

EFFECT OF LONG-TERM DEBT *on the* FINANCIAL CONDITION OF THE STATE



DEPARTMENT OF LEGISLATIVE SERVICES 2009

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

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

November 2009

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November 2009

The Honorable Ulysses Currie
Senate Chairman, Spending Affordability Committee

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

Dear Chairman Currie 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 September 10 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 Flora Arabo, Andrew Gray, Richard Harris, Matthew Klein, 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 \$990 million for new authorizations of general obligation (GO) bonds during the 2010 legislative session. The recommendation is \$120 million less than what was authorized in the 2009 legislative session. In its recommendation, CDAC advised that the committee intends to reconvene in December 2009 to reexamine the recommended authorization level due to the extraordinary and rapidly changing fiscal conditions. Factors that will influence the committee are revisions from the Board of Revenue Estimates' general fund revenue projection, options available to provide operating budget relief by transferring appropriate projects to the capital budget, revisions to debt service estimates, and extensions to federal authorizations incorporated in the American Recovery and Reinvestment Act of 2009.

The Department of Legislative Services (DLS) concurs with the recommendation to maintain the GO bond authorization level at \$990 million. Should the committee revise the GO bond authorization limit, DLS will evaluate the recommendation.

Build America Bonds with Longer Maturities Are Less Expensive Than Similar Tax-exempt GO Bonds

The American Recovery and Reinvestment Act of 2009 authorized the issuance of Build America Bonds (BABs). The bonds' interest payments are taxable. To offset the interest costs, the federal government provides issuers with a subsidy equal to 35% of the interest payments. In August 2009, the State issued \$50.0 million in BABs; in October 2009, the State issued another \$51.8 million. The bonds issued will mature in 13 to 15 years. After each bond sale, DLS prepares a statistical analysis of the bond sales which compares the sales to market statistics and other bond sales. A DLS analysis of the cost of BABs estimates that the yield on BABs is 0.92% (92 basis points) less than the cost of tax-exempt bonds maturing in 15 years. Chapter 5 provides an analysis of the interest rate cost associated with issuing GO bonds. **So long as Build America Bonds reduce debt service costs, it is recommended that the State continue to issue Build America Bonds in the place of tax-exempt bonds that mature in 13 to 15 years.**

Retail Sales Are More Expensive Than Competitively Bid Sales to Institutional Investors

In 2009, Maryland issued its first retail bond sale in at least 20 years. The sales totaled \$225.8 million in March and \$235.0 million in August. DLS estimates that issuing retail bonds,

instead of competitively bid bonds to institutional investors, increased the interest cost on the \$460.8 million issued by 0.10% (10 basis points), which reduced the premium realized by the State to an estimated \$3.5 million. Chapter 5 provides an analysis of the interest rate cost associated with issuing GO bonds. **Since retail bonds are more expensive than bonds sold to institutional investors through a competitive process, it is recommended that subsequent bond sales be limited to one retail sale per year. DLS recognizes that the data from the first two retail sales is insufficient to conclusively estimate the cost of retail bonds and recommends that subsequent bond sales will need to be evaluated.**

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.**

Bay Restoration Funding Insufficient to Achieve Statutory Goal

Bay restoration bonds are issued to support upgrading major wastewater treatment plants to reduce runoff into the Chesapeake Bay. The Maryland Department of the Environment estimates that the cost to upgrade the plants now totals \$1.539 billion. Funds available total \$530 million in bay bonds and \$351 million in pay-as-you-go (PAYGO) funds, leaving a funding shortage totaling \$658 million. This issue is discussed in Chapter 3. **The Department of Legislative Services recommends that the Administration and legislature examine the funding and need associated with upgrading wastewater treatment plants and develop a plan that determines what additional funds will be supporting this effort or how costs will be scaled back so that available funds are sufficient to achieve the program's goals.**

Analysis of Bay Restoration Bond Sale Suggests That Cost of Debt Could Be Reduced through a Competitive Sale

In June 2008, Maryland issued the first \$50 million in bay restoration bonds. The bonds received a AA bond rating. The bonds were issued through a negotiated sale. Competitive bond sales tend to reduce the cost of debt. An analysis of the bay bonds suggests that a competitive

bond sale may be appropriate. Other State debt, such as GO and transportation bonds, is competitively bid. This issue is discussed in Chapter 7. **Given that bay restoration bonds have successfully been issued, are highly rated, are supported by stable revenues, and do not have any particularly unique or complicated provisions, it is recommended that the future issuance of bay bonds be made on a competitive sale, instead of a negotiated sale basis.**

Proposed Real Property Leases Should Be Included in State Debt Projections

The Administration is proposing that two major State capital projects, the State Center Complex in Baltimore and the new Department of Health and Mental Hygiene (DHMH) public health laboratory, be financed through capital leases instead of GO bonds. CDAC's current analysis does not include the State Center or DHMH lab as State-supported debt. To clarify if these projects are State debt, the operating budget bill included a requirement that the State Treasurer's Office evaluate the proposed State Center lease for potential affordability implications. The Treasurer's assessment, provided to the budget committees in May 2009, is that the prudent approach would be to assume that the State Center occupancy leases are, or will be, capital leases and that they will impact debt affordability. The same can be said for the new DHMH public health laboratory which, considering the essential public need and use of the facility, makes a capital lease determination and corresponding debt affordability impact even more likely. **Insofar as the State Center and public laboratory projects are State projects funded with State revenues and the Treasurer's Office advises that it is prudent to consider these projects State debt, the Department of Legislative Services recommends that the Capital Debt Affordability Committee include these projects as State debt.**

Higher Education Academic Debt

CDAC recommends limiting new debt authorization for academic facilities to \$27 million for fiscal 2011. Academic bond issuances are discussed in Chapter 6. **DLS concurs with the committee's assessment that issuing \$27 million in new University System of Maryland academic revenue bonds is affordable.**

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. More recently, Chapter 445 of 2005 added the chair of the Capital Budget Subcommittee of the Senate Budget and Taxation Committee and the chair of the Capital Budget Subcommittee of the House Appropriations Committee 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 (ARRA), 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 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. A complete discussion of GO bond authorizations, issuances, and costs is provided in Chapter 3. The committee recommended a \$990 million limit on new GO debt authorization for the 2010 session. This figure is \$120 million less than last session's authorization level which included what was considered at the time to be a one-time \$150 million increase intended to provide operating budget relief to allow the shifting of planned operating budget expenditures to the capital budget. The recommendation for the 2010 session no longer includes an amount for the Southern Maryland Regional Strategy-Action Plan for Agriculture, referred to as the Tobacco Transition Program, as the intent of the enabling legislation as amended has been fulfilled with the final authorization provided for the program in the 2009 session.

Exhibit 2.1 shows that the long-range plan adopted by the committee removes the one-time \$150 million increase recommended for the 2009 session. When CDAC recommended the additional authorizations for fiscal 2010 in its 2008 report, the committee stipulated that the increase not remain in the base permanently and that the level of GO bond

Exhibit 2.1
Effect of Proposed CDAC GO Bond Authorizations
2010-2014 Legislative Sessions
(\$ in Millions)

<u>Session</u>	<u>Proposed GO Authorizations</u>	<u>Change from Previous Years Authorization</u>
2010	\$990	-\$120
2011	1,020	30
2012	1,050	30
2013	1,080	30
2014	1,110	30
Total	\$5,250	

Source: *Report of the Capital Debt Affordability Committee on Recommended Debt Authorizations*, September 2009

authorizations beginning with the 2010 session return to the level recommended in the committee's 2007 report. The committee's affordability analysis estimates and assumptions are predicated upon the debt authorization levels returning to levels proposed by CDAC in its 2007 report.

However, in a letter to the Presiding Officers, the Treasurer as Chair of CDAC advised that the committee intends to reconvene late in calendar 2009 to reexamine the recommended authorization level due to the extraordinary and rapidly changing fiscal conditions. The Treasurer cited the following issues and circumstances which could impact CDAC's recommendation:

- Board of Revenue Estimates' September revenue estimate;
- developing options to provide operating budget relief by transferring appropriate expenditures to the capital budget;
- debt service projects subsequent to possible refunding and projected new money bond issuances planned for the fall; or
- possible extension of federal authorizations incorporated in the ARRA, such as school construction bonds and Build American Bonds.

Committee Is No Longer Required to Make GO Authorization Recommendation for Public School Construction

The Public School Facilities Act of 2004 established a State goal to provide \$2 billion in State funding over eight years to address school construction needs statewide, or \$250 million per year from fiscal 2006 to 2013. An uncodified section of this Act directed CDAC to review school construction funding needs and make specific recommendations regarding additional funding for school construction when recommending the State's annual debt limit and GO bond authorization level. This requirement was deleted through an amendment included in the Maryland Consolidated Capital Bond Loan of 2009 (fiscal 2010 capital budget bill).

Higher Education Academic Debt to Be Authorized

CDAC recommends limiting new debt authorization for academic facilities to \$27 million in the 2010 legislative session, which is the same amount authorized in the 2009 legislative session. The long-range plan adopted by the committee sets the annual authorization for academic facilities bonds at \$27 million for fiscal 2011-2015. CDAC notes that the proposed capital financing programs for the public higher education systems result in a debt burden level, measured as debt service as a percentage of operating revenues plus State appropriations is within the 4.5% ratio. Academic bond issuances are discussed in Chapter 6.

Governor's Proposed Allocation

Since CDAC's recommendation, the Governor has offered a preliminary allocation of the GO bond authorizations. In accordance with Section 8-113 of the State Finance and Procurement Article, the Governor notified the General Assembly on the level of State debt that is advisable. The Governor accepted the recommendation of CDAC and provided the following preliminary allocation of the \$990 million debt authorization, as shown in **Exhibit 2.2**.

Exhibit 2.2 Governor's Proposed General Obligation Bond Capital Program

	<u>GO Debt</u>
General Construction – State-owned Facilities	\$460,000,000
Public School Construction	250,000,000
Other Special Projects – Grants and Loans	280,000,000
Total	\$990,000,000

Source: Governor's Office, October 15, 2009

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;
- Qualified Zone Academy Bonds (QZABs) backed by the full faith and credit of the State;
- Qualified School Construction Bonds (QSCBs) backed by the full faith and credit of the State;
- 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 (GARVEEs) 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 (WQFA), 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 2011 through 2015.

New General Obligation Bond Authorizations

The Capital Debt Affordability Committee (CDAC) recommended a limit of \$990 million for new authorizations of GO bonds during the 2010 session. The recommendation no longer includes an amount for tobacco buyout financing, as required by Chapter 103 of 2001, as the requirements of this Act as amended have been fulfilled.

The committee's recommendation for the 2010 session includes the removal of the additional \$150 million in new authorizations recommended for the 2009 session which were used to shift planned operating budget expenditures to the capital budget. These additional authorizations were considered one-time in nature and, therefore, not built into the base. The recommended limit for the 2010 session continues the policy to include a 3% annual increase (approximately \$30 million annually through the five-year forecast) to account for inflation and program growth. Taken together, these two actions result in a recommendation for the 2010 session which is \$120 million lower than what was authorized in the 2009 session.

Exhibit 3.1 shows that the committee's long-term forecast for new GO bond authorization levels, as reflected in its 2009 report, recommends a total of \$5.25 billion in authorizations from the 2010 through 2014 sessions. This amount is equal to the amount proposed by CDAC in its 2008 report.

Exhibit 3.1

Effect of New Policy on GO Bond Authorizations

2010-2014 Legislative Sessions

(\$ in Millions)

<u>Session</u>	<u>2008 Report Recommended Authorizations</u>	<u>2009 Report Recommended Authorizations</u>	<u>Difference</u>
2010	\$1,100	\$1,100	\$0
2011	990	990	0
2012	1,020	1,020	0
2013	1,050	1,050	0
2014	1,080	1,080	0
Total	\$5,250	\$5,250	\$0

GO: general obligation

Source: *Report of the Capital Debt Affordability Committee on Recommended Debt Authorizations*, 2008 and 2009

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 2010 through 2018 would be issued. **Exhibit 3.2** compares the issuance stream projected by CDAC in its 2008 report and the 2009 Department of Legislative Services estimate to reveal \$34 million less in issuances through fiscal 2018. The most significant changes occur in fiscal 2010 and 2011. To take advantage of the low rates attributable to Build America Bonds, the Treasurer's Office has issued a third series of bonds in October 2010 (in most years, there are only issuances in March and August). This results in an additional \$200 million issued in fiscal 2010 and a corresponding decrease in issuances in fiscal 2011. The cost of Build America Bonds is analyzed in Chapter 5.

Exhibit 3.2 Proposed Issuance Stream Fiscal 2010-2018 (\$ in Millions)

<u>Fiscal Year</u>	<u>2008 Report</u>	<u>2009 Estimate</u>	<u>Increase</u>
2010	\$910	\$1,160	\$250
2011	970	770	-200
2012	1,000	975	-25
2013	1,030	980	-50
2014	1,050	1,040	-10
2015	1,070	1,065	-5
2016	1,100	1,100	0
2017	1,130	1,125	-5
2018	1,147	1,158	11
Total	\$9,407	\$9,373	-\$34

Source: 2008 Report: *Report of the Capital Debt Affordability Committee on Recommended Debt Authorizations*, 2008; 2009 Estimate: Department of Legislative Services, November 2009

The table in Appendix 2 also indicates the expected issuances of current authorizations. At the beginning of fiscal 2010, approximately \$2.3 billion in debt was authorized by the General Assembly but not issued. The CDAC report assumes that \$1,160 million of this debt will be issued in fiscal 2010, \$463 million in fiscal 2011, and the remainder issued between fiscal 2012 and 2018.

General Obligation Bond Debt Service Costs

Exhibit 3.3 shows that debt service costs are now expected to be \$53 million less than projected in the 2008 report. Debt service costs are attributable to issuance amounts and interest rate assumptions.

Exhibit 3.3 Projected Debt Service Costs Fiscal 2010-2018 (\$ in Millions)

<u>Fiscal Year</u>	<u>2008 Report Estimated Debt Service Costs</u>	<u>2009 Report Estimated Debt Service Costs</u>	<u>Difference</u>
2010	\$783	\$783	\$0
2011	842	846	4
2012	894	885	-9
2013	952	959	7
2014	998	994	-4
2015	1,061	1,055	-6
2016	1,180	1,153	-27
2017	1,236	1,226	-10
2018	1,311	1,303	-8
Total	\$9,257	\$9,204	-\$53

Note: Totals may not sum due to rounding.

Source: *Report of the Capital Debt Affordability Committee on Recommended Debt Authorizations*, 2008 and 2009

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. The following issuances refunded bonds:

- The March 2002 bond sale included \$109.9 million in principal with \$117.2 million placed into escrow (includes a \$7.5 million premium) to refund the prior bonds. Over the term of the bonds, this results in debt service savings of \$10.8 million.
- The July 2002 bond sale included \$290.8 million in principal with \$315.3 million placed into escrow (includes \$24.7 million premium) to refund the prior bonds. The gross savings on this refund is \$17.5 million.
- The February 2003 bond sale issued \$86.1 million in principal and placed \$95.8 million in escrow (includes \$9.6 million premium) to refund previously issued bonds. The debt service savings on this refund are \$6.4 million.
- The October 2004 bond sale issued \$574.7 million in principal and placed \$631.1 million into escrow to refund previously issued bonds. The debt service savings are \$23.1 million.
- The March 2005 bond sale issued \$281.2 million in bonds and placed \$292.3 million into escrow to refund previously issued bonds. The debt service savings are \$11.6 million.

