Higher Education
Fiscal 2018 Budget Overview

Department of Legislative Services
Office of Policy Analysis
Annapolis, Maryland

January 26, 2017

For further information contact: Garret T. Halbach Phone: (410) 946-5530

Higher Education
Fiscal 2018 Budget Overview

State Funding Changes for Higher Education
($ in Thousands)

	2017 Working[1]	2017 Adjusted[2]	2018 Allowance[3]	2018 Adjusted[4]	2017 Adj.-2018 Adj. Change	% Change
Public Four-year Institutions						
University System of Maryland (USM)	$1,329,902	$1,333,956	$1,366,927	$1,360,752	$26,796	2.0%
Morgan State University	93,203	93,203	95,177	94,950	1,747	1.9%
St. Mary's College of Maryland	25,160	25,160	24,965	24,965	-195	-0.8%
Subtotal – Public Four-year	***$1,448,264***	***$1,452,318***	***$1,487,069***	***$1,480,667***	***$28,349***	***2.0%***
Other Higher Education						
Maryland Higher Education Commission						
Administration	$6,665	$6,665	$6,801	$6,788	$123	1.9%
Financial Aid	104,798	107,898	108,482	108,482	584	0.5%
Educational Grants[1]	1,175	1,175	6,462	6,462	5,287	449.9%
Non-USM RHEC	2,027	2,027	2,045	2,045	18	0.9%
Independent Institutions	46,817	46,817	53,392	46,817	0	0.0%
Aid to Community Colleges	314,335	314,335	319,553	318,009	3,674	1.2%
Baltimore City Community College	40,064	40,064	40,602	40,602	538	1.3%
Subtotal – Other Higher Education	***$515,882***	***$518,982***	***$537,338***	***$529,206***	***$10,224***	***2.0%***
Total Higher Education	**$1,964,146**	**$1,971,300**	**$2,024,408**	**$2,009,873**	**$38,573**	**2.0%**

RHEC: regional higher education center

[1] The 2017 Working is the fiscal 2017 appropriation with all budget amendments, including educational grants from the Maryland Higher Education Commission (MHEC), and Board of Public Works actions from November 2016. As a result, grants initially budgeted in MHEC in fiscal 2017 for Educational Grants are shown in the institutions' budgets.
[2] The 2017 Adjusted is the 2017 Working with fiscal 2017 deficiencies excluding funding for community colleges to cover retirement administrative fees.
[3] The 2018 allowance includes planned transfers of grants from MHEC to institutions.
[4] The 2018 Adjusted is the 2018 Allowance with contingent and back of the budget bill reductions.

Note: State funds include general funds, Higher Education Investment Funds, special funds supporting educational grants, and financial aid programs, reimbursable funds supporting financial aid programs, and the Maryland Fire and Rescue Institute.

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

Recommended Actions

1. Adopt narrative requesting a report on financial aid and loan data by the Expected Family Contribution.
2. Adopt narrative requesting a report on faculty workload.
3. Adopt narrative requesting a report on comparable funding peers.

2017 and 2018 Actions

State support for higher education grows $38.6 million in fiscal 2018, or 2.0%, after accounting for deficiencies in fiscal 2017 and contingent budget reductions in fiscal 2018. Fiscal 2018 is the first year in which State support for higher education has surpassed $2 billion.

Fiscal 2017 Deficiencies

There are two general fund deficiencies affecting public four-year institutions. One deficiency is for $4.7 million and covers a shortfall in the Higher Education Investment Fund (HEIF), which underattained in fiscal 2017 by that amount. The second deficiency, for $4.1 million, provides general funds to backfill fiscal 2017 cost containment in the University System of Maryland (USM), which originally was to have been covered by a transfer from the HEIF fund balance. Because of the HEIF underattainment, general funds are now being used.

The Maryland Higher Education Commission (MHEC) also has two deficiencies. One deficiency is for $1.0 million due to an ongoing lawsuit, and the other is $3.1 million from a fund balance transfer to backfill need-based financial aid that had been reduced by the same amount by cost containment in fiscal 2017. Unlike in prior years, MHEC has no ongoing liabilities in community college programs, as these accrued liabilities had been paid off in fiscal 2016.

Finally, there is also a fiscal 2017 deficiency for $0.9 million related to community colleges. This funding is a portion of a one-time grant to cover teacher retirement administrative fees that are normally covered by local jurisdictions. This funding is not shown in the cover sheet of this analysis.

