
Spending Affordability Briefing

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

November 14, 2017

Capital Program

Pay-as-you-go Outlook

- General Fund Support for the Capital Program Remains Constrained:** The fiscal situation continues to limit general fund support of the capital program. The fiscal 2019 baseline assumes the use of \$78.4 million in general funds as compared to the \$9.5 million appropriated in the fiscal 2018 budget. Two components comprise the majority of the difference:

 - Project Creating Opportunities for Renewal and Enterprise (C.O.R.E.):** Consistent with the 2017 *Capital Improvement Program* (CIP), the fiscal 2019 baseline assumes \$28.5 million in general fund support for project C.O.R.E. in Baltimore City. This initiative was general obligation (GO) bond funded at \$25.6 million in fiscal 2018 reflecting the constrained use of general fund pay-as-you-go (PAYGO) and would likely be a candidate for GO bond funding in fiscal 2019, the last year of the three-year initiative.
 - Transfer Tax Repayment:** The fiscal 2019 baseline assumes that transfer tax revenues used to fund Program Open Space (POS) will be augmented by the repayment of funds in accordance with Chapter 10 of 2016 and in accordance with the repayment plan established by the Administration in the 2017 CIP. Accordingly, the baseline includes \$37.9 million in general funds that are expended as special funds.
- Special Fund Support for the Capital Program Projected to Increase in Fiscal 2019:** The 2019 baseline programs a \$128.0 million increase in the use of special fund PAYGO in support of the capital program. This is primarily attributable to changes in the transfer tax revenues available for capital purposes, including the end of transfer tax revenue diversions to the General Fund and increased revenue estimates for fiscal 2019 above fiscal 2018 budgeted estimates.

Capital PAYGO Program (\$ in Millions)

<u>Fund Type</u>	<u>FY 2017 Final</u>	<u>FY 2018 Leg. Approp.</u>	<u>FY 2019 CIP</u>	<u>FY 2019 Baseline</u>	<u>Difference Baseline to Leg. Approp.</u>	<u>Difference Baseline to CIP</u>
General	\$72.1	\$9.5	\$50.5	\$78.4	\$68.9	\$27.9
Special	355.3	376.3	502.7	504.3	128.0	1.6
Federal	75.1	106.0	69.9	77.7	-28.3	7.8
Total	\$502.5	\$491.8	\$623.1	\$660.4	\$168.6	\$37.3

CIP: *Capital Improvement Program*

PAYGO: pay-as-you-go

Note: Fiscal 2017 final general fund figures include \$6.792 million and \$3.003 million appropriated for the Maryland Department of the Environment Water Quality and Drinking Water revolving loan programs that were reverted to the General Fund at the close out of the fiscal 2017 budget.

Capital Program (cont.)

- Transfer Tax Replacement Plan:** Chapter 10 of 2016 requires the repayment of \$237.2 million in past redirected transfer tax funds by fiscal 2029. The plan provides for the use of general funds as a source of repayment and includes several components that potentially impact the fiscal 2019 budget. Based on Chapter 10 and the Administration's plan, the fiscal 2019 baseline includes \$37.9 million in general funds of which \$31.9 million is allocated in accordance with the POS statutory formula, and \$6.0 million is provided to Capital Development Projects. Of note, \$16.9 million of the \$31.9 million is not required to be repaid in fiscal 2019 – a cumulative repayment of \$50.7 million could be delayed until fiscal 2021 – but is reflected in the fiscal 2019 baseline in accordance with the Administration's current repayment plan.

Transfer Tax Replacement Plan Fiscal 2018-2029 (\$ in Millions)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023-2029</u>	<u>Total</u>
Payback for Fiscal 2006 Transfer (to be distributed through Transfer Tax formula)	\$0.0	\$15.0	\$15.0	\$15.0	\$0.0	\$0.0	\$45.0
Critical Maintenance/Natural Resources Development Fund (Payback for Fiscal 2006 Transfer)	0.0	6.0	6.0	6.0	6.0	16.0	40.0
Payback for Fiscal 2016 to 2018 Transfer (to be distributed through Transfer Tax formula) *	0.0	16.9	16.9	16.9	12.7	88.8	152.2
Total	\$0.0	\$37.9	\$37.9	\$37.9	\$18.7	\$104.8	\$237.2

*Statute requires repayment of \$50.7 million by close of fiscal 2021. The Governor's plan is to repay in \$16.9 million installments over fiscal 2019 through 2021.

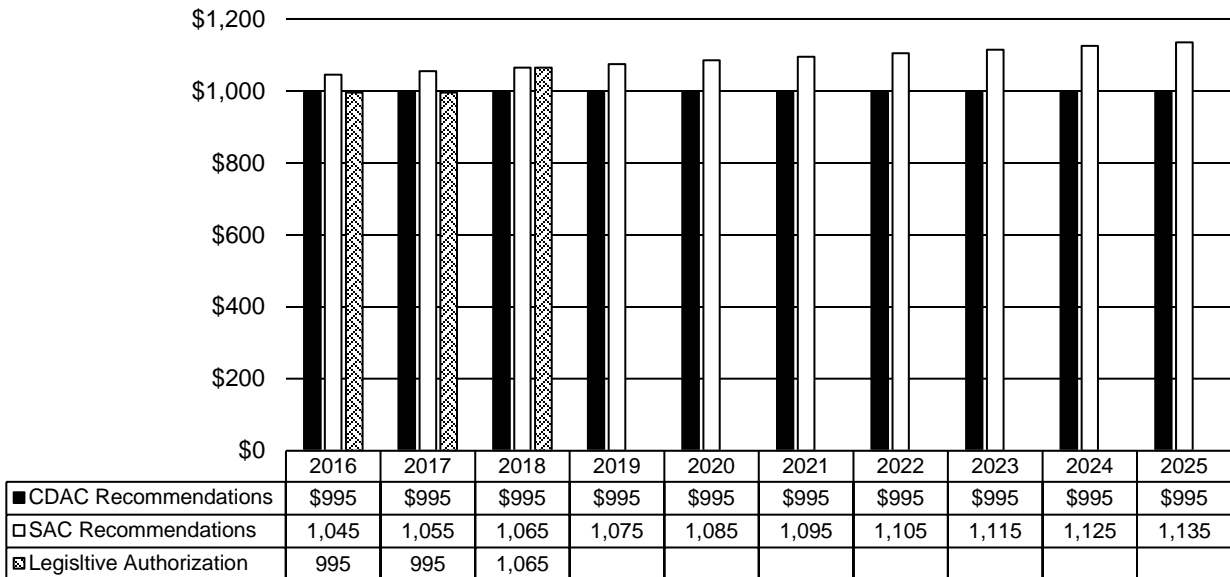
Note: Chapter 10 of 2016 requires the repayment of one-third by fiscal 2021, two-thirds by fiscal 2025, and of the full amount by fiscal 2029. Repayment figures do not include \$5.0 million required to be allocated to the Maryland Agricultural and Resource-Based Industry Development Corporation Next Generation Farmland Acquisition Program considered an operating budget program.

Source: Department of Budget and Management

Capital Program (cont.)

- Capital Debt Affordability Committee (CDAC) Recommends Annual \$995 Million GO Bond Authorization Level:** The October 2017 CDAC recommendation would keep new GO bond authorizations at \$995 million annually through the planning period and continues the policy of scaled back annual authorizations. The 2016 SAC recommendation, recognizing the need to address the increasing reliance on general funds for debt service, established a limit on new GO bond authorizations that increased by 1% on a year-over-year basis. This moderate growth rate limits increases in GO bond authorizations to projected State property tax revenue increases. Since general funds and other State revenues are projected to increase at an annual rate in excess of 1%, this reduces the ratio of debt service to revenues in the out-years.