These five recent bond sale refunding issuances reduced GO bond debt service costs by a total of \$69 million. The State Treasurer's Office, with advice from its financial advisor, determines whether refinancing GO debt is advantageous. Should interest rates fall to a point where it is determined that there would be sufficient savings to warrant a refunding, such action would be presented to the Board of Public Works (BPW) for its approval. As part of the October 2009 bond sale, the State Treasurer's Office was poised to issue \$617.9 million in refunding bonds which was estimated would reduce debt service costs by \$23.3 million. Unfortunately, as the date of the bond sale approached, interest rates began to increase thus evaporating any potential savings, and the refunding sale was cancelled. BPW authorized the Treasurer to issue refunding bonds within 90 days of the sale if interest rates decline and savings can be realized.

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.

To date, the State has not paid 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. For example, the State issued \$9.4 million in QZABs in November 2004. The issuance's sinking fund payments total \$7.4 million, compared to \$12.5 million in interest payments for a similar GO bond issuance.

The State Treasurer's Office advises that the federal government has approved new rules regarding arbitrage that preclude the State from investing sinking funds. As a consequence, the State will no longer be 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 are also expected to increase because the State cannot issue all QZABs at par, but must instead offer some coupon. The December 2008 sale includes \$6.1 million in payments for \$5.6 million in principal. Even with a coupon, QZABs are still less expensive than GO bonds.

To date, the State has issued \$42.1 million in QZABs. **Exhibit 3.4** shows that sinking fund payments total \$34.5 million. Another \$26.0 million in QZABS have been authorized. They will need to be issued by December 2011.

Exhibit 3.4
Maryland QZAB Issuances
(\$ in Thousands)

<u>Authorizing Legislation</u>	<u>Date Issued</u>	<u>Amount Authorized</u>	<u>Amount Issued</u>	<u>Total Payments</u>	<u>Annual Sinking Fund Payment</u>
Chapter 322 of 2000 ¹	Nov. 2001 ¹	\$9,828	\$9,828	\$13,320	\$888
Chapter 139 of 2001 ¹	Nov. 2001 ¹	8,270	8,270	n/a ¹	n/a ¹
Chapter 55 of 2003	Nov. 2004	9,043	9,043	7,356	490
Chapter 431 of 2005 ²	Nov. 2006 ²	9,364	4,378	3,609	241
Chapter 431 of 2005 ²	Nov. 2007 ²	n/a ²	4,986	4,089	272
Chapter 585 of 2007	Dec. 2008	11,126	5,563	6,142	508
Total		\$47,631	\$42,068	\$34,515	\$2,400

QZAB: Qualified Zone Academy Bond

¹ November 2001 issuance includes authorizations made in 2000 and 2001.

² QZABs authorized in Chapter 431 of 2005 are issued in two bond sales.

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

Source: State Treasurer's Office

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.

QSCBs are tax credit bonds entitling the holder of the bond to a tax credit for federal income 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.

Maryland has been allocated \$50.4 million in QSCBs in 2009 and another \$50.4 million in 2010. Unused credits may be carried forward for one year. At this point, it is unclear if the market will accept QSCBs or at what price they might be sold. The State Treasurer's Office is marketing QSCBs. If they are issued at par, they could substantially reduce debt service costs. For example, the total debt service costs for issuing \$50.4 million of QSCBs at par is \$24.4 million less than issuing the same amount of GO bonds, saving the State an average of \$1.6 million annually over the 15-year period. If both authorizations are successfully marketed, the State could reduce its debt service by as much as \$3.2 million a year.

Transportation Debt

MDOT issues 15-year, tax-supported consolidated transportation bonds. Bond proceeds are usually earmarked for 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 nine outstanding issuances of nontraditional debt, two 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.

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 2007 special session, the maximum outstanding debt limit was increased to \$2.6 billion (from \$2.0 billion) in recognition of the enactment of several revenue enhancements including transferring a portion of sales tax receipts to the TTF.

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 2010 budget bill set the maximum ceiling for June 30, 2010, at \$1,830,010,000. The Department of Legislative Services (DLS) estimates that as of June 30, 2010, debt outstanding will total \$1,725,255,000, due to smaller bond sales than originally estimated.

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, 2010, MDOT will have net income coverage of 2.6 and pledged taxes coverage of 5.7.

As shown in **Exhibit 3.5**, MDOT has issued new (*e.g.*, nonrefunding) consolidated transportation bonds in 16 of the past 21 years. MDOT issued a total of \$390 million in two issuances for fiscal 2009 with premiums totaling \$12 million. The debt issuance was smaller than the \$415 million anticipated; however, capital expenditures were less than expected reducing the need for cash.

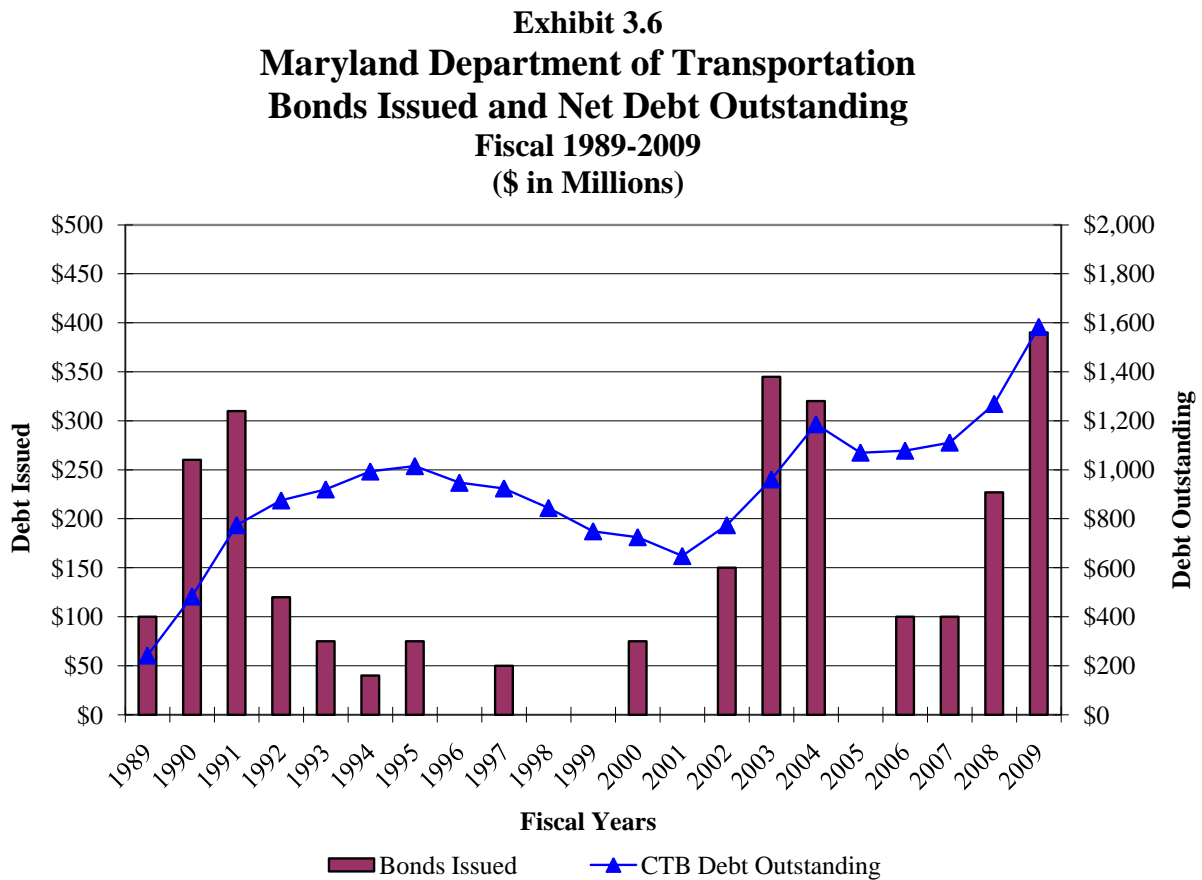
Exhibit 3.5
Consolidated Transportation Bond Issuance*
(\$ in Millions)

<u>Fiscal Year</u>	<u>Bonds Issued</u>
1989	\$100
1990	260
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
Total	\$2,737

*Exclusive of refinancing. Four refinancing issuances were made from fiscal 1989 through 2006, including most recently in fiscal 2004, when a total of \$75,900,000 was refinanced.

Source: Maryland Department of Transportation, September 2009

Exhibit 3.6 illustrates annual bond sales and changes in debt outstanding from fiscal 1989 to 2009. In fiscal 2009, MDOT's net debt outstanding was \$1.583 billion, well under the \$2.600 billion debt outstanding debt limit.



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 decline in fiscal 2010 and begin to grow modestly thereafter as the economy begins to recover. Given the decline in revenue, modest estimates of revenue growth, and higher projections for operating expenditures, bond sales are constrained to maintain coverage ratios throughout the six-year planning period. As a result, the State's special fund transportation capital program is expected to decline from \$745 million in fiscal 2010 to \$420 million in fiscal 2015.

Exhibit 3.7 shows that DLS estimates MDOT will be able to issue approximately \$220 million in fiscal 2010, \$130 million in fiscal 2011, and \$55 million to \$40 million from fiscal 2012 to 2015. The higher bond issuance in 2010 is intended to maintain capital expenditures which diminish the ability to issue debt in later fiscal years.

Exhibit 3.7
Consolidated Transportation Bonds – MDOT Projected Issuances
Fiscal 2010-2015
(\$ in Millions)

<u>Fiscal Year</u>	<u>Amount</u>
2010	\$220
2011	130
2012	55
2013	55
2014	45
2015	40
Total	\$545

Source: Department of Legislative Services

Debt Outstanding

Exhibit 3.8 shows the amount of estimated debt outstanding from fiscal 2010 to 2015. From fiscal 2010 to 2015, debt outstanding is estimated to decline by \$325 million. This decline is due to the amount of debt retired being greater than the amount of debt issued over this period.

Exhibit 3.8
Consolidated Transportation Bonds – MDOT Projected Debt Outstanding
Fiscal 2010-2015
(\$ in Millions)

<u>Fiscal Year</u>	<u>Amount</u>
2010	\$1,725
2011	1,707
2012	1,659
2013	1,603
2014	1,515
2015	1,400

Source: Department of Legislative Services

Debt Service

Exhibit 3.9 shows that debt service costs are projected to increase steadily from \$151 million in fiscal 2010 to \$230 million in fiscal 2015. The growth is attributable to increased principal payments from prior issuances.

Exhibit 3.9
Projected Transportation Debt Service
Fiscal 2010-2015
(\$ in Millions)

<u>Fiscal Year</u>	<u>Projected Debt Service</u>
2010	\$151
2011	165
2012	185
2013	190
2014	210
2015	230
Total	\$1,131

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. **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 issues GARVEE bonds to support construction of the ICC. MDTA issued \$325.0 million in GARVEE bonds on May 22, 2007, with a net premium of \$16.9 million. 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

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.

The most recent energy performance contract lease approved by BPW on October 17, 2007, provides financing for up to \$60 million from October 2007 through September 2010. On October 1, 2009, the Treasurer notified LPC, as required by Section 8-403 of the State Finance and Procurement Article, of plans to issue Invitation for Bids (IFB) for up to \$200 million in new energy performance contract financing for the period beginning December 1, 2009, through June 30, 2011. This is more than twice the most recent approved master lease which provides \$60 million of financing for a similar three-year period. CDAC's 2009 forecast assumes \$65 million in new annual energy leases compared to just \$33 million in the committee's 2008 forecast; although roughly one-third of the new leases are expected to be supported by non-State revenues and not be counted in the debt affordability calculations. This newly proposed master lease further indicates greater planned use of this form of financing in the near term and represents an opportunity to finance capital improvements while reducing State energy costs. Financing terms can be extended for up to 15 years depending upon the expected annual energy savings associated with a specific project. Since the projects are guaranteed by a certified Energy Service Company to reduce energy consumption and, therefore, annual appropriations for utility costs for State agencies, the financing is considered to be budget neutral.

The State Treasurer's Office has historically financed energy performance contracts and equipment leases under a master lease arrangement under which one financier provides a significant amount of funds for an extended period, re-setting the finance rate for each financing based on a percentage of a Treasury index. However, with the severe disruptions in the financial markets over the past year, both the current 2007 Equipment Master Lease and 2007 Energy Master Lease were amended to permit the substitution of the Treasury Interest Rate Swap Index for the Treasury Constant Maturities Index in order to secure approval of financing presented to

BPW. Despite some financial market improvements, the Treasurer has advised that the contractor under both lease programs will no longer be able to meet the commitments to finance the balance that remains under each approved master lease. As a result, rather than procure a master lease, the Treasurer's Office has proposed to issue a series of smaller Energy Performance Contract (EPC) Lease-Purchase and Equipment Lease-Purchase IFBs on a bimonthly basis beginning in October 2009. Each IFB will seek the current market rate, and the award will go to the bidder with the lowest rate without the use of the still unsettled Treasury or other indices. This is intended to ensure that the State receives the current market rates for its lease financings in the face of a very volatile financial market. If approved by LPC, it is the intent of the Treasurer's Office that this revised method of securing financing will extend to the proposed \$200 million EPC financing.

CDAC's 2009 forecast assumes approximately \$15.0 million in new equipment leases annually. The master equipment lease approved by BPW in November 2007 provided \$100.0 million in capital equipment lease-purchase financing on a consolidated basis under the lease-purchase financing program for a period that runs from December 2007 through June 2011. Although these actions would portend greater use of this form of financing in the near term, the State's current budget problems have significantly curtailed the use of equipment leases. Through October 2009, the State Treasurer's Office has only issued \$14.3 million under the most recent \$100.0 million authorization, a portion of which was used to finance on a taxable basis a portion of the total cost to purchase and install new audio/video equipment at Oriole Park at Camden Yards. Another indication of the State's budget constraints with respect to equipment financing is the decline in new capital equipment leases, as the amount of outstanding debt decreases from \$100.2 million as of June 30, 2008, to \$60.0 million as of June 30, 2009.

Exhibit 3.10 shows that tax-supported capital lease debt outstanding totals \$247.7 million as of June 30, 2008, compared to \$213.4 million as of June 30, 2009. The amount of outstanding energy performance contract leases increased by \$13.5 million while outstanding equipment leases decreased by \$40.2 million from June 30, 2008, to June 30, 2009. The out-year forecast also shows current leases and projected activities for equipment and energy performance leases.