Fiscal 2018 Allowance

There is one back of the budget bill reduction in fiscal 2018 that reduces supplemental contributions to the pension system. This reduces support for public four-year institutions by $2.4 million and support for community colleges by $1.6 million. More information on that issue will be provided in the State Retirement Agency budget analysis. The fiscal 2018 allowance does not provide for any cost-of-living adjustment or personnel increments.

Unlike fiscal 2017, there is a Budget Reconciliation and Financing Act in fiscal 2018 to provide mandate relief. Funds that were required by the University of Maryland Strategic Partnership Act (Chapter 25 of 2016) to increase funding guideline attainment are reduced by $3.5 million at the University of Maryland Baltimore County (UMBC) and $0.5 million at Towson University (TU). Another reduction of $6.6 million provides for flat funding of the Sellinger formula for independent institutions in fiscal 2018.

After contingent reductions, USM receives the biggest dollar increase of $26.8 million, or 2%. That increase will support current services costs and various personnel costs, such as salaries and fringe benefits. It also includes $6.0 million to support operating costs for the new Health Sciences Facility III at the University of Maryland Baltimore (UMB). There is no new enhancement funding for student completion initiatives, and cost containment totaling $14.2 million from the November 2016 Board of Public Works cost containment action is carried forward. The fiscal 2018 allowance assumes in-State tuition at public four-year institutions increases by 2%, the same increase as fiscal 2017. Unlike fiscal 2017, there are no special one-time institutional grants outside of St. Mary's College of Maryland's (SMCM) funding formula; so while State support for SMCM declines slightly, its formula is fully funded.

Most other areas of the higher education budget increase. The higher education funding formulas for local community colleges and Baltimore City Community College (BCCC) are fully funded, although the BCCC amount is determined by a hold harmless clause. Funding for the State's locally operated community colleges grows $3.7 million. Support for the community college pension system declines due to the back of the bill reduction such that total retirement support actually declines by $1.7 million, or 2.7%, in fiscal 2018. The Cade formula is fully funded, although it increases by only $1.1 million, or 0.5%. Miscellaneous grants increase by about $4.3 million, of which $4.0 million comes via a special one-time $4.0 million supplemental grant. Details on how this funding will be allocated are not yet available, but the Administration has indicated that the funds are for community colleges that hold tuition increases to 2.0%. General funds for BCCC increase $0.5 million, or 2.1%, due to the Department of Budget and Management (DBM) not carrying forward the cost containment action from November 2016.

MHEC student financial aid programs received a deficiency in fiscal 2017 to backfill the Educational Excellence Award (EEA) program, which had been reduced to meet cost containment for MHEC. The Need-based Student Financial Assistance Fund (NSFAF) balance had been intended to provide for additional awards in other aid programs but will now be used only in EEA. No other transfers are budgeted in the allowance, and the NSFAF fund balance is now down to approximately $1.5 million. Overall, financial aid grows only $0.6 million, or 0.5%. The Maryland Early Graduation Scholarship, created by executive order in January 2016, is not funded in the fiscal 2018 budget. MHEC Administration grows only $0.1 million, mostly due to general personnel costs. Finally, MHEC Regional Higher Education Center (RHEC) funding increases by $18,000 for startup funding for the new RHEC in Frederick. Other educational grants increase $5.3 million due almost entirely to $5.0 million to fund a new matching contribution program at Maryland 529 (formerly called College Savings Plans of Maryland) and $0.3 million in startup funding for the same agency to administer the new program and another new program, Achieving a Better Life Experience (ABLE). This is discussed further in the final issue of this analysis. Finally, as mentioned above, Sellinger aid for independent institutions is flat-funded at $46.8 million in fiscal 2018 after a contingent reduction.

Funding for the State's four-year public higher education institutions from fiscal 2014 to the fiscal 2018 allowance is shown in **Exhibit 1**. Total funding over fiscal 2017 increases $28.2 million, or 2.0%. However, fiscal 2018 growth is ahead of fiscal 2016 growth after all cost containment actions. After contingent actions, the largest increases at public four-year institutions are at Salisbury University (SU), the University of Maryland University College (UMUC), and UMB, which all increase by at least 4.0%. While SMCM loses 0.8% in State support, this is misleading due to the inclusion of $1.1 million in fiscal 2017 for an information technology project. These funds were entirely outside of the funding formula and were not included in calculating fiscal 2018 formula funding for SMCM. The only other institution to see reduced funding is the University of Maryland Center for Environmental Science.