2015-2017 CDAC and 2015-2016 SAC Recommended GO Bond Authorization Levels Fiscal 2016-2025 (\$ in Millions)



CDAC: Capital Debt Affordability Committee
 GO: general obligation
 SAC: Spending Affordability Committee

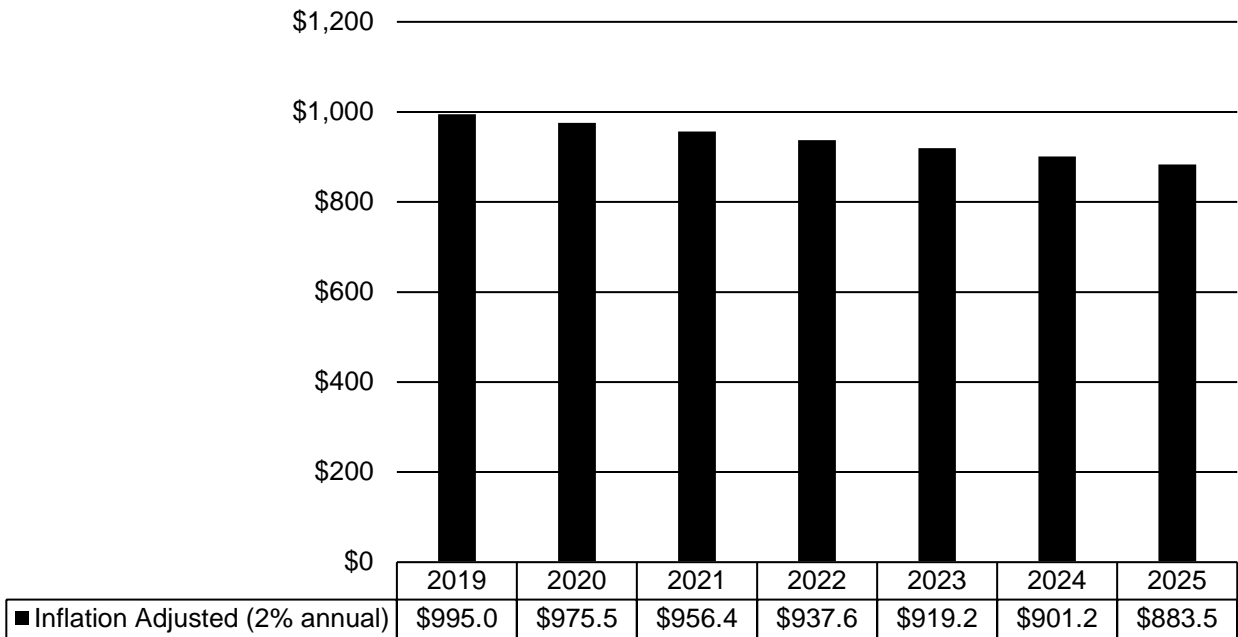
Note: The fiscal 2016 capital program was supplemented with the use of \$48.0 million in bond premiums increasing the amount of bond proceeds made available to the capital program to \$1,043.0 million. The fiscal 2017 capital program was supplemented with \$121.0 million in general funds of which \$42.9 million fenced off in the State Reserve Fund was never appropriated.

Source: 2015, 2016, and 2017 CDAC report, 2016 SAC report

Capital Program (cont.)

- Impact of Construction Inflation on Bond Authorization Levels:** The CDAC’s 2017 recommendation does not include an annual inflation adjustment. Without annual adjustments to account for the effects of inflation in the construction market, CDAC’s proposed level of annual out-year authorization is diminished. The CDAC’s recommendation for the 2018 session marks the third year in a row that an annual inflationary increase has not been factored. More recently, prior to the current flat funding recommendation, CDAC policy included a 3% annual growth in new GO bond authorizations; 2% construction inflation; and 1% population growth.
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CDAC Proposed New GO Bond Authorization Levels – Inflation Adjusted Fiscal 2019-2025 (\$ in Millions)

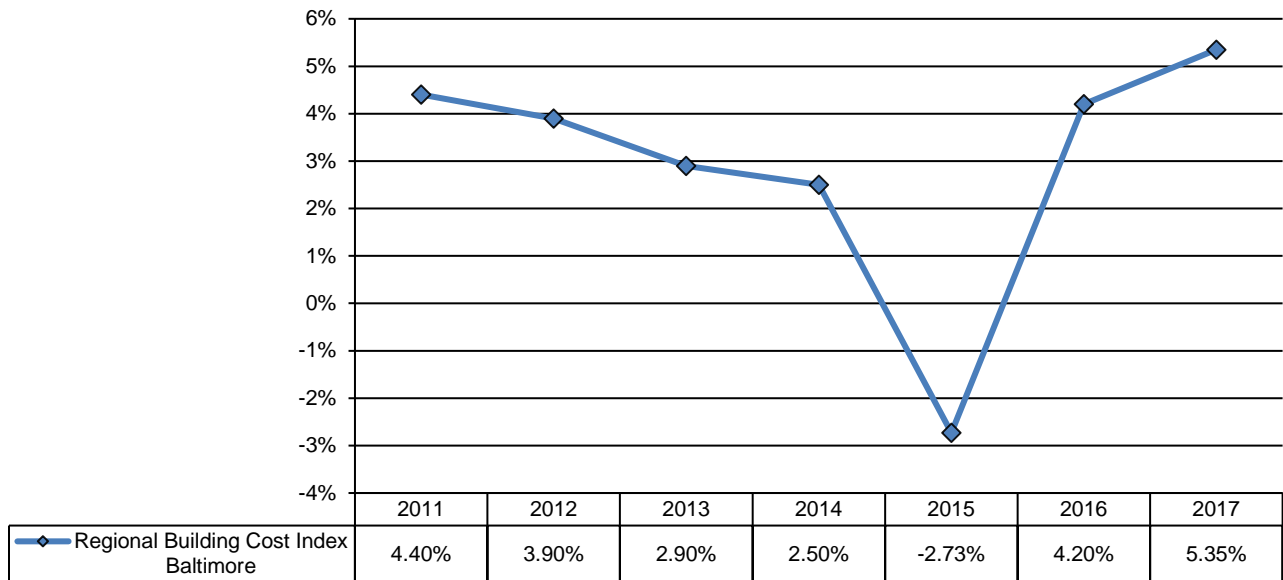


CDAC: Capital Debt Affordability Committee
GO: general obligation

Source: 2017 CDAC report

Capital Program (cont.)

Annual Construction Cost Inflation Calendar 2011-2017



Source: Engineering News-Record Building and Construction Cost Indexes – City Cost Index Baltimore City