Exhibit 3.10
Tax-supported Capital Lease Debt Outstanding
As of June 30, 2008, and June 30, 2009
(\$ in Millions)

<u>State Agency/Facility</u>	<u>Amount Outstanding June 2008</u>	<u>Amount Outstanding June 2009</u>	<u>Difference</u>
State Treasurer's Office			
Capital Equipment Leases	\$100.2	\$60.0	-\$40.2
Energy Performance Projects	50.9	64.4	13.5
Maryland Department of Transportation			
Headquarters Office Building	28.4	27.4	-1.0
Maryland Aviation Administration Shuttle Buses	11.6	10.3	-1.3
Department of General Services			
St. Mary's County Multi-service Center	3.2	2.6	-0.6
Calvert County Multi-service Center	1.3	0.7	-0.6
Towson District Court	1.4	0.7	-0.7
Hyattsville District Court	1.9	1.0	-0.9
Hilton Street Facility	2.0	1.8	-0.2
Prince George's County Justice Center	21.9	21.3	-0.6
Maryland Environmental Service			
Eastern Correctional Institution – Water and Wastewater Facility	1.9	1.3	-0.6
Maryland Transportation Authority			
Annapolis State Office Parking Garage	22.6	22.0	-0.6
Total	\$247.7	\$213.4	-\$34.3

Source: State Treasurer's Office, November 2008 and November 2009

New Federal Tax Credits Could Reduce Costs

The Energy Improvement and Extension Act of 2008, enacted by Congress in October 2008, authorized the issuance of Qualified Energy Conservation Bonds (QECBs) that may be used by state and local governments to finance certain types of energy projects. QECBs are qualified tax credit bonds. These bonds are like QZABs in that they can be issued without

any interest payments. The borrower pays back only the principal of the bond, and the bondholder receives federal tax credits in lieu of the traditional bond interest.

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 enabling legislation set a limit of \$800 million on the volume of energy conservation tax credit bonds that may be issued by state and local governments. However, the American Recovery and Reinvestment Act of 2009 expanded the allowable bond volume to \$3.2 billion. Maryland’s allocation is \$58.4 million and may be sub-allocated to large local governments with populations of 100,000 or more. The Treasurer’s Office is currently evaluating the potential use of QECBs to supplement the State’s EPC program but advises that legislation is needed to allow authorization of this financing tool.

Proposed Real Property Leases Could Be State Debt

The nature of real property leases makes it difficult to project out-year costs since they tend to be one-time opportunities that have a short lead time. For example, there are a wide range of costs as some leases’ total value is less than \$10 million while others is greater than \$40 million. Although CDAC’s forecast does not assume any new real property leases in the out-years, the treatment of real property leases can affect the State’s debt affordability calculations. This became an issue in the 2009 legislative session in the context of the General Assembly’s evaluation of the proposed redevelopment of the State Center Complex in Baltimore and the financing of the new Department of Health and Mental Hygiene (DHMH) public health laboratory. The specific question centered on the different treatment of leases, which are:

- **Capital Lease:** On its balance sheet, the lessee records the asset generally at cost and a corresponding liability for the obligation to make the lease payments. The lease payments are allocated between interest expense and a reduction of the lease liability. The State records capital leases on its balance sheet, and CDAC includes tax-supported capital leases in its analyses of debt affordability if they are supported by State revenues.
- **Operating Lease:** If the lease is accounted for as an operating lease, no asset or liability is recognized on the balance sheet. Rather, the lessee records lease payments under an operating lease as rent expense. At this time, operating leases are not considered to be State debt.

According to generally accepted accounting principles (GAAP), if a lease meets one or more of the following four criteria at its inception, the lease must be classified as a capital lease and should, therefore, be included in the overall debt affordability calculations:

- the lease transfers ownership of the property to the State (lessee) by the end of the lease term;
- the lease allows the State (lessee) to purchase the property at a bargain price at fixed points in the term of the lease and for fixed amounts;
- the term of the lease is 75% or more of the estimated useful economic life of the property; or
- the present value of the State's lease payments is 90% or more of the fair value of the property occupied by the State.

The current analysis does not include the State Center or DHMH lab as State-supported debt because representatives of MDOT and the Department of General Services indicated that they planned to structure any State occupancy leases at State Center with the private developer as an operating lease and, therefore, outside the State's debt affordability calculations. To clarify that this is appropriate, Section 52 of the State operating budget bill included a requirement that the Treasurer's Office evaluate the proposed leases for potential affordability implications prior to the Board of Public Works approving the Master Development Agreement for the proposed State Center project.

The Treasurer's assessment, provided to the budget committees in May 2009, is that the prudent approach would be to assume that the State Center occupancy leases are, or will be, capital leases and that they will impact debt affordability. The same can be said for the new DHMH public health laboratory which, considering the essential public need and use of the facility, makes a capital lease determination and corresponding debt affordability impact even more likely. If these projects are classified as State capital projects, lease payments at State Center upon completion of the project of approximately \$27.7 million annually in fiscal 2014 and escalating to \$46.4 million in 2028 would be factored into the State's debt affordability calculations. The DHMH lab would add \$14.0 million to 21.0 million of annual rent that would have to be included in the affordability calculations.

Insofar as the State Center and public laboratory projects are State projects funded with State revenues, the Department of Legislative Services recommends that the Capital Debt Affordability Committee include these projects as State debt.

Bay Restoration Bonds

The Bay Restoration Fund 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 (WWTPs). The fund is administered by MDE's WQFA. 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. 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. MDE Water Quality Administration's bond counsel has reviewed this issue and concurs 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.

Based on the current priority list and estimated capital cost of ENR upgrades, **Exhibit 3.11** shows that the program projects issuing debt in fiscal 2010 and that by fiscal 2012, debt outstanding will peak at \$498.4 million. Debt service costs increase to \$52.4 million in fiscal 2013. The Septic Fund is operated on a pay-as-you-go (PAYGO) basis and does not involve revenue bond proceeds.

Exhibit 3.11
Bay Restoration Fund
Fiscal 2010-2014
(\$ in Millions)

	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Revenue Bonds Issued	\$150	\$150	\$180	\$0	\$0
Debt Outstanding	194	335	498	473	446
Debt Service	5	20	35	52	52

Source: Maryland Department of the Environment

The bay fund legislation developed clear goals. Current estimates suggest that the funding provided will not be able to meet these goals. MDE estimates that the cost to upgrade the 67 major WWTPs has increased from \$1.113 billion to \$1.539 billion, a difference of \$426.0 million. This increase primarily reflects increased funding projected for the Back River (\$258.0 million), Cox Creek (\$82.0 million), Patapsco (\$25.2 million), and Sod Run (\$12.43 million) upgrade projects. The program plans to issue \$530.0 million in revenue bonds through fiscal 2012. These revenue bonds, in addition to revenues expended from the fund as PAYGO special funds, would fund approximately \$881.0 million of the \$1.539 billion upgrade cost, a difference of \$658.0 million. At this point it is unclear how this funding gap will be

resolved. **The Department of Legislative Services recommends that the Administration and legislature examine the funding and need associated with upgrading wastewater treatment plants and develop a plan that determines what additional funds will be supporting this effort or how costs will be scaled back so that available funds are sufficient to achieve the program's goals.**

Program Open Space Bonds

Program Open Space 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 are intended to backfill the transfer of up to \$70 million in Program Open Space State share unencumbered fund balance per the Budget Reconciliation and Financing Act of 2009 (Chapter 487 of 2009). It is anticipated that the full \$70 million in special bonds will be issued in spring 2010 since the bonds must be issued within one year of the first general fund advances for property purchases, which were approved by the Board of Public Works on June 17, 2009.

Chapter 419 of 2009 requires that debt service on Program Open Space special bonds be paid from the Program Open Space State land acquisition allocation of the State transfer tax and that the debt not be included as State tax-supported debt by the CDAC until the bonds have been issued. The law also allows real property to be acquired if the offer by the State is less than the lowest approved appraisal for the property.

Exhibit 3.12 shows that the annual debt service costs are expected to be \$7 million. This assumes that the bonds will receive an investment grade rating and that debt service costs do not change significantly. To sell the bonds, a portion of the proceeds may be required to support a reserve fund. The estimates can vary depending on the rating of the bonds, market conditions at the time of the bond sale, and reserve fund requirements.

Exhibit 3.12
Program Open Space Special Bonds Debt Service Payment Schedule
Fiscal 2010-2015
(\$ in Millions)

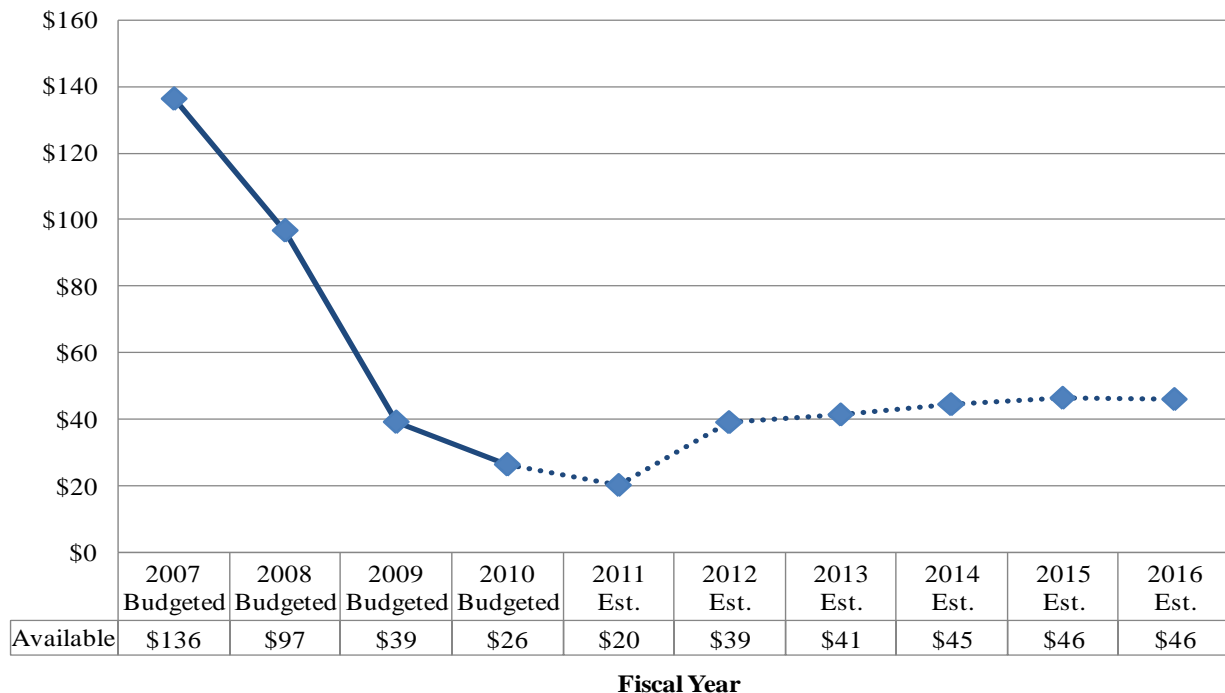
	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Revenue Bonds Issued	\$70	\$0	\$0	\$0	\$0	\$0
Debt Outstanding	70	67	63	60	56	52
Debt Service	0	7	7	7	7	7

Notes: The debt issuance and debt service schedule assumes the following: (1) all \$70.0 million will be issued in spring 2010; (2) 5% interest; (3) interest and principal payments after one year, instead of three years (which is customary for GO bonds); and (4) bonds are retired in 15 years.

Source: Department of Legislative Services, November 2009

Exhibit 3.13 shows that transfer tax revenues allocated to Program Open Space State land acquisitions decline from \$136 million in fiscal 2007 to an estimated \$20 million in fiscal 2011 and then increase to \$39 million in fiscal 2012. Although there have been fluctuations in the State transfer tax receipts in recent years, the minimum projected revenues are almost three times debt service costs. The revenue fluctuations have been due to fluctuations in the number and value of housing sales, and the budgeted fluctuations have been due to overestimates of revenue for particular fiscal years. Issuing the bonds reduces the amount available for projects.

Exhibit 3.13
Program Open Space State Land Acquisition Funding
Available to Support Debt Service
Fiscal 2007-2016
(\$ in Millions)



Est.: Estimated

Notes: The budgeted transfer tax figures were used for fiscal 2007-2010, and the Bureau of Revenue Estimates estimated figures for fiscal 2011-2016. The assumption is that the Maryland Heritage Areas Authority would receive \$3.0 million in all but fiscal 2011 (when a figure of \$349,000 is used to balance the formula) and that a maximum of \$1.5 million required for the Baltimore City Direct Grant would be taken out of the State land acquisition amount.

Source: Bureau of Revenue Estimates; Department of Legislative Services

Maryland Stadium Authority

MSA was created in 1986 (Chapter 283) to construct and operate stadium sites for professional baseball and football in the Baltimore area. MSA is authorized to issue 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 3.14** lists MSA's authorized debt, debt outstanding, and annual debt service. The exhibit includes an expected increase in debt service for the baseball and football stadiums due to planned capital improvements.

Exhibit 3.14
Maryland Stadium Authority
Revenue Debt Authorizations, Debt Outstanding, and Debt Service
(\$ in Millions)

<u>Project</u>	<u>Authorized</u>	<u>Outstanding as of October 2009</u>	<u>Debt Service Fiscal 2010</u>
Baseball and Football Stadiums	\$235.0	\$179.1	\$22.0
Baltimore City Convention Center	55.0	25.0	5.1
Montgomery County Conference Center	23.2	18.9	1.8
Hippodrome Performing Arts Center	20.3	16.2	1.8
Ocean City Convention Center	17.3	8.7	1.5
Camden Station	8.7	8.1	0.6
Total	\$359.5	\$256.0	\$32.8

Note: Numbers may not sum 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 \$235.0 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. The last such reallocation took place after MSA sold \$10.25 million of Sports Facilities Taxable Lease Revenue Refunding Bonds in July 2002. These bonds were sold to refund the principal of bond anticipation notes that were issued to satisfy an arbitration panel's ruling that MSA deposit \$10.0 million in a special fund from which improvements to Oriole Park at Camden Yards are funded.

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 2010 debt service cost for the revenue bonds is \$5.1 million and subject to State appropriation. Chapter 320 of 2008 extended the date by which MSA is obligated to contribute two-thirds of the operating deficits of the Baltimore Convention Center to December 31, 2014. 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 2010 debt service cost for these revenue bonds is \$1.5 million and subject to State appropriation. The State is also statutorily required to contribute one-half toward OCCC's annual operating deficit through fiscal 2015 and \$50,000 annually to a capital improvement fund.

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 fund 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. The fiscal 2010 debt service costs for these revenue bonds are \$1.8 million. Montgomery County contributed \$13.7 million for construction and another \$2.5 million for project-related enhancements. The project opened in 2004.

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 averaging \$1.8 million annually for the 20-year term of the bond are derived from the State's general fund subject to appropriation. More specifically, 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. Ticket surcharge revenues are estimated at \$777,000 in fiscal 2010.

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 are 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 2010 debt service costs for the authority's revenue bonds are about \$691,000 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 2004 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, the authority is authorized to provide assistance but is not authorized to issue revenue bonds to only one project, Coppin State University's Physical Education Complex.