Exhibit 1
State Support for Public Universities
Fiscal 2014-2018
($ in Thousands)

Institution	Actual 2014	Actual 2015	Actual 2016	Adjusted Working 2017	Adjusted Allowance 2018	% Change 2014-17	$ Change 2017-18	% Change 2017-18
Univ. of Maryland, Baltimore	$196,668	$208,459	$217,009	$225,323	$234,657	4.6%	$9,334	4.1%
Univ. of Maryland, College Park	401,234	428,019	446,755	465,452	470,737	5.1%	5,285	1.1%
Bowie State University	38,527	40,573	41,695	44,846	45,362	5.2%	517	1.2%
Towson University	96,567	102,987	110,088	117,634	120,043	6.8%	2,409	2.0%
Univ. of Maryland Eastern Shore	33,380	35,073	37,168	40,347	40,782	6.5%	435	1.1%
Frostburg State University	35,472	37,381	39,281	41,469	42,065	5.3%	596	1.4%
Coppin State University	40,736	42,320	44,755	47,352	47,399	5.1%	48	0.1%
University of Baltimore	32,059	33,434	35,023	37,290	37,629	5.2%	339	0.9%
Salisbury University	41,823	44,897	48,092	51,630	55,056	7.3%	3,426	6.6%
Univ. of Maryland Univ. College	35,704	38,694	39,459	41,856	43,954	5.4%	2,098	5.0%
Univ. of Maryland Baltimore County	101,694	108,123	112,365	118,329	120,231	5.2%	1,903	1.6%
Univ of Maryland Center for Environ. Science	20,690	21,564	22,382	22,898	22,810	3.4%	-88	-0.4%
University System of Maryland Office	21,299	22,059	23,722	25,985	26,303	6.9%	318	1.2%
Morgan State University	79,154	84,198	86,135	93,203	94,950	5.6%	1,747	1.9%
St. Mary's College of Maryland	19,843	20,722	25,107	25,160	24,965	8.2%	-195	-0.8%
Total Funding for Public Four-year Institutions	**$1,194,848**	**$1,268,501**	**$1,329,035**	**$1,398,773**	**$1,426,944**	**5.4%**	**$28,171**	**2.0%**
Total with Other Higher Education Funding*	**$1,240,864**	**$1,316,431**	**$1,376,727**	**$1,452,318**	**$1,480,667**	**5.4%**	**$28,349**	**2.0%**

* Other Higher Education Funding includes funding for agricultural and extension programs and the Maryland Fire and Rescue Institute.

Note: The exhibit includes deficiencies in fiscal 2017. The fiscal 2018 adjusted appropriation includes anticipated annual grants from the Maryland Higher Education Commission.

Source: Governor's Budget Books, Fiscal 2014-2018

The HEIF Underattains Revenues

The HEIF, which was created in the special session of 2007, receives 6% of corporate income tax revenues, most recently estimated as $58.3 million in fiscal 2017. The HEIF provided a fairly reliable source of funding for higher education institutions from fiscal 2009 through 2013, during which it accrued a fund balance as the economy began to improve, and corporate tax revenues started to exceed projections. However, in fiscal 2014, revenues underattained by about $10.0 million, wiping out the HEIF fund balance and requiring midyear HEIF reductions to institutions. Revenues were stable in fiscal 2015 and 2016, leading to a small fund balance of $3.3 million at the close of fiscal 2016.

Exhibit 2 shows an accounting of the HEIF actions in fiscal 2017. Two issues have now led to the fund being overcommitted by $8.7 million. First, the HEIF revenue attainment in fiscal 2017 is about 12% lower than forecasted a year ago, leading to a mismatch between the legislative appropriation and available funds. Second, DBM planned on using the HEIF fund balance to offset cost containment actions made in November 2016. To rectify this, the Governor's allowance provides for two deficiencies in fiscal 2017. The first deficiency ($4.7 million) covers the shortfall in the HEIF necessary to fully meet the fiscal 2017 legislative appropriation. The second deficiency ($4.1 million) covers the cost containment that originally was to be backfilled by the HEIF.

