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

DEPARTMENT OF LEGISLATIVE SERVICES 2023

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

Department of Legislative Services
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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF POLICY ANALYSIS
MARYLAND GENERAL ASSEMBLY

Victoria L. Gruber
Executive Director

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December 2023

The Honorable Jim Rosapepe
Senate Chair, Spending Affordability Committee

The Honorable Mark S. Chang
House Chair, Spending Affordability Committee

Dear Chair Rosapepe and Chair Chang:

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 (CDAC), an independent affordability analysis, and independent policy recommendations to the Spending Affordability Committee (SAC).

CDAC complements the efforts of SAC in management of the State's bonded indebtedness. CDAC is required to submit a recommended level of debt authorization to the Governor and the General Assembly by October 20 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 General Assembly.

The statistical analysis and data used in developing the recommendations were prepared by Patrick Frank with assistance from Elizabeth Allison, Andrew Gray, Emily Haskel, Steven McCulloch, and Kelly Norton. The manuscript was prepared by Brett Ogden.

Respectfully submitted,

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Chapter 1. Recommendations of the Department of Legislative Services

New General Obligation Bond Authorization

The Capital Debt Affordability Committee (CDAC) recommended a limit of $1.75 billion for new authorizations of general obligation (GO) bonds for fiscal 2025, which is $0.5 billion more than the $1.25 billion recommended by the Spending Affordability Committee (SAC) in December 2022. The amount recommended by SAC was used by the Department of Legislative Services (DLS) to prepare baseline budget estimates and is affordable as it falls well within the affordability criteria, as discussed in Chapter 4. DLS also examined costs associated with the CDAC recommendation. This authorization is also affordable but does increase debt service costs by $246 million at the end of the forecast period.

In Chapter 8, DLS examines the State's bond ratings and observes that the State continues to maintains the highest bond rating even with unusually high debt levels and unfunded pension liabilities. This is attributable to Maryland's strong and well-embedded financial practices, like having CDAC and SAC thoroughly review State debt at public hearings. DLS also provides a complete analysis of other influences on State debt that includes expanding to cash flow analysis to examine where debt service costs are headed, other pressures on the capital program, and revenue risk. **To maintain a AAA bond rating from all three rating agencies and keep interest payments low, DLS recommends that the State should carefully evaluate fiscal management and debt policies. This includes examining the implications of increasing authorizations to consider more than just short-term cash flow changes but also to evaluate (1) maximum GO bond debt service costs; (2) the effect of increasing other State debt like transportation debt; and (3) the impact of recessions that may occur over the forecast period.**

Interest Rate Changes

Since March 2022, interest rates have increased. U.S. one-year Treasury Notes' constant yield rates increased from 1.72% to 4.66%. The impact of increasing interest rates has been to reduce bond sale premiums, but this has not affected debt service costs. The State Treasurer's Office (STO) and DLS interest rate estimates assume a 5.00% coupon rate. Should bond sales' true interest cost (TIC) be expected to exceed 5.00%, the assumed rate used for forecasting debt service should also be increased. **DLS recommends that interest rates should be closely monitored and that interest rate assumptions increase if an anticipated TIC is more than 5.00%.**

Review of Capital Leases

The Governmental Accounting Standards Board (GASB) is an independent, nonpolitical organization dedicated to establishing rules that require state and local governments to report clear, consistent, and transparent financial information. In 2013, GASB initiated a project to reexamine issues associated with lease accounting. The objective of the project was to examine whether operating leases can meet the definitions of assets or liabilities that could result in new standards for capital leases. Capital leases are discussed in Chapter 3.

After years of deliberation, GASB approved Statement 87, which redefines lease rules. The new rules require government lessees to recognize a lease liability and an intangible asset representing their right to use the leased asset, with limited exception. Lessees would amortize the leased asset over the term of the lease and recognize interest expense related to the lease liability. Exceptions are provided for short-term leases lasting 12 months or less, along with financed purchases. The new GASB guidelines are effective with fiscal years beginning after June 30, 2022.

CDAC formed a workgroup that included STO, the Department of Budget and Management, the Department of General Services, and DLS. The workgroup considered expanding the capital lease definition to include multi-year leases. It noted that amortizing the leases over the CDAC forecast period substantially increases administrative costs and that the costs of the leases under the current approach include a substantial share of multi-year leases. The additional efforts required to track and to amortize the out-year impacts of hundreds of leases provide only a marginal benefit with little effect on CDAC ratios. **DLS concurs with CDAC reaffirming that the State will keep the previous GASB definition of State debt. The amortization costs of these leases are equal to much of the costs associated with leases in excess of one year, and the current definition avoids a substantial increase in administrative costs and effort.**

Issuance of Transportation Debt

The Maryland Department of Transportation 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. Transportation bonds are discussed in Chapter 3. **DLS recommends 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.**

Issuance of Bay Restoration Bond Debt

The Bay Restoration Fund (BRF) was created in 2004 primarily to provide grants for enhanced nutrient removal pollution reduction upgrades at the State's 67 major wastewater treatment plants (WWTP). DLS projects that a program consistent with current laws and policies can be supported without issuing an additional $100 million in fiscal 2027. A fee increase enacted in 2012 to support the BRF is scheduled to sunset by fiscal 2031, which will limit the ability to support long-term debt service costs. BRF bonds are discussed in more detail in Chapter 3.

DLS recommends that the General Assembly continue to limit BRF revenue bond issuances at a level that maintains debt outstanding within the 4% of personal income debt affordability criterion and debt service within the 8% of revenues affordability criteria. In addition, it is recommended that the Maryland Department of the Environment update the General Assembly during the 2024 session on the BRF revenue outlook. DLS also recommends against issuing any new bonds since the original goal of upgrading the 67 major WWTP plants is approaching completion and there is a short time horizon between any new issuance and the sunsetting of the fee increase on June 30, 2030.

Issuance of Higher Education Academic Debt

CDAC recommends limiting new debt authorization of the University System of Maryland (USM) academic revenue bonds (ARB) to $30 million for the 2024 session. This amount is the same amount authorized in the 2023 session and is consistent with the amount programmed for the 2024 session in the 2023 *Capital Improvement Program*. Academic bond issuances are discussed in Chapter 7. **DLS concurs with the committee's recommendation that issuing $30 million in new USM ARBs is affordable.**

Chapter 2. Recommendations of the Capital Debt Affordability Committee

The Capital Debt Affordability Committee (CDAC) 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 the other committee voting members are the Comptroller, the Secretary of Transportation, the Secretary of Budget and Management, and an individual appointed by the Governor. The chairs of the Capital Budget subcommittee of the Senate Budget and Taxation Committee and the Capital Budget subcommittee of the House Appropriations Committee serve as nonvoting members. The committee meets each fall 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; consolidated transportation bonds; stadium authority bonds; bay restoration bonds; and capital leases supported by State revenues. Bonds supported by non-State revenues, such as the University System of Maryland's auxiliary revenue bonds or the Maryland Transportation Authority's revenue bonds, are examined but are not considered to be State-source debt and are not included in CDAC's debt affordability calculation.

New General Obligation Debt Authorization

GO bonds support the State's capital program and are backed by the full faith and credit of the State. CDAC recommended a GO bond authorization level of $1.750 billion in fiscal 2025, which is above the $1.250 billion recommended by the Spending Affordability Committee in December 2022 and the $1.205 billion programmed in the 2023 *Capital Improvement Program* (CIP). For planning purposes, CDAC assumed the higher level of GO bond authorizations for the remainder of the five-year planning period. The higher authorization level recommended by the committee would allow the use of bond funding in place of pay-as-you-go general funds planned for fiscal 2025 in the 2023 CIP in an effort to relieve fiscal pressures on the General Fund.

Higher Education Academic Debt

CDAC recommends a new debt authorization of academic revenue bonds in the amount of $30 million for the 2024 session. This amount is the same amount authorized in the 2023 session and is consistent with the amount programmed for the 2024 session in the 2023 CIP.

State Debt Definition for Capital Leases

Capital leases supported by State revenues are State debt. State policy has been to look to the Government Accounting Standards Board (GASB) for guidance. The previous standard was that a lease is a capital lease if one of the following criteria are met:

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

GASB 87 amends these rules so that almost every lease more than one year is a capital lease. To examine this issue, CDAC formed a workgroup that included the State Treasurer's Office, the Department of Budget and Management, the Department of General Services, and the Department of Legislative Services. The workgroup considered expanding the capital lease definition to include leases. The workgroup gathered data and reviewed all leases that are more than one year. It noted that amortizing the leases over the CDAC forecast period substantially increases administrative costs and that the costs of the leases under the current approach is more than half the cost of total multi-year leases. The additional effort required track and to amortize the out-year impacts of hundreds of leases provides only a marginal benefit with little effect on CDAC ratios. **CDAC reaffirmed that the State will keep the previous GASB definition of State debt. The amortization costs of these leases are equal to most of the costs associated with leases in excess of one year, and the current definition avoids a substantial increase in administrative costs and effort.**

Chapter 3. State Debt

Maryland has authorized the issuance of the following types of State debt:

- tax-exempt general obligation (GO) bonds backed by the full faith and credit of the State, which include Qualified Zone Academy Bonds (QZAB), Qualified School Construction Bonds (QSCB), Qualified Energy Conservation Bonds (QECB), and Build America Bonds (BAB);

- taxable GO bonds, which are issued in the place of tax-exempt debt and include private activity bonds;

- capital leases, with annual payments subject to appropriation by the General Assembly;

- revenue bonds and notes issued by the Maryland Department of Transportation (MDOT), backed by operating revenues and pledged taxes of the department;

- Grant Anticipation Revenue Vehicles (GARVEE), pledging projected future federal transportation grants to support debt service payments;

- revenue bonds issued by the Maryland Stadium Authority (MSA) that are supported by State revenues;

- bay restoration bonds issued by the Maryland Department of the Environment's (MDE) Water Quality Financing Administration, pledging revenues from the Bay Restoration Fund (BRF); 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 design, 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. In December 2022, the Spending Affordability Committee (SAC) recommended a GO bond authorization level of $1.25 billion in fiscal 2025, with recommended funding increasing by 4% annually thereafter. **Exhibit 3.1** shows that the 2022 SAC recommendation would provide $6.8 billion of new GO bond authorizations from fiscal 2025 through 2029. Combined capital

GO bond and general fund requests for this same period total $15.5 billion, or $6.2 billion more than the recommended authorization level.

Exhibit 3.1
Capital Funding Requests
Fiscal 2025-2029
($ in Millions)

	2025	2026	2027	2028	2029	Total
State-owned Projects	$1,424	$1,832	$1,986	$1,936	$1,756	$8,935
Capital Grant and Loan Programs[1]	1,420	1,303	1,213	1252	1,396	6,584
Total Requests (GO Bonds and GF)	**$2,844**	**$3,135**	**$3,200**	**$3,188**	**$3,152**	**$15,519**
Planned General Funds[2]	$596	$575	$431	$449	$449	$2,500
2022 SAC Recommended GO Bond Authorization	1,250	1,300	1,355	1,410	1,465	6,780
Total Funding Planned/Authorized	**$1,846**	**$1,875**	**$1,786**	**$1,859**	**$1,914**	**$9,280**
Requests Over Planned Funding	**$998**	**$1,260**	**$1,414**	**$1,329**	**$1,238**	**$6,239**

GF: general funds
GO: general obligation
SAC: Spending Affordability Committee

[1] Capital grant and loan requests and planned general funds each include $22 million annually for the Historic Revitalization Tax Credit and $5 million annually for the Transit-Oriented Development Capital Grant and Revolving Loan Fund. Requests include $100 million in fiscal 2025 for the Federal Bureau of Investigation Headquarters Building but otherwise do not include miscellaneous project requests to the Governor or the legislature.
[2] Planned general funds are estimated in the Department of Legislative Services' (DLS) baseline budget. This includes projects in the *Capital Improvement Program*, new mandates, and historic revitalization tax credits, which DLS considers to be capital spending.

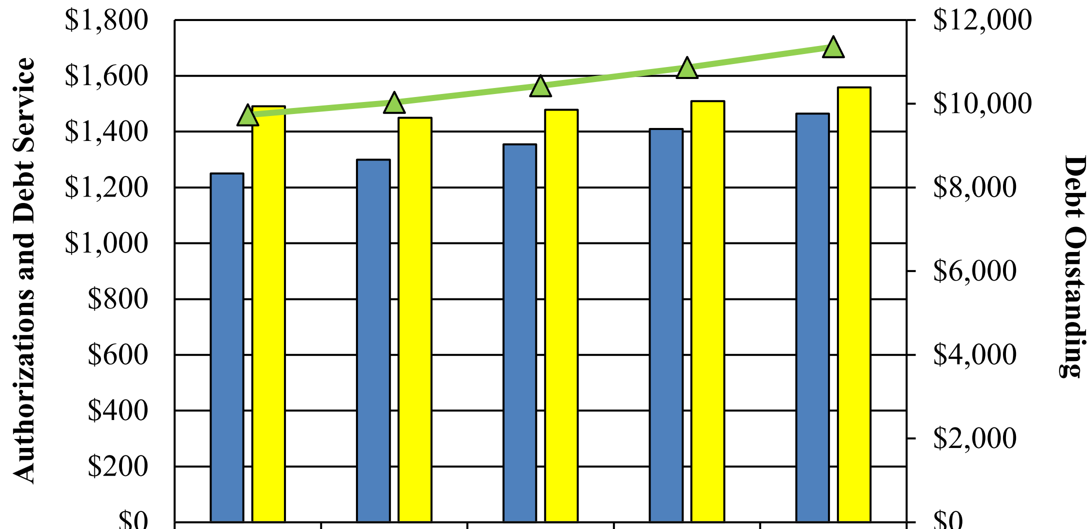
Note: Numbers may not sum to total due to rounding.

Source: Department of Budget and Management; Department of Legislative Services

GO bonds authorized in a given year are not all issued the year in which they are authorized. The State Treasurer's Office (STO) reports that just over half of the GO bonds authorized in a year are typically issued within the first two fiscal years that follow. Specifically, the Capital Debt Affordability Committee (CDAC) assumes that 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 that GO bonds are authorized and the time that the bonds affect debt outstanding and debt service levels.

Exhibit 3.2 shows the 2022 SAC recommended GO bond authorization level as well as debt service costs and debt outstanding over the five-year planning period from fiscal 2025 to 2029. A comparison of the 2022 SAC recommended authorization levels with the higher 2023 CDAC recommended levels can be found in Chapter 8.

Exhibit 3.2
GO Bond Authorizations, Debt Service Costs, and Debt Outstanding
Fiscal 2025-2029
($ in Millions)



	2025	2026	2027	2028	2029
Authorizations	$1,250	$1,300	$1,355	$1,410	$1,465
Debt Service	1,491	1,449	1,478	1,510	1,559
Debt Outstanding	9,733	10,034	10,426	10,866	11,359

GO: general obligation

Source: Department of Legislative Services

General Obligation Bond Refunding

GO bonds recently issued by Maryland are callable after 10 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 until the bonds are callable. This increases gross GO bond debt outstanding, but net debt remains constant. Bond refunding has reduced debt service costs by $402 million since fiscal 2010. Refunding opportunities have diminished in recent years. Two factors are responsible for reduced refunding opportunities.

- ***Federal Tax Cuts and Jobs Act (TCJA) of 2017 Amended Federal Tax Law to Eliminate Advanced Refunding:*** Until January 1, 2018, federal tax law allowed the State one advanced refunding for every tax-exempt bond sale. Advanced refunding allowed the State to issue tax-exempt refunding bonds before the call date. The advantages of advanced refunding bonds are that savings can be realized early, advanced refunding provides a hedge against increasing interest rates, and issuances can be bundled to increase efficiencies. The immediate result of the new law was the suspension of advanced refunding issuances, which had become common. Since the law change, there has been just one refunding issuance, which occurred in August 2021.

- ***Higher Interest Rates:*** Higher interest rates increase the cost of refunding bonds, thus reducing savings and refunding opportunities. The Department of Legislative Services (DLS) notes that recent bond sales have issued bonds with 5% coupon rates and interest rates for AAA-rated State debt are below 5%, so there still may be some opportunities at subsequent bond sales. Changes in interest rates and the effect of higher interest rates on long-term debt service costs is discussed in Chapter 8.

Program Open Space Debt Service Payments

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

The full $70 million in GO bonds was issued as part of two State issuances, February and July 2010, as shown in **Exhibit 3.3**. The first purchases were in August 2010. The Department of Natural Resources (DNR) received $65 million, and the Maryland Department of Agriculture (MDA) received the remaining $5 million. Some of the debt was issued as BABs. The bonds include federal direct payment subsidies that were reduced by sequestration. The reduction is less than $100,000.

Exhibit 3.3
Program Open Space GO Bond Issuances
($ in Thousands)

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

GO: general obligation

Source: Department of Budget and Management

Exhibit 3.4 shows that the final debt service payment is in fiscal 2026. The debt service is deducted from transfer tax revenues allocated to DNR and MDA, proportionately, based on the share of the issuance each received.

Exhibit 3.4
Program Open Space GO Bonds Debt Service Payment Schedule
Fiscal 2024-2029
($ in Millions)

	2024	2025	2026	2027	2028	2029
Debt Outstanding	$8.4	$1.6	$0.0	$0.0	$0.0	$0.0
Debt Service	7.0	7.0	1.7	0.0	0.0	0.0

GO: general obligation

Source: Department of Budget and Management

Federal Tax Credit and Direct Payment Bonds

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

To date, the State has issued $209 million in QZABs, QSCBs, and QECBs. **Exhibit 3.5** shows that DLS estimates that the lower costs associated with these bonds reduced total debt service payments by $66 million. However, some of these bonds are affected by federal sequestration reductions, which reduces the savings by almost $3 million.

Exhibit 3.5

Summary of Special Purpose Issuances

Type	Date Issued	Amount Issued	Debt Service Payments	Total Payments	Similar GO Payments[1]	Savings	Sequestration Reduction	Net Savings
QZAB	Nov-01	$18,098	$0	$12,432[2]	$27,182	$14,750	$0	$14,750
QZAB	Nov-04	9,043	0	7,356[2]	12,393	5,038	0	5,038
QZAB	Dec-06	4,378	0	3,609[2]	6,132	2,523	0	2,523
QZAB	Dec-07	4,986	0	4,089[2]	6,967	2,877	0	2,877
QZAB	Dec-08	5,563	6,142	6,142	7,606	1,464	0	1,464
QZAB	Dec-09	5,563	6,275	6,275	7,052	778	0	778
QSCB	Dec-09	50,320	0	49,570[2]	63,791	14,221	0	14,221
QSCB	Aug-10	45,175	0	44,497	52,731	8,234	-1,544	6,690
QZAB	Dec-10	4,543	0	4,474	5,302	828	-179	649
QZAB	Aug-11	15,900	15,900	15,900	20,267	4,367	-518	3,849
QECB	Aug-11	6,500	7,080	7,080	8,285	1,206	-184	1,021
QZAB	Aug-12	15,230	15,230	15,230	18,303	3,073	-334	2,739
QZAB	Dec-13	4,549	4,549	4,549	5,875	1,326	0	1,326
QZAB	Dec-14	4,625	4,625	4,625	5,971	1,346	0	1,346
QZAB	Dec-15	4,625	4,625	4,625	5,971	1,346	0	1,346
QZAB	Dec-16	4,680	4,680	4,680	5,926	1,246	0	1,246
QZAB	Dec-17	4,823	4,823	4,823	5,922	1,099	0	1,099
Total		**$208,601**	**$73,928**	**$199,954**	**$265,677**	**$65,723**	**-$2,760**	**$62,963**

GO: general obligation
QECB: Qualified Energy Conservation Bond
QSCB: Qualified School Construction Bond
QZAB: Qualified Zone Academy Bond

[1] Similar GO payments vary over time because interest rates vary. The analysis uses the GO true interest cost at the time that the debt is issued.
[2] Sinking fund payment.

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

Source: Comptroller of Maryland; State Treasurer's Office; Department of Legislative Services

Effect of Sequestration on Direct Payment Bonds

The federal Budget Control Act (BCA) of 2011 imposed caps on federal discretionary spending from federal fiscal 2012 to 2021. The Act also created the Joint Select Committee on Deficit Reduction to further reduce the federal deficit by at least $1.2 trillion over 10 years. The BCA established a backup process to achieve the reduction with automatic spending cuts, or "sequestration."

Direct pay bonds are affected by mandatory reductions required through sequestration. STO advises that this reduces federal fund reimbursements for these bonds. As federal reimbursements decline, this mandatory reduction also declines. The Internal Revenue Service advises that the federal sequestration rate is expected to be 5.7% from federal fiscal 2021 to 2030. **Exhibit 3.6** shows that federal grants are expected to decline. These grants are winding down with the final payment in fiscal 2028.

Exhibit 3.6

Effect of Sequestration on Federal Fund Revenues

Fiscal 2023-2025

($ in Thousands)

Issuance	2023	2024	2025	Total
February 2010 Build America Bonds	$2,855	$1,952	$1,001	$5,808
July 2010 Build America Bonds	968	708	434	2,110
July 2010 Qualified School Construction Bonds	1,965	1,965	1,965	5,895
December 2010 Qualified Zone Academy Bonds	228	228	228	684
August 2011 Qualified Zone Academy Bonds	660	660	660	1,980
August 2011 Qualified Energy Conservation Bonds	234	234	234	703
August 2012 Qualified Zone Academy Bonds	426	426	426	1,279
Less Sequestration and Other Adjustments	*-944*	*-352*	*-282*	*-1,578*
Total	**$6,393**	**$5,822**	**$4,667**	**$16,881**

Source: State Treasurer's Office; Internal Revenue Service; Congressional Budget Office; Department of Legislative Services

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.

The federal TCJA eliminated the QZAB program, so no additional issuances are planned. The last QZAB issuance will mature in fiscal 2028.

Qualified School Construction Bonds

QSCBs were created under the federal American Recovery and Reinvestment Act of 2009 (ARRA) as a new type of debt instrument to finance the construction, rehabilitation, or repair of public school facilities. The bonds are issued with the full faith and credit of the State and are debt. For purposes of calculating State debt affordability, QSCBs are included in the State's GO bond debt outstanding and debt service. These bonds were issued in place of tax-exempt bonds. The net effect of the bonds was to reduce the State debt service payments.

In December 2009, the State sold $50.3 million in QSCBs at par without a supplemental coupon. The bonds generate savings by replacing subsequent GO bond issuances that would have supported public school construction. Since there was no supplemental coupon, the State will not pay any interest on these bonds.

The State's second QSCB bond sale was in July 2010 when the State sold $45.2 million in QSCBs. At the time of the sale, federal direct payments fully subsidized the $29.4 million in debt service payments. Sequestration has reduced the federal subsidy by approximately $1.7 million. The State is not authorized to issue any additional QSCBs. This final QSCB matures in fiscal 2026.

Qualified Energy Conservation Bonds

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

The State issued the full $6.5 million allocated to the State in July 2011. The proceeds support the construction of energy conservation projects at a school in St. Mary's County. This issuance is retired in fiscal 2027.

Build America Bonds

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

The federal program expired on December 31, 2010. In calendar 2009 and 2010, the State issued BABs four times: August 2009; October 2009; February 2010; and July 2010. These issuances totaled $583 million. The final BAB issuance matures in fiscal 2025.

Transportation Debt

MDOT issues 15-year, tax-supported consolidated transportation bonds. Bond proceeds support highway construction and other transportation capital projects. Revenues from taxes and fees and other funding sources accrue to the Transportation Trust Fund (TTF) to pay debt service and 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 has debt referred to as nontraditional debt. Nontraditional debt currently includes Certificates of Participation, Special Transportation Project Revenue Bonds, and debt sold on MDOT's behalf by the Maryland Economic Development Corporation and the Maryland Transportation Authority. A portion of the financing for the Purple Line transit project will be provided through a federal Transportation Infrastructure Finance and Innovation Act loan that will be considered MDOT nontraditional debt. The General Assembly annually adopts budget language that imposes a ceiling on MDOT's nontraditional debt.

Continuing Impact of the COVID-19 Pandemic

The effects of the COVID-19 pandemic continue to be seen in decreased transit ridership, especially for commuter modes, and in reduced operating revenues, primarily related to transit. Transit ridership is lower in 2023 for all modes compared to prepandemic levels. Fiscal 2023 operating revenues generated by the Maryland Transit Administration (MTA) totaled $68 million, which was 51.4% less than the amount generated in fiscal 2019.

Federal aid through COVID-19 stimulus legislation helped support the operations of MDOT and the Washington Metropolitan Area Transit Authority (WMATA) and replaced revenue losses attributed to the pandemic. In fiscal 2024, however, this federal COVID-19 aid will be exhausted, with MTA utilizing the final $120 million of the nearly $1.9 billion in federal aid and WMATA utilizing the final $561 million of the nearly $2.9 billion in federal aid.

Consolidated Transportation Bonds

The issuance of transportation bonds is limited by two criteria: (1) an outstanding debt limit; and (2) 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. The maximum outstanding debt limit is currently $4.5 billion.