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.

In fiscal 2009, the authority completed a study on an expansion of the Ocean City Convention Center for the town of Ocean City. Also, MSA is currently undertaking a feasibility study on behalf of Baltimore City on the possible modernization of the Baltimore City circuit court complex and the possible construction of a new courthouse.

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.

Chapter 4. Economic Factors and Affordability Analysis

Chapter 43 of 1978 created the Capital Debt Affordability Committee (CDAC). The committee's 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; and
- 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. DLS is using the Board of Revenue Estimates' (BRE) September 2009 personal income estimates, which **Exhibit 4.1** shows are lower than personal income estimates used by CDAC. Changes in personal income can have a large impact on the affordability of the State's debt level. Improvements in personal income levels have the effect of improving the affordability picture.

In contrast, lower personal income results in higher ratios of debt outstanding for any given level of debt.

Exhibit 4.1
Maryland Personnel Income – Historical Data and Projections
Comparison of DLS and CDAC Projections
(\$ 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>
2009	\$269,168		\$274,074		-\$4,906
2010	276,015	2.54%	282,840	3.20%	-6,825
2011	289,004	4.71%	294,943	4.28%	-5,939
2012	305,640	5.76%	310,019	5.11%	-4,379
2013	323,714	5.91%	328,067	5.82%	-4,353
2014	341,007	5.34%	347,512	5.93%	-6,505
2015	356,503	4.54%	365,601	5.21%	-9,098

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

Source: CDAC Personal Income: *Capital Debt Affordability Committee Report*, September 2009

Revenue Projections

Exhibit 4.2 shows that DLS' revenue projections are less than CDAC's through fiscal 2015. DLS' revenues are the September 2009 revenues projected by BRE, which reflect the continued economic slowdown. Lower revenues tend to reduce debt service capacity. Over the past two years, revenue write-downs have been substantial. CDAC's 2007 report (prepared before the special session) assumed just over \$18 billion in fiscal 2010 revenues, which is \$2 billion more than currently projected.

Exhibit 4.2
Revenue History and Projections
(\$ in Millions)

Fiscal Year	General Funds	State Property Tax	Other ABF	U.S. Treasury	ETF	Subtotal	MDOT	GARVEE	Stadium	Bay Rest. Fund	Total	CDAC Est.	Diff.
2009	\$12,879.2	\$701	\$81	\$0	\$0	\$13,661	\$2,171	\$441	\$20	\$56	\$16,349	\$16,319	\$29
2010	12,307.6	751	66	0	39	13,164	2,120	441	20	56	15,801	15,961	-160
2011	12,733.9	777	44	1	13	13,569	2,197	441	20	57	16,284	16,568	-283
2012	13,390.0	799	2	2	366	14,559	2,323	441	20	57	17,400	17,878	-478
2013	14,221.3	820	2	2	614	15,660	2,435	441	20	58	18,613	18,871	-258
2014	14,959.9	841	2	2	664	16,469	2,547	441	20	58	19,536	19,723	-187
2015	15,614.8	863	2	2	677	17,159	2,617	441	20	59	20,296	20,515	-219

ABF: Annuity Bond Fund

CDAC: Capital Debt Affordability Committee

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

GARVEE: Grant Anticipation Revenue Vehicle

MDOT: Maryland Department of Transportation

Source of Estimates:

(1) General Fund, Use of Premium, and Maryland Department of Transportation: Department of Legislative Services, November 2009;

(2) State Property Tax, Stadium, GARVEE, Bay Restoration Fund, and Capital Debt Affordability Committee Revenues: *Capital Debt Affordability Committee Report*, September 2009

Affordability Analysis

DLS has prepared a revised estimate of State debt outstanding to personal income and State debt service to revenues. The State debt GO bond issuances, shown in **Exhibit 4.3**, are consistent with CDAC debt limits. The only substantial change in assumptions relates to the Maryland Department of Transportation (MDOT) consolidated transportation bond issuances. DLS projects that the revenues supporting these bonds will be substantially less than is currently projected by MDOT. In keeping with current debt policies and bond covenants, MDOT bond issuances in the DLS forecast are reduced by \$880 million from fiscal 2010 to 2015, which reduces debt outstanding. **Exhibit 4.4** shows that, for the forecast period, debt outstanding as a percent of personal income peaks at 3.47% in fiscal 2010. **Exhibit 4.5** shows that the debt service as a percent of revenues increases throughout the forecast period and peaks at 7.61% in fiscal 2017. These peaks are quite a bit higher than they were one year ago, when debt outstanding peaked at 3.14% and debt service peaked at 6.88 percent, reflecting declines in personal income and revenue estimates.

Exhibit 4.3
New Debt Issuances
(\$ in Millions)

Fiscal Year	GO Bonds Authorized	GO Bond Issuances	MDOT Bonds	GARVEE	Capital Leases	Stadium Authority	Bay Restoration Bonds
2010	\$990	\$1,160	\$220	\$0	\$32	\$14	\$150
2011	1,020	770	130	0	15	0	150
2012	1,050	975	55	0	15	0	180
2013	1,080	980	55	0	15	0	0
2014	1,110	1,040	45	0	15	0	0
2015	1,140	1,065	40	0	15	0	0
2016	1,170	1,100	0	0	15	0	0
2017	1,200	1,125	0	0	15	0	0
2018	1,230	1,158	0	0	15	0	0
2019	1,270	1,185	0	0	15	0	0

GARVEE: Grant Anticipation Revenue Vehicle

GO: general obligation

MDOT: Maryland Department of Transportation

Source: Department of Legislative Services, November 2009

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

<u>Fiscal Year</u>	<u>MDOT Bonds</u>	<u>GARVEE</u>	<u>Capital Leases</u>	<u>Stadium Authority</u>	<u>Bay Restoration Bonds</u>	<u>Total Tax-supported Debt</u>	<u>Fiscal Year</u>
2009	\$1,582.9	\$704.4	\$213.4	\$256.0	\$46.8	\$8,677.1	2009
2010	1,725.3	651.8	209.6	253.2	194.2	9,590.5	2010
2011	1,707.1	596.9	193.7	234.6	334.9	9,883.5	2011
2012	1,659.2	539.4	179.8	214.7	498.4	10,356.8	2012
2013	1,603.3	479.0	168.3	193.5	473.0	10,571.8	2013
2014	1,514.8	415.8	155.2	171.0	446.3	10,797.2	2014
2015	1,400.3	349.4	143.2	148.3	418.1	10,983.7	2015
2016	1,235.7	279.8	131.0	129.2	388.4	11,063.4	2016
2017	1,052.0	206.6	119.7	110.3	357.2	11,113.8	2017
2018	871.7	129.7	110.4	90.1	324.3	11,141.3	2018
2019	727.0	48.9	100.9	68.9	289.6	11,199.9	2019

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

2009	0.59%	0.26%	0.08%	0.10%	0.02%	3.22%	2009
2010	0.63%	0.24%	0.08%	0.09%	0.07%	3.47%	2010
2011	0.59%	0.21%	0.07%	0.08%	0.12%	3.42%	2011
2012	0.54%	0.18%	0.06%	0.07%	0.16%	3.39%	2012
2013	0.50%	0.15%	0.05%	0.06%	0.15%	3.27%	2013
2014	0.44%	0.12%	0.05%	0.05%	0.13%	3.17%	2014
2015	0.39%	0.10%	0.04%	0.04%	0.12%	3.08%	2015
2016	0.33%	0.07%	0.03%	0.03%	0.10%	2.96%	2016
2017	0.27%	0.05%	0.03%	0.03%	0.09%	2.83%	2017
2018	0.21%	0.03%	0.03%	0.02%	0.08%	2.70%	2018
2019	0.17%	0.01%	0.02%	0.02%	0.07%	2.58%	2019

GARVEE: Grant Anticipation Revenue Vehicle

MDOT: Maryland Department of Transportation

Source:

(1) General Fund, Use of Premium, and Maryland Department of Transportation: Department of Legislative Services, November 2009; and

(2) State Property Tax, Stadium, GARVEE, Bay Restoration Fund, and Capital Debt Affordability Committee Revenues: *Capital Debt Affordability Committee Report*, September 2009

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

<u>Fiscal Year</u>	<u>General Obligation</u>	<u>MDOT Bonds</u>	<u>GARVEE</u>	<u>Capital Leases</u>	<u>Stadium Authority</u>	<u>Bay Restoration Bonds</u>	<u>Total Tax-supported Debt Service</u>	<u>Fiscal Year</u>
2009	\$744.8	\$142.4	\$36.1	\$47.5	\$31.9	\$0.0	\$1,002.7	2009
2010	782.8	150.7	87.5	45.7	32.9	4.7	1,104.2	2010
2011	846.2	164.5	87.5	40.9	33.9	4.7	1,177.7	2011
2012	885.0	184.8	87.5	38.2	34.1	19.6	1,249.1	2012
2013	959.2	189.8	87.5	34.7	34.1	27.5	1,332.8	2013
2014	993.9	210.5	87.5	35.7	34.2	37.5	1,399.2	2014
2015	1,054.7	230.2	87.5	32.9	32.9	47.5	1,485.6	2015
2016	1,152.9	234.6	87.5	32.5	28.0	52.4	1,587.9	2016
2017	1,226.1	245.5	87.5	31.7	26.6	52.4	1,669.8	2017
2018	1,303.1	233.1	87.5	28.7	26.7	52.4	1,731.5	2018
2019	1,349.7	190.8	87.5	28.5	26.3	52.4	1,735.1	2019

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

2009	4.56%	0.87%	0.22%	0.29%	0.20%	0.00%	6.13%	2009
2010	4.95%	0.95%	0.55%	0.29%	0.21%	0.03%	6.99%	2010
2011	5.20%	1.01%	0.54%	0.25%	0.21%	0.03%	7.23%	2011
2012	5.09%	1.06%	0.50%	0.22%	0.20%	0.11%	7.18%	2012
2013	5.15%	1.02%	0.47%	0.19%	0.18%	0.15%	7.16%	2013
2014	5.09%	1.08%	0.45%	0.18%	0.18%	0.19%	7.16%	2014
2015	5.20%	1.13%	0.43%	0.16%	0.16%	0.23%	7.32%	2015
2016	5.46%	1.11%	0.41%	0.15%	0.13%	0.25%	7.53%	2016
2017	5.59%	1.12%	0.40%	0.14%	0.12%	0.24%	7.61%	2017
2018	5.71%	1.02%	0.38%	0.13%	0.12%	0.23%	7.58%	2018
2019	5.68%	0.80%	0.37%	0.12%	0.11%	0.22%	7.30%	2019

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

Source:

(1) General Fund, Use of Premium, and Maryland Department of Transportation: Department of Legislative Services, November 2009; and

(2) State Property Tax, Stadium, GARVEE, Bay Restoration Fund, and Capital Debt Affordability Committee Revenues: *Capital Debt Affordability Committee Report*, September 2009

Exhibit 4.6 shows that debt outstanding ratios based on DLS personal income estimates are higher than those estimated by CDAC in fiscal 2010 and 2011, while the CDAC estimates are higher in the out-years. The difference between the two ratios is largely related to MDOT's debt service costs, which are substantially less in the DLS estimate. This is attributable to reducing the amount of bonds sold by MDOT.

Exhibit 4.6
State Debt to Personal Income
Comparison of DLS and CDAC Estimates

<u>Fiscal Year</u>	<u>DLS</u>	<u>CDAC</u>
2010	3.47%	3.34%
2011	3.42%	3.41%
2012	3.39%	3.49%
2013	3.27%	3.43%
2014	3.17%	3.32%
2015	3.08%	3.25%
2016	2.96%	3.18%
2017	2.83%	3.11%
2018	2.70%	3.03%
2019	2.58%	2.96%

CDAC: Capital Debt Affordability Committee

DLS: Department of Legislative Services

Source: *Capital Debt Affordability Committee Report*, September 2009

Similarly, **Exhibit 4.7** shows that debt service ratios based on the DLS baseline forecast of general fund revenues are greater than those estimated by CDAC from fiscal 2010 to 2012. After 2014 the CDAC ratios are higher. The difference between the two ratios is largely related to MDOT's debt service costs, which are substantially less in the DLS estimate and offset the impact of lower DLS revenue estimates. This is attributable to reducing the amount of bonds sold by MDOT.

Exhibit 4.7
State Debt Service to State Revenues
Comparison of DLS and CDAC Estimates

<u>Fiscal Year</u>	<u>DLS</u>	<u>CDAC</u>
2010	6.99%	6.92%
2011	7.23%	7.16%
2012	7.18%	7.15%
2013	7.16%	7.28%
2014	7.16%	7.32%
2015	7.32%	7.47%
2016	7.53%	7.74%
2017	7.61%	7.93%
2018	7.58%	8.02%
2019	7.30%	7.82%

CDAC: Capital Debt Affordability Committee

DLS: Department of Legislative Services

Source: *Capital Debt Affordability Committee Report*, September 2009

Chapter 5. Analysis of Factors Influencing General Obligation 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, the following data were collected and analyzed for the 47 bond sales since March 1991 (refunding sales are excluded): 40 competitively bid, tax-exempt; 3 competitively bid, taxable GO bond sales; 2 competitively bid, Build America Bonds (BABs); and 2 negotiated, retail bond sales:

- true interest cost;
- Delphis Scale¹ for 15-year, 10-year, or 5-year tax-exempt bonds depending on the average maturity of the issuance;
- 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;

¹ Because of the tremendous size of the State and municipal bond market, there are independent companies that gather information about the yield on State and municipal bonds. One such independent company, the Delphis Hanover Corporation, prepares an index that measures the average yield on State and municipal bonds based on daily market activity (Delphis Scale). When collecting data, the Department of Legislative Services called the Delphis Hanover Corporation to discuss how they estimate bond yields. Corporate representatives advised that they have been estimating yields since 1963 and collect the yield for every bond issue over \$10 million for competitive and negotiated sales, as well as secondary market data. With respect to the secondary market, they exclude any outliers. Maryland has collected the estimated 10-year yield for AAA bonds for every bond sale since 1991.

- Consumer Price Index to examine if inflation affected markets perception of the amount of debt sold;
- 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 variable previously listed and identifies six statistically significant variables at the 95% confidence level that affect the TIC. All the other previously identified statistics were not statistically significant at the 95% confidence level. **Exhibit 5.1** shows the data for the statistically significant variables.

- ***Delphis Scale:*** The key variable is the Delphis Scale. This is an estimate of the market rate for AAA-rated State and municipal bonds. The Delphis Hanover Corporation prepares an index that measures the average yield on State and municipal bonds based on daily market activity (Delphis Scale). DLS has collected the estimated yield for AAA bonds for every bond sale since 1991. For taxable debt issuances, which mature within 7 years and have an average maturity of 5 years, the yield for 5-year maturities is used. For BABs, which mature in 14 or 15 years, the index for 15-year maturities is used. The Delphis Scale reflects the rate of non-callable bonds, while Maryland bonds generally are callable. Consequently, Maryland's bonds are higher value bonds than the market ratio, since they give the issuer the opportunity to redeem the bonds early. This may explain why the Delphis Rate coefficient, which is 1.064, exceeds 1.0.
- ***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 United States 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.

