

EFFECT OF LONG-TERM DEBT ON THE FINANCIAL CONDITION OF THE STATE



DEPARTMENT OF LEGISLATIVE SERVICES 2013

Effect of Long-term Debt on the Financial Condition of the State

**Department of Legislative Services
Office of Policy Analysis
Annapolis, Maryland**

November 2013

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November 2013

The Honorable James E. DeGrange, Sr.
Senate Chairman, Spending Affordability Committee

The Honorable John L. Bohanan, Jr.
House Chairman, Spending Affordability Committee

Dear Chairman DeGrange and Chairman Bohanan:

The Department of Legislative Services' annual report on the *Effect of Long-term Debt on the Financial Condition of the State* is presented. This report follows the format of previous reports and includes a review of the recommendations of the Capital Debt Affordability Committee, an independent affordability analysis, and independent policy recommendations to the Spending Affordability Committee.

The Capital Debt Affordability Committee complements the efforts of the Spending Affordability Committee in management of the State's bonded indebtedness. The Capital Debt Affordability Committee, created by an Act of the 1978 General Assembly, is required to submit a recommended level of debt authorization to the Governor and the General Assembly by October 1 of each year. The existence of the committee within the Executive Branch means that consideration of debt affordability will occur at the time of formulation of the State's capital program, as well as the time of approval of the program by the legislature.

The statistical analysis and data used in developing the recommendations were prepared by Patrick Frank with assistance from Andrew Gray, Garret Halbach, Matthew Jackson, Matthew Klein, Jason Kramer, Jonathan Martin, and Jody Sprinkle. The manuscript was prepared by Judy Callahan.

Respectfully submitted,

Warren G. Deschenaux
Director

WGD/jac

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Chapter 1. Recommendations of the Department of Legislative Services

New General Obligation Bond Authorization

The Capital Debt Affordability Committee (CDAC) recommended a limit of \$1,160 million for new general obligation (GO) bond authorizations during the 2014 legislative session. The recommendation is \$75 million more than was planned by the committee in last year's report. The proposed increase is on top of the \$150 million increase in authorizations proposed last year. Taken together, these two increases add \$1,125 million to the State capital program between fiscal 2014 and 2019.

As discussed in Chapter 7, the Department of Legislative Services (DLS) is concerned that GO bond debt service costs are increasing at a higher rate than the State property tax revenues supporting them. State pension costs are also increasing in the out-years. As a result, the general fund share of GO bond debt service and State pension costs increase from 9.5% of general fund revenues in fiscal 2013 to 13.7% of general fund revenues in fiscal 2018. Unless pension payments are reduced (they are now \$300 million above the actuarially required level), the remaining lever to provide relief from this ongoing fiscal squeeze is through moderation of the burden of debt service. This can be accomplished by constraining, rather than increasing, the level of debt to be incurred, or through the Board of Public Works by increasing the property tax. **As one step toward constraining the growth in long-term obligations, DLS recommends that the previously established debt authorization levels be maintained.**

Issuance of Taxable Debt

The State's capital program supports a number of different public policy objectives, such as health, environmental, public safety, education, housing, and economic development objectives. Federal government regulations allow the State to issue debt that does not require the buyer to pay federal taxes on interest earnings. In cases where investors do not pay federal income taxes, they are willing to settle for lower returns. Investors in taxable debt require higher returns to offset their tax liabilities. Consequently, the State can offer lower interest rates on tax-exempt bonds.

Federal laws and regulations limit the kinds of activities the proceeds from tax-exempt bonds can support. To avoid exceeding the private activity limits imposed in the federal regulations, the State has previously appropriated funds in the operating budget instead of issuing debt for private purpose programs and projects.

At the August 2013 bond sale, the State issued \$40 million in taxable GO bonds and \$435 million of tax-exempt bonds. The true interest cost of the taxable bonds was noticeably higher than the tax-exempt bonds – 1.48% for four-year, taxable debt compared to 1.04% for

four-year, tax-exempt debt. Using market data, DLS estimated the cost of issuing tax-exempt debt. The net effect on spending over the four years is that the tax-exempt bonds cost approximately \$478,000 less than taxable bonds. This issue is discussed in more detail in Chapter 7. **To reduce debt service cost, DLS recommends that the Department of Budget and Management reduce private activity authorizations for fiscal 2015.**

Authorization of Transportation Debt

The Maryland Department of Transportation issues bonds supported by Transportation Trust Fund revenues. As State tax-supported bonds, these bonds compete with other State capital projects within debt affordability limits. Transportation debt capacity is limited by the constraints on debt outstanding, debt service coverage, the cash flow needs for projects in the capital program, and overall, State debt affordability limits. Transportation debt is discussed in Chapter 3. **It is recommended that the General Assembly continue to set an annual limit on the level of State transportation debt to keep debt outstanding within the 4% of personal income debt affordability criterion and debt service within the 8% of revenues debt affordability criterion.**

Authorization of Bay Restoration Bond Debt

The Bay Restoration Fund was created in 2004 primarily to provide grants for enhanced nutrient removal pollution reduction upgrades at the State's 67 major wastewater treatment plants. In 2012, the General Assembly adopted legislation to increase funding for these projects. Current plans provide sufficient funding for this initiative. Bay bonds are discussed in more detail in Chapter 3. **It is recommended that the General Assembly continue to limit Bay Restoration Fund revenue bond issuances at a level that maintains debt outstanding within the 4% of personal income debt affordability criterion and debt service within the 8% of revenues affordability criteria.**

Higher Education Academic Debt

CDAC recommends limiting new debt authorization for academic facilities to \$32 million for fiscal 2015. Academic bond issuances are discussed in Chapter 6. **DLS concurs with the committee's assessment that issuing \$32 million in new University System of Maryland academic revenue bonds is affordable.**

Private Activity Bonds' Reporting Requirements

Federal tax-exempt Private Activity bond allocation authority in Maryland is governed by Sections 13-801 through 13-807 of the Financial Institutions Article. The article stipulates that the Secretary of the Department of Business and Economic Development (DBED) is the responsible allocating authority of private activity bonds. As the State's single allocating authority agency, DBED is required to collect and submit allocation and issuance data annually to the Internal Revenue Service.

Although the article requires State entities that issue private activity bonds to annually report to DBED, it does not set forth a reporting requirement from DBED to the Spending Affordability Committee (SAC) or any other State entity. Instead, State Government Article Section 2-1010 requires any State agency with private activity bond issuance authority to annually submit to SAC a report that provides the actual level of private activity bonds issued in the prior year and the projected level of private activity bonds to be issued in the current year. While the agencies do not adhere to the reporting under State Government Article 2-1010, DBED does maintain this information as required by Financial Institutions Article 13-804, and DLS annually publishes the aggregate data in this report. Issues related to private activity bonds are discussed in Chapter 6.

To the extent that Section 1010 of the State Government Article requires each State agency that issues private activity bonds to submit the aforementioned report as opposed to a single report submitted by the "allocating authority" (DBED), DLS recommends legislation be introduced that amends the statutory reporting provision to clarify that a single consolidated report issued by DBED should be submitted rather than individual reports from each issuing agency.

Chapter 2. Recommendations of the Capital Debt Affordability Committee

Chapter 43 of 1978 created the Capital Debt Affordability Committee (CDAC). The committee is required to recommend an estimate of State debt to the General Assembly and the Governor. The committee is chaired by the State Treasurer, and other committee voting members are the Comptroller, Secretaries of the Department of Transportation and the Department of Budget and Management, and an individual appointed by the Governor. The chairs of the Capital Budget Subcommittee of the Senate Budget and Taxation Committee and the Capital Budget Subcommittee of the House Appropriations Committee serve as nonvoting members. The committee meets each summer to evaluate State debt levels and recommend prudent debt limits to the Governor and the General Assembly. The Governor and the General Assembly are not bound by the committee's recommendations.

When reviewing State debt, CDAC considers general obligation (GO) bonds, including various taxable, tax-exempt, and tax credit bonds authorized under the federal American Recovery and Reinvestment Act of 2009; consolidated transportation bonds; stadium authority bonds; bay restoration bonds; Grant Anticipation Revenue Vehicle revenue bonds; and capital leases supported by State revenues. Bonds supported by non-State revenues, such as the University System of Maryland's auxiliary revenue bonds or the Maryland Transportation Authority's revenue bonds, are examined but are not considered to be State source debt and are not included in CDAC's debt affordability calculation.

New General Obligation Debt Authorization

GO bonds are backed by the full faith and credit of the State, and they support the State's capital program. The committee recommended a \$1.160 billion limit on new GO debt authorization for the 2014 session. The \$1.160 billion figure reflects a \$75 million increase over the \$1.085 billion the committee programmed for the 2014 session in CDAC's 2012 report. Moreover, the committee's long-range plan adjusts annual GO authorization levels upward by \$75 million for each of the 2014 through 2018 sessions over what the committee planned for in its 2012 report. Recommended authorization levels return to current programmed levels in the 2019 session.

The increase in authorizations was proposed by the Department of Budget and Management. In support of the increase, the department noted that the increase will allow the State to accommodate expenses associated with the State Highway Administration's portion of the Chesapeake Watershed Implementation Plan (WIP) funding requirement included in the Transportation Infrastructure Investment Act of 2013 (Chapter 429 of 2013). The Act requires the Governor to include general funds or GO bond funds in the budget to comply with WIP. The funding plan established in the Act requires \$45 million in fiscal 2015, \$65 million in fiscal 2016, \$85 million in fiscal 2017, and \$100 million annually in fiscal 2018 and 2019 for

WIP compliance. The department also notes that capital funding also stimulates the economy by adding eight jobs for every \$1 million in construction funding.

Exhibit 2.1 shows that CDAC's planned authorizations include steady increases throughout the forecast period.

Exhibit 2.1
Effect of Proposed Capital Debt Affordability Committee
General Obligation Bond Authorizations
2014-2023 Legislative Sessions
(\$ in Millions)

<u>Session</u>	<u>Proposed GO Authorizations 2013 CDAC</u>	<u>Change from 2012 CDAC Authorizations</u>
2014	\$1,160	\$75
2015	1,170	75
2016	1,180	75
2017	1,275	75
2018	1,315	75
2019	1,280	0
2020	1,320	0
2021	1,360	0
2022	1,400	0
2023	1,440	0
Total	\$12,900	\$375

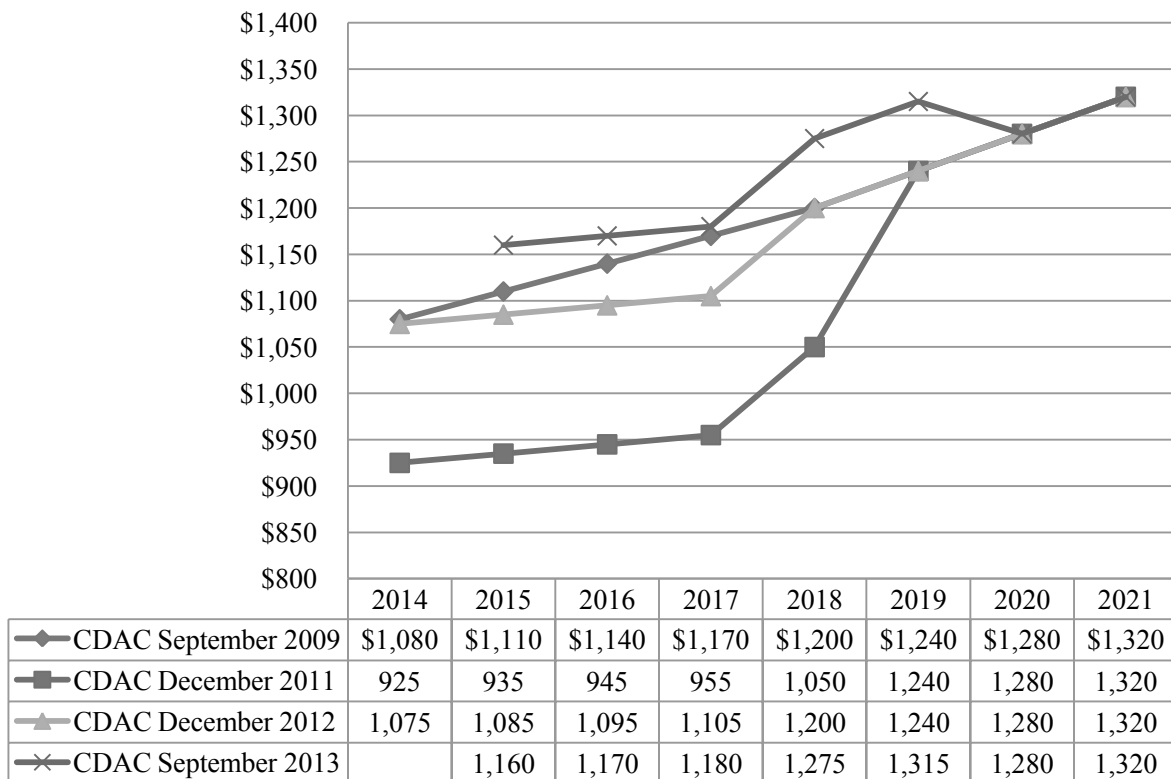
CDAC: Capital Debt Affordability Committee

GO: general obligation

Source: *Affordability Analysis: Alternative Authorization Recommendation*, Capital Debt Affordability Committee, September 25, 2013

Exhibit 2.2 illustrates past fluctuations in CDAC's recommendations for new GO bond authorization levels. In order to keep authorization levels within affordability limits, which limits debt service to no more than 8% of revenues and total outstanding debt to no more than 4% of personal income measures, the committee significantly reduced authorization levels programmed for the forecast period with the 2010 session budget submission. Predicated upon improvements in the State's economy, CDAC's December 2012 recommendation restored most of the previous reductions by adding \$750 million of new GO bond authorizations over fiscal 2014-2018. This year's CDAC recommendation adds \$375 million of new GO bond authorizations over fiscal 2015-2019, returning to currently programmed levels in fiscal 2020.

Exhibit 2.2
Past Fluctuations in CDAC Recommendations
General Obligation Bond Authorizations
Fiscal 2014-2021
(\$ in Millions)



CDAC: Capital Debt Affordability Committee

Source: *Affordability Analysis: Alternative Authorization Recommendation*, Capital Debt Affordability Committee, September 25, 2013; Department of Legislative Services, October 2013

It is worth noting that the committee may revise its recommended authorizations following the Board of Revenue Estimates' December forecast.

Higher Education Academic Debt

CDAC recommends limiting new debt authorization of academic revenue bonds to \$32 million beginning in the 2014 legislative session. This is the same amount authorized for the 2013 legislative session and is consistent with the long-range plan adopted by the committee prior to the 2011 session which included \$5 million more on an annual basis to support a long-term campuswide infrastructure improvement program at the University of Maryland, College Park.

Chapter 3. State Debt

Maryland's statutes allow for the issuance of the following types of State debt:

- general obligation (GO) bonds backed by the full faith and credit of the State, which include Qualified Zone Academy Bonds (QZAB), Qualified School Construction Bonds (QSCB), Qualified Energy Conservation Bonds (QECB), and Build America Bonds (BAB);
- capital leases, annual payments subject to appropriation by the General Assembly;
- revenue bonds and notes issued by the Maryland Department of Transportation (MDOT), backed by operating revenues and pledged taxes of the department;
- Grant Anticipation Revenue Vehicles (GARVEE) pledging projected future federal transportation grants to support debt service payments. GARVEEs can be issued by MDOT and the Maryland Transportation Authority (MDTA);
- revenue bonds issued by the Maryland Stadium Authority (MSA), secured by a lease which is supported by State revenues;
- bay restoration bonds issued by the Maryland Department of the Environment's (MDE) Water Quality Financing Administration, pledging revenues from the Bay Restoration Fund; and
- revenue or bond anticipation notes which may be issued by the Treasurer and which must be repaid within 180 days of issuance. Currently, there are no anticipation notes outstanding.

General Obligation Bonds

GO bonds are authorized and issued to pay for the construction, renovation, or equipping of facilities for State, local government, and private-sector entities. Grants and loans are made to local governments and private-sector entities when the State's needs or interests have been identified. Projects funded with GO bonds include but are not limited to public and private colleges and universities, public schools and community colleges, prisons and detention centers, and hospitals. **Appendix 1** shows agency GO bond requests for fiscal 2015 through 2019.

New General Obligation Bond Authorizations: Increased Out-year Authorizations

The Capital Debt Affordability Committee (CDAC) recommended a limit of \$1.160 billion for new authorizations of GO bonds during the 2014 session. This recommendation represents a \$75 million increase over the \$1.085 billion that the committee planned for the 2014 session in its 2012 report and \$225 million over what the committee

planned for the 2013 session in its 2011 report. **Exhibit 3.1** shows CDAC's long-term forecast recommends a total of \$6.100 billion in new GO bond authorizations for the 2014 through 2018 sessions. Compared to last year's forecasted levels, annual authorizations will increase by \$75 million and total authorizations by \$375 million over the 2014 through 2018 sessions.

Exhibit 3.1
Effect of New Policy on General Obligation Bond Authorizations
2014-2018 Legislative Sessions
(\$ in Millions)

Session	2011 Recommended Authorizations	2012 Recommended Authorizations	2013 Recommended Authorizations	2011-2012 Difference	2012-2013 Difference
2014	\$935	\$1,085	\$1,160	\$150	\$75
2015	945	1,095	1,170	150	75
2016	955	1,105	1,180	150	75
2017	1,050	1,200	1,275	150	75
2018	1,240	1,240	1,315	-	75
Total	\$5,125	\$5,725	\$6,100	\$600	\$375

Source: *Affordability Analysis: Alternative Authorization Recommendation*, Capital Debt Affordability Committee, September 25, 2013; *Report of the Capital Debt Affordability Committee on Recommended Debt Authorizations*, 2011 and 2012

The committee's 2010 and 2011 forecasted authorization levels reflected a policy of reduced authorizations relative to the committee's December 2009 recommendations. This write-down in out-year authorizations became necessary to keep the State debt within debt affordability limits and reflected the recession's impact on the State's capital program. This action reduced the fiscal 2011 to 2018 capital budget by \$810 million. The 2012 recommendation almost restored forecasted authorization levels to what was recommended in December 2009, falling just short of what was recommended in December 2009 by \$60 million.

CDAC's currently recommended out-year authorization levels are within the debt affordability benchmarks which limit State tax-supported debt outstanding to more than 4% of State personal income and debt service to no more than 8% of revenues. Citing the Watershed Implementation Plan funding requirement and the stimulative effect of additional GO bond funding on employment and revenues, the committee's recommendation seeks to fund capital priorities that would otherwise be deferred. As has been the case in recent years, the committee may review the State's fiscal outlook and revenue estimates again in December 2013, when the Board of Revenue Estimates provides its next revenues estimate, to determine if further adjustments and modifications to its recommendations are prudent.

General Obligation Bond Issuance Stream

GO bonds authorized in a given year are not issued the year in which they are authorized. The State Treasurer's Office reports that just over half of the GO bonds authorized in a year are typically issued within the first two fiscal years. Specifically, CDAC assumes bonds authorized in a given year will be fully issued over five years (31% in the first year, 25% in the second year, 20% in the third year, 15% in the fourth year, and 9% in the fifth year). This delay in issuance results in a substantial lag between the time GO bonds are authorized and the time the bonds affect debt outstanding and debt service levels.

Appendix 2 shows how the proposed authorizations for fiscal 2015 through 2023 would be issued. **Exhibit 3.2** compares the issuance stream projected by the Department of Legislative Services (DLS) based on the CDAC authorization levels in its December 2012 analysis and the 2013 DLS estimate based on the recommended increase over the planning period. The 2013 DLS projections show the State issuing \$369 million more through fiscal 2019. The difference between the two projected issuance streams reflects the impact of the \$375 million of additional GO bond authorizations recommended by CDAC in the planning period, as well as changes in issuance patterns attributable to capital project spending needs.

Exhibit 3.2
Proposed Issuance Stream
Fiscal 2015-2019
(\$ in Millions)

Fiscal Year	2012 Estimate	2013 Estimate	Difference
2015	\$956	\$1,019	\$63
2016	984	1,057	73
2017	1,048	1,125	77
2018	1,117	1,193	76
2019	1,160	1,240	80
Total	\$5,265	\$5,634	\$369

Source: *Effect of Long-term Debt on the Financial Condition of the State*, November 2012; Department of Legislative Services, October 2013

General Obligation Bond Debt Service Costs

Exhibit 3.3 shows that debt service costs are expected to be \$55 million more than what DLS projected in the 2013 session. Debt service costs are attributable to interest rate assumptions and issuance amounts. The forecast assumes that the interest rate on bonds issued in the out-years is 5%, which is the same assumption made in the 2012 report. The difference in projected debt service costs is attributable to the increased issuance stream which is a function of the higher GO bond authorizations recommended for fiscal 2015 through 2019, as well as changes in capital project cash flow needs. In addition, refunding previously issued bonds in March 2013 results in \$10 million in debt service savings over the remaining life of the bonds.

Exhibit 3.3
Projected Debt Service Costs
Fiscal 2015-2022
(\$ in Millions)

<u>Fiscal</u> <u>Year</u>	<u>2012</u> <u>Estimate</u>	<u>2013</u> <u>Estimate</u>	<u>Difference</u>
2015	\$1,052	\$1,045	-\$7
2016	1,147	1,142	-5
2017	1,207	1,206	-1
2018	1,275	1,277	2
2019	1,309	1,318	9
2020	1,382	1,389	7
2021	1,418	1,440	22
2022	1,477	1,505	28
Total	\$10,267	\$10,322	\$55

Note: Totals may not sum due to rounding.

Sources: *Effect of Long-term Debt on the Financial Condition of the State*, November 2012; Department of Legislative Services, October 2013; *Report of the Capital Debt Affordability Committee on Recommended Debt Authorizations*, October 2012

General Obligation Bond Refunding

In recent years, low interest rates provided the State with the opportunity to refund bonds. The bonds were financed by issuing new debt at lower interest rates. The new debt was placed in an escrow account from which debt service payments for the previously issued debt are made. This increases gross GO bond debt outstanding, but net debt remains constant. **Exhibit 3.4** shows that refunding reduced debt service costs by \$89 million since December 2009.

Exhibit 3.4
Debt Service Cost Savings Attributable to Bond Refunding
(\$ in Millions)

<u>Date of Sale</u>	<u>Amount Issued</u>	<u>Amount Retired</u>	<u>Savings</u>	<u>Net Present Value of Savings</u>
December 2009	\$602.8	\$606.3	\$25.8	\$24.9
February 2010	195.3	200.4	9.3	8.6
September 2011	254.9	264.6	12.6	11.1
March 2012	138.4	140.7	12.6	10.2
August 2012	183.8	194.5	18.7	16.1
March 2013	165.1	168.7	10.0	8.1
Total	\$1,540.3	\$1,575.1	\$89.1	\$79.0

Source: Public Financial Management, Inc.

The State Treasurer's Office, with advice from its financial advisor, is continually monitoring financial markets to determine if refinancing GO debt is advantageous. Should it be determined that market interest rates are sufficient to warrant a refunding, such action would be presented to the Board of Public Works (BPW) for its approval.

Program Open Space Debt Service Payments

Program Open Space (POS) bonds totaling \$70 million were authorized as the Program Open Space Acquisition and Opportunity Loan of 2009 by Transfer Tax – Program Open Space Bonds – Land and Easement Acquisition (Chapter 419 of 2009). The bonds were intended to replace funds lost due to the transfer of up to \$70 million in Program Open Space State share unencumbered fund balance to the general fund per the Budget Reconciliation and Financing Act of 2009 (Chapter 487 of 2009). Prior Authorizations of State Debt to Fund Capital Projects – Alterations Act of 2010 (Chapter 372 of 2010) allows for the debt to be issued through GO bonds. In the end, POS bonds were not issued; the State issued GO bonds in place of POS bonds to reduce costs due to GO bonds' low interest rates.

The full \$70 million in GO bonds was issued as part of two State issuances, February and July 2010, as shown in **Exhibit 3.5**. By statute, the bond issuance had to occur before the first expenditures of general fund advances for property purchases. The first purchases were in August 2010; the statute has been met. The Department of Natural Resources (DNR) received \$65 million, and the Maryland Department of Agriculture (MDA) received \$5 million of the \$70 million issuance. Some of the debt was issued as Build America Bonds. The bonds include federal direct payment subsidies that were reduced by sequestration. The reduction is less than \$100,000.

