X00A00
Public Debt

Operating Budget Data

($ in Thousands)

	FY 12 Actual	FY 13 Working	FY 14 Allowance	FY 13-14 Change	% Change Prior Year
General Fund	$0	$0	$101,000	$101,000	
Adjusted General Fund	**$0**	**$0**	**$101,000**	**$101,000**	
Special Fund	866,712	910,514	870,171	-40,343	-4.4%
Adjusted Special Fund	**$866,712**	**$910,514**	**$870,171**	**-$40,343**	**-4.4%**
Federal Fund	11,498	11,955	12,381	426	3.6%
Adjusted Federal Fund	**$11,498**	**$11,955**	**$12,381**	**$426**	**3.6%**
Adjusted Grand Total	**$878,209**	**$922,469**	**$983,552**	**$61,083**	**6.6%**

- The budget bill includes a $197,820 deficiency appropriation. These are federal funds supporting debt service. The bonds are taxable bonds with a direct federal tax subsidy.

- Debt service costs continue to climb, reflecting increased debt issuances and debt outstanding.

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

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Analysis in Brief

Issues

Long-term Problem: Cost of Debt Exceeds Projected State Property Tax Revenues: General obligation (GO) bond debt service costs are supported by the Annuity Bond Fund (ABF). The fund's largest revenue source is from the State property tax. Over the next few years, State property tax revenues are estimated to remain fairly flat. This contrasts with debt service costs, which are expected to increase steadily in the out-years. General funds or tax increases will be needed to support debt service costs. **The State Treasurer should be prepared to brief the committees on the status of the ABF.**

Short-term Help: Bond Sale Premiums: Since 2001, State GO bond sales have generated substantial bond sale premiums. Until fiscal 2014, these premiums provided sufficient funds to avoid tax increases or general fund appropriations to meet debt service costs. Premiums are no longer sufficient. **The State Treasurer should be prepared to discuss the effect of bond sale premiums on the ABF's ability to fund State GO bond debt service costs.**

Not Helping: Capital Budget Expansion: The new capital spending plan proposes to increase GO bond authorizations by $150 million annually for five years beginning in fiscal 2014. This increases debt service costs. **The State Treasurer should be prepared to brief the committees on the effect of increased capital budget authorizations and debt service costs.**

Also Not Helping: Taxable Bonds Are More Expensive, Reliance Should Be Reduced as State Approaches Structural Balance: The federal government limits the amount of private activity projects in tax-exempt bonds. The State has been increasing its authorizations of private activity projects in the GO program. In fiscal 2013, the State issued $23 million in taxable bonds. Data from the bond sale shows that taxable bonds are more expensive than tax-exempt bonds. **To reduce debt service costs in the out-years, language limiting the level of private activity authorizations is recommended.**

Recommended Actions

1. Add language declaring the intent that the State reduce private activity authorizations beginning in fiscal 2015.

2. Add language to restrict general fund appropriations so that they may only be used to pay debt service.

X00A00
Public Debt

Operating Budget Analysis

Program Description

The Public Debt program appropriates funds for general obligation (GO) bonds' debt service payments. This includes principal and interest payments. GO bonds support the State's general construction program, such as prisons, office buildings, higher education facilities, school construction, and mental health facilities. GO bonds do not pledge specific revenues but rather pledge the State's full faith and credit. Issuances include:

- tax-exempt bonds sold to institutional investors;
- tax-exempt bonds sold to retail investors;
- taxable bonds sold to institutional investors;
- Build America Bonds (BAB), which were taxable bonds for which the State receives a direct subsidy from the federal government;
- Qualified Zone Academy Bonds (QZAB) that support specific education projects. Depending on the date of issuance, these bonds have received federal tax credits or direct federal subsidies;
- Qualified School Construction Bonds (QSCB), which supported specific education projects. Depending on the date of issuance, these bonds have received federal tax credits or direct federal subsidies; and
- Qualified Energy Conservation Bonds (QECB), which are direct federal subsidy bonds that support energy efficiency capital expenditures in public building, renewable energy production, and other related projects.

GO bond debt service payments are supported by the Annuity Bond Fund (ABF). The ABF revenues include State property tax revenues, federal subsidies, bond sale premiums, and repayments from certain State agencies, subdivisions, and private organizations. General funds may subsidize debt service if these funds are insufficient.

Performance Analysis

1. Analysis of GO Bonds' True 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's internal rate of return. The TIC is calculated at each competitive bond sale, and the bidder with the lowest TIC is awarded the bid. This process awards the bonds to the lowest cost bid.

Financial theory suggests factors that could influence Maryland's GO bond's TIC. Research has confirmed a number of significant influences in other states and in national studies that include Maryland. To build the least squares regression equation, data was collected and analyzed for the 56 bond sales since March 1991 (refunding sales are excluded): 45 competitively bid, tax-exempt bond sales; 4 competitively bid BABs; and 7 negotiated retail bond sales. The complete analysis is provided in the *Effect of Long-term Debt on the Financial Condition of the State* prepared by the Department of Legislative Services (DLS).

The sum of least squares regression analysis is used to evaluate the factors that could influence the TIC. In all, over 30 independent variables were tested, including Maryland gross State product to United States gross domestic product, State budget growth, average years to maturity, and use of a financial advisor. **Appendix 3** provides all the data for the statistically significant variables. **Exhibit 1** shows which 5 independent variables are statistically significant factors that influence the TIC:

- ***Bond Buyer 20-bond Index[1]:*** The key variable is the 20-bond index. This is an estimate of the market rate for 20-year, AA-rated State and municipal bonds. DLS has collected the estimated yields since 1991.

- ***Ratio of Maryland Total Personal Income to the United States Total Personal Income:*** One perspective on interest rates is to consider them as a return for risk. The higher the risk, the higher interest rate investors will expect. One factor of risk is the fiscal health of the entity selling the debt. In the DLS regression equation, State personal income is used as a proxy for fiscal health. The equation uses a ratio that compares State personal income to U.S. personal income. If the ratio increases, Maryland is doing relatively better than the rest of the United States, and a GO bond issuance's TIC tends to decline.

- ***Years to Maturity:*** Under normal economic conditions, bonds with shorter maturities have lower interest costs than bonds with longer maturities. This is referred to as a positive yield curve. The analysis estimates that every year adds 0.25% (25 basis points) to the TIC.

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

Exhibit 1
True Interest Cost Regression Equation Independent Variables
Bond Sales from 1991-2012

Independent Variable	Coefficient	Standard Error	Beta	t-test	Sig.	Tol.	Comment
Bond Buyer 20-bond Index	0.88	0.04	0.65	21.083	0.000	0.63	Highest t-test suggests with confidence that the index is significant.
MD PI/US PI	-2.15	0.73	-0.10	-2.926	0.005	0.50	Negative coefficient suggests that as the Maryland economy strengthens, compared to the United States, the TIC declines.
Years to Maturity	0.25	0.03	0.33	8.115	0.000	0.34	Positive coefficient means that longer maturities tend to have higher TICs.
BABs	-1.17	0.20	-0.26	-5.862	0.000	0.29	Negative coefficient suggests BABs are less expensive.
Post-financial Crisis	-0.53	0.10	-0.22	-5.210	0.000	0.32	Maryland bonds yields are reduced since the crisis.
Constant	2.189						

BABs: Build America Bonds
MD PI/US PI: Maryland Total Personal Income to United States Personal Income
Sig.: Significance or confidence interval
TIC: True interest cost
Tol.: Tolerance, a test of multicollinearity

Source: Department of Legislative Services, October 2012

- ***BABs:*** In February 2009, the American Recovery and Reinvestment Act authorized the issuance of BABs. The bonds are taxable bonds that support the same types of projects that traditional tax-exempt bonds 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 35.0% 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.