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>
Delphis Scale	1.064	0.021	1.06	49.99	0.00	0.432	High beta suggests that the Delphis Scale has a strong relationship with the TIC.
MD PI/US PI	-1.522	0.284	-0.09	-5.368	0.00	0.700	Negative coefficient suggests that as the Maryland economy strengthens, compared to the United States, the TIC declines.
Amount Sold	6.49×10^{-10}	0.000	0.09	4.320	0.00	0.430	Every \$100 million sold adds 0.06% (6 basis points) to the TIC.
Taxable Debt	1.651	0.075	0.47	21.87	0.00	0.413	Taxable debt adds 1.65% (165 basis points) to TIC.
BABs	-0.915	0.070	-0.22	-13.04	0.00	0.702	BABs yields are 0.92% (92 basis points) below tax-exempt yields.
Retail	0.245	0.067	0.06	3.639	0.00	0.762	Retail bonds are 0.25% (25 basis points) more expensive than traditional bonds.
Constant	2.989	0.652	n/a	4.568	0.00	n/a	

BABs: Build America Bonds

Ind.: Independent

MD PI/US PI: Maryland Total Personal Income to the 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 2009

- ***Amount of Debt Sold:*** The various bond sales issuances range from \$20 million in taxable bonds issued in July 2005 to \$500 million in competitively sold tax-exempt bonds issued in July 2003. Issues that are particularly small or large can be more expensive. Smaller issues may be more difficult for underwriters to market and larger issues may be more difficult for issuers to absorb. Since the coefficient is positive, Maryland's TIC increases as the amount of bonds sold increases. This is to be expected, since Maryland is a highly rated State that issues bonds in fairly large quantities; in other words, Maryland bonds are easy to market (because the debt is high quality and well-known) but difficult to absorb (because the issuances are large). The analysis estimates that every additional \$100 million issued increases the TIC by 0.06% (6 basis points).
- ***Taxable Debt:*** The State has also issued three taxable debt series. Since investors are required to pay federal income taxes on the interest earnings of taxable bonds, these bonds require a higher return and sell at a higher TIC. All the taxable bonds mature within seven years and are not callable. The analysis estimates that the TIC of taxable bonds is 1.65% (165 basis points) greater than the TIC for tax-exempt bonds.
- ***Build America Bonds:*** In February 2009, ARRA authorized the issuance of BABs. The bonds are taxable bonds that support the same types of projects that traditional tax-exempt bond support. The difference is that the buyers do not receive any federal tax credits or deductions so that the interest earnings are subject to federal taxes. Instead, Maryland receives a subsidy equal to 35% of the interest costs from the federal government. In concept, the bonds expand the number of buyers of State and municipal debt since the bonds are also attractive to individuals and institutions that do not pay federal taxes. Because the tax-exempt bonds benefit is greater for shorter maturities, the State issued tax-exempt bonds with shorter maturities and BABs with longer maturities. In August, Maryland sold \$50 million in BABs, all maturing after 15 years, and in October, Maryland sold \$50.8 million in BABs, all maturing in 13 to 15 years. The analysis estimates that the TIC of BABs is 0.92% (92 basis points) less than the TIC for tax-exempt bonds.
- ***Retail Bonds:*** In 2009, the State issued retail bonds through a negotiated sale. The bonds were sold over a three-day period beginning five days before the sale to institutional investors. The sale gave Maryland citizens the first priority to buy GO bonds. The sales totaled \$225.8 million in March 2009 and \$235.0 million in August 2009. The analysis estimates that the TIC for retail bonds is 0.25% (25 basis points) greater than the TIC for competitively sold bonds to institutional investors.

DLS also examined a number of variables that appeared to influence the TIC but were not statistically significant at a 95% confidence level. These variables are:

- ***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. In the 2008 analysis, this cost of the call was estimated to be 0.08% (8 basis points). In this analysis, this variable is no longer statistically significant at a 95% confidence level and is not included in the equation. The analysis of the call is complicated by the number of different calls and circumstances under which they are issued. While this may make financial sense, it adds variables that reduce the confidence level of the call variable.
- ***Use of a Financial Advisor:*** The State has used a financial advisor for all but four of the bond sales. While coefficient is negative, implying that using a financial advisor reduces borrowing costs, the t-test was not statistically significant.

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. For example, all six of the variables confidence level exceeds 99%, which is well above the standard 95% used in assessing if a variable is statistically significant. **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	853.7	We are almost 100% confident that the independent variables influence the dependent variable.
Margin of error	Standard error of the estimate	0.081	We expect the actual TIC to be within 0.08% (8 basis points) of the estimate.
Estimate in relation to actual data	Adjusted R Square	0.991	The model's estimates are within 1% of the actual data.
Serial or Autocorrelation	Durbin-Watson	2.392	The ideal value is 2.0. If the number deviates too far from 2, 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 2009

Policy Implications

Build America Bonds Are Less Expensive Than Tax-exempt GO Bonds

The Treasurer's Office surmised that BABs with longer maturities would be less expensive than tax-exempt bonds with longer maturities. Consequently, the longer maturities in the August and October bond sales were issued as BABs. The DLS analysis confirms that savings were realized by issuing BABs; the equation estimates that the yield on the BABs (after adjusting for the federal subsidy) is 0.92% (92 basis points) less than the yield for 15-year tax-exempt bonds. This reduces the debt service costs almost \$1.0 million annually on the \$108.2 million that was issued. **Insofar as Build America Bonds reduce debt service costs by an estimated 92 basis points, DLS recommends that the State continue to issue Build America Bonds.**

Smaller Issuances Are Less Expensive Than Larger Issuances

Since 1991, Maryland has issued bonds 47 times. Bond sales vary from \$20 million to \$500 million with an average size of \$210 million, a median size of \$200 million, and a standard deviation of approximately \$120 million. The DLS analysis estimates that increasing the size of a bond sale \$100 million increases the sale's TIC by 0.0649% (6 basis points). This increases annual debt service costs by just under \$6,500 for every \$100 million sold. The implication is that the State can reduce borrowing costs by reducing the amount of bonds sold on occasion and increasing the number of bond sales. Because the additional costs attributable to increased bond sales are quite modest, increasing the number of bond sales may result in additional costs that offset savings. However, if GO bond authorizations and issuances continue to increase, the Treasurer's Office may want to consider the costs and benefits associated with increasing the number of bond sales.

Retail Sales Are More Expensive Than Competitively Bid Sales to Institutional Investors

In 2009, Maryland issued its first two retail sales totaling \$225.8 million in March and \$235.0 million in August. Based on the regression analysis, DLS estimates that retail bonds' yield is approximately 0.25% (25 basis points) greater than the cost of competitively sold bonds to institutional investors. This is offset by savings attributable to reducing the total amount of bonds sold to institutional investors; issuing retail bonds reduces the TIC of bonds sold to institutional investors by 0.06% (6 basis points). DLS estimates that the net effect is that retail bonds were 0.10% (10 basis points) more expensive. Insofar as the bonds sold at a premium, the higher yield on the retail bonds did not result in higher debt service costs but instead resulted in a reduced bond sale premium. DLS estimates that the two retail bond sales totaling \$460.8 million would have realized an additional \$3.5 million in bond sale premiums if the bonds had been sold to institutional investors through a competitive sale. **Since retail bonds are more expensive than bonds sold to institutional investors through a competitive process, it is recommended that subsequent bond sales be limited to one retail sale per year. DLS recognizes that the data from the first two retail sales is insufficient to conclusively estimate the cost of retail bonds and recommends that subsequent bond sales be evaluated.**

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 (MHHEFA), 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 \$85 per capita, adjusted annually for inflation. Maryland's 2009 allocation totaled \$507 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 Section 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.

Exhibit 6.1 provides the calendar 2005 through 2009 figures for the amount of available tax-exempt bond authority and the level of issuances made under the volume cap limits. In 2005, total issuances under the volume cap were relatively low, and Maryland abandoned allocations carried forward from previous years for the first time. While the State was also forced to abandon a portion of its carry-forward allocation again in 2006, which is to be expected given the large amount of accumulated carry forward from the three previous years, the amount of issuances in 2006 and 2007 increased substantially. The increase is attributable to large issuances by CDA in support of its single-family mortgage programs. Though the CDA did not issue any debt directly against the 2008 allocation, it was still able to issue single- and multi-family bonds that year because prior year carry forwards were sufficient to support the activity.

Exhibit 6.1
Allocation of Private Activity Bonds
Calendar 2005-2009
(\$ in Millions)

	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009 Est.</u>
Fund Sources					
Annual Cap	\$444.6	\$448.0	\$477.3	\$477.6	\$507.0
2008 Special Housing Allocation	-	-	-	175.9	-
Carry Forward from Prior Years	945.4	1,040.6	699.0	390.8	624.0
Total Capacity Available	\$1,390.0	\$1,488.6	\$1,176.3	\$1,044.3	\$1,131.0
Issuances					
Mortgage Revenue Bonds	\$95.8	\$564.9	\$369.7	\$98.7	\$275.2
Multi-family Housing	133.0	44.9	37.8	106.0	9.0
Housing Not Broken Out	34.6	-	90.0	21.2	-
Industrial Development Bonds	8.1	17.6	103.0	-	-
Exempt Facilities	3.8	-	-	38.6	-
Other	-	-	-	-	-
Total Issuances	\$275.3	\$627.4	\$600.5	\$264.5	\$284.2
Prior Year Carry Forward Abandoned	74.1	162.2	12.5	55.8	
Carry Forward	\$1,040.6	\$699.0	\$563.3	\$724.0	\$846.8

Note: Numbers may not sum due to rounding.

Source: Bond Market Association; Department of Business and Economic Development; Department of Housing and Community Development

A portion of this debt also represents refinances and taxable bonds. Debt issued for these purposes are not subject to the federal volume cap. These issuances nonetheless mark a sizable decrease in CDA bond activity as demand for mortgage products dropped off in 2008. Estimates for 2009 indicate that CDA expects single-family programs to gain some momentum, though CDA has only had one issuance under its single-family mortgage program in the amount of \$32.7 million.

In July, Congress passed the Housing and Economic Recovery Act (HERA) of 2008 which included 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 may 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 must be abandoned after two years, not three. Refinancing assistance under this authorization must adhere to CDA's established income and purchase price limits. In addition to HERA, the American Recovery and Reinvestment Act of 2009 provides CDA with the ability to issue up to \$100.0 million to refund taxable variable rate debt as tax-exempt variable rate debt. As of June 30, 2009, CDA taxable debt outstanding totaled \$300.5 million.

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 Senate Bill 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.

The Department of Budget and Management (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 revenues 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, superceding the 1989 process.

Exhibit 6.2 summarizes the increase in debt outstanding for various categories between fiscal 1999 and 2009. 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 1999 and 2009
(\$ in Millions)

	<u>1999</u>	<u>2009</u>	<u>% Change</u>
Agency debt subject to State regulatory issuance cap	\$523.5	\$2,406.9	360%
Agency debt not subject to State regulatory issuance cap	3,994.2	4,798.0	20%
General obligation and State lease debt	4,398.5	7,670.0	74%
Transportation debt	749.1	1,583.0	111%
Authorities and corporations without caps	3,557.7	10,582.9	197%
Total	\$13,223.0	\$27,040.8	104%

Note: Numbers may not sum due to rounding.

Source: Department of Budget and Management

From fiscal 1999 through 2009, general obligation (GO) bond and State capital lease debt outstanding increased by 74%. This reflects increased GO bond authorizations augmenting the planned incremental growth in authorizations beginning in the 2001 session. Prior to the 2001 session, the State policy was to increase debt authorizations by \$15 million annually. However, pressures to increase the State's capital program brought about, in part, by a declining State economy which limited the use of pay-as-you-go to support the State's capital program and pressures to increase funding for public school construction projects, have resulted in higher GO authorizations and significant growth in outstanding GO debt. Also, as discussed in Chapter 3 of this report, the State has made greater use of financing through the Treasurer's Master Equipment Lease-Purchase program and Energy Performance Contract Master Lease-Purchase Financing program.

Over the same period, agency debt, subject to the Governor's issuance cap, grew to \$2.4 billion, more than 4.5 times the 1999 level. Much of this growth is attributable to the growth in Maryland Transportation Authority debt, which increased by \$2.2 billion to support construction of the InterCounty Connector and I-95 express lanes. Agency debt that is not subject to the Governor's cap has grown by \$803.8 million, an increase of 20%. Debt for authorities/corporations without issuance caps (MEDCO and MHHEFA) nearly tripled, increasing by \$7.0 billion. MEDCO and MHHEFA issuances do not create or constitute any indebtedness or obligation of the State. MEDCO bonds are typically secured by a lien on property and are payable from revenues of the project financed or borrower, while MHHEFA repayments may include the mortgaging of a project, reserves and sinking funds, and rental and other fees.

Debt Service on 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 granted Baltimore City Community College (BCCC) the authority to issue bonds for auxiliary facilities only, although Chapter 213 of 2009 allowed BCCC to issue academic revenue bonds as well. Academic facilities are primarily used for instruction of students, and auxiliary facilities are those that produce income from fees charged for the 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.

The statute specifies 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. The legislation may also increase the USM total debt limit when warranted. The USM debt limit is \$1.05 billion, the MSU limit is \$88 million, and the SMCM limit is \$60 million. Chapter 213 of 2009 increased BCCC's debt limit from \$15 million to \$65 million.

University System of Maryland

In early 2008, USM revised the system's self-imposed debt management policy. It included new policies to reassure investors and the rating agencies of USM's financial stability and control over debt. Previously, the goal was for debt service to be under 5.5% of operating revenues plus mandatory transfers. The new policy adjusts the ratio to 4.5% of operating revenues plus State appropriations including grants and contracts. This new base is larger, thus a lower ratio was required.

The new policies were based on discussions with Public Financial Management's Higher Education Office, rating agencies, and investors. Over the past year, the ratings of many higher education institutions have been downgraded by the ratings agencies in response to the economic downturn. Reassuring investors and rating agencies is of particular importance. With a stable debt management policy, USM expects to maintain the current credit rating of AA from Moody's and Fitch as well as AA+ from S&P.

Exhibit 6.3 shows USM will be well under the 4.5% debt service ratio for fiscal 2010 through 2015. Including debt issued in fiscal 2010, total debt service will be approximately \$116.5 million, or 3.6%, of unrestricted funds and mandatory transfers. The forecast indicates the ratio will stay between 3.6% and 3.8% over the next five years, with fiscal 2015 projected to be 3.6%.