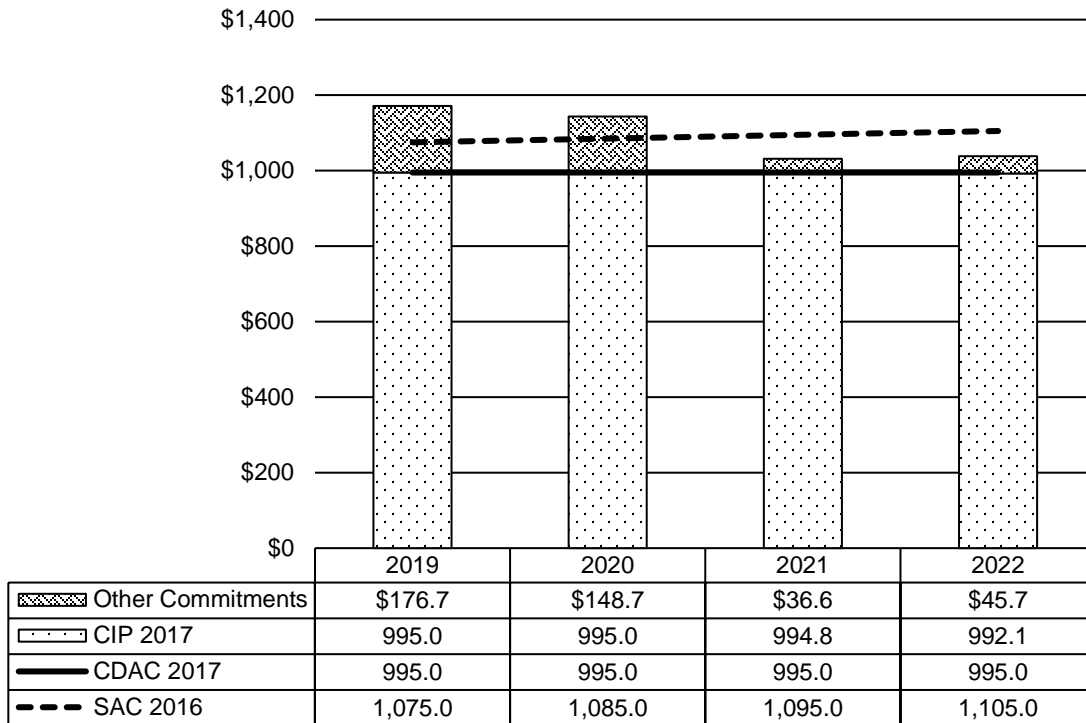
- Year-over-year Construction Inflation on the Rise:** Following a sharp decline in calendar 2015, beginning in early calendar 2016 and through the first nine months of calendar 2017, year-over-year construction inflation is on the rise. A tightening of the labor market and wage increases has contributed to a steady increase relative to calendar 2015 measures. Overall, from calendar 2011 through the first nine months of calendar 2017, regional construction inflation has increased at an average annual rate of 3.2%. Recent spikes in construction inflation could result in an upward revision of standard annual inflation factors used in estimating out-year project costs as programmed in the annual CIP further stressing a flat \$995 million GO bond authorization level.

CDAC Recommended GO Bond Authorization Levels Are Insufficient to Meet Commitments

Capital commitments made in the 2017 session exceed the levels of GO bonds currently programmed in the 2017 CIP and recommended by CDAC.

Capital Program (cont.)

GO Bond Commitments Made in 2017 Exceed Programmed Authorization Levels Fiscal 2019-2022 (\$ in Millions)



CDAC: Capital Debt Affordability Committee

CIP: *Capital Improvement Program*

GO: general obligation

SAC: Spending Affordability Committee

Source: 2017 CIP; Department of Legislative Services

- Commitments Exceed Programmed GO Bond Authorization Levels:** These additional commitments include mandates established through legislation, capital programs, and projects accelerated by the Administration and the General Assembly; pre-authorization of projects not already included in the CIP; expressions of legislative intent through budget language; and potential GO bond replacement funds for general funds programmed in the 2017 CIP including the transfer tax repayment plan established in Chapter 10 of 2016. Commitments for fiscal 2019 exceed the CDAC recommendation by \$176.7 million.

Capital Program (cont.)

Commitments Made in 2017 Session Exceed Programmed GO Bond Authorization Levels Fiscal 2019-2022 (\$ in Millions)

	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Projects Accelerated/Enhanced/Deferred	\$35.839	\$29.902	-\$30.322	-\$2.000
Projects Preauthorized	16.460	26.915	0.000	0.000
Mandates	14.000	14.000	14.000	14.000
Expressions of Intent	29.000	25.000		
Legislative Local Initiatives	15.000	15.000	15.000	15.000
Subtotal	\$110.299	\$110.817	-\$1.322	\$27.000
Potential Bond Replacement for GF PAYGO	\$66.407	\$37.907	\$37.907	\$18.680
Total	\$176.706	\$148.724	\$36.585	\$45.680

GF: general fund
GO: general obligation
PAYGO: pay-as-you-go

Note: Estimated out-year funding impacts for accelerated projects assumes that items will be funded in useable phases such that no gaps exist in estimated project delivery timelines. Estimates for deferred projects reflect one-year deferral and funding in useable phases such that no gaps exist in the timing of funding and project delivery.

Source: 2017 *Capital Improvement Program*; Department of Legislative Services

State Debt Policy

Capital Debt Affordability Committee Recommends Decreasing Authorizations

- The Capital Debt Affordability Committee (CDAC) reviews State debt policy each year and issues a recommendation for the following legislative session by October 1. CDAC voting members are the State Treasurer, the Comptroller, the Secretary of Budget and Management, the Secretary of Transportation, and an individual appointed by the Governor. The chairs of the Capital Budget subcommittees of the Senate Budget and Taxation Committee and the House Appropriations Committee are also on CDAC.
- CDAC recommends authorizing \$995 million in general obligation (GO) bonds for the fiscal 2019 capital program, compared to \$1,065 million authorized in fiscal 2018. For planning purposes, the committee also recommends maintaining annual expenditures at \$995 million through fiscal 2027.

State Debt Is within Affordability Ratios

- CDAC's policy is that State tax-supported debt outstanding should not exceed 4.0% of Maryland personal income, and State tax-supported debt service payments should not exceed 8.0% of State revenues.
- The level of GO bond authorizations proposed by CDAC are affordable.
- The Department of Legislative Services (DLS) notes that the level of debt proposed by the Spending Affordability Committee, \$1,075 million authorized in fiscal 2019, is affordable.

State Affordability Ratios Fiscal 2018-2023

<u>Fiscal Year</u>	<u>Debt Outstanding Not to Exceed 4% of Personal Income</u>	<u>Debt Service Not to Exceed 8% of Revenues</u>
2018	3.49%	7.74%
2019	3.41%	7.79%
2020	3.32%	7.60%
2021	3.19%	7.56%
2022	3.06%	7.64%
2023	2.95%	7.59%

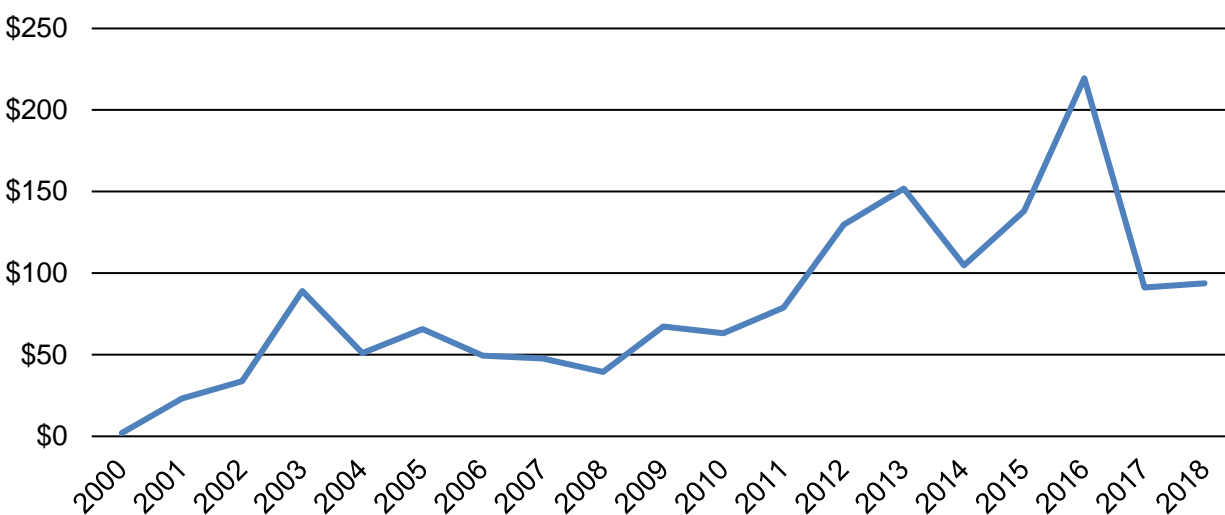
Source: Department of Legislative Services, October 2017

State Debt Policy (cont.)