- ***Post-financial Crisis:*** This a variable that indicates if a bond was sold before or after Lehman Brothers collapsed in September 2008. The equation estimates that Maryland bond yields are 0.53% (53 basis points) less since September 2008. This is consistent with the "flight to quality" that some believe has resulted since the financial crisis of 2008. The average bond in the index is a lower quality bond than Maryland bonds. The negative coefficient projects that the yield on higher-rated bonds has been reduced when compared to AA-rated bonds. This variable was not necessary in previous years. The analysis used an index of AAA-rated bonds which would not identify an increasing spread between higher and lower rated bonds. Now that a AA-rated index is used, a variable measuring the increasing spread between AAA and AA bonds results in an improved equation.

Finally, what is not statistically significant can be as interesting as what is significant. Last year's analysis included data from bonds issued less than a month after Maryland was placed on Credit Review by Moody's Investors Service, Inc. After the initial bond sale, the data implied that this action increased the yield on Maryland bonds. The State has now issued additional bonds in 2012 while still on credit review. After including the 2012 bond sales, the credit review is no longer statistically significant. This analysis suggests that, if there were initially additional costs attributable to the credit review, these additional costs have faded away.

Fiscal 2013 Actions

Proposed Deficiency

The budget bill includes a federal fund deficiency appropriation totaling $197,820. The State issued $15.2 million in QZABS in August 2012. QZABs support public school construction projects. These are taxable bonds with a direct federal interest subsidy for the issuer (in this case, the State of Maryland). The federal funds fully subsidize the State's interest payment, so that the effective interest rate for the State is 0%. The deficiency appropriation is the federal subsidy for interest.

DLS recommends that the deficiency appropriation be approved.

Actions Since Enactment of the Fiscal 2013 Budget

Since the fiscal 2013 budget was enacted, debt service costs have been reduced by almost $6.7 million. **Exhibit 2** shows that the reductions are attributable to low interest paid on the bonds issued, a federal subsidy, and savings from refunding bonds.

Exhibit 2
Analysis of August 2012 Bond Sale
($ in Thousands)

Description	Amount
Projected August 2012 Debt Service Costs	**$13,125**
Actual Debt Service Costs	
Negotiated Debt Service	$484
Tax-exempt Institutional Debt Service	9,083
Taxable Bond Debt Service	43
Qualified Zone Academy Bond Debt Service	198
Subtotal – August Bond Sale Debt Service	***$9,807***
Savings	
Refunding	$3,170
Federal Qualified Zone Academy Bond Direct Payment	198
Subtotal – Savings	***$3,368***
Total Debt Service Costs	**$6,439**
Additional (Savings) Debt Service Costs	**-$6,685**

Source: Department of Budget and Management; Public Financial Management, Inc,, August 1, 2012

Anticipated debt service expenditures are $916.0 million in fiscal 2013 and not $922.5 million that is currently in the working appropriation. The lower appropriation reduces special fund appropriations from the ABF, which increases the fiscal 2013 end-of-year fund balance. The estimates prepared by DLS in this analysis reflect these changes and assume $916.0 million in the working appropriation, as well as a higher ABF balance.

Proposed Budget

The fiscal 2014 allowance totals $983.6 million. This continues the steady increase in GO bond debt service costs experienced in recent years. These increases are attributable to higher GO bond authorizations and issuances in recent years resulting in more debt outstanding. For example, the amount of new GO bonds issued increased from just over $400.0 million annually in fiscal 2001 and 2002, approximately $700.0 million from fiscal 2005 to 2008, and over $1 billion from fiscal 2010 to 2012.

Most of the revenues supporting GO bond debt service are derived from State property taxes. **Exhibit 3** shows that State property taxes provide $713.4 million, which represents 72.5% of the appropriation. The Administration's fiscal 2014 forecast does not assume any bond sale premiums. Without bond sale premiums, the current State property tax rate (at $0.112 per $100 of assessable base) and ABF balance is insufficient to fully fund debt service costs. To support debt service without raising State property taxes, the allowance includes $101.0 million in general fund appropriations. This is the second general fund appropriation since fiscal 2003, when the State property tax was raised from $0.084 to $0.132 per $100 of assessable base. The rate was reduced to the current rate, $0.112, in fiscal 2007. Fiscal 2006 included a $29.3 million appropriation to ensure that sufficient funds were available to fund debt service costs.

Exhibit 3
Annuity Bond Fund Revenues and General Obligation Bond Debt Service Expenditures
Fiscal 2012-2014
($ in Thousands)

	Actual Expenditures 2012	Working Appropriation 2013	Allowance 2014
Annuity Bond Fund (ABF) Activity			
Beginning Balance	$162,136	$192,245	$149,886
Property Tax Receipts	762,299	723,489	713,414
Interest and Penalties on Property Taxes	2,253	2,250	2,250
Other Repayments and Receipts	989	645	459
Bond Premium	129,719	133,526	0
Transfer to Reserve	-192,245	-149,886	-1,947
ABF Special Fund Appropriations	**$865,151**	**$902,268**	**$864,062**
General Fund Appropriations	$0	$0	$101,000
Transfer Tax Special Fund Appropriations	1,561	1,561	6,109
Federal Fund Appropriations	11,498	11,955	12,381
Federal Fund Appropriations – Deficiency	0	198	0
Projected Total Debt Service Expenditures	**$878,209**	**$915,982**	**$983,552**
Fiscal 2013 Changes to the Legislative Appropriation			
Excess Appropriations	$0	$6,685	$0
Budgeted Debt Service Appropriations	**$878,209**	**$922,666**	**$983,552**

Source: Department of Budget and Management, January 2013

Exhibit 4 provides a breakdown of debt service costs projected in the fiscal 2014 allowance. The allowance includes $951.4 million in debt service from bonds that have already been issued and $32.1 million in debt service from issuances projected in March and summer 2013. Prior to fiscal 2001, State debt service was comprised of traditional GO bonds (tax-exempt debt issued to institutional investors). The exhibit identifies debt service payments attributable to the new kinds of debt that have been added since 2001.

Exhibit 4
Fiscal 2014 Debt Service Costs
($ in Millions)

Type of Debt	Principal	Interest	Sinking Fund	Total
Traditional GO Bonds	$545.7	$279.1	$0.0	$824.9
Retail Bonds	67.4	20.6	0.0	88.0
Taxable Bonds	0.0	0.1	0.0	0.1
Build America Bonds	0.0	25.3	0.0	25.3
Qualified Zone Academy Bonds	0.8	1.4	2.2	4.5
Qualified School Construction Bonds	0.0	2.0	6.4	8.3
Qualified Energy Conservation Bonds	0.0	0.3	0.0	0.3
Subtotal	***$614.0***	***$328.9***	***$8.6***	***$951.4***
Projected Issuances				
March 2013 Bond Sale	$0.0	$20.3	$0.0	$20.3
Summer 2013 Bond Sale[1]	0.0	11.4	0.0	11.4
Additional $150 Million	0.0	0.5	0.0	0.5
Subtotal	***$0.0***	***$32.1***	***$0.0***	***$32.1***
Total	**$614.0**	**$361.0**	**$8.6**	**$983.6**

GO: general obligation

[1] Excludes additional $150 million proposed to be authorized in fiscal 2014 capital budget.