Exhibit 3.5
Program Open Space GO Bond Issuances
(\$ in Thousands)

<u>Issue Date</u>	<u>GO Bond Issuance</u>	<u>Principal</u>
February 2010	First Series A, Build America Bonds	\$33,333
July 2010	2010 Second Series A, Tax-Exempt (Retail Sale)	11,945
July 2010	2010 Second Series B, Tax-Exempt (Competitive Sale)	18,472
July 2010	2010 Second Series C, Taxable Build America Bonds	6,250
Total		\$70,000

GO: general obligation

Source: Department of Budget and Management, January 2011

Exhibit 3.6 shows that debt service costs are \$6.3 million in 2015. The debt service is deducted from transfer tax revenues allocated to DNR and MDA proportionately based on the share of the issuance each received.

Exhibit 3.6
Program Open Space GO Bonds Debt Service Payment Schedule
Fiscal 2013-2018
(\$ in Millions)

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Debt Outstanding	\$70.0	\$65.4	\$60.7	\$55.7	\$50.5	\$45.1
Debt Service	1.6	6.1	6.3	6.4	6.6	6.7

GO: general obligation

Source: Department of Budget and Management, January 2011

Federal Tax Credit and Direct Payment Bonds

In addition to tax-exempt GO bonds, the State has also taken advantage of federal programs that allow the State to issue bonds whereby the buyers can receive federal tax credits or the State will receive a direct payment to offset interest costs. These bonds are issued in the place of traditional tax-exempt GO bonds. To date, the State has issued QZABs, QSCBs,

QECBs, and BABs. QZABs, QSCBs, and QECBs have been issued to support education capital projects. BABs support the same projects that tax-exempt bonds support.

To date, the State has issued \$185 million in QZABs, QSCBs, and QECBs to support education construction projects. **Exhibit 3.7** shows that DLS estimates that the lower costs associated with these bonds reduced total debt service payments by almost \$59 million.

Exhibit 3.7
Federal Tax Credit and Direct Pay Issuances Supporting
Public School Capital Projects
(\$ in Thousands)

<u>Type</u>	<u>Year Issued</u>	<u>Amount Issued</u>	<u>Sinking Fund Payments</u>	<u>Debt Service Payments</u>	<u>Similar GO Payments¹</u>	<u>Savings</u>
QZAB	2001	\$18,098	\$12,432	\$0	\$27,182	\$14,750
QZAB	2004	9,043	7,356	0	12,393	5,038
QZAB	2006	4,378	3,609	0	6,132	2,523
QZAB	2007	4,986	4,089	0	6,967	2,877
QZAB	2008	5,563	0	6,142	7,606	1,464
QZAB	2009	5,563	0	6,275	7,052	778
QSCB ²	2009	50,320	49,964	0	63,791	13,827
QSCB ²	2010	45,175	44,663	0	52,731	8,068
QZAB ²	2010	4,543	4,543	0	5,302	759
QZAB	2011	15,900	0	15,900	20,267	4,367
QECB	2011	6,500	0	7,080	8,285	1,206
QZAB	2012	15,230	0	15,230	18,303	3,073
Total		\$185,299	\$126,656	\$50,627	\$236,011	\$58,730

GO: general obligation
QECB: Qualified Energy Conservation Bonds

QSCB: Qualified School Construction Bonds
QZAB: Qualified Zone Academy Bonds

¹ Estimates the cost of issuing an equal amount of bond assuming the true interest cost of the nearest general obligation bond sale.

² Sinking fund payments are estimated, and the final amount may change when final arrangements are made.

Note: Subtotals and totals may not sum due to rounding.

Source: Comptroller; State Treasurer's Office, October 2012

Qualified Zone Academy Bonds

QZABs were created under the federal Tax Reform Act of 1997 as a new type of debt instrument to finance specific education projects. In Maryland, the proceeds support the Aging Schools Program. QZABs are issued with the full faith and credit of the State. Consequently, QZABs are considered State debt. For purposes of calculating State debt affordability, QZABs are included in the State's GO bond debt outstanding and debt service.

Prior to 2008, the State did not pay interest on QZAB issuances. Instead, bondholders receive a federal income tax credit for each year the bond is held. The State is not required to make payments on the principal until the bonds are redeemed. For example, under its 2001 agreement with Bank of America, the State, through the State Treasurer's Office, makes annual payments into a sinking fund invested into a guaranteed rate of interest. Since the funds are invested in interest-bearing accounts, the repayment of the principal by the State is less than the par value of QZABs, making QZABs less expensive than GO bonds.

The Treasurer's Office advised that the federal government approved new rules regarding arbitrage that precluded the State from investing sinking funds. As a consequence, the State is no longer able to invest the sinking funds payments, interest earnings will no longer be generated, and the State will need to fully appropriate the principal borrowed. Costs also increased because the State cannot issue all QZABs at par but must instead offer a supplemental coupon. The December 2008 sale offered a 1.60% supplemental coupon. As Exhibit 3.6 showed, even with a supplemental coupon, QZABs are still less expensive than GO bonds.

Recently, the federal government has authorized QZABs with a direct payment to the State. Because interest rates are quite low, the federal payment is sufficient to fully subsidize the interest costs. For example, the State issued \$15.2 million in August 2012. The winning bid was submitted by Morgan Stanley & Co., LLC with a true interest cost that is essentially 0% because State debt service costs are reimbursed by the federal government. The net interest cost for the winning bidder was 2.83%. Since the federal government fully reimburses the State, there effectively is no interest payment for these bonds.

The State has received additional QZAB allotments that need to be issued before December 2013, 2014, and 2015. The State can issue \$4.5 million in 2013 and \$4.6 million in 2014 and 2015. The DLS debt service calculations assume that this debt will be issued as direct pay debt and that federal payments will be sufficient to support interest costs. As such, the payments represent State principal payments from fiscal 2015 to 2032.

Qualified School Construction Bonds

QSCBs were created under the federal American Recovery and Reinvestment Act of 2009 as a new type of debt instrument to finance the construction, rehabilitation, or repair of public school facilities. The bonds are issued with the full faith and credit of the State and are debt. For purposes of calculating State debt affordability, QSCBs are included in the State's GO

bond debt outstanding and debt service. These bonds were issued in place of tax-exempt bonds. The net effect of the bonds was to reduce the State debt service payments.

QSCBs are tax credit bonds entitling the holder of the bond to a tax credit for federal income tax purposes in lieu of receiving current interest on the bonds, similar to QZABs. The tax credit rate on QSCBs is set by the U.S. Treasury to allow for issuance of QSCBs at par and with no interest costs to the issuer. Unlike QZABs, tax credits may be stripped from bonds and sold separately, which could increase the marketability of the bonds.

Under ideal circumstances, the bonds sell at par without any interest payments (referred to as a supplemental coupon). Prior to December 2009, QSCBs were sold with supplemental coupon payments (such as the Baltimore County sale which included a 1.25% coupon) or at a discount (such as the Virginia Public School sale which generated proceeds equal to 91.0% of the bonds' principal).

In December 2009, the State sold \$50.3 million in QSCBs at par without a supplemental coupon. The State's second QSCB bond sale was in July 2010 when the State sold \$45.2 million in QSCBs. The bonds generate savings by replacing subsequent GO bond issuances that would have supported public school construction. Since there was no supplemental coupon, the State will not pay any interest on these bonds. The State is not authorized to issue any additional QSCBs.

Qualified Energy Conservation Bonds

QECBs were created by the Tax Extenders and Alternative Minimum Tax Relief Act of 2008. The American Recovery and Reinvestment Act of 2009 increased the allocation. The bonds are taxable bonds. The State will receive a direct federal subsidy for 70% of the federal tax credit rate. All the bonds mature in 15 years. The definition of qualified energy conservation projects is fairly broad and contains elements relating to energy efficiency capital expenditures in public buildings, renewable energy production, various research and development applications, mass commuting facilities that reduce energy consumption, several types of energy-related demonstration projects, and public energy efficiency education campaigns.

The State issued the full \$6.5 million allocated to the State in July 2011. The proceeds will support the construction of energy conservation projects at a school in St. Mary's County. The winning bid's interest cost was 0.62%. This low rate is attributable to the federal reimbursement. The winning bidders' net interest cost is 4.22%. Insofar as the federal tax credit rate at the day of the sale was 5.15%, and the State will be reimbursed 70.0% of that rate, the effective federal reimbursement is 86.0%. Annual interest payments are approximately \$137,000. The federal subsidy is \$117,000, requiring a net interest payment that is just over \$19,000 from the State. Over the life of the bonds, payments will total \$7.1 million.

Build America Bonds

The American Recovery and Reinvestment Act of 2009 authorized the State to sell BABs. The bonds support the types of projects that traditional tax-exempt bonds support and are issued in place of tax-exempt bonds. The buyers of the bonds do not receive any federal tax credit and are subject to federal taxes. Instead, Maryland receives a 35% subsidy from the federal government. Unlike QZABs, QSCBs, and QECBs, these bonds can support any project that is eligible to be funded with tax-exempt bonds.

To minimize debt service payments, the State bid the first BABs issuance as both traditional tax-exempt bonds and BABs, with the sale awarded to the lowest bid. Nine underwriters bid for BABs, and there were no bids for the tax-exempt bonds. In subsequent bond sales, the State bid them as BABs only.

The federal program expired on December 31, 2010. In 2009 and 2010, the State issued BABs four times: in August 2009, October 2009, February 2010, and July 2010. These issuances totaled \$583.2 million. The BABs are structured similarly to tax-exempt GO bonds. In January 2011, DLS estimated that BABs reduced State GO bond debt service costs by \$39.0 million over the life of the bonds.

Effect of Sequestration on Direct Payment Bonds

The federal Budget Control Act of 2011 imposes caps on federal discretionary spending from federal fiscal 2013 to 2021. The Act also created a Joint Select Committee to further reduce the federal deficit by at least \$1.2 billion over 10 years. The committee could substitute reductions for the mandatory spending reductions required through sequestration. The committee did not reach any agreement on reductions, and mandatory reductions are now in place.

Direct pay bonds are affected by mandatory reductions required through sequestration. The State Treasurer's Office advises that this reduces federal fund reimbursements for these bonds. In fiscal 2013, reimbursements were reduced by approximately \$51,000. Fiscal 2014 federal funds are expected to be reduced by \$1.1 million, from \$12.4 million to \$11.3 million. If sequestration continues into fiscal 2015, federal funds could be reduced by \$0.9 million, resulting in an \$11.5 million federal subsidy. Because exact reductions are influenced by the mismatch between federal and State fiscal years, the date bond payments are due, and the timing of the request for federal reimbursements, the amount that federal funds are reduced can vary from initial estimates.

Transportation Debt

MDOT issues 15-year, tax-supported consolidated transportation bonds. Bond proceeds usually support highway construction. Revenues from taxes and fees and other funding sources accrue to the Transportation Trust Fund (TTF) to pay debt service, operating budget requirements, and to support the capital program. Debt service on consolidated transportation bonds is payable solely from the TTF.

In addition to issuing consolidated transportation bonds, MDOT also issues debt referred to as nontraditional debt. Nontraditional debt currently includes Certificates of Participation, Maryland Economic Development Corporation debt, and debt sold on MDOT's behalf by MDTA. Of the 10 outstanding issuances of nontraditional debt, 2 are tax-supported and are included in the State debt affordability analysis in the Capital Lease section. The General Assembly annually adopts budget language that imposes a ceiling on MDOT's nontraditional debt.

Chapter 429 of 2013 provided additional revenues for the TTF by indexing the motor fuel tax rate to the Consumer Price Index and creating a sales and use tax equivalent rate applied to the average annual price of motor fuel. This additional revenue will be used to support additional capital spending. The additional revenue generated from Chapter 429 also allows for the department to issue more debt to support the capital program.

Consolidated Transportation Bonds

The issuance of transportation bonds is limited by two criteria: an outstanding debt limit and a coverage test. Section 3-202(b) of the Transportation Article establishes the maximum aggregate and unpaid principal balance of consolidated transportation bonds that may be outstanding at any one time. During the 2013 session, the maximum outstanding debt limit was increased to \$4.5 billion (from \$2.6 billion) in recognition of the enactment of an increase in motor fuel tax revenue.

Section 3-202(c) of the Transportation Article further requires the General Assembly to establish each year in the State budget the maximum unpaid principal balance in bonds that may be outstanding at the end of the forthcoming year. The fiscal 2014 budget bill set the maximum ceiling for June 30, 2013, at \$2,292,670,000. DLS estimates that as of June 30, 2014, debt outstanding will total \$1,754,035,000 due to smaller bond sales than originally estimated and the timing of those bond sales.

The bond revenue coverage test, which is established in MDOT's bond resolutions, establishes that the department will maintain net revenues and pledged taxes equal to at least twice (2.0) the maximum future debt service, or MDOT will not issue bonds until the 2.0 ratio is met. MDOT has adopted an administrative policy establishing a minimum coverage of 2.5. Based on projected bond sales, DLS estimates that as of June 30, 2014, MDOT will have net income coverage of 3.3 and pledged taxes coverage of 5.6.

As shown in **Exhibit 3.8**, MDOT has issued new (*e.g.*, nonrefunding) consolidated transportation bonds in 17 of the past 23 years.

Exhibit 3.8
Consolidated Transportation Bond Issuance*
(\$ in Millions)

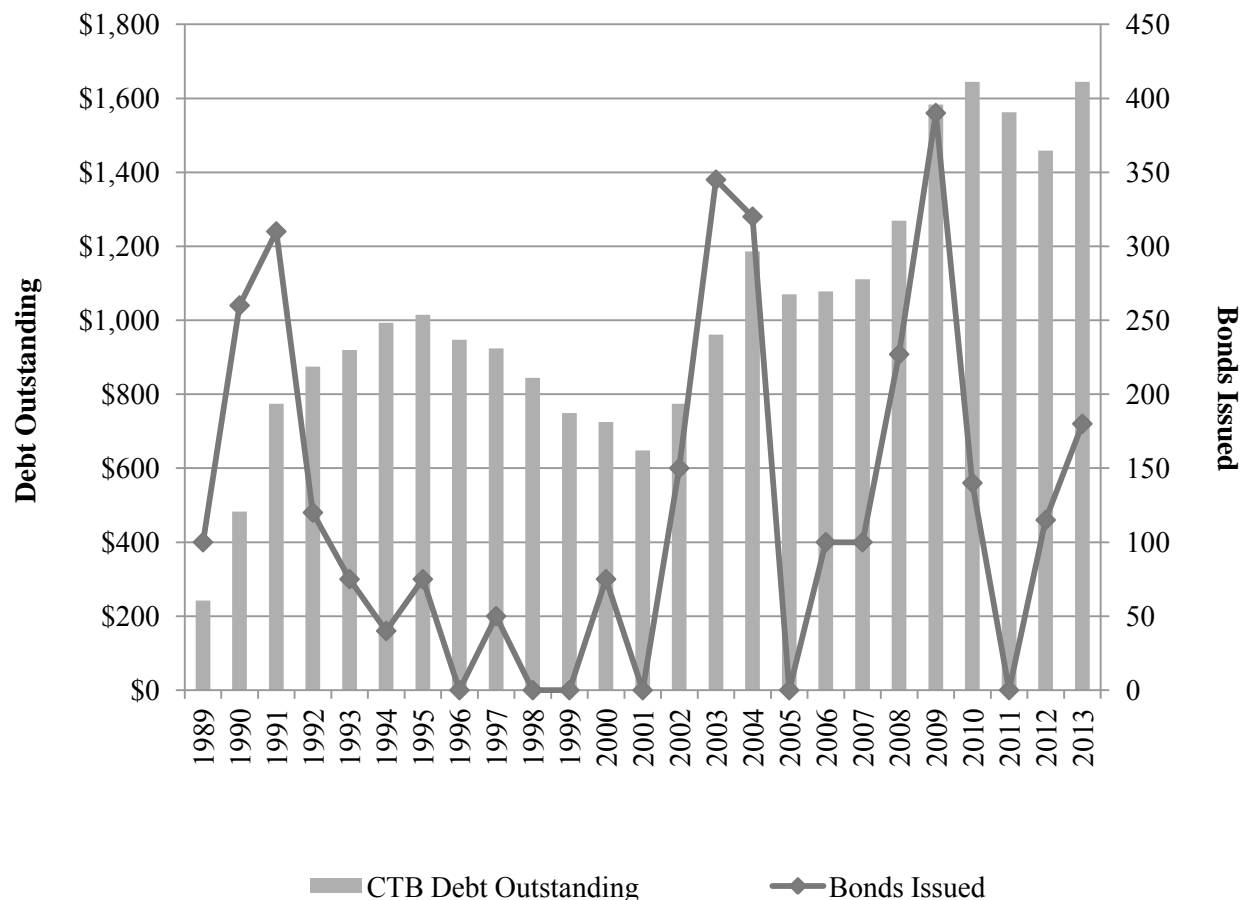
<u>Fiscal Year</u>	<u>Bonds Issued</u>
1991	\$310
1992	120
1993	75
1994	40
1995	75
1996	0
1997	50
1998	0
1999	0
2000	75
2001	0
2002	150
2003	345
2004	320
2005	0
2006	100
2007	100
2008	227
2009	390
2010	140
2011	0
2012	115
2013	180
Total	\$2,812

*Exclusive of refinancing. Five refinancing issuances were made from fiscal 1990 through 2014, including most recently in fiscal 2011, when a total of \$238,000,000 was refinanced.

Source: Maryland Department of Transportation, September 2013

Exhibit 3.9 illustrates annual bond sales and changes in debt outstanding from fiscal 1990 to 2013. In fiscal 2013, MDOT's net debt outstanding was \$1.6 billion, well under the \$2.6 billion debt outstanding debt limit. (The debt outstanding limit was increased for fiscal 2014 and beyond.)

Exhibit 3.9
Maryland Department of Transportation
Bonds Issued and Net Debt Outstanding
Fiscal 1989-2013
(\$ in Millions)



CTB: consolidated transportation bond

Source: Maryland Department of Transportation

Future Debt Issuance

Every fall, DLS prepares a TTF forecast. The forecast projects revenues and expenditures and adjusts debt issuances accordingly. DLS estimates that revenues will grow moderately in fiscal 2014 and 2015 as the economy continues to recover and then even out in later fiscal years. MDOT's revenue estimates assume more robust growth in titling tax receipts.

The TTF forecast assumes that capital funds are available after operating needs have been met. The DLS TTF forecast assumes greater operating expenditures, attributable to employee compensation in the future and transit and winter maintenance costs which reduces what is available for capital. Finally, under the DLS forecast, the TTF will maintain its coverage ratio at 2.5 through fiscal 2022. Despite this, DLS assumes a slightly higher level of bond issuances which are affordable due to the additional amount of revenue MDOT will be receiving. **Exhibit 3.10** shows that DLS estimates MDOT will be able to issue debt of approximately \$490 million in fiscal 2014 and \$760 million in fiscal 2015.

Exhibit 3.10
Department of Legislative Services' Estimate
Consolidated Transportation Bonds – MDOT Projected Issuances
Fiscal 2014-2019
(\$ in Millions)

<u>Fiscal Year</u>	<u>Amount</u>
2014	\$490
2015	760
2016	580
2017	450
2018	725
2019	470
Total	\$3,475

MDOT: Maryland Department of Transportation

Source: Department of Legislative Services

Debt Outstanding

Exhibit 3.11 shows the amount of estimated debt outstanding from fiscal 2014 to 2019. From fiscal 2014 to 2019, debt outstanding is estimated to increase by \$2.1 billion. This increase is tied to the cash flow needs of projects and is affordable under the department's coverage ratios and statutory debt outstanding limit.

Exhibit 3.11
Consolidated Transportation Bonds – MDOT Projected Debt Outstanding
Fiscal 2014-2019
(\$ in Millions)

<u>Fiscal Year</u>	<u>Amount</u>
2014	\$1,759
2015	2,372
2016	2,794
2017	3,061
2018	3,589
2019	3,868

MDOT: Maryland Department of Transportation

Source: Department of Legislative Services

Debt Service

Exhibit 3.12 shows that debt service costs are projected to increase steadily from \$204 million in fiscal 2014 to \$370 million in fiscal 2019. The growth is attributable to increased principal payments from prior issuances and the costs associated with issuing the debt from fiscal 2014 to 2019.

Exhibit 3.12
Projected Transportation Debt Service
Fiscal 2014-2019
(\$ in Millions)

<u>Fiscal Year</u>	<u>Projected Debt Service</u>
2014	\$204
2015	257
2016	286
2017	320
2018	355
2019	370
Total	\$1,794

Source: Department of Legislative Services

Conclusions and Recommendations on Transportation Debt

MDOT competes with other State capital projects within debt affordability limits. Transportation debt capacity is limited by the constraints on debt outstanding, debt service coverage, the cash-flow needs for projects in the capital program, and overall State debt affordability limits. The infusion of additional revenue has increased MDOT's and the State's ability to issue debt for capital projects. **It is recommended that the General Assembly continue to set an annual limit on the level of State transportation debt to keep debt outstanding within the 4% of personal income debt affordability criterion and debt service within the 8% of revenues affordability criteria.**

Grant Anticipation Revenue Vehicles

GARVEEs are transportation bonds that are issued by states and public authorities that are backed by future federal-aid highway and transit appropriations. While the source of funds used to repay GARVEE issuances originates with the federal government, the federal government's agreement to the use of its funds in this manner does not constitute any obligation on the part of the federal government to make these funds available. If for any reason federal appropriations are not made as anticipated, the obligation to repay GARVEEs falls entirely to the State agency or authority that issued them. To increase the GARVEE bond rating and reduce borrowing costs, the State pledges TTF revenues should federal appropriations be insufficient to pay GARVEE debt service. Since paying the debt is an obligation of the State, and TTF revenues have been pledged, GARVEE bonds are considered State debt.

Chapter 472 of 2005 authorizes the use of GARVEE bonds for the InterCounty Connector (ICC) project. The law stipulates that the State may issue no more than \$750.0 million in GARVEE bonds and that bond maturity may not exceed 12 years after date of issue. MDTA issued \$325.0 million in GARVEE bonds on May 22, 2007, with a net premium of \$16.9 million to support construction of the ICC. A second GARVEE debt issuance of \$425.0 million was issued on December 11, 2008, with a net premium of \$17.7 million. GARVEE debt service payments are \$87.5 million from fiscal 2010 to 2019 and \$51.4 million in fiscal 2020, the last year of debt service payments.

Capital Leases Supported by State Revenues

Section 8-104 of the State Finance and Procurement Article requires that capital leases supported by State tax revenues be included in State debt affordability calculations. The law does allow an exception for energy performance contract (EPC) leases if the savings generated exceed the costs and they are properly monitored.

Beginning in 1987, the State's capital program began utilizing lease/leaseback financing for capital projects. These leases are used to acquire both real property and equipment.

Beginning in fiscal 1994, the State instituted a program involving equipment leases for energy conservation projects at State facilities to improve energy performance.

Sections 8-401 to 8-407 of the State Finance and Procurement Article regulate leases. The law requires that capital leases be approved by BPW and that the Legislative Policy Committee (LPC) has 45 days to review and comment on any capital lease prior to submission to BPW. Chapter 479 of 2008 further regulates capital leases by amending Section 12-204 of the State Finance and Procurement Article to require capital leases that execute or renew a lease of land, buildings, or office space must be certified by CDAC to be affordable within the State's debt affordability ratios or must be approved by the General Assembly in the budget of the requesting unit prior to BPW approval.

All three types of leases (equipment, energy performance, and property) have advantages. Often, equipment leases involve high technology equipment, such as data processing equipment or telecommunications equipment. Equipment leases offer the State more flexibility than purchases since leases can be for less than the entire economic life of the equipment. Equipment leases are especially attractive in an environment where technology is changing very rapidly. Leases may also be written with a cancellation clause that would allow the State to cancel the lease if the equipment were no longer needed. Currently, the Treasurer's lease-purchase program consolidates the State's equipment leases to lower the cost by reducing the interest rate on the lease. The rate the Treasurer receives for the State's equipment leases financed on a consolidated basis is less than the rates individual agencies would receive if they financed the equipment leases themselves.

For real property, the transaction generally involves an agreement in which the State leases property to a developer who in turn builds or renovates a facility and leases it back to the State. At the end of the lease period, ownership of the facility is transferred to the State. Equipment leases are generally for shorter periods of time, from three to five years. The primary advantages of property leases, when compared to GO bonds, are that they allow the State to act more quickly if an unanticipated opportunity presents itself. Because of the extensive planning and legislative approval process involved in the State's construction program, it often takes years to finance a project. Lease agreements are approved by BPW after they have been reviewed by the budget committees. Since BPW and the budget committees meet throughout the year, leases may be approved much more quickly than GO bonds, which must be approved by the entire General Assembly during a legislative session. Therefore, property leases give the State the flexibility to take advantage of economical projects, which are unplanned and unexpected.

For energy performance projects, agencies make lease payments using the savings that result from implementation of the conservation projects. Using the savings realized in utility cost reductions to pay off energy performance project leases allows projects to proceed that otherwise might not be of high enough priority to be funded given all of the other competing capital needs statewide. Under the program, utility costs will decrease; as the leases are paid off, the savings from these projects will accrue to the State.