Paying for Debt Service

- From fiscal 2004 to 2013, general funds were appropriated for debt service costs only once.
 - General appropriations were avoided because:
 - GO bonds were selling at substantial premium, attributable to low-interest rates;
 - property values increased in excess of 10.0% in some fiscal years, resulting in additional State property tax revenue, even with the homestead tax credit limiting annual increases; and
 - the State property tax rate was increased from \$0.084 per \$100 of assessable base to \$0.132 in fiscal 2004. This was reduced to \$0.112 in fiscal 2007 and has remained at that level.
 - After the property bubble burst, State property tax revenues declined from fiscal 2011 to 2014. From fiscal 2014 to 2018, State property tax revenues increased at an annual rate of 2.8%. The Annuity Bond Fund no longer generates sufficient revenues to support all GO bond debt service costs.
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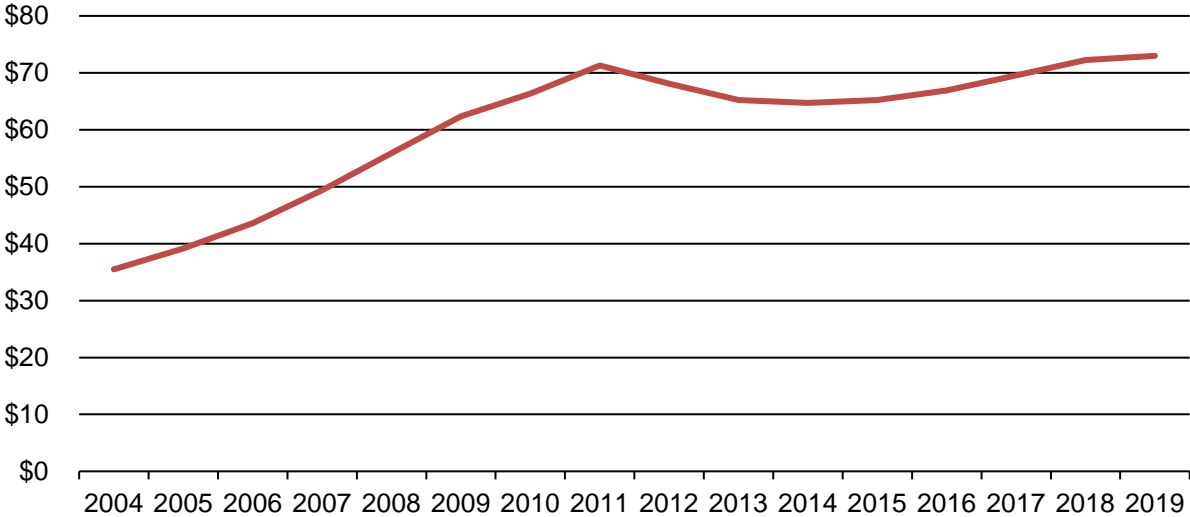
Bond Sale Premiums Realized Fiscal 2000-2018 (\$ in Millions)



Source: Department of Legislative Services

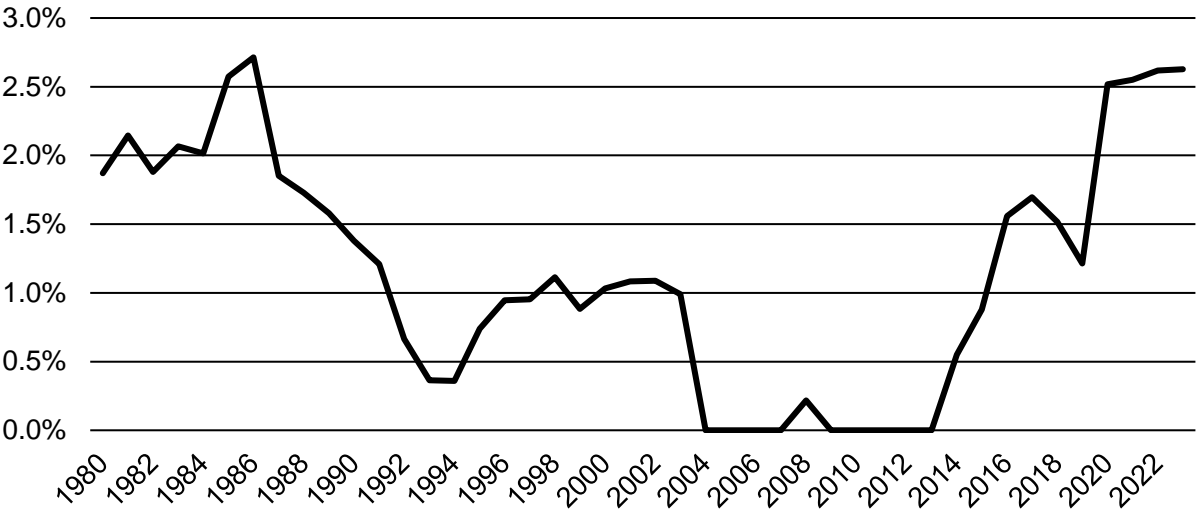
State Debt Policy (cont.)

Revenues Generated by One Cent of State Property Taxes
Fiscal 2004-2019
(\$ in Millions)



Source: Department of Legislative Services

General Fund Debt Service Appropriations
As a Percentage of General Fund Revenues
Fiscal 1980-2022



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

State Debt Policy (cont.)

Annuity Bond Fund Forecast Fiscal 2018-2023 (\$ in Millions)

	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Special Fund Revenues						
Prior Year Balance	\$191	\$192	\$1	\$2	\$1	\$1
State Property Tax Receipts	809	817	834	851	868	885
Bond Sale Premiums ¹	147	53	20	0	0	0
Other Revenues	2	2	2	2	2	2
Subtotal Special Fund Revenues	\$1,149	\$1,065	\$858	\$855	\$872	\$889
General Funds	\$260	\$221	\$463	\$486	\$517	\$537
Transfer Tax Special Funds	7	7	7	7	7	7
Federal Funds	12	11	11	10	9	8
Total Revenues	\$1,427	\$1,304	\$1,338	\$1,358	\$1,405	\$1,441
Debt Service Expenditures	\$1,235	\$1,303	\$1,337	\$1,356	\$1,404	\$1,439
ABF End-of-year Fund Balance	\$192	\$1	\$2	\$1	\$1	\$2

ABF: Annuity Bond Fund

¹The August 2017 bond sale generated a \$93.7 million premium. Estimated bond sale premiums total \$52.7 million in March 2018, \$31.1 million in summer 2018, \$21.8 million in March 2019, \$11.4 million in summer 2019, and \$8.9 million in March 2020. This assumes coupon rates between 4.25% and 4.50% and the True Interest Cost increasing from 2.89% to 4.50%.

Source: Department of Legislative Services, October 2017

- From fiscal 2018 to 2023, total debt service costs increase 3.1% annually. State property tax revenues increase 1.8% annually.
- Fiscal 2019 begins with a \$192 million fund balance, which reduces the required general fund appropriation.
- General fund appropriations increase 5.1% annually after fiscal 2020.
- If interest rates remain low throughout the forecast period, DLS projects that the bond sales would generate upward of \$70 million in premiums in fiscal 2019 and 2020, which offsets the general fund appropriation correspondingly.

State Debt Policy (cont.)

Provisions in the Federal Tax Plan That Affect State Debt

Termination of Private Activity Bonds

- Private Activity Bonds (PAB) provide financing to nongovernment entities at a lower tax-exempt rate. These bonds support housing, student loans, and infrastructure projects.
- In Maryland, the annual allocation was \$601 million in fiscal 2016. Though the allocation is not exhausted each year, PABs provided \$650 million in financing for single-family homes over fiscal 2013 and 2014, as well as \$648 million for multifamily housing for the period of fiscal 2013 to 2016.
- Additionally, the federal tax bill proposed to eliminate a 4% low-income housing tax credit, which is used by developers to raise capital. The Department of Housing and Community Development (DHCD) estimates that this provided \$174 million in capital for low-income housing in fiscal 2016.
- DHCD advises that these changes would substantially shrink available funding for low-income housing.
- In addition to the State's PAB allocation, the U.S. Department of Transportation provisionally approved that the Maryland Economic Development Corporation (MEDCO) issue up to \$1.3 billion in PABs for the Maryland Department of Transportation's Purple Line light rail project. MEDCO has issued \$313 million and does not plan on issuing any additional PABs. Since no additional bonds will be issued, losing the tax-exemption does not have a direct impact on the State for this particular project.