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

Source: Comptroller Office, October 2012; Department of Budget and Management, January 2012

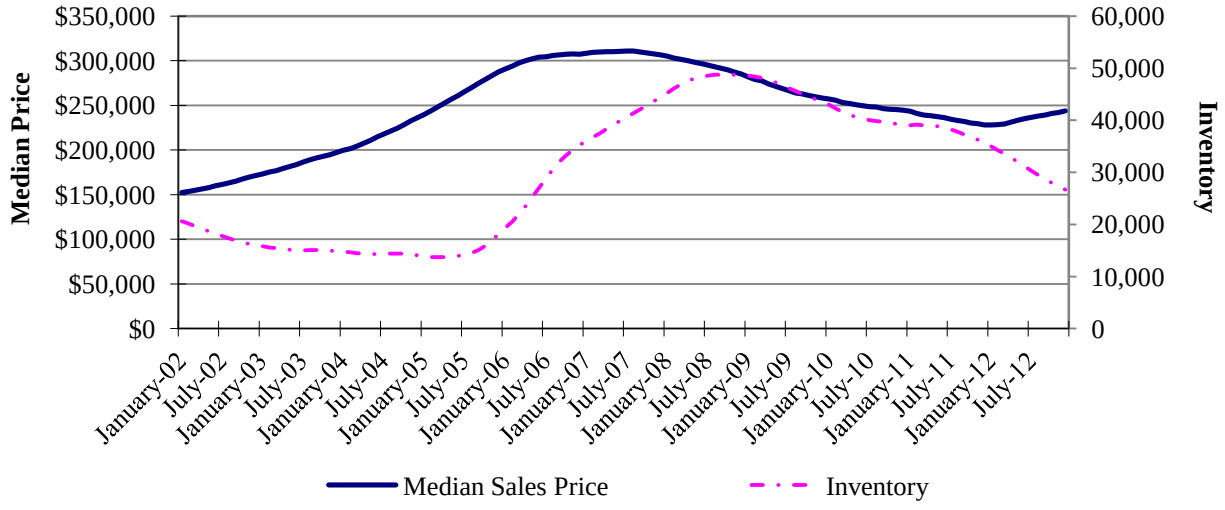
Issues

1. Long-term Problem: Cost of Debt Exceeds Projected State Property Tax Revenues

GO bond debt service costs are supported by the ABF. The fund's largest revenue sources include State property tax revenues and proceeds from bond sale premiums. Other revenue sources include interest and penalties on property taxes and repayments for local bonds. When the ABF has not generated sufficient revenues to fully support debt service, general funds have subsidized debt service payments. In April 2006, the State property tax rate was set at $0.112 per $100 of assessable base; this reduced the fiscal 2007 rate by $0.02 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. **Exhibit 5** shows that the previous decade had seen a substantial increase in real estate values, which peaked in summer 2007, followed by a decline in values. The year-over-year decline began in July 2007 and continued until February 2012. That is 55 straight months of year-over-year declines in median home values. Since February 2012, each month has seen a year-over-year increase in prices.

Exhibit 5
Maryland Housing – Median Prices and Inventory
12-month Moving Average
January 2002 to November 2012



Note: Since this is a 12-month moving average, the first data point averages all values from February 2001 to January 2002. The date shown on the X-axis shows the final date of the average (for example, January 2002 in the first data point.)

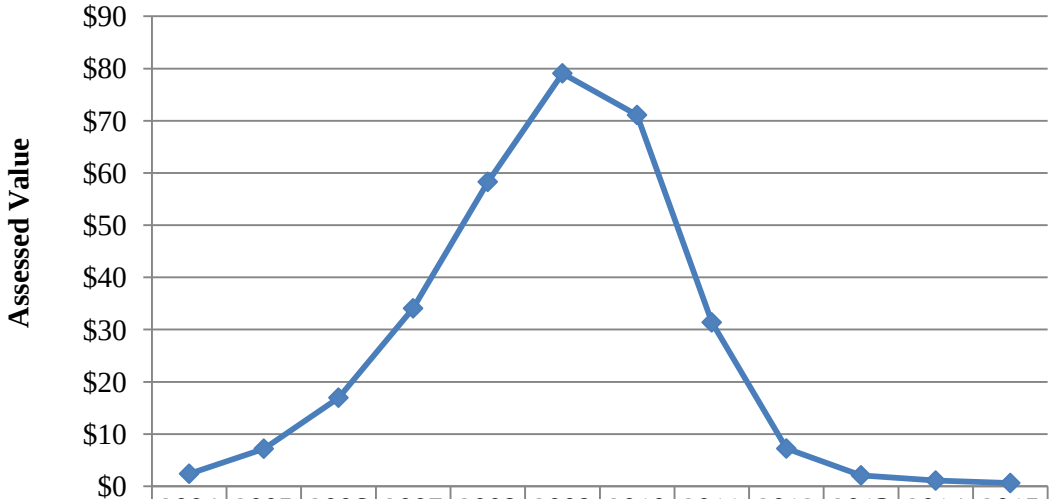
Source: Maryland Association of Realtors

Inventories went through a similar increase and decline. Since the increase in home values in February, inventories have continued to decline. In December 2012, inventories totaled approximately 22,000, which is less than inventories were in September 2000, which totaled about 25,000.

When home values increased from 2001 to 2007, State property tax collections did not increase correspondingly; similarly, the decline in home values since 2007 did not result in a corresponding decline in revenues. One reason for this is the Homestead Tax Credit. This credit limits the increase in State property assessments subject to the property tax to 10%. If reassessing a resident's property results in an increase that exceeds 10%, the homeowner receives a credit for any amount above 10%. This limits growth in revenues when property values rise quickly. It also provides the State a hedge should property values decline. As home values declined, the homestead credit declined and revenues continued to slowly increase. The result was to smooth State revenues; State property tax revenue growth was slower as home values increased, and there was no decline in revenues when home values decreased.

Exhibit 6 shows that State homestead credits increased to $79 billion in fiscal 2009 in response to increases in assessments. By fiscal 2015, the aggregate homestead credits are projected to be under $1 billion.