Exhibit 2
Higher Education Investment Fund
Overcommitted by $8.7 Million
Fiscal 2017
($ in Millions)

Revenue or Expenditure	Description
$3.3	Opening Fiscal 2017 HEIF Fund Balance
58.3	Fiscal 2017 HEIF Revenue Estimate (December 2016)
-66.3	HEIF Legislative Appropriation
-4.1	HEIF Fund Balance Transfer to Backfill Cost Containment
-$8.7	**Fiscal 2017 Working HEIF Fund Balance**

HEIF: Higher Education Investment Fund

Note: Funds in the Tuition Stabilization Trust are excluded from this exhibit.

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

The fiscal 2017 underattainment demonstrates the risk of tying budgets to a sometimes unstable funding source. Although the HEIF was not meant to be the sole source of revenue for higher education, it was intended to provide capital and enhancement funding to the public four-year universities. Similar to relying on temporary federal funds for long-term State functions, when funding levels drop,

uncertainty enters into the budgeting process. In previous years when the HEIF has underattained, such as in fiscal 2009 and 2014, institutions had to adapt their budgets to lower the HEIF revenue. **The Department of Legislative Services (DLS) is concerned by the precedent of fully guaranteeing the HEIF revenue to higher education regardless of actual revenue attainment and will recommend against the $8.7 million in HEIF-related deficiencies in fiscal 2017.**

The Tuition Stabilization Trust (TST) is an account within the HEIF, created by Chapters 192 and 193 of 2010, and is intended to increase the predictability of tuition increases at State institutions by accumulating a reserve of funds to offset significant tuition increases, such as in fiscal 2003, 2006, and at some institutions, in fiscal 2015. The statute requires a balance of 1.0% to 5.0% of undergraduate tuition revenues in the TST. However, only $100,000 has been transferred into the fund in years of increasing corporate tax revenues. No transfers have occurred since the HEIF revenue became more volatile in fiscal 2014, and no transfer is anticipated in fiscal 2018. The TST legislation also set a goal that tuition increases not exceed the three-year rolling average increase in median family income. The most recent three-year average actual median family income increase from the federal Census Bureau shows an increase of 2.1%, compared to the average tuition and fee increase of 2.0% imposed in fall 2016 and 2.0% proposed in the allowance for fall 2017.

The Secretary of Higher Education should comment on the best use of the $0.3 million in the TST given that no significant TST funds have ever been deposited or withdrawn from the account.

Exhibit 3 shows the current forecast for the HEIF from estimates made in December of each year by the Board of Revenue Estimates (BRE). Historically, the corporate income tax, the basis for the HEIF, has been more volatile than the personal income tax. While the December 2015 forecast was up slightly in four of five out-years, the December 2016 forecast is lower in all five out-years and projects fiscal 2017 HEIF revenue to be $7.9 million below expectations from one year ago. Fiscal 2018 revenue is about $6.3 million lower than the estimate from one year ago, and that lower figure is reflected in the allowance. BRE will next provide an update on State revenues, including the HEIF, in March 2017.

Exhibit 3
Higher Education Investment Fund Forecast
Fiscal 2015-2022
($ in Millions)

	2015	2016	2017	2018	2019	2020	2021	2022
December 2012	$67.4	$69.4	$71.5	$73.7				
December 2013	60.7	63.7	67.9	69.8	$72.8			
December 2014	59.5	63.7	66.6	68.9	71.2	$74.0		
December 2015		64.4	66.2	69.0	72.0	74.5	$77.2	
December 2016			58.3	62.7	66.1	68.9	71.7	$74.6
Difference – 2016 to 2015			**-$7.9**	**-$6.3**	**-$5.9**	**-$5.6**	**-$5.5**	