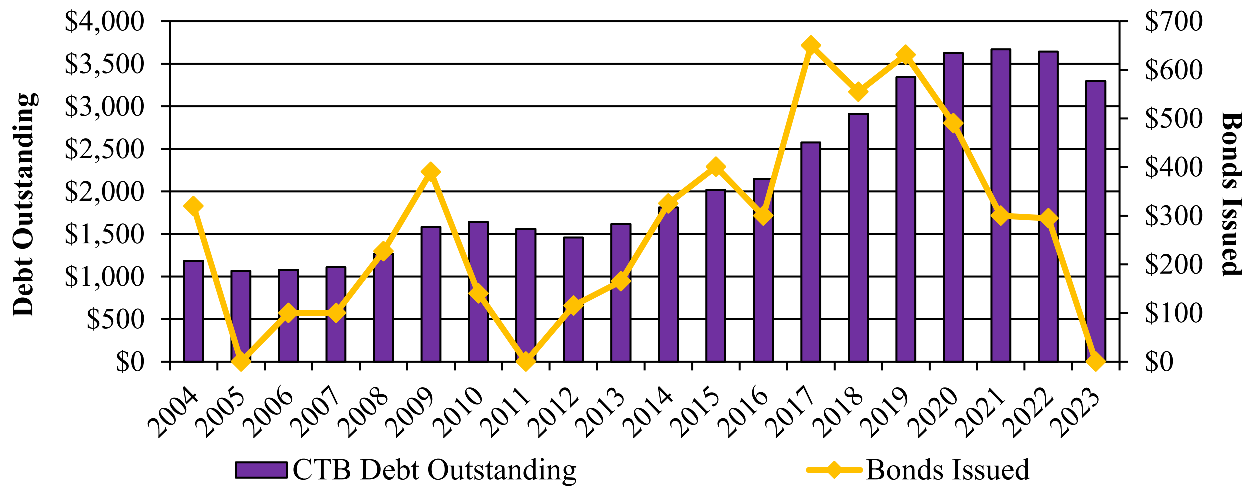
Section 3-202(c) of the Transportation Article further requires the General Assembly to establish each year in the State budget the maximum unpaid principal balance in bonds that may be outstanding at the end of the forthcoming year. The fiscal 2024 Budget Bill set the maximum ceiling for June 30, 2024, at $3,115 million. DLS estimates that as of June 30, 2024, debt outstanding will total $3,005 million.

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, 2024, MDOT will have a net income coverage of 4.0 and a pledged taxes coverage of 6.2.

MDOT has issued new (*e.g.*, nonrefunding) consolidated transportation bonds in 17 of the last 20 years, with the only exceptions being in calendar 2005, 2011, and 2023.

Exhibit 3.7 illustrates annual bond sales and changes in debt outstanding from fiscal 2004 to 2023. In fiscal 2023, MDOT's net debt outstanding was $3.3 billion, well under the $4.5 billion debt outstanding debt limit.

Exhibit 3.7
Bonds Issued and Net Debt Outstanding
Maryland Department of Transportation
Fiscal 2004-2023
($ in Millions)



CTB: consolidated transportation bond

MDOT: Maryland Department of Transportation

Source: Maryland Department of Transportation; Department of Legislative Services

Special Transportation Project Revenue Bonds

In 2014, the General Assembly passed legislation allowing MDOT to issue transportation project revenue bonds backed by the revenues attributable to the facilities being financed for the payment of debt service on the bonds. Bonds issued under this authority may not include a pledge of the tax revenues accruing to the TTF and are not supported by tax revenues, like the gas tax, so are not considered to be tax-supported debt. Special Transportation Project Revenue Bonds will be a component of the department's nontraditional debt.

In February 2021, MDOT issued the first bonds under this authority, refunding bonds totaling $220 million to refund debt previously issued for certain projects at Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall Airport). In July 2021, MDOT issued $190 million in new money bonds to fund construction of the Concourse A and B Connector and Baggage Handling System Replacement project at BWI Marshall Airport. The refunding bonds have a 10-year maturity, and the new money bonds have a 30-year maturity.

Future Debt Issuance

Each fall, DLS develops a TTF forecast that includes revenue and spending assumptions, which can vary sometimes significantly from those included in MDOT's September TTF forecast. These differences can lead to different conclusions on the amount of debt that can be issued to support MDOT's capital program. This year, the DLS forecast shows a reduction in capacity to issue debt to support MDOT's capital program. The following is a discussion of the differences between the DLS and MDOT forecasts with respect to revenues and spending, and debt issuance.

The DLS forecast of revenues is a net $246.3 million higher over the six-year period compared to MDOT's forecast. DLS is projecting motor fuel tax revenues will be $300.1 million lower than MDOT's estimate, but this will be more than offset by higher titling tax revenues of $546.4 million over the six-year period. The DLS estimates for motor fuel tax revenues assume slightly lower consumption levels and gas prices. For titling tax revenues, DLS anticipates higher demand in vehicle purchases with revenues growing at an average annual rate of 5.3% compared to MDOT's forecast rate of 3.3%.

On the spending side, the DLS forecast assumes operating expenses over the six-year forecast will be $844.1 million higher than MDOT is projecting. The higher operating spending is primarily due to increases in the DLS forecast for the operating grant to WMATA to address the $750 million fiscal 2025 shortfall, described in WMATA presentations and the press as a "fiscal cliff," resulting from the end of federal COVID-19 stimulus funding and ridership levels that have yet to return to prepandemic levels. The MDOT forecast does not include funding for this purpose.

The DLS and MDOT forecasts both assume that the MDOT administrative policy of maintaining a minimum debt service coverage ratio of 2.5 (net income to maximum debt service) is adhered to throughout the forecast. However, the higher operating spending in the DLS forecast necessitates steep reductions in bond issuances, totaling nearly $1.3 billion between fiscal 2025 and 2029, to maintain the 2.5 coverage throughout the forecast. **Exhibit 3.8** shows the planned level of debt issuances, debt outstanding, and debt service included in the DLS and MDOT forecasts, and the resulting net income debt service coverage ratios in each forecast.

Exhibit 3.8
Consolidated Transportation Bonds
Fiscal 2025-2029
($ in Millions)

	2025	2026	2027	2028	2029	2025-2029
Bond Issuances – DLS	$96	$37	$55	$48	$22	$258
Bond Issuances – MDOT	565	215	325	285	130	1,520
Difference	**-$469**	**-$178**	**-$270**	**-$237**	**-$108**	**-$1,262**
Debt Outstanding – DLS	$2,791	$2,522	$2,256	$1,972	$1,660	
Debt Outstanding – MDOT	3,260	3,169	3,172	3,098	2,855	
Difference	**-$469**	**-$647**	**-$916**	**-$1,126**	**-$1,195**	
Debt Service – DLS	$432	$416	$418	$415	$403	$2,084
Debt Service – MDOT	442	440	451	487	492	2,311
Difference	**-$10**	**-$24**	**-$33**	**-$72**	**-$88**	**-$227**
Net Income Debt Service Coverage Ratio – DLS	3.5	3.3	3.3	2.7	2.5	
Net Income Debt Service Coverage Ratio – MDOT	3.3	2.8	2.9	2.7	2.5	
Difference	**0.2**	**0.5**	**0.4**	**0.0**	**0.0**	

DLS: Department of Legislative Services
MDOT: Maryland Department of Transportation

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

Source: Maryland Department of Transportation; Department of Legislative Services

Grant Anticipation Revenue Vehicle Bonds

Chapter 455 expands the authority of MDOT to issue GARVEE bonds backed by future federal aid. MDOT may issue such bonds, but the aggregate outstanding and unpaid principal amount of debt issued cannot exceed $1.0 billion as of June 30 of any year. Proceeds may only support:

- designing and constructing the Baltimore Red Line;

- procuring zero-emission buses and constructing related infrastructure, including bus maintenance facilities;
- developing and constructing the Southern Maryland Rapid Transit Corridor;
- designing and constructing improvements to the Maryland Route 2 and Route 4 corridor, including the Thomas Johnson Bridge;
- designing and constructing improvements to the Maryland Route 90 corridor; or
- designing and constructing improvements to the Interstate 81 corridor.

Chapter 455 also limits the maturity of GARVEE bonds to 15 years or less. MDOT does not currently have plans to issue GARVEE bonds.

Chapter 455 also amends Section 8-104 of the State Finance and Procurement Article, which required that GARVEE bonds are always considered to be State debt. The Act also removed the requirement that MDOT make secondary pledges to secure GARVEE bonds with TTF revenues. This was done so that GARVEE bonds get the same high bond rating and pay the same low interest costs that MDOT's bonds backed by the TTF pay. MDOT advises that this requirement is no longer necessary to get competitive interest rates with GARVEE bond issuances. DLS observes that since TTF revenues are State revenues, should MDOT decide to issue GARVEE bonds with a secondary pledge to reduce interest costs, those bonds should be classified as State debt even if the statute does not require this. For example, bay restoration bonds are not specifically identified as State debt in the statute but are classified as State debt since BRF revenues are State revenues.

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. Transportation debt will need to be managed within the context of overall State tax-supported debt limits. **DLS recommends 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 criterion.**

Capital Leases Supported by State Revenues

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

Beginning in 1987, the State's capital program began utilizing lease/leaseback financing for capital projects. These leases are used to acquire both real property and equipment. Real property leases allow facilities to be purchased through a lease with terms ranging from 15 to 25 years. The terms of equipment leases are 3, 5, and 10 years. Since fiscal 1994, the State has operated 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 the Board of Public Works (BPW) and that the Legislative Policy Committee (LPC) have 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 that 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 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 was 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 that 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. The primary advantage of property leases when compared to GO bonds is 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 that are unplanned and unexpected.

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

Exhibit 3.9 shows that projected tax-supported capital lease debt outstanding totals $137.1 million as of June 30, 2024. Debt service costs are $30.1 million in fiscal 2024. This excludes EPCs for the Ravens and Orioles stadiums that are included in the MSA totals. The last payment for the MDOT headquarters building was in fiscal 2022.

Exhibit 3.9

Tax-supported Capital Lease Debt Outstanding and Debt Service

($ in Millions)

State Agency/Facility	Debt Outstanding June 2024	Debt Service Fiscal 2024
State Treasurer's Office		
Capital Equipment Leases	$7.9	$4.4
Energy Performance Projects	0.9	1.2
Maryland Department of Transportation		
Airport Shuttle Buses	17.3	2.1
Department of General Services		
Prince George's County Justice Center	7.9	1.5
Maryland Transportation Authority		
Annapolis State Office Parking Garage	11.2	1.5
Maryland Department of Health		
Public Health Laboratory	83.1	14.0
Total	**$128.2**	**$24.6**
New Equipment Leases	$8.9	$5.5
Total	**$137.1**	**$30.1**

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

Source: State Treasurer's Office

Energy Performance Contracts

Chapter 163 of 2011 allows CDAC to exclude capital leases if the savings they generate equal or exceed the lease payments. It also requires that EPCs be monitored in accordance with the reporting requirements adopted by CDAC. The Department of General Services (DGS) reviews these EPCs to determine if they do in fact generate savings. STO advises that five projects are excluded from CDAC calculations.

Exhibit 3.10 shows that three EPC projects are included as capital leases. The university project is not State debt, and the two other projects are included in the leasing affordability calculation in Chapter 4.

Exhibit 3.10
Tax-supported Energy Leases Lacking Surety Guarantee
Fiscal 2024
($ in Thousands)

Agency	Status	Debt Outstanding as of June 30, 2024	Debt Service
University of Baltimore	Non-State Debt	$0	$649
Department of Veterans Affairs	State Debt	29	57
Maryland Port Administration	State Debt	809	489
Total		**$837**	**$1,194**

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

Source: State Treasurer's Office

In 2022, Section 12-301 of the State Finance and Procurement Article was amended to increase EPC's maximum maturity from 15 to 30 years. DGS advises that there are projects with a useful life and payback of more than 15 years. This change is expected to increase the number of viable EPCs. Although there may not be many 30-year agreements, there appear to be sufficient agreements that require more than 15 years.

Changes to Lease Accounting Rules

The Governmental Accounting Standards Board (GASB) is an independent, nonpolitical organization dedicated to establishing rules that require state and local governments to report clear, consistent, and transparent financial information. For years under GASB guidelines, leases that met at least one of the following criteria were considered capital leases:

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

- the present value of the lease payments is 90% or more of the fair value of the property.

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

New GASB Rules Require Governments to Recognize Leases Exceeding 12 Months

In 2013, GASB initiated a project to reexamine issues associated with lease accounting. The objective of the project was to examine whether operating leases can meet the definitions of assets or liabilities, which could result in new standards for capital leases. A concern was that the current approach to operating leases undervalues liabilities. For example, there are a number of operating leases that include long-term commitments to make payments, but no liabilities are reported.

After much deliberation, GASB unanimously approved Statement 87 that redefines lease rules. The requirements of the proposed statement would be effective for reporting periods beginning after December 15, 2019, with earlier application permitted. In response to the COVID-19 pandemic, GASB Statement 95 postponed the effective date by 18 months to June 15, 2021. Fiscal 2022 was the first State fiscal year after the effective date.

The new rules require government lessees to recognize a lease liability and an intangible asset representing their right to use the leased asset with limited exception. Lessees amortize the leased asset over the term of the lease and recognize interest expenses related to the lease liability. Exceptions are provided for short-term leases lasting 12 months or less along with financed purchases.

The new rules increase the amount of capital leases, but it is unclear to what extent. In response to the narrative in the fiscal 2019 *Joint Chairmen's Report*, the Department of Budget and Management (DBM), DGS, and MDOT prepared a preliminary estimate of debt service costs and debt outstanding under the new GASB guidelines. This estimate is that fiscal 2018 lease debt would total $91 million and debt outstanding $516 million. The fiscal 2019 *Comprehensive Annual Financial Report* estimates that the fiscal 2019 leasing costs totaled just under $100 million. This amount may well overstate leasing costs that would be State debt if the affordability process were to adopt GASB 87. For example, State debt measures only include debt supported by State revenues, by which not all these leases are supported. For example, university revenues and debt are not State revenues or debt.

2023 Workgroup and CDAC Capital Leasing Policy

In 2023, CDAC formed a workgroup that included STO, DBM, DGS, and DLS. The workgroup considered expanding the capital lease definition to include multi-year leases. The workgroup had gathered data and reviewed leases that are more than one year. It noted that amortizing the leases over the CDAC forecast period substantially increases administrative costs and that the costs of the leases under the current approach include a substantial share of multi-year leases. The additional efforts required track and to amortize the out-year impacts of hundreds of leases provide only a marginal benefit with little effect on CDAC ratios. **CDAC reaffirmed that the State will keep the previous GASB definition of State debt. The amortization costs of these leases are equal to most of the costs associated with leases in excess of one year, and the current definition avoids a substantial increase in administrative costs and effort.**

Bay Restoration Bonds

Background

The BRF was created in 2004 to provide grants for enhanced nutrient removal (ENR) pollution reduction upgrades at the State's 67 major wastewater treatment plants (WWTP). BRF is funded by a $60 per year bay restoration fee on users of wastewater facilities (WWTP Fund) and septic systems and sewage holding tanks (Septic Fund). Fees were increased from $30 per year to $60 per year in 2012. The fund has several revenue sources and expends funds for both operating (MDE's operating expenses, operation and maintenance grants, bond expenses, and cost-effective nutrient load reductions) and capital (wastewater facility upgrades, sewer rehabilitation, and stormwater projects) purposes. One of the largest alternative uses of the BRF was established by Chapters 694 and 695 of 2021 (Clean Water Commerce Act). Chapters 694 and 695 implemented a mandatory transfer of $20.0 million annually from the BRF to the Clean Water Commerce Account to purchase cost-effective nutrient load reductions, as noted above, in support of the State's efforts to achieve the Chesapeake Bay Total Maximum Daily Load.

CDAC considered whether bay bonds are State debt in 2004. At the time, the committee agreed that the bonds are State debt. The Water Quality Financing Administration's bond counsel reviewed this issue and concurred with this opinion.

Fund Balance Status

The most recent data provided by MDE shows that the BRF closing balance, on a cash basis, decreased from $167.0 million in fiscal 2022 to $154.4 million in fiscal 2023 and is projected to decrease even further to $146.4 million in fiscal 2024. Overall, MDE notes that the projected BRF closing balance is anticipated to decline through fiscal 2028. One factor in the decline of the BRF closing balance is the allocation of funding to the Clean Water Commerce Account.

Revenue Bond Schedule

To date, $330 million in par value has been issued. Debt outstanding peaked at $301.6 million in fiscal 2016 and then has decreased steadily over the time period shown in **Exhibit 3.11**. Debt service costs held steady at $31.8 million in fiscal 2023. Overall, issuances are limited by the revenues generated by the WWTP share of the funds, overall State debt considerations, and limitations on uses. The current plan is to retire all debt by the end of fiscal 2030, when the fee is scheduled to drop to $30 per year. This would limit the final issuance to a three-year maturity if bonds are issued in fiscal 2027. Therefore, based on current law and project schedules reported in the 2023 *Capital Improvement Program* (CIP) and past revenue uncertainties, it does not appear necessary to issue the $100 million in revenue bonds in fiscal 2027, and DLS does not forecast that these bonds will be issued under current laws and policies.

Exhibit 3.11
Bay Restoration Wastewater Treatment Fund
Fiscal 2023-2029
($ in Millions)

	2023	2024	2025	2026	2027	2028	2029
Debt Outstanding	$161.6	$140.4	$118.1	$94.7	$70.4	$44.9	$18.3
Debt Service	31.8	27.2	27.2	27.1	27.3	27.7	28.0

Source: Maryland Department of the Environment

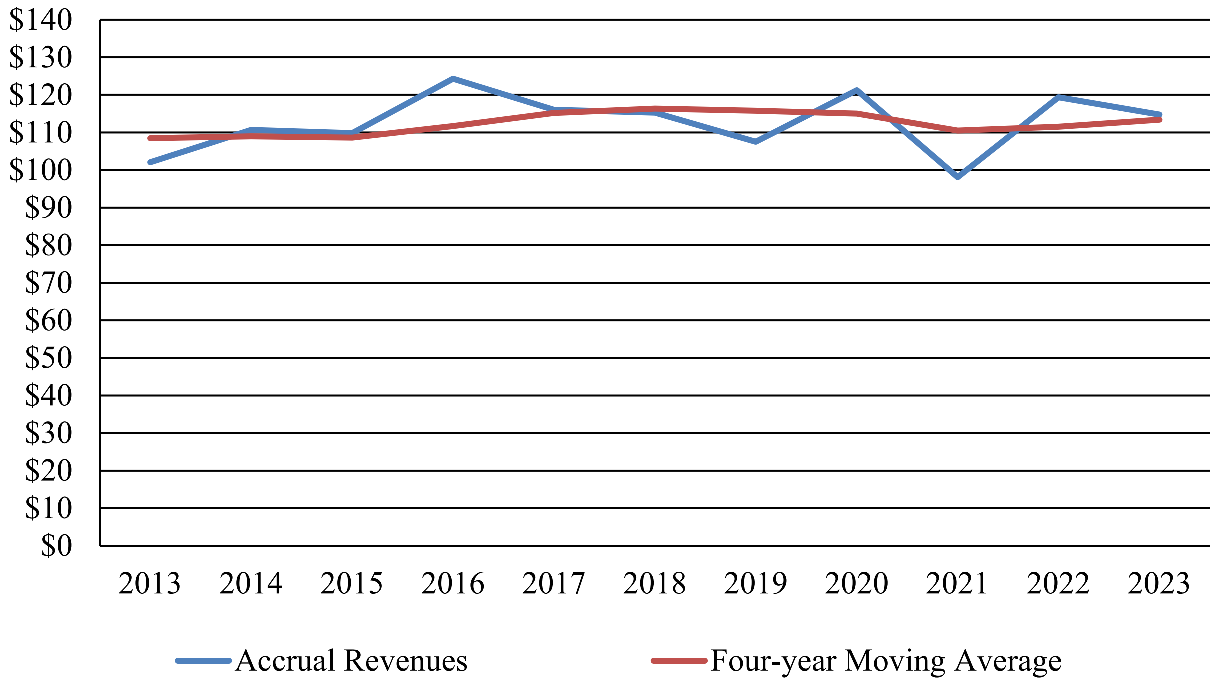
No Need to Issue Additional Debt

The overall BRF bond authorization is $590 million. Of this amount, MDE has issued $330 million and is retaining the option to issue an additional $100 million in fiscal 2027. However, there is no need to issue additional revenue bonds for the following reasons: ENR upgrades have largely been completed; there is an influx of federal funding; the 2023 CIP reflects the programming of GO bond funding; and any additional debt is limited to a three-year maturity due to the fee dropping to $30 per year in fiscal 2031.

Revenues Have Stabilized

BRF fee revenues have fluctuated over the last couple of years but have since stabilized at approximately $115 million per year, as shown in **Exhibit 3.12**.

Exhibit 3.12
Bay Restoration Fund Revenues
Fiscal 2013-2023
($ in Millions)



Source: Comptroller of Maryland

DLS recommends that the General Assembly continue to limit BRF revenue bond issuances at a level that maintains debt outstanding within the 4% of personal income debt affordability criterion and debt service within the 8% of revenues affordability criterion. DLS also recommends against issuing any new bonds since the original goal of upgrading the 67 major WWTP plants is approaching completion, and there is a short time horizon between any new issuance and the sunsetting of the fee increase on June 30, 2030.

Maryland Stadium Authority

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

In subsequent years, MSA's role has 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. More recently, MSA's role has been expanded to issue (1) up to $1.1 billion in debt for the purpose of constructing and improving public school facilities in Baltimore City; (2) up to $2.2 billion for public school facilities statewide; (3) up to $375 million for horse racing and community development; (4) additional bonds for Orioles and Ravens stadiums; (5) bonds for Statewide Sports and Entertainment Facilities; and (6) bonds for Blue Line Corridor (BLC) projects in Prince George's County. The Baltimore City school debt, statewide school debt, and racing debt is not considered a debt of the State. **Exhibit 3.13** lists MSA's current tax-supported authorized debt, debt outstanding, and annual debt service. MSA also issues non-State debt for stadiums. This is discussed in the non-State debt section at the end of this chapter.

Exhibit 3.13
MSA Revenue Debt Authorizations, Debt Outstanding, and Debt Service
Fiscal 2024
($ in Thousands)

Project	Revenues Supporting Debt	Authorized	Outstanding on June 30, 2024	Debt Service Fiscal 2024
State Debt				
Hagerstown Multi-Use Sports and Events Facility	General Fund	$59,500	$56,280	$3,746
Baltimore City Convention Center[1]	General Fund	55,000	0	0
Ocean City Convention Center	General Fund	24,500	19,365	1,656
Montgomery County Conference Center[1]	General Fund	23,185	0	1,559
Baseball and Football Stadiums and Camden Station[2]	Lottery and MSA	n/a	53,825	12,069
Subtotal		***$162,185***	***$129,470***	***$19,030***
Non-State Debt				
Built to Learn	ETF	$2,200,000	$611,795	$36,523
Baseball and Football Stadiums and Camden Station[2]		1,200,000	353,265	2,083
Baltimore City Public Schools	Lottery, Baltimore City, State Grants	1,100,000	1,217,475	59,998
Blue Line Corridor Projects	Lottery	400,000	0	0
Horse Racing Facilities	Lottery	375,000	0	0
Sports Entertainment Facilities Financing Fund[3]	Lottery	220,000	98,495	0
Supplemental Facilities Fund	MSA	25,000	0	0
Subtotal		***$5,520,000***	***$2,281,030***	***$98,604***
Total		**$5,682,185**	**$2,410,500**	**$117,634**

ETF: Education Trust Fund
MSA: Maryland Stadium Authority

[1] Debt has been issued and retired.
[2] Authorization limit for Camden Complex includes the stadiums and Camden Station. The authorization does not specify between State and non-State debt. Chapter 60 of 2022 increased the limit from $235 million to $1,200 million.
[3] Interest costs are $3.081 million, but debt service will be paid from a Capitalized Interest Fund, so no appropriations are needed until fiscal 2025.

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

Source: Maryland Stadium Authority

Revenues Supporting Maryland Stadium Authority Debt

The revenue sources supporting State debt are lottery revenues, Education Trust Fund (ETF) revenues, stadium authority revenues, general funds, and revenues pledged by Baltimore City. This section provides a short summary of these revenues. The bonds are discussed in more detail later in the chapter.

Lottery Revenues

These are the commitments supported by lottery revenues:

- Camden Yards and the baseball and football stadiums with a $90 million annual cap. There are two small bank loans that get first priority, the Series 2013 and Series 2014, about $2.0million in total debt service. The remaining bonds are lease back revenue bonds with the master lease as the pledge to the bondholders. These are parity bonds, so all bondholders have equal claims without any preference for any particular issuance.

- Baltimore City Public Schools (BCPS) with a $20 million annual cap. The financing fund is the pledge to the bondholders. These are parity bonds.

- Racing and Community Development Fund with a $17.5 million annual cap. This will be structured the same as BCPS bonds with the financing fund being pledged to the bondholders. These will be parity bonds.

- Sports Entertainment Facilities Financing Fund with a $25 million annual cap. This will be structured the same as BCPS bonds with the financing fund being pledged to the bondholders. These will be parity bonds.

- Prince George's County BLC Facility Fund with a $27 million annual cap. This will be structured the same as BCPS bonds with the financing fund being pledged to the bondholders. These will be parity bonds.