Exhibit 6
State Property Tax Homestead Tax Credits
Fiscal 2004-2015
($ in Billions)

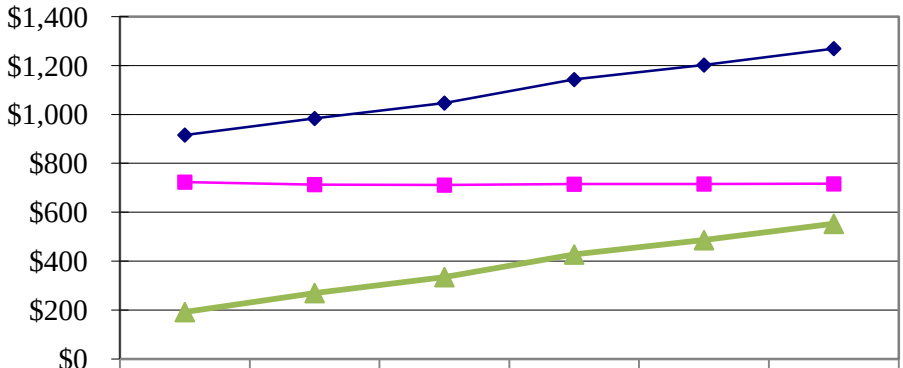


	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Homestead Tax Credit	2.4	7.2	16.9	34.1	58.3	79.1	71.1	31.4	7.2	2.1	1.1	0.6

Source: State Department of Assessments and Taxation

Over the next few years, State property tax revenues are estimated to remain fairly flat. This contrasts with debt service costs, which are expected to increase steadily in the out-years. **Exhibit 7** shows how State property taxes, which are $192 million less than debt service costs in fiscal 2013, are expected to be $553 million less than debt service costs in fiscal 2018.

Exhibit 7
GO Bond Debt Service Costs and State Property Tax Revenue Collections
Fiscal 2013-2018
($ in Millions)



	2013	2014	2015	2016	2017	2018
State Property Tax Receipts	$723	$713	$711	$715	$716	$716
GO Bond Debt Service Costs	$916	$984	$1,047	$1,143	$1,202	$1,269
Difference	$192	$270	$335	$428	$486	$553

GO: general obligation

Source: Department of Legislative Services, January 2013

In fiscal 2013, the shortfall in State property tax receipts is not a problem because the ABF has a large fund balance. In recent years, the State has benefited from the low interest rates offered for AAA-rated State and municipal bonds. These low rates have reduced the GO bond's TIC, which resulted in higher bond sale premiums. These premiums have been deposited into the ABF to support debt service costs.

Exhibit 8 shows that fiscal 2013 has $192 million in prior year fund balances, which provides sufficient funds to support debt service in fiscal 2013. However, fiscal 2014 State property tax rates are insufficient to support debt service costs, and the Administration proposes to appropriate $101 million in general funds to support State debt service costs.

Exhibit 8
Revenues Supporting Debt Service
Fiscal 2013-2018
($ in Millions)

	2013	2014	2015	2016	2017	2018
Special Fund Revenues						
State Property Tax Receipts	$723	$713	$711	$715	$716	$716
Bond Sale Premiums	134	0	0	0	0	0
Other Revenues	3	3	3	3	3	3
ABF Fund Balance Transferred from Prior Year	192	150	2	2	2	2
Subtotal Special Fund Revenues Available	***$1,052***	***$866***	***$716***	***$720***	***$720***	***$721***
General Funds	0	101	314	406	465	531
Transfer Tax Special Fund Appropriations	2	6	6	6	7	7
Federal Funds[1]	12	12	12	12	12	12
Total Revenues	**$1,066**	**$985**	**$1,049**	**$1,144**	**$1,204**	**$1,271**
Projected Debt Service Expenditures	**$916**	**$984**	**$1,047**	**$1,143**	**$1,202**	**$1,269**
ABF End-of-year Fund Balance	**$150**	**$2**	**$2**	**$2**	**$2**	**$2**

ABF: Annuity Bond Fund

[1]Federal interest subsidies for Build America Bonds, Qualified Zone Academy Bonds, Qualified School Construction Bonds, and Qualified Energy Conservation Bonds.

Source: Department of Legislative Services, January 2013

The State Treasurer should be prepared to brief the committees on the status of the ABF.

2. Short-term Help: Bond Sale Premiums

GO bond debt service is supported by the ABF and general funds. ABF's revenue sources include property tax revenues, interest generated by fund balances, loan repayments for local bonds, and miscellaneous revenues generated from bond sales such as bond sale premiums. The purpose of the bond fund is to support debt service. If ABF revenues are insufficient to support the entire GO bond debt service, general funds are also appropriated.

Before calendar 2001, more than 95% of revenues were generated from either property taxes (distributed through the ABF) or general fund appropriations. In recent years, bond sale premiums

have been a substantial revenue source for the ABF. Since fiscal 2001, the State generated over $650 million in bond sale premiums. This is almost 10% of debt service expenditures over the same period.

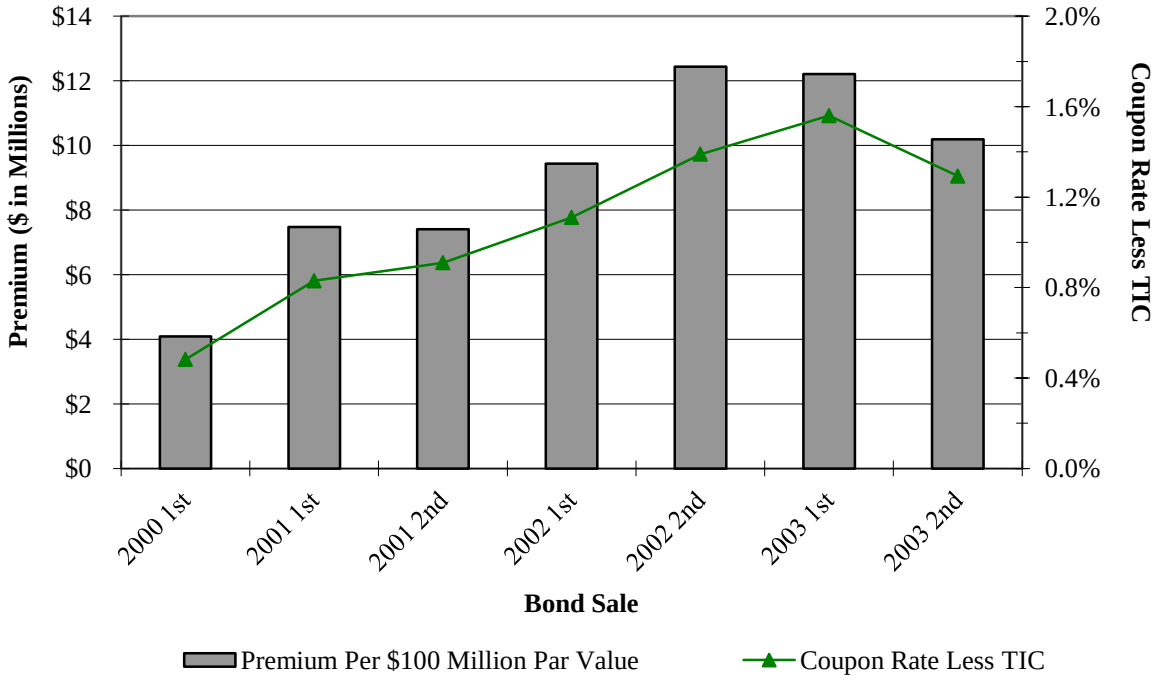
Bond Sale Premiums Have Increased as Interest Rates Have Decreased

When bonds are sold, they have a par value (cost of the bond as shown in the Official Statement) and a coupon rate (interest rate paid to the bondholder). When the bonds are bid, the Treasurer's Office determines the value of the bonds sold and when the bonds mature. The market determines the coupon rate and the sale price of the bonds. In the current low-interest rate climate, the coupon rate has been substantially higher than the market interest rate, as measured by the TIC. If the TIC is less than a bond's coupon rate, the markets bid up the price of the bonds to a level that is higher than par value. The difference between the par value and the sale price of the bonds is a premium. Conversely, when the TIC is above the coupon rate, the bonds cannot sell at par value and sell for less. This difference is referred to as a discount.