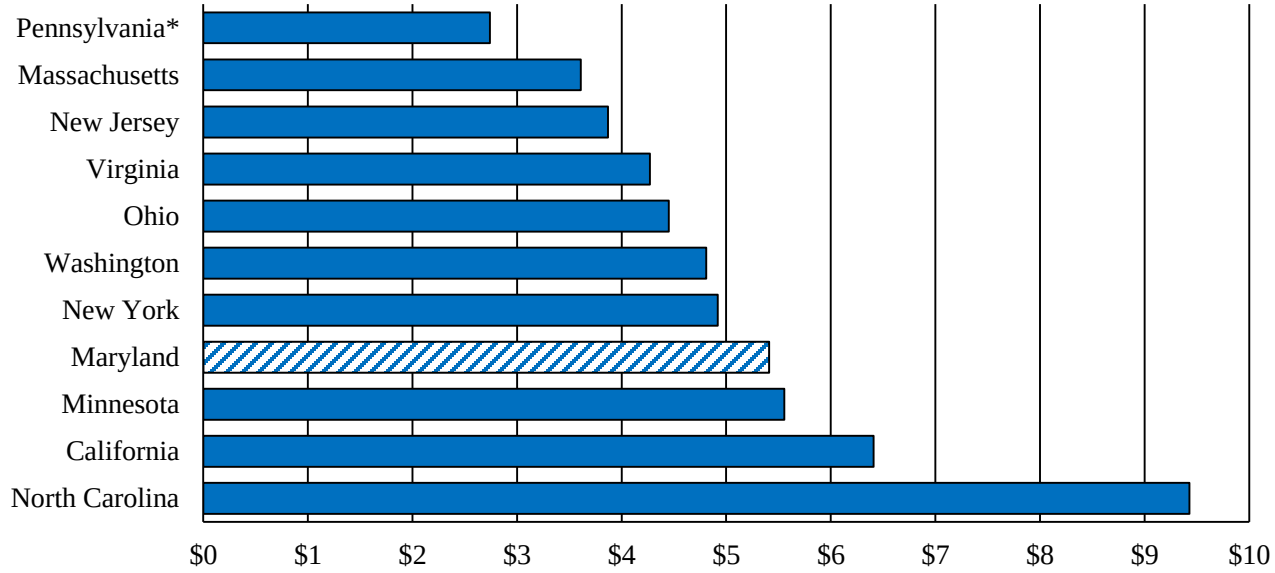
Source: Board of Revenue Estimates; Department of Legislative Services

Higher Education in Maryland versus Competitor States

The 2008 Commission to Develop the Maryland Model for Funding Higher Education selected 10 states that Maryland competes with for jobs. These states are listed in the following exhibits and serve as a useful benchmark for how well Maryland is managing the resources going into higher education and how well the students are succeeding.

Exhibit 4 shows how Maryland compares to the 10 competitor states in terms of state support per $1,000 in personal income. Overall, Maryland ranks relatively well compared to the other competitor states and is well ahead of neighboring Pennsylvania and Virginia. However, Maryland trails California, which has a very large and highly centralized education system, and is even further behind North Carolina, which ranks fifth in the country overall in this measure. While Maryland compares well to the competitor states here, Maryland ranks only twenty-ninth overall, while Pennsylvania is fiftieth. The states spending the most funding relative to personal income are all rural, such as New Mexico and Wyoming.