Exhibit 3.13 shows that projected tax-supported capital lease debt outstanding totals \$286 million as of June 30, 2013. Debt outstanding is projected to decrease to \$271 million on June 30, 2014. The \$15 million decline in the amount outstanding on current leases is expected to be offset by \$15 million in new equipment leases.

Exhibit 3.13
Tax-supported Capital Lease Debt Outstanding
As of June 30, 2013 and Projected June 30, 2014
(\$ in Millions)

<u>State Agency/Facility</u>	<u>Amount Outstanding June 2013</u>	<u>Projected Amount Outstanding June 2014</u>	<u>Difference</u>
State Treasurer's Office			
Capital Equipment Leases	\$19.2	\$10.1	-\$9.1
Energy Performance Projects	6.4	5.0	-1.4
Maryland Department of Transportation			
Headquarters Office Building	20.7	18.7	-2.0
Maryland Aviation Administration Shuttle Buses	5.1	3.8	-1.3
Department of General Services			
Hilton Street Facility	1.1	0.9	-0.2
Prince George's County Justice Center	18.4	17.7	-0.8
Maryland State Lottery			
Ocean Downs and Perryville Video Lottery Equipment	25.0	16.9	-8.1
Maryland Transportation Authority			
Annapolis State Office Parking Garage	19.3	18.6	-0.7
Department of Health and Mental Hygiene			
Public Health Lab	170.9	164.7	-6.2
Subtotal – Current Leases	\$286.2	\$256.3	-\$29.8
Proposed Leases			
New Capital Equipment Leases	0.0	15.0	15.0
Total	\$286.2	\$271.3	-\$14.8

Note: Subtotals and totals may not sum due to rounding.

Source: State Treasurer's Office, September 2013

Energy Performance Contract Policies

Chapter 163 of 2011 changed how the State classifies EPCs. Prior to the enactment of the legislation, Section 8-104 of the State Finance and Procurement Article required that all capital leases supported by State tax revenues be included in State debt calculations. In 2010, CDAC reviewed this issue and determined that most of these leases yielded savings that exceeded the lease payments. Consequently, these tend to reduce total State spending. The State Treasurer's Office also surveyed other states about their practices. It is common practice for other states to exclude capital leases that realize savings in excess of the capital cost.

The legislation that was enacted allows CDAC to exclude capital leases if the savings they generate equal or exceed the lease payments. It also requires that EPCs are monitored in accordance with the reporting requirements adopted by CDAC. The Department of General Services reviews these EPCs to determine if they do in fact generate savings. The Treasurer's Office advises that 23 EPCs can be excluded from CDAC's debt affordability calculation. Four projects, whose fiscal 2013 debt service costs total approximately \$802,000, cannot be excluded and are included in the affordability calculation.

Changes to Lease Accounting Rules Are Being Examined

Under current guidelines, leases that meet at least one of the following criteria are considered to be capital leases:

- the lease transfers ownership of the property to the lessee by the end of the lease term;
- the lease allows the lessee to purchase the property at a bargain price at a fixed point in the term of the lease for a fixed amount;
- the term of the lease is 75% or more of the estimated economic useful life of the property; or
- the present value of the lease payments are 90% or more of the fair value of the property.

Currently, many leases that the State enters into are not considered to be capital leases. Even if the leases represent long-term commitments to make payments, no liabilities are reported. Similarly, no assets are reported on many leases even if the State has long-term rights to receive operating lease payments.

The Governmental Accounting Standards Board (GASB) is "an independent, nonpolitical organization dedicated to establishing rules that require state and local governments to report clear, consistent, and transparent financial information." In 2013, GASB initiated a project to reexamine issues associated with lease accounting. The objective of the project is to examine whether operating leases can meet the definitions of assets or liabilities, which could result in new standards for capital leases. This project is being performed in concert with the Financial Accounting Standards Board and the International Accounting Standards Board. GASB plans on issuing an Exposure Draft to allow the public to review any changes to standards in November 2014. The final statement should be issued in December 2015.

If GASB proposes changes to leasing standards, the new standards could substantially increase the amount of leases included in the debt affordability calculation. DLS will continue to monitor this issue and report if there are any changes to leasing standards.

Bay Restoration Bonds

The Bay Restoration Fund (BRF) was created in 2004 primarily to provide grants for enhanced nutrient removal (ENR) pollution reduction upgrades at the State's 67 major wastewater treatment plants (WWTP), which are defined as wastewater treatment plants with a design capacity of 0.5 million gallons per day or greater. The fund is administered by MDE's Water Quality Financing Administration. The fund is financed by a bay restoration fee on users of wastewater facilities (WWTP Fund) and septic systems and sewage holding tanks (Septic Fund). The fees on WWTP users (and users receiving public drinking water) took effect January 1, 2005, and are being collected through water and sewer bills. The fees on septic system and sewage holding tank owners took effect October 1, 2005, and are being collected by the counties. Fees were increased in 2012. The fund has several revenue sources and expends funds for both operating and capital purposes.

CDAC considered whether bay bonds are State debt in 2004. At the time, the committee agreed that the bonds are State debt. The Water Quality Financing Administration's bond counsel reviewed this issue and concurred with this opinion. Bond counsel noted that there is a substantial likelihood that, if challenged in court, the Maryland courts would consider bay bonds to be State debt since the bonds are supported by an involuntary exaction that serves a general public purpose.

Bay Restoration Fund Fee Future Use

Chapter 150 of 2012 (Environment – Bay Restoration Fund – Fees and Uses) established additional authorized uses for the BRF beginning in fiscal 2018. After the payment of debt service on outstanding bonds and the allocation of funds to other required uses, these additional uses include the following, in order of priority: (1) funding an upgrade of a wastewater facility with a design capacity of 500,000 gallons or more per day to ENR; (2) funding for the most cost-effective ENR upgrades at WWTP with a design capacity of less than 500,000 gallons per day; (3) costs associated with upgrading septic systems and sewage holding tanks; and (4) grants for local government stormwater control measures for jurisdictions that have implemented a specified system of charges under current authority.

Based on the current priority list and estimated capital cost of ENR upgrades, **Exhibit 3.14** shows that the program projects issuing debt each year between fiscal 2014 and 2018 and that by fiscal 2018, debt outstanding will peak at \$463.0 million. Debt service costs increase to \$53.2 million in fiscal 2019. These issuances are limited by the revenues generated by the WWTP Fund, overall State debt considerations, and the spending on additional uses allowed under Chapter 150 of 2012 beginning in fiscal 2018.

Exhibit 3.14
Bay Restoration Fund
Fiscal 2013-2019
(\$ in Millions)

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Revenue Bonds Issued	\$0.0	\$90.0	\$140.0	\$140.0	\$80.0	\$30.0	\$0.0
Debt Outstanding	36.0	123.1	260.0	392.2	456.9	463.0	432.9
Debt Service	4.6	4.6	9.1	20.7	34.8	46.7	53.2

Note: In fiscal 2008, \$50 million in revenue bond debt was issued.

Source: Maryland Department of the Environment; Department of Legislative Services; October 2013

The debt issuances for the WWTP Fund have been delayed again because projects have been delayed due to the magnitude of the projects and the number of years involved in design and construction. The Septic Fund is operated on a pay-as-you-go (PAYGO) basis and does not involve revenue bond proceeds.

Bay Restoration Funds Now Deemed Sufficient to Meet State Goal

The bay fund legislation developed clear goals. Current estimates indicate that the funding provided will be able to meet the ENR upgrade goals due to the roughly doubling of the Bay Restoration Fund fee and the reduction in cost estimates.

Overall, the program plans to issue \$530.0 million in revenue bonds through fiscal 2018. These revenue bonds, in addition to revenues expended from the fund as PAYGO special funds, would fund the entirety of the currently projected \$1,297 million upgrade cost, leaving a surplus projected to begin in fiscal 2018 of \$69.3 million that could be used for the additional purposes specified in Chapter 150 of 2012.¹ The \$76.9 million in GO bond funding that was programmed in the 2012 *Capital Improvement Program* for the out-years will not be needed in order to meet the WWTP nitrogen reduction bay fund goals.

It is recommended that the General Assembly continue to limit Bay Restoration Fund revenue bond issuances at a level that maintains debt outstanding within the 4% of personal income debt affordability criterion and debt service within the 8% of revenues affordability criteria.

¹MDE estimates that the cost to upgrade the 67 major wastewater treatment plants has increased from \$1,259 million to \$1,297 million, primarily due to revised estimates for the Back River WWTP upgrade.

Maryland Stadium Authority

Chapter 283 of 1986 created MSA to construct and operate stadium sites for professional baseball and football in the Baltimore area. MSA is authorized to issue taxable and tax-exempt revenue bonds for property acquisition and construction costs related to two stadiums at Baltimore's Camden Yards. The authority may also participate in the development of practice fields, team offices, parking lots, garages, and related properties.

In subsequent years, MSA's role was expanded to include managing and issuing revenue bonds to renovate and expand convention centers in Baltimore and Ocean City, construct a conference center in Montgomery County, renovate the Hippodrome Performing Arts Center, and renovate Camden Station. **Exhibit 3.15** lists MSA's tax-supported authorized debt, debt outstanding, and annual debt service.

Exhibit 3.15
Maryland Stadium Authority
Revenue Debt Authorizations, Debt Outstanding, and Debt Service
(\$ in Millions)

<u>Project</u>	<u>Authorized</u>	<u>Outstanding as of July 2013</u>	<u>Debt Service Fiscal 2014</u>
Baseball and Football Stadiums	\$235.0	\$141.8	\$21.3
Baltimore City Convention Center	55.0	9.3	5.1
Montgomery County Conference Center	23.2	12.9	1.6
Hippodrome Performing Arts Center	20.3	12.9	1.6
Ocean City Convention Center	17.3	4.1	1.4
Camden Station	8.7	6.9	0.7
Equipment Leases	n/a	5.1	1.0
Total	\$359.5	\$193.0	\$32.7

Note: Numbers may not sum to total due to rounding.

Source: Maryland Stadium Authority

Camden Yards Sports Complex

Provisions of the Financial Institutions Article limit the amount of bonds the authority may issue at the Camden Yards Sports Complex and the allocation of outstanding tax-supported debt. The authority may only exceed the limit with approval of BPW and notification to LPC.

During the construction of the baseball and football stadiums, MSA remained within the statutory limit of \$235 million in outstanding debt; however, BPW has, on several occasions, reallocated the specific statutory project limits to meet the cash-flow needs of the construction efforts. Debt service is supported by lottery revenues.

Between 2010 and 2012, MSA issued over \$30 million in Sports Facilities Taxable Lease Revenue Bonds in order to fund capital improvement projects at the Camden Yards Complex. The bonds will be secured by lottery revenues and, in the opinion of bond counsel, will not constitute tax-supported debt. An agreement with the Comptroller ensures that lottery proceeds are deposited with a trustee for the benefit of the holders of the bonds. The bonds were sold as a private placement at a 2.9% interest rate and a 3.5-year term. Funds are being used primarily for the three phases of capital improvements to Oriole Park, including concrete restoration, seat renovation, waterproofing, roof replacement, electrical repairs, and some structural steel painting. A refunding and reissue of this debt is expected in fiscal 2014 to avoid a significant final payment and to extend payments beyond fiscal 2015. The original offering was done in conjunction with \$4 million financed through the State Treasurer's Master Equipment Lease Program to replace video boards at the football stadium and \$10 million financed through the State Treasurer's Energy Performance Contract Master Lease Program for various energy projects at the facilities.

In 2012, MSA issued approximately \$105 million in fixed-rate lease revenue bonds that were used to refund the 1998 and 1999 variable-rate bonds. This transaction eliminated exposure risks and some annual fees associated with the current variable-rate debt.

Baltimore and Ocean City Convention Centers

MSA issued \$55.0 million in revenue bonds for the Baltimore City Convention Center as authorized by 1993 legislation. Baltimore City issued \$50.0 million in city bonds, and the State contributed another \$58.0 million in GO bond funding toward the construction cost of the project, which was completed in 1997. The fiscal 2014 debt service cost for the revenue bonds is \$5.1 million and subject to State appropriation. Chapter 286 of 2013 extended the date by which MSA is obligated to contribute two-thirds of the operating deficits of the Baltimore Convention Center to December 31, 2019. The State is also statutorily required to contribute \$200,000 annually to a capital improvement fund.

MSA issued \$17.3 million in revenue bonds for the Ocean City Convention Center (OCCC), which was authorized in 1995 and matched by a contribution from the Town of Ocean City. The fiscal 2013 debt service cost for these revenue bonds is \$1.4 million and subject to State appropriation. As amended by Chapter 630 of 2012, the State is also statutorily required to contribute one-half toward OCCC's annual operating deficit through fiscal 2036 and \$50,000 annually to a capital improvement fund.

In December 2008, MSA and the Town of Ocean City released a feasibility study on the proposed expansion of the OCCC. The study recommended a moderate expansion and remodeling to the convention center to modernize audiovisual and technical amenities, provide

more function space, and increase prime exhibit space. In December 2009, MSA submitted an Amended Comprehensive Plan of Financing for the OCCC expansion. The plan called for MSA to issue tax-exempt lease-revenue bonds to pay for the project. However, in order to realize a lower cost of capital, the expansion was ultimately funded with GO bonds through the fiscal 2011 and 2012 capital budget bill. Construction was completed in fall 2012.

Montgomery County Conference Center

In July 2003, MSA issued \$23.2 million in tax-supported bonds to support construction of the Montgomery County Conference Center. Of this amount, \$20.3 million represents the State's contribution to construction costs, which totaled \$66.0 million. The remaining bond proceeds funded a capitalized interest account established as part of the financing plan to fund interest-only debt service payments beginning on June 15, 2003, and continuing through June 15, 2004. Debt service payments thereafter and continuing through June 15, 2024, are paid from funds subject to appropriation by the State. Montgomery County contributed \$13.7 million for construction and another \$2.5 million for project-related enhancements. The project opened in 2004. In 2012, MSA submitted an Amended Comprehensive Plan of Financing for the center to refund the existing issuance at a lower rate. The fiscal 2014 debt service costs for these revenue bonds are \$1.6 million – a savings of over \$200,000. MSA has recently agreed to serve as construction manager for a new parking garage for the center, to be paid for by the county.

Hippodrome Performing Arts Center

On July 10, 2002, the authority issued \$20.25 million in taxable revenue bonds for the renovation of the Hippodrome Performing Arts Center in Baltimore City. The total cost of the Hippodrome project was \$63.0 million excluding capitalized interest expense. Funding for the project was provided by the State, MSA revenue bonds, Baltimore City, Baltimore County, private contributions, the performing arts center's operator, historic tax credits, and interest earnings. The project was completed in February 2004.

Debt service payments were averaging \$1.8 million annually for the 20-year term of the bond and are subject to appropriation. The Hippodrome is leased to the State and, subsequently, leased back to MSA. The rent paid under the lease by the State is equivalent to the debt service on the revenue bonds and is derived from the State's general fund. The debt service is partially offset by a \$2 per ticket surcharge for events at the Hippodrome, which is required by legislation authorizing the project. The surcharge was originally expected to cover approximately half of the debt service; however, lower than expected sales have led to greater contributions by MSA's financing fund. Accordingly, in 2012, MSA submitted an Amended Comprehensive Plan of Financing for the center to refund the existing issuance at a lower rate in order to lower the State's contribution to debt service. The fiscal 2014 debt service is \$1.6 million.

Camden Station

Section 13-708.1 of the Financial Institutions Article provides that MSA may develop any portion of Camden Yards to generate incidental revenues for the benefit of the authority subject to approval of BPW and LPC. MSA received LPC approval in January 2003 and BPW approval in December 2003 to renovate Camden Station, a historic four-story building next to the baseball stadium.

In February 2004, MSA issued \$8.7 million in 20-year taxable revenue bonds to renovate Camden Station. Of that amount, \$8.0 million is to pay for capital construction associated with the development of the project. The remaining bond proceeds were used to pay capitalized interest, costs of issuance, and bond insurance. The capital interest period covered biannual debt service payments through June 15, 2006. The fiscal 2014 debt service costs for the authority's revenue bonds are about \$740,000 subject to State appropriation.

Phase I of the project, involving the basement and first floor, was completed in March 2005. Phase II, involving the second and third floors, was completed in August 2006. The Babe Ruth Museum rents approximately 22,551 square feet in the basement and on the first floor, and Geppi's Entertainment Museum rents approximately 17,254 square feet on the second and third floor.

Local Project Assistance and Feasibility Studies

The 1998 capital budget bill (as amended by Chapter 204 of 2003 and Chapter 445 of 2005) authorizes MSA to assist State agencies and local governments in managing construction projects. The budget committees must be notified, and funding must be provided entirely by the agency or local government requesting assistance unless funding is specifically provided in the budget for the project. Currently, MSA is providing technical assistance in support of the State's interests in the redevelopment of State Center. The 1998 bill also authorizes the authority to conduct feasibility studies. The budget committees must give approval for the studies, and costs must add to no more than \$500,000 annually of MSA's nonbudgeted funds.

Several studies are currently in various stages of completion by the authority. MSA and Baltimore City recently released a market and economic study of an expanded convention center, a new arena, and a new hotel in Baltimore. A second phase of the study, to include a discussion of design, is pending a submission of a memorandum of understanding between the project stakeholders. Also, MSA recently released a study, in conjunction with the Maryland-National Capital Park and Planning Commission, on a proposed lacrosse stadium and youth sports complex. Reports have also been released recently on a potential horse park and for a hotel/meeting space complex in Frederick.

Other studies to be conducted include the second phase of the lacrosse stadium study and an expansion to the Arthur Perdue Stadium in Wicomico County. Feasibility studies represent projects still in the planning stages. Since the projects are in a planning stage and are quite

speculative, they are excluded from the affordability analysis and long-term debt projections. However, if any of these projects was to be developed and funded, it would add to the State debt load and reduce the State's debt capacity.

In 2013, the General Assembly adopted House Bill 860 (Chapter 647) authorizing MSA to issue up to \$1.1 billion in debt for the purpose of constructing and improving public school facilities in Baltimore City. Any debt issued by MSA to finance construction or improvement of Baltimore City public school facilities is not a debt, liability, or pledge of the faith and credit or taxing power of the State. Sources of revenue to pay the debt service and other project costs are:

- all revenues generated by the Baltimore City beverage container tax;
- all of the city's proceeds from table games at the video lottery facility located in Baltimore City that are dedicated to school construction and 10% of the participation rent paid by the video lottery facility operator to Baltimore City;
- \$10 million in State education aid due to Baltimore City Board of School Commissioners (BCBSC) from recurring retiree health care costs shifted from Baltimore City to BCBSC;
- \$20 million in annual proceeds from the State lottery;
- \$10 million diverted from State education aid to BCBSC in fiscal 2016 and \$20 million in each fiscal year thereafter;
- proceeds from the sale of bonds to finance improvements to Baltimore City public school facilities; and
- any other funds or revenues received from or dedicated by any public source to support the initiative.

MSA is responsible for managing all public school construction and improvement projects in Baltimore City that are financed under the Act. However, MSA may not use any of its own funds, whether appropriated or nonbudgeted, to pay for any costs or expenses related to its role as project manager.

Chapter 4. Economic Factors and Affordability Analysis

The Capital Debt Affordability Committee's (CDAC) mission is to advise the Governor and the General Assembly regarding the maximum amount of debt that can prudently be authorized. To evaluate debt affordability, the committee has adopted these two criteria:

- State debt outstanding should be limited to 4% of Maryland personal income.
- State debt service should be limited to 8% of revenues supporting the debt service.

These criteria compare debt to economic factors that relate to the wealth of Maryland citizens (personal income) and the resources of the State (revenues). Maintaining debt levels within the guidelines set by the committee allows the State to maintain its AAA bond rating and support a growing capital program that is sustainable.

The criteria are flexible enough to allow the State to adjust the program as the State's fiscal condition changes. For example, the flexibility allowed the State to prudently increase the capital program when operating funds became scarce during the recession earlier this decade. The criteria also offer the State a predictable, stable, and transparent process.

This section examines the economic factors that measure debt affordability and evaluates CDAC's recommendation to determine affordability.

Personal Income

The Department of Legislative Services' (DLS) estimates of personal income differ from those of CDAC. CDAC is using the Board of Revenue Estimates' September 2013 personal income estimates, which **Exhibit 4.1** shows are less than personal income estimates used by DLS. Lower Maryland personal income reduces the ratio of debt outstanding to personal income.

Exhibit 4.1
Maryland Personnel Income
Comparison of Department of Legislative Services and
Capital Debt Affordability Committee Projections
Calendar 2013-2019
(\$ in Millions)

Calendar Year	DLS Personal Income <u>Estimate</u>	% <u>Change</u>	CDAC Personal Income <u>Estimate</u>	% <u>Change</u>	<u>Difference</u>
2013	\$319,465		\$314,042		\$5,423
2014	330,452	3.44%	324,927	3.47%	5,525
2015	344,484	4.25%	338,777	4.26%	5,707
2016	359,352	4.32%	354,083	4.52%	5,269
2017	375,990	4.63%	371,002	4.78%	4,988
2018	394,378	4.89%	387,326	4.40%	7,052
2019	412,943	4.71%	403,168	4.09%	9,775

CDAC: Capital Debt Affordability Committee

DLS: Department of Legislative Services

Source: Capital Debt Affordability Committee, September 2013; Department of Legislative Services, October 2013

Revenue Projections

Exhibit 4.2 shows that DLS' out-year revenue projections are less than CDAC's through fiscal 2021. The differences relate to the DLS estimate of out-year transportation revenues. DLS does not expect transportation revenues to increase as much as the CDAC estimates.

Exhibit 4.2
Comparison of DLS and CDAC Revenue Projections
Fiscal 2013-2023
(\$ in Millions)

<u>Fiscal Year</u>	<u>General Funds</u>	<u>Property Tax</u>	<u>Other ABF</u>	<u>ETF Slots</u>	<u>Transfer Taxes</u>	<u>Subtotal</u>	<u>TTF</u>	<u>GARVEE</u>	<u>Stadium</u>	<u>Flush Tax</u>	<u>Total</u>
2013	\$14,620.5	\$723.9	\$166.5	\$308.3	\$140.4	\$15,959.6	\$2,461.5	\$467.2	\$24.6	\$98.0	\$19,010.9
2014	15,332.4	719.9	62.8	350.3	74.8	16,540.2	2,668.9	467.2	23.6	98.9	19,798.8
2015	15,861.7	710.9	15.0	506.0	112.0	17,205.6	2,827.6	467.2	22.3	100.0	20,622.7
2016	16,585.8	714.9	15.0	513.8	122.9	17,952.4	3,170.2	467.2	22.3	101.0	21,713.2
2017	17,359.3	715.8	15.0	582.4	130.4	18,802.9	3,372.2	467.2	22.3	102.0	22,766.6
2018	18,159.0	716.3	15.0	611.3	135.3	19,636.9	3,450.6	467.2	22.3	103.0	23,680.1
2019	18,865.1	734.2	15.0	641.1	225.7	20,481.1	3,520.2	467.2	21.8	104.1	24,594.5
2020	19,714.0	752.6	14.2	660.4	230.2	21,371.4	3,579.6	467.2	21.7	105.1	25,545.0
2021	20,601.2	771.4	13.5	680.2	234.8	22,301.1	3,707.9	0.0	7.6	106.2	26,122.9
2022	21,528.2	790.7	12.7	700.7	239.5	23,271.8	3,822.3	0.0	7.6	107.2	27,208.9
2023	22,497.0	810.4	12.7	721.6	244.3	24,286.0	3,944.5	0.0	7.2	108.3	28,346.0

ABF: Annuity Bond Fund

BRF: Bay Restoration Fund

CDAC: Capital Debt Affordability Committee

Diff: Difference

DLS: Department of Legislative Services

ETF: Education Trust Fund (supported by video lottery terminals)

GARVEE: Grant Anticipation Revenue Vehicle

TTF: Transportation Trust Fund

Source: (1) General Fund, Other Annuity Bond Fund, and Maryland Department of Transportation: Department of Legislative Services, October 2013; and (2) State Property Tax, Federal Funds, ETF Slots, Transfer Taxes, Stadium Authority, GARVEE, Bay Restoration Fund, and Capital Debt Affordability Committee Revenues: Capital Debt Affordability Committee, September 2013

Affordability Analysis

DLS has prepared a revised estimate of State debt outstanding to personal income and State debt service to revenues. **Exhibit 4.3** shows DLS' debt issuance assumptions. The GO bond, Grant Anticipation Revenue Vehicle (GARVEE), Stadium Authority, and bay restoration bond issuances are consistent with CDAC estimates. There are differences with respect to Qualified Zone Academy Bonds (QZABs) and Maryland Department of Transportation (MDOT) bonds. With respect to QZABs, DLS is assuming that the State will issue the federal authorizations provided through December 2015. DLS does not anticipate transportation revenues will be sufficient to support the program proposed by MDOT and has scaled back issuances.