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

The increases in premiums are attributable to the difference between the bonds' coupon rates and the TIC. The coupon rates have declined less than market interest rates (as measured by the TIC) in recent years. **Exhibit 9** shows how the spread between the coupon rate and the TIC affects bond sale premiums in bond sales from 2000 to 2003, when the State began realizing large premiums. Over the same period, bond sale premiums increased from $4 million sale to $12 million per $100 million of bonds sold. The actual premium realized is even more stunning, as the total amount of bonds sold increased. The first 2000 bond sale generated an $8 million premium, while the first 2003 bond sale generated a $61 million premium.

Exhibit 9
Differences Between Coupon Rates and True Interest Cost Affect Premiums
2000-2003 Bond Sales



TIC: true interest cost

Source: Department of Legislative Services, November 2003

Bond Sale Premiums Protect Investors Against Rising Interest Rates

The return an investor receives for purchasing a bond is referred to as the yield. When bonds are sold, the yield is the TIC. At the July 2011 bond sale, the State competitively sold $29.0 million of GO bonds with 15-year maturities. The coupon rate of the bonds was 5.00%, and the yield was 3.30%. The value of each $5,000 bond with a 5.00% coupon rate was $5,999. The additional $999 was the premium investors paid to increase the coupon rate from 3.30 to 5.00%. At the time of the bond sale, the value of a $5,000 bond with a 3.30% coupon rate is the same as a $5,999 bond with a 5.00% coupon rate.

Even though the two bonds in the previous example are worth the same on the day of the sale, investors prefer to purchase bonds at a premium under current market conditions. The reason for this is that bonds sold at a premium hold their value better than bonds sold at par if interest rates rise. If

interest rates increase from 3.30 to 4.30%, the value of bonds sold for $5,999 decline 10.30% while the value of bonds sold at par ($5,000) decline 11.00%.

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

Maryland Conservatively Estimates Bond Sale Premiums

In the November 2003 *Effect of Long-term Debt on the Financial Condition of the State*, DLS recommended that the State estimate premiums when preparing the budget. At the time, DLS noted that this should be done cautiously because bond markets can be volatile. DLS' concern is that bond sale premiums can vary substantially. Even a slight change in market interest rates or the coupon rates proposed by the winning bidder can increase or reduce the premium by millions of dollars.

Since the fiscal 2005 budget, the State has estimated premiums in the budget. The State's approach has been conservative so premiums are estimated in the current fiscal year and not throughout the full forecast period. This is so that the State is not relying on a volatile revenue source to support debt service payments. Changes in interest rates or the amount of bonds sold can substantially change how large a premium is realized at a bond sale. Specifically:

- ***Interest Rates Changes:*** Either increasing the true interest cost or reducing the coupon rate by a combination of 0.25% (25 basis points) reduces the projected March 2013 premium by $12 million; or

- ***Modifying the Amount of Bonds Sold:*** Adding $25 million to the sale adds $3 million to the premium.

For the fiscal 2014 budget, this means that a premium is estimated for the March 2013 bond sale, the last bond sale of fiscal 2013, but not for any of the fiscal 2014 bond sales. State property taxes and bond sale premiums have been sufficient to generate ABF balances that were large enough to support annual debt service even if no premium is realized in the year of the allowance. This fund balance has been whittled down over the years and is now no longer sufficient to fund all of the next year's debt service.

Current Market Conditions Suggest that the State Will Realize Premiums Through the Summer of 2015

So that the State does not rely on a volatile source for debt service payments, the Administration includes $101 million in general funds in the Public Debt fiscal 2014 allowance. However, it is quite likely that there will be bond sale premiums realized in fiscal 2014. Current Federal Reserve policy is to maintain low interest rates until the summer of 2015. After that, rates are

expected to be increased. In other words, rates are likely to remain low and then rise. These are ideal conditions for issuing bonds at a premium, and the demand for bonds issued at a premium is likely to remain high. To evaluate the effect of continued low interest rates on the ABF, DLS has prepared an estimate of bond sale premiums with low interest rates through summer 2015. **Exhibit 10** shows that this could generate $229 million in bond sale premiums.

Exhibit 10
Bond Sale Premiums Realized If Market Conditions Remain Constant
($ in Millions)

Bond Sale Date	Amount Issued	Estimated Premium
Summer 2013	$475.0	$58.9
Winter 2014	502.0	51.2
Summer 2014	475.0	48.4
Winter 2015	520.0	52.3
Summer 2015	475.0	18.4
Total	**$2,447.0**	**$229.3**

Note: Using these assumptions: (1) true interest cost is 2.50% in summer 2013, 2.75% from winter 2014 to winter 2015, and 3.50% in summer 2015; and (2) coupon rate is 4.00% in all bond sales.

Source: Department of Budget and Management

Exhibit 11 shows that realizing bond sale premiums from fiscal 2014 to 2016 is insufficient to eliminate the need for all general funds. Fiscal 2014 ends with a fund balance totaling $112 million. In fiscal 2015 additional general funds will be needed, even with sizeable premiums and a large fund balance at the beginning of the fiscal year. By fiscal 2018, $531 million in general funds are needed as State property tax revenues represent 56% of debt service costs.

Exhibit 11
Revenues Supporting Debt Service
With Bond Sale Premiums Realized in Fiscal 2014 to 2016
Fiscal 2013-2018
($ in Millions)

	2013	2014	2015	2016	2017	2018
Special Fund Revenues						
State Property Tax Receipts	$723	$713	$711	$715	$716	$716
Bond Sale Premiums	134	110	101	18	0	0
Other Revenues	3	3	3	3	3	3
ABF Fund Balance Transferred from Prior Year	192	150	112	1	1	1
Subtotal Special Fund Revenues Available	$1,052	$976	$927	$737	$719	$720
General Funds	0	101	102	388	465	531
Transfer Tax Special Funds	2	6	6	6	7	7
Federal Funds	12	12	12	12	12	12
Total Revenues	**$1,066**	**$1,096**	**$1,047**	**$1,144**	**$1,203**	**$1,270**
Projected Debt Service Expenditures	**$916**	**$984**	**$1,047**	**$1,143**	**$1,202**	**$1,269**
ABF End-of-year Fund Balance	**$150**	**$112**	**$1**	**$1**	**$1**	**$1**

ABF: Annuity Bond Fund

[1]Federal interest subsidies for Build America Bonds, Qualified Zone Academy Bonds, Qualified School Construction Bonds, and Qualified Energy Conservation Bonds.

Source: Department of Legislative Services, January 2013

The State Treasurer should be prepared to discuss the effect of bond sale premiums on the ABF's ability to fund State GO bond debt service costs.

3. Not Helping: Capital Budget Expansion

Since the Capital Debt Affordability Committee (CDAC) process was established in 1979, the State has gone through different periods of reducing and expanding State debt. The most recent expansion began in 2001. In every legislative session from 2001 to 2009, legislation expanding State debt was passed. Some of the major actions include 2006 (when GO bond authorizations were increased by $100 million annually in perpetuity and the annual escalation was increased to 3%) and 2009 (when GO authorizations were increased $150 million annually). Two new kinds of debt were

also authorized: Bay Restoration Bonds were authorized in 2004 and Grant Anticipation Revenue Vehicles were authorized in 2005.