Exhibit 6.3
University System of Maryland Debt Service as Related to Unrestricted Funds
Fiscal 2006-2015
(\$ 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>
2006	\$934,826	\$110,290	\$2,569,356	4.3%
2007	954,846	106,295	2,757,284	3.9%
2008	969,923	104,920	2,980,332	3.5%
2009	1,028,522	112,213	3,122,857	3.6%
2010 Estimated	1,073,338	116,535	3,247,771	3.6%
2011 Estimated	1,120,359	126,897	3,377,682	3.8%
2012 Estimated	1,170,237	128,221	3,512,789	3.7%
2013 Estimated	1,226,118	130,169	3,653,301	3.6%
2014 Estimated	1,272,718	139,323	3,799,433	3.7%
2015 Estimated	1,319,319	141,667	3,951,410	3.6%

Notes: Total Debt Outstanding and Total Debt Service include academic, auxiliary, and capital leases debt.

Source: University System of Maryland

USM also modified 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. Previously, the goal ratio was to have expendable resources be no less than 76% of total debt outstanding. USM consulted with its financial advisor and came to an agreement with the Board of Regents establishing a new minimum of 55%. **Exhibit 6.4** shows USM's expendable resources to debt outstanding ratios for fiscal 2006 to 2015. It has exceeded the target minimum throughout the entire period, indicating some capacity to issue more debt under the new criteria.

Exhibit 6.4
Summary of Expendable Resources to Debt Outstanding for the
University System of Maryland
Fiscal 2006-2015
(\$ in Thousands)

<u>Fiscal Year</u>	<u>Available Resources</u>	<u>Debt Outstanding</u>	<u>Ratio of Expendable Resources to Debt Outstanding</u>
2006	\$835,304	\$934,826	89.4%
2007	992,148	954,846	103.9%
2008	1,043,592	969,923	107.6%
2009 Estimated	1,140,282	1,028,522	110.9%
2010 Estimated	1,007,880	1,073,338	93.9%
2011 Estimated	1,016,330	1,120,359	90.7%
2012 Estimated	1,011,030	1,170,237	86.4%
2013 Estimated	1,028,780	1,226,118	83.9%
2014 Estimated	1,048,780	1,272,718	82.4%
2015 Estimated	1,068,780	1,319,319	81.0%

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

Source: University System of Maryland

Morgan State University

As shown in **Exhibit 6.5**, MSU has \$65.9 million of total debt in fiscal 2010. This figure includes academic, auxiliary, and capital lease debt. Auxiliary debt is the largest of the three, totaling \$53.1 million. The ratio of debt service to unrestricted funds is estimated to be 4.9% in fiscal 2010. This ratio remains below the 5.5% ratio throughout the entire period, falling to 3.5% in fiscal 2015.

Exhibit 6.5
Morgan State University Debt Service as Related to Unrestricted Funds
Fiscal 2006-2015
(\$ 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>
2006	\$69,877	\$6,687	\$122,239	5.5%
2007	69,631	6,887	136,527	5.0%
2008	68,067	7,322	145,459	5.0%
2009	66,943	7,700	158,041	4.9%
2010 Estimated	65,879	8,015	163,279	4.9%
2011 Estimated	61,097	8,013	171,442	4.7%
2012 Estimated	56,146	7,390	180,015	4.1%
2013 Estimated	53,616	7,435	189,015	3.9%
2014 Estimated	50,928	7,739	198,466	3.9%
2015 Estimated	45,845	7,390	210,394	3.5%

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

Source: Morgan State University

St. Mary's College of Maryland

SMCM's outstanding debt consists of auxiliary and capital lease debt. SMCM does not have any outstanding academic debt. Considering auxiliary debt combined with capital lease debt, the total debt in fiscal 2010 is estimated to be \$45.3 million and is expected to decrease to \$37.4 million by fiscal 2015. From fiscal 2006 to 2009, SMCM exceeded the 5.5% debt ratio in order to build more residential buildings to house increasing enrollment. As shown in **Exhibit 6.6**, the debt ratio declines to 5.4% in fiscal 2010 and is expected to further decline to 4.4% by fiscal 2015.

Exhibit 6.6
St. Mary's College of Maryland Debt Service as Related to
Unrestricted Funds
Fiscal 2006-2015
(\$ 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>
2006	\$43,761	\$2,998	\$53,422	5.6%
2007	49,501	3,089	55,367	5.6%
2008	48,199	3,452	60,781	5.7%
2009	46,790	3,517	62,787	5.6%
2010 Estimated	45,333	3,522	65,299	5.4%
2011 Estimated	43,853	3,504	67,911	5.2%
2012 Estimated	42,313	3,495	70,627	4.9%
2013 Estimated	40,722	3,496	73,452	4.8%
2014 Estimated	39,076	3,501	76,390	4.6%
2015 Estimated	37,376	3,501	79,446	4.4%

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

Source: St. Mary's College of Maryland

Chapter 7. State Debt Evaluation and Outlook

Maryland has a large debt program. The State is projected to end fiscal 2010 with \$6.6 billion of general obligation (GO) bond debt outstanding and \$9.6 billion in State debt outstanding. GO bond debt service is \$783 million in fiscal 2010, while total debt service is over \$1.1 billion. Maryland GO bonds receive the highest rating (AAA) from all three major rating agencies: Fitch, Moody's, and Standard & Poor's. This chapter analyzes:

- the outlook for GO bond costs and the revenues supporting GO bonds; and
- the advantages of issuing bay restoration bonds through a competitive sale.

General Obligation Bond Funding Outlook

GO bond costs are projected to exceed \$1.0 billion by fiscal 2015. These debt service costs are supported by State property tax revenues and some smaller revenue sources (such as bond sale premiums, interest income, and local bond repayments). In recent years, favorable State and municipal bond market conditions (such as low interest rates) have increased bond sale premiums so that revenues are sufficient to support debt service. In the out-years, debt service costs are expected to increase at twice the rate that revenues are expected to increase. This is expected to lead to general fund subsidies for debt service or increased State property tax rates. This section examines the reason for increased costs and the outlook for the revenues supporting GO bond debt service.

State Has Expanded Authorizations Since 2000

Since the 2000 legislative session, State debt has been increased by authorizing additional GO and transportation debt and authorizing new kinds of State debt. **Exhibit 7.1** shows that the State has expanded debt authorizations in 16 separate actions: 10 actions increase GO bond authorizations; 3 actions increase transportation bond authorizations; GARVEEs are authorized; Program Open Space bonds are authorized; and bay restoration bonds are authorized.

These new and expanded authorizations increased the ratio of debt outstanding to personal income. At the end of fiscal 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 2009, GO bond authorizations increased to \$8.2 billion of which \$5.9 billion was issued and \$2.3 billion was authorized but unissued.

Exhibit 7.1
New and Increased Debt Authorizations Since 2000

<u>Initial Authorization</u>	<u>Type of Debt Authorized</u>	<u>Amount Authorized</u>	<u>Supporting Revenues</u>	<u>Effect on Capital Spending</u>
Chapter 111 of 2001	GO Bonds	\$30 million annually	State property taxes and general fund	Increase the State capital program
Chapter 440 of 2002	Consolidated Transportation Bonds	Increased debt limit from \$1.2 billion to \$1.5 billion	Transportation Trust Fund revenues	Increase State transportation capital program
Chapter 103 of 2002	GO Bonds	\$5 million annually	State property taxes and general fund	Fund Tobacco Transition Program
Chapter 290 of 2002	GO Bonds	\$200 million in fiscal 2003	State property taxes and general fund	Move PAYGO capital projects into GO bond program
Chapter 204 of 2003	GO Bonds	\$200 million in fiscal 2004	State property taxes and general fund	Move PAYGO capital projects into GO bond program
Chapter 432 of 2004	GO Bonds	\$100 million annually for five years	State property taxes and general fund	Increase the State capital program
Chapter 430 of 2004	Consolidated Transportation Bonds	Increased debt limit from \$1.5 billion to \$2.0 billion	Transportation Trust Fund revenues	Increase State transportation capital program
Chapter 428 of 2004	Bay Restoration Bonds	Estimated \$530 million in total issuances	Bay restoration fee	Fund wastewater treatment plant improvements
Chapter 472 of 2005	GARVEEs	Not to exceed \$750 million	Federal transportation funds	Fund InterCounty Connector

<u>Initial Authorization</u>	<u>Type of Debt Authorized</u>	<u>Amount Authorized</u>	<u>Supporting Revenues</u>	<u>Effect on Capital Spending</u>
Chapter 46 of 2006	GO Bonds	Increase escalation from \$15 million to 3%, \$100 million annually, beginning in fiscal 2010	State property taxes and general fund	Increase the State capital program
Chapter 488 of 2007	GO Bonds	\$100 million annually	State property taxes and general fund	Increase the State capital program
Chapter 6, First Special Session of 2007	Consolidated Transportation Bonds	Increased debt limit from \$2.0 billion to \$2.6 billion	Transportation Trust Fund revenues	Increase State transportation capital program
Chapter 336 of 2008	GO Bonds	\$100 million annually	State property taxes and general fund	Increase the State capital program
Chapter 485 of 2009	GO Bonds	\$150 million in fiscal 2010	State property taxes and general fund	Move PAYGO capital projects into GO bond program
Chapter 419 of 2009	POS Bonds	\$70 million in fiscal 2010	State share of transfer tax revenues	Maintain POS spending in fiscal 2010
Chapter 719 of 2009	GO Bonds	\$2 million	State property taxes and general fund reimbursed by Community Development Administration	Contingent authorization for local government infrastructure bonds

CDAC: Capital Debt Affordability Committee

GO: general obligation

GARVEEs: Grant Anticipation Revenue Vehicles

PAYGO: pay-as-you-go

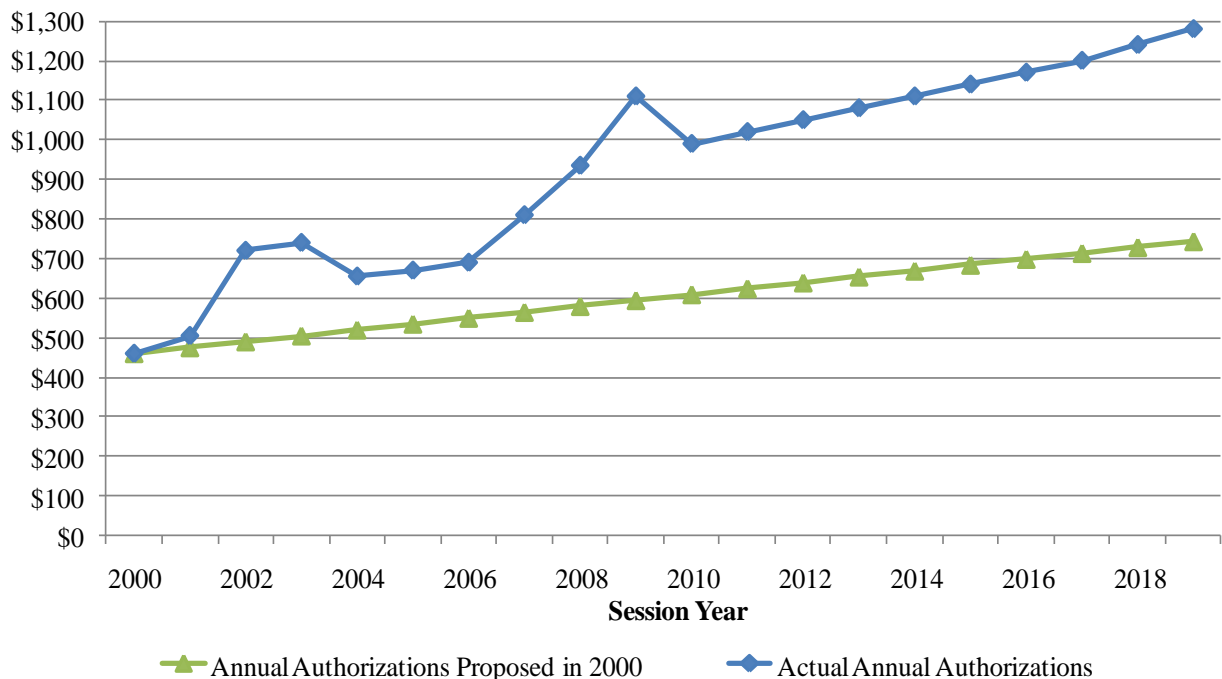
POS: Program Open Space

Source: Department of Legislative Services

Debt Service Costs Are Projected to Grow in Response to Increased Authorizations

GO bonds account for 9 of the 14 increases in bond authorization since 2000 and 67% of State debt at the end of fiscal 2009. **Exhibit 7.2** shows that increased authorizations now support \$990 billion in new GO bond authorizations during the 2009 legislative session, as opposed to \$610 million in 2009 authorizations proposed by the Capital Debt Affordability Committee in 2000.

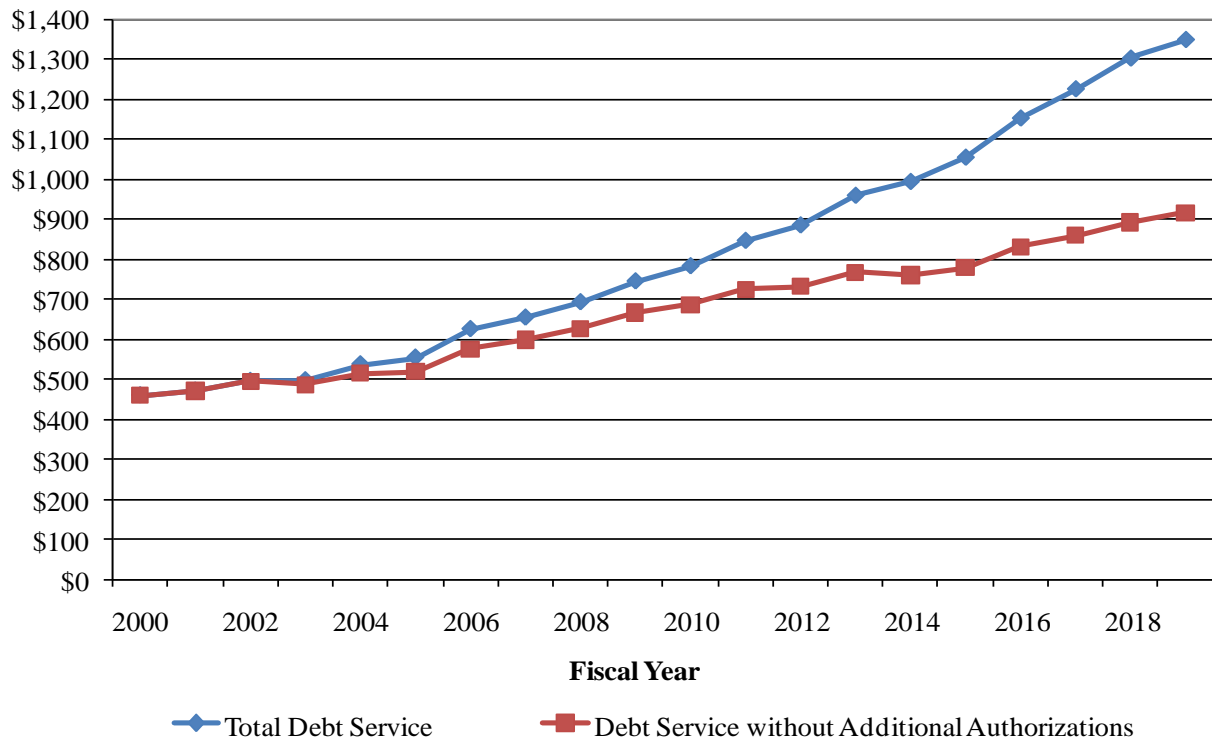
Exhibit 7.2
GO Bond Authorizations Proposed in 2000 and 2009
 2000-2019 Legislative Sessions
 (\$ in Millions)



Source: Department of Legislative Services, November 2009

These increased authorizations result in higher debt service costs. **Exhibit 7.3** estimates that fiscal 2011 debt service costs would have been \$724 million without the additional authorizations. This is \$122 million less than the current projection, which totals \$846 million. From fiscal 2009 to 2019, debt service costs are projected to increase by 6.1% annually. Without the increased authorizations, the growth rate for GO bond debt service costs would have been 3.2% annually. By fiscal 2019, increased authorizations add \$433 million to debt service costs with debt service costs totaling \$1,350 million.