Exhibit 4.3
Projected New Debt Issuances
Fiscal 2014-2023
(\$ in Millions)

<u>Fiscal Year</u>	<u>GO Bond Auth.</u>	<u>GO Bond Issuances</u>	<u>QZABs</u>	<u>Trans. Bonds</u>	<u>GARVEE</u>	<u>Capital Leases</u>	<u>Stadium Authority Bonds</u>	<u>Bay Restoration Bonds</u>
2014	\$1,075	\$977	\$5	\$490	\$0	\$15	\$0	\$90
2015	1,160	1,019	5	760	0	19	0	140
2016	1,170	1,125	5	580	0	69	0	140
2017	1,180	1,193	0	450	0	5	0	80
2018	1,275	1,240	0	725	0	5	0	30
2019	1,315	1,260	0	470	0	5	0	0
2020	1,280	1,288	0	400	0	5	0	0
2021	1,320	1,318	0	100	0	5	0	0
2022	1,360	1,346	0	0	0	5	0	0
2023	1,400	1,381	0	300	0	5	0	0

GARVEE: Grant Anticipation Revenue Vehicle

GO: General Obligation

QZAB: Qualified Zone Academy Bond

Source: (1) General Obligation, Maryland Department of Transportation Bonds, QZAB, and Capital Leases: Department of Legislative Services, October 2013; and (2) Stadium Authority, GARVEE, and Bay Restoration Bonds: Capital Debt Affordability Committee, September 2013

Exhibit 4.4 shows that, for the forecast period, debt outstanding as a percent of personal income peaks at 3.61% in fiscal 2018. **Exhibit 4.5** shows that the debt service as a percent of revenues increases until fiscal 2018 as it reaches 7.74% and then declines. The debt service ratio begins to increase again in fiscal 2022 due primarily to transportation debt service costs.

Exhibit 4.4
State Tax-supported Debt Outstanding
Components and Relationship to Personal Income
Fiscal 2013-2023
(\$ in Millions)

Fiscal Year	General Obligation Bonds	MDOT Bonds	GARVEE	Capital Leases	Stadium Authority Bonds	Bay Restoration Bonds	Total Tax-supported Debt	Fiscal Year
2013	\$8,006	\$1,645	\$479	\$286	\$193	\$36	\$10,645	2013
2014	8,369	1,759	416	271	169	123	11,107	2014
2015	8,730	2,372	349	263	145	260	12,119	2015
2016	9,034	2,794	280	301	125	392	12,926	2016
2017	9,376	3,061	207	279	106	457	13,486	2017
2018	9,736	3,589	130	253	86	463	14,256	2018
2019	10,122	3,868	49	226	65	433	14,763	2019
2020	10,467	4,079	0	201	44	399	15,190	2020
2021	10,821	3,937	0	178	36	364	15,336	2021
2022	11,157	3,666	0	162	28	326	15,338	2022
2023	11,470	3,646	0	148	20	287	15,572	2023

State Tax-supported Debt Outstanding as a Percent of Personal Income
(Affordability Criteria = 4.0%)

2013	2.51	0.51	0.15	0.09	0.06	0.01	3.33	2013
2014	2.53	0.53	0.13	0.08	0.05	0.04	3.36	2014
2015	2.53	0.69	0.10	0.08	0.04	0.08	3.52	2015
2016	2.51	0.78	0.08	0.08	0.03	0.11	3.60	2016
2017	2.49	0.81	0.05	0.07	0.03	0.12	3.59	2017
2018	2.47	0.91	0.03	0.06	0.02	0.12	3.61	2018
2019	2.45	0.94	0.01	0.05	0.02	0.10	3.58	2019
2020	2.43	0.95	0.00	0.05	0.01	0.09	3.52	2020
2021	2.40	0.87	0.00	0.04	0.01	0.08	3.41	2021
2022	2.38	0.78	0.00	0.03	0.01	0.07	3.27	2022
2023	2.35	0.75	0.00	0.03	0.00	0.06	3.19	2023

GARVEE: Grant Anticipation Revenue Vehicle
MDOT : Maryland Department of Transportation

Source: (1) General Obligation, Maryland Department of Transportation Bonds, and Capital Leases: Department of Legislative Services, October 2013; and (2) Stadium Authority, GARVEE, and Bay Restoration Bonds: Capital Debt Affordability Committee, September 2013

Exhibit 4.5
State Tax-supported Debt Service
Components and Relationship to Revenues
Fiscal 2013-2023
(\$ in Millions)

Fiscal Year	General Obligation	MDOT Bonds	GARVEE	Capital Leases	Stadium Authority Bonds	Bay Restoration Bonds	Total Tax-supported Debt Service	Fiscal Year
2013	\$916	\$174	\$87	\$31	\$32	\$5	\$1,246	2013
2014	981	204	87	35	38	5	1,350	2014
2015	1,045	257	87	40	31	9	1,471	2015
2016	1,142	286	87	44	26	21	1,607	2016
2017	1,206	320	87	42	25	35	1,715	2017
2018	1,277	355	87	42	25	47	1,833	2018
2019	1,318	370	87	41	24	53	1,894	2019
2020	1,389	393	51	38	24	55	1,951	2020
2021	1,440	451	0	32	10	55	1,989	2021
2022	1,505	476	0	28	10	55	2,076	2022
2023	1,573	519	0	26	9	55	2,182	2023

State Tax-supported Debt Service as a Percent of Revenues
(Affordability Criteria = 8.0%)

2013	4.82	0.92	0.46	0.16	0.17	0.02	6.55	2013
2014	4.96	1.03	0.44	0.18	0.19	0.02	6.82	2014
2015	5.06	1.25	0.42	0.20	0.15	0.04	7.13	2015
2016	5.26	1.32	0.40	0.20	0.12	0.10	7.40	2016
2017	5.30	1.41	0.38	0.18	0.11	0.15	7.54	2017
2018	5.39	1.50	0.37	0.18	0.11	0.20	7.74	2018
2019	5.36	1.50	0.36	0.17	0.10	0.22	7.70	2019
2020	5.44	1.54	0.20	0.15	0.10	0.22	7.64	2020
2021	5.51	1.73	0.00	0.12	0.04	0.21	7.61	2021
2022	5.53	1.75	0.00	0.10	0.04	0.20	7.63	2022
2023	5.55	1.83	0.00	0.09	0.03	0.20	7.70	2023

GARVEE: Grant Anticipation Revenue Vehicle
MDOT: Maryland Department of Transportation

Source: (1) General Obligation, Maryland Department of Transportation Bonds, and Capital Leases: Department of Legislative Services, October 2013; and (2) Stadium Authority, GARVEE, and Bay Restoration Bonds: Capital Debt Affordability Committee, September 2013

Exhibit 4.6 shows that debt outstanding ratios based on DLS' personal income estimates are lower than those estimated by CDAC from fiscal 2014 to 2023. The difference between the two ratios is attributable to MDOT bond issuances, which are less in the DLS estimate.

Exhibit 4.6
State Debt to Personal Income
Comparison of DLS and CDAC Estimates
Fiscal 2014-2023

<u>Fiscal Year</u>	<u>DLS</u>	<u>CDAC</u>
2014	3.36%	3.53%
2015	3.52%	3.65%
2016	3.60%	3.70%
2017	3.59%	3.65%
2018	3.61%	3.68%
2019	3.58%	3.63%
2020	3.52%	3.61%
2021	3.41%	3.56%
2022	3.27%	3.48%
2023	3.19%	3.40%

CDAC: Capital Debt Affordability Committee

DLS: Department of Legislative Services

Source: Capital Debt Affordability Committee, October 2013; Department of Legislative Services, October 2013

Similarly, **Exhibit 4.7** shows the debt service ratios based on the DLS forecast of revenues and those estimated by CDAC from fiscal 2014 to 2023. The difference between the two ratios relate to both revenues and debt issuances. DLS estimates lower transportation revenues than CDAC. On the debt service side of the ratio, DLS anticipates reduced transportation bond issuances and less debt service costs.

Exhibit 4.7
State Debt Service to State Revenues
Comparison of DLS and CDAC Estimates
Fiscal 2014-2023

<u>Fiscal Year</u>	<u>DLS</u>	<u>CDAC</u>
2014	6.82%	6.79%
2015	7.13%	7.07%
2016	7.40%	7.37%
2017	7.54%	7.53%
2018	7.74%	7.67%
2019	7.70%	7.62%
2020	7.64%	7.55%
2021	7.61%	7.55%
2022	7.63%	7.61%
2023	7.70%	7.72%

CDAC: Capital Debt Affordability Committee
DLS: Department of Legislative Services

Source: Capital Debt Affordability Committee, October 2013; Department of Legislative Services, October 2013

Chapter 5. Analysis of Factors Influencing Bonds' Interest Cost

The interest rate that Maryland pays for the bonds it sells is referred to as the true interest cost (TIC). This rate is derived by calculating a bond sale's Internal Rate of Return. The TIC is calculated at each bond sale, and the bidder with the lowest TIC is awarded the bid.

The financial literature provides information about factors that influence the TIC of State and municipal bond sales. Since 2006, the Department of Legislative Services (DLS) has prepared a statistical analysis to evaluate these financial factors. In this chapter, the sum of least squares regression is used to evaluate what factors influence the TIC Maryland receives on general obligation (GO) bond sales. **Appendix 3** shows the data used in the analysis.

Financial Theory and Research Identifies Factors That Influence the True Interest Cost

Financial theory suggests factors that could influence Maryland's GO bond's TIC. Research has confirmed a number of significant influences in other states and in national studies that include Maryland. To build the least squares regression equation, data was collected and analyzed for the 54 bond sales since March 1991 (refunding sales are excluded): 47 competitively bid, tax-exempt bond sales; and 7 negotiated, retail bond sales. The data collected includes:

- true interest cost;
- The Bond Buyer 20-bond Index¹;
- date of the bond sale, fiscal year, and calendar years the bonds were sold;
- if the bond sale includes one of the various call provisions offered since 1991;
- average years to maturity;
- amount of debt sold;
- Consumer Price Index to examine if inflation affected the market's perception of the amount of debt sold;

¹The Bond Buyer is a trade publication that gathers data about the yield on State and municipal bonds. The 20-bond index includes 20 GO State and municipal bonds maturing in 20 years. These bonds have an average rating equivalent to AA by Standard and Poor's and Aa2 by Moody's Investors Service, Inc. The data is reported weekly every Friday and reflects the yields from the previous day.

- use of a financial advisor;
- ratio of Maryland personal income to U.S. personal income; and
- ratio of Maryland gross state product to U.S. gross domestic product, both nominal and adjusted for inflation.

The Equation Identifies Statistically Significant Factors Influencing Interest Costs

The least squares regression analysis dependent variable is the TIC. All the other variables are independent variables that are included to control the factors that could influence the TIC. The question that the regression equation addresses is which of the independent variables influence the dependent variable (TIC). The regression equation examines the variables previously listed and identifies five statistically significant variables at the 95% confidence level that affect the TIC. **Exhibit 5.1** shows the data for the statistically significant variables.

- ***Bond Buyer 20-bond Index²***: The key variable is the 20-bond index. This is an estimate of the market rate for 20-year, AA-rated State and municipal bonds. DLS has collected the estimated yields since 1991.
- ***Ratio of Maryland Total Personal Income to the United States Total Personal Income***: One perspective on interest rates is to consider them as a return for risk. The higher the risk, the higher interest rate investors will expect. One factor of risk is the fiscal health of the entity selling the debt. In the DLS regression equation, State personal income is used as a proxy for fiscal health. The equation uses a ratio that compares State personal income to U.S. personal income. If the ratio increases, Maryland is doing relatively better than the rest of the United States, and a GO bond issuance's TIC tends to decline.
- ***Years to Maturity***: Under normal economic conditions, bonds with shorter maturities have lower interest costs than bonds with longer maturities. This is referred to as a positive yield curve. The analysis estimates that every year adds 0.21% (21 basis points) to the TIC.

²This is the first year that the Bond Buyer 20-bond index is used. In past years, an index of 10-year, AAA-rated bonds prepared by the Delphis-Hanover Corporation was used. The firm, which priced bonds daily since 1963, closed in April 2012 because its founder, Austin C. Tobin, became ill.

Exhibit 5.1
TIC Regression Equation – Evaluating the Independent Variables

<u>Ind. Variable</u>	<u>Coefficient</u>	<u>Std. Error</u>	<u>Beta</u>	<u>t-test</u>	<u>Sig.</u>	<u>Tol.</u>	<u>Comment</u>
Bond Buyer 20-bond Index	0.875	0.038	0.65	23.285	0.000	0.64	Highest t-test suggests with confidence that the index is significant.
MD PI/US PI	-1.595	0.683	-0.08	-2.336	0.024	0.48	Negative coefficient suggests that as the Maryland economy strengthens, compared to the United States, the TIC declines.
Years to Maturity	0.208	0.032	0.19	4.407	0.000	0.58	Positive coefficient means that longer maturities tend to have higher TICs.
Post-financial Crisis	-0.651	0.094	-0.27	-6.961	0.000	0.33	Maryland bonds yields are reduced since the crisis.
Call	0.259	0.083	0.08	3.107	0.003	0.74	Callable bonds increase interest costs.
Constant	1.197						

Ind.: independent

MD PI/US PI: Maryland Total Personal Income to United States Personal Income

Sig.: significance or confidence interval

Std.: standard

TIC: true interest cost

Tol.: tolerance, a test of multicollinearity

Source: Department of Legislative Services, October 2013

- Post-financial Crisis:** This is a variable that indicates if a bond was sold before or after Lehman Brothers collapsed in September 2008. The equation estimates that Maryland bond yields are 0.65% (65 basis points) less since the September 2008. This is consistent with the “flight to quality” that some believe has resulted since the financial crisis of 2008. The average bond in the index is a lower quality bond than Maryland bonds. The negative coefficient projects that the yield on higher rated bonds has been reduced when compared to AA-rated bonds. This variable was not necessary in previous years. The analysis used an index of AAA-rated bonds which would not identify an increasing

spread between higher and lower rated bonds. Now that an AA-rated index is used, a variable measuring the increasing spread between AAA and AA bonds results in an improved equation.

- ***Inclusion of a Call Provision:*** A call is an option that allows the seller to retire debt early. This may be advantageous if interest rates decline below the rate the seller is paying. Consequently, buyers often require higher interest rates if an issuance includes a call provision. Maryland usually issues callable bonds.

DLS also analyzed the cost of issuing retail bonds. The analysis estimated that retail bonds add 0.18% (18 basis points) to the TIC. However, this result is not within the 95% confidence interval, so it is not included in the final equation. (It is merely in the 90% confidence interval.)

Statistical Analysis Suggests That the Equation Explains the TIC Extremely Well

In addition to estimating and evaluating the specific variables, a proper statistical analysis must also incorporate an analysis of the equation as a whole, such as:

- how confident are we in the equation (confidence interval);
- what is the equation's margin of error;
- how close are the equation's estimates to the actual data; and
- is there a dependence between successive dependent variables (serial or autocorrelation)?

The regression equation has a high level of explanatory power and suggests that the determinants of Maryland's TIC are well understood and account for almost all of the variations that are seen in the TIC. **Exhibit 5.2** shows the equation's statistics.

Exhibit 5.2 TIC Regression Equation – Evaluating the Entire Equation

<u>What Is Measured</u>	<u>Statistic Used to Measure</u>	<u>Value of Statistic</u>	<u>Explanation</u>
Confidence in the equation	F Statistic	395.1	We are over 99.9% confident that the independent variables influence the dependent variable.
Margin of error	Standard error of the estimate	0.187	We expect the actual TIC to be within 0.19% (19 basis points) of the estimate.
Estimate in relation to actual data	Adjusted R Square	0.974	The model's estimates explain 97.4% of the actual data.
Serial or autocorrelation	Durbin-Watson	1.729	The ideal value is 2.0. If the number deviates too far from 2.0, it suggests that there are patterns in the errors, and a key independent variable is missing.

TIC: true interest cost

Source: Department of Legislative Services, October 2013

Examining the Effectiveness of the Regression Equation – An Intuitive Approach

As previously noted, the appendices provide all the statistical data. This allows statisticians to examine DLS' least squares regression equation. In addition to the statistical data, a more intuitive analysis of the regression equation may be made.

In the past, DLS has compared the TIC to the 20-bond index to examine the State's GO bond yields. The purpose of the exercise is to improve upon this approach and to determine what factors are statistically significant and to what extent they influence the TIC. For the regression equation to be useful, it should be able to better estimate the TIC than the 20-bond index alone. While the index is a good proxy for general market conditions, it does not reflect any independent variables specific to Maryland's financial condition or a bond sale's attributes (such as the strength of the economy, including a call provision, or the length of issuance).

Exhibit 5.3 compares the DLS regression equation and the 20-bond index to the actual TIC and shows that the DLS regression equation is more often closer to the TIC than the 20-bond index. Of the 54 bond sales analyzed, the DLS estimate is closer to the actual TIC than the 20-bond index 53 times (96%). The 20-bond index is closer one time (2%). The total error of the DLS regression equation is 764 basis points, compared to 5,624 basis points for the 20-bond index.

This comparison shows that including variables, such as Maryland personal income to U.S. personal income, provides an estimate that is quite close to the actual TIC and provides an estimate that is usually closer than the 20-bond index alone.

Exhibit 5.3
Comparison of the DLS Regression Equation and
The Bond Buyer 20-bond Index to Actual TIC

Bond Sale Date	TIC	DLS Model	20-bond Index	Difference Between TIC and DLS	Difference Between TIC and 20-bond	Closer Estimate
03/13/91	6.31	6.30	7.32	0.01	1.01	DLS Equation
07/10/91	6.37	6.24	7.21	0.13	0.84	DLS Equation
10/09/91	5.80	5.77	6.66	0.03	0.86	DLS Equation
05/13/92	5.80	5.68	6.54	0.12	0.74	DLS Equation
01/13/93	5.38	5.35	6.19	0.03	0.81	DLS Equation
05/19/93	5.10	5.00	5.77	0.10	0.67	DLS Equation
10/06/93	4.45	4.60	5.30	0.15	0.85	DLS Equation
02/16/94	4.48	4.70	5.42	0.22	0.94	DLS Equation
05/18/94	5.36	5.35	6.14	0.01	0.78	DLS Equation
10/05/94	5.69	5.67	6.50	0.02	0.81	DLS Equation
03/08/95	5.51	5.41	6.18	0.10	0.67	DLS Equation
10/11/95	4.95	5.11	5.82	0.16	0.87	DLS Equation
02/14/96	4.51	4.68	5.33	0.17	0.82	DLS Equation
06/05/96	5.30	5.25	5.94	0.05	0.64	DLS Equation
10/09/96	4.97	5.07	5.73	0.10	0.76	DLS Equation
02/26/97	4.90	5.01	5.65	0.11	0.75	DLS Equation
07/30/97	4.64	4.64	5.23	0.00	0.59	DLS Equation
02/18/98	4.43	4.53	5.07	0.10	0.64	DLS Equation
07/08/98	4.57	4.56	5.12	0.01	0.55	DLS Equation
02/24/99	4.26	4.49	5.08	0.23	0.82	DLS Equation
07/14/99	4.83	4.72	5.36	0.11	0.53	DLS Equation
07/19/00	5.05	4.94	5.60	0.11	0.55	DLS Equation
02/21/01	4.37	4.30	5.21	0.07	0.84	DLS Equation

Bond Sale Date	TIC	DLS Model	20-bond Index	Difference Between TIC and DLS	Difference Between TIC and 20-bond	Closer Estimate
07/11/01	4.41	4.27	5.22	0.14	0.81	DLS Equation
03/06/02	4.23	4.18	5.19	0.05	0.96	DLS Equation
07/31/02	3.86	4.01	5.00	0.15	1.14	DLS Equation
02/19/03	3.69	3.82	4.79	0.13	1.10	DLS Equation
07/16/03	3.71	4.00	4.71	0.29	1.00	DLS Equation
07/21/04	3.89	4.11	4.84	0.22	0.95	DLS Equation
03/02/05	3.81	3.81	4.50	0.00	0.69	DLS Equation
07/20/05	3.79	3.67	4.36	0.12	0.57	DLS Equation
03/01/06	3.87	3.73	4.39	0.14	0.52	DLS Equation
07/26/06	4.18	3.87	4.55	0.31	0.37	DLS Equation
02/28/07	3.86	3.49	4.10	0.37	0.24	20-bond Index
08/01/07	4.15	3.87	4.51	0.28	0.36	DLS Equation
02/27/08	4.14	4.41	5.11	0.27	0.97	DLS Equation
07/16/08	3.86	3.34	4.65	0.52	0.79	DLS Equation
03/04/09	3.39	3.37	4.96	0.02	1.57	DLS Equation
03/02/09	3.63	3.51	4.87	0.12	1.24	DLS Equation
08/05/09	2.93	3.06	4.65	0.13	1.72	DLS Equation
08/03/09	3.20	3.11	4.69	0.09	1.49	DLS Equation
10/21/09	2.93	2.65	4.31	0.28	1.38	DLS Equation
07/28/10	1.64	1.74	4.21	0.10	2.57	DLS Equation
07/28/10	1.91	2.18	4.21	0.27	2.30	DLS Equation
03/07/11	2.69	2.61	4.90	0.08	2.21	DLS Equation
03/09/11	3.49	3.64	4.91	0.15	1.42	DLS Equation
07/25/11	1.99	1.96	4.46	0.03	2.47	DLS Equation
07/27/11	3.08	3.14	4.47	0.06	1.39	DLS Equation
03/02/12	2.18	2.11	3.72	0.07	1.54	DLS Equation
03/07/12	2.42	2.51	3.84	0.09	1.42	DLS Equation
07/27/12	2.52	2.22	3.61	0.30	1.09	DLS Equation
08/01/12	2.17	2.40	3.66	0.23	1.49	DLS Equation
03/06/13	2.35	2.53	3.86	0.18	1.51	DLS Equation
07/24/13	3.15	3.46	4.77	0.31	1.62	DLS Equation
Total Error				7.64	56.24	

DLS: Department of Legislative Services

TIC: true interest cost

Source: Department of Legislative Services, October 2013

Chapter 6. Non-tax-supported Debt

In addition to the tax-supported debt that Maryland issues, there are various forms of non-tax-supported debt that are issued by State agencies and non-State public purpose entities. While this debt is not backed by the full faith and credit of the State and is not included within the tax-supported debt limits, concerns have been raised that a default in payment of debt service on this debt could negatively impact other Maryland debt.

Non-tax-supported debt generally takes the form of either a project/program revenue debt or conduit debt, as discussed below:

- **Revenue Bonds:** Revenue bonds are bonds issued to raise funds for a specific project or program. The debt service on these bonds is generally repaid using revenues generated through the operation of the project or program for which the bonds were sold. For example, the Maryland Transportation Authority (MDTA) issues project revenue bonds to finance the cost of constructing revenue-generating transportation facilities, and MDTA then repays the bonds using the revenues generated through the tolls charged to drivers for the use of the facilities.
- **Conduit Debt:** Conduit debt is debt that agencies or authorities issue on behalf of clients. Clients could include local governments, nonprofit organizations, or private companies. When an agency or authority serves as a conduit issuer, the bonds it issues may not be obligations of the issuing entity. Should the client for whom the bonds are issued be unable to meet debt service obligations on their bonds, the issuing entity is not necessarily obligated to make the debt payments. In such circumstances, the issuing agency may take the client's property into receivership or exercise other contractual provisions to meet the debt service. Agencies and authorities in the State that serve primarily as conduit issuers include the Maryland Economic Development Corporation (MEDCO), the Maryland Health and Higher Educational Facilities Authority, and the Maryland Industrial Development Financing Authority.

Revenue and Private Activity Bonds

Debt service on revenue bonds is generally paid from the revenue generated from facilities built with the bond proceeds. The Department of Housing and Community Development's (DHCD) Community Development Administration (CDA) makes housing loans with revenue bond proceeds, and the mortgage payments help pay debt service. Likewise, MDTA constructs toll facilities with bond proceeds, and the tolls collected pay off the bonds. Other State agencies issue bonds for various purposes. This agency debt is funded through what are referred to as private activity bonds.

The United States' Tax Reform Act of 2006 established an annual limit on the amount of tax-exempt private activity bonds that may be issued by any state in any calendar year. This limit is based on a per-capita limit, presently \$95 per capita, adjusted annually for inflation. Maryland's 2013 allocation totaled \$559 million.