Repeal of Tax Credit Bonds

- Since fiscal 2001, the State has issued \$204 million in federally subsidized bonds, such as Qualified Zone Academy Bonds, of which \$166 million are tax credit bonds.
- DLS estimates that tax credits reduced State debt service costs by \$56 million.

State Debt Policy (cont.)

Repeal of Advanced Refunding Bonds

- In general, State bonds include a 10-year call. Under current federal law, each issuance allows one advanced refunding. The advanced refunding provides the State with the opportunity to refinance bonds at a lower rate before the bonds are callable, if interest rates decline.
- Since December 2009, refunding has reduced GO bond debt service costs by \$316 million. Without advanced refunding, some savings would have been reduced and future refunding might have been less if interest rates increased.

Effect of Reducing Taxes on the State and Municipal Bond Market

- Another concern about the bill is that reducing taxes is likely to reduce the demand for municipal bonds:
 - Financial institutions, like banks and insurance companies, are estimated to own 25.0% of tax-exempt bonds. These institutions would require a higher interest rate to purchase tax-exempt bonds.
 - Some reports note that owners of pass-through entities, such as partnerships and Subchapter S Corporations, may also be less likely to purchase tax-exempt bonds, thereby dampening the demand and driving up prices.
- A research and consulting firm estimates that reducing the corporate income tax rate to 20.0% is expected to increase the tax-exempt interest rates by 0.50% to 0.75% (50 to 75 basis points) without considering the effect of other provisions in the bill.
 - At the most recent bond sale in August 2017, the State issued \$550 million.
 - Since GO bonds sold at a premium, higher rates would not increase debt service costs if interest rates increase by 0.50% (50 basis points). Instead, the higher rates would reduce the premium by \$25 million. The State's premium would have been reduced from \$94 million to \$69 million.
 - When bonds no longer sell at a premium, the effect of increasing interest rates by 0.50% (50 basis points) is to increase debt service costs. This adds \$28 million to debt service costs over the 15-year life of a \$550 million issuance.

Transportation Trust Fund Forecast

Transportation Trust Fund Forecast Comparison Fiscal 2017-2022 v. Fiscal 2018-2023 Six-year Totals (\$ in Millions)

	<u>MDOT Final 2017-2022</u>	<u>MDOT Draft 2018-2023</u>	<u>Final Draft Variance</u>	<u>DLS 2018-2023</u>	<u>MDOT/DLS Variance</u>
Revenues					
Taxes and Fees					
Motor Vehicle Fuel Taxes	\$6,844	\$7,144	\$300	\$6,913	-\$231
Titling Taxes	5,475	5,577	102	5,651	74
Sales Tax – Rental Vehicles	195	199	4	199	0
Corporate Income Tax	979	1,023	44	1,023	0
Registration Fees	2,378	2,403	25	2,403	0
Miscellaneous Motor Vehicle Fees	1,856	1,881	25	1,881	0
Subtotal – Taxes and Fees	\$17,727	\$18,227	\$500	\$18,069	-\$157
Other Revenues					
Operating Revenues	\$2,856	\$2,946	\$90	\$2,946	\$0
Federal Operating Assistance	582	582	0	582	0
Bond Proceeds/Premiums	3,378	2,990	-388	1,883	-1,107
Other	549	525	-24	525	0
Change in Fund Balance	-24	-6	18	13	19
Subtotal – Other Revenues	\$7,341	\$7,037	-\$304	\$5,949	-\$1,088
Total Revenues	\$25,068	\$25,264	\$196	\$24,018	-\$1,245
Expenditures					
Debt Service	\$2,226	\$2,445	\$219	\$2,251	-\$194
Operating Budget	12,598	12,945	347	13,607	662
P3 Availability Payments	0	150	150	150	0
Deductions to Other Agencies	421	431	10	431	0
Highway User Revenues	1,074	1,094	20	1,096	2
State Capital Program*	8,749	8,199	-550	6,484	-1,715
Total Expenditures	\$25,068	\$25,264	\$196	\$24,018	-\$1,245

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

P3: Public-private partnership

*For comparison purposes, the fiscal 2017 through 2022 special fund amount includes \$694 million that was reserved for Highway User Revenues restoration in the Transportation Trust Fund forecast but not included in the *Consolidated Transportation Program*.

Transportation Trust Fund Forecast (cont.)

Observations

- The six-year State capital program in the Maryland Department of Transportation (MDOT) draft fiscal 2018-2023 Transportation Trust Fund (TTF) forecast is \$196 million higher than its prior year six-year program. Tax and fee revenue projections add \$500 million compared with MDOT's previous forecast, but this is partially offset by lower projected debt issuances. Higher projected debt service, operating expenditures, and the start of Availability Payments to the Purple Line concessionaire combine to reduce the State-funded capital program by \$550 million compared to the previous forecast.
- The Department of Legislative Services (DLS) fiscal 2018-2023 TTF forecast indicates that the State capital program in the MDOT draft forecast is still oversubscribed by \$1.7 billion caused by the following:
 - additional spending for departmental operations accounts for \$662 million of the reduction. The DLS forecast inflates out-year operational spending by the five-year average annual rate of increase through fiscal 2017. The budget committees instructed MDOT to use the five-year rate of change in its out-year operating projections but it chose not to do so;
 - lower motor fuel tax revenues partially offset by higher estimated titling tax revenues account for a further \$157 million of the reduction to the capital program; and
 - bond issuances in the DLS forecast are \$1.1 billion less than in the MDOT forecast. The reduction is necessary to maintain the net income to debt service coverage ratio of 2.5 that MDOT has adopted as its administrative policy (bond covenants require a minimum of 2.0 coverage.) Absent the reduction in bond issuances, the net income debt coverage ratio would fall below the 2.5 minimum in fiscal 2021 through 2023.

Draft Consolidated Transportation Program

- The draft fiscal 2018 to 2023 *Consolidated Transportation Program* (CTP) reflects \$811 million less in capital spending over the six-year period compared to the previous six-year plan. Federal funds decrease by \$214 million due primarily to cash flow changes in the Purple Line project and projects completing the development and evaluation process. The \$559 million decrease in special funds was necessitated due to the higher spending for debt service, departmental operations, and planned payments to the Purple Line concessionaire discussed previously.
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Comparison of Six-year Capital Spending by Fund Source Fiscal 2017-2023 (\$ in Millions)

	<u>2017-2022 CTP</u>	<u>Draft 2018-2023 CTP</u>	<u>Change</u>	<u>% Change</u>
Special Funds*	\$8,773.2	\$8,214.7	-\$558.5	-6.4%
Federal Funds	5,674.0	5,460.0	-214.0	-3.8%
Other Funds**	1,044.6	1,006.8	-38.5	-3.7%
Total Funds	\$15,491.8	\$14,680.8	-\$811.0	-5.2%

CTP: *Consolidated Transportation Program*

*For comparison purposes, the fiscal 2017-2022 special fund amount includes \$694 million that was reserved for Highway User Revenues restoration in the Transportation Trust Fund (TTF) forecast but not included in the CTP. This funding is not reserved in the draft forecast and is thus included in the draft CTP.

**Includes funds from customer and passenger facility charges and certain types of federal aid that do not pass through the TTF.

Note: Totals may not sum due to rounding.

Source: Maryland Department of Transportation, 2017-2022 final CTP, 2018-2023 draft CTP

Draft Consolidated Transportation Program (cont.)