MSA Revenues

Prior to the enactment of Chapter 60, MSA's revenues have been used to support debt service for Camden Yards and the baseball and football stadiums when debt service exceeded $20 million. MSA revenues can also be used to support the Supplemental Facilities Fund.

Baltimore City

In addition to the lottery revenues previously mentioned, Baltimore City school construction bonds are also supported by Baltimore City funds. These include diverting State school aid and revenues from container taxes. Funding for Baltimore City school revitalization is discussed in more detail later in this chapter.

Education Trust Fund

A share of proceeds from video lottery terminals and table games at licensed gaming facilities is deposited into the ETF. The Built to Learn Act (Chapter 20 of 2020) required the Comptroller to make semiannual deposits from the ETF to the Supplemental Public School Construction Financing Fund beginning in fiscal 2022. Chapter 20 was contingent on the enactment of the Blueprint for Maryland's Future (House Bill 1300 of 2020), which the Governor vetoed. The veto was overridden, but not until after the budget bill was introduced, so the initial payment into the supplemental financing fund is in fiscal 2023. Annual deposits are $60 million in fiscal 2023, $125 million in fiscal 2024 and subsequent fiscal years, and $100 million beginning in fiscal 2026 if Prince George's County enters into a public-private partnership (P3) to construct schools.

State Debt Issuances

Camden Yards Sports Complex

Statute limits the amount of bonds that 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. Chapter 60 increased the statutory limit for bonds for the stadiums and Camden Yards complex from $235 million to $1.2 billion in outstanding debt. This provides $600 million for each team. The law prohibits MSA from issuing debt with maturities that exceed the length of teams' leases. Debt service is supported by lottery revenues.

Hagerstown Multi-Use Sports and Events Facility

Chapter 353 of 2021 created the Hagerstown Multi-Use Sports and Events Facility Fund as a continuing, nonlapsing fund to support financing and construction of the facility. The fund can support payment of debt service on MSA bonds, reasonable charges and expenses related to MSA's borrowing, and the management of MSA obligations. Beginning in fiscal 2023, the Governor is required to include a $3.75 million appropriation to the fund in the State operating budget. The fund can support up to $59.5 million in bonds.

MSA issued $57.6 million in 30-year bonds for the facility in March 2022. The sale realized an $11.8 million net premium, after deducting cost of issuance and the underwriter's discount. The project also uses $10.5 million in additional appropriations from the State. The project budget is

$12.5 million for site acquisition, $3.0 million for design and engineering, and $66.6 million for construction. In December 2022, MSA advised that based on current estimates, the scope of the facility will need to be reduced or funding will need to be increased. Primary reasons for the additional need are inflation and higher than anticipated interest rates and acquisition costs. For example, $69.6 million received in bond proceeds is $5.2 million less than the October 2021 estimate. Additionally, acquisition costs for one of the parcels totaled $6.25 million, which includes $2.75 million for relocation costs and reflects a 79% increase over the appraised value. To address this shortfall, Chapter 468 of 2023 increased the Sports Entertainment Facilities Financing Fund debt outstanding cap from $200 million to $220 million. The legislation was also amended to allow nonprofit organizations to receive bond proceeds for projects. In October 2023, another $20.1 million in par value bonds supported by the Sports Entertainment Facilities Financing Fund were issued to support the Hagerstown facility. This fund is considered non-State debt. The fund is discussed in more detail in the Sports Entertainment Facilities Financing Fund section later in this chapter.

Baltimore City Convention Center

Chapter 695 of 2019 required that MSA enter into an agreement to begin planning and design of the expansion and renovation of the Baltimore City Convention Center (BCCC). Prior issuances have been retired, so the full $55 million in capacity is available for the bonds. When the legislation was enacted, MSA expected to issue $50 million in bonds, of which two-thirds ($33.3 million) would be supported by the State and one-third ($16.7 million) would be supported by Baltimore City. The State annual share of debt service would be $2.6 million from fiscal 2022 through 2039. Complications at the site slowed design and delayed this project such that no bonds have been issued as of October 2022. MSA advises that it has sent some revised plans to the city, which is reviewing the plans. The timing of project construction or any bond issuances is unclear. BCCC received $25.7 million in the fiscal 2024 operating budget to begin renovation projects.

Ocean City Conference Center

Chapters 217 and 218 of 2019 authorized additional bonds to expand the Ocean City Conference Center. In October 2019, MSA issued $20.9 million in tax-supported bonds to support construction of the expansion. The sale generated $3.8 million in net premiums, and proceeds totaled $24.7 million. To support the first two years of debt service interest payments, $1.9 million was deposited into a capitalized interest fund. Principal payments begin in the third year, with the final debt service payment in fiscal 2040. The renovation project also receives $15.0 million from the Town of Ocean City and $500,000 from the Maryland capital budget. Debt service payments will be $1.7 million beginning in fiscal 2023, and the bonds will be retired in fiscal 2040.

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 that totaled $66 million. The remaining bond proceeds funded a capitalized interest account established as part of the financing plan to fund interest-only debt service payments beginning on June 15, 2003, and continuing through June 15, 2004. Debt service payments thereafter are paid from funds subject to appropriation by the State. Montgomery County contributed $13.7 million for construction and $2.5 million for project-related enhancements. The project opened in 2004. In 2012, MSA submitted an Amended Comprehensive Plan of Financing for the center to refund the existing issuance at a lower rate.

Camden Station

Statute 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 and BPW approval in 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 fund capital construction associated with the development of the project. The remaining bond proceeds were used to pay capitalized interest, costs of issuance, and bond insurance. The capital interest period covered biannual debt service payments through June 15, 2006. The bonds will be retired in fiscal 2025.

Non-State Debt

MSA also is authorized to issue bonds supporting baseball and football stadiums, Baltimore City school construction, the statewide public school construction program, horse racing facilities, sports entertainment facilities, and BLC projects that are not considered to be State debt.

Non-State Debt Issued for the Camden Yards Sports Complex on Advice of Bond Counsel

Since fiscal 2010, MSA has issued Sports Facilities Taxable Lease Revenue Bonds to fund capital improvement projects at the Camden Yards Sports Complex. The bonds have been secured by lottery revenues and, in the opinion of bond counsel, did not constitute tax-supported debt. An agreement with the Comptroller ensures that lottery proceeds are deposited with a trustee for the benefit of the holders of the bonds.

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

While the State does not consider this to be State debt, this interpretation of State debt is not universal. For example, Moody’s Investors Service considers all debt from lottery revenues to be debt of the State that issued the debt. Moody’s estimates of Maryland’s debt service to revenues affordability ratio tends to be higher than the CDAC ratio, which is one factor that results in a lower calculation by CDAC than Moody’s.

Chapter 60 increased MSA's bonding limit for the Orioles' and Ravens' stadiums to $1.2 billion, in which each franchise gets $600 million. This was done to encourage the teams to remain in Baltimore when the leases expire.

In January 2023, BPW approved a new lease between the State and the Ravens. The new lease terminated and replaced the existing lease. The lease is 15 years, with two 5-year renewal options that can only be exercised by the Ravens. This lease extends the lease period through the 2037 National Football League season. In August 2023, $413 million in par value bonds were issued for improvements to the Baltimore Ravens' M&T Bank Stadium. This included taxable, tax-exempt, and conversion bonds. The bonds mature in September 2037.

In September 2023, MSA and the Orioles entered into a memorandum of understanding (MOU) for a new facility use agreement and ground lease for development rights. The parties have not entered into a new lease agreement.

Supplemental Facilities Fund

The Supplemental Facilities Fund was established in Chapter 221 of 2019. This continuing, nonlapsing fund can be used to support facilities that directly or indirectly benefit the sports facilities at Camden Yards. MSA can issue up to $25.0 million for supplemental facilities in Baltimore City. This could include developing, establishing, acquiring, owning, leasing, improving, operating as landlord, regulating, maintaining, selling, transferring, or otherwise disposing of property acquired under the Act. The Act also authorizes MSA to enter into partnerships with Baltimore City, units of the State or local government, or private developers.

Revenues to the fund consist of funds appropriated for deposit, proceeds from the sale of bonds concerning supplemental facilities, revenues collected or received from any source under the bill related to supplemental facilities, and any additional money made available from any public or private source for the purposes established for the fund. To the extent that is considered appropriate by MSA, the receipts of a supplemental facility must be pledged to and charged with the following relating to the supplemental facility: the payment of debt service on MSA bonds; all reasonable charges and expenses related to MSA borrowing; and the management of MSA obligations.

The fund is to support the Camden Yards complex so it cannot support the Baltimore Convention facility or the Hippodrome Performing Arts facility in Baltimore City. Debt issued is not a debt of the State, MSA, or any other governmental unit. MSA has not issued any Supplemental Facilities Fund bonds.

Baltimore City School Revitalization Program

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

- all revenues generated by the Baltimore City beverage container tax;

- Baltimore City's proceeds from table games at its video lottery facility that are dedicated to school construction and 10% of the participation rent paid by the video lottery facility operator to Baltimore City;

- $10.0 million in State education aid due to the Baltimore City Board of School Commissioners (BCBSC) from forgone Baltimore City expenses attributable to recurring retiree health care costs shifted from Baltimore City to BCBSC beginning in fiscal 2017;

- $20.0 million in annual proceeds from the State lottery beginning in fiscal 2016;

- $10.0 million diverted from State education aid to BCBSC in fiscal 2016 and $20.0 million in each fiscal year thereafter beginning in fiscal 2017;

- proceeds from the sale of bonds to finance improvements to BCPS facilities; and

- any other funds or revenues received from or dedicated by any public source to support the initiative.

MSA is responsible for managing all public school construction and improvement projects in Baltimore City that are financed under the Act. However, MSA may not use any of its own funds, whether appropriated or nonbudgeted, to pay for any costs or expenses related to its role as project manager. Annual debt service payments are capped at $60 million.

In April 2016, MSA issued the first round of debt dedicated to the first phase (Year 1 schools) of the school construction program. The 30-year, tax-exempt revenue bonds totaled $320.0 million and garnered a premium of $66.1 million to be used for construction costs for 11 schools. The second bond issuance supporting Year 2 schools was issued in February 2018. A total of $426.4 million was issued. The sale generated a $70.0 million premium that supports construction.

MSA issued $525 million in bonds in three series in July 2020. Series A was $194 million in tax-exempt bonds. Series B was $34 million in tax-exempt green revenue bonds. Series C was $296 million in taxable refunding bonds. Refunding Series C did not generate any proceeds for the project fund. Rather, the series reduced debt service costs of prior bond sales, which increased how much could be issued in Series A. The par value and premiums for Series A and B are deposited into the project fund. In addition to the par value, the premium for Series A was $98 million, and the premium for Series B was $16 million, bringing the total proceeds deposited into the project fund from this sale to $342 million.

The final issuance was in July 2022. MSA issued capital appreciation bonds, which extended the Baltimore City School revitalization bond debt service payments for five years. The final debt service payment will be in fiscal 2055, instead of 2050. The bonds pay no debt service until fiscal 2051, at which point there are five annual debt service payments totaling $60 million from fiscal 2051 to 2055. The bonds' par value is $66.05 million, and the TIC is 5.002%. This sale increases the net par value issued, after adjusting for refunding issuances, to $1,040 million with total proceeds, including bond sale premiums and capital appreciation bonds, totaling $1,269 million. MSA advises that this is the final issuance.

Built to Learn Act

The Built to Learn Act (Chapter 20) and Built to Learn Act – Revisions (Chapter 698 of 2021) establish a program to fund public school construction statewide. MSA is authorized to issue up to $2.2 billion in revenue bonds, backed by annual payments from the ETF beginning in fiscal 2022, for public school construction projects in the State, including to support a possible P3 agreement for Prince George's County. Projects are approved by the Interagency Commission on School Construction.

Since revenues for debt service are fixed, how much is available for projects will be determined by interest rates when bonds are sold. To date, two series of bonds have been issued. **Exhibit 3.14** shows that $699 million of bond proceeds have been deposited into the project fund. DLS estimates that if TIC of the remaining sales is 3%, another $1.24 billion is available to be deposited into the project fund for a total of $1.94 billion. Should the TIC increase to 5%, additional project funds total $0.97 billion, which provides $1.67 billion in total project funds.

Exhibit 3.14
Results from First Two Built to Learn Bond Sales
Fiscal 2021-2022
($ in Millions)

	Series 2021	Series 2022	Total
Fiscal Year that Issuance Matures	2051	2052	
Par Value	$257.0	$373.1	$630.0
Premium Net of Issuance and Capitalized Interest Costs	28.9	40.4	69.3
Total Available for Project Fund	**$285.9**	**$413.5**	**$699.3**
Average Annual Debt Service[1]	$14.8	$21.7	$36.4
Final Debt Service Payment[2]	14.8	36.5	
True Interest Cost	2.83%	3.21%	
Average Coupon	3.80%	4.06%	
Bond Buyer 20-Bond Index in Week of Sale	2.28%	3.19%	
Average Life (Years)	18.4	19.4	
Delivery Date	11/02/21	03/10/22	
Bid Dates	10/19/21	02/23/22	

[1] Since the fund earns interest, actual debt service could exceed the $100 million appropriation in some fiscal years.
[2] Bonds mature in 30 years. When an issuance matures and no long pays debt service, the subsequent issuance has a balloon payment in its final year.

Source: BofA Securities; Department of Legislative Services

Racing and Community Development Act of 2020

The Racing and Community Development Act (Chapter 590 of 2020) authorizes MSA to issue up to $375 million in bonds for financing planning, design, construction, and related expenses for racing facilities at Pimlico and Laurel Park. The bonds support improvements to both facilities, including the clubhouse, racetracks, stables and barns, and associated roads and walkways. The Pimlico site will be conveyed to Baltimore City, the Baltimore Development Corporation, or a designated entity.

Chapter 590 requires that a minimum of $180 million support Pimlico and $155 million support Laurel Park. BPW approval is required prior to any bond issuance, and MSA must provide to the fiscal committees financing plans 45 days prior to BPW approval.

The Racing and Community Development Financing Fund is established as a revolving fund for implementing provisions of law concerning racing and community development projects and for the payment of debt service expenses incurred by MSA, or otherwise approved by MSA, concerning the projects. The fund will issue 30-year bonds. Beginning in fiscal 2022, the bill requires the transfer of $17 million from the State Lottery Fund to the Financing Fund for each fiscal year until the bonds issued for a racing facility have matured. As of October 2023, appropriations into the fund are $51 million, $17 million each in fiscal 2022 to 2024. No debt has been issued.

Racing Facilities Construction Has Been Delayed and Costs Are Increasing: A schedule provided in December 2019 projected that Laurel Park construction would be done first, after which Pimlico would be renovated. The plan expected Laurel Park's construction to be completed in calendar 2022 so that racing at Laurel Park could begin in February 2022. As of October 2023, construction had not yet begun at Laurel Park. An MSA report to the fiscal committees included the following findings:

- for the Pimlico project, one of eight agreements and none of the property conveyances have been completed, while no agreements have been reached for the Laurel Park project;

- programmatic needs identified by the Maryland Jockey Club and Maryland Thoroughbred Horsemen's Association increased the cost of the Laurel Park project by over $150 million, with changes in the finalized program including a complete replacement and reconfiguration of the tracks, adding a fourth synthetic training surface, a backstretch expansion beyond Laurel Park's existing footprint to increase population and programming demand, increased square footage of the clubhouse facility, and relocation of the clubhouse facility to the opposite side of the track; and

- interest rates have increased substantially, so the proceeds available for construction will decline.

Maryland Thoroughbred Racetrack Operating Authority (MTROA) Is Created: Chapter 111 of 2023 created MTROA with the purpose of maintaining the State as a best-in-class thoroughbred racing venue. This includes (1) developing new and existing racing and training facilities; (2) entering into agreements, leases, partnerships, or contracts to support and sustain racing and parimutuel wagering in accordance with rules and regulations; and (3) authorizing or creating a separate body, entity, or holding company to carry out provisions of the Act. MTROA receives funds from the Racing and Community Development Financing Fund, and any funds supporting the authority are not available for capital improvements.

Sports Entertainment Facilities Financing Fund

Chapter 61 created the Sports Entertainment Facilities Financing Fund. A sports entertainment facility is a structure or other improvement at which minor league games are played or other non-major league sporting events are held. It includes parking lots, garages, and other property adjacent and directly related to the facility. It does not include a (1) facility located at Camden Yards; (2) sports facility; or (3) high school, collegiate, or recreational venue that does not generate positive incremental tax benefits to the State.

To fund a project, MSA must secure a written agreement with the nonprofit, State, county, or local government in which the sports entertainment facility is located, as approved by BPW, under which the source of funding and the order in which funds will be spent is described, and the State, county, or local government agrees to (1) own, market, promote, and operate or contract for the marketing, promotion, and operation of the sports entertainment facility in a manner that maximizes the facility's economic return; (2) maintain and repair or contract for the maintenance and repair of the facility; and (3) any other terms or conditions deemed necessary or appropriate by MSA. The county or local government in which a sports entertainment facility financed by the bill is located must annually report to the fiscal committees of the General Assembly on the sports entertainment facility's assessment of the maintenance and repair needed to keep the facility in operating order.

The fund is supported by two biennial deposits of lottery funds. Annual appropriations cannot exceed $25 million, and total debt outstanding cannot exceed $220 million. Total debt outstanding is low compared to other financing funds. MSA anticipates issuing bonds with shorter maturities that will amortized more quickly, so the fund will not need as high a level of debt outstanding. The shorter amortization allows MSA to fund more projects. In October 2023, MSA issued $98.5 million in par value bonds which realized another $5.1 million in premiums. The first debt service payment, due in June 2024, will be supported by bond proceeds deposited into a Capitalized Interest Fund. After also deducting issuance costs and the underwriter's discount, the bond proceeds provide approximately $20 million in par value and premiums for each of the following projects:

- Prince George's Stadium in Prince George's County, home of the Bowie Baysox, the Class AA affiliate of the Baltimore Orioles;

- Arthur W. Perdue Stadium in Wicomico County, home of the Delmarva Shorebirds, the Class A affiliate of the Baltimore Orioles;

- Nymeo Field at Harry Grove Stadium in Frederick County, home of the Frederick Keys, an unaffiliated MLB Draft League team;

- Regency Furniture Stadium in Charles County, home of the Southern Maryland Blue Crabs, an unaffiliated Atlantic League team; and

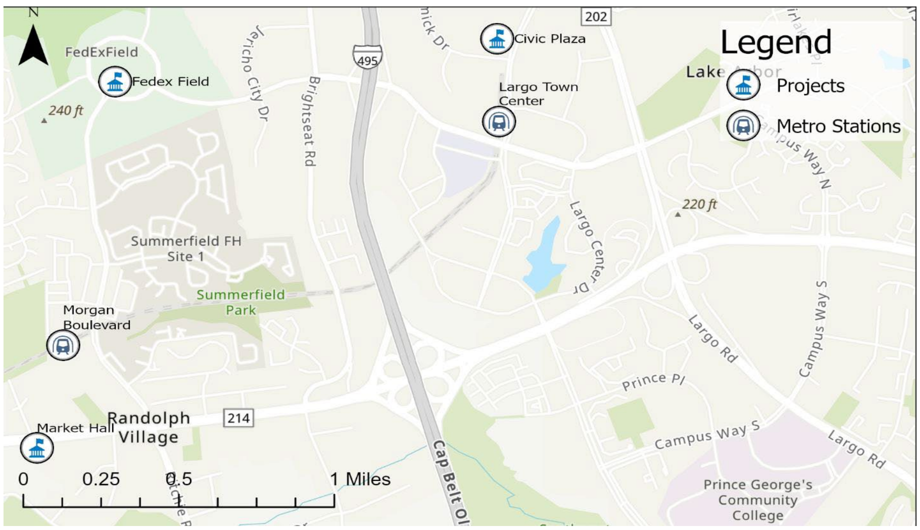
- Hagerstown Multi-Use Stadium and Event Facility in Washington County, home of the Hagerstown Flying Boxcars, an unaffiliated Atlantic League team.

There are plans to issue additional bonds sufficient to provide $20 million for a project fund supporting renovations to Leidos Field and Ripken Stadium in Harford County, home of the Aberdeen Ironbirds. The team is the Class High-A affiliate of the Baltimore Orioles. The team had not completed an MOU with MSA when the bonds were sold.

Prince George's County Blue Line Corridor Facilities' Projects

Chapter 61 created the Prince George's County BLC Facility Fund. A BLC facility is a structure located within BLC that is (1) a convention center; (2) an arts and entertainment amphitheater; or (3) any other functionally related structure, improvement, infrastructure, furnishing, or equipment of a facility, including parking garages. **Exhibit 3.15** shows potential projects identified by Prince George's County in April 2022.

Exhibit 3.15
Potential Blue Line Corridor Projects



Source: Prince George's County; Esri; U.S. Geological Survey; SafeGraph; GeoTechnologies, Inc., April 2022

To finance site acquisition, planning, design, and construction of a BLC facility, MSA must notify the fiscal committees of the General Assembly and provide them with a comprehensive financing plan, as specified, and obtain the approval of BPW of the proposed bond issue, the financing plan, and the required agreement with Prince George's County. MSA must also secure a written agreement with Prince George's County identifying the roles and responsibilities of each party with respect to the BLC facility.

The fund is supported by two biennial deposits of lottery funds. Annual appropriations cannot exceed $27 million, and total debt outstanding cannot exceed $400 million. Issuances are most commonly expected to be amortized over 30 years. MSA advises that it does not anticipate requiring any debt service appropriation before fiscal 2025.

Local Project Assistance and Feasibility Studies

The 1998 capital budget bill (as amended by Chapter 204 of 2003 and 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. MSA is also authorized 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.

Studies that MSA is currently conducting include an Anne Arundel Arts and Conference Center, St. Mary's County Sports Complex, Hagerstown Community College Athletic Facilities, and Frostburg State University Regional Sports Complex. 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.

Chapter 4. Affordability Analysis

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

- State debt outstanding should be limited to 4% of Maryland personal income; 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. 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.

As noted in prior chapters, the Department of Legislative Services' (DLS) analysis assumes general obligation (GO) bond authorizations consistent with the Spending Affordability Committee (SAC) recommendations made in December 2022. In October 2023, CDAC recommended increasing authorizations. The effect of this increase is examined in Chapter 8.

Personal Income

Exhibit 4.1 shows the official Board of Revenue Estimates (BRE) September 2023 personal income estimates.

Exhibit 4.1
Maryland Personal Income
Calendar 2024-2029
($ in Billions)

Year	Personal Income Estimate	% Change
2024	$472	4.26%
2025	491	4.21%
2026	512	4.29%
2027	534	4.21%
2028	556	4.06%
2029	578	3.98%

Source: Board of Revenue Estimates

Revenue Projections

Exhibit 4.2 shows the out-year revenue projections through fiscal 2029. General fund, transfer tax, and Blueprint for Maryland's Future Fund estimates are consistent with BRE estimates. Bay Restoration Fund estimates were prepared by the Maryland Department of the Environment, and stadium revenue estimates were prepared by the Maryland Stadium Authority.

Exhibit 4.2
Revenue Projections
Fiscal 2024-2029
($ in Millions)

Fiscal Year	General Funds	Property Tax	Other ABF	Blueprint	Transfer Taxes	TTF	Stadium	BRF	Total
2024	$24,566	$981	$8	$750	$239	$4,204	$19	$115	$30,882
2025	25,081	1,026	7	795	255	4,199	18	115	31,495
2026	25,769	1,056	5	850	280	4,336	17	115	32,428
2027	26,652	1,067	3	907	285	4,387	9	115	33,425
2028	27,695	1,078	3	936	305	4,460	9	115	34,600
2029	28,693	1,088	3	961	327	4,543	9	115	35,739

ABF: Annuity Bond Fund
BRF: Bay Restoration Fund
TTF: Transportation Trust Fund

Note: BRF revenues only include revenues for wastewater treatment and exclude septic revenues.

Source: Board of Revenue Estimates; Maryland Department of Transportation; State Treasurer's Office; Maryland Stadium Authority; Maryland Department of the Environment; State Department of Assessments and Taxation; Department of Legislative Services

DLS has prepared separate estimates of Transportation Trust Fund (TTF) revenues, State property taxes, and other Annuity Bond Fund (ABF) revenues. The key difference between DLS and CDAC is attributable to TTF revenues and spending. As mentioned in Chapter 3, DLS' net TTF revenue estimates are $246 million higher than the Maryland Department of Transportation (MDOT) estimates. However, DLS also estimates that expenses will be $844 million more than MDOT is projecting. Additional expenses exceeding net revenues reduces net income, which has an outsized effect on bond issuances since net income is leveraged to issue transportation bonds that expand the transportation capital program. As such, DLS' estimate of MDOT's total bond issuances in the forecast period are substantially less than MDOT's. Like CDAC, DLS uses the State Department of Assessments and Taxation's fiscal 2024 to 2026 property base estimates for the baseline State property tax estimates. Other ABF revenues are primarily federal funds, which are discussed in Chapter 3.