The federal Tax Reform Act of 1986 specifically allows states to set up their own allocation procedures for use of their individual bond limit. Bond allocation authority in Maryland is determined by Sections 13-801 through 13-807 of the Financial Institutions Article. The Secretary of the Department of Business and Economic Development (DBED) is the responsible allocating authority. Each year's bond issuing ability is initially allocated in the following manner: 50.0% to all counties (35.0% for housing bonds allocated to each county based on population and 15.0% for bonds other than housing allocated to each county based on average bond issuances); 2.5% to the Secretary for the purpose of reallocating the cap to municipalities; 25.0% to CDA for housing bonds; and 22.5% to what is referred to as the "Secretary's Reserve." This reserve may be allocated to any State or local issuer as determined at the sole discretion of the Secretary of Business and Economic Development and pursuant to the goals listed under Section 13-802(4)(iii).

In practice, most localities transfer much of their allocation authority to CDA because CDA can more efficiently and cost effectively issue mortgage revenue and multi-family housing bonds than can be accomplished by any individual jurisdiction. The debt belongs to the county that received the initial allocation and is not backed by CDA. State issuers, such as the Maryland Industrial Development Financing Authority and MEDCO, as well as counties who need bond allocations in excess of their initial allocation, may request allocations from the Secretary's Reserve.

Private activity bonds are subject to the unified volume cap set by Congress in the Tax Reform Act of 1986. Allocations, however, may be carried forward by eligible users and for specific purposes but expire at the end of three years if not issued. Unused cap, other than that which has been allocated to CDA or transferred to CDA by local governments, reverts back to DBED on September 30 of each year. DBED then determines what amount to carry forward in support of existing projects or endeavors. Historically, any remaining nonhousing allocations have been reallocated to CDA at year end for carry-forward purposes.

Reporting of Bond Activity

Federal tax-exempt private activity bond allocation authority in Maryland is governed by Sections 13-801 through 13-807 of the Financial Institutions Article. The article stipulates that the Secretary of Business and Economic Development is the responsible allocating authority of private activity bonds. As the State's single allocating authority agency, DBED is required to collect and submit allocation and issuance data annually to the Internal Revenue Service. Section 13-804 of the article requires each agency that issues private activity bonds to annually submit to DBED by September 15 the following information:

- the amount of the total allocation of the Maryland State ceiling allocated in that year to the issuer;
- the amount and type of bonds issued in that year pursuant to the total allocation to the issuer in that year;
- the amount and type of bonds not issued, but anticipated to be issued on or before September 30 of that year, pursuant to the total allocation to the issuer in that year; and
- any other information that the Secretary may request.

Although the article requires State entities that issue private activity bonds to annually report to DBED, it does not set forth a reporting requirement from DBED to the Spending Affordability Committee (SAC) or any other State entity. Instead, State Government Article Section 2-1010 requires any State agency with private activity bond issuance authority to annually submit to SAC a report that provides the actual level of private activity bonds issued in the prior year and the projected level of private activity bonds to be issued in the current year.

While the agencies do not adhere to the reporting under State Government Article 2-1010, DBED does maintain this information as required by Financial Institutions Article 13-804, and the Department of Legislative Services (DLS) annually publishes the aggregate data in this report. Moreover, there is a separate annual report published by the Department of Budget and Management (DBM) required under Executive Order 01.01.1998.07 that provides information on the financing transactions and level of outstanding debt of State agencies whose debt limit is not limited in amount by State law which includes private activity bond issuances.

To the extent that Section 1010 of the State Government Article requires each State agency that issues private activity bonds to submit the aforementioned report as opposed to a single report submitted by the “allocating authority” (DBED), DLS recommends legislation be introduced that amends the statutory reporting provision to clarify that a single consolidated report issued by DBED should be submitted rather than individual reports from each issuing agency.

Allocation of Private Activity Bonds

Exhibit 6.1 provides the calendar 2009 through 2013 figures for the amount of available tax-exempt bond authority and the level of issuances made under the volume cap limits. In 2009 and 2010, total issuances under the volume cap were relatively low. A reduction from previous years in single-family housing issuances primarily drove the decrease, although other issuances decreased as well. Total carry forward continues to grow because it has outpaced annual issuances recently. For instance, in 2010 or 2012, CDA did not issue any single-family housing debt, and in some years, CDA does not issue any debt directly against that year’s allocation if sufficient amounts of carry forwards are available to support the activity of its single- and multi-family programs.

Exhibit 6.1
Allocation of Private Activity Bonds
Calendar 2008-2012
(\$ in Millions)

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>YTD 2013</u>
Fund Sources					
Annual Cap	\$507.0	\$513.0	\$548.5	\$553.7	\$559.0
Recovery Zone Facility Bonds*	313.3	-	-	-	-
Carry Forward from Prior Years	886.1	978.6	1,218.4	1,193.0	1,461.2
Total Capacity Available	\$1,706.4	\$1,491.6	\$1,766.9	\$1,746.7	\$2,020.2
Issuances					
Single-family Housing	\$235.2	\$0.0	\$350.9	\$0.0	\$56.0
Multi-family Housing	25.7	90.2	72.4	31.0	139.7
Housing – Other	9.5	65.6	19.4	18.0	8.6
Industrial Development Bonds	9.1	17.9	0.0	0.0	0.0
Recovery Zone Facility Bonds	0.0	171.1	0.0	0.0	0.0
Non-housing County	0.0	0.0	0.0	8.6	0.0
Total Issuances	\$279.5	\$344.8	\$442.7	\$57.6	\$204.3
Prior Year Carry Forward Abandoned	135.0	99.5	100.0	258.9	n/a
Carry Forward	\$851.6	\$1,308.6	\$1,124.2	\$1,461.2	n/a

Note: Numbers may not sum to total due to rounding.

*One-time allocation for use in 2009 and 2010. No carry forward permitted.

Source: Department of Business and Economic Development; Department of Housing and Community Development

A portion of the CDA's debt also represents refinancing prior issuances and issuing taxable bonds. Debt issued for these purposes are not subject to the federal volume cap. The issuances indicate CDA bond activity rebounded in 2013 after a five-year low in 2012, which reflected a reduction in demand for mortgage products after the recession of 2008. While CDA did not issue any single-family program bonds in 2010 or 2012, it issued \$351 million in bonds in 2011 and \$56 million in bonds so far in 2013. There will be an estimated \$140 million in multi-family housing bonds issued in 2013, a five-year high.

The federal Housing and Economic Recovery Act (HERA) of 2008 includes several funding provisions to help states address rising foreclosures. As part of this package, Maryland received an additional \$175.9 million in Mortgage Revenue Bond funds, allowing DHCD to refinance existing mortgages for the first time. This separate, one-time allocation is above and beyond the annual cap and has special restrictions. The bonds could be issued under either the single-family or multi-family bond programs and, unlike the annual federally mandated volume cap, any unused portion of this authorization had to be abandoned after two years, not three. Therefore, this one-time authorization to issue bonds expired in 2010. Refinancing assistance under this authorization adhered to CDA's established income and purchase price limits.

Debt Outstanding

Containing the amount of non-tax-supported agency debt has been a consistent concern of both the General Assembly and the Capital Debt Affordability Committee. During the 1989 session, the General Assembly passed SB 337 in an attempt to establish a measure of control over agency debt. This legislation was vetoed by the Governor who addressed the issue through the issue of Executive Order 01.01.1989.13 that established a procedure whereby the Governor set a revenue bond debt ceiling each year and allocated the debt allowance among the State agencies.

DBM was tasked with administering the process and was required to submit a report annually on the amount of agency debt outstanding. During the 1997 interim, a workgroup comprised of DBM staff and staff from agencies that issue revenue bonds met to review the provisions of the 1989 executive order and make recommendations for improvement. The workgroup recommended removing higher education institutions from the process because their levels of debt are already limited by statute. Additionally, the CDA Infrastructure Program was recommended for removal from the process because the program's debt is issued on behalf of local governments and is not a debt of the State. Finally, the workgroup recommended changes in reporting dates and notification requirements. It was decided that prior notification of issuances need to be made only for issuances of \$25 million or more. On February 10, 1998, the Governor instituted the recommendations of the workgroup by signing Executive Order 01.01.1998.07, superseding the 1989 process.

Exhibit 6.2 summarizes the increase in debt outstanding for various categories between fiscal 2003 and 2013. A table containing debt outstanding by year for the individual agencies is included as **Appendix 4**.

Exhibit 6.2
Debt Outstanding as of June 30
Fiscal 2003 and 2013
(\$ in Millions)

	<u>2003</u>	<u>2013</u>	<u>Total Change</u>	<u>Annual % Change</u>
Agency debt subject to State regulatory cap	\$715	\$3,376	\$2,661	16.8%
Agency debt not subject to State regulatory cap	4,486	4,886	399	0.9%
Tax-supported debt	5,413	10,618	5,206	7.0%
Authorities and corporations without caps	6,105	11,212	5,107	6.3%
Total	\$16,719	\$30,091	\$13,372	6.1%

Note: Numbers may not sum to total due to rounding.

Source: Department of Budget and Management, Maryland State Treasurer

Debt Service on University Academic and Auxiliary Revenue Bonds

Chapter 93 of 1989 gave Morgan State University (MSU), St. Mary's College of Maryland (SMCM), and the University System of Maryland (USM) the authority to issue bonds for academic and auxiliary facilities. Chapter 208 of 1992 gave Baltimore City Community College (BCCC) the authority to issue bonds for auxiliary facilities, and Chapter 213 of 2009 extended its authority to include academic revenue bonds (ARB) as well. Academic facilities are primarily used for instruction of students, while auxiliary facilities are those that produce income from fees charged for use of the facility. A residential dormitory is an example of an auxiliary facility. Debt service on auxiliary and academic debt may be paid from auxiliary and academic fees, a State appropriation expressly authorized for that purpose, or revenues from contracts, gifts, and grants.

Statute specifies that academic facilities must be expressly approved by an act of the General Assembly that determines both the project and bond issue amount. Each year, USM introduces legislation entitled Academic Facilities Bonding Authority listing the specific academic projects requiring authorization. Legislation may also increase the total debt limit for institutions when warranted. Section 13-102 of the Education Article limits debt outstanding to \$1.4 billion for USM, \$88 million for MSU, \$65 million for BCCC, and \$60 million for SMCM.

University System of Maryland

USM's debt management policies aim to reassure investors and the rating agencies of the system's financial stability and control over debt. USM aims for debt service to be less than 4.5% of operating revenues plus State appropriations including grants and contracts. This ratio

was developed after discussions with its financial advisor (Public Financial Management's Higher Education Office), rating agencies, and investors.

Since the economic downturn, the ratings of many higher education institutions were downgraded due to their weaker financial positions. With a strong debt management policy, USM expects to maintain the current rating of AA1 (stable) from Moody's and the equivalent AA+ (stable) from both Fitch and Standard & Poor's. All three ratings were given in October 2012.

Exhibit 6.3 shows that USM will be under the 4.5% debt service goal for fiscal 2014-2019. Including debt issued in fiscal 2014, total debt service will be approximately \$134 million, or 3.1%, of fiscal 2014 operating revenues plus State appropriations including grants and contracts. The forecast indicates the ratio will stay between 3.3% and 3.5% over the next five years, with fiscal 2019 projected to be 3.5%. This is higher than fiscal 2009-2014 but still below the 4.5% target maximum.

Exhibit 6.3
University System of Maryland Debt Service as Related to Operating Funds
Plus State Appropriations
Fiscal 2009-2019
(\$ in Millions)

<u>Fiscal Year</u>	<u>Total Debt Outstanding</u>	<u>Total Debt Service</u>	<u>Operating Revenues Plus State Appropriations</u>	<u>Ratio of Debt Service to Operating Revenues Plus State Appropriations</u>
2009	\$1,029	\$111	\$3,730	3.0%
2010	1,083	116	3,788	3.1%
2011	1,129	127	4,065	3.1%
2012	1,170	124	4,204	3.0%
2013	1,196	132	4,256	3.1%
2014 Estimated	1,230	134	4,341	3.1%
2015 Estimated	1,256	145	4,428	3.3%
2016 Estimated	1,276	154	4,516	3.4%
2017 Estimated	1,295	159	4,607	3.4%
2018 Estimated	1,312	163	4,699	3.5%
2019 Estimated	1,325	170	4,793	3.5%

Note: Total debt outstanding and total debt service include academic, auxiliary, and capital lease debt.

Source: University System of Maryland

USM also has a goal for the ratio of expendable resources (defined as unrestricted assets of USM and the affiliated foundation with adjustments for certain long-term liabilities) to debt outstanding. With advice from its financial advisor, USM's goal is for expendable resources to be no less than 55% of total debt outstanding. **Exhibit 6.4** shows USM's expendable resources to debt outstanding ratio for fiscal 2009-2019. It has exceeded the target minimum throughout the entire period and has grown in recent years, indicating capacity to issue more debt under the criterion. Beginning in fiscal 2013, USM began to request \$5 million more in ARBs than it had been authorized each year previously. This additional money is targeted for facility renewal needs at the University of Maryland, College Park and is expected to continue for several years.

Exhibit 6.4
Summary of Expendable Resources to Debt Outstanding for the
University System of Maryland
Fiscal 2009-2019
(\$ in Millions)

<u>Fiscal Year</u>	<u>Available Resources</u>	<u>Debt Outstanding</u>	<u>Ratio of Available Resources to Debt Outstanding</u>
2009	\$1,130	\$1,029	109.9%
2010	1,188	1,083	109.7%
2011	1,432	1,129	126.9%
2012	1,622	1,170	138.6%
2013	1,752	1,196	146.6%
2014 Estimated	1,361	1,230	110.7%
2015 Estimated	1,398	1,256	111.3%
2016 Estimated	1,437	1,276	112.6%
2017 Estimated	1,476	1,295	114.0%
2018 Estimated	1,517	1,312	115.6%
2019 Estimated	1,559	1,325	117.6%

Note: Debt outstanding includes auxiliary, academic, and capital lease debt.

Source: University System of Maryland

St. Mary's College of Maryland

SMCM's outstanding debt consists of auxiliary and capital lease debt. SMCM has no outstanding academic debt. The total debt in fiscal 2014 is estimated to be \$36.4 million and is expected to decrease to \$26.7 million by fiscal 2019. As shown in **Exhibit 6.5**, the college's ratio of debt service to unrestricted expenditures is also expected to decline from an estimated 4.7% in fiscal 2014 to 3.5% in fiscal 2019. From fiscal 2009 to 2010, SMCM exceeded the 5.5% debt ratio goal in order to construct additional residential buildings to house increasing enrollment. In September 2013, SMCM's bond rating was downgraded by Moody's from A2 to A1 due to ongoing enrollment concerns. However, given a history of strong State support to SMCM, the outlook remains stable from Moody's and because SMCM's bonds are issued at a fixed rate, there is no effect on existing bonds.

Exhibit 6.5
St. Mary's College of Maryland Debt Service Related to Unrestricted Funds
Fiscal 2009-2019
(\$ in Thousands)

<u>Fiscal Year</u>	<u>Total Debt Outstanding</u>	<u>Total Debt Service</u>	<u>Unrestricted Expenditures</u>	<u>Ratio of Debt Service to Unrestricted Expenditures</u>
2009	\$46,790	\$3,517	\$62,787	5.6%
2010	45,333	3,522	63,883	5.5%
2011	41,753	3,500	65,187	5.4%
2012	38,313	3,416	66,817	5.1%
2013	38,311	3,211	68,487	4.7%
2014 Estimated	36,387	3,208	68,116	4.7%
2015 Estimated	34,536	3,204	69,819	4.6%
2016 Estimated	32,637	3,119	71,565	4.4%
2017 Estimated	30,676	3,123	73,354	4.3%
2018 Estimated	28,652	3,036	75,188	4.0%
2019 Estimated	26,742	2,730	77,068	3.5%

Note: Total debt outstanding and total debt service includes auxiliary and capital lease debt only. St. Mary's College of Maryland does not have any academic debt.

Source: St. Mary's College of Maryland

Also, in fiscal 2012, SMCM issued \$15.8 million in auxiliary revenue bonds to refund outstanding debt issued in fiscal 2002 and 2003. This refinancing plan will result in lower debt service payments in the long term.

Baltimore City Community College

BCCC has never issued auxiliary or academic debt but is authorized to issue up to \$65 million. According to a report submitted by the college to the Capital Debt Affordability Committee, possible uses of debt could include the financing of a new parking garage or a capital lease for an academic facility on the east side of Baltimore City.

Since both the amount and eligible uses of its debt authorization were expanded in the 2009 session, BCCC has repeatedly postponed plans to initiate the bond rating process and issue debt. At one point, BCCC reported that it expected to initiate the bond rating process in fiscal 2013 with the intent of issuing debt the following year. However, the college has more recently decided not to pursue the rating process and has no plans to issue debt in the foreseeable future. By comparison, both USM and MSU have used ARBs to finance the construction and renovation of academic facilities, and USM regularly allocates a portion of its annual ARB authorization to academic projects in conjunction with general obligation bond funds as a means to advance system priority projects.

Use of BCCC's debt capacity could advance capital projects that the college deems a priority. However, the interest rate BCCC-issued bonds would receive from the rating agencies would be a concern. For example, MSU, the closest State institution in terms of size, is rated as A+ by Standard & Poor's and AA3 according to Moody's, which is lower than the State's AAA bond rating. This results in higher interest rates and debt service on MSU-issued debt. Given other budget constraints at BCCC associated with a decline in student enrollment, it is unlikely BCCC would wish to pursue its own debt issuance.

In the recent past, a second issue concerned BCCC's plans for an academic facility on the east side of Baltimore City. However, the Board of Trustees has declined to pursue any project at this time, which reduces the potential need for BCCC to issue bonds.

In order to support any potential future debt payments, BCCC would likely need to increase its capital reserve. The capital reserve is funded by a Facilities Capital Fee charged to students and generates almost \$0.2 million annually. As of June 30, 2013, the capital reserve has \$1.3 million. BCCC's capital reserve is held in the college's fund balance, which totaled \$33.5 million at the end of fiscal 2013. The fund balances of USM, MSU, and SMCM support each institution's bond rating. Any consideration of future BCCC academic revenue bond issuances needs to include provisions for funding debt service since current annual revenue to BCCC's capital reserve fund would not support significant issuances.

Morgan State University

As shown in **Exhibit 6.6**, MSU estimates \$43.8 million of debt in fiscal 2014. This figure includes academic, auxiliary, and capital lease debt. Auxiliary debt is the largest of the three, totaling \$38.5 million. The ratio of debt service to unrestricted expenditures is estimated to be 3.7% in fiscal 2014, below the State's 5.5% goal ratio. MSU is not planning to issue more debt in the next five years, and the college's projected debt ratio is expected to stay between 3.4% and 4.1% through fiscal 2019.

Exhibit 6.6
Morgan State University Debt Service as Related to Unrestricted Funds
Fiscal 2009-2019
(\$ in Thousands)

<u>Fiscal Year</u>	<u>Total Debt Outstanding</u>	<u>Total Debt Service</u>	<u>Unrestricted Expenditures</u>	<u>Ratio of Debt Service to Unrestricted Expenditures</u>
2009	\$67,825	\$7,700	\$148,538	5.2%
2010	64,354	8,015	146,641	5.5%
2011	59,556	8,034	150,429	5.3%
2012	55,165	7,429	172,609	4.3%
2013	47,761	5,776	165,502	3.5%
2014 Estimated	43,770	6,421	172,647	3.7%
2015 Estimated	43,145	6,078	177,572	3.4%
2016 Estimated	41,763	6,774	182,899	3.7%
2017 Estimated	36,338	7,505	188,386	4.0%
2018 Estimated	34,176	7,474	194,979	3.8%
2019 Estimated	29,586	8,253	202,779	4.1%

Note: Total debt outstanding and total debt service includes academic, auxiliary, and capital lease debt.

Source: Morgan State University

Chapter 7. State Debt Outlook

Maryland has a large capital program. The State ended fiscal 2013 with \$8.0 billion of general obligation (GO) bond debt outstanding and \$10.7 billion in State debt outstanding. GO bond debt service was \$913 million in fiscal 2013, while total debt service is over \$1.2 billion. This section examines the following State debt issues:

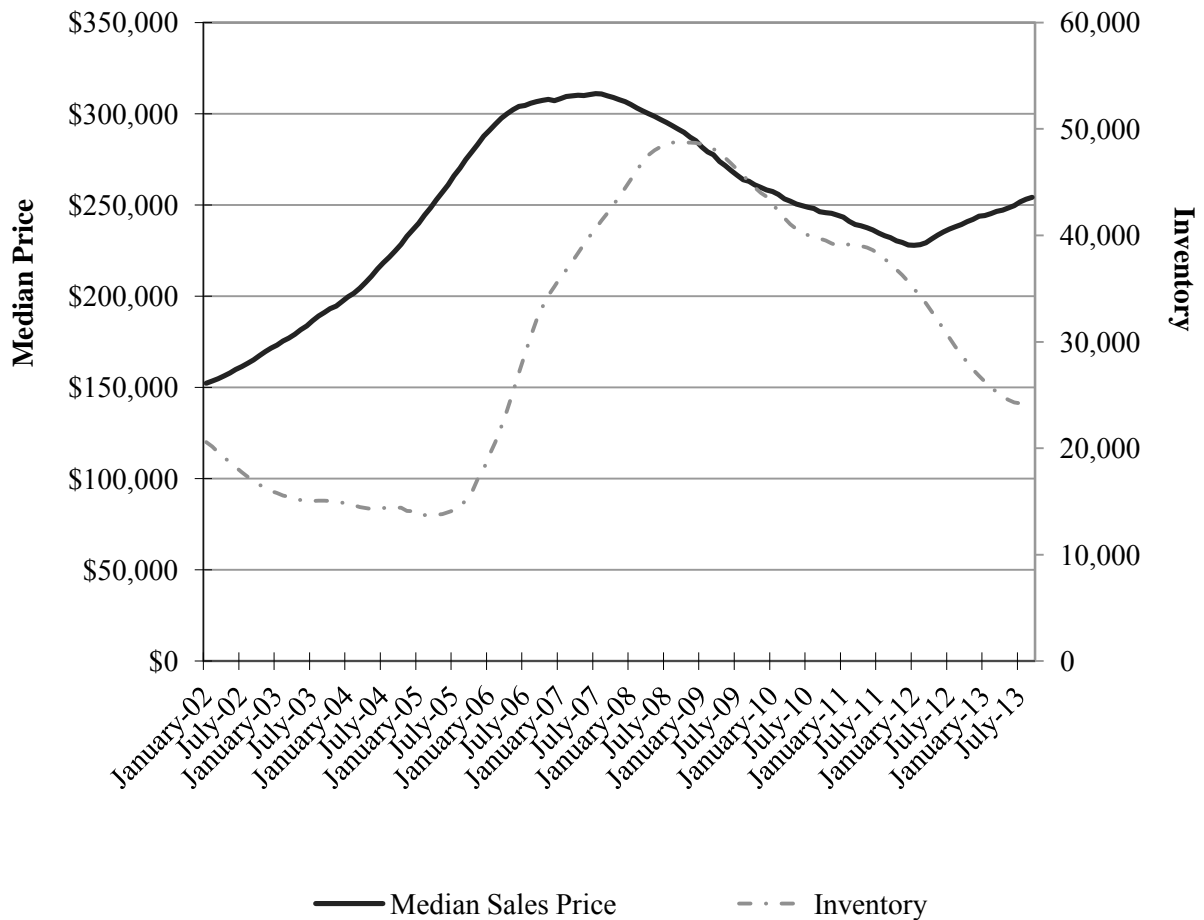
- State property tax revenues are projected to be insufficient to support debt service in the out-years;
- the Capital Debt Affordability Committee (CDAC) approved increasing GO bond authorizations by \$375 million from fiscal 2015 to 2019, which adds to the growing burden long-term liabilities are adding to the general fund in the out-years;
- data from recent bond sales shows that taxable debt is more expensive than tax-exempt debt; and
- the Maryland Department of Transportation (MDOT) is proposing a new public-private partnership (P3) project, the Purple Line transit project in Montgomery and Prince Georges' counties.

State Property Tax Revenues Are Insufficient to Support Debt Service

GO bond debt service costs are supported by the Annuity Bond Fund (ABF). The fund's largest revenue source is the State property tax. In April 2006, the State property tax rate was set at \$0.112 per \$100 of assessable base and has remained at that level since fiscal 2007. Other revenue sources include proceeds from bond sale premiums interest and penalties on property taxes and repayments for local bonds. When the ABF has not generated sufficient revenues to fully support debt service, general funds have subsidized debt service payments.