Exhibit 7.3
Effect of Increased GO Bond Authorizations on Debt Service Costs
Fiscal 2000-2018
(\$ in Millions)



GO: general obligation

Source: Department of Legislative Services, November 2009

Bond Sale Premiums Provide Sufficient Revenues to Support Debt Service Costs through Fiscal 2012

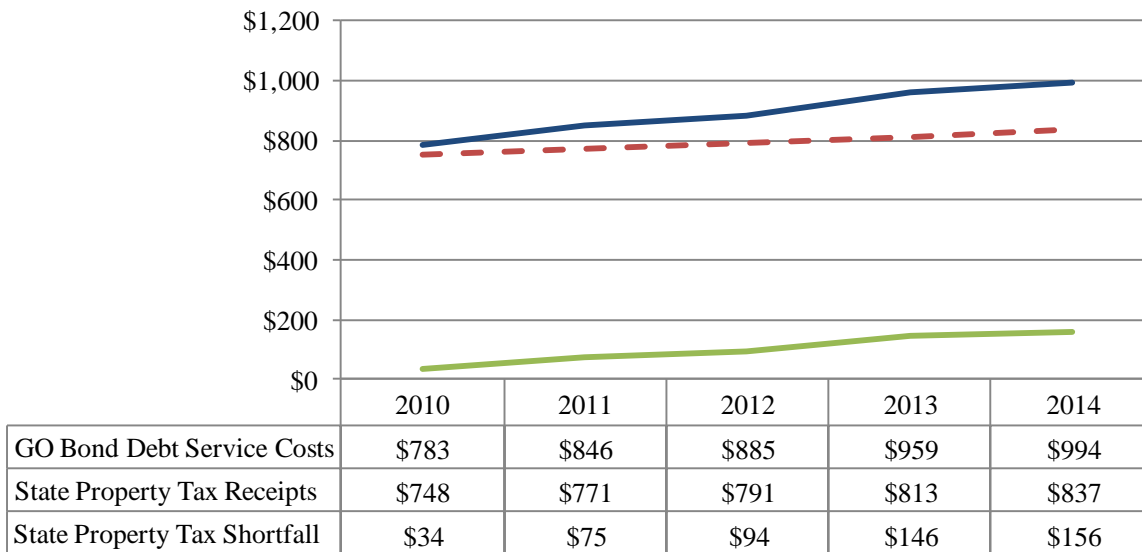
GO bond debt service costs are supported by the Annuity Bond Fund (ABF). The fund's largest revenue sources include State property tax revenues and proceeds from bond sale premiums. Other revenue sources include interest generated by fund balances and repayments for local bonds. When the ABF has not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

The major revenue source supporting debt service payments is the State property tax. State property tax collections are influenced by trends in the housing market. This decade has seen a substantial increase in real estate values followed by a decline in values. Because State

assessments lag increases in property values, the recent declines in property values are expected to lead to slowing growth, instead of declining, State property tax receipts. The State Department of Assessments and Taxation (SDAT) projects small increases in the State's assessable base. Based on SDAT's assessable base estimates, DLS projects that State property tax receipts will increase approximately 3% annually from fiscal 2010 to 2014, if the tax rate is maintained at \$0.112 per \$100 of assessable base.

As previously mentioned, the debt service costs are expected to increase by more than 6%, while State property tax receipts are expected to increase by 3%. **Exhibit 7.4** shows how State property taxes, which are only \$34 million less than debt service costs in fiscal 2010, are expected to be \$156 million less than debt service costs in fiscal 2014. At the end of November 2009, SDAT will update its State property tax revenue estimates. If assessable base estimates are reduced, this gap between debt service and State property tax receipts would increase.

Exhibit 7.4
GO Bond Debt Service Costs and State Property Tax Revenue Collections
Fiscal 2010 to 2014
(\$ in Millions)



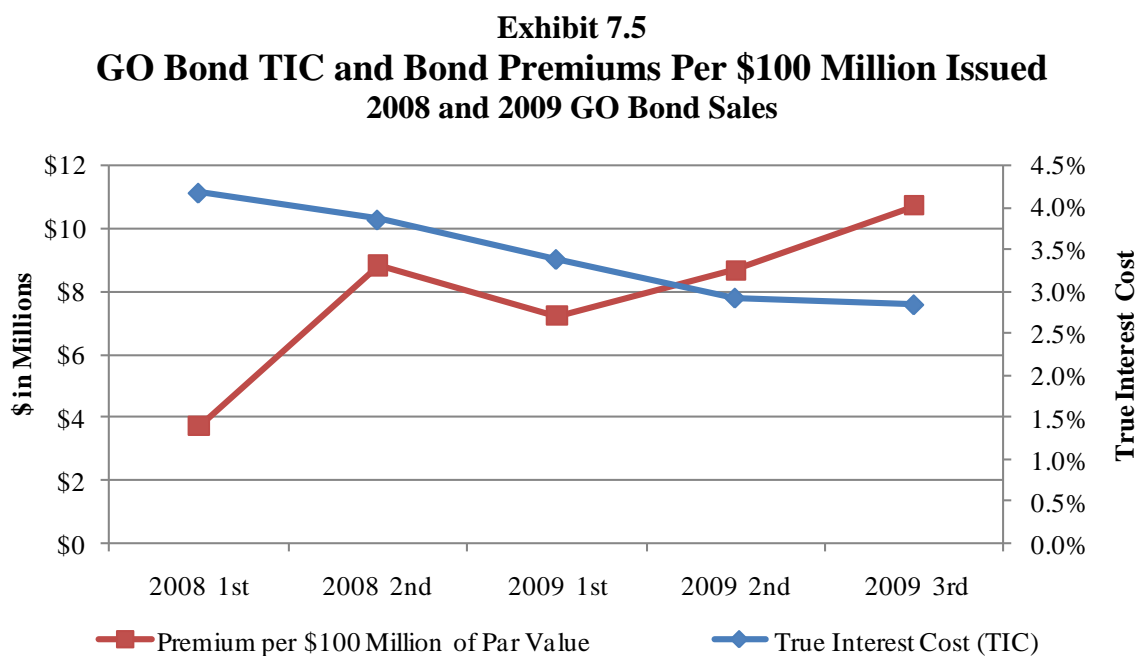
— GO Bond Debt Service Costs
 — State Property Tax Shortfall

— State Property Tax Receipts

GO: general obligation

Source: Department of Legislative Services, November 2009

In fiscal 2009 and 2010, the State has benefited from the low interest rates offered for AAA-rated State and municipal bonds. These low rates have reduced GO bond's TIC, which resulted in higher bond sale premiums. **Exhibit 7.5** shows the relationship between increasing TICs in 2008 and the resulting higher bond sale premiums. If the GO bond sales' TICs remain low, premiums will probably be high and provide additional short-term revenues for the ABF. However, once interest rates increase, TICs will also increase and bond sale premiums will be reduced. Current economic forecasts project interest rates to rise. Based on these forecasts, DLS projects that bond sale premiums in the March and July 2010 bond sales will be less than premiums realized at recent bonds sales.



GO: general obligation

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

In the next four years, debt service costs are expected to increase at a higher rate than debt service costs, leading to a growing gap between revenues and costs. However, this gap is not expected to result in a deficit in the ABF until fiscal 2012. The State benefits from low interest rates, which drive up bond sale premiums. **Exhibit 7.6** shows how the ABF's end-of-year balance increases to \$130 million in fiscal 2010 and then declines in fiscal 2011 and 2012. If State property tax rates do not increase, the State will need to appropriate \$16 million in general funds in fiscal 2012. General fund appropriations increase to \$188 million in fiscal 2015. General fund appropriations could decline if interest rates remain low or could increase if State property assessable base estimates are revised downward.

Exhibit 7.6
Estimated Annuity Bond Fund Activity
Fiscal 2010-2014

	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>
Special Fund Revenues							
Property Tax Receipts	\$701	\$748	\$771	\$791	\$813	\$837	\$862
Bond Sale Premiums	74	90	16	0	0	0	0
Other Revenues	3	2	2	2	2	2	2
ABF Fund Balance Transferred from Prior Year	38	72	130	75	0	0	1
Subtotal Special Fund Revenues Available	\$816	\$912	\$919	\$868	\$816	\$840	\$865
General Fund Appropriations	0	0	0	16	142	153	188
Federal Fund Appropriations	0	1	2	2	2	2	2
Total Revenues	\$816	\$913	\$921	\$885	\$960	\$995	\$1,055
Projected Debt Service Expenditures	\$745	\$783	\$846	\$885	\$959	\$994	\$1,055
ABF End-of-year Fund Balance	\$72	\$130	\$75	\$0	\$0	\$1	\$0

ABF: Annuity Bond Fund

*Projects \$26 million bond sale premium in March 2010 bond sale and \$16 million in July 2010 bond sale.

Source: Department of Legislative Services, November 2009

Analysis of Bay Restoration Bond Sale Suggests That Cost Could Be Reduced Through a Competitive Sale

On June 12, 2008, the Maryland Water Quality Financing Administration (MWQFA) issued \$50 million in bay restoration bonds. This was the first issuance of bay bonds. MWQFA estimates that another \$480 million in bay bonds will be issued through fiscal 2012. The bonds were rated AA and were issued through a negotiated sale.

Most bonds are sold through either a negotiated or competitive sale. In a negotiated sale, the underwriter is selected well in advance of the bond sale. After the underwriter has been chosen, the issuer and underwriter determine the cost of the sale. In a competitive sale, the issuer solicits bids from underwriters at a specified date and time and awards the bond sale when the bids are opened.

Competitive sales have the following advantages:

- ***Costs of Competitive Bond Sales Tend to Be Lower:*** The nature of the bid process provides an incentive for underwriters to provide the lowest bids. Securities Data Company estimates that the cost of competitive sales was \$0.81 per \$1,000 bond less than negotiated sales. Because costs tend to be lower, Maryland's GO and MDOT's transportation bonds are sold in competitive bond sales.
- ***Competitive Sales Promote the Appearance of an Open, Fair Process:*** The very nature of Maryland's competitive sales is to have all bids opened in public at the same time.

Negotiated sales have the following advantages:

- ***Greater Incentive for the Underwriter to Pre-market the Bond Sale:*** Bonds that have complicated structures, are not sold frequently, or are sold by issuers experiencing financial difficulties may be difficult for underwriters to sell. Negotiated sales provide opportunities for underwriters to begin marketing the bonds well in advance of the bond sale.
- ***Flexibility:*** It is less complicated to change the timing or structure of an issue in a negotiated sale.

The State's initial bay bond sale was a negotiated sale. For the next bond sale, a competitive sale may be warranted. The consensus is that competitive sales reduce costs, which is why Maryland GO and transportation bonds are bid competitively. Arguments supporting a competitive sale are that:

- ***Bay Bonds Benefit from State's Financial Strength and High Credit Rating:*** Bay bonds benefit from Maryland's financial strength and good credit.¹ Negotiated sales are often advantageous if an issuer has been downgraded. This is not a concern with bay bonds.
- ***Bay Bonds Are No Longer New and the First Issuance Was Received Favorably:*** Because it is often difficult to gauge how well a new issuance will be received, the first bond sale of a new issuance is often a negotiated sale, which gives the underwriter more time to market the bonds. Insofar as the first bond sale was favorably received, a negotiated sale may not be necessary.

¹ DLS compared the true interest cost of the bay bonds to GO bonds sold since 1991. As in Chapter 5, the sum of least squares regression is used to determine what variables are statistically significant. The only change to the GO bond analysis was to add data for the bay bond sale to the data series and to include an independent variable for bay bonds in the equation. (The independent variable for the Delphis Scale assumes the rate for AA-rated bonds.) This resulted in only minor changes to the GO bond equation's statistics. The statistical data suggest that the markets perceive bay bonds to be AA-rated and that the bay bonds factors are very much influenced by the same factors that affect Maryland GO bonds. This implies that bay bonds benefit from Maryland's financial strength and good credit.

- ***Bay Bond Provisions Are Not Particularly Unique or Complex:*** Bonds that have complicated or unique provisions often require additional effort for underwriters to sell, so they are offered in a negotiated sale. This is not the case with bay bonds.
- ***Bay Bonds Are Highly Rated:*** Bonds that are rated less than A can be more difficult to market. As a consequence, the bonds are often issued through a negotiated sale. Since bay bonds are rated AA, this is not a concern.
- ***Revenues Supporting Bay Bond Debt Service Are Stable:*** Bay bonds are supported by the Bay Restoration Fee, which charges users of wastewater treatment plants and septic systems. The fee is largely based on the number of users and is quite stable, which reduces the bonds' risk and makes them easier to market.

Given that bay restoration bonds have successfully been issued, are highly rated, are supported by stable revenues, and do not have any particularly unique or complicated provisions, it is recommended that future issues of bay bonds be made on a competitive sale, instead of a negotiated sale basis.

Appendix 1

Capital Budget Requests for Fiscal 2011 to 2015

Agency requests for fiscal 2011 total \$1.87 billion, over \$884.2 million more than the amount available under the recommended general obligation (GO) bond debt limit of \$990.0 million. Capital requests for the next five years total over \$10.3 billion, while the projected debt limit for the same period totals approximately \$5.25 billion. These figures demonstrate that the number of capital projects proposed far exceeds the ability of the State to appropriate bond funds to provide for capital needs. The table below provides a listing of GO bond capital requests over the next five years. This listing reflects agency requests and will differ from the list that will appear in the Governor's fiscal 2011 *Five-year Capital Improvement Program*.