Affordability Analysis

DLS has prepared a revised estimate of State debt outstanding to personal income and State debt service to revenues. This analysis assumes a fiscal 2025 GO bond authorization totaling $1.25 billion. This is consistent with the debt levels recommended by SAC in its 2022 report for fiscal 2025. DLS compares the impact of additional authorizations proposed by CDAC in Chapter 8.

Exhibit 4.3 shows affordability calculation assumptions for GO bond authorizations, transportation bonds, and capital leases.

Exhibit 4.3
Projected New Debt Issuances
Fiscal 2024-2029
($ in Millions)

Fiscal Year	GO Bond Authorizations	GO Bond Issuances	Transportation Bonds	Capital Leases
2024	$1,205	$550	$0	$34
2025	1,250	1,300	96	24
2026	1,300	1,350	37	6
2027	1,355	1,400	55	6
2028	1,410	1,450	48	6
2029	1,465	1,525	22	6

GO: general obligation

Source: State Treasurer's Office; Department of Legislative Services

CDAC policy is that tax-supported State debt outstanding not exceed 4% of personal income. The proposed levels of State debt are affordable. **Exhibit 4.4** shows that for the forecast period, debt outstanding as a percent of personal income peaks at 2.75% in fiscal 2024 as the ratio steadily declines.

Exhibit 4.4
State Tax-supported Debt Outstanding
Components and Relationship to Personal Income
Fiscal 2024-2029
($ in Millions)

Fiscal Year	GO Bonds	MDOT Bonds	Capital Leases	Stadium Authority Bonds	Bay Restoration Bonds	Total Tax-supported Debt
2024	$9,545	$3,005	$137	$129	$140	$12,957
2025	9,733	2,791	116	118	118	12,877
2026	10,034	2,522	95	106	95	12,851
2027	10,426	2,256	79	102	70	12,933
2028	10,866	1,972	65	98	45	13,045
2029	11,359	1,660	49	93	18	13,181

State Tax-supported Debt Outstanding as a Percent of Personal Income
(Affordability Criteria = 4.00%)

2024	2.02%	0.64%	0.03%	0.03%	0.03%	2.75%
2025	1.98%	0.57%	0.02%	0.02%	0.02%	2.62%
2026	1.96%	0.49%	0.02%	0.02%	0.02%	2.51%
2027	1.95%	0.42%	0.01%	0.02%	0.01%	2.42%
2028	1.96%	0.35%	0.01%	0.02%	0.01%	2.35%
2029	1.97%	0.29%	0.01%	0.02%	0.00%	2.28%

GO: general obligation
MDOT: Maryland Department of Transportation

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

Source: Capital Debt Affordability Committee; Maryland Department of Transportation; State Treasurer's Office; Maryland Stadium Authority; Maryland Department of the Environment; Department of Legislative Services

With respect to debt service, the policy is that State tax-supported debt service not exceed 8% of tax revenues supporting debt service. The proposed levels of State debt are affordable. **Exhibit 4.5** shows that the debt service as a percent of revenues peaks at 6.34% in fiscal 2025 and declines throughout the forecast period.

Exhibit 4.5
State Tax-supported Debt Service
Components and Relationship to Revenues
Fiscal 2024-2029
($ in Millions)

Fiscal Year	GO Bonds	MDOT Bonds	Capital Leases	Stadium Authority	Bay Restoration Bonds	Total Tax-supported Debt Service
2024	$1,433	$426	$30	$19	$27	$1,935
2025	1,491	432	30	18	27	1,998
2026	1,449	416	29	17	27	1,938
2027	1,478	418	28	9	27	1,960
2028	1,510	415	25	9	28	1,987
2029	1,559	403	26	9	28	2,026

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

2024	4.64%	1.38%	0.10%	0.06%	0.09%	6.27%
2025	4.73%	1.37%	0.10%	0.06%	0.09%	6.34%
2026	4.47%	1.28%	0.09%	0.05%	0.08%	5.98%
2027	4.42%	1.25%	0.08%	0.03%	0.08%	5.86%
2028	4.36%	1.20%	0.07%	0.03%	0.08%	5.74%
2029	4.36%	1.13%	0.07%	0.02%	0.08%	5.67%

GO: general obligation
MDOT: Maryland Department of Transportation

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

Source: Capital Debt Affordability Committee; Maryland Department of Transportation; State Treasurer's Office; Maryland Stadium Authority; Maryland Department of the Environment; Department of Legislative Services

Chapter 5. Long-term Cost Forecasts

In the previous chapter, the affordability of bonds was analyzed consistent with the Capital Debt Affordability Committee's (CDAC) debt affordability criteria. The committee compares debt outstanding to personal income and debt service costs to revenues.

While this debt affordability approach is enlightening, it is not sufficient. This chapter provides an analysis of out-year costs and the effect of these costs on general fund spending. Specific issues examined are:

- the Annuity Bond Fund (ABF), which provides revenues that support general obligation (GO) bond costs;
- general fund spending on debt service since the affordability process began in fiscal 1979;
- pension costs, which are the State's other large long-term liability that are also examined by rating agencies; and
- cost of Other Post Employment Benefits (OPEB).

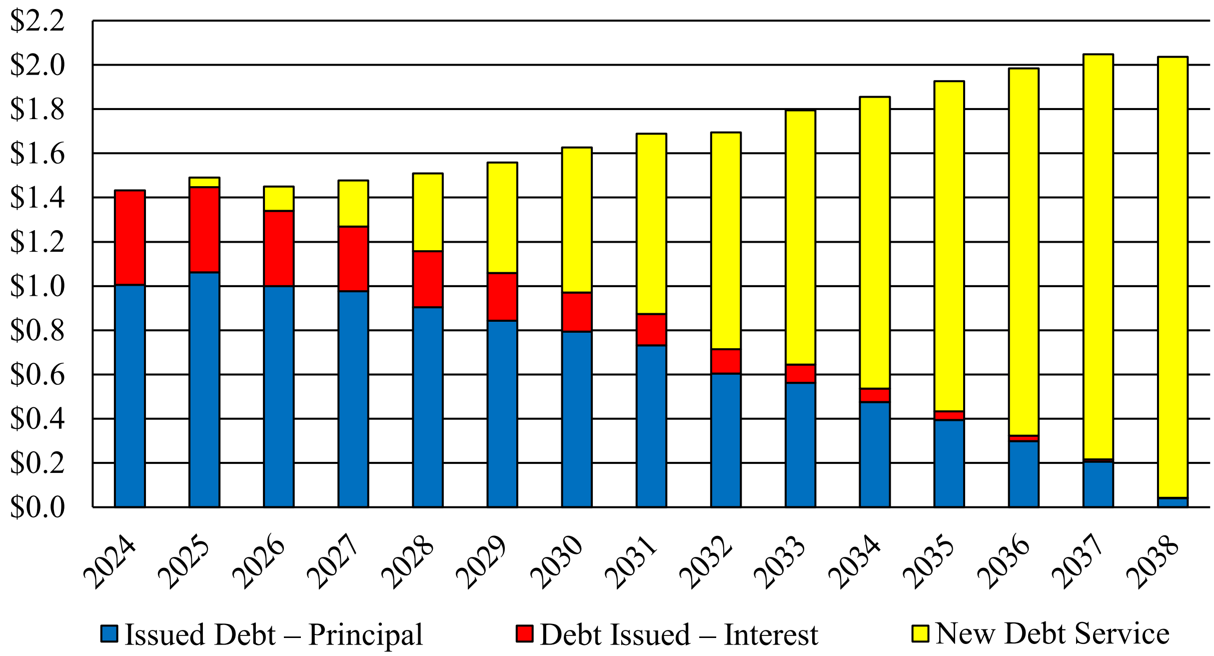
General Fund Appropriations Are Necessary to Support Debt Service

GO bond debt service is primarily supported by State property tax revenues and general funds. The State property tax rate is insufficient to support all debt service costs, so general funds are appropriated to subsidize the shortfall. This analysis assumes that the State authorizes $1.25 billion in GO bonds in fiscal 2025 and that authorizations increase 4% annually. This is consistent with the amount recommended by the Spending Affordability Committee (SAC) in December 2022. As discussed in Chapter 2, CDAC recommended authorizing $1.75 billion in fiscal 2025. The CDAC recommendation is analyzed in Chapter 8.

Out-year Debt Service Costs Expected to Increase Steadily

The Maryland Constitution limits State debt maturities to 15 years. State policy is to pay interest only in the first 2 years and have level debt service payments from years 3 to 15. Because Maryland bonds have short maturities, debt is retired quickly, and all bonds issued in fiscal 2024 will be retired before fiscal 2039. **Exhibit 5.1** shows the principal and interest costs for bonds sold prior to November 2023 as well as the debt service costs for anticipated bond sales. From fiscal 2024 to 2039, debt service costs increase from $1.43 billion to $2.15 billion, an annual increase of 2.95%. Annual debt service payments on previously issued debt peak at $0.4 million in fiscal 2025 and decline steadily thereafter. Low interest rates and rapidly amortized debt keep debt service payments from previously issued debt low.

Exhibit 5.1
General Obligation Bonds' Debt Service Costs
Fiscal 2024-2038
($ in Billions)



Note: Issued principal and interest are adjusted to reflect sinking fund payments.

Source: State Treasurer's Office; Comptroller's Office; Department of Legislative Services

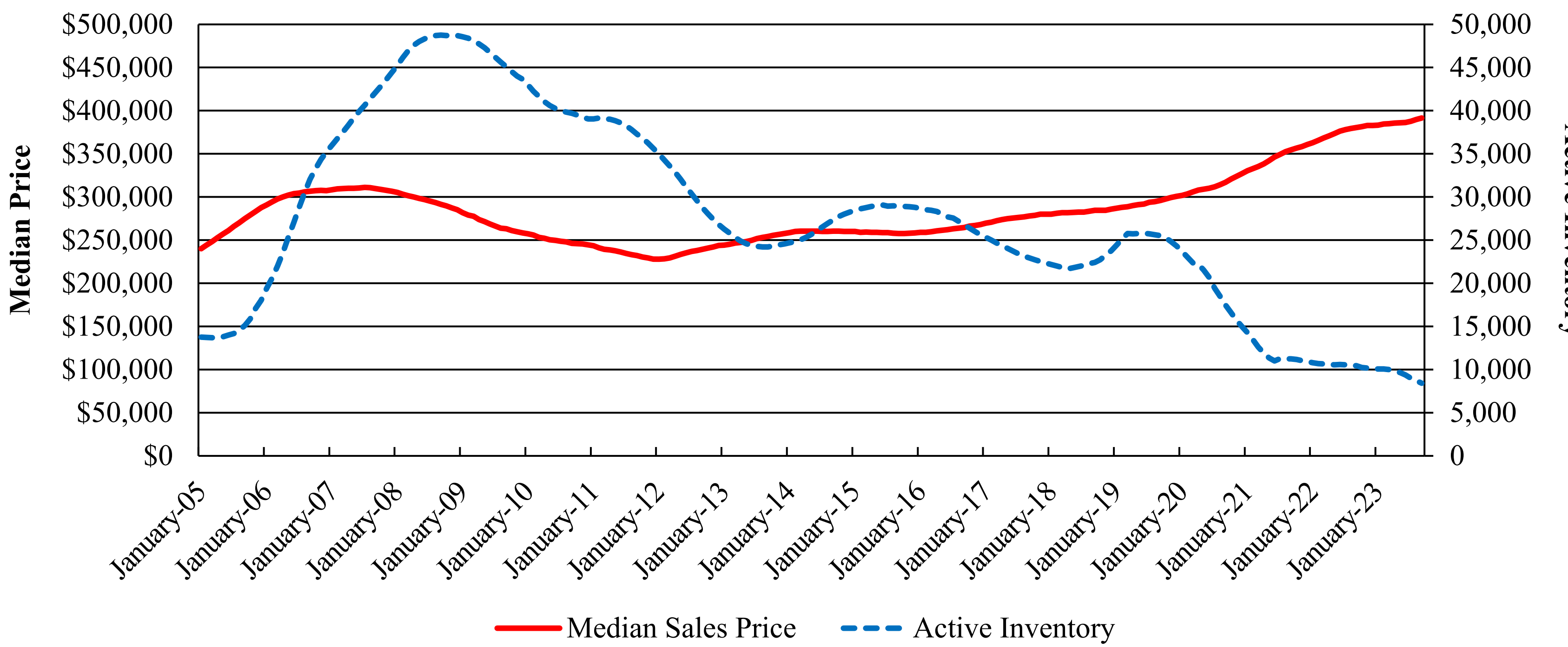
The short maturities mean that debt is retired quickly, and interest costs decline quickly. The average maturity for the State's 15-year GO bonds is just under 10 years, so most of each issuance is retired within 10 years. Fiscal 2024 interest costs total $420 million, which is 30% of $1.433 billion in total debt service. The share of interest costs to debt service payments decreases steadily throughout the forecast period for previously issued bonds.

Home Values Have Increased Modestly and Steadily in Recent Years

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

State property tax collections are influenced by trends in the housing market. **Exhibit 5.2** shows that the median home price has increased steadily since calendar 2012, with prices increasing more sharply in calendar 2020 and 2021. Even more pronounced is the decline in the inventory of houses for sale. Inventories since September 2021 have been lower than the number of inventories since before calendar 2000. Home sales have also declined substantially since calendar 2021. There were approximately 107,400 sales in Maryland in 2021, compared to 84,700 in calendar 2022 and 50,400 through September in 2023. Since the summer months have the highest sales, it is expected that 2023 sales will be well below 2021 levels. It seems that higher interest rates have affected sales more than home values (which have seen prices increase).

Exhibit 5.2
Maryland Housing – Median Prices and Inventory
12-month Moving Average
January 2005 to September 2023



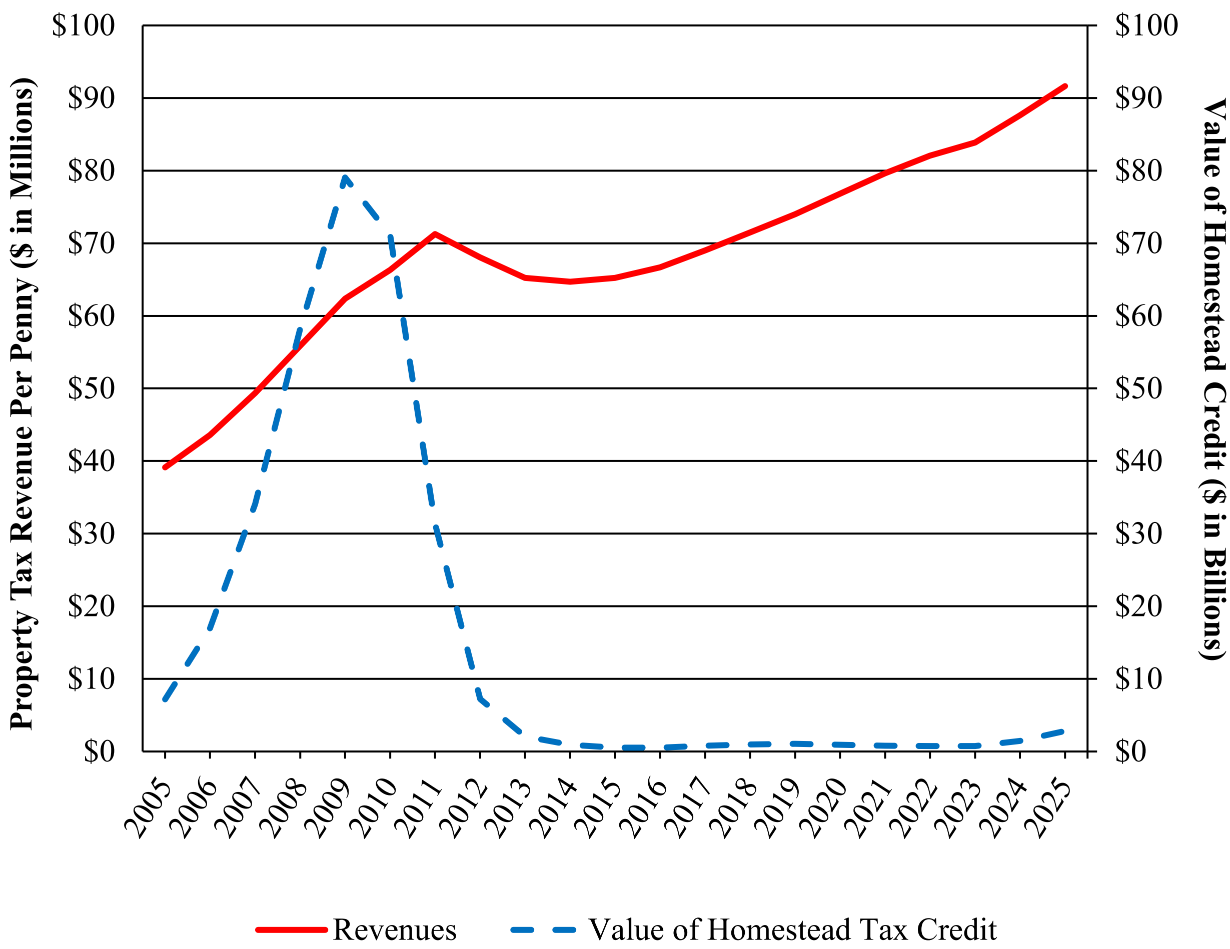
Note: There were sometimes substantial revisions of prior calendar year inventory data as some months were revised by as much as 20%. The data is a 12-month moving average, which cancels any effects from seasonality and shows the underlying trend.

Source: Maryland Association of Realtors; Department of Legislative Services

Homestead Tax Credit and Three-year Assessment Process

Exhibit 5.3 shows how much revenue one cent on the State property tax has generated since fiscal 2005. State property tax receipts generated per one cent of tax increased through fiscal 2011, even as home values peaked in fiscal 2007. Revenues declined from fiscal 2012 to 2014 but have generally increased since fiscal 2015.

Exhibit 5.3
State Property Tax Homestead Tax Credits and Revenues Per Each Cent of State Property Taxes
Fiscal 2005-2025



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

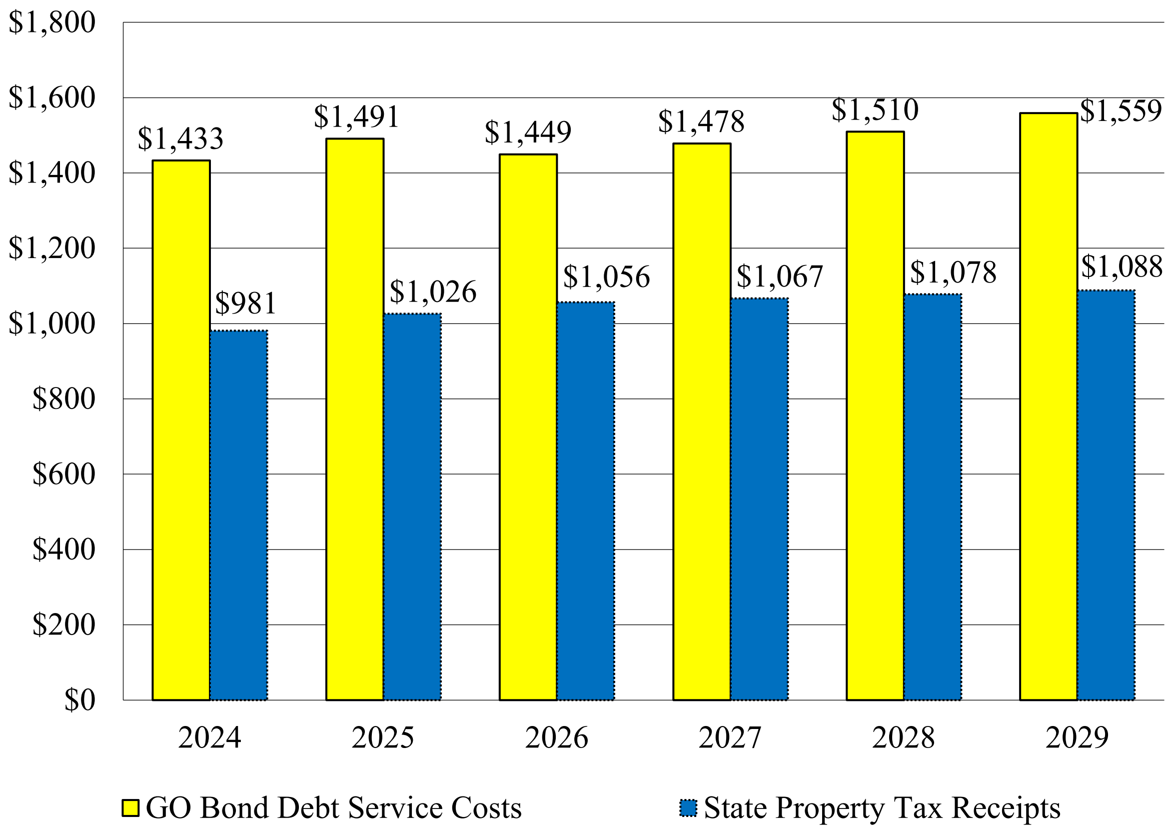
Assessment policies and the Homestead Tax Credit account for the lag between changes in the real estate market and tax receipts. Property values are assessed every three years, and increases are phased in over three years. For example, if a value increases by 9%, the increase would be 3% in the first year, 6% in the second year, and 9% in the third year. Having three years between assessments also moderates fluctuations in State property taxes. Properties assessed in calendar 2024 will have last been assessed in calendar 2021. Home values have increased steadily, which has increased the value of the Homestead Tax Credit.

The Homestead Tax Credit limits the annual increase in State property assessments subject to the property tax to 10%. If reassessing a resident's assessed property value results in an increase that exceeds 10%, the homeowner receives a credit for any amount above 10%. This limits revenue growth when property values rise quickly. Taken together, the three-year assessment process and the Homestead Tax Credit slowed the revenue increases during the real estate boom and delayed the peak until after the decline in property values. Current market conditions suggest that State property tax receipts should be stable over the next few years, even if home values slow or decline modestly.

General Funds Are Appropriated to Keep State Property Taxes Low

State property tax revenues are estimated to increase at a rate of 1.6% annually from fiscal 2024 to 2029. This estimate is consistent with the State Department of Assessments and Taxation estimates that assessable base increases 5% in fiscal 2025 and 3% in fiscal 2026. For fiscal 2027 to 2029, the Department of Legislative Services (DLS) expects the assessable base to increase 1% annually. Debt service costs are expected to increase at a rate of 2.1% from fiscal 2024 to 2029. **Exhibit 5.4** shows how State property tax revenues, which are $451 million less than debt service costs in fiscal 2024, are expected to be $471 million less than debt service costs in fiscal 2029. This analysis assumes the authorizations proposed by SAC in December 2022. Chapter 8 has an analysis of the CDAC October 2023 recommendation.

Exhibit 5.4
GO Bond Debt Service Costs and State Property Tax Revenue Collections
Fiscal 2024-2029
($ in Millions)



GO: general obligation

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

Exhibit 5.5 shows that estimates of general fund subsidies to the ABF range between $387 million and $468 million from fiscal 2024 to 2029. State property tax revenues are expected to increase steadily throughout the period. Reduced bond sales in fiscal 2023 and 2024 result in a decline in debt service costs in fiscal 2026, which reduces the required general fund appropriation.

Exhibit 5.5
Revenues Supporting Debt Service
Fiscal 2024-2029
($ in Millions)

	2024	2025	2026	2027	2028	2029	Annual % Change
Special Fund Revenues							
State Property Tax Receipts	$981	$1,026	$1,056	$1,067	$1,078	$1,088	2.1%
Other Revenues	3	3	3	3	3	3	0.0%
Prior Year ABF Balance Transferred	20	18	1	1	1	1	-48.9%
Subtotal	***$1,004***	***$1,047***	***$1,060***	***$1,071***	***$1,081***	***$1,092***	***1.7%***
General Funds	434	433	387	407	429	468	1.5%
Transfer Tax Special Funds	7	7	2	0	0	0	-100.0%
Federal Funds	6	5	2	1	0	0	-100.0%
Total Revenues	**$1,451**	**$1,492**	**$1,451**	**$1,479**	**$1,510**	**$1,560**	**1.5%**
Debt Service Expenditures	**$1,433**	**$1,491**	**$1,449**	**$1,478**	**$1,510**	**$1,559**	**1.7%**
End-of-year ABF Balance	**$18**	**$1**	**$1**	**$1**	**$1**	**$1**	

ABF: Annuity Bond Fund

Note: Assumes debt authorizations recommended by the Spending Affordability Committee in December 2022.