State property tax collections are influenced by trends in the housing market. **Exhibit 7.1** shows that this decade has seen a substantial increase in real estate values, which peaked in summer 2007, followed by a decline in values. The year-over-year decline began in July 2007 and continued until February 2012. That is 55 straight months of year-over-year declines in median home values. Since February 2012, each month has seen a year-over-year increase in prices.

Exhibit 7.1
Maryland Housing – Median Prices and Inventory
12-month Moving Average
January 2002 to September 2013

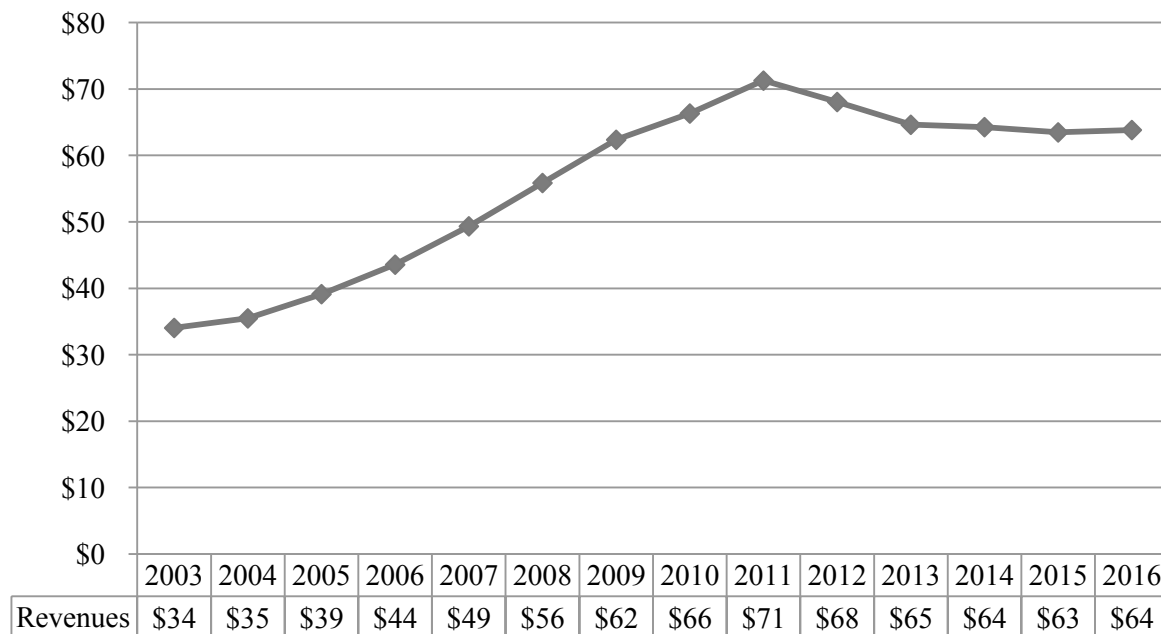


Source: Maryland Association of Realtors; Department of Legislative Services

Inventories went through a similar increase and decline. However, they lagged behind the pattern seen in home prices. Since the increase in home values in February 2012, inventories continued to decline through February 2013 and reached a nadir of approximately 21,300. In September 2013, inventories increased to approximately 27,000. This is more than inventories were in September 2000, which totaled about 25,000.

As expected, the rising property values from 2002 to 2007 increased State property tax receipts. **Exhibit 7.2** compares how much revenue one cent on the State property tax has generated since fiscal 2003. In fiscal 2003, there was a modest increase, and from fiscal 2004 to 2011, the increases were quite steep. Revenues declined from fiscal 2011 to 2014 and are expected to increase slightly in fiscal 2016.

Exhibit 7.2
Revenues Generated by One Cent of State Property Taxes
Fiscal 2003-2016
(\$ in Millions)

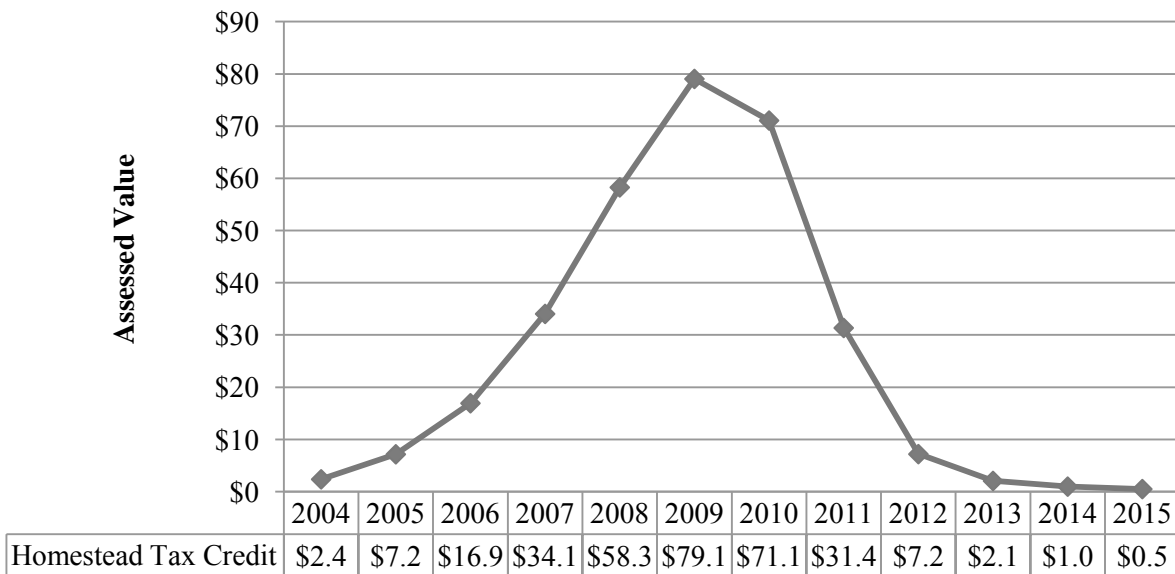


Source: State Department of Assessments and Taxation; Department of Budget and Management; Department of Legislative Services

Assessment policies also account for the lag between changes in real estate market and tax receipts. Property values are assessed every three years, and increases are phased in over three years. For example, if a value increases by 9%, the State increase would be 3% in the first year, 6% in the second year, and 9% in the third year. Taken together, the three-year assessment and Homestead Tax Credit slowed the revenue increases and delayed the peak.

When home values increased from 2001 to 2007, however, State property tax collections did not immediately increase at the same rate; similarly, the decline in home values since 2007 did not result in an immediate decline in revenues. One reason for this is the Homestead Tax Credit. This credit limits the increase in State property assessments subject to the property tax to 10%. If reassessing a resident's property results in an increase that exceeds 10%, the homeowner receives a credit for any amount above 10%. This limits growth in revenues when property values rise quickly. It also provides the State a hedge should property values decline. As home values declined, the homestead credit declined, and revenues continued to slowly increase. The result was to smooth State revenues; State property tax revenue growth was slower as home values increased, and there was no decline in revenues when home values decreased. **Exhibit 7.3** shows that State credits increased to \$79 billion in fiscal 2009 in response to increases in assessments. By fiscal 2014, the aggregate homestead credits are projected to be under \$1 billion.

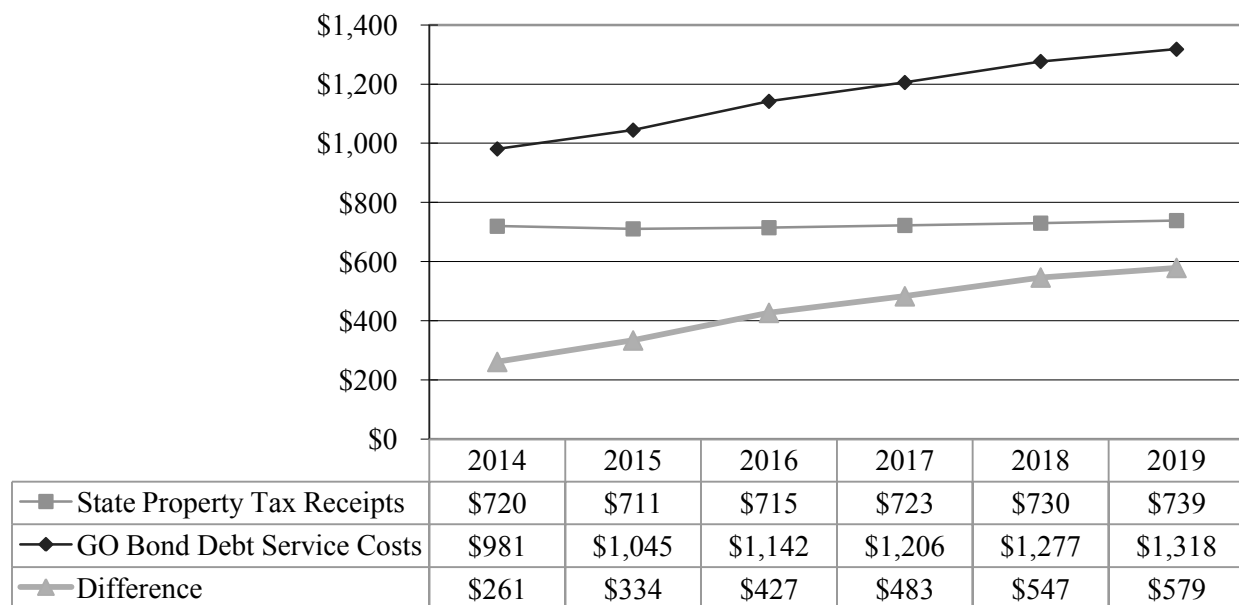
Exhibit 7.3
State Property Tax Homestead Tax Credits
Fiscal 2004-2015
(\$ in Billions)



Source: State Department of Assessments and Taxation

Over the next few years, State property tax revenues are estimated to remain fairly flat. This contrasts with debt service costs, which are expected to increase steadily in the out-years. **Exhibit 7.4** shows how State property taxes, which are \$261 million less than debt service costs in fiscal 2014, are expected to be \$579 million less than debt service costs in fiscal 2019.

Exhibit 7.4
GO Bond Debt Service Costs and State Property Tax Revenue Collections
Fiscal 2014-2019
(\$ in Millions)



GO: general obligation

Source: Department of Legislative Services, October 2013

In fiscal 2013, the shortfall in State property tax receipts was not a problem because the ABF had a large fund balance. In recent years, the State has benefited from the low interest rates offered for AAA-rated State and municipal bonds. These low rates have reduced GO bonds' true interest cost (TIC), which resulted in higher bond sale premiums. These premiums have been deposited into the ABF to support debt service costs. **Exhibit 7.5** shows that fiscal 2014 begins with \$168 million in prior year fund balances, most of which are derived from bond sale premiums.

Exhibit 7.5
Revenues Supporting Debt Service
Fiscal 2014-2019
(\$ in Millions)

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>
Special Fund Revenues						
State Property Tax Receipts	\$720	\$711	\$715	\$723	\$730	\$739
Bond Sale Premiums ¹	79	59	18	0	0	0
Other Revenues	3	3	3	3	3	3
ABF Fund Balance Transferred from Prior Year	168	10	1	1	1	1
Subtotal Special Fund Revenues Available	\$970	\$783	\$737	\$726	\$734	\$742
General Funds ²	4	233	387	462	524	557
Transfer Tax Special Funds ³	6	6	6	7	7	7
Federal Funds ⁴	11	12	12	12	12	12
Total Revenues	\$991	\$1,035	\$1,143	\$1,207	\$1,277	\$1,319
 Projected Debt Service Expenditures	 \$981	 \$1,045	 \$1,142	 \$1,206	 \$1,277	 \$1,318
 ABF End-of-year Fund Balance	 \$10	 \$1	 \$1	 \$1	 \$1	 \$1

ABF: Annuity Bond Fund

¹Estimated bond sale premiums total \$29.8 million in March 2014, \$28.2 million in August 2014, \$31.2 in March 2015, and \$18.4 million in August 2015.

²The Department of Legislative Services estimates that fiscal 2014 bond sale premiums are sufficient to reduce the general fund appropriations from \$83.0 million to \$4.0 million.

³This supports \$70.0 million of general obligation bonds issued in 2010 for Program Open Space.

⁴This includes federal interest subsidies for Build America Bonds, Qualified Zone Academy Bonds, Qualified School Construction Bonds, and Qualified Energy Conservation Bonds.

Source: Department of Legislative Services, October 2013

By fiscal 2015, the fund balance is insufficient to support debt service costs. Even if bond sale premiums are assumed in fiscal 2015, the Department of Legislative Services (DLS) estimates that \$233 million in general fund appropriations will be needed. The general fund appropriations are projected to increase to \$557 million in fiscal 2019.

DLS continues to estimate bond sale premiums with each bond sale through the summer 2015 bond sale. This is consistent with the Federal Reserve policy to maintain interest rates near zero through summer 2015. This policy is expected to keep interest rates low, which generates bond sale premiums for the State. While this is expected to keep interest rates low, DLS recognizes that rates have increased in recent months and are unlikely to return to the uncharacteristically low levels seen in 2012 and the winter of 2013. The TIC at the July 2013 bond sale for tax-exempt bonds to institutional investors was 3.15%, which is 79 basis points higher than the March 2013 bond sale (2.36% TIC). A similar increase was also seen in market indices. For example, The Bond Buyer 20-bond Index (the index used in the TIC analysis in Chapter 5), saw rates increase from 3.86% on March 7, to 4.77% on July 25, 2013. (These are the days closest to the State's bond sales.) **Appendix 5** provides the DLS analysis of bond sale premiums and demonstrates why investors prefer premiums under current conditions.

The fiscal 2015 ABF balance estimate considers bond sales, revenues, interest rates, and a number of other factors. Given the uncertainty in financial markets, the ABF estimate can change substantially. Key factors that could result in revisions include:

- **Revised Property Tax Estimates:** SDAT will update the property tax revenue estimates at the end of November 2013. Since 2012, year-over-year median home values have increased. It is unclear how this will affect revenues, but if the estimate is revised upward, the shortfall in the ABF is reduced.
- **Interest Rates Changes:** Bond sale premiums are sensitive to changes in market interest rates. Even modest changes can substantially increase or decrease the amount of premiums received. For example, either increasing the TIC or reducing the coupon rate by a combination of 0.25% (25 basis points) reduces the projected March 2014 premium by \$12 million.
- **The Amount of Bonds Sold:** Should capital projects be moving faster than currently anticipated, the State could require additional bond proceeds from the March 2014 sale, which tends to increase the premium. For example, it is estimated that adding \$25 million to the sale would add \$3 million to the premium.

Post-recession Capital Budget Expansion Continues

Since the CDAC process was established in 1979, the State has gone through different periods of reducing and expanding State debt. The State began expanding the capital program in 2001. In every legislative session from 2001 to 2009, legislation expanding State debt beyond

inflationary increases was adopted. Some of the major actions include 2006 (when GO bond authorizations were increased by \$100 million annually in perpetuity and the annual escalation was increased to 3%) and 2009 (when GO authorizations were increased \$150 million annually). Two new kinds of debt were also authorized: Bay Restoration Bonds were authorized in 2004, and Grant Anticipation Revenue Vehicles (GARVEEs) were authorized in 2005.

These new and expanded authorizations increased the amount of debt outstanding. At the end of fiscal 1999, State debt outstanding totaled \$4.7 billion. By the end of fiscal 2011, total debt outstanding had increased to \$9.6 billion (an increase of 6.1% annually). In 1999, GO bond authorizations totaled \$4.5 billion, of which \$3.5 billion was issued and \$1.0 billion was authorized but unissued. By the end of fiscal 2011, GO bond authorizations increased to \$9.3 billion, of which \$7.0 billion was issued and \$2.3 billion was authorized but unissued.

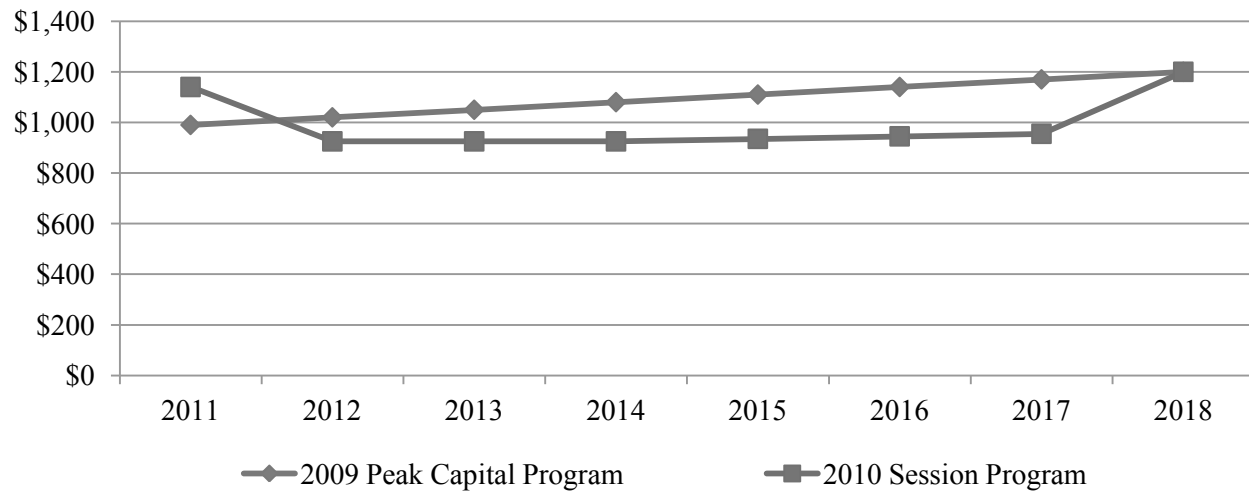
Committee Reduces General Obligation Debt Authorizations When State Reaches Affordability Limit in December 2009

By the end of 2009, State debt reached its affordability limit. A sudden decline in revenues, coupled with the recent expansion in debt, brought the State to the limit. The 2007 through 2009 recession was especially deep and resulted in lower out-year income and revenue estimates, which have reduced the State's debt capacity.

In December 2009, CDAC met to revise its recommended GO bond authorization. Since the committee had made its recommendation in September 2009, the Board of Revenue Estimates had substantially reduced the State's general fund revenue projections. The revised revenue projections were low enough to reduce the State debt service to revenues ratio to the point that it exceeded the CDAC's 8% limit.

In response to these lower revenues, the committee reduced the out-year GO bond authorizations so that the debt service to revenues ratio was below the limit. **Exhibit 7.6** shows that the plan proposed for the 2010 legislative session increased authorizations in fiscal 2011 and then reduced authorization from fiscal 2012 to 2017. In fiscal 2018, spending would go back to the previous trajectory. This reduced fiscal 2011 to 2018 authorizations from \$8,760 million in the 2009 "peak" program to \$7,950 million in the 2010 session plan, a reduction of \$810 million.

Exhibit 7.6
Reductions to GO Bond Program
Fiscal 2011-2018
(\$ in Millions)



Source: Capital Debt Affordability Committee, 2009 and 2010

Administration Proposes Multi-year Capital Program Increases in Fiscal 2014 and 2015

State revenues have improved since 2009. The improvement is attributable to revenues exceeding expectations and revenue enhancements enacted by the General Assembly, most notably increasing income tax rates in the first special session of 2012 and motor fuel taxes in the 2013 regular session. Since State debt is limited to 8% of revenues, increasing revenues also increases debt capacity.

Insofar as additional revenues were available, the Administration proposed the following increases to GO bond authorizations:

- In December 2011, CDAC approved a one-time increase to the fiscal 2013 authorization. The amount was increased from \$925 million to \$1,075 million. This was done because many shovel-ready projects were ready to move forward.
- In September 2012 at the CDAC hearings, the Administration proposed a five-year increase to GO bond authorizations. Specifically, the proposal was to increase authorizations \$150 million annually from fiscal 2014 to 2018, for a total increase of \$750 million. The justification for the increase was that increased funding created construction jobs, “shovel-ready projects” were available, interest rates were low, and

moving pay-as-you-go (PAYGO) projects from the operating budget to the capital budget was reducing funding for GO bond funded projects. The proposed increase was within the affordability guidelines, and CDAC and the General Assembly approved the additional authorizations.

- In September 2013 at the CDAC hearings, the Administration proposed another five-year increase to GO bond authorizations. Specifically, the proposal was to increase authorizations \$75 million annually from fiscal 2015 to 2019, for a total increase of \$375 million. The Department of Budget and Management's (DBM) justification for the increase is a requirement in the Transportation Infrastructure Investment Act of 2013 (Chapter 429 of 2013) that \$395 million in general funds or GO bonds support the Watershed Implementation Plan over five years. The department also notes that every \$1 million in construction funding supports eight jobs. The proposed increase was within the affordability guidelines, and CDAC approved the additional authorizations.

Initially, increasing GO bond authorizations does not add much to State debt service costs, but over time the costs become substantial. **Exhibit 7.7** shows that the increased program is not expected to add to fiscal 2014 debt service costs. When fully phased, debt service costs will be \$43 million more if current interest rate assumptions hold. Initially, costs increase slowly because capital projects are phased in over a period of years and because the State only pays interest for the first two years after a bond is issued. With respect to capital project phasing, the State Treasurer's Office estimates that 31% of capital project bonds are issued in the first year.

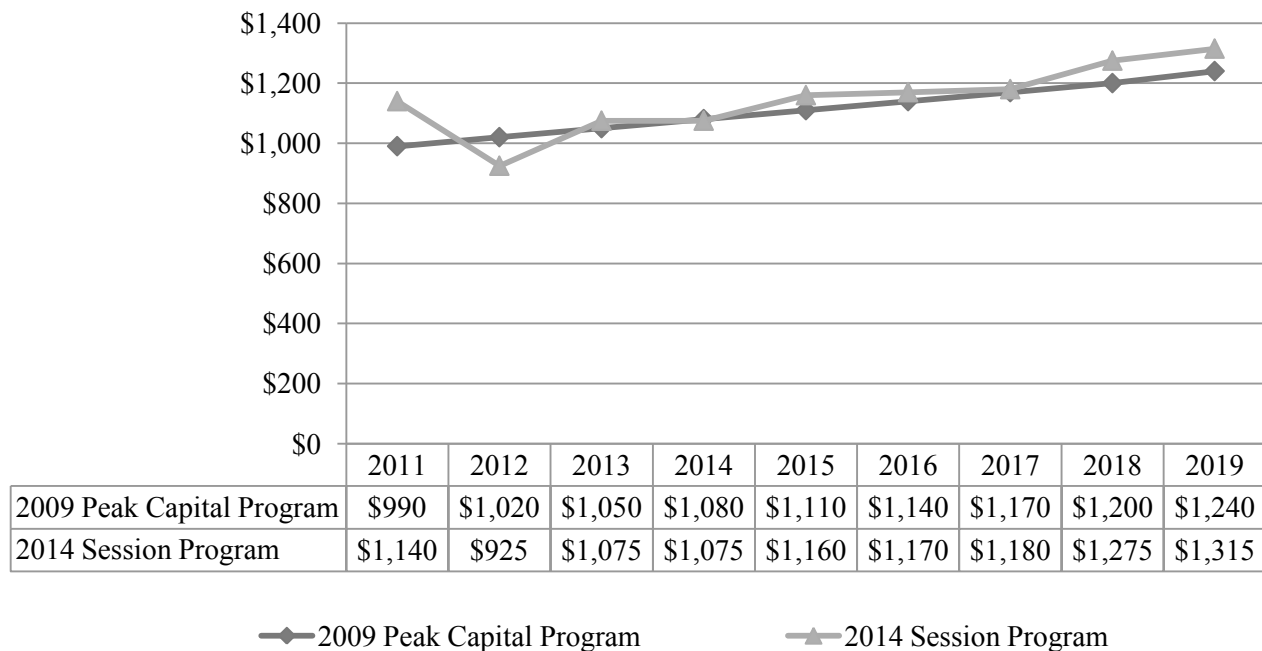
Exhibit 7.7
Effect of Increasing General Obligation Bond Authorizations
Fiscal 2015-2023
(\$ in Millions)

<u>Fiscal Year</u>	<u>Increase in Authorizations</u>	<u>Additional Debt Service</u>
2015	\$75.0	\$0.2
2016	75.0	1.7
2017	75.0	4.1
2018	75.0	8.5
2019	75.0	14.3
2020	0.0	20.8
2021	0.0	26.8
2022	0.0	32.7
2023	0.0	36.2

Source: Department of Legislative Services, October 2013

If approved by the General Assembly, adding \$375 million to the capital program increases the capital program beyond what was funded in the 2009 peak program. **Exhibit 7.8** shows that the proposed program increases the fiscal 2015 capital authorizations from \$1,110 million to \$1,160 million, a \$50 million increase. Over the five-year period, spending now exceeds the 2009 peak program by \$240 million.