These new and expanded authorizations increased the amount of debt outstanding. At the end of fiscal 1999, State debt outstanding totaled $4.7 billion. By the end of fiscal 2011, total debt outstanding increased to $10.2 billion (an increase of 6.1% annually). In 1999, GO bond authorizations totaled $4.5 billion of which $3.5 billion was issued and $1.0 billion was authorized but unissued. By the end of fiscal 2012, GO bond authorizations increased to $9.9 billion of which $7.5 billion was issued and $2.3 billion was authorized but unissued.

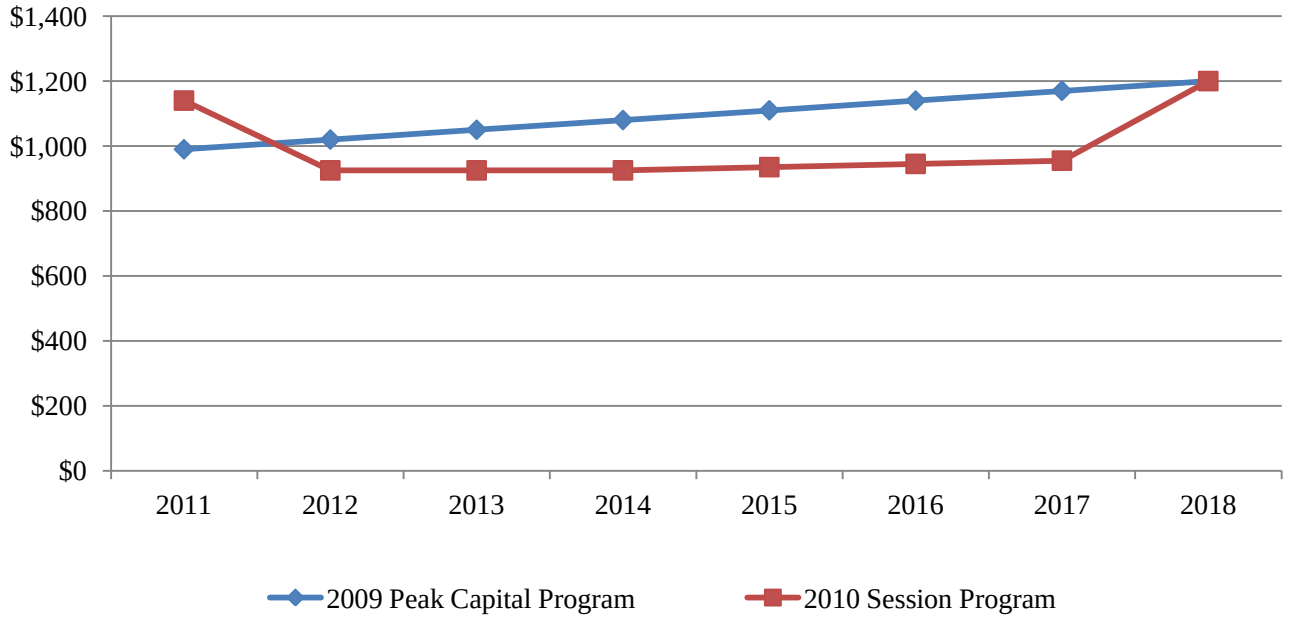
Committee Reduces GO Debt Authorizations When State Reaches Affordability Limit in December 2009

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

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

In response to these lower revenues, the committee reduced the out-year GO bond authorizations so that the debt service to revenues ratio was below the limit. **Exhibit 12** shows that the plan proposed for the 2010 legislative session increased authorizations in fiscal 2011 and then reduced authorization from fiscal 2012 to 2017. In fiscal 2018, spending would go back to the previous trajectory. This reduced fiscal 2011 to 2018 authorizations from $8,760 million in the 2009 "peak" program to $7,950 million in the 2010 session plan – a reduction of $810 million.

Exhibit 12
Reductions to GO Bond Program
Fiscal 2011-2018
($ in Millions)



GO: general obligation

Source: Capital Debt Affordability Committee, 2009 and 2010

Administration Proposes to Increase GO Debt by $750 Million Over Five Years

State revenues have improved since 2009. The improvement is attributable to revenues exceeding expectations and revenue enhancements enacted by the General Assembly, most notably increasing income tax rates in the first special session of 2012. Since State debt is limited to 8% of revenues, increasing revenues also increase debt capacity. Consequently, these additional revenues have increased debt capacity.

In September 2012, the Department of Budget and Management (DBM) proposed to increase GO bond authorizations by $150 million per year from fiscal 2014 to 2018, adding $750 million to the capital budget. DBM's justification for increasing authorizations was that there are "shovel-ready projects," interest rates are low, capacity is squeezed by legislative pre-authorizations, and the capital budget provides operating budget relief. DBM also noted that, even if authorizations are increased,

this September's debt service to revenue ratio is less than the ratio was in September 2011. This increase was approved by CDAC.

Increasing GO bond authorizations does not add much to State debt service costs, initially. However, over time the costs become substantial. **Exhibit 13** shows that the increased program is expected to add less than $1 million to fiscal 2014 debt service costs. By fiscal 2022, $72 million in additional debt service costs are projected. Initially, costs increase slowly because capital projects are phased in over a period of years and because the State only pays interest for the first two years after a bond is issued. With respect to capital project phasing, the State Treasurer's Office estimates that 31% of capital project bonds are issued in the first year.

Exhibit 13
Effect of Increasing GO Bond Authorizations
Fiscal 2014-2022
($ in Millions)

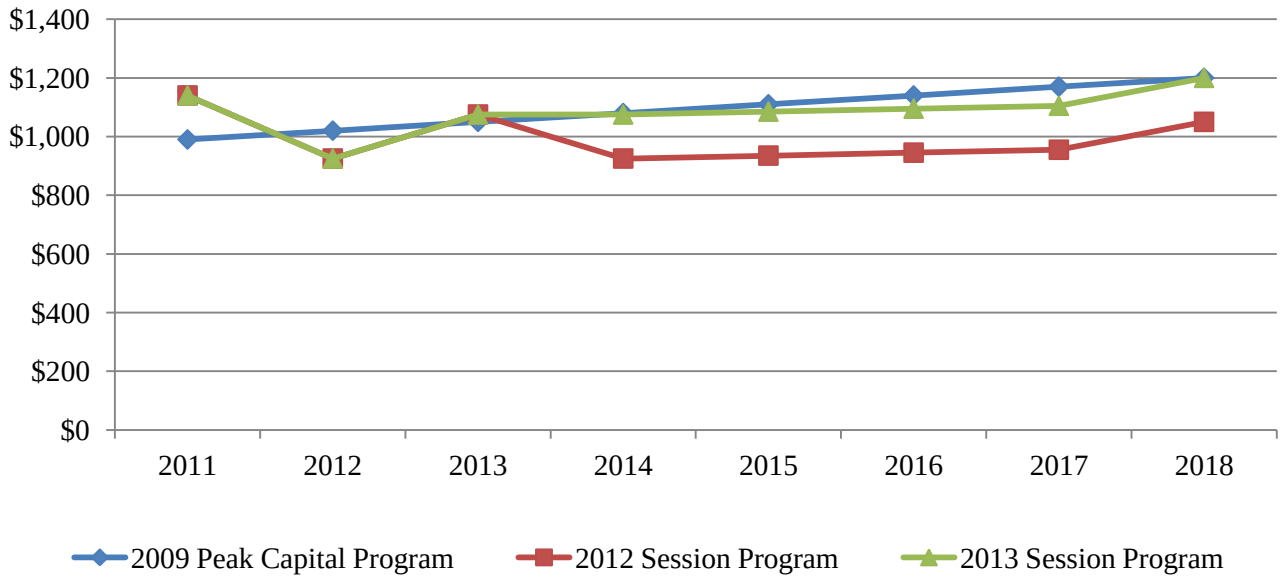
Fiscal Year	Increase in Authorizations	Additional Debt Service
2014	$150.0	$0.5
2015	150.0	3.3
2016	150.0	8.0
2017	150.0	16.2
2018	150.0	28.0
2019	0.0	41.3
2020	0.0	53.8
2021	0.0	65.0
2022	0.0	72.3