Source: Department of Legislative Services

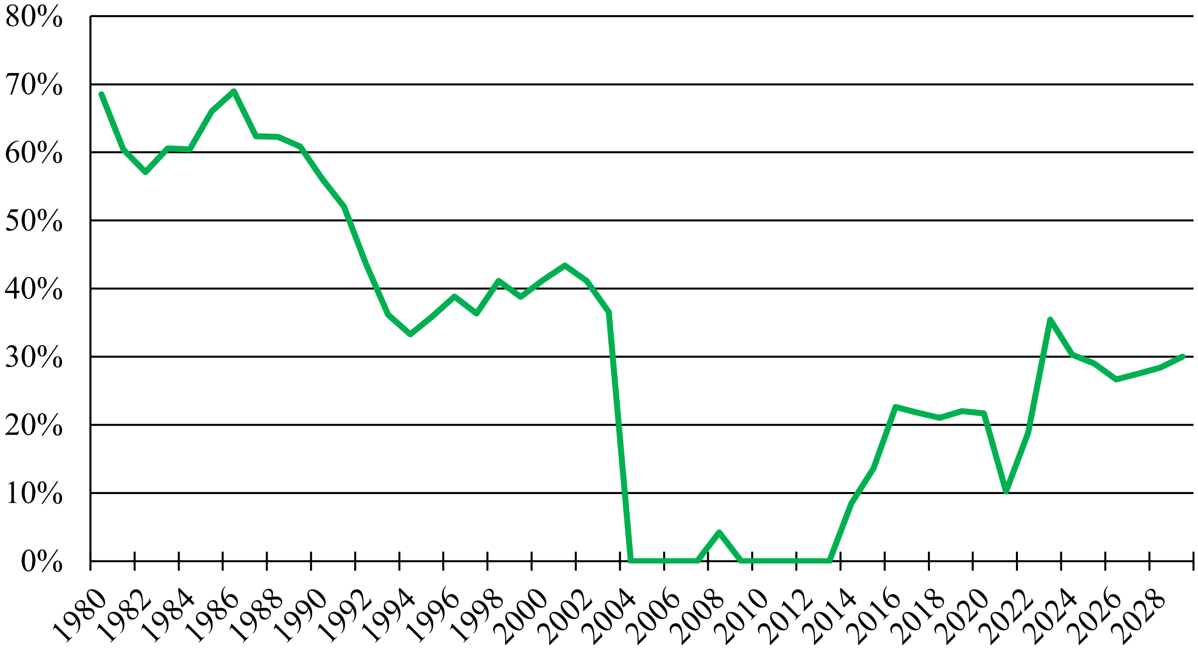
General Fund Appropriations for Debt Service Since 1980

In most years, State policy has been to keep State property tax rates low. To fund debt service, the State has appropriated general funds in all but nine years since fiscal 1980.

Exhibit 5.6 shows that DLS projects that general fund appropriations for debt service will be 27% to 30% of debt service appropriations from fiscal 2024 to 2029. Since the affordability process began in fiscal 1979, the level of general fund support has varied considerably;

general fund support peaked at 69% in fiscal 1986, while no support was provided from fiscal 2004 to 2007 and from fiscal 2009 to 2013.

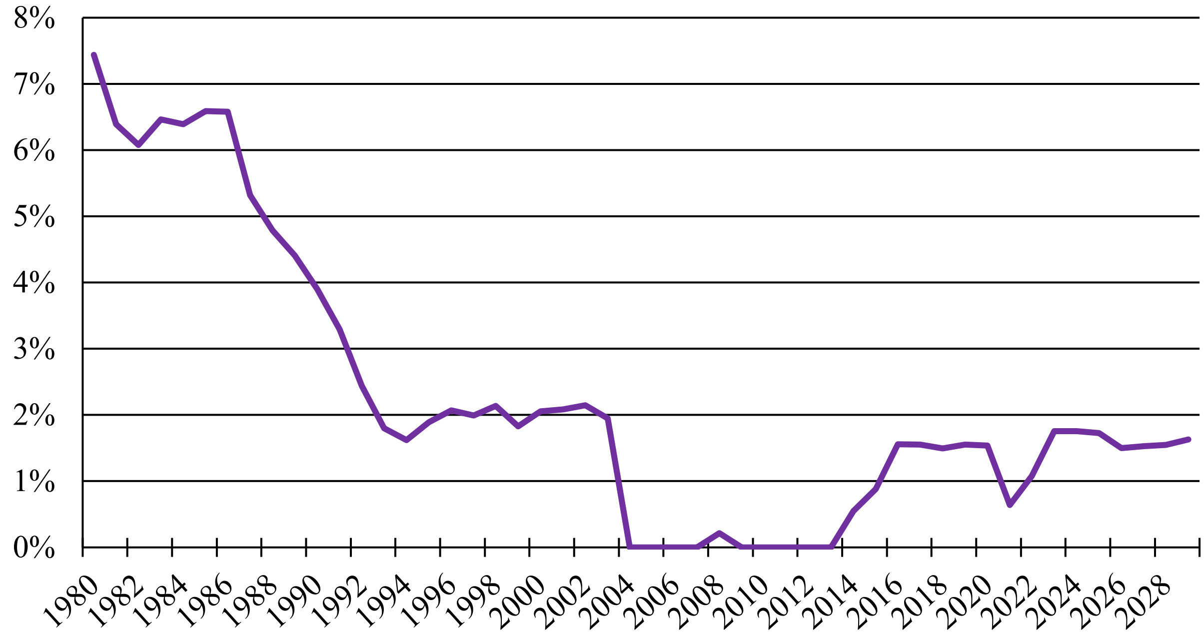
Exhibit 5.6
General Fund Appropriations as a Percent of Debt Service Appropriations
Fiscal 1980-2029



Source: Department of Budget and Management

Exhibit 5.7 shows that current estimates expect that the general fund costs for debt service will range from 1.5% to 1.8% of total general fund revenues from fiscal 2024 to 2029. From fiscal 2004 to 2013, the State appropriated general funds only once. The State property tax rate was increased from $0.084 to $0.132 per $100 of assessable base in fiscal 2004. The State also benefited from low interest rates, which generated large bond sale premiums that were used to support debt service payments. The State property tax rate was reduced to its current rate, $0.112 per $100 of assessable base, in fiscal 2007.

Exhibit 5.7
General Fund Debt Service Appropriations as a Percent of General Fund Revenues
Fiscal 1980-2029



Note: Fiscal 1985 to 2003 includes general funds appropriated in the Maryland State Department of Education for capital school construction. Fiscal 2002 and 2003 are adjusted to remove proceeds from refunding bonds.

Source: Department of Budget and Management; State Treasurer's Office; Department of Legislative Services

Rating Agencies Are Concerned about Pension and Other Post Employment Benefits Liabilities

Maryland's bonds are rated AAA from the three major rating agencies, and it has been State policy to maintain this rating. High ratings tend to reduce interest costs. The traditional estimate is that the AAA rating reduces interest rates by about 0.20% (20 basis points) compared to the AA+ rating. This reduction may be larger now. The interest cost analysis in Chapter 6 suggests that Maryland's bonds are 0.87% (or 87 basis points) less than *The Bond Buyer* 20-Bond Index, which is approximately $400,000 per year annual debt service for a typical $500 million bond sale. A ratings downgrade also could reduce this advantage that Maryland bonds have over lesser rated bonds. When reviewing debt, rating agencies have commented on pension liabilities.

Pension costs and debt service represent the State's two largest long-term liabilities after bond issuances. High pension liabilities are often cited when rating agencies downgrade a State or municipality's debt. For example, Standard & Poor's cited pension liabilities when the state of Illinois' debt rating was recently downgraded. Pension concerns were also cited when ratings for the city of Fort Worth, Texas and the state of Connecticut were downgraded.

This section examines trends in State pension and OPEB costs. The positive news for Maryland is that all three rating agencies have acknowledged Maryland's efforts to achieve adequate pension funding.

Overview of Defined Benefit Pension Plans

The State provides defined benefit pension plans. These plans require the State to make annual payments that represent the normal cost (the cost of the annual increase in benefits earned by employees) and a share of the unfunded liability. These pension payments are made to employees for years after they retire and represent a long-term liability to the State. Pension costs are supported with general, special, and federal funds.

About 97% of the teachers' pension fund supports the staff of the local school boards. By statute, the local school boards pay the normal costs, and the State is responsible for any remaining costs (which is the unfunded liability).

Annual Pension Costs Increased after the Great Recession

Employer pension contributions increased from $1.0 billion in fiscal 2010 to $2.6 billion in fiscal 2024. The primary reason for the increased costs is market losses suffered in fiscal 2008 and 2009 when the pension fund lost 5.4% and 20%, respectively. This reduced the funded ratio from 80.4% at the beginning of fiscal 2008 to 65% at the end of fiscal 2009. Lower contributions required by the corridor funding method also led to a lower funded ratio. To reduce the unfunded liability, higher appropriations are necessary from the State. The amount that the State appropriates each year is determined by the actuarial funding method. It is the general practice for the Governor to propose and the General Assembly to appropriate the amount certified by the State Retirement and Pension System Board.

Pension Costs Contained in Response to Increasing Liabilities

In response to increasing liabilities, the State enacted pension reform in 2011, which has reduced benefits, increased contributions, and required local jurisdictions to share in the costs of teacher pensions. Specific changes include:

- reducing cost-of-living adjustments earned after fiscal 2011;
- increasing employee contributions from 5% to 7% for most employees (judges, for example, were excluded);
- increasing the vesting period for employees hired after June 30, 2011, from 5 years to 10 years;
- reducing the multiplier for employees hired after June 30, 2011, to 1.5% of salary per year worked; and
- appropriating a share of savings to overfund pension contributions.

The State also required local governments to begin sharing in teacher pension costs in fiscal 2013. Local governments pay the normal cost for their employees' pensions. The State pays the unfunded liability. Should this liability increase, the State pays the full cost of this increased liability. Under this structure, State payments are larger and tend to be more volatile than the local payments.

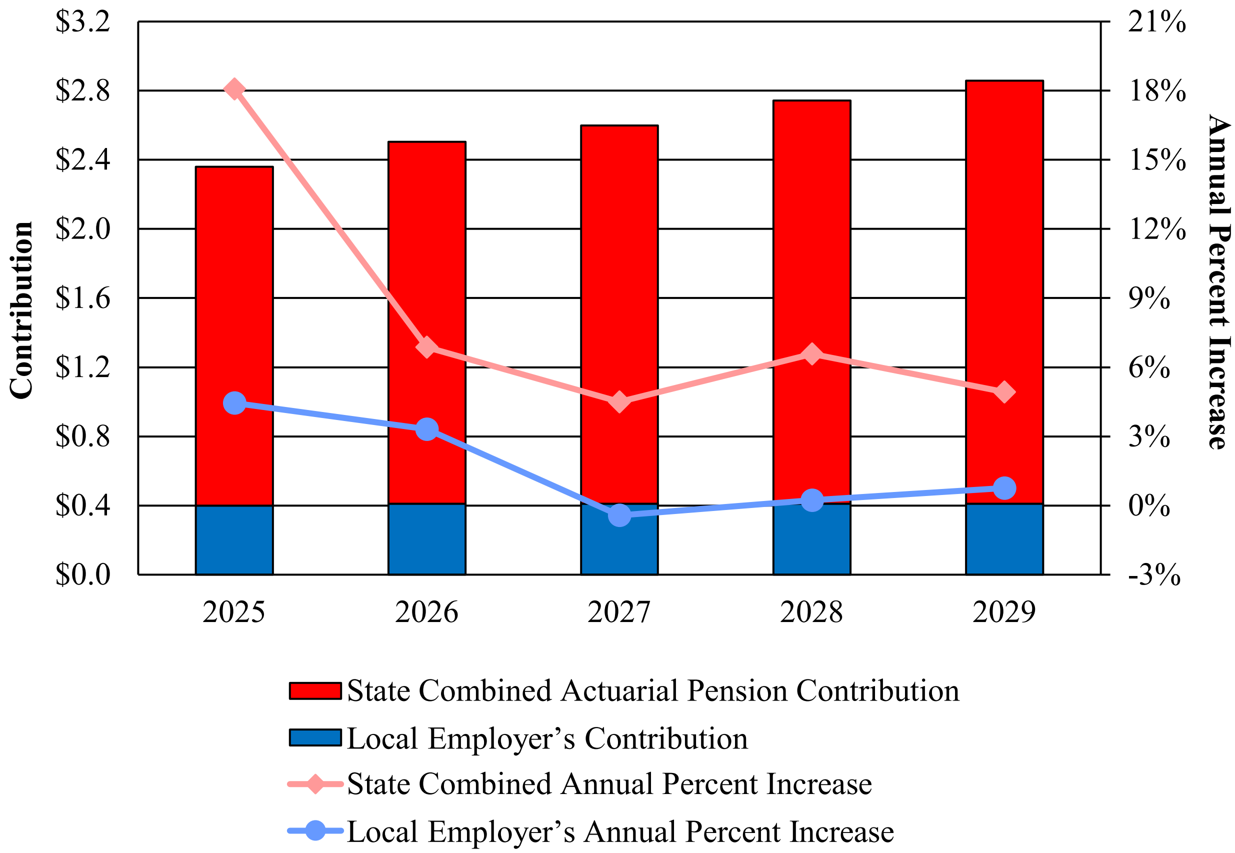
Current law requires supplemental pension contributions. The Administration is required to include $75 million in supplemental contributions and to provide appropriate unassigned general fund balances of up to $25 million.

Pension Cost Outlook

The market return for pension fund assets was -2.90% in fiscal 2022 and 3.11% in fiscal 2023. The fund's assumed annual return is 6.80%, so the fiscal 2023 returns were 3.69% less than projected. This was the second straight year with an investment loss. Although the market value of the fund's assets increased from $64.3 billion to $64.9 billion, a larger increase was anticipated so unrealized gains will be amortized as losses, which are smoothed over five years. The practical effect is an increase in the actuarial contribution.

Exhibit 5.8 shows that the State's annual actuarially required contribution is expected to increase from $1.96 billion in fiscal 2025 to $2.45 billion in fiscal 2029, which is an annual increase of 5.69%. Total pension costs, which include local contributions, increase from $2.36 billion in fiscal 2025 to $2.86 billion in fiscal 2029. Local costs, which are only the normal cost and are not affected by losses, increase at an annual rate of 0.62%.

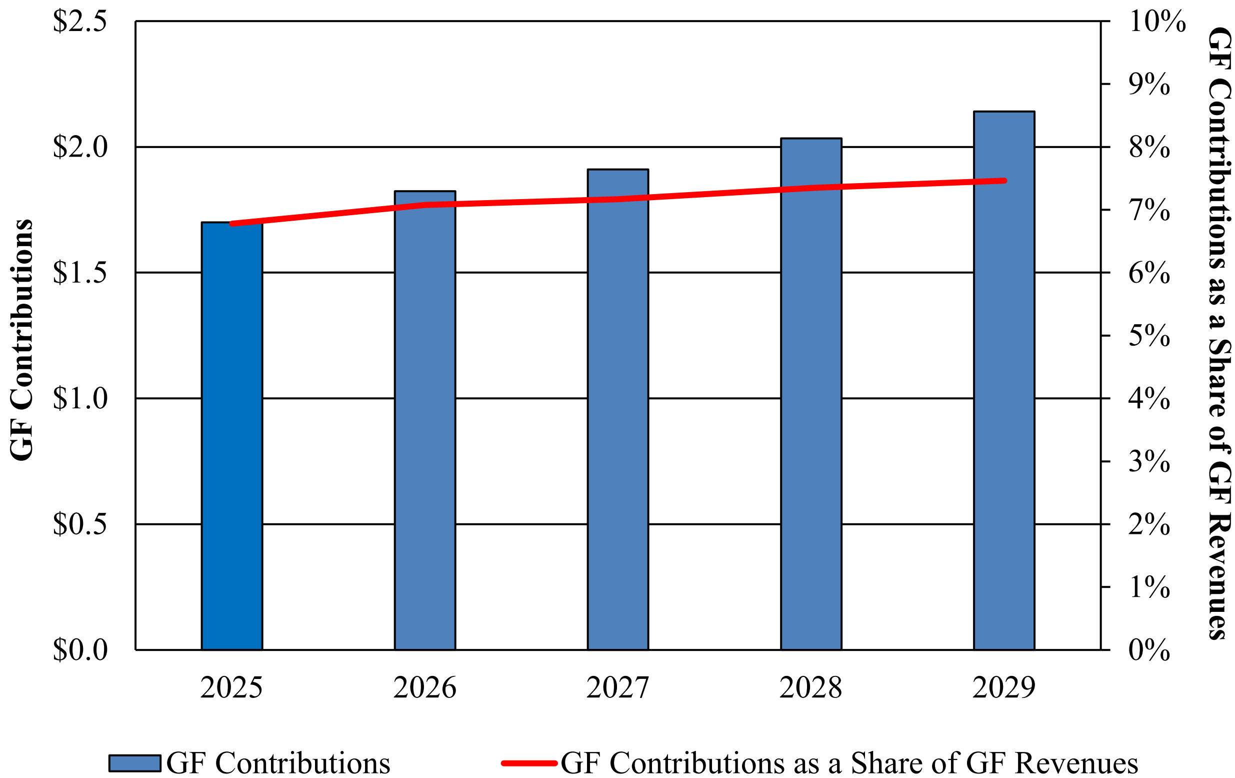
Exhibit 5.8
Total State Pension Costs
Fiscal 2025-2029



Source: GRS; Department of Legislative Services

Exhibit 5.9 shows that general fund costs for pensions are expected to rise from 6.8% in fiscal 2025 to 7.5% in fiscal 2029. General fund pension costs are increasing at a higher rate than general fund revenues, so pension costs are expected to be a larger share of expenditures in the out-years.

Exhibit 5.9
GF Pension Costs as a Percent of GF Revenues
Fiscal 2025-2029
($ in Billions)



GF: general fund

Source: GRS; Department of Legislative Services

Each year, Moody's Investor Service (Moody's) publishes a report that compares state debt service and debt outstanding to wealth indicators like state revenues and personal income. With respect to pensions, Moody's calculates the adjusted net pension liability (ANPL), which is each plan's unfunded liability. To compare pension plans, Moody's recalculates each state's pension liability using the same discount rate. Moody's uses the Financial Times Stock Exchange (FTSE) Pension Liability Index as of June 30 each year for this purpose. The index is published monthly and is maintained by the FTSE Group. The index includes three discount rates: a standard rate; an intermediate rate; and a short rate. Moody's uses the standard rate to determine APNLs in its report. This rate is currently lower than the reported discount rates used by all pension plans shown in the Moody's report, so APNLs are higher than the net pension liabilities across the board. The larger the difference between the rates, the larger the adjustment Moody's will make. **Exhibit 5.10** shows Maryland's liability is the highest among AAA-rated states when compared to personal income.

Exhibit 5.10
Adjusted Net Pension Liability to Personal Income of AAA-rated States
Fiscal 2022

State	Adjusted Net Pension Liability to Personal Income	State Rank
Maryland	13.0%	9
Delaware	9.0%	18
Mean – All States	8.2%	n/a
Texas	7.6%	20
Iowa	5.3%	24
Median – All States	5.2%	n/a
Indiana	4.5%	29
Missouri	4.2%	30
Minnesota	3.2%	34
South Dakota	2.8%	36
Utah	2.5%	37
Virginia	2.2%	42
North Carolina	2.2%	42
Georgia	2.0%	47
Tennessee	1.8%	49
Florida	1.6%	50

Source: *U.S. State Liabilities Report*, Moody's September 2023

Other Post Employment Benefits Outlook

The State also offers retirees subsidized health care. Retirees participate in the same plan as active employees. Retirees can also participate in Medicare. These plans are not subject to the same benefit protections as pension plans, which have a defined benefit formula that cannot be reduced retroactively and that determines the liability. Instead, retirees participate in a plan that the State can, and does, regularly modify. Retirees pay premiums, copayments, and coinsurance that offset the State's costs. In recent years, there have been changes to all these retiree costs. In addition, medical and pharmaceutical inflation rates change from year to year.

2010 Public Employees' and Retirees' Benefit Sustainability Commission Recommendations and 2011 Legislative Action

In 2010, the Public Employees' and Retirees' Benefit Sustainability Commission, tasked to study and make recommendations with respect to State-funded health care and pension benefits, identified the State's high unfunded OPEB liability, which totaled $15.9 billion, as an issue that the State should address. The commission expressed concern that failure to reduce the high unfunded OPEB liability could endanger the State's AAA bond rating and result in higher costs to borrow money for State projects and needs. The commission specifically recommended that the State establish a goal of reducing its unfunded liability for OPEB by 50% and commit to fully funding its OPEB liabilities within 10 years.

Medicare-eligible retirees' prescription drug cost was determined to be a primary contributor to the State's OPEB liability. The commission proposed fully transitioning Medicare-eligible retirees onto the Medicare Part D prescription drug program and eliminating State prescription drug coverage to these retirees. The recommendation was intended to reduce the OPEB liability substantially while still ensuring that retirees had access to prescription drug coverage through Medicare. Aligning the transition with a provision in the 2010 Patient Protection and Affordable Care Act that eliminated the Medicare Part D coverage gap by calendar 2020 (later accelerated to 2019) was recommended. The alignment was intended to mitigate the financial impact on State retirees. Chapter 397 of 2011 (the Budget Reconciliation and Financing Act) as enacted included the planned transition recommended by the commission. As a result, the State's unfunded OPEB liability decreased from $15.9 billion to $9.5 billion.

Cost Estimates Complicated by 2018 Lawsuit and 2019 Legislation

In September 2018, a lawsuit was filed in the Circuit Court for Baltimore City challenging the planned transition of prescription drug coverage required by Chapter 397. In October 2018, a federal judge granted a temporary restraining order and preliminary injunction, delaying the transition until the lawsuit was resolved. As a result, there was no change in coverage for Medicare-eligible retirees in calendar 2019.

In response to concerns raised by retirees about the cost of prescription drugs, Chapter 767 of 2019 establishes prescription drug out-of-pocket reimbursement or catastrophic coverage programs for specified State retirees, dependents, or surviving dependents who are enrolled in a Medicare prescription drug benefit plan. State employees hired after June 30, 2011, remain ineligible for prescription drug coverage from the State when they reach Medicare eligibility.

Although a federal District Court judge initially ruled in favor of the plaintiffs, a federal court later dismissed the lawsuit. The State can now implement statutory changes that transition the coverage for prescription drug costs for Medicare-eligible State retirees from the State health plan to Medicare Part D as well as provide State reimbursement for retirees who enroll in Medicare Part D for most of the out-of-pocket expenses incurred in a Part D plan. The changes are not effective until calendar 2025.

State Does Not Provide Full Actuarial Funding

At the end of fiscal 2022, the State's net OPEB liability was $12.4 billion, representing a funded ratio of 3% ($385 million in assets). The State has not met the commission's recommendation regarding payments to prefund the OPEB liability. The State has not provided OPEB liability payments since fiscal 2010.

Beginning in fiscal 2022, the Administration is required to appropriate unassigned general fund balances of up to $25 million into the Postretirement Health Benefits Trust Fund. The fiscal 2023 unassigned general fund balance was $555.5 million, requiring another $25 million appropriation in fiscal 2025.

Rating Agency Comments

To date, rating agencies have not downgraded Maryland in response to underfunding OPEB. The agencies are aware of the State's effort to reduce unfunded OPEB and pension liabilities. Agencies regularly comment that actions that increase liabilities, either by reducing funding or increasing benefits without increasing appropriations, would be viewed as credit weaknesses that could result in a credit downgrade. Rating agencies do not provide specificity as to how much an unfunded liability can be increased without resulting in a credit downgrade. Instead, agencies react after actions are taken.

As with the pension liability, Moody's now includes the OPEB liability in its annual review of State's long-term liabilities. **Exhibit 5.11** shows that Maryland has the third highest OPEB liability to personal income ratio among AAA-rated states behind Delaware and Texas.

Exhibit 5.11

Adjusted Net OPEB Liability to Personal Income of AAA-rated States

Fiscal 2022

State	Adjusted Net OPEB Liability to Personal Income	State Rank
Delaware	12.3%	2
Texas	2.7%	11
Maryland	2.6%	13
Mean – All States	2.0%	n/a
Median – All States	2.0%	n/a
Missouri	1.0%	20
North Carolina	0.8%	22
Florida	0.4%	27
Virginia	0.2%	31
Georgia	0.2%	31
Tennessee	0.2%	31
Iowa	0.1%	36
Minnesota	0.1%	36
Indiana	0.0%	44
South Dakota	0.0%	44
Utah	0.0%	44

OPEB: Other Post Employment Benefits

Source: *U.S. State Liabilities Report*, Moody's September 2022

Chapter 6. Analysis of Factors Influencing Bonds' Interest Cost

The interest rate that Maryland pays for the bonds that 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 that Maryland receives on general obligation (GO) bond sales.

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

Financial theory suggests factors that could influence Maryland's GO bonds' TIC. Research has confirmed numerous significant influences in other states and in national studies that include Maryland. To build the sum of least squares regression equation, data was collected and analyzed for the 82 bond issuances and groups since March 1991 (refunding sales are excluded): 74 competitively bid, tax-exempt bond issuances; and 8 negotiated, retail bond issuances. The analysis does not include taxable bonds. The data collected includes:

- the TIC;
- *The Bond Buyer* 20-bond index;
- date of the bond sale, fiscal year, and calendar years that the bonds were sold;
- if the bond sale includes one of the various call provisions offered since 1991;
- effect of requiring 5.00% coupon rates, which was done for bond sales from August 2020 to March 2023;
- average years to maturity;
- amount of debt sold;
- Consumer Price Index to examine if inflation affected the market's perception of the amount of debt sold;

- 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 sum of 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, which is the TIC. The regression equation examines the variables previously listed and identifies four statistically significant variables at the 95% confidence level that affect the TIC.[1] **Exhibit 6.1** shows the data for the statistically significant variables. **Appendix 2** provides a summary of the data.