Comparison of Six-year Capital Spending by Mode Fiscal 2017-2023 (\$ in Millions)

	<u>2017-2022 CTP</u>	<u>Draft 2018-2023 CTP</u>	<u>Change</u>	<u>% Change</u>
Secretary's Office	\$320.0	\$217.9	-\$102.1	-31.9%
WMATA	1,583.8	1,631.9	48.1	3.0%
State Highways*	8,494.0	8,181.8	-312.2	-3.7%
Port	876.4	784.3	-92.1	-10.5%
Motor Vehicle	121.5	117.8	-3.7	-3.0%
Mass Transit	3,658.0	3,363.7	-294.3	-8.0%
Airport	437.7	383.3	-54.4	-12.4%
Total	\$15,491.4	\$14,680.7	-\$810.7	-5.2%

CTP: *Consolidated Transportation Program*

WMATA: Washington Metropolitan Area Transit Authority

*For comparison purposes, the fiscal 2017 through 2022 State Highways amount includes \$694 million that were reserved for Highway User Revenues restoration in the Transportation Trust Fund forecast but not included in the CTP. This funding is not reserved in the draft forecast and is thus included in the draft CTP.

Source: Maryland Department of Transportation, 2017-2022 final CTP, 2018-2023 draft CTP

- The largest decrease, on a percentage basis, occurs in the Secretary's Office, which sees a 31.9% decrease in its six-year program due to the completion of the development and evaluation phase of two mostly federally funded projects related to Amtrak and to the removal of capital grants for local governments in the draft CTP. Over half the reductions to the port represent reductions to projects to fund other needs. The reduction in airport funding is due primarily to projects being completed or nearing completion.
- The largest dollar decreases occur in highways (-\$312 million) and mass transit (-\$294 million) funding. Lower construction cost estimates and cash flow changes in the Total Maximum Daily Load program account for just over \$36 million of the decrease in highway project funding and reduced need in the sound barrier program accounts for an additional \$10 million of the reduction. The reduction in mass transit spending relates to cash flow changes for the Purple Line and the removal of a locally funded project from the draft CTP.

Personnel

Regular Full-time Equivalent Positions Changes Fiscal 2016 Actual to Fiscal 2019 Baseline

<u>Department/Service Area</u>	<u>2016 Actual</u>	<u>2017 Working</u>	<u>2018 Working*</u>	<u>2019 Baseline</u>	<u>2018-2019 Change</u>
Largest Five State Agencies					
Public Safety and Correctional Services	11,025	10,954	10,554	10,554	0
Human Services	6,360	6,224	6,224	6,233	9
Health	6,353	6,181	6,187	6,192	5
Police and Fire Marshal	2,438	2,436	2,436	2,436	0
Juvenile Services	2,041	1,998	1,978	1,978	0
Subtotal	28,217	27,793	27,379	27,393	14
Transportation	9,126	9,108	9,058	9,058	0
Other Executive					
Legal (Excluding Judiciary)	1,501	1,475	1,474	1,485	11
Executive and Administrative Control	1,626	1,564	1,559	1,569	10
Financial and Revenue Administration	2,119	2,102	2,099	2,100	1
Budget and Management and DoIT	480	584	582	582	0
Retirement	213	210	210	210	0
General Services	578	581	581	582	1
Natural Resources	1,321	1,315	1,333	1,332	-1
Agriculture	380	356	355	355	0
Labor, Licensing, and Regulation	1,603	1,513	1,491	1,495	5
MSDE and Other Education	1,940	1,940	1,940	1,942	2
Housing and Community Development	337	325	324	330	6
Commerce	202	193	193	193	0
Environment	939	894	893	900	7
Subtotal	13,237	13,051	13,033	13,075	42
Executive Branch Subtotal	50,579	49,951	49,469	49,525	56
Higher Education	25,632	25,909	26,298	26,298	0
Judiciary	3,914	3,951	3,989	4,003	14
Legislature	749	749	749	750	1
Total	80,874	80,560	80,505	80,576	71

DoIT: Department of Information Technology
MSDE: Maryland State Department of Education

*Fiscal 2018 Working Appropriation reflects changes in higher education positions due to Board of Public Works action, and the creation and abolishment of positions due to flex authority of the institutions.

Note: Numbers may not sum due to rounding.

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

Personnel (cont.)

Analysis of Vacancies and Turnover Rate Fiscal 2018 Working Appropriation Compared to October 2017 Vacancies

<u>Department/Service Area</u>	<u>Positions</u>	<u>Turnover Rate*</u>	<u>Vacancies to Meet Turnover</u>	<u>Vacancies</u>	<u>Vacancies Above (or Below) Turnover</u>
Largest General Fund State Agencies					
Public Safety and Correctional Services	10,554	9.1%	958	1,750	792
Human Services	6,224	7.6%	472	528	56
Health	6,187	7.2%	448	615	167
Police and Fire Marshal	2,436	7.2%	175	309	134
Juvenile Services	1,978	7.3%	144	207	63
Subtotal	27,379	8.0%	2,197	3,409	1,212
Transportation	9,058	4.5%	408	614	206
Other Executive					
Legal (Excluding Judiciary)	1,474	5.6%	82	123	41
Executive and Administrative Control	1,559	4.0%	62	157	95
Financial and Revenue Administration	2,099	4.8%	102	177	75
Budget and Management and DoIT	582	3.8%	22	59	36
Retirement	210	4.9%	10	20	10
General Services	581	6.1%	35	69	34
Natural Resources	1,333	5.9%	79	136	57
Agriculture	355	6.2%	22	31	9
Labor, Licensing, and Regulation	1,491	3.4%	51	216	165
MSDE and Other Education	1,940	5.7%	111	175	64
Housing and Community Development	324	6.0%	20	22	2
Commerce	193	7.6%	15	5	-10
Environment	893	6.5%	58	88	29
Subtotal	13,033	5.2%	670	1,277	607
Executive Branch Total	49,469	6.5%	3,275	5,300	2,025

DoIT: Department of Information Technology

MSDE: Maryland State Department of Education

*The turnover rate for the Department of Public Safety and Correctional Services and the Department of Human Services includes turnover reductions approved by Board of Public Works action on September 6, 2017.

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

Executive Branch Staffing Needs

- Since fiscal 2002 the Executive Branch, excluding higher education, has abolished almost 7,700 positions.
 - DLS spent two years reviewing Executive Branch staffing needs based on laws, regulations, caseload guidelines, agency staffing studies, and other documentation.
 - Based on this analysis, the Department of Legislative Services has identified a need for nearly 1,300 additional authorized positions in addition to the need to fill approximately 1,200 existing positions.
-

<u>Agency</u>	<u>Additional Positions Required</u>
Maryland Department of the Environment	295
Office of the Public Defender	214
State Department of Assessments and Taxation	200
Department of State Police	193
Department of Public Safety and Correctional Services	154
Maryland Department of Health	93
Department of Juvenile Services	79
Maryland Commission On Civil Rights	12
Maryland Insurance Administration	9
Department of General Services	6
Historic St. Mary's City Commission	4
Secretary of State	3
Total	1,262

- Cost containment hiring freezes, limited employee compensation since the Great Recession, and uncompetitive salary levels impede the State's ability to attract and retain employees.
- Despite ranking fifth in personal income, State salaries ranked twenty-ninth in the United States based on a 2016 study commissioned by Missouri which examined salary levels adjusted for the cost of living.
- Many of the understaffed areas have very high vacancy rates currently. Some of the understaffing reflects current practices deviating from statute (e.g., State Department of Assessments and Taxation). Any effort to address could initially be limited to a modest increase in new regular positions for a few agencies.
- The Spending Affordability Committee may want to recommend that the Governor improve efforts to fill vacant positions and to provide new positions to agencies which could fill them.