Exhibit 7.8
Reductions to GO Bond Program
Fiscal 2011-2019
(\$ in Millions)



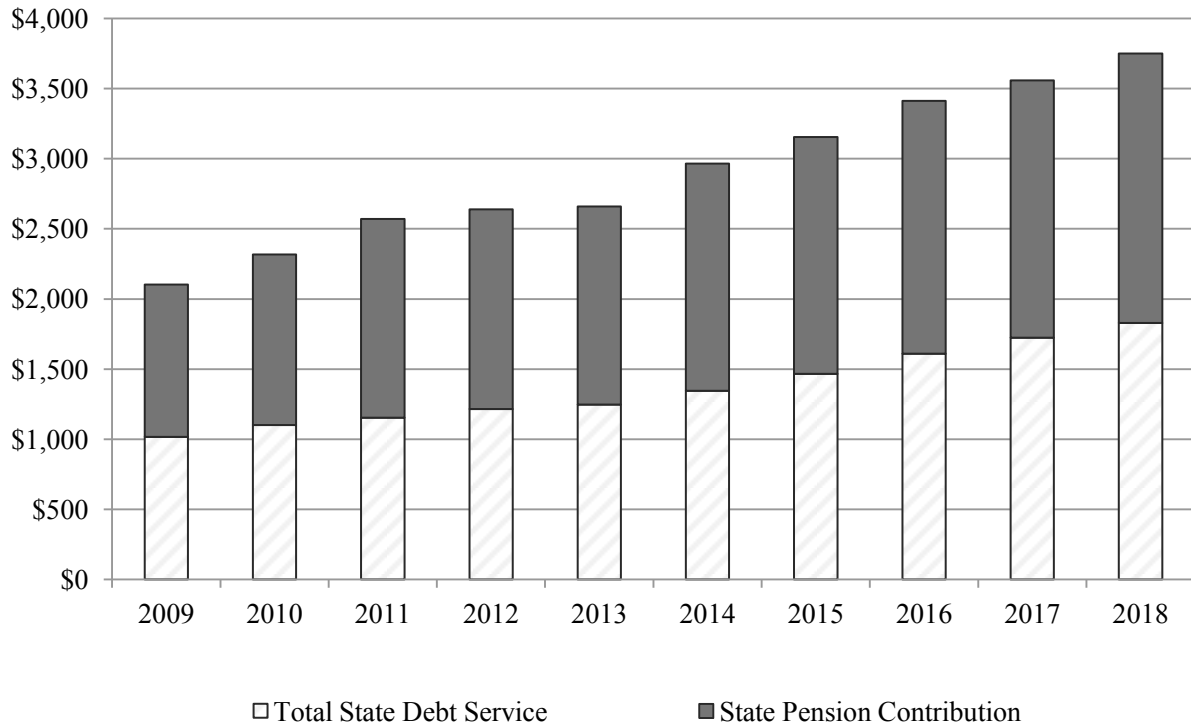
Source: Capital Debt Affordability Committee, 2009 and 2013

Long-term Liabilities Are Expected to Increase at a Greater Rate Than the Revenues Supporting Them

As discussed earlier, debt service costs are projected to increase 6.1% annually over the next five years, while State property tax revenues are projected to increase 0.5% annually. This is a concern because the ABF will require increasing amounts of general fund appropriations. A second concern is that State pension costs are also projected to increase in the out-years. From fiscal 2013 to 2018, State pension costs are expected to increase 6.3% annually. **DLS is concerned that it is not prudent to continue to increase GO bond authorizations and recommends that the committee does not approve an increase in the level of authorizations but instead maintains authorizations at the currently planned level.**

The rationale for concern rests on the growing burden that long-term financial commitments are putting on the State budget, particularly the general fund. These liabilities are comprised not only of debt service, but also the ongoing and growing expense of employee and teacher pensions. **Exhibit 7.9** shows that total debt service and pension costs (including transportation, bay restoration, and other debt) are expected to increase from \$2.66 billion in fiscal 2013 to \$3.75 billion in fiscal 2018. This is an annual increase of 7.1%. Moreover, these costs require an increasing share of general fund revenues. **Exhibit 7.10** shows that costs increase from 9.5% in fiscal 2013 to 13.7% of general fund revenues in fiscal 2018.

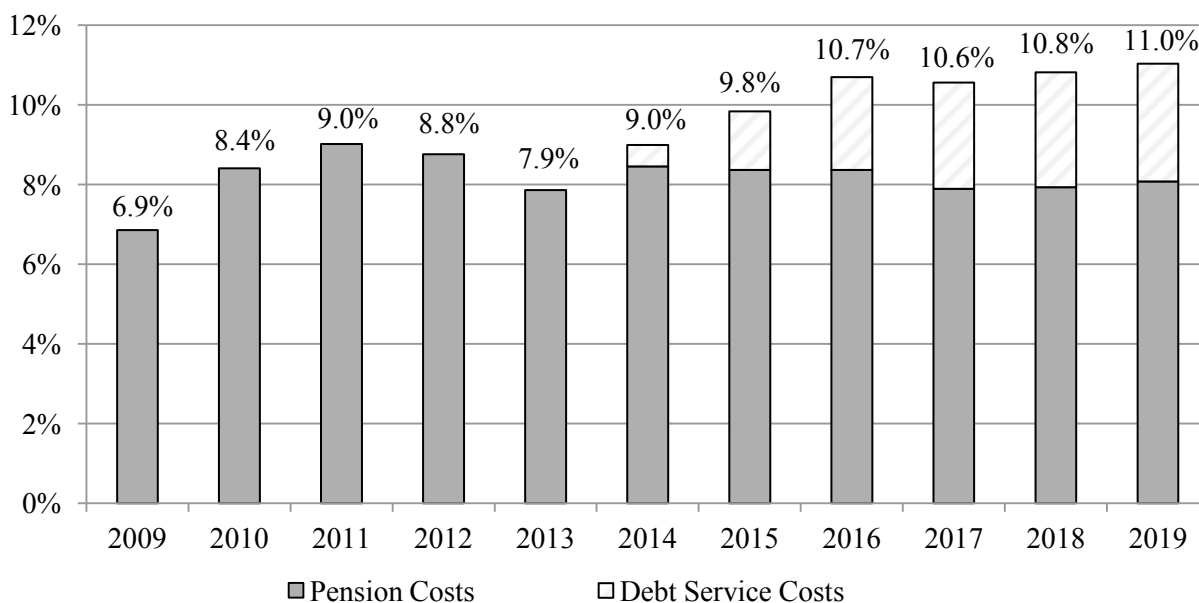
Exhibit 7.9
Cumulative Debt Service and Pension Costs
Fiscal 2009-2018
(\$ in Millions)



Note: Total State debt service includes transportation, bay restoration, capital leases, and stadium authority debt. State pension contribution excludes local teacher pension cost sharing.

Source: Gabriel Roeder Smith and Company, State Treasurer's Office, Department of Legislative Services, September 2013

Exhibit 7.10
Debt Service General Fund Subsidy and State Pension Costs
Compared to General Fund Revenues
Fiscal 2009-2019
(\$ in Millions)



Source: Gabriel Roeder Smith and Company; State Treasurer's Office; Department of Legislative Services, September 2013

Unless pension payments are reduced (they are now \$300 million above the statutorily required level), the remaining lever to provide relief from this ongoing fiscal squeeze is through moderation of the burden of debt service. This can be accomplished by constraining, rather than increasing, the level of debt to be incurred, or through the Board of Public Works by increasing the property tax. **As one step toward constraining the growth in long-term obligations, DLS recommends that the previously established debt authorization levels be maintained.**

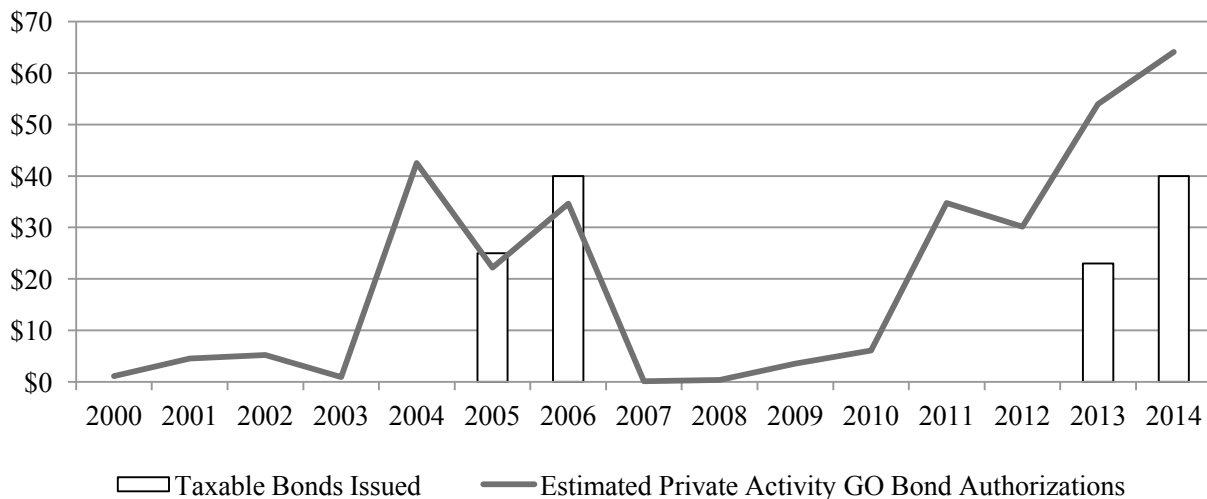
Reducing Taxable Debt Authorizations Reduces Interest Payments

The State's capital program supports a number of different public policy objectives, such as health, environmental, public safety, education, housing, and economic development. Federal government regulations allow the State to issue debt that does not require the buyer to pay federal taxes on interest earnings. In cases where investors do not pay federal income taxes, they are willing to settle for lower returns. Investors in taxable debt require higher returns to offset their tax liabilities. Consequently, the State can offer lower interest rates on tax-exempt bonds.

Federal laws and regulations limit the kinds of activities the proceeds from tax-exempt bonds can support. One such requirement limits private activities or private purposes of the bond proceeds to 5% of the bond sales proceeds. Another requirement limits the bonds to \$15 million for business use projects and \$5 million for business loans. Examples of programs that support private activities or uses include the Partnership Rental Housing and Neighborhood Business Development programs of the Department of Housing and Community Development (DHCD), the Hazardous Substance Cleanup Program of the Maryland Department of the Environment, the Public Safety Communications program of the Department of Information Technology (DoIT), and the Physical Sciences Complex at the University of Maryland, College Park.

To avoid exceeding the private activity limits imposed in the federal regulations, the State has previously appropriated funds in the operating budget instead of issuing debt for private purpose programs and projects. Recent years' fiscal constraints have limited the amount of operating funds available for capital projects. To continue these programs, the State authorized GO bonds. In fiscal 2011, the State began migrating private purpose programs from the operating budget into the capital budget. **Exhibit 7.11** shows that the State has authorized at least \$30 million in private activity bonds annually since fiscal 2011 and issued taxable debt in fiscal 2013 and 2014.

Exhibit 7.11
Private Activity Authorizations and Taxable Bond Issuances
Fiscal 2000-2014
(\$ in Millions)



GO: general obligation

Source: Department of Budget and Management's *Capital Improvement Program*; Financial Advisor's *Report on Bond Sales*

Taxable Bonds Cost More Than Tax-exempt Bonds

At the August 2013 bond sale, the State sold \$40 million in taxable GO bonds to institutional investors. The issuance included \$27.8 million in three-year bonds and \$12.2 million in four-year bonds. The State also issued \$435 million of tax-exempt bonds on the same day. The TIC of the taxable bonds was noticeably higher than the tax-exempt bonds; 1.48% for four-year, taxable debt compared to 1.04% for four-year, tax-exempt debt. A second difference between the two issuances is that the taxable debt essentially sold at par, while the tax-exempt debt sold at a considerable premium.

Using market data, DLS estimated the cost of issuing tax-exempt debt. The analysis assumes that the tax-exempt bonds generated a premium. **Exhibit 7.12** shows that the tax-exempt bonds would have likely generated a \$5.6 million premium and that debt service costs would exceed taxable debt service costs by \$5.1 million. The net effect on spending over the four years is that the tax-exempt bonds cost approximately \$478,000 less than taxable bonds. Since the tax-exempt bonds generate a premium that is realized when the bonds are sold, and the debt service costs stretch over four years, the net present value of the savings, which is approximately \$575,000, is even more than the cash savings.

Exhibit 7.12
Comparing Taxable Bonds to Tax-exempt Bonds
 (\$ in Thousands)

	Three-year Bonds	Four-year Bonds	Total
Amount Sold	\$27,845	\$12,155	\$40,000
Estimated Tax-exempt Premium	\$3,692	\$1,925	\$5,618
Estimated Tax-exempt Debt Service	32,022	14,586	46,608
Net Cost of Tax-exempt Bonds	28,330	12,661	40,990
Taxable Debt Service	\$28,633	\$12,836	\$41,468
Tax-exempt Bonds' Cash Savings	\$303	\$175	\$478
Net Present Value of Savings	361	214	575

Source: Department of Legislative Services, October 2013

In the out-years, the additional costs for issuing taxable debt are likely to increase. The current low interest rate environment is probably suppressing the additional costs paid by issuers of taxable debt. For example, the State issued taxable debt in fiscal 2005 and 2006. At the time, interest rates were higher, and DLS estimates that taxable bonds added \$2.8 million in debt service costs for the \$65.0 million issued. This is roughly three times the cost differential as the July 2013 bond sale.

Another factor that is likely to add to the cost of taxable debt is increased tax rates for higher income earners and corporations. The value of tax-exempt bonds is greatest when tax rates are highest. Recently enacted federal tax rate increases may well have an effect on the spread between taxable and tax-exempt bonds.

In conclusion, there is a measurable difference between the cost of taxable and tax-exempt debt. The additional price paid by issuers of taxable debt is more likely to increase than decrease, when compared to tax-exempt debt.

Reliance on GO Bonds for Private Use and Activities Continues After Budget Improves

It is not unusual for the State to move PAYGO capital projects and programs into the GO bond program when State finances deteriorate. Usually, the projects and programs are moved back out of the GO bond program after finances have improved. For example, Exhibit 7.11 shows this pattern after the rise in private use authorizations from fiscal 2004 to 2006. In fiscal 2007, there is a decline in private activity authorizations.

This is not the case in the current *Capital Improvement Program*. The fiscal 2014 budget, which has the lowest structural deficit since before the Great Recession began, has private activity authorizations increasing to \$64 million. This is the highest, not the lowest level in years. **Exhibit 7.13** shows that out-year private activity authorizations range from \$31 million in fiscal 2015 to \$21 million in fiscal 2018. Though there is a decline in authorizations, there still is a substantial reliance on GO bond funds to support projects and programs that are traditionally supported in the PAYGO capital funding.

Exhibit 7.13
Private Activity Authorizations by Department
Fiscal 2014-2018
(\$ in Thousands)

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>
Private Loans					
Department of Information Technology	\$3,345	\$6,345	\$5,145	\$5,175	\$0
State Department of Education	12	133	245	234	229
Morgan State University	505	50	0	0	0
University System of Maryland	2,990	611	383	0	0
Johns Hopkins University	600	750	0	0	0
Total Estimated Private Funds	\$7,452	\$7,889	\$5,773	\$5,409	\$229
Private Business Use					
Department of Housing and Community Development	\$55,810	\$23,000	\$21,900	\$21,000	\$20,000
Department of the Environment	484	325	325	325	325
Department of Natural Resources	200	0	0	0	0
Department of Planning	150	150	150	150	150
Total Estimated Private Funds	\$56,644	\$23,475	\$22,375	\$21,475	\$20,475
Grand Total	\$64,096	\$31,364	\$28,148	\$26,884	\$20,704
Out-year Total without Housing or Information Technology		\$2,019	\$1,103	\$709	\$704

Source: Department of Budget and Management, *Capital Improvement Program*, January 2013

As previously mentioned, federal regulations allow for some private activity in tax-exempt bonds. This allows some flexibility if there are minor changes in the use of infrastructure built or if there are some projects or programs that have a limited private activity component. Most of the agencies that have some private activity in their projects have exposure that can be managed within the federal guidelines.

The concern is that there are large private activity authorizations in DoIT and DHCD. These large authorizations are likely to result in taxable bonds in the out-years. Funding these programs in the operating budget reduces the amount of private activity authorizations to \$2 million or less in the out-years. This is consistent with a normal level of private activity authorizations. In fiscal 2015, this frees almost \$30 million in GO bond capacity that can be used for other projects. In the out-years, moving these programs into cash reduces debt service costs. **To reduce debt service cost, DLS recommends that DBM reduce the level of private activity authorizations for fiscal 2015.**

Maryland Department of Transportation Proposes Public-private Partnership for Purple Line Transit Project

Chapter 5 of 2013 establishes the State's P3 policies. The law specifically authorizes certain agencies, including the MDOT, to enter into P3 agreements and establishes oversight and reporting requirements. These agencies are referred to as reporting agencies. Prior to soliciting bids, a reporting agency is required to prepare a pre-solicitation report, in consultation with DBM. This report should be submitted to the budget committees, DLS, the State Comptroller, and the State Treasurer. This report is required to address if any debt generated by the project is State debt that should be considered in the State's debt affordability calculation. After the pre-solicitation review period, BPW designates a project as a P3, and the reporting agency can procure a vendor. At least 30 days prior to BPW approval of the P3 agreement, the proposed agreement must simultaneously be submitted to the State Treasurer and State Comptroller. At this point, they analyze the impact of the P3 on the State's debt affordability limits. BPW cannot enter into an agreement if it breaches the State's debt affordability limits.

Purple Line Project Description and Funding Plan

MDOT is proposing to build a Purple Line transit project in Prince George's and Montgomery counties. This is a 16-mile east-west light rail transit line extending inside the Capital Beltway from New Carrollton in Prince George's County to Bethesda in Montgomery County. According to MDOT plans, the Purple Line would connect the major central business districts and activity centers of Bethesda, Silver Spring, Takoma/Langley Park, College Park/University of Maryland, and New Carrollton. The project also would provide direct connections to Metrorail at Bethesda, Silver Spring, College Park, and New Carrollton, which would link the two branches of the Red line and the Green and Orange lines, as well as all three Maryland Area Regional Commuter (MARC) lines, Amtrak, and local bus routes. MDOT sees this project as improving east-west mobility and reducing travel times for area residents.

At this point in the process, construction cost estimates are preliminary and could vary substantially from the final costs. For planning purposes, MDOT estimates that total Purple Line construction costs will be \$2.2 billion. Currently, the department anticipates that the State will receive approximately \$900 million in federal funds and \$220 million in local contributions, leaving \$1.1 billion for the State to finance. MDOT advises that approximately \$400 million will be supported by Transportation Trust Fund (TTF) appropriations, and the remaining \$700 million will be supported by a concessionaire procured through a P3. The P3 concessionaire's capitalization is expected to be 10% equity and 90% debt, resulting in just over \$600 million in debt issued by the concessionaire. This debt will be amortized over 30 years from fiscal 2020 to 2050. MDOT will reimburse the concessionaire through availability payments, which will be annual appropriations out of the TTF. All these costs are preliminary and subject to change.

There will also be availability payments for the concessionaire's operating costs. To maintain standards, MDOT expects to include performance incentives in the availability payments. If the vendor does not meet the incentives, its payment can be reduced.

This project will also be generating some operating revenues, which will offset the operating and capital budget costs. However, as with other projects, the revenues are less than the full operating costs. The State will retain the authority to determine fares. In some P3 arrangements, the concessionaire sets the fee.

Purple Line Debt Affordability Analysis

This project is supported with operating availability payments, capital availability payments, TTF bonds, and federal funds. Operating payments support the operation of the system when it is completed. **The consensus is that operating availability payments have no debt affordability implications.** Federal funds will support capital spending. **Federal funds are not State source revenue and also have no affordability implications.**¹ TTF bonds are included in the State debt affordability calculation. **MDOT advises that TTF bonds used to support the Purple Line will be classified as State debt.**

The remaining spending is the capital availability payment. This reimburses the concessionaire's capital costs, including debt service payments. The department advises that it is pursuing a federal Transportation Infrastructure Finance and Innovation Act (TIFIA) loan to finance the P3. TIFIA provides federal credit assistance, in this case a direct loan, to finance surface transportation projects of national and regional significance. The total amount of the loan is limited to 33% of the total project cost, and the P3 concessionaire will include at least 10% of the value of the concessionaire's share as equity. Other debt instruments may also be pursued.

MDOT proposes to make an annual appropriation backed by dedicated transit operating revenues generated by the project to support the concessionaire's debt service payments. This appropriation is referred to as an availability payment annually. To provide additional security against the risk of an appropriation not being made, the department would pledge all transit revenues. MDOT does not consider these transit operating revenues to be tax-supported revenues but rather a fee for using the transit service that can be avoided (*i.e.*, individuals can choose not to use the service). Since transit operating revenues are not tax-supported revenues, MDOT submits that this component of the project is not tax-supported debt and should not be considered when determining debt affordability.

At this point, there is insufficient information to determine if the capital availability payments are State debt. Whether or not it is State debt depends on such factors as the use of the project (is it a public good or is it for general use), is there a long-term liability for the State, and do State revenues support the project.

¹ Concerns have been raised that federal funds have not been awarded so there is some risk that they may be less than anticipated. MDOT advises that if federal fund appropriations are insufficient, TTF bonds will be issued. Since these TTF bonds are State debt, a loss in federal funds could affect debt affordability.

The Purple Line Enhances the Transportation System

MDOT advises the Purple Line's objective is to "create a more efficient transportation system." The purpose is not just to create a 16-mile transit line between New Carrollton and Bethesda but to enhance transportation throughout the area. The line will shorten transit commutes between the two stations so that riders no longer have to travel through Washington, DC.

An efficient route can also reduce road traffic by encouraging some riders to take transit instead of automobiles. Connections to MARC, Amtrak, and local bus lines should both induce transit ridership that enhances economic activity and reduce road traffic for a more efficient transportation system. An efficient Purple Line can encourage economic activity and reduce road traffic.

The line also shares a characteristic with a public good, specifically, nonrival consumption. Nonrival consumption means that, for a given level of production, consumption by one person does not limit the quantity consumed by another. In other words, until the train is full (the given level of production), adding another rider does not force the first rider off the train. Also like a public good, a transportation system's characteristics are the same for all users of that system.

The Availability Payments Are a Long-term Liability for the State

Upon entering into an agreement with a concessionaire, the State will be obligated to make availability payments for 30 years. MDOT advises that this liability will be shown on the balance sheet. Based on the four Government Accounting Standards Board (GASB) criteria for determining the classification of a lease as operating or capital, this transaction is a capital lease. To be a capital lease, the financing must meet one of the following criteria:

- the ownership of the property is transferred to the lessee by the end of the terms of the lease;
- the agreement contains a bargain purchase option;
- the lease term is equal to 75% or more of the estimated economic impact of the leased property; and
- the present value at the beginning of the lease term of the minimum lease payments equals or exceeds 90% of the fair market value of the leased property. A lessee shall compute the present value of the minimum lease payments using its incremental borrowing rate.

MDOT advises that the State owns the land and improvements and will retain ownership at the end of the lease term, so this clearly is a debt since CDAC considers all capital leases to be

debt. For this project, the availability payments essentially are construction payments for a capital asset owned by the State, much like issuing GO bond debt for a construction project.

Appropriations Are Made from the Transportation Trust Fund, Which Is a State Revenue Source

The TTF was created to provide MDOT with a revenue source for operating and capital spending. The entire TTF has long been considered State revenues. CDAC considers TTF revenues to be State revenues when calculating debt affordability. Also, when calculating transportation bonds' coverage ratios, MDOT calculates net income that includes all TTF revenues, including transit operating revenues. MDOT's proposal is to use a share of TTF revenues to support construction through annual appropriations from the TTF.

Though it seems unlikely now that the concessionaire will not fulfill the contract, there are examples of vendors leaving contracts before all the debt is retired. In 2005, the State entered into an agreement with M-real, a Finnish paper company, to construct a cargo shed. M-real left after six years, and the TTF was required to continue making annual appropriations. So long as the revenues are entering into the TTF, the revenues are State tax revenues, thus making the project a State debt project. The concern is that whatever happens to the concessionaire, the TTF is ultimately responsible.

All TTF revenues are currently included in the State revenues when determining debt affordability limits. If transit revenues are used to support a non-State project and the affordability ratios, the same revenues are effectively being categorized as both State and non-State debt. This is clearly double-counting these revenues. Historically, transit revenues have been classified as State tax revenue for purposes of calculating the ratio of debt service to State revenues. Unless all transit fare revenue was segregated from the TTF and remitted directly to a trustee, the availability payments are being made from commingled tax and fee revenue in the TTF.