GO: general obligation

Source: Department of Legislative Services, October 2012

If approved by the General Assembly, adding $750 million to the capital program would almost bring GO bond authorizations back to the peak level that was proposed in 2009. **Exhibit 14** shows that the proposed program raises capital authorizations to $1,075 million in fiscal 2014, compared to the $1,080 million in fiscal 2014 that was proposed in 2009. Total authorizations from fiscal 2011 to 2018 would be $8,700 million, which is $60 million less than was proposed in 2009.

Exhibit 14
New Program Approaches Peak Spending
Fiscal 2011-2018
($ in Millions)



Source: Capital Debt Affordability Committee

The State Treasurer should be prepared to brief the committees on the effect of increased capital budget authorizations and debt service costs.

4. Also Not Helping: Taxable Bonds Are More Expensive, Reliance Should Be Reduced as State Approaches Structural Balance

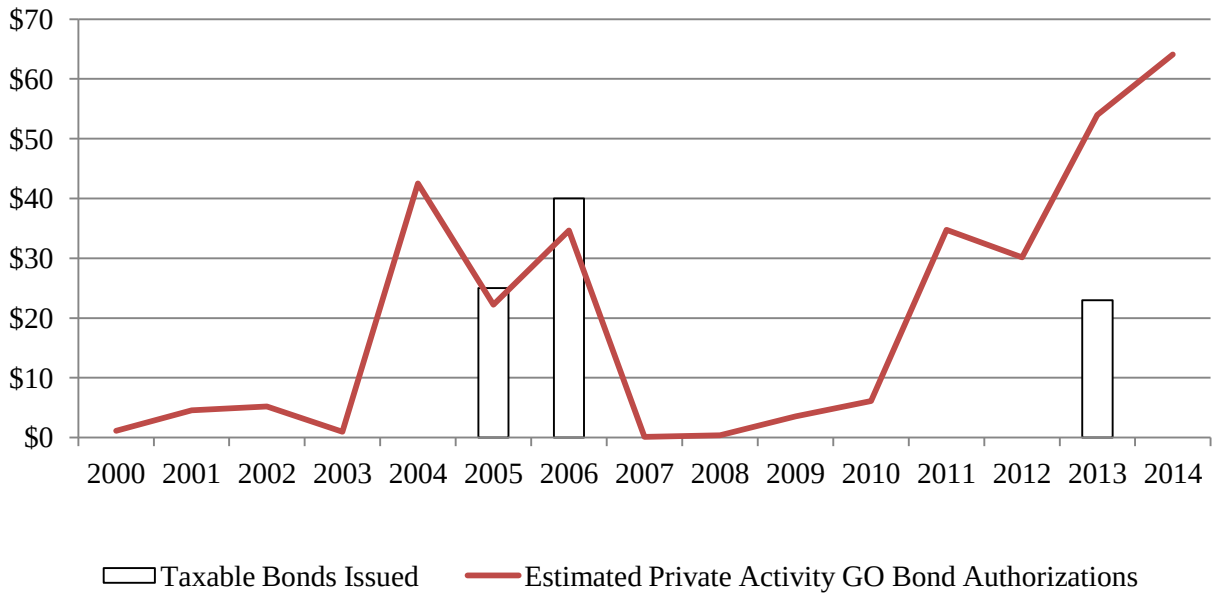
The State's capital program supports a number of different public policy objectives such as health, environmental, public safety, education, housing, and economic development objectives. Federal government regulations allow the State to issue debt that does not require the buyer to pay federal taxes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

Federal laws and regulations limit the kinds of activities the proceeds from tax-exempt bonds can support. One such requirement limits private activities or private purposes of the bond proceeds to 5% of the bond sales proceeds. Another requirement limits the bonds to $15 million for business use projects and $5 million for business loans. Examples of programs that support private activities

or uses include the Partnership Rental Housing and Neighborhood Business Development programs of the Department of Housing and Community Development (DHCD), the Hazardous Substance Cleanup Program of the Maryland Department of the Environment, the Public Safety Communications program of the Department of Information Technology (DoIT), and the Physical Sciences Complex at the University of Maryland, College Park.

To avoid exceeding the private activity limits imposed in the federal regulations, the State has previously appropriated funds in the operating budget instead of issuing debt for private purpose programs and projects. Recent years' fiscal constraints have limited the amount of operating funds available for capital projects. To continue these programs, the State authorized GO bonds. In fiscal 2011, the State began migrating private purpose programs from the operating budget into the capital budget. **Exhibit 15** shows that the State has authorized at least $30 million in private activity bonds annually since fiscal 2011 and issued $23 million in taxable debt in fiscal 2013.

Exhibit 15
Private Activity Authorizations and Taxable Bond Issuances
Fiscal 2000 to 2014
($ in Millions)



GO: general obligation

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

Taxable Bonds Cost More and Taxable Bonds' Costs Are Expected To Increase

At the most recent bond sale in August 2012, the State sold $23 million in taxable GO bonds to institutional investors. The issuance's TIC was 0.45% and the State did not realize a premium. At the same bond sale, the State also issued $4 million in tax-exempt bonds to institutional investors. The tax-exempt bond sale had a TIC of 0.33%. In other words, the difference between the two bonds, which were both issued on the same day, was 0.12% (12 basis points). DLS estimates that if the taxable issuance had sold at a TIC of 0.33%, instead of 0.45%, the bonds would have generated a premium totaling approximately $500,000.

In the out-years, the additional costs for issuing taxable debt are likely to increase. The current low interest rate environment is probably suppressing the additional costs paid by issuers of taxable debt. For example, the State issued taxable debt in fiscal 2005 and 2006. At the time, interest rates were higher, and DLS estimates that taxable bonds added $2.8 million in debt service costs for the $65.0 million issued. This is roughly twice the cost differential as the August 2012 bond sale.

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

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

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

It is not unusual for the State to move pay-as-you-go (PAYGO) capital projects and programs into the GO bond program when State finances deteriorate. Usually, the projects and programs are moved back out of the GO bond program after finances have improved. For example, Exhibit 15 shows this pattern after the rise in private use authorizations from fiscal 2004 to 2006. In fiscal 2007 there is a decline in private activity authorizations.