Exhibit 4
State Support Per $1,000 in Personal Income
Fiscal 2016

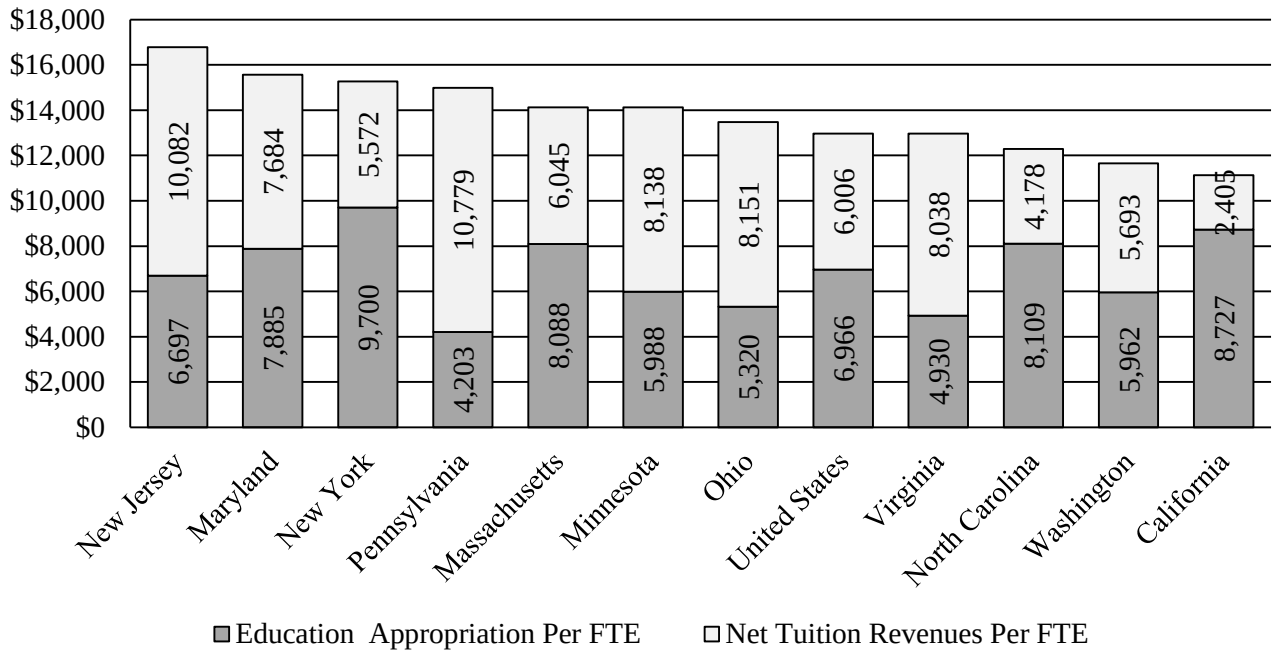


*Fiscal 2016 information was unavailable for Pennsylvania. Fiscal 2015 data is used instead.

Source: Grapevine Summary Tables, Fiscal 2015-2016

Exhibit 5 shows public higher education appropriations and tuition revenue per full-time equivalent (FTE) enrollment in Maryland, competitor states, and the national average. Maryland is interesting in that while the State ranks in the middle on both education appropriation per FTE and net tuition revenue per FTE, when combined, Maryland has the second highest total funding per FTE, behind only New Jersey. Maryland's fund mix is approximately 50/50, whereas some competitor states, like California, receive a lot more state support per student. Others, like Pennsylvania, rely more on tuition revenue to fund higher education expenses. This is not surprising given the relative funding levels of these two states shown in the prior exhibit.

Exhibit 5
Education Appropriations and Tuition Revenue Per FTE Enrollment
Fiscal 2015



FTE: Full-time Equivalent

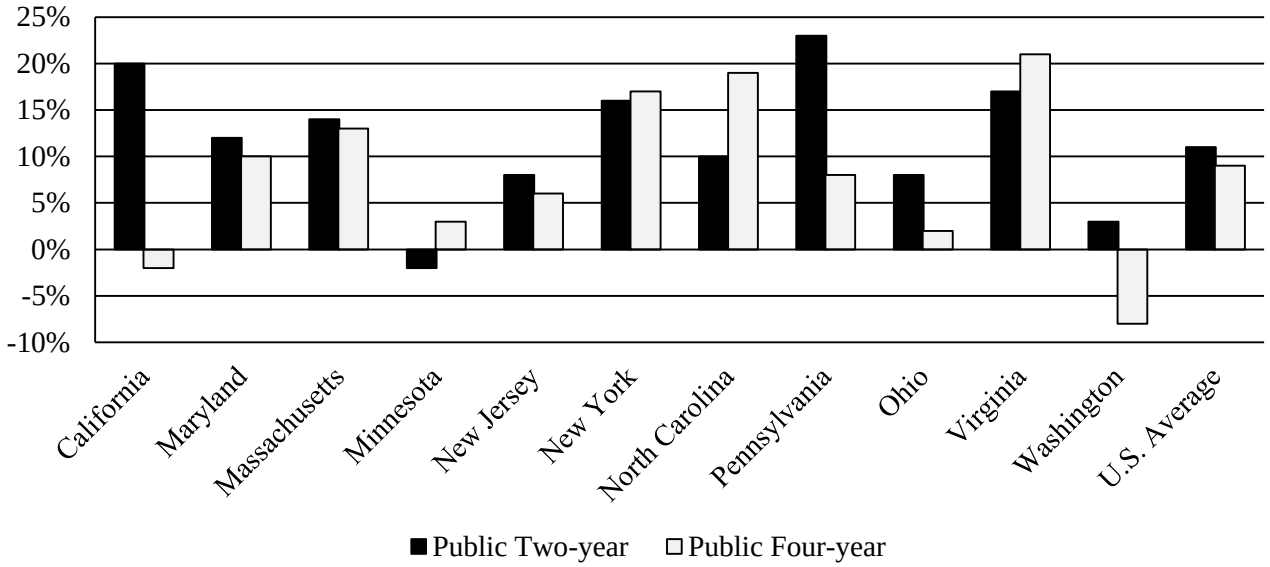
Source: *State Higher Education Finance: Fiscal 2015*, State Higher Education Executive Officers Association

