Development Authority and the Virginia Public School Authority. Neither of these entities expect to issue additional moral obligation debt.

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, 2016 to tax-supported debt, the resulting average debt capacity is $370.47 million.

Outstanding Moral Obligation Debt
Fiscal Years 2007-2016



Contingent or Limited Liability Debt

The Virginia Public School Authority (VPSA) is the only issuer of non-tax-supported debt that utilizes a sum sufficient appropriation (SSA) as an additional credit enhancement. SSA debt represents a contingent liability for the Commonwealth. The VPSA had $2.50 billion of 1997 Resolution bonds outstanding as of June 30, 2016 and an additional $353 million of School Tax Credit bonds outstanding. Both VPSA programs receive authorization to issue bonds with a SSA credit enhancement from the Code of Virginia, §22.1-167.2.

The use of SSA credit enhancement for VPSA's issuance of bonds or notes for the purpose of making grants to local school boards was codified during the 2001 General Assembly session (§22.1-167.3, Code of Virginia). As of June 30, 2016, outstanding notes for school technology and security amounted to $194 million.

VPSA's bonds issued through its Stand Alone Program are secured by the related local government's G.O. pledge. While these bonds are afforded the security enhancement of VPSA's ability to intercept state aid to the obligated locality for VPSA's use towards payment of debt service should the locality default on its payment to VPSA, the Stand Alone Program bonds are not additionally secured by SSA.

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, 2016 to tax-supported debt, the resulting average debt capacity is $192.16 million.