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

- ***Ratio of Maryland Total Personal Income to the U.S. Total Personal Income:*** One perspective on interest rates is to consider them as a return for risk. The higher the risk, the higher the 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.

- ***Post-financial Crisis:*** This is a variable that indicates if a bond was sold before or after the financial crisis of 2008. The financial press has noted a "flight to quality" since the crisis. Statistical data from Maryland bond sales suggests that there has been a flight to quality with respect to bonds sold after March 2008. This date may be related to the collapse of Bear Stearns, which resulted in a Federal Reserve bailout and sale to

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[1] The statistical analysis of the equation suggests that the equation explains GO bond sales' TICs very well. The adjusted R-square, which measures how much of the TIC is explained by the equation, is 0.972. The F Statistic, which measures if this group of variables is jointly significant, is 569, which is more than 99.9% significant. DLS ran the Durbin-Watson statistic, which measures autocorrelation between variables, and it is 1.506, which is reasonable, but does suggest some positive autocorrelation.

JPMorgan Chase. The equation estimates that Maryland bond yields are 0.778% (78 basis points) less than *The Bond Buyer* 20-bond index since the financial crisis.

- ***Years to Maturity:*** Under normal economic conditions, bonds with shorter maturities have lower interest costs than bonds with longer maturities. The analysis estimates that every year adds 0.142% (14 basis points) to the TIC.

- ***Issuing Callable Bonds:*** A call is an option that allows the seller to retire debt early. Recent Maryland GO issuances are callable after 10 years. This can be advantageous if interest rates decline below the rate that the seller is paying. Consequently, buyers often require higher interest rates if an issuance includes a call provision. This analysis estimates that callable bonds add 0.33% (33 basis points) to the cost of a bond. In the March 2023 sale, Maryland bonds will be callable on March 15, 2034. Bonds maturing after that date can be called and refunded.

Exhibit 6.1

TIC Regression Equation – Evaluating the Independent Variables

Independent Variable	Coefficient	Std. Error	t-test	Sig.	Tol.	Comment
The Bond Buyer 20-bond Index	0.873	0.037	23.680	0.000	0.343	Highest t-test suggests that this is a most significant independent variable and that Maryland bonds are priced at 87% of the index.
Maryland Personal Income to U.S. Personal Income	-1.446	.277	-5.223	0.000	0.713	Stronger Maryland personal income tends to reduce the TIC.
Post-financial Crisis	-0.778	0.079	-9.866	0.000	0.427	Maryland bonds' yields are reduced since the crisis.
Years to Maturity	0.142	0.020	7.087	0.000	0.524	Positive coefficient means that longer maturities tend to have higher TICs.
Callable Bonds	0.330	0.086	3.824	0.000	0.535	Callable bonds' average TIC is 33 basis points (0.33%) higher than noncallable bonds.
Constant	1.460					

Sig.: significance or confidence interval
Std.: standard
TIC: true interest cost
Tol.: tolerance, a test of multicollinearity

Source: Department of Legislative Services

Chapter 7. Nontax-supported Debt

In addition to the tax-supported debt that Maryland issues, there are various forms of nontax-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.

Nontax-supported debt generally takes the form of either project/program revenue debt or conduit debt.

- ***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 that 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 as conduit issuers include MDTA, the Maryland Economic Development Corporation (MEDCO), the Maryland Health and Higher Educational Facilities Authority, and the Maryland Industrial Development Financing Authority (MIDFA).

Debt Outstanding

Exhibit 7.1 summarizes the change in debt outstanding for different types of debt between fiscal 2013 and 2023:

- ***Agency Debt Subject to State Regulatory Cap:*** This category includes debt held by State agencies on which the State sets limits. The debt is not backed by State taxes.

- ***Agency Debt Not Subject to State Regulatory Cap:*** This type of debt is held by State agencies that do not have limits set by the State. The debt is not backed by State taxes.

- ***Tax-supported Debt:*** State debt that is supported by taxes.

- ***Authorities and Corporations:*** Debt held by non-State agencies that is not subject to any debt ceiling or allocation caps.

Exhibit 7.1
Debt Outstanding as of June 30
Fiscal 2013 and 2023
($ in Millions)

	2013	2023	Total Change	Annual % Change
Agency Debt Subject to State Regulatory Cap	$3,376	$2,593	-$783	-2.6%
Agency Debt Not Subject to State Regulatory Cap	4,886	5,700	814	1.6%
Tax-supported Debt	10,618	13,749	3,131	2.6%
Authorities and Corporations without Caps	11,226	11,514	287	0.3%
Total	**$30,105**	**$33,555**	**$3,450**	**1.1%**

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

Source: Department of Legislative Services

A table containing debt outstanding by year for individual agencies is included as **Appendix 3**.

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 U.S. 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 adjusted annually for inflation. Maryland's 2023 allocation totaled $741.0 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 §§ 13-801 through 13-807 of the Financial Institutions Article. The Secretary of Commerce 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 and pursuant to the goals listed under statute.

In practice, most localities transfer much of their allocation authority to CDA because CDA can more efficiently and cost effectively issue mortgage revenue and multifamily housing bonds than any individual jurisdiction. The debt belongs to the county that received the initial allocation and is not backed by CDA. State issuers, such as MIDFA 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 the U.S. 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 the Maryland Department of Commerce (Commerce) on September 30 of each year. Commerce 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.

Allocation of Private Activity Bonds

Exhibit 7.2 provides the calendar 2019 through 2023 figures for the amount of available tax-exempt bond authority and the level of issuances made under the volume cap limits. Total carry forward remains high because it has outpaced annual issuances recently; in some years, CDA does not issue any debt directly against that year's allocation if sufficient amounts of carry forward are available to support program activity.

Exhibit 7.2
Allocation of Private Activity Bonds
Calendar 2019-2023 YTD
($ in Millions)

	2019	2020	2021	2022	YTD 2023
Fund Sources					
Annual Cap	$634.5	$634.8	$665.0	$678.2	$741.0
Carry Forward from Prior Years	1,668.7	1,271.4	1,286.5	1,397.1	1,204.6
Total Capacity Available	**$2,303.2**	**$1,906.2**	**$1,951.5**	**$2,075.3**	**$1,945.6**
Issuances					
Single-family Housing	$691.3	$240.0	$187.5	$397.6	$30.5
Multifamily Housing	340.5	379.7	366.8	473.1	277.29
Total Issuances	**$1,031.7**	**$619.7**	**$554.4**	**$870.7**	**$307.8**
Prior Year Carry Forward Abandoned	$0.0	$0.0	$0.0	$0.0	$0.0
Carry Forward	$1,271.4	$1,286.5	$1,397.1	$1,204.6	$1,637.8

YTD: year to date

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

Source: Department of Commerce

CDA's issuance of single-family housing private activity debt varies year to year based on housing market conditions and interest rates, and CDA may also issue single-family debt that does not make use of the volume cap. Overall, single-family issuances using volume cap from calendar 2019 to 2022 (totaling $1.5 billion) far exceeded issuances during the prior four-year period ($240 million). This increase is due to both decreased interest rates as well as increased marketing of DHCD's mortgage programs.

Maryland Economic Development Corporation Bonds

MEDCO classifies its projects as "Performing," "Watch," or "Non-performing" based on the project's ability to meet its financial obligations. As of September 2023, the Chesapeake Bay Conference Center (CBCC) project was non-performing, and two of MEDCO's student housing projects were in watch status.

CBCC was already a nonperforming project prior to the COVID-19 pandemic, and revenues were further reduced by the pandemic. Fiscal 2022 revenues increased significantly along with increased travel demand, which had been suppressed during the pandemic, but additional staffing to meet demand, supply chain issues, and inflation led to increased operating costs. Residential construction along the golf course that began in April 2022 is expected to have a positive impact on the project. MEDCO advises that the project is able to cover all operating expenses, but revenues are still not sufficient to make full debt service payments. Investors have repeatedly extended six-month forbearance agreements over the past several years, most recently through the end of calendar 2023, and MEDCO expects these agreements to continue to be extended.

Student Housing Bonds

Revenues at student housing facilities, which make up the majority of MEDCO-operated projects, were negatively impacted by the transition during the COVID-19 pandemic from in-person to remote and hybrid learning environments. Occupancy in several housing projects remained low for an extended period, and as a result, several projects entered watch status. As of September 2023, student housing projects at Frostburg State University (FSU) and the University of Maryland, Baltimore Campus remain in watch status. The student housing at Towson University (TU), which was on watch status as of September 2022, has since been reclassified as a performing project. MEDCO anticipates that the student housing projects will be able to fund operating expenses, however, and make their next debt service payments.

Exhibit 7.3 shows the debt coverage ratio at the end of the last three fiscal years, the maximum debt service, and outstanding balance at the end of fiscal 2023 for each housing project. MEDCO anticipates that all student housing projects will be able to fund operating expenses and meet their upcoming debt service payments.

Exhibit 7.3

Status of MEDCO-operated Student Housing Projects

Fiscal 2021-2023

($ in Millions)

	Debt Coverage Ratio[1]				
Project	**2021**	**2022**	**2023**	**Maximum Annual Debt Service**	**Outstanding Balance June 2023**
Bowie State University	***1.13***	2.62	2.11	$1.4	$11.1
Bowie Mixed Use Project	n/a	1.36	1.36	2.6	44.5
Capitol Technology University	1.24	1.51	2.11	0.9	11.8
Frostburg State University	1.26	***1.18***	***0.89***	1.2	9.9
Morgan State University	1.33	1.89	1.23	2.4	20.9
Morgan Mixed Use Project	n/a	n/a	n/a	6.0	80.8

Project	Debt Coverage Ratio[1] 2021	2022	2023	Maximum Annual Debt Service	Outstanding Balance June 2023
Salisbury University	1.93	1.97	2.21	2.2	14.9
Towson University	***0.47***	***1.16***	1.58	3.5	34.2
University of Maryland, Baltimore Campus	***1.15***	***1.15***	***1.18***	1.9	21.6
University of Maryland, Baltimore County	***0.60***	1.91	1.83	1.2	14.0
University of Maryland, College Park Campus	1.41	1.28	1.58	10.1	104.3
University Village at Sheppard Pratt	1.56	1.66	1.83	1.6	14.5

MEDCO: Maryland Economic Development Corporation

[1] Debt coverage ratio is the ratio of net operating income to debt service payments. The required coverage ratio is 1.2.

Note: Bold and italics indicate projects that did not meet the required coverage ratio.

Source: Maryland Economic Development Corporation

University System of Maryland

The University System of Maryland (USM) historically has issued 20-year bonds with serial maturities and level debt service payments. USM also recently added the ability to issue 10-year serial maturities for facilities renewal projects and 30-year bonds to the portfolio for student housing projects. The first year is interest only, and the principal is retired in the remaining years.

USM's debt management Board of Regents policy establishes prudent limits and process for the use of debt financing and to reassure investors and the rating agencies of the system's financial stability and control over debt. The policy was last revised in April 2018 to reflect the current planning metrics used by USM. USM aims for debt service that includes payments on capital lease obligations but not operating lease payments (terms no longer used in the preparation of audited financial statements with the adoption of Governmental Accounting Standards Board (GASB) Statement 87) to be less than 4.0% of operating revenues plus State appropriations, including grants and contracts. Despite the GASB changes to lease reporting, only leases that had been classified as capital leases will impact State debt capacity. The current ratio was developed after discussions with its financial advisor (Public Financial Management's Higher Education Office), rating agencies, and investors. Chapter 3 provides a detailed discussion of capital leases and recent GASB changes.

USM reports that it expects to maintain the current rating of AA1 (stable) from Moody's and the equivalent AA+ from both Fitch (stable) and Standard & Poor's (S&P). The most recent credit reviews by the rating agencies were in January and February 2023. The next full rating meetings are expected to take place in January 2024.

Exhibit 7.4 shows that USM will be under the 4.0% debt service goal for fiscal 2023 to 2029. Total debt service will be approximately $144 million, or 2.4%, of fiscal 2023 operating revenues plus State appropriations, including grants and contracts. The forecast indicates that the ratio will stay at or below 3.1% through the fiscal 2029 projection.

Exhibit 7.4

University System of Maryland Debt Service as Related to Operating Revenues Plus State Appropriations

Fiscal 2011-2029 Est.
($ in Millions)

Year	Total Debt Outstanding	Total Debt Service	Operating Revenues Plus State Appropriations	Ratio of Debt Service to Operating Revenues Plus State Appropriations
2011	$1,129	$127	$4,065	3.1%
2012	1,170	124	4,204	3.0%
2013	1,217	139	4,256	3.3%
2014	1,290	130	4,478	3.0%
2015	1,199	141	4,472	3.2%
2016	1,270	146	4,644	3.1%
2017	1,298	142	4,811	3.0%
2018	1,286	145	4,931	2.9%
2019	1,304	154	4,929	3.1%
2020	1,202	154	5,114	3.0%
2021	1,357	136	4,960	2.7%
2022	1,453	138	6,096	2.6%
2023 Est.	1,601	144	6,218	2.3%
2024 Est.	1,602	139	6,342	2.2%
2025 Est.	1,608	137	6,469	2.1%
2026 Est.	1,616	134	6,598	2.0%
2027 Est.	1,627	137	6,730	2.0%
2028 Est.	1,635	143	6,865	2.1%
2029 Est.	1,637	144	7,002	2.1%

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

Source: University System of Maryland

USM also has a policy limit for the ratio of available resources (defined as unrestricted net position, or fund balance of USM and the affiliated foundation with adjustments for certain long-term liabilities) to debt outstanding. With advice from its financial advisor, USM's Board of Regents policy limits debt authorizations such that the ratio of available resources is to be no less than 90% of total debt outstanding, adjusted for outstanding commitments; in practice, this is managed to a ratio of 1:1.

Exhibit 7.5 shows USM's available resources to debt outstanding ratio for fiscal 2011 to 2029. USM also adjusts this ratio in its internal cash management analysis. Adjustments include expanding debt outstanding to include anticipated issuances for projects that the system is committed to completing. This reduces the ratio of available resources to debt outstanding by increasing the denominator of the fraction. USM advises that after adjustments are made, the preliminary fiscal year-end 2023 ratio was 112%. USM has exceeded the target minimum 90% throughout the entire period. In the 2024 session, the system will seek authorization for a total of $30 million in academic revenue bonds to provide facility renewal and capital project funding for USM institutions for fiscal 2025.

Exhibit 7.5

Summary of Available Resources to Debt Outstanding for the University System of Maryland

Fiscal 2011-2029 Estimated

($ in Millions)

Year	Available Resources	Debt Outstanding	Ratio of Available Resources to Debt Outstanding
2011	$1,432	$1,129	126.9%
2012	1,622	1,170	138.6%
2013	1,752	1,217	144.0%
2014	1,748	1,290	135.5%
2015	1,902	1,199	158.6%
2016	2,067	1,270	162.8%
2017	2,178	1,298	167.8%
2018	2,384	1,286	185.5%
2019	2,576	1,304	197.6%
2020	2,617	1,202	217.7%
2021	2,798	1,357	206.2%
2022	2,946	1,453	202.8%
2023 Estimated	3,187	1,601	199.0%
2024 Estimated	3,203	1,602	199.9%
2025 Estimated	3,219	1,608	200.1%
2026 Estimated	3,235	1,606	200.1%
2027 Estimated	3,251	1,627	199.8%
2028 Estimated	3,267	1,635	199.8%

Year	Available Resources	Debt Outstanding	Ratio of Available Resources to Debt Outstanding
2029 Estimated	3,284	1,637	200.5%

Note: Debt outstanding includes auxiliary, academic, and capital lease debt. The ratios include planned $30 million annual academic revenue bond issuances but not any other potential future obligations.

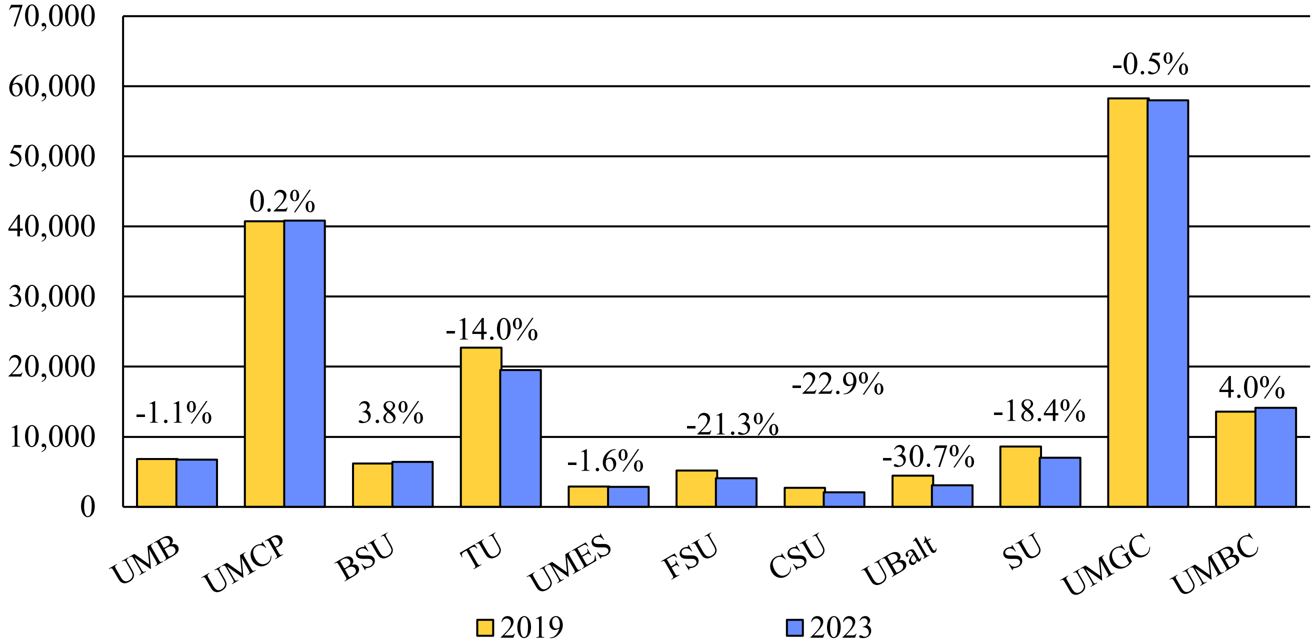
Source: University System of Maryland

Has Enrollment Bounced Back to Prepandemic Levels?

Fall 2020 was the first fall semester impacted by the pandemic during which USM institutions de-densified campuses with most classes being taught remotely and reduced resident hall occupancy for the academic year. Fall 2021 saw the resumption of in-person classes and full occupancy of resident halls. To understand the impact these actions had on enrollment and if institutions have fully recovered from the impacts of the pandemic, fall 2019 (prepandemic) enrollment is used as a baseline for comparison.

Overall, as shown in **Exhibit 7.6**, total fall headcount enrollment at USM institutions decreased by 4.3% in 2023 compared to 2019. This represents a bounce back of 1.3% in enrollment, as the decrease in 2022 was 5.6%. The impact of the pandemic varied depending upon the type of institution with some experiencing declines exceeding 20%, while others saw increases in enrollment. In general, more selective institutions and historically Black colleges and universities (HBCU), such as University of Maryland, College Park Campus; the University of Maryland Baltimore County; and Bowie State University, saw their enrollment bounce back to prepandemic levels, while regional institutions (*e.g.*, FSU, Salisbury University, and TU) continue to struggle. This partly reflects the impact of the continuing decline in enrollment at community colleges affecting the number of transfer students enrolling at these institutions.

Exhibit 7.6
Total Fall Headcount Enrollment and Percentage Change
Fall 2019 and Fall 2023



BSU: Bowie State University
CSU: Coppin State University
FSU: Frostburg State University
SU: Salisbury University
TU: Towson University
UBalt: University of Baltimore
UMB: University of Maryland, Baltimore Campus
UMBC: University of Maryland Baltimore County
UMCP: University of Maryland, College Park Campus
UMES: University of Maryland Eastern Shore
UMGC: University of Maryland Global Campus

Note: Percent change is by institution from fall 2019 to fall 2023. Fall 2023 are preliminary data.

Source: University System of Maryland, November 2023

Also noteworthy is that first-time enrollment has increased beyond prepandemic levels. Nationally, for fall 2023, first-time enrollment across all higher education institutions declined since 2022 by 3.6%, while USM institutions experienced a 6.7% increase in first-time enrollment since last year, the largest first-time cohort ever. Another positive indicator is enrollment of full-time students increased at USM institutions for the first time in two years.

St. Mary's College of Maryland

St. Mary's College of Maryland's (SMCM) outstanding debt consists of auxiliary and capital lease debt. The total debt in fiscal 2023 is $37.5 million, declining to $25.8 million by fiscal 2029. As shown in **Exhibit 7.7**, the college's ratio of debt service to unrestricted expenditures is also expected to decrease from 4.6% in fiscal 2023 to 2.2% in fiscal 2029.

Exhibit 7.7

St. Mary's College of Maryland Debt Service Related to Unrestricted Expenditures

Fiscal 2011-2029 Estimated

($ in Thousands)

Year	Total Debt Outstanding	Total Debt Service	Unrestricted Expenditures	Ratio of Debt Service to Unrestricted Expenditures
2011	$41,753	$3,500	$65,187	5.4%
2012	38,313	3,416	66,817	5.1%
2013	38,311	3,211	63,082	5.1%
2014	36,387	3,208	61,031	5.3%
2015	34,268	3,200	65,858	4.9%
2016	33,904	3,436	70,310	4.9%
2017	31,735	3,682	68,414	5.4%
2018	31,390	3,516	64,059	5.5%
2019	25,760	4,044	66,490	6.1%
2020	24,340	2,708	66,286	4.1%
2021	42,135	3,034	65,895	4.6%
2022	39,865	3,816	73,402	5.2%
2023	37,535	3,791	80,702	4.6%
2024	35,115	3,786	90,241	4.2%
2025 Estimated	32,965	3,429	92,948	3.7%
2026 Estimated	31,015	3,153	95,736	3.3%
2027 Estimated	29,115	3,033	98,608	3.0%
2028 Estimated	27,135	3,041	101,566	3.9%
2029 Estimated	25,765	2,370	104,612	2.2%

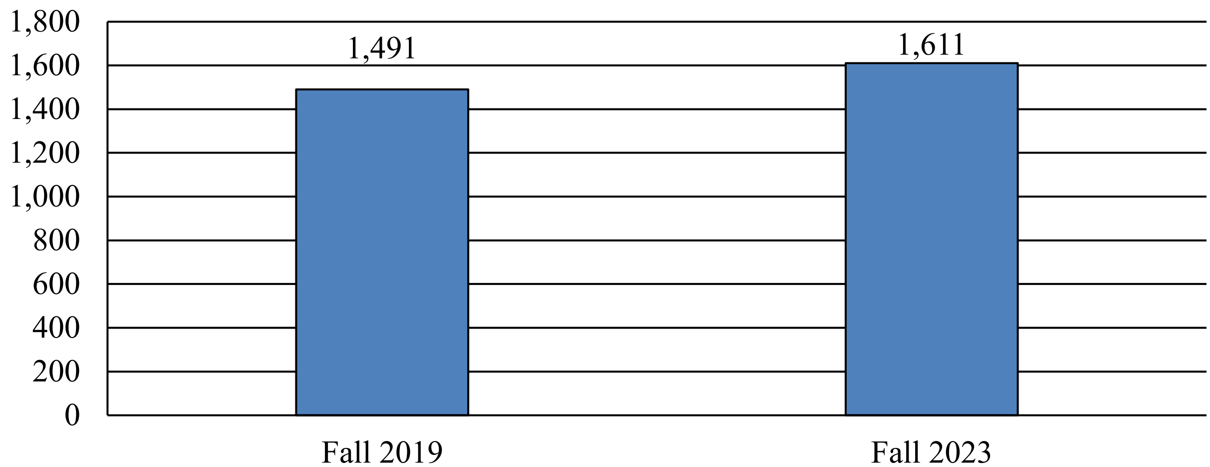
Note: Total debt outstanding and total debt service includes auxiliary and capital lease debt only. St. Mary's College of Maryland does not have any academic debt.

Source: St. Mary's College of Maryland

In August 2021, SMCM's bond rating was affirmed by Moody's at A2 with a stable outlook, upgraded from the previous rating of A2 negative. In February 2023, Moody's reaffirmed the A2 stable rating citing strong State support, rising enrollments, new program offerings, solid financial practices, and a strong governance structure.

Enrollment projections continue to be rebound for the college. Fall 2023 enrollment exceeds prepandemic numbers. As shown in **Exhibit 7.8**, the SMCM full-time undergraduate enrollment for fall 2023 is 1,611 total students, compared to 1,491 for fall 2019, an increase of 8.0%. For fall 2023, SMCM once again exceeded the record for the number of applications received at 3,109. By comparison, in fall 2019, the college only had 1,621 total applications. Thus, the college has experienced an application increase of 91.8% in four years.

Exhibit 7.8
St. Mary's College Enrollment Headcount
Fall 2019 and Fall 2023



Source: St. Mary's College of Maryland, November 2023

Morgan State University

As shown in **Exhibit 7.9**, Morgan State University (MSU) had $44.4 million of debt in fiscal 2023 relating to $5.2 million in capital lease debt and $39.2 million in HBCU loan disbursements. There was no academic and auxiliary revenue debt outstanding as of June 30, 2023. MSU initiated an additional HBCU loan (2022 HBCU loan) for $65 million to fund student housing renovations and critical deferred maintenance projects on December 2, 2022. No further issuance of debt is currently under consideration over the next five years.