Tuition and Other Costs at Public Institutions

Exhibit 6 shows Maryland and its competitor states again as ranked by changes in public two- and four-year tuition rates over the past five years by the College Board. Three sectors across three states stand out for having *decreases* in tuition. For example, Washington's four-year sector's

rate declined 8% over the five-year period due to that state's enacting moderate tuition decreases in fall 2015 and 2016 after years of large tuition increases. Maryland's growth of 12% for community colleges and 10% for public four-year institutions reflects a more moderated approach.

Exhibit 6
Five-year Percentage Change in In-State Tuition and Fees at Two- and Four-year Public Institutions
Fiscal 2012-2017



Note: Tuition and fees are adjusted for inflation. State average tuition and fee rates are weighted by full-time enrollment.

Source: *Trends in College Pricing 2016*, The College Board

According to the same College Board report, when compared to all states, Maryland's public four-year undergraduate tuition and fee rates are right in the middle. The tuition freeze era of fiscal 2007 through 2010 enabled Maryland's four-year institutions to make rapid improvements in this ranking, but the subsequent years with moderate tuition increases have seen Maryland's ranking erode slightly. Nationally, Maryland's average tuition and fee rate at public four-year institutions in fall 2016 was the twenty-fourth most expensive in the country, a large improvement from seventh most expensive in fall 2004 but a small decline from twenty-seventh most expensive in fall 2013 and 2014. Maryland ranks less well in community college tuition and fee rates, having the fifteenth most expensive community colleges in the country (excluding Alaska) in fall 2016 compared to tenth in fall 2005. **Appendices 6** and **7** show tuition rates at Maryland's public four-year institutions for fall 2017 and community colleges for fall 2016 (fall 2017 rates are not yet available for all community colleges), respectively.

Beyond tuition, students and families must also pay mandatory fees to support activities or services, as well as room and board charges if they live on campus. More discussion of academic fees is contained in an update at the end of this analysis. **Exhibit 7** shows each college's full rates for full-time, on-campus students. SMCM is the highest at $26,862, and Coppin State University (CSU) is the lowest at $16,022. Both schools have been in those positions for at least the past 20 years. Comparable rates from fall 2008 show that costs have grown the most, by 49.6%, at SU, which is to be expected given its decision to accelerate its own tuition growth rate. However, SU is still only the fifth most expensive of the 10 colleges shown in the exhibit. Different meal and room plans greatly alter the total charges, which could change the rankings. This exhibit assumes, when possible, a shared double suite and the standard meal plan. With the exceptions of SMCM, UMBC, and Frostburg State University (FSU), room and board are a greater cost to students than tuition and fees. Overall, the exhibit shows that even during the era when Maryland was frequently freezing or moderating tuition increases, the various costs of higher education can still increase quickly.

Exhibit 7

Tuition, Fees, and Room and Board Rates at Public Four-year Institutions In-state Full-time Undergraduate Students

Fall 2008 and 2017

	Fall 2008	Fall 2017					
	Total Charge	Tuition	Mandatory Fees	Room and Board	Total Charge	$ Change 2008-16	% Change 2008-16
St. Mary's College of Maryland	$21,844	$11,646	$2,774	$12,442	$26,862	$5,018	23.0%
UM Baltimore County	17,500	8,368	3,160	10,866	22,394	4,894	28.0%
UM, College Park	17,113	8,481	1,975	11,398	21,854	4,741	27.7%
Towson University	15,620	6,692	2,956	11,754	21,402	5,782	37.0%
Salisbury University	14,120	6,982	2,594	11,548	21,124	7,004	49.6%
Morgan State University	12,922	5,207	2,753	9,388	17,348	4,426	34.3%
UM Eastern Shore	12,415	5,427	2,631	9,354	17,412	4,997	40.2%
Bowie State University	13,246	6,468	2,446	8,404	17,318	4,072	30.7%
Frostburg State University	12,922	5,264	2,501	9,591	17,356	4,434	34.3%
Coppin State University	12,279	4,468	2,068	9,486	16,022	3,743	30.5%