Appendix 1 (Continued)
General Obligation Bond Requests: Fiscal 2011-2015
(\$ in Millions)

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>Total</u>	Category Totals
State Facilities							\$781.9
Board of Public Works	\$56.4	\$147.6	\$128.9	\$98.0	\$179.3	\$510.1	
Military	0.0	0.0	3.9	0.0	0.8	4.8	
Department of Disabilities	1.6	1.6	1.6	1.6	1.6	8.0	
Department of Information Technology	72.0	44.0	88.0	63.0	0.0	259.0	
Health and Social Services							\$708.7
Health and Mental Hygiene	\$2.6	\$12.2	\$13.0	\$31.1	\$31.5	\$110.5	
University of MD Medical System	13.5	10.2	10.5	9.8	5.0	49.0	
Senior Citizen Activity Center	0.5	2.0	2.0	2.0	2.0	8.5	
Juvenile Services	110.2	62.9	164.2	115.9	62.6	515.7	
Private Hospital Grant Program	5.0	5.0	5.0	5.0	5.0	25.0	
Environment							\$433.5
Natural Resources	\$15.0	\$15.0	\$15.0	\$15.0	\$15.0	\$75.0	
Agriculture ¹	12.5	12.0	12.0	14.0	14.0	64.5	
Environment	51.3	50.9	53.1	51.3	48.0	254.6	
MD Environmental Service	13.2	8.9	4.1	7.8	5.4	39.4	
Education							\$4,196.6
Education	\$25.0	\$31.0	\$27.5	\$5.0	\$5.0	\$93.5	
MD School for the Deaf	0.3	0.0	0.0	0.0	1.4	1.7	
Public School Construction	742.1	803.9	881.3	841.9	832.2	4,104.4	
Higher Education							\$2,577.0
University System of MD ²	\$259.8	\$375.8	\$226.0	\$295.6	\$303.1	\$1,460.3	
Baltimore City Comm. College	14.7	22.3	35.5	20.0	16.3	108.9	
St. Mary's College	0.0	4.0	18.7	18.0	43.7	84.5	
Morgan State University	48.9	48.3	62.5	92.7	76.9	329.3	
Community Colleges	93.1	111.6	81.3	123.7	110.6	520.3	
Southern MD Higher Educ. Center	1.2	13.2	0.8	0.0	0.0	15.3	
Private Facilities Grant Program	10.5	12.0	12.0	12.0	12.0	58.5	
Public Safety							\$692.5
Public Safety	\$53.2	\$83.6	\$92.8	\$117.0	\$77.3	423.9	
State Police	48.8	44.9	27.8	37.1	35.1	193.7	
Local Jails	15.0	15.0	15.0	15.0	15.0	75.0	
Housing and Economic Development							\$173.2
Economic Development	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	
Housing and Comm. Development	28.3	28.9	27.5	26.2	25.5	136.2	
Canal Place	0.0	0.9	1.3	0.0	0.0	2.1	
Historic St. Mary's City	0.2	0.3	17.1	0.1	1.3	17.7	
Planning	1.5	5.4	5.2	1.2	4.0	17.2	
Legislative Initiatives³	100.0	100.0	100.0	100.0	100.0	100.0	\$500.0
Miscellaneous	57.8	56.3	47.5	45.0	31.5	238.0	\$238.0
Subtotal Request	\$1,874.2	\$2,029.5	\$2,173.0	\$2,164.8	\$2,059.8	\$10,301.3	\$10,301.3
Debt Affordability Limits	\$990.0	\$1,020.0	\$1,050.0	\$1,080.0	\$1,110.0	\$5,250.0	
Variance	\$884.2	\$1,009.5	\$1,123.0	\$1,084.8	\$949.8	\$5,051.3	

¹The Department of Agriculture request does not include the Tobacco Transition Program.

²In addition to the general obligation bond request, the University System of Maryland has requested academic revenue bond funding of \$27 million annually for fiscal 2011 through 2015.

³These figures represent an estimated average of the total funding requests received through legislative local bond funds.

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

Source: Department of Budget and Management

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

Legislative Session	Proposed Auth.	Estimated Issuances During Fiscal Year (a) =====>										Post 2019	Total Issued
		<u>2010</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>		
2010	\$990,000	\$0	\$307,000	\$248,000	\$198,000	\$149,000	\$88,000						\$990,000
2011	1,020,000		0	316,000	255,000	204,000	153,000	\$92,000					1,020,000
2012	1,050,000			0	326,000	263,000	210,000	158,000	\$93,000				1,050,000
2013	1,080,000				0	335,000	270,000	216,000	162,000	\$97,000			1,080,000
2014	1,110,000					0	344,000	278,000	222,000	167,000	\$99,000		1,110,000
2015	1,140,000						0	353,000	285,000	228,000	171,000	\$103,000	1,140,000
2016	1,170,000							0	363,000	293,000	234,000	280,000	1,170,000
2017	1,200,000								0	372,000	300,000	528,000	1,200,000
2018	1,230,000									0	381,000	849,000	1,230,000
2019	1,270,000										0	1,270,000	1,270,000
Total New Authorization		\$0	\$307,000	\$564,000	\$779,000	\$951,000	\$1,065,000	\$1,097,000	\$1,125,000	\$1,157,000	\$1,185,000	\$3,030,000	
Previously Authorized													
GO Bonds	\$2,328,351	\$1,160,000	\$463,000	\$411,000	\$201,000	\$89,000	\$0	\$3,000	\$0	\$1,000	\$0	\$0	\$2,328,000
Total Issuances		\$1,160,000	\$770,000	\$975,000	\$980,000	\$1,040,000	\$1,065,000	\$1,100,000	\$1,125,000	\$1,158,000	\$1,185,000	\$3,030,000	
Percentage issuance assumptions by fiscal year:													
Fiscal year following year of authorization					1st	2nd	3rd	4th	5th				
Percent of authorization issued					31%	25%	20%	15%	9%				

Appendix 3
Maryland's General Obligation Bonds' True Interest Cost Analysis
Statistically Significant Independent Variables

<u>Sale Date</u>	<u>TIC</u>	<u>Delphis Rate</u>	<u>MD/US PI</u>	<u>Amount Sold</u>	<u>Retail</u>	<u>Taxable</u>	<u>BABs</u>
March 13, 1991	6.31	6.15	2.261	\$95,000,000	No	No	No
July 10, 1991	6.37	6.50	2.240	100,000,000	No	No	No
October 9, 1991	5.80	5.70	2.230	120,000,000	No	No	No
May 13, 1992	5.80	5.75	2.220	120,000,000	No	No	No
January 13, 1993	5.38	5.40	2.221	130,000,000	No	No	No
May 19, 1993	5.10	5.10	2.212	130,000,000	No	No	No
October 6, 1993	4.45	4.45	2.206	140,000,000	No	No	No
February 16, 1994	4.48	4.50	2.208	120,000,000	No	No	No
May 18, 1994	5.36	5.35	2.199	120,000,000	No	No	No
October 5, 1994	5.69	5.50	2.191	160,000,000	No	No	No
March 8, 1995	5.51	5.35	2.184	175,000,000	No	No	No
October 11, 1995	4.95	4.80	2.163	150,000,000	No	No	No
February 14, 1996	4.51	4.35	2.159	170,000,000	No	No	No
June 5, 1996	5.30	5.10	2.144	150,000,000	No	No	No
October 9, 1996	4.97	4.90	2.144	170,000,000	No	No	No
February 26, 1997	4.90	4.70	2.136	240,000,000	No	No	No
July 30, 1997	4.64	4.50	2.135	250,000,000	No	No	No
February 18, 1998	4.43	4.25	2.119	250,000,000	No	No	No
July 8, 1998	4.57	4.40	2.128	250,000,000	No	No	No
February 24, 1999	4.26	4.10	2.134	225,000,000	No	No	No
July 14, 1999	4.83	4.80	2.146	125,000,000	No	No	No
July 19, 2000	5.05	4.85	2.157	200,000,000	No	No	No
February 21, 2001	4.37	4.28	2.178	200,000,000	No	No	No
July 11, 2001	4.41	4.39	2.201	200,000,000	No	No	No
March 6, 2002	4.23	4.17	2.233	200,000,000	No	No	No
July 31, 2002	3.86	3.89	2.241	225,000,000	No	No	No
February 19, 2003	3.69	3.77	2.235	500,000,000	No	No	No
July 16, 2003	3.71	3.56	2.250	500,000,000	No	No	No
July 21, 2004	3.89	3.89	2.254	400,000,000	No	No	No
March 2, 2005	3.81	3.72	2.259	350,000,000	No	No	No
July 20, 2005	3.79	3.63	2.268	430,000,000	No	No	No
March 1, 2006	3.87	3.89	2.242	280,000,000	No	No	No
July 26, 2006	4.18	4.09	2.238	350,000,000	No	No	No
February 28, 2007	3.86	3.77	2.228	325,000,000	No	No	No
August 1, 2007	4.15	4.02	2.218	375,000,000	No	No	No

Appendix 3 (Continued)

<u>Sale Date</u>	<u>TIC</u>	<u>Delphis Rate</u>	<u>MD/US PI</u>	<u>Amount Sold</u>	<u>Retail</u>	<u>Taxable</u>	<u>BABs</u>
March 2, 2005	3.87	2.36	2.259	25,000,000	No	Yes	No
July 20, 2005	4.43	3.13	2.268	20,000,000	No	Yes	No
March 1, 2006	4.98	3.56	2.242	20,000,000	No	Yes	No
February 27, 2008	4.14	3.90	2.208	400,000,000	No	No	No
July 16, 2008	3.86	3.76	2.213	415,000,000	No	No	No
March 4, 2009	3.39	3.51	2.287	199,220,000	No	No	No
March 2, 2009	3.63	3.47	2.287	225,780,000	Yes	No	No
August 5, 2009	2.93	3.17	2.303	200,000,000	No	No	No
August 3, 2009	3.20	3.16	2.303	235,000,000	Yes	No	No
August 5, 2009	3.02	4.16	2.303	50,000,000	No	No	Yes
October 21, 2009	2.93	3.19	2.242	141,800,000	No	No	No
October 21, 2009	3.06	4.10	2.242	51,800,000	No	No	Yes

BABs: Build American Bonds

TIC: True Interest Cost

Source for Delphis Rate: Maryland State Treasurer's Office, The Bond Buyer

Source for Personal Income (PI): Federal Bureau of Economic Analysis

Remaining Sources: Bond Sale Official Statements

Appendix 4
Debt Outstanding
Fiscal 1999-2009
(\$ in Millions)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>2009</u>	<u>99-09</u>
<u>Agency Debt Subject to Ceiling and Allocation Caps</u>												
Maryland Environmental Service	\$34.0	\$29.4	\$34.4	\$36.5	\$33.7	\$30.5	\$30.5	\$24.5	\$19.6	\$18.7	\$19.8	-42%
Maryland Wholesale Food Center Authority	6.9	6.8	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-100%
Maryland Transportation Authority	344.5	318.7	300.6	668.8	575.6	627.2	763.6	765.1	1,055.3	1,877.4	2,247.1	552%
Maryland Water Quality Financing Admin.	138.1	131.3	124.3	115.9	105.6	96.6	88.2	73.9	65.7	154.9	140.0	1%
Revenue Cap Total	\$523.5	\$486.2	\$466.0	\$821.2	\$714.9	\$754.3	\$882.2	\$863.5	\$1,140.6	\$2,051.0	\$2,406.9	360%
% Change/Prior Year	-7%	-7%	-4%	76%	-13%	6%	17%	-2%	32%	80%	17%	
<u>Agency Debt Not Subject to Ceiling and Allocation Caps</u>												
Baltimore City Community College	\$0.0	\$0.0	\$1.2	\$1.1	\$1.0	\$0.9	\$0.9	\$0.8	\$0.8	\$0.7	\$0.7	n/a
Dept. of Housing and Community Dev. ⁽¹⁾	2,473.5	2,627.0	2,692.1	2,705.8	2,672.8	2,415.1	2,194.6	2,248.1	3,204.3	3,259.4	3,095.4	25.1%
Local Government Infrastructure (CDA)	81.1	85.5	87.7	91.7	105.6	114.6	122.5	117.0	122.0	135.1	121.6	49.9%
Maryland Energy Financing Administration	301.1	388.4	379.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-100.0%
Maryland Industrial Development Financing Auth.	346.3	330.0	311.6	581.4	568.4	411.1	395.0	409.6	387.1	382.0	344.9	-0.4%
MDOT – County Revenue Bonds	34.6	25.6	19.0	12.9	7.9	4.5	31.8	30.0	58.4	56.8	98.5	184.7%
MDOT – Non-tax-supported COPs	42.8	42.5	74.3	65.2	57.7	54.0	49.7	72.6	68.5	64.2	59.9	40.0%
Morgan State University	27.5	27.1	26.8	33.4	72.2	70.0	68.6	67.7	66.0	64.2	60.5	120.0%
St. Mary's College of Maryland	17.3	16.9	27.8	27.5	40.6	39.7	40.6	43.8	46.6	45.4	46.6	169.4%
University System of Maryland	670.0	656.1	802.7	797.0	960.0	973.0	1,012.8	934.8	954.8	963.0	969.9	44.8%
Non-cap Total	\$3,994.2	\$4,199.2	\$4,422.9	\$4,316.1	\$4,486.1	\$4,082.8	\$3,916.3	\$3,924.4	\$4,908.5	\$4,970.8	\$4,798.0	20.1%
% Change/Prior Year	5%	5%	5%	-2%	4%	-9%	-4%	0%	26%	1%	-3%	
<u>Tax-supported Debt</u>												
Transportation Debt	\$749.1	\$724.8	\$648.1	\$714.2	\$961.2	\$1,185.7	\$1,069.9	\$1,078.5	\$1,111.0	\$1,269.1	\$1,583.0	111.3%
Capital Leases – Board of Public Works	149.2	148.4	197.7	245.7	217.1	191.9	175.1	226.0	247.9	247.7	213.4	43.0%
General Obligation Debt	3,500.2	3,348.9	3,450.9	3,544.2	3,932.5	4,102.3	4,511.8	4,868.5	5,142.2	5,493.8	5,873.6	67.8%
Tax-supported Debt Total	\$4,398.5	\$4,222.1	\$4,296.7	\$4,504.1	\$5,110.8	\$5,479.8	\$5,756.8	\$6,173.0	\$6,501.1	\$7,010.6	\$7,670.0	74.4%
% Change/Prior Year	5%	-4%	2%	5%	13%	7%	5%	7%	5%	8%	9%	
<u>Authorities and Corporations Not Subject to Ceiling and Allocation Caps</u>												
Health/Higher Education Facilities Authority	\$3,236.6	\$3,555.0	\$3,660.8	\$4,265.4	\$4,619.5	\$5,316.9	\$5,544.3	\$6,181.1	\$7,262.0	\$8,204.8	\$8,466.8	161.6%
MEDCO	321.1	635.4	855.6	1,077.7	1,485.9	1,593.9	1,642.6	1,872.4	1,894.2	2,095.5	2,116.1	559.0%
Authorities and Corporations Total	\$3,557.7	\$4,190.4	\$4,516.4	\$5,343.1	\$6,105.4	\$6,910.8	\$7,186.9	\$8,053.5	\$9,156.2	\$10,300.3	\$10,582.9	197.5%
% Change/Prior Year	17%	18%	8%	18%	14%	13%	4%	12%	14%	12%	3%	

CDA: Community Development Administration

COPs: Certificates of Participation

MDOT: Maryland Department of Transportation

MEDCO: Maryland Economic Development Corporation

⁽¹⁾ Excludes local government infrastructure.

Source: Department of Budget and Management