Exhibit 7.9

Morgan State University Debt Service as Related to Unrestricted Expenditures

Fiscal 2011-2029 Est.
($ in Thousands)

Year	Total Debt Outstanding[1]	Total Debt Service	Unrestricted Expenditures	Ratio of Debt Service to Unrestricted Expenditures
2011	$59,556	$8,034	$150,429	5.3%
2012	55,165	7,429	157,647	4.7%
2013	47,761	5,776	165,502	3.5%
2014	43,770	6,422	164,211	3.9%
2015	43,145	6,078	170,966	3.6%
2016	54,409	7,100	179,011	4.0%
2017	48,481	8,312	195,529	4.3%
2018	46,465	8,332	201,361	4.1%
2019	44,434	7,980	205,670	3.9%
2020	40,973	8,081	203,560	4.0%
2021	9,038	7,588	166,919	4.5%
2022	27,960	2,159	253,291	0.9%
2023	44,391	3,050	308,209	1.0%
2024 Est.	105,535	7,715	361,313	2.1%
2025 Est.	101,001	7,732	367,180	2.1%
2026 Est.	97,408	6,670	385,539	1.7%
2027 Est.	94,817	5,590	404,816	1.4%
2028 Est.	92,119	5,590	425,057	1.3%
2029 Est.	89,342	5,590	446,310	1.3%

[1] Morgan State University advises that fiscal 2021 debt outstanding was low because the university retired $22.6 million in 1993 and 2012 bonds in fiscal 2020. Another $7.5 million in loans were forgiven, leaving $9 million in capital leases outstanding.

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

Source: Morgan State University

MSU has taken advantage of the HBCU Capital Financing Program through the U.S. Department of Education. This program provides low-cost capital to finance improvements to the infrastructure of the nation's HBCUs. HBCU Capital Financing Program debt is not considered revenue bonds outstanding but rather a general obligation of the university.

MSU indicated that, for financial statement purposes, this debt should not be considered outstanding until it is disbursed. In other words, this is similar to a line of credit.

MSU received an affirmed A+ Rating from S&P in April 2023 with the outlook at stable, and Moody's' last review was in May 2021 with an A1 rating and stable outlook.

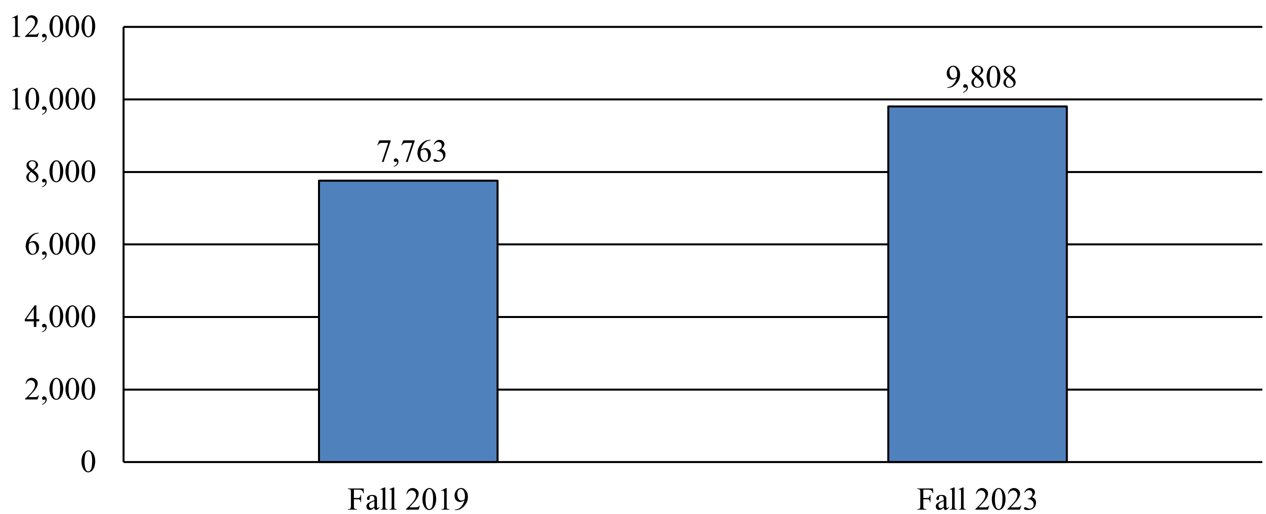
MSU generally issues 20-year bonds with serial maturities and level debt service payments with the first-year interest only and the principal retired over the remaining 19 years. MSU has indicated that, as a result of GASB 87 implementation, there is an estimated additional $22.2 million in capital leases arising from those leases previously accounted for as operating leases. MSU has engaged an accounting/consulting firm to perform an analysis to determine the actual impact of GASB 87 on its financial statements. See Chapter 3 for more details about GASB statements and capital leases.

MSU, like many HBCUs, has seen a steady increase in enrollment. This increase goes against the trend of a decline in enrollment overall for universities. While many colleges have been dealing with a steady decrease in enrollment that has been exacerbated by the pandemic, MSU has avoided this outcome. As shown in **Exhibit 7.10**, in fall 2019, MSU's total headcount was 7,763; while in fall 2023, it rose to 9,808. MSU's enrollment increased by 26.3% between fall 2019 and fall 2023.

Exhibit 7.10

Morgan State University Enrollment Headcount

Fall 2019 and Fall 2023



Source: Morgan State University, November 2023

Baltimore City Community College

To date, Baltimore City Community College (BCCC) has not taken advantage of its ability to issue auxiliary or academic debt but is authorized to issue up to $65 million. Since both the amount and eligible uses of its debt authorization were expanded in the 2009 session, BCCC has not initiated the bond rating process to issue debt. BCCC more recently decided to assess its position to issue debt before pursuing the rating process. This position will be reviewed by its Board of Trustees, which is tasked with reviewing the institution's capital planning needs.

Chapter 8. Issues

Issues examined in this chapter are:

- the effect of the Capital Debt Affordability Committee's (CDAC) recommendation to increase general obligation (GO) bond authorizations on State debt service costs, State revenues, and the debt service to revenues affordability ratio;

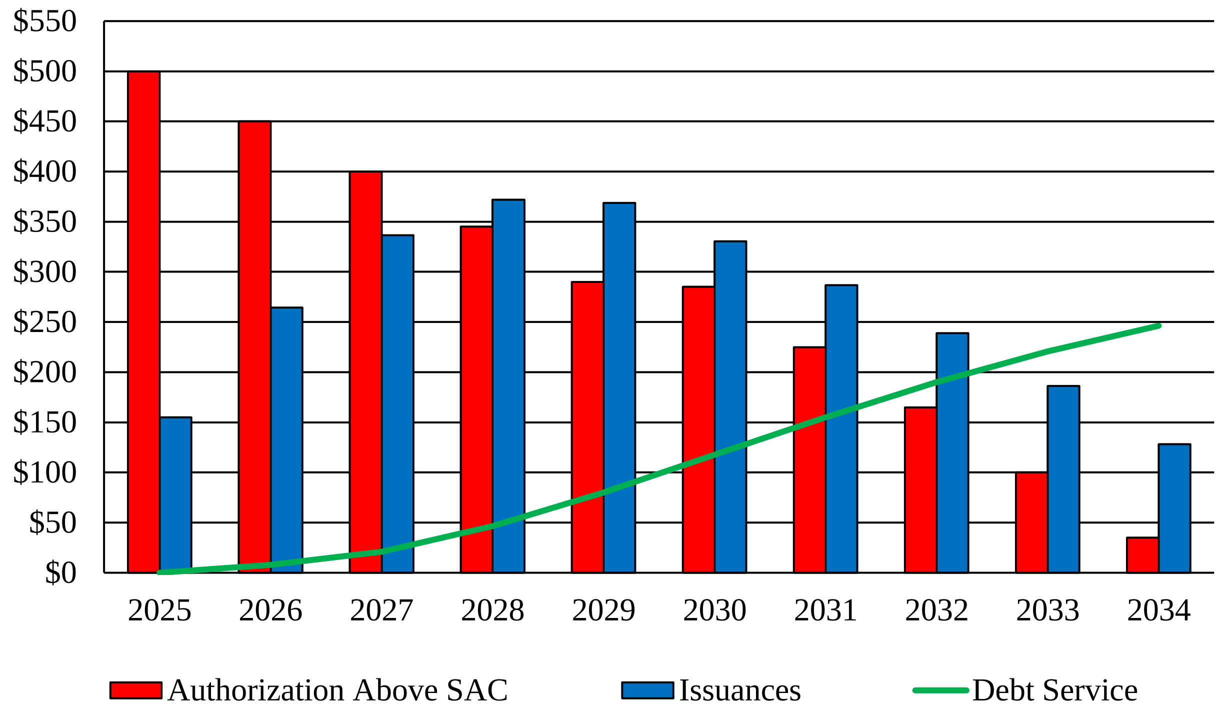
- that despite being a high debt state, Maryland has a AAA rating from all three major rating agencies because of sound debt management policies; and

- if higher interest rates will increase debt service costs.

Effect of Capital Debt Affordability Committee General Obligation Bond Authorization Recommendation

In October 2023, CDAC recommended increasing the fiscal 2025 authorization to $1.75 billion, which is $500 million more than the amount recommended by the Spending Affordability Committee (SAC) in December 2022. For analysis purposes, CDAC assumed that authorizations remain at that amount throughout the forecast period. **Exhibit 8.1** shows that this adds $2.795 million to GO bond authorizations through fiscal 2034.

Exhibit 8.1
Effect of CDAC Authorizations on Issuances and Debt Service Costs
Fiscal 2025-2034
($ in Millions)



CDAC: Capital Dept Affordability Committee
SAC: Spending Affordability Committee

Source: State Department of Assessments and Taxation; State Treasurer's Office; Department of Legislative Services

The exhibit also shows when these additional authorizations are expected to be issued. The federal government limits how long issuers can keep tax-exempt bond proceeds unspent. To avoid paying the federal government arbitrage rebates, Maryland issues bonds when the proceeds are needed to pay capital project costs. State policy is to assume that 30% of an authorization is issued in the first year, and all authorizations are issued within five years. Using these rules, the Department of Legislative Services (DLS) estimates that $155 million in additional bonds are issued in fiscal 2025.

State debt is amortized so that the first 2 years are interest-only payments and the principal is retired from the third to the fifteenth year. Debt service payments are calibrated so that annual debt service is about the same from years 3 to 15. An issuance's average maturity is 10 years. Not making principal payments until the third year reduces the short-term cost of issuing bonds. Since bonds are expected to be issued in the winter of 2025, the first principal payment is in fiscal 2028, 3 years after issuance. Over the 10-year forecast period, debt service costs increase steadily and reach maximum debt service totaling $246 million. Taken together, delayed issuances and principal payments understate the cost of issuing debt in the short term. To get a sense of the long-term effect of increasing authorizations, DLS uses maximum debt service instead of cash flows when evaluating increased authorizations.

As discussed in Chapter 4, DLS expects the State debt service to State revenues affordability ratio to decline. Much of this is attributable to a shrinking transportation capital program. **Exhibit 8.2** shows that the debt service to revenues criteria declines from 6.34% in fiscal 2025 to 5.25% in fiscal 2034, if authorizations are consistent with the December 2022 SAC recommendation. The exhibit also shows how policy changes can affect the debt service ratio, specifically:

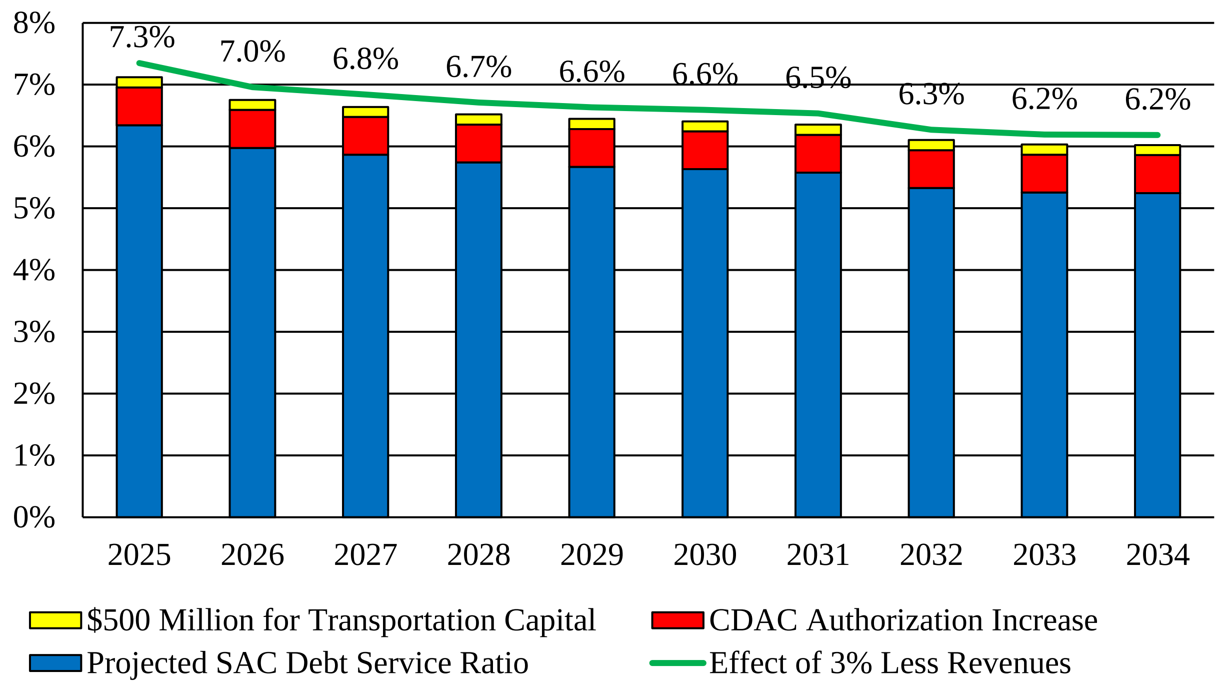
- ***Increasing GO Bond Authorizations Increases Debt but Does Not Affect Revenues:*** DLS estimates that maximum debt service attributable to increasing GO bond authorizations as assumed by CDAC is 51 basis points, or 0.51%. Maximum debt service shows where the ratios are headed and avoids understating the ultimate cost of increased authorizations that is inherent in the cash-flow approach.

- ***Increasing Transportation Revenues Increases Debt and Revenues Supporting Debt:*** DLS also notes that there is a commission currently meeting to examine transportation revenue options. To examine the effect of adding transportation revenues to boost the transportation capital program, DLS estimates that increasing transportation revenues by $500 million annually would allow additional bonding that adds 16 basis points (0.16%) to the debt service ratio.

- ***Recessions Reduce Revenues but Do Not Directly Affect Debt:*** Another factor that could influence the debt service ratio is a recession. DLS observes that recessions commonly result in revenues underperforming by 3%. This would reduce the debt service ratio by 16 to 20 basis points (0.16% to 0.2%).

Taken together, these events increase the debt service to revenues ratio by 83 to 87 basis points (0.84% to 0.87%). Increasing the authorization as proposed by CDAC is affordable even if a more cautious assessment is made.

Exhibit 8.2
Debt Service to State Revenues Affordability Outlook
Fiscal 2025-2034



CDAC: Capital Debt Affordability Committee
SAC: Spending Affordability Committee

Source: Board of Revenue Estimates; Maryland Department of Transportation; State Treasurer's Office; Maryland Stadium Authority; Maryland Department of the Environment; Capital Debt Affordability Committee; State Department of Assessments and Taxation; Department of Legislative Services

Maryland Is a High-debt State That May See Increased Demand for Capital Spending during the Six-year Forecast Period

Maryland is a high-debt State that uses debt to support non-State capital assets. As discussed later in this chapter and in Chapter 3, large new bond issuances to support stadiums and public school construction have been authorized in recent years. Maryland also has aging infrastructure that may lead to increased demand to authorize additional debt.

Large Capital Program Also Supports Local Jurisdictions and Nonprofit Organizations

Maryland authorizes and issues higher levels of debt than most states, especially most AAA-rated states. Maryland has used these high levels of debt to expand its capital program beyond just supporting State agency facilities. More than half of Maryland's capital program supports non-State programs and projects, the largest of which support public education and health.

Each year, Moody's Investors Service compares State debt levels. Two of the measures estimated by Moody's are measures that the State uses when evaluating debt: debt outstanding to personal income; and debt service to revenues. Maryland's ratios are among the highest for AAA-rated states.

Exhibit 8.3 shows that Moody's ranked Maryland the thirteenth highest state with respect to debt outstanding, which is 4.1% of personal income. This is the second highest level among AAA-rated states. Most AAA-rated states are below the ratio, suggesting that it is more difficult to keep a high bond rating as levels of debt increase. The state with the highest ratio nationwide is Hawaii, with a ratio of 11.2%.

Exhibit 8.3
Ranking AAA-rated States
Net Tax Supported Debt Outstanding as a Percent of Personal Income
Fiscal 2022

State	Debt Outstanding to Personal Income	State Rank
Delaware	7.0%	5
Maryland	**4.1%**	**13**
Virginia	2.8%	19
Mean – All States	**2.8%**	**n/a**
Minnesota	2.2%	25
Georgia	2.0%	26
Utah	1.6%	29
Florida	1.2%	32
North Carolina	1.2%	21
Texas	1.1%	36
South Dakota	0.9%	28
Missouri	0.7%	42
Iowa	0.7%	42
Tennessee	0.5%	45
Indiana	0.4%	46

Note: Moody's estimate of net tax-supported debt outstanding excludes non-State debt supported by revenues other than State taxes. Moody's includes all lottery bonds, while Maryland excludes some lottery bonds. Consequently, Moody's estimates are usually higher than Maryland's estimates.

Source: Moody's Investors Services, September 2023

Exhibit 8.4 shows that Maryland's debt service to revenues ratio of 3.4% is the second highest among AAA-rated states. To make the comparison comparable, Moody's estimates an implied debt service. This is done by amortizing all debt over 20 years. Since Maryland's GO and transportation bonds are amortized over 15 years, Maryland GO bonds' implied debt service costs are less than actual debt service costs, which lowers Maryland's ratio. However, Moody's also considers lottery bonds to be State debt, and since these bonds are often amortized over 30 years, debt service costs for those bonds are increased with this methodology. The implied rate further increases the ratio since it increases most of the Maryland Stadium Authority's (MSA) debt service costs. Overall, Moody's ratio is less than the State ratio, so the net effect of this process is to reduce Maryland's ratio. Even with net favorable debt service adjustments, Maryland still has the second highest ratio among AAA-rated states. Connecticut has the highest debt service to revenues ratio nationally, as debt service is 7.3% of State revenues.

Exhibit 8.4
Ranking AAA-rated States
Net Debt Service as a Percent of Revenues
Fiscal 2022

State	Implied Debt Service to State Revenues	State Rank
Delaware	3.5%	11
Maryland	**3.4%**	**12**
Virginia	2.7%	17
Georgia	2.3%	20
Mean – All States	**2.2%**	n/a
Median	**1.8%**	n/a
Florida	1.7%	26
Minnesota	1.7%	26
Utah	1.4%	30
Texas	1.3%	31
North Carolina	1.2%	34
Missouri	1.0%	36
Iowa	0.7%	41
Indiana	0.6%	44
South Dakota	0.6%	44
Tennessee	0.5%	16

Note: Moody's estimate of net tax-supported debt outstanding excludes non-State debt supported by revenues other than State taxes. Moody's includes all lottery bonds, while Maryland excludes some lottery bonds. Consequently, Moody's estimates are usually higher than Maryland's estimates. Moody's also estimates implied debt service, which increases Maryland's bonds' amortization period to 20 years. This reduces the ratio, since most Maryland bonds are amortized over 15 years.

Source: Moody's Investors Services, September 2023

Moody's has expanded its debt service report to include other long-term liabilities, such as unfunded pension liabilities, unfunded Other Post Employment Benefits liabilities, and other liabilities like judgments, compensated absences, and environmental remediation. This provides a more expansive measure of long-term liabilities. Moody's compares the estimated annual cost of these liabilities to annual State revenues. **Exhibit 8.5** shows that Maryland has the highest ratio among AAA-rated states. As in Exhibit 8.4, debt service costs are implied, and as discussed in Chapter 5, Moody's recalculates pension costs by using the FTSE Pension Liability Index as the common discount rate.

Exhibit 8.5
Total Liabilities to State Revenues
Fiscal 2022

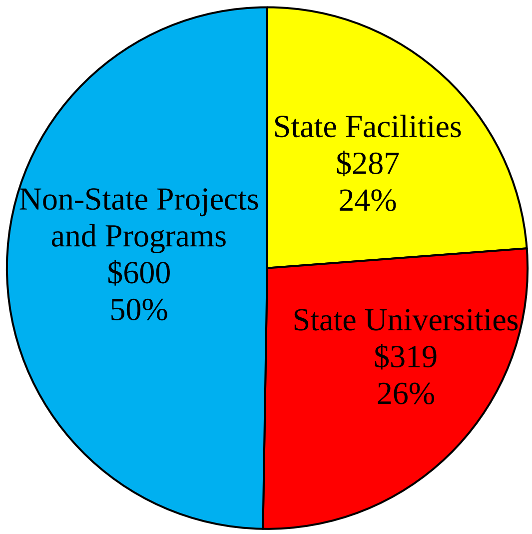
State	Total Liabilities' Fixed Annual Costs to State Revenues	State Rank
Maryland	**11.3%**	**11**
Delaware	10.4%	14
Mean – All States	**8.1%**	n/a
Indiana	7.5%	21
Missouri	6.2%	24
Texas	6.0%	25
Georgia	4.5%	32
Virginia	4.5%	32
Florida	3.5%	38
Iowa	3.5%	39
Utah	3.4%	40
Tennessee	3.0%	43
Minnesota	2.9%	44
North Carolina	2.9%	44
South Dakota	1.4%	49

Source: Moody's Investors Services, September 2022

Uses of Maryland's General Obligation Bonds

Maryland's bond program supports various State and non-State projects and programs. **Exhibit 8.6** shows that 50% of proposed fiscal 2024 GO bond authorizations support non-State projects and programs. The largest area of support, public school construction, receives $221 million, which is 18% of total authorizations.

Exhibit 8.6
Uses of General Obligation Bond Proceeds
Fiscal 2024 as Introduced
($ in Millions)



Note: The capital budget bill authorizes funding for $1.205 billion in projects.

Source: Department of Budget and Management; Department of Legislative Services

Since 2019, the State Has Authorized a Substantial Amount of Revenue Bonds to Supplement Capital Needs Not Funded with General Obligation Bonds

In addition to the GO bond program, the State authorizes revenue bonds to support various non-State assets. Since 2019, the General Assembly has authorized over $4.5 billion in MSA debt to support the following projects:

- $2.2 billion for Built to Learn school construction projects;
- $1.2 billion for stadium improvements to the Baltimore Orioles and Ravens' stadiums;
- $400 million for constructing and renovating blue line corridor projects in Prince George's County;
- $375 million for improvements to horse racing at Pimlico and Laurel Park;

- $220 million for minor league sports stadiums and entertainment facilities;
- $59.5 million for constructing the Hagerstown Multi-Use Sports and Events Facility;
- $55 million for renovating and expanding the Baltimore City Convention Center;
- $25 million for a Supplemental Facilities Fund; and
- $24.5 million for renovating and expanding the Ocean City Convention Center.

Prior to 2010, MSA bonds supported by lottery revenues were classified as State debt. Bond counsel advised that this debt can be structured so that it is not State debt if the Comptroller's Office deposits the lottery funds with a trustee for the bondholders. Stadium bond sales in 2013 and 2014 were structured as non-State sales. Of MSA's $5.7 billion in total authorized debt, $5.5 billion is counted by the State as non-State debt. As noted earlier, Moody's considers bonds supported by lottery revenues to be State debt.

Sound Policies Give Maryland Access to Inexpensive Debt

Despite Maryland's high levels of debt, GO bond interest rates are low. Maryland's credit strengths include a strong economy and a willingness to make difficult decisions. Adhering to Maryland's affordability process is also a key credit strength.

Maryland Bonds Sell at a Low Interest Rate

The State currently pays one of the lowest interest rates of all issuers of state and municipal debt. Paying low interest rates persisted through the pandemic and has continued since interest rates have risen throughout 2022 and 2023. Each year, DLS measures the factors that influence GO bonds' interest rates. An analysis of the interest cost of GO bonds in Chapter 6 shows that the State's cost of capital is low. DLS' analysis suggests that:

- State bonds sell at 87% of *The Bond Buyer's* index of 20 state and municipal bonds, which is well below the average; and
- the "flight to quality" since the Great Recession reduces the interest rate by another 0.78% (76 basis points). The market has been more discriminating of credit quality since the Great Recession, which has reduced Maryland rates compared to average and lowered quality issuances.

Why Maryland Has a AAA Bond Rating

High levels of debt notwithstanding, Maryland has a AAA bond rating from all three major credit rating agencies. Rating agencies have identified strong economic and financial practices as credit strengths. The State also adheres to its affordability process and policies.