However, transit revenues are not necessarily State revenues. The revenues do represent a user fee paid by transit riders. If the fees were not deposited into the TTF, but rather were deposited into an account that supports the availability payments, the availability payments may not necessarily be considered State debt. A similar arrangement has been made for lottery revenues supporting stadium projects. Until more details are known about how the revenue for the availability payments are structured, it cannot be determined if the transit revenues are a State revenue source.

Unclear If Project Is State Debt

In conclusion, it cannot be determined at this time if the capital availability payments are State debt. The project is an enhancement to the transportation system that provides benefits to transit riders, automobile drivers, and businesses. The project is also a long-term liability for the State. However, it is unclear that the transit revenues generated to support the capital availability payments will first be dedicated to only support those availability payments.

Appendix 1
General Obligation Bond Requests: Fiscal 2015-2019
(\$ in Millions)

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>Total</u>	Category Totals
State Facilities							\$783.6
Board of Public Works	\$35.8	\$168.3	\$170.8	\$125.0	\$81.5	\$581.5	
Military	3.0	2.6	4.7	12.4	4.2	26.8	
Disabilities	1.6	1.6	1.6	1.6	1.6	8.0	
MD Public Broadcasting	12.8	0.0	0.0	0.0	0.0	12.8	
Information Technology*	52.3	54.7	26.6	20.8	0.0	154.4	
Health and Social Services							\$638.4
Health and Mental Hygiene	\$7.5	\$26.2	\$26.3	\$23.1	\$23.9	\$106.9	
University of MD Medical	15.0	15.5	15.3	11.6	0.0	57.4	
Senior Citizen Activity Center	0.1	2.0	2.0	2.0	2.0	8.1	
Juvenile Services	37.9	29.9	64.2	46.0	82.8	260.8	
Private Hospital Grant Program	5.2	5.0	5.0	5.0	5.0	25.2	
Prince George's County Hospital	20.0	20.0	20.0	120.0	0.0	180.0	
Environment							\$859.9
Natural Resources	\$107.7	\$84.4	\$88.9	\$94.2	\$89.7	\$464.9	
Agriculture	25.4	27.7	26.8	27.6	28.5	136.0	
Environment	38.4	44.0	44.0	43.5	2.4	172.3	
MD Environmental Service	13.4	27.7	20.9	10.5	14.2	86.7	
Education							\$3,072.8
Education	\$18.3	\$33.2	\$30.9	\$28.1	\$5.0	\$115.5	
MD School for the Deaf	1.7	0.2	1.9	0.0	0.1	3.9	
Public School Construction	631.8	586.3	630.7	569.6	535.1	2,953.4	
Higher Education							\$2,761.6
University System of MD**	\$308.3	\$320.5	\$335.2	\$274.9	\$313.8	\$1,552.8	
Baltimore City Comm. College	1.0	6.9	42.5	21.2	24.2	95.7	
St. Mary's College	18.9	13.1	10.3	11.7	0.0	54.1	
Morgan State University	52.3	48.3	92.0	134.9	52.9	380.5	
Community Colleges	107.6	102.3	134.6	176.4	89.8	610.7	
Southern MD Higher Educ.	0.0	5.7	6.3	0.0	0.0	12.0	
Private Facilities Grant Program	10.1	12.0	12.0	10.8	11.0	55.9	
Public Safety							\$354.0
Public Safety	\$59.2	\$23.9	\$25.6	\$111.3	\$80.6	\$300.6	
State Police	13.9	4.3	0.1	0.0	0.0	18.4	
Local Jails	0.0	5.0	10.0	10.0	10.0	35.0	

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>Total</u>	<u>Category Totals</u>
Housing and Economic Development							\$261.6
Housing and Comm. Development	\$51.4	\$48.2	\$47.1	\$46.2	\$45.3	\$238.2	
Historic St. Mary's City	9.5	0.0	0.0	0.6	0.3	10.4	
Planning	1.4	6.0	3.4	0.9	1.3	13.0	
Transportation							395.0
Transportation	\$45.0	65.0	85.0	100.0	100.0	395.0	
							\$321.9
Legislative Initiatives***	\$50.0	\$50.0	\$50.0	\$50.0	\$50.0	\$250.0	
Miscellaneous	28.0	15.4	13.5	10.0	5.0	71.9	
Subtotal Request	\$1,784.5	\$1,855.9	\$2,048.2	\$2,100.0	\$1,660.1	\$9,448.7	\$9,448.7
Debt Affordability Limits 2012 CDAC	\$1,075.0	\$1,085.0	\$1,095.0	\$1,105.0	\$1,200.0	\$5,560.0	
Debt Affordability Limits 2013 CDAC	\$1,150.0	\$1,160.0	\$1,170.0	\$1,180.0	\$1,275.0	\$5,935.0	
Variance 2012 CDAC	\$709.5	\$770.9	\$953.2	\$995.0	\$460.1	\$3,888.7	
Variance 2013 CDAC	\$634.5	\$695.9	\$878.2	\$920.0	\$385.1	\$3,513.7	

CDAC: Capital Debt Affordability Committee

*Funding request reflects estimated cost to build out Phase I at the "public safety" level only. The estimated cost of completing subsequent phases is not included.

**In addition to the general obligation bond request, the University System of Maryland has requested academic revenue bond funding of \$32.0 million annually for fiscal 2015-2019.

*** Figures represent an estimated average of the total funding requests received through legislative local bond bills.

Note: Numbers may not sum to total due to rounding.

Source: Department of Budget and Management

Appendix 2
Estimated General Obligation Issuances
(\$ in Thousands)

Fiscal Year	Proposed Auth.	Estimated Issuances During Fiscal Year (a) =====>										Post 2023	Total Issued
		<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>		
2015	\$1,160,000	\$0	\$360,000	\$290,000	\$232,000	\$174,000	\$104,000						\$1,160,000
2016	1,170,000		0	363,000	293,000	234,000	176,000	\$104,000					1,170,000
2017	1,180,000			0	366,000	295,000	236,000	177,000	\$106,000				1,180,000
2018	1,275,000				0	395,000	319,000	255,000	191,000	\$115,000			1,275,000
2019	1,315,000					0	408,000	329,000	263,000	197,000	\$118,000		1,315,000
2020	1,280,000						0	397,000	320,000	256,000	192,000	\$115,000	1,280,000
2021	1,320,000							0	409,000	330,000	264,000	317,000	1,320,000
2022	1,360,000								0	422,000	340,000	598,000	1,360,000
2023	1,400,000									0	434,000	966,000	1,400,000
87 Total New Authorization		\$0	\$360,000	\$653,000	\$891,000	\$1,098,000	\$1,243,000	\$1,262,000	\$1,289,000	\$1,320,000	\$1,348,000	\$3,436,000	
Previously Authorized GO Bonds:	\$2,356,125	977,000	659,000	404,000	234,000	95,000	-3,000	-2,000	-1,000	-2,000	-2,000	0	\$2,359,000
Total Issuances		\$977,000	\$1,019,000	\$1,057,000	\$1,125,000	\$1,193,000	\$1,240,000	\$1,260,000	\$1,288,000	\$1,318,000	\$1,346,000	\$3,436,000	
Percentage issuance assumptions by fiscal year:													
Fiscal year following year of authorization					1st	2nd	3rd	4th	5th				
Percent of authorization issued					31.0%	25.0%	20.0%	15.0%	9.0%				

Appendix 3
Maryland General Obligation Bond Debt True Interest Cost Analysis
Statistically Significant Variables

<u>Bond Sale Date</u>	<u>TIC</u>	20-bond <u>Index</u>	<u>MD/US PI</u>	<u>YTM</u>	<u>Post-crisis</u>	<u>Call</u>
March 13, 1991	6.31%	7.32%	2.261	9.84	No	Yes
July 10, 1991	6.37%	7.21%	2.240	9.85	No	Yes
October 9, 1991	5.80%	6.66%	2.230	9.80	No	Yes
May 13, 1992	5.80%	6.54%	2.220	9.80	No	Yes
January 13, 1993	5.38%	6.19%	2.221	9.73	No	Yes
May 19, 1993	5.10%	5.77%	2.212	9.73	No	Yes
October 6, 1993	4.45%	5.30%	2.206	9.73	No	Yes
February 16, 1994	4.48%	5.42%	2.208	9.74	No	Yes
May 18, 1994	5.36%	6.14%	2.199	9.74	No	Yes
October 5, 1994	5.69%	6.50%	2.191	9.72	No	Yes
March 8, 1995	5.51%	6.18%	2.184	9.78	No	Yes
October 11, 1995	4.95%	5.82%	2.163	9.65	No	Yes
February 14, 1996	4.51%	5.33%	2.159	9.65	No	Yes
June 5, 1996	5.30%	5.94%	2.144	9.69	No	Yes
October 9, 1996	4.97%	5.73%	2.144	9.70	No	Yes
February 26, 1997	4.90%	5.65%	2.136	9.68	No	Yes
July 30, 1997	4.64%	5.23%	2.135	9.68	No	Yes
February 18, 1998	4.43%	5.07%	2.119	9.68	No	Yes
July 8, 1998	4.57%	5.12%	2.128	9.68	No	Yes
February 24, 1999	4.26%	5.08%	2.134	9.60	No	Yes
July 14, 1999	4.83%	5.36%	2.146	9.60	No	Yes
July 19, 2000	5.05%	5.60%	2.157	9.72	No	Yes
February 21, 2001	4.37%	5.21%	2.178	9.71	No	No
July 11, 2001	4.41%	5.22%	2.201	9.68	No	No
March 6, 2002	4.23%	5.19%	2.233	9.61	No	No
July 31, 2002	3.86%	5.00%	2.241	9.66	No	No
February 19, 2003	3.69%	4.79%	2.235	9.60	No	No
July 16, 2003	3.71%	4.71%	2.250	9.67	No	Yes
July 21, 2004	3.89%	4.84%	2.254	9.70	No	Yes
March 2, 2005	3.81%	4.50%	2.259	9.70	No	Yes
July 20, 2005	3.79%	4.36%	2.268	9.69	No	Yes
March 1, 2006	3.87%	4.39%	2.242	9.68	No	Yes
July 26, 2006	4.18%	4.55%	2.238	9.64	No	Yes
February 28, 2007	3.86%	4.10%	2.228	9.64	No	Yes

<u>Bond Sale Date</u>	<u>TIC</u>	<u>20-bond Index</u>	<u>MD/US PI</u>	<u>YTM</u>	<u>Post-crisis</u>	<u>Call</u>
August 1, 2007	4.15%	4.51%	2.218	9.65	No	Yes
February 27, 2008	4.14%	5.11%	2.208	9.64	No	Yes
July 16, 2008	3.86%	4.65%	2.213	9.60	Yes	Yes
March 4, 2009	3.39%	4.96%	2.287	9.01	Yes	Yes
March 2, 2009	3.63%	4.87%	2.287	10.04	Yes	Yes
August 5, 2009	2.93%	4.65%	2.303	8.96	Yes	Yes
August 3, 2009	3.20%	4.69%	2.303	9.01	Yes	Yes
October 21, 2009	2.93%	4.31%	2.242	7.91	Yes	Yes
July 28, 2010	1.64%	4.21%	2.259	5.34	Yes	No
July 28, 2010	1.91%	4.21%	2.259	6.20	Yes	Yes
March 7, 2011	2.69%	4.90%	2.286	6.86	Yes	No
March 9, 2011	3.49%	4.91%	2.286	10.51	Yes	Yes
July 25, 2011	1.99%	4.46%	2.299	5.65	Yes	No
July 27, 2011	3.08%	4.47%	2.299	10.05	Yes	Yes
March 2, 2012	2.18%	3.72%	2.306	8.33	Yes	Yes
March 7, 2012	2.42%	3.84%	2.306	9.71	Yes	Yes
July 27, 2012	2.52%	3.61%	2.277	9.10	Yes	Yes
August 1, 2012	2.17%	3.66%	2.277	9.71	Yes	Yes
March 6, 2013	2.35%	3.86%	2.288	9.61	Yes	Yes
July 24, 2013	3.15%	4.77%	2.284	10.20	Yes	Yes

TIC: true interest cost

MD/US PI: ratio of Maryland personal income to U.S. personal income

YTM: years to maturity

BABs: Build America Bonds

Source for 20-bond Index: The Bond Buyer

Source for personal income: Federal Bureau of Economic Analysis

Remaining Sources: Bond Sale Official Statements

Appendix 4
Agency Debt Outstanding
Fiscal 2003-2013
(\$ in Millions)

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>Change</u> <u>2003-2013</u>	<u>Average</u> <u>Annual</u> <u>% Change</u> <u>2003-2013</u>
<u>Agency Debt Subject to Ceiling and Allocation Caps</u>													
Maryland Environmental Service	\$33.7	\$30.5	\$30.5	\$24.5	\$19.6	\$18.7	\$19.8	\$28.5	\$31.2	\$27.5	\$25.2	-\$8.5	-2.9%
Maryland Wholesale Food Center Authority	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n/a
Maryland Transportation Authority	575.6	627.2	763.6	765.1	1,055.3	1,877.4	2,247.1	2,708.2	3,292.9	3,292.9	3,303.2	2,727.6	19.1%
Maryland Water Quality Financing Administration ¹	105.6	96.6	88.2	73.9	65.7	104.9	140.0	126.3	112.0	57.7	47.2	-58.4	-7.7%
Revenue Cap Total	\$714.9	\$754.3	\$882.3	\$863.5	\$1,140.6	\$2,001.0	\$2,406.9	\$2,863.0	\$3,436.1	\$3,378.1	\$3,375.6	\$2,660.7	16.8%
% Change/Prior Year	-12.9%	5.5%	17.0%	-2.1%	32.1%	75.4%	20.3%	18.9%	20.0%	-1.7%	-0.1%		
<u>Agency Debt Not Subject to Ceiling and Allocation Caps</u>													
Baltimore City Community College	\$1.0	\$0.9	\$0.9	\$0.8	\$0.8	\$0.7	\$0.7	\$0.7	\$1.2	\$1.0	\$0.9	-\$0.1	-1.0%
Dept. of Housing and Community Development ²	2,672.8	2,415.1	2,194.6	2,248.1	3,204.3	3,259.4	3,177.5	3,345.9	3,238.7	3,106.5	2,979.0	306.2	1.1%
Local Government Infrastructure (CDA)	105.6	114.6	122.5	117.0	122.0	135.1	121.6	109.7	127.2	122.8	129.6	24.0	2.1%
MD Industrial Development Financing Authority	568.4	411.1	395.0	409.6	387.1	382.0	344.9	375.7	484.8	492.6	347.7	-220.7	-4.8%
MDOT – County Revenue Bonds	7.9	4.5	31.8	30.0	58.4	56.8	98.5	95.1	89.1	82.9	101.7	93.8	29.1%
MDOT – Nontax-supported Issuances	57.7	54.0	49.7	72.6	68.5	64.2	59.9	57.3	54.2	51.1	47.7	-10.0	-1.9%
Morgan State University	72.2	70.0	68.6	67.7	69.6	68.4	67.8	64.4	59.6	55.2	47.8	-24.4	-4.0%
St. Mary's College of Maryland	40.6	39.7	40.6	43.8	49.5	48.2	46.8	45.3	41.8	38.3	36.1	-4.5	-1.2%
University System of Maryland	960.0	973.0	1,012.8	934.8	954.8	969.9	1,028.5	1,082.9	1,129.2	1,170.0	1,195.0	235.0	2.2%
Noncap Total	\$4,486.2	\$4,082.9	\$3,916.5	\$3,924.4	\$4,915.0	\$4,984.7	\$4,946.2	\$5,177.0	\$5,225.8	\$5,120.4	\$4,885.5	\$399.3	0.9%
% Change/Prior Year	3.9%	-9.0%	-4.1%	0.2%	25.2%	1.4%	-0.8%	4.7%	0.9%	-2.0%	-4.6%		
<u>Tax-supported Debt</u>													
Transportation Debt	\$963.7	\$1,187.3	\$1,070.8	\$1,078.5	\$1,111.1	\$1,268.8	\$1,582.6	\$1,645.0	\$1,561.8	\$1,562.6	\$1,618.0	\$654.3	5.3%
Grant Anticipation Revenue Vehicles	0.0	0.0	0.0	0.0	325.0	300.7	704.4	651.8	596.9	539.4	479.0	479.0	n/a
Capital Leases	193.1	198.6	175.1	226.9	247.9	247.4	266.8	242.5	166.4	310.3	286.2	93.1	4.0%
Maryland Stadium Authority	323.2	321.0	309.2	296.8	283.1	271.6	256.0	243.6	225.7	218.3	193.0	-130.2	-5.0%
Bay Restoration Bonds	0.0	0.0	0.0	0.0	0.0	50.0	46.8	44.2	41.6	38.8	36.0	36.0	n/a
General Obligation Debt	3,932.5	4,102.3	4,511.8	4,868.5	5,142.2	5,493.8	5,873.6	6,523.2	6,982.8	7,541.1	8,005.8	4,073.3	7.4%
Tax-supported Debt Total	\$5,412.5	\$5,809.2	\$6,066.9	\$6,470.7	\$7,109.3	\$7,632.3	\$8,730.2	\$9,350.3	\$9,575.2	\$10,210.5	\$10,618.0	\$5,205.5	7.0%
% Change/Prior Year	14.5%	7.3%	4.4%	6.7%	9.9%	7.4%	14.4%	7.1%	2.4%	6.6%	4.0%		

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>Change</u> <u>2003-2013</u>	<u>Average</u> <u>Annual</u> <u>% Change</u> <u>2003-2013</u>
<u>Authorities and Corporations Not Subject to Ceiling and Allocation Caps</u>													
Health/Higher Education Facilities Authority	\$4,619.5	\$5,316.9	\$5,544.3	\$6,181.1	\$7,262.0	\$8,204.8	\$8,466.8	\$8,660.7	\$8,656.4	\$8,913.1	\$8,835.3	\$4,215.8	6.7%
Maryland Economic Development Corporation	1,485.9	1,593.9	1,642.6	1,872.4	1,894.2	2,094.0	2,115.1	2,329.9	2,471.2	2,471.2	2,376.7	890.8	4.8%
Authorities and Corporations Total	\$6,105.4	\$6,910.8	\$7,186.9	\$8,053.5	\$9,156.2	\$10,298.8	\$10,581.9	\$10,990.6	\$11,127.6	\$11,384.3	\$11,212.0	\$5,106.6	6.3%
% Change/Prior Year	14.3%	13.2%	4.0%	12.1%	13.7%	12.5%	2.7%	3.9%	1.2%	2.3%	-1.5%		

CDA: Community Development Administration
MDOT: Maryland Department of Transportation

¹ Excludes bay restoration bonds.

² Excludes local government infrastructure.

Appendix 5

Investors Are Purchasing Maryland Bonds at a Premium to Protect Against a Loss in the Value of Their Bonds If Interest Rates Increase

When bonds are sold, they have a par value (cost of the bond as shown in the Official Statement) and a coupon rate (interest rate paid to the bondholder). When the bonds are bid, the Treasurer's Office determines the value of the bonds sold and when the bonds mature. The market determines the coupon rate and the sale price of the bonds.

In the current low-interest rate climate, the coupon rate has been substantially higher than the market interest rate, as measured by the true interest cost (TIC). If the TIC is less than a bond's coupon rate, the markets bid up the price of the bonds to a level that is higher than par value. The difference between the par value and the sale price of the bonds is a premium. Conversely, when the TIC is above the coupon rate, the bonds cannot sell at par value and sell for less. This difference is referred to as a discount.

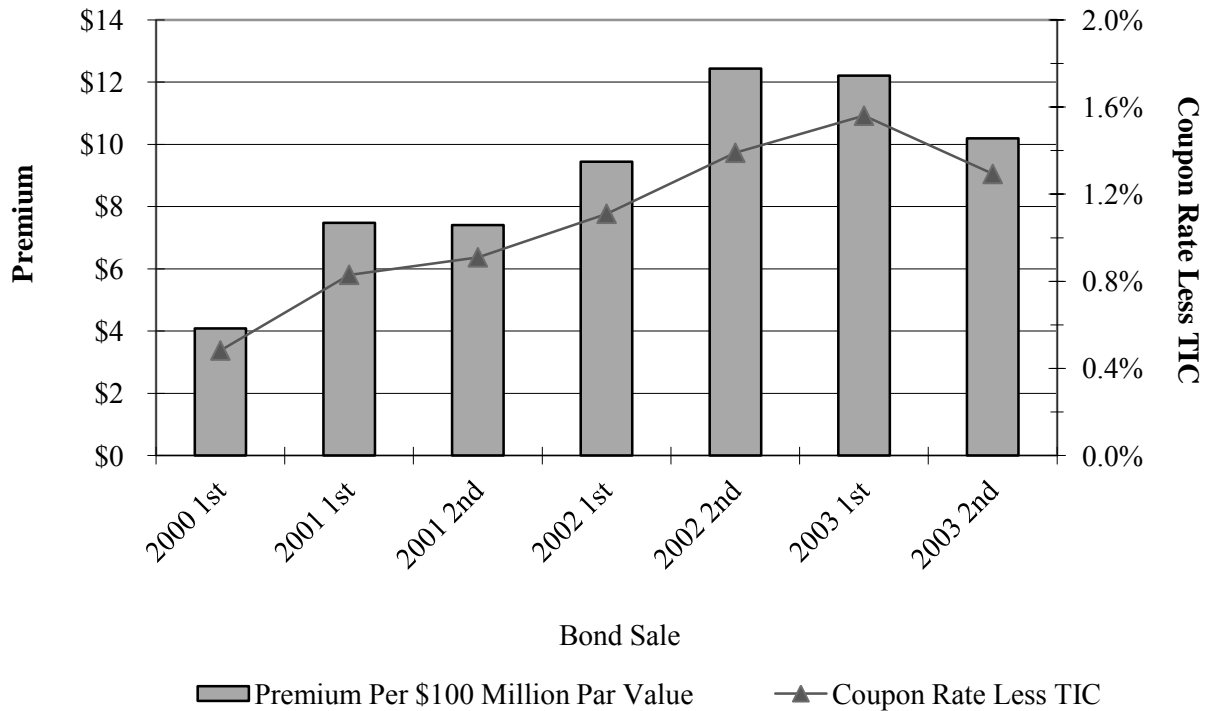
For most bond sales before 2001, the TIC was slightly below the coupon rate. This generated a small premium and provided sufficient funds for the capital program. Since 2001, interest rates have declined, while coupon rates have remained constant. The result has been substantial premiums. This relationship was examined by the Department of Legislative Services in calendar 2003 in the *Effect of Long-term Debt on the Financial Condition of the State*.

The increases in premiums are attributable to the difference between the bonds' coupon rates and the TIC. The coupon rates have declined less than market interest rates (as measured by the TIC) in recent years. **Table 1** shows how the spread between the coupon rate and the TIC affects bond sale premiums in bond sales from 2000 to 2003, when the State began realizing large premiums. Over the same period, bond sale premiums increased from \$4 million per sale to \$12 million per \$100 million of bonds sold. The actual premium realized is even more stunning, as the total amount of bonds sold increased. The first 2000 bond sale generated an \$8 million premium, while the first 2003 bond sale generated a \$61 million premium.

Bond Sale Premiums Protect Investors against Rising Interest Rates

The return an investor receives for purchasing a bond is referred to as the yield. When bonds are sold, the yield is the TIC. At the July 2011 bond sale, the State competitively sold \$29 million of general obligation bonds with 15-year maturities. The coupon rate of the bonds was 5.0%, and the yield was 3.3%. The value of each \$5,000 bond with a 5.0% coupon rate was \$5,999. The additional \$999 was the premium investors paid to increase the coupon rate from 3.3 to 5.0%. At the time of the bond sale, the value of a \$5,000 bond with a 3.3% coupon rate is the same as a \$5,999 bond with a 5.0% coupon rate.

Table 1
Differences between Coupon Rates and True Interest Cost Affect Premiums
2000-2003 Bond Sales
(\$ in Millions)



TIC: true interest cost

Source: Department of Legislative Services, November 2003

Even though the two bonds in the previous example are worth the same on the day of the sale, investors prefer to purchase bonds at a premium under current market conditions. The reason for this is that bonds sold at a premium hold their value better than bonds sold at par if interest rates rise. If interest rates increase from 3.3% to 4.3%, the value of bonds sold for \$5,999 decline 10.3%, while the value of bonds sold at par (\$5,000) decline 11.0%.

Current interest rates are historically low. According to data from the Federal Reserve Board, the yield on 10-year treasury bills on the Friday after the most recent bond sale was among the lowest since 1962. In fact, only 3 out of 2,663 weeks had lower yields. In this environment, it certainly makes sense for investors to protect themselves against rising interest rates, and this is done by purchasing bonds at a premium.