State Retirement and Pension System

Employer Pension Contributions Fiscal 2017-2019 (\$ in Millions)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
State Employer Base	\$1,532.5	\$1,549.3	\$1,570.8
Supplemental	75.0	75.0	75.0
Sweeper	50.0	0	50.0
Governor	25.0	0	0
Total State	\$1,682.5	\$1,624.3	\$1,695.8
Local School Boards	\$279.8	\$280.5	\$283.8
Total Employer	\$1,962.2	\$1,904.8	\$1,979.6

Source: State Retirement Agency; Department of Budget and Management; Department of Legislative Services

- Total State contributions for teacher and employee pensions are projected to be almost \$1.70 billion in fiscal 2019, an increase of \$71.5 million from the fiscal 2018 contribution, largely due to the restoration of the \$50.0 million pension sweeper payment (see below).
- Local school systems are projected to contribute \$283.8 million, an increase of \$3.3 million from fiscal 2018 levels.
- The projected State contribution includes a supplemental contribution of \$75.0 million and \$50.0 million in general funds from the pension sweeper provision enacted during the 2015 session.
- The system's funded ratio climbed to 70.9%, surpassing the 70.0% threshold for the first time since fiscal 2009.
- With investment returns exceeding the actuarial target in three of the last five years, and actuarial losses from fiscal 2012 now fully accounted, the amount of unrecognized losses has been cut by about half, from \$2.2 billion last fiscal year to \$1.2 billion this fiscal year.

State Retirement and Pension System Investment Return Assumption

- The Board of Trustees of the State Retirement and Pension System lowered its assumed rate of investment returns from 7.55% to 7.45% over two years, and its assumed inflation rate from 2.7% to 2.6% over the same period, beginning with the June 30, 2017 actuarial valuation.
- The system's actuary estimates that the reduction from 7.55% to 7.50% in the most recent actuarial valuation increased total employer contributions by approximately \$33.5 million.
- The board made the decision even though the system's actuary advised the board that the 7.55% assumed rate was within the acceptable range of anticipated future returns.
- In addition, past average annual returns have generally exceeded the 7.55% level for short-, medium-, and long-term periods:

One Year:	10.0%
Five Year:	7.6%
Ten Year:	4.2%
Thirty Year:	8.1%

General Obligation Bond Sale Premiums Projected and Realized

When bonds are sold, they have a par value (principal) and a coupon rate (interest rate paid to the bondholder based on par value). When the bonds are bid, the Treasurer's Office determines how many bonds are sold (par value of the bonds) and when the bonds mature.¹ The underwriter determines the coupon rate (interest rate the issuer pays) and the sale price of the bonds, which is awarded to the underwriter with the lowest interest cost. If the coupon rate is greater than the market rate, which is referred to as the True Interest Cost (TIC), the bonds sell at a premium and the State's bond proceeds exceed par value of the bonds.

At the most recent bond sale in August 2017, the State issued \$550 million in tax-exempt general obligation (GO) bonds (par value). The average coupon was 4.29% and the TIC (market interest rate) was 2.29%. Since the coupon rate exceeded the market interest rate, the bonds sold at a premium, and total bond proceeds totaled \$644 million (after deducting the underwriters discount and cost of issuance expenses). This additional \$94 million is the bond premium.

The Department of Legislative Services' Premium Estimating Process

To estimate a premium, the Department of Legislative Services (DLS) follows these steps:

- ***Estimate the TIC:*** To estimate the TIC, DLS uses the interest rate projections from Moody's Economy.com and IHS Global Insight for the 10-year U.S. Treasury Bill. DLS uses the 10-year interest rate projections since the average maturity for State bonds is usually just under 10 years. These two rates are averaged. This average adjusts the TIC of the most recent bond sale to reflect changes in interest rates over time. For example, if the rates are expected to increase 1.00% (100 basis points) in one year, the projected TIC of the bond sale one year later would be 1.00% (100 basis points) higher than the most recent sale's TIC.
- ***Project the Coupon Rate:*** DLS computes the average coupon rate of recent bond sales. This has been hovering around 4.25% in recent years; the most recent issuance had an average coupon rate of 4.29%.

¹ Section 34 of Article III of the Constitution of Maryland limits State debt to 15 years. State policy is to pay interest only the first 2 years, and begin retiring debt in the third year. Debt service payments are about the same from year 3 to year 15. The average maturity of a State bond is just under 10 years.

- **Use the TIC, Coupon Rate, and Amount Issued to Estimate Premiums:** For each expected sale, DLS prepares an amortization table and calculates the premiums based on the present value of the cash flows.

Comparing DLS' and the Department of Budget and Management's Premium Estimates

Each fall, DLS prepares an estimate of the next fiscal year's budget for the Spending Affordability Committee. As part of this process, DLS projects the premiums that will be realized during the budget year. The Administration does not estimate premiums during the upcoming budget's fiscal year. As introduced by the Administration, the budget only includes an estimate of premiums anticipated in the current year. Since the sale occurs before the end of the legislative session, a deficiency appropriation can be made. The Department of Budget and Management's policy is consistent with the State Treasurer, who recommends against estimating premiums in the budget year. **Exhibit 1** shows that DLS projected \$301 million in premiums from fiscal 2014 through 2018 that were not included in the allowance.

Exhibit 1 Projected Premiums Fiscal 2014-2018 (\$ in Millions)

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u> ¹	<u>2018</u>	<u>Total</u>
DLS' SAC Projected Premiums Two Year's Prior	\$105.1	\$59.4	\$55.2	\$32.3	\$48.6	\$300.6
DBM's Projected Premiums with Budget Submission	0.0	0.0	0.0	0.0	0.0	0.0

DBM: Department of Budget and Management

DLS: Department of Legislative Services

SAC: Spending Affordability Committee

¹ DLS models projected \$32.3 million in premiums, but the forecast did not include any premiums.

Source: Department of Legislative Services; Public Financial Management; Public Resources Advisory Group

Accuracy of Premium Estimates

DLS' calculations are close to the actual premium. A typical DLS estimate of a \$50 million premium is usually within \$100,000 of the actual premium if the same TIC and

coupon rate are used. When estimating premiums, the concern is that slight changes in the TIC or coupon rate result in substantial changes in the premiums. For example, changing the interest rate or coupon rate by 0.25% (25 basis points) changes the premium estimate \$12 million.

In recent years, economic forecasters have projected that interest rates would increase steadily in the near term. This has not been the case; instead, interest rates have remained low. As discussed earlier, DLS uses these forecasts to estimate premiums. Since the economic forecasts have anticipated increasing interest rates, DLS has projected that the premiums will decline in the budget year. In fact, interest rates have remained low, so DLS has underestimated premiums. **Exhibit 2** shows that DLS' model estimated \$301 million in premiums while actual premiums totaled \$652 million.

Exhibit 2
Projected and Actual Bond Sale Premiums
Fiscal 2014-2018
(\$ in Millions)

<u>Fiscal Year</u>	<u>DLS Projections</u>	<u>Actual Premiums</u>	<u>Difference</u>
2014	\$105.1	\$104.7	-\$0.4
2015	59.4	142.8	83.4
2016	55.2	219.5	164.3
2017	32.3 ¹	91.2	58.9
2018	48.6	93.9	45.3
Total	\$300.6	\$652.1	\$351.5

¹ DLS models projected \$32.3 million in premiums, but the forecast did not include any premiums.

DLS: Department of Legislative Services

Source: Department of Legislative Services; Public Financial Management; Public Resources Advisory Group

The Effect of Unbudgeted Premiums on the Annuity Bond Fund Balance

The Annuity Bond Fund (ABF) supports GO bond debt service costs. The largest revenue source is the State property tax. Bond sale premiums are deposited into the fund. If these revenues are insufficient, general funds are also appropriated. When forecasting the ABF, DLS provides sufficient general fund revenues to fully fund debt

service costs but no excess general funds are provided. Consequently, DLS estimates that the budget year will end with a fund balance that is about \$1 million.