Rating Agencies Identify Maryland's Credit Strengths

Prior to the most recent bond sale in March 2023, rating agencies reaffirmed Maryland's AAA bond rating. Those agencies commented on the following credit strengths:

- high wealth and income levels;
- broad and diverse economy;
- strong and well-embedded financial practices; and
- adequate reserves and liquidity.

Maryland Has a History of Making Difficult Decisions to Reduce or Slow the Growth of the Capital Program to Keep Debt Affordable

An example of Maryland's strong and well-embedded financial practices is the State's willingness to make difficult decisions. The State has exhibited discipline when ratios were close to breaching the affordability limits. During the Great Recession, revenues declined so substantially that the State debt service to revenues was expected to exceed 8% of revenues in the out-years. In response, GO bond authorizations were reduced from $1.14 billion in fiscal 2011 to $925 million in fiscal 2012. The prior plan had been to increase the fiscal 2012 authorizations to $1.17 million.

The State has also restrained increases in bond authorizations. From 2015 through 2021, SAC recommended that increases in authorizations be limited to 1%. This policy was adopted when the debt service to revenues ratio was close to the affordability limit. The major revenue source supporting debt service is the State property tax, which was projected to increase between 1% to 2% annually. To keep the growth below revenues, increases in authorizations were limited to 1%.

Observations about Maryland's AAA Rating

Based on conversations with rating agencies and the comments in their ratings, DLS observes that:

- ***Most AAA-rated States Have Debt Levels Below the Median:*** While high debt levels do not disqualify states from receiving the AAA rating, most AAA-rated states have debt levels below the median on two key measures. Only 3 of 14 states with AAA ratings from the three major rating agencies have debt outstanding ratios above the median, and, similarly, 4 of 14 states have debt service ratios above the median. It is clear that AAA-rated states are not authorizing and issuing as much debt as lower-rated states.

- ***Maryland's Affordability Process Is a Credit Strength:*** All three rating agencies comment favorably about Maryland's affordability process. The agencies consider Maryland's financial and debt management processes to be strong, well-embedded, and sustainable. The agencies recognize that the State develops long-term forecasts through a collaborative approach. The process is proactive as the State addresses budget shortfalls quickly and is prepared to make mid-year adjustments. Maryland has also taken actions to reduce long-term liabilities.

- ***Process Matters More:*** As a high-debt, AAA-rated State, process matters more for Maryland than other states. Each of the three major rating agencies is concerned about the high levels of long-term liabilities. If ratings were only about debt levels, Maryland might not get the AAA-rating from all three agencies. Fortunately, the agencies also consider Maryland's financial and debt management processes. These have an excellent reputation for being thorough and adhered to consistently. Rating agency comments suggest that Maryland will need to maintain these high standards to keep the highest ratings for Maryland debt.

To maintain a AAA bond rating from all three rating agencies and keep interest payments low, DLS recommends that the State carefully evaluate fiscal management and debt policies. This includes examining the implications of increasing authorizations to consider more than just short-term cash flow changes but to evaluate (1) maximum GO bond debt service costs; (2) the effect of increasing other State debt like transportation debt; and (3) the impact of recessions that may occur over the forecast period.

Effect of Recent Interest Rate Increases

Interest rates have been unusually low recently and are now bouncing back to be in line with prior years' rates. Federal Reserve policies and concerns about the economy kept interest rates low during the Covid-19 pandemic. **Exhibit 8.7** shows that the 10-year U.S. Treasury Note[1] stayed below 2% over much of that period. While it occasionally dipped below 2% in prior years, this was the only extended period below 2%. Interest rates were below 1% for 288 business days in 2020 and 2021. Since March 2022, interest rates have trended upward, albeit unevenly. The 10-year rate was last below 2% on March 11, 2022, at 1.98%. Rates have exceeded 4.5% since September 2023 but have not exceeded 5%.

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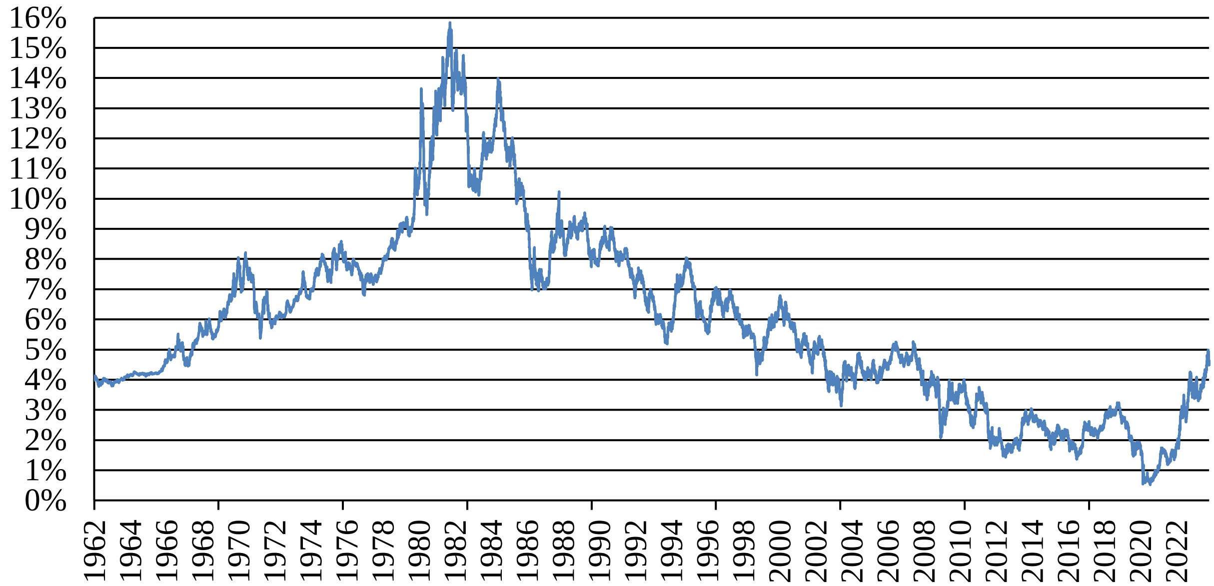
[1] DLS uses the 10-year rate as a basis for comparison since GO bond issuances average maturities are 10 years.

Exhibit 8.7
10-year U.S. Treasury Note Interest Rates
January 1962 to November 2023



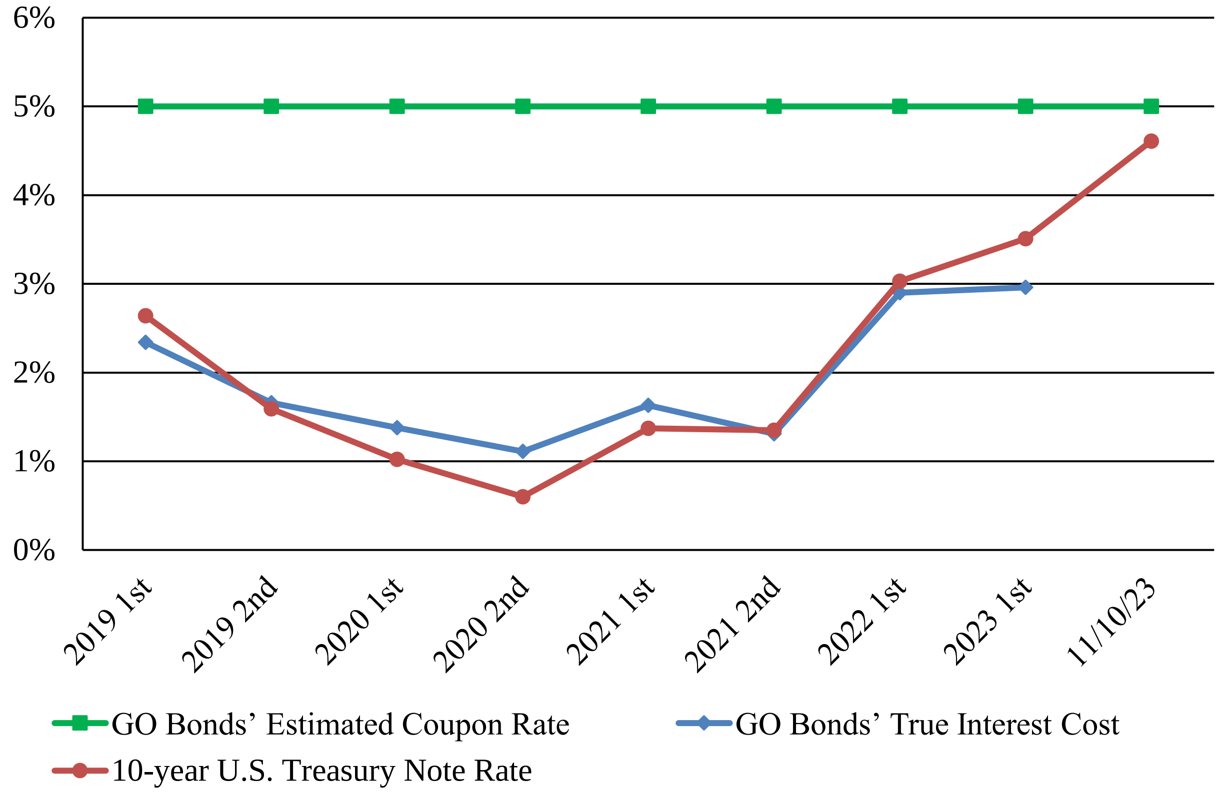
Source: Board of Governors of the Federal Reserve System

Interest Rates Are Still Below the Coupon Rates

To date, higher interest rates have not increased debt service costs. The State Treasurer's Office and DLS' interest rate estimates assume a 5.00% coupon rate[2] on bond sales. Until the true interest cost (TIC) is higher than 5.00%, higher interest rates will not increase debt service costs. When the TIC is less than the coupon rate, bonds sell at a premium. Higher interest rates have reduced premiums rather than increase debt service costs. **Exhibit 8.8** shows that the TIC, which is the market rate, of the most recent GO bond sale in March 2022 was 2.96%. The 10-year U.S. Treasury Note rate was 3.51% on the date of the sale. The U.S. Treasury Note rate has increased since the March bond sale. However, it has not yet exceeded 5.00%. If interest rates remain at current levels, debt service costs will not increase, but premiums will be quite small. However, additional increases in interest rates could affect debt service costs. **DLS recommends that interest rates should be closely monitored and that interest rate assumptions increase if an anticipated TIC is more than 5.00%.**

[2] The coupon rate is the interest rate that is paid to the bondholders on the par value of the bonds. Par value is the nominal value of the bond as indicated by the Official Statement. As interest rates change, bonds can be sold for more or less than par value. Since the State pays a fixed interest rate on a fixed par value, market changes do not have any effect on principal or debt service payments.

Exhibit 8.8
General Obligation Bond Sales' True Interest Costs and
10-year Treasury Note Rate on Day of Bond Sale
Issuances from Calendar 2019-2023



GO: general obligation

Note: The State Treasurer's Office canceled the second 2023 band sale noting that funds from previous sales are sufficient to support capital projects. To show market rates in late 2023, the exhibit shows the most recent 10-year U.S. Treasury Note rate available when this report was prepared.

Source: Public Resources Advisory Group; Board of Governors of the Federal Reserve System; Department of Legislative Services

Appendix 1

Estimated General Obligation Bond Issuances

Fiscal 2024 to Post-2033
($ in Millions)

		Estimated Issuances During Fiscal Year (a) ====>											
Fiscal Year	**Proposed Auth.**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**Post-2033**	**Total Issued**
2025	$1,250	$0	$388	$313	$250	$188	$111						$1,250
2026	1,300		0	403	325	260	195	$117					1,300
2027	1,355			0	420	339	271	203	$122				1,355
2028	1,410				0	437	353	282	212	$126			1,410
2029	1,465					0	454	366	293	220	$132		1,465
2030	1,525						0	473	381	305	229	$137	1,525
2031	1,585							0	491	396	317	381	1,585
2032	1,650								0	512	413	725	1,650
2033	1,715									0	532	1,183	1,715
Total New Authorization		**$0**	**$388**	**$716**	**$995**	**$1,224**	**$1,384**	**$1,441**	**$1,499**	**$1,559**	**$1,623**	**$2,426**	

Source: Department of Legislative Services

Appendix 2

Maryland General Obligation Bond Debt True Interest Cost Analysis

Statistically Significant Variables

Bond Sale Date	TIC	20-bond Index	MD/U.S. PI	Post-crisis	YTM	Call
03/13/91	6.31%	7.32%	2.261	No	9.84	Yes
07/10/91	6.37%	7.21%	2.240	No	9.85	Yes
10/09/91	5.80%	6.66%	2.230	No	9.80	Yes
05/13/92	5.80%	6.54%	2.220	No	9.80	Yes
01/13/93	5.38%	6.19%	2.221	No	9.73	Yes
05/19/93	5.10%	5.77%	2.212	No	9.73	Yes
10/06/93	4.45%	5.30%	2.206	No	9.73	Yes
02/16/94	4.48%	5.42%	2.208	No	9.74	Yes
05/18/94	5.36%	6.14%	2.199	No	9.74	Yes
10/05/94	5.69%	6.50%	2.191	No	9.72	Yes
03/08/95	5.51%	6.18%	2.184	No	9.78	Yes
10/11/95	4.95%	5.82%	2.163	No	9.65	Yes
02/14/96	4.51%	5.33%	2.159	No	9.65	Yes
06/05/96	5.30%	5.94%	2.144	No	9.69	Yes
10/09/96	4.97%	5.73%	2.144	No	9.70	Yes
02/26/97	4.90%	5.65%	2.136	No	9.68	Yes
07/30/97	4.64%	5.23%	2.135	No	9.68	Yes
02/18/98	4.43%	5.07%	2.119	No	9.68	Yes
07/08/98	4.57%	5.12%	2.128	No	9.68	Yes
02/24/99	4.26%	5.08%	2.134	No	9.60	Yes
07/14/99	4.83%	5.36%	2.146	No	9.60	Yes
07/19/00	5.05%	5.60%	2.157	No	9.72	Yes
02/21/01	4.37%	5.21%	2.178	No	9.71	No
07/11/01	4.41%	5.22%	2.201	No	9.68	No
03/06/02	4.23%	5.19%	2.233	No	9.61	No
07/31/02	3.86%	5.00%	2.241	No	9.66	No
02/19/03	3.69%	4.79%	2.235	No	9.60	No
07/16/03	3.71%	4.71%	2.250	No	9.67	Yes
07/21/04	3.89%	4.84%	2.254	No	9.70	Yes
03/02/05	3.81%	4.50%	2.259	No	9.70	Yes
07/20/05	3.79%	4.36%	2.268	No	9.69	Yes
03/01/06	3.87%	4.39%	2.242	No	9.68	Yes
07/26/06	4.18%	4.55%	2.238	No	9.64	Yes

Bond Sale Date	TIC	20-bond Index	MD/U.S. PI	Post-crisis	YTM	Call
02/28/07	3.86%	4.10%	2.228	No	9.64	Yes
08/01/07	4.15%	4.51%	2.218	No	9.65	Yes
02/27/08	4.14%	5.11%	2.208	No	9.64	Yes
07/16/08	3.86%	4.65%	2.213	Yes	9.60	Yes
03/04/09	3.39%	4.96%	2.287	Yes	9.01	Yes
03/02/09	3.63%	4.87%	2.287	Yes	10.04	Yes
08/05/09	2.93%	4.65%	2.303	Yes	8.96	Yes
08/03/09	3.20%	4.69%	2.303	Yes	9.01	Yes
10/21/09	2.93%	4.31%	2.242	Yes	7.91	Yes
07/28/10	1.64%	4.21%	2.259	Yes	5.34	No
07/28/10	1.91%	4.21%	2.259	Yes	6.20	Yes
03/07/11	2.69%	4.90%	2.286	Yes	6.86	No
03/09/11	3.49%	4.91%	2.286	Yes	10.51	Yes
07/25/11	1.99%	4.46%	2.299	Yes	5.65	No
07/27/11	3.08%	4.47%	2.299	Yes	10.05	Yes
03/02/12	2.18%	3.72%	2.306	Yes	8.33	Yes
03/07/12	2.42%	3.84%	2.306	Yes	9.71	Yes
07/27/12	2.52%	3.61%	2.277	Yes	9.10	Yes
08/01/12	2.17%	3.66%	2.277	Yes	9.71	Yes
03/06/13	2.35%	3.86%	2.288	Yes	9.61	Yes
07/24/13	3.15%	4.77%	2.284	Yes	10.20	Yes
03/05/14	2.84%	4.41%	2.265	Yes	10.14	Yes
07/18/14	1.27%	4.36%	2.240	Yes	4.69	No
07/23/14	2.65%	4.29%	2.240	Yes	10.16	Yes
03/05/15	2.65%	3.68%	2.232	Yes	9.63	Yes
07/16/15	2.83%	3.82%	2.238	Yes	10.33	Yes
06/08/16	2.17%	3.03%	2.207	Yes	9.62	Yes
03/08/17	2.84%	4.02%	2.205	Yes	10.59	Yes
08/16/17	2.29%	3.57%	2.200	Yes	9.59	Yes
03/07/18	2.83%	3.88%	2.129	Yes	10.29	Yes
08/01/18	2.33%	3.95%	2.124	Yes	6.72	No
08/01/18	3.12%	3.95%	2.124	Yes	13.05	Yes
03/26/19	1.78%	3.79%	2.138	Yes	6.69	No
03/26/16	2.71%	3.79%	2.138	Yes	13.02	Yes
08/14/19	1.13%	3.10%	2.128	Yes	7.35	No
08/14/19	1.98%	3.10%	2.128	Yes	13.00	Yes
03/04/20	0.89%	2.31%	2.107	Yes	7.41	No

Bond Sale Date	TIC	20-bond Index	MD/U.S. PI	Post-crisis	YTM	Call
03/04/20	1.85%	2.31%	2.107	Yes	13.01	Yes
07/22/20	0.55%	2.10%	2.090	Yes	6.75	No
07/22/20	1.74%	2.10%	2.090	Yes	13.09	Yes
02/24/21	0.63%	2.44%	2.009	Yes	7.48	No
02/24/21	1.73%	2.44%	2.009	Yes	13.07	Yes
08/11/21	0.76%	2.14%	2.009	Yes	7.58	No
08/11/21	1.78%	2.14%	2.009	Yes	13.02	Yes
06/08/22	2.32%	3.16%	1.885	Yes	7.19	No
06/08/22	2.83%	3.16%	1.885	Yes	10.97	Yes
06/08/22	3.29%	3.16%	1.885	Yes	13.97	Yes
03/15/23	2.35%	3.57%	1.820	Yes	7.71	Yes
03/15/23	3.22%	3.57%	1.820	Yes	13.04	Yes

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

Source for 20-bond Index: *The Bond Buyer*
Source for personal income: Moody's Analytics; IHS Markit
Remaining sources: Bond Sale Official Statements

Appendix 3
Agency Debt Outstanding
Fiscal 2013-2023
($ in Millions)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Change 2013-2023	Average Annual % Change 2013-2023
Agency Debt Subject to Ceiling and Allocation Caps													
Maryland Environmental Service	$25.2	$27.9	$26.4	$24.8	$23.1	$21.4	$27.8	$26.8	$24.7	$22.3	$19.9	-$5.3	-2.3%
Maryland Transportation Authority	3,303.2	3,179.3	3,176.4	3,062.0	2,928.4	2,149.9	2,097.5	2,393.5	2,479.5	2,424.9	2,566.2	-737.0	-2.5%
Maryland Water Quality Financing Administration[1]	47.2	36.7	33.2	29.2	24.7	20.3	17.8	15.2	12.4	9.5	6.5	-40.7	-17.9%
Revenue Cap Total	**$3,375.6**	**$3,243.9**	**$3,235.9**	**$3,116.0**	**$2,976.2**	**$2,191.6**	**$2,143.1**	**$2,435.5**	**$2,516.6**	**$2,456.6**	**$2,592.6**	**-$783.0**	**-2.6%**
% Change/Prior Year	**0.3%**	**-3.9%**	**-0.2%**	**-3.7%**	**-4.5%**	**-26.4%**	**-2.2%**	**13.6%**	**3.3%**	**-2.4%**	**5.5%**		
Agency Debt Not Subject to Ceiling and Allocation Caps													
Baltimore City Community College	$0.9	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	$0.0	-$0.9	-100.0%
Department of Housing and Community Development[2]	2,979.0	2,783.2	2,557.0	2,535.9	2,445.4	2,295.9	2,601.2	3,038.8	2,922.9	3,193.1	3,883.5	904.5	2.7%
Local Government Infrastructure (CDA)	129.6	137.1	164.1	156.1	167.8	184.0	191.9	195.9	181.5	165.9	175.7	46.1	3.1%
Maryland Industrial Development Financing Authority	347.7	335.1	312.6	288.3	286.4	265.8	237.0	223.6	213.0	185.8	187.9	-159.8	-6.0%
MDOT – County Revenue Bonds	101.7	94.9	87.9	120.2	108.8	97.0	128.0	113.4	100.6	87.2	76.0	-25.7	-2.9%
MDOT – Nontax-supported Issuances	47.7	44.7	41.5	38.2	33.4	29.8	26.1	22.1	17.9	13.5	8.8	-38.9	-15.6%
Morgan State University	47.8	44.3	43.5	58.3	51.8	46.5	45.0	40.9	9.0	27.9	44.4	-3.4	-0.7%
St. Mary's College of Maryland	36.1	34.3	34.6	32.5	32.0	29.6	25.8	24.3	42.1	39.9	37.5	1.4	0.4%
University System of Maryland	1,195.0	1,269.0	1,128.5	1,178.7	1,202.0	1,186.8	1,196.7	1,202.0	1,207.9	1,297.8	1,285.9	90.9	0.7%
Noncap Total	**$4,885.5**	**$4,742.7**	**$4,369.7**	**$4,408.2**	**$4,327.5**	**$4,135.5**	**$4,451.6**	**$4,861.0**	**$4,694.9**	**$5,011.0**	**$5,699.8**	**$814.3**	**1.6%**
% Change/Prior Year	**-4.6%**	**-2.9%**	**-7.9%**	**0.9%**	**-1.8%**	**-4.4%**	**7.6%**	**9.2%**	**-3.4%**	**6.7%**	**13.7%**		

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Change 2013-2023	Average Annual % Change 2013-2023
Tax-supported Debt													
Transportation Debt	$1,618.0	$1,813.0	$2,020.3	$2,146.1	$2,578.4	$2,911.7	$3,342.9	$3,627.0	$3,672.3	$3,643.5	$3,297.0	$1,679.0	7.4%
Grant Anticipation Revenue Vehicles	479.0	415.8	349.4	279.8	206.6	129.7	48.9	0.0	0.0	0.0	0.0	-479.0	-100.0%
Capital Leases	286.2	260.3	242.2	236.0	216.7	223.6	199.2	198.1	175.4	160.0	147.1	-139.1	-6.4%
Maryland Stadium Authority	193.0	175.4	151.0	130.5	110.4	88.6	122.8	120.1	108.5	153.8	142.0	-51.0	-3.0%
Bay Restoration Bonds	36.0	133.1	130.0	301.6	292.9	273.6	253.4	232.1	209.7	186.2	161.6	125.6	16.2%
General Obligation Debt	8,005.8	8,362.3	8,677.2	9,465.3	9,334.2	9,479.4	9,606.9	9,772.5	9,912.9	10,588.6	10,001.2	1,995.4	2.3%
Tax-supported Debt Total	**$10,618.0**	**$11,160.0**	**$11,570.1**	**$12,559.2**	**$12,739.1**	**$13,106.6**	**$13,574.2**	**$13,949.7**	**$14,078.8**	**$14,732.2**	**$13,748.9**	**$3,130.9**	**2.6%**
% Change/Prior Year	**4.0%**	**5.1%**	**3.7%**	**8.5%**	**1.4%**	**2.9%**	**3.6%**	**2.8%**	**0.9%**	**4.6%**	**-6.7%**		
Authorities and Corporations Not Subject to Ceiling and Allocation Caps													
Health/Higher Education Facilities Authority	$8,835.3	$8,837.2	$8,779.5	$8,664.0	$9,042.8	$9,063.4	$8,903.8	$8,339.6	$8,475.2	$8,600.2	$8,512.1	-$323.2	-0.4%
Maryland Economic Development Corporation	2,391.0	2,253.8	2,192.7	2,426.6	2,311.0	2,301.9	2,373.0	2,453.7	2,758.2	3,029.4	3,001.5	610.5	2.3%
Authorities and Corporations Total	**$11,226.3**	**$11,091.0**	**$10,972.2**	**$11,090.6**	**$11,353.8**	**$11,365.3**	**$11,276.8**	**$10,793.3**	**$11,233.5**	**$11,629.6**	**$11,513.6**	**$287.3**	**0.3%**
% Change/Prior Year	**-1.8%**	**-1.2%**	**-1.1%**	**1.1%**	**2.4%**	**0.1%**	**-0.8%**	**-4.3%**	**4.1%**	**3.5%**	**-1.0%**		

CDA: Community Development Administration
MDOT: Maryland Department of Transportation

[1] Excludes bay restoration bonds.
[2] Excludes local government infrastructure.