This is not the case in the current *Capital Improvement Program*. The fiscal 2014 allowance, which has the lowest structural deficit since before the Great Recession began, has private activity authorizations increasing to $64 million. This is the highest, not the lowest level in years. **Exhibit 16** shows that out-year private activity authorizations range from $31 million in fiscal 2015 to $21 million in fiscal 2018. Though there is a decline in authorizations, there still is a substantial reliance on GO bond funds to support projects and programs that are traditionally supported in the PAYGO capital funding.

Exhibit 16
Private Activity Authorizations by Department
Fiscal 2014 to 2018
($ in Thousands)

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

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

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

The concern is that there are large private activity authorizations in DoIT and DHCD. These large authorizations are likely to result in taxable bonds in the out-years. Funding these programs in the operating budget reduces the amount of private activity authorizations to $2 million or less in the out-years. This is consistent with a normal level of private activity authorizations. **DLS recommends that language be added to limit out-year taxable bond authorizations.**

Recommended Actions

1. Add the following language:

   It is the intent of the General Assembly that the State reduce the amount of proposed private activity general obligation bond debt in fiscal 2015 and beyond. To implement this intent the Administration should reduce the level of private activity authorizations to less than $5,000,000 per fiscal year in the fiscal 2015 to 2019 Capital Improvement Program.

   Explanation: The General Assembly is concerned that projected GO bond debt service costs are increasing at a much higher rate than the funds available in the Annuity Bond Fund (ABF), which supports debt service. Adding to the growing debt service costs is the current practice to authorize bonds for private activity projects and programs that have traditionally been funded in the operating budget. The high level of private activity authorizations has required the State to issue $23 million in taxable debt in fiscal 2013. Recent data from GO bond sales demonstrate that taxable debt is more expensive than tax-exempt debt. Continuing to authorize $20 million to $30 million in private activity projects will result in additional taxable bond authorizations and add to the increasing shortfall in the ABF. To reduce the cost of debt, this language requires the Administration to reduce the amount of private activity authorizations and to instead fund these projects in the operating budget.

2. Add the following language to the general fund appropriation:

   , provided that $101,000,000 of this appropriation made for the purpose of general obligation bonds' debt service payments may only be expended for that purpose. Funds not expended for this restricted purpose may not be transferred by budget amendment or otherwise to any other purpose and shall be returned in the Annuity Bond Fund to address future debt service.

   Explanation: Currently, annual State property tax receipts are insufficient to fully find general obligation bonds' debt service costs in fiscal 2014 and the out-years. To fill the gap, general funds are appropriated to support debt service costs. Current market conditions suggest that it is likely that fiscal 2014 bond sales will generate some bond sale premiums. Premiums reduce the need for general funds in fiscal 2014 but do not eliminate the need for general funds in the out-years. This language restricts the use of general funds to support debt service only, if the full appropriation is not needed in fiscal 2014.

Appendix 1

Current and Prior Year Budgets

Current and Prior Year Budgets
Public Debt
($ in Thousands)

	General Fund	Special Fund	Federal Fund	Reimb. Fund	Total
Fiscal 2012					
Legislative Appropriation	$0	$871,203	$11,060	$0	$882,263
Deficiency Appropriation	0	0	437	0	437
Budget Amendments	0	0	0	0	0
Reversions and Cancellations	0	-4,491	0	0	-4,491
Actual Expenditures	**$0**	**$866,712**	**$11,498**	**$0**	**$878,209**
Fiscal 2013					
Legislative Appropriation	$0	$910,514	$11,955	$0	$922,469
Budget Amendments	0	0	0	0	0
Working Appropriation	**$0**	**$910,514**	**$11,955**	**$0**	**$922,469**

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

Fiscal 2012

Fiscal 2012 actual Public Debt spending was $4.1 million less than the appropriation. Major changes include:

- the September 2011 refunding reduced debt service cost by approximately $1,949,000;
- debt service payments for the July 2011 bond sale were almost $1,235,000 less than budgeted;
- sinking fund payments for the 2009 QSCB were $512,000 less than projected;
- approximately $437,000 in federal fund deficiency appropriations were provided. This supported debt service for QZABs, at approximately $323,000; and QECBs, which totaled under $114,000; and
- $437,000 in special funds for QZABs and QECBs are canceled due to the availability of federal funds.

Fiscal 2013

To date, there have been no budget amendments in fiscal 2013.

Fiscal Summary
Public Debt

Program/Unit	FY 12 Actual	FY 13 Wrk Approp	FY 14 Allowance	Change	FY 13 - FY 14 % Change
01 Redemption and Interest on State Bonds	$ 878,209,166	$ 922,468,627	$ 983,551,871	$ 61,083,244	6.6%
Total Expenditures	**$ 878,209,166**	**$ 922,468,627**	**$ 983,551,871**	**$ 61,083,244**	**6.6%**
General Fund	$ 0	$ 0	$ 101,000,000	$ 101,000,000	N/A
Special Fund	866,711,547	910,513,984	870,170,789	-40,343,195	-4.4%
Federal Fund	11,497,619	11,954,643	12,381,082	426,439	3.6%
Total Appropriations	**$ 878,209,166**	**$ 922,468,627**	**$ 983,551,871**	**$ 61,083,244**	**6.6%**

Note: The fiscal 2013 appropriation does not include deficiencies. The fiscal 2014 allowance does not include contingent reductions.

Appendix 3

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

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

Bond Sale Date	TIC	20-bond Index	MD/US PI	YTM	BABs	Post-crisis
February 28, 2007	3.86%	4.10%	2.228	No	No	No
August 1, 2007	4.15%	4.51%	2.218	No	No	No
February 27, 2008	4.14%	5.11%	2.208	No	No	No
July 16, 2008	3.86%	4.65%	2.213	No	No	Yes
March 4, 2009	3.39%	4.96%	2.287	No	No	Yes
March 2, 2009	3.63%	4.87%	2.287	No	No	Yes
August 5, 2009	2.93%	4.65%	2.303	No	No	Yes
August 3, 2009	3.20%	4.69%	2.303	No	No	Yes
August 5, 2009	3.02%	4.65%	2.303	Yes	Yes	Yes
October 21, 2009	2.93%	4.31%	2.242	No	No	Yes
October 21, 2009	3.06%	4.31%	2.242	Yes	Yes	Yes
February 24, 2010	2.85%	4.36%	2.262	Yes	Yes	Yes
July 28, 2010	1.64%	4.21%	2.259	No	No	Yes
July 28, 2010	1.91%	4.21%	2.259	No	No	Yes
July 28, 2010	2.74%	4.21%	2.259	Yes	Yes	Yes
March 7, 2011	2.69%	4.90%	2.286	No	No	Yes
March 9, 2011	3.49%	4.91%	2.286	No	No	Yes
July 25, 2011	1.99%	4.46%	2.299	No	No	Yes
July 27, 2011	3.08%	4.47%	2.299	No	No	Yes
March 2, 2012	2.18%	3.72%	2.306	No	No	Yes
March 7, 2012	2.42%	3.84%	2.306	No	No	Yes
July 27, 2012	2.52%	3.61%	2.277	No	No	Yes
August 1, 2012	2.17%	3.66%	2.277	No	No	Yes

BABs: Build America Bonds
MD/US PI: ratio of Maryland personal income to U.S. personal income
TIC: true interest cost
YTM: years to maturity

Source: *The Bond Buyer*; Federal Bureau of Economic Analysis; Bond Sale Official Statements