If unbudgeted premiums are realized, they are deposited into the ABF. This results in a large end-of-year balance in the ABF. This can be used to reduce general fund appropriations in the out-years. When preparing the fiscal 2016 forecast in November 2014, DLS recommended estimating premiums during the budget year. The recommendation was not approved, and the State has continued the policy of not estimating premiums in the budget year.

Transportation Trust Fund Closeout
Comparison of Fiscal 2017 Projected and Actual Revenues and Expenditures
(\$ in Millions)

	Projected 2017	Actual 2017	Variance
Starting Fund Balance	\$126	\$126	\$0
Revenues			
Motor Fuel Taxes	\$1,040	\$1,079	\$39
Titling Taxes	882	886	4
Sales Tax – Rental Vehicles	31	32	1
Corporate Income, Registrations, and Misc. Motor Vehicle Administration Fees	832	839	7
Maryland Department of Transportation (MDOT) Operating Revenues (MD Aviation Admin., MD Port Admin., and MD Transit Admin.)	445	441	-4
Other Receipts and Adjustments	113	120	7
Bond Proceeds and Premiums	623	723	100
Total Revenues	\$3,966	\$4,118	\$152
Uses of Funds			
MDOT Operating Expenditures	\$1,850	\$1,854	\$4
MDOT Capital Expenditures	1,577	1,700	123
MDOT Debt Service	300	288	-12
Highway User Revenues	173	175	2
Other Expenditures	67	65	-3
Total Expenditures	\$3,967	\$4,082	\$114
Ending Fund Balance	\$125	\$163	\$38

- The fiscal 2017 ending fund balance of \$163 million was \$38 million over the target ending balance.
- Overall, nonbond-related revenues exceeded projections by almost \$53 million. Bond sales and premiums were \$100 million above projections.
- Spending was a net of \$114 million more than estimated with increased capital spending of \$123 million partially offset by reductions in debt service and other spending.

Baseline Budget Position Changes Assumptions

Fiscal 2018 Position Changes

- A net increase of 387 positions in higher education is reflected in fiscal 2018. Using flex authority, the institutions created 377 new positions, converted 79 contractual positions, and abolished 39 positions. In addition, the Board of Public Works abolished 30 positions in the University System of Maryland on September 6, 2017.

Fiscal 2019 Position Changes

Workload Adjustments

- 5 new positions in fiscal 2018 for the Office of the Chief Medical Examiner as a result of increased autopsies, requiring 3 additional medical examiners, 1 investigator, and 1 toxicologist.
- A net decrease of 0.84 positions in the Department of Natural Resources due to changes in staffing needs for the Bloede Dam Removal, Cunningham Falls State Park, and Point Lookout State Park Lighthouse Restoration projects.

New Facilities

- 14 new positions in the Judiciary for the new Catonsville Courthouse, including 5 District Court judges, 5 staffers, and 4 facility-related positions.
- 2 new positions in the Department of Planning for the new Patterson Center, including 1 horticulturalist and 1 administrator.

Transfers

- 5 positions in the Department of Human Services associated with homeless services are transferred to the Department of Housing and Community Development.

Positions Associated with Legislation

- 13 new positions in the Department of Human Services as a result of the transfer of the Charles County State Attorneys' Office to the department (Chapter 135 of 2017) and additional staff to handle increased caseloads in the adult protective services program (Chapters 837 and 838 of 2017).

- 7 new positions in the Maryland Department of the Environment to provide regulatory and compliance engineers to review county water and sewer plans (Chapter 387 of 2017) and to implement required lead testing of drinking water in public or nonpublic schools (Chapter 386 of 2017), and a sanitarian to develop and implement required membrane bioreactor regulations in on-site sewage disposal systems (Chapter 391 of 2017).
- 11 new positions in the Office of the Attorney General to implement the Maryland Securities Act – Vulnerable Adults (Chapters 837 and 838 of 2017), the Crime Victims Resource Act (Chapter 659 of 2017), and the Maryland Defense Act (Chapter 26 of 2017).
- 4.5 new positions in the Department of Labor, Licensing, and Regulation to oversee implementation of new continuing education standards (Chapter 784 of 2017), to provide an investigator to implement the POWER Apprenticeship Act (Chapter 782 of 2017), and to provide an investigator and administrator to assist with State Occupational Mechanical Licensing Boards with ongoing regulatory responsibilities (Chapter 254 of 2017).
- 4 new positions in the Maryland Insurance Administration to review carrier network access plans (Chapter 309 of 2016) and for an additional analyst to review filings of participation agreements and related documents (Chapters 225 and 226 of 2017).
- 2 new positions in the Executive Department – Boards, Commissions, and Offices to handle an increase in Small and Minority Business registrations (Chapter 438 of 2017).
- 2 new positions in the Department of Housing and Community Development to provide a program administrator for the National Capital Strategic Economic Development Fund (Chapter 523 of 2017), and a position to administer the Independent Living Tax Credit (Chapter 229 of 2017).
- 1 new position in the General Assembly of Maryland Office of Legislative Audits for an additional staff auditor to conduct a performance audit of the Prince George's County Board of License Commissioners once every three years (Chapters 811 and 812 of 2017).
- 1 new position in the Military Department for a human resource officer to handle increased workload as a result of expanding collective bargaining to firefighters at Martin State Airport (Chapter 182 of 2017).

- 1 new position in the Office of Administrative Hearings for an additional administrative law judge to process increased grievances as a result of the Payroll Recovery Act (Chapter 783 of 2017).
- 1 new position in the State Department of Assessments and Taxation to assist the Property Tax Assessment Appeals Boards in the disposition of appeals to comply with the required 120-day period (Chapter 537 of 2017).
- 1 new position in the Department of General Services for an administrator to implement the POWER Apprenticeship Act (Chapter 782 of 2017).
- 1 new position in the Maryland State Department of Education for an educational program specialist to administer the Pathways in Technology Early College High School program (Chapter 591 of 2017).
- 1 new position for the new Maryland State Library Agency for two part-time positions, including an information technology position and an assistant Attorney General (Chapters 337 and 338 of 2017).

**Contractual Full-time Equivalent Positions Changes
Fiscal 2016 Actual to Fiscal 2019 Baseline**

<u>Department/Service Area</u>	<u>2016 Actual</u>	<u>2017 Working</u>	<u>2018 Wrk. Approp.</u>	<u>2019 Baseline</u>	<u>2018-2019 Change</u>
Largest General Funded State Agencies					
Public Safety and Correctional Services	268	392	308	308	0
Human Services	143	74	74	74	0
Health	354	483	476	476	0
Police and Fire Marshal	22	66	68	68	0
Juvenile Services	178	147	150	150	0
Subtotal	964	1,162	1,078	1,078	0
Transportation	40	41	122	122	0
Other Executive					
Legal (Excluding Judiciary)	46	51	57	57	0
Executive and Administrative Control	203	180	179	180	1
Financial and Revenue Administration	52	51	51	51	0
Budget and Management and DoIT	13	13	34	34	0
Retirement	11	9	8	8	0
General Services	7	23	23	23	0
Natural Resources	376	436	492	494	2
Agriculture	45	47	48	48	0
Labor, Licensing, and Regulation	127	145	130	130	1
MSDE and Other Education	274	286	279	282	3
Housing and Community Development	53	103	105	105	0
Commerce	18	21	25	25	0
Environment	27	61	50	50	0
Subtotal	1,251	1,425	1,478	1,484	7
Executive Branch Subtotal	2,255	2,627	2,678	2,684	7
Higher Education	6,937	6,766	7,064	7,064	0
Judiciary	330	334	347	357	10
Legislature	0	0	0	0	0
Total	9,522	9,728	10,089	10,105	17

DoIT: Department of Information Technology

MSDE: Maryland State Department of Education

*Note: Numbers may not sum due to rounding.

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