UM: University of Maryland

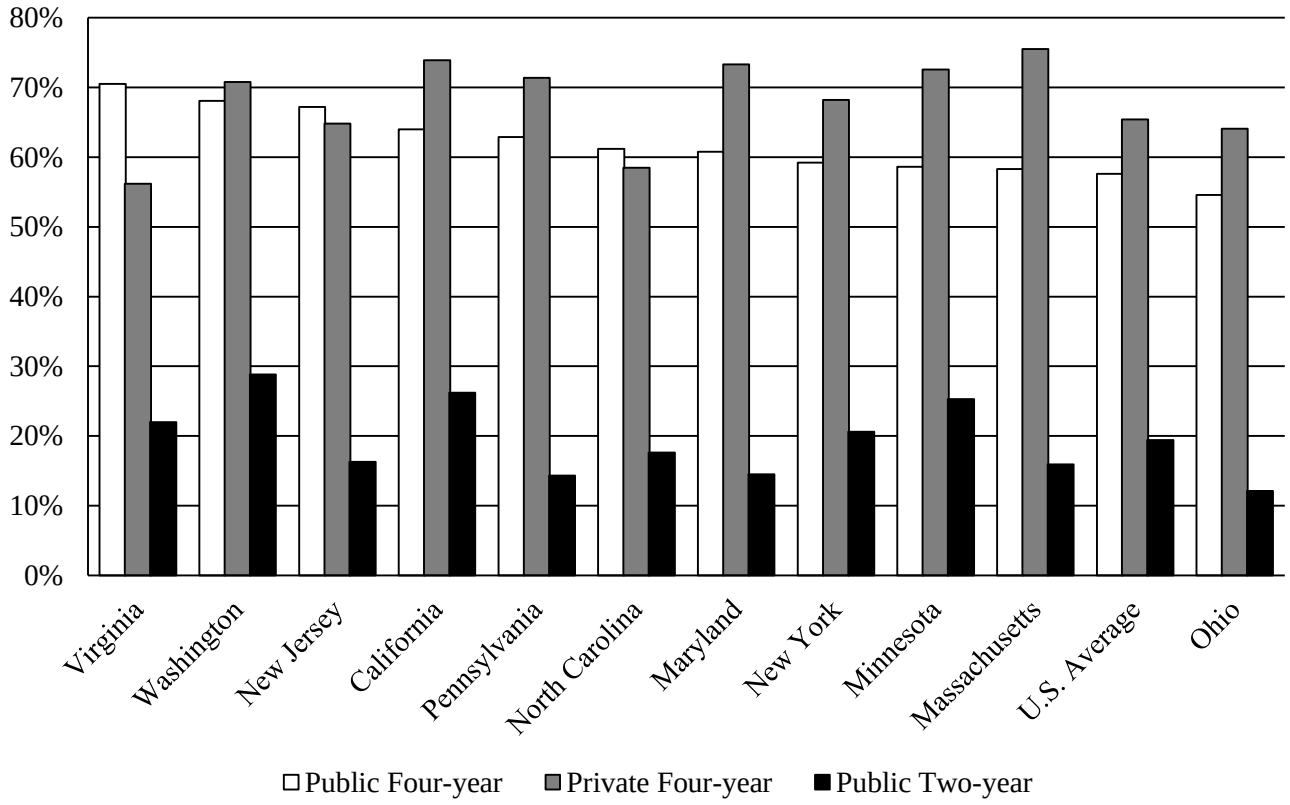
Note: All rates are pending approval by the institutions' governing boards. Only residential institutions are included; University of Maryland, Baltimore, University of Maryland, University College, and University of Baltimore excluded.

Source: St. Mary's College of Maryland; University System of Maryland Schedule of Tuition and Mandatory Fees; Morgan State University

Productivity Measures

Ultimately, higher education systems are evaluated by how many students successfully complete a program of study. **Exhibit 8** shows graduation rates across three sectors in Maryland and the competitor states. The rates used are the federal three-year graduation rate for community colleges and the six-year rate for public and private four-year institutions.

Exhibit 8
Graduation Rates Across Sectors in Maryland and Competitor States
First-time, Full-time Students
2013



Note: Graduation rates shown are students completing a two-year degree within three years or a four-year degree within six years.

Source: *College Completion*, The Chronicle of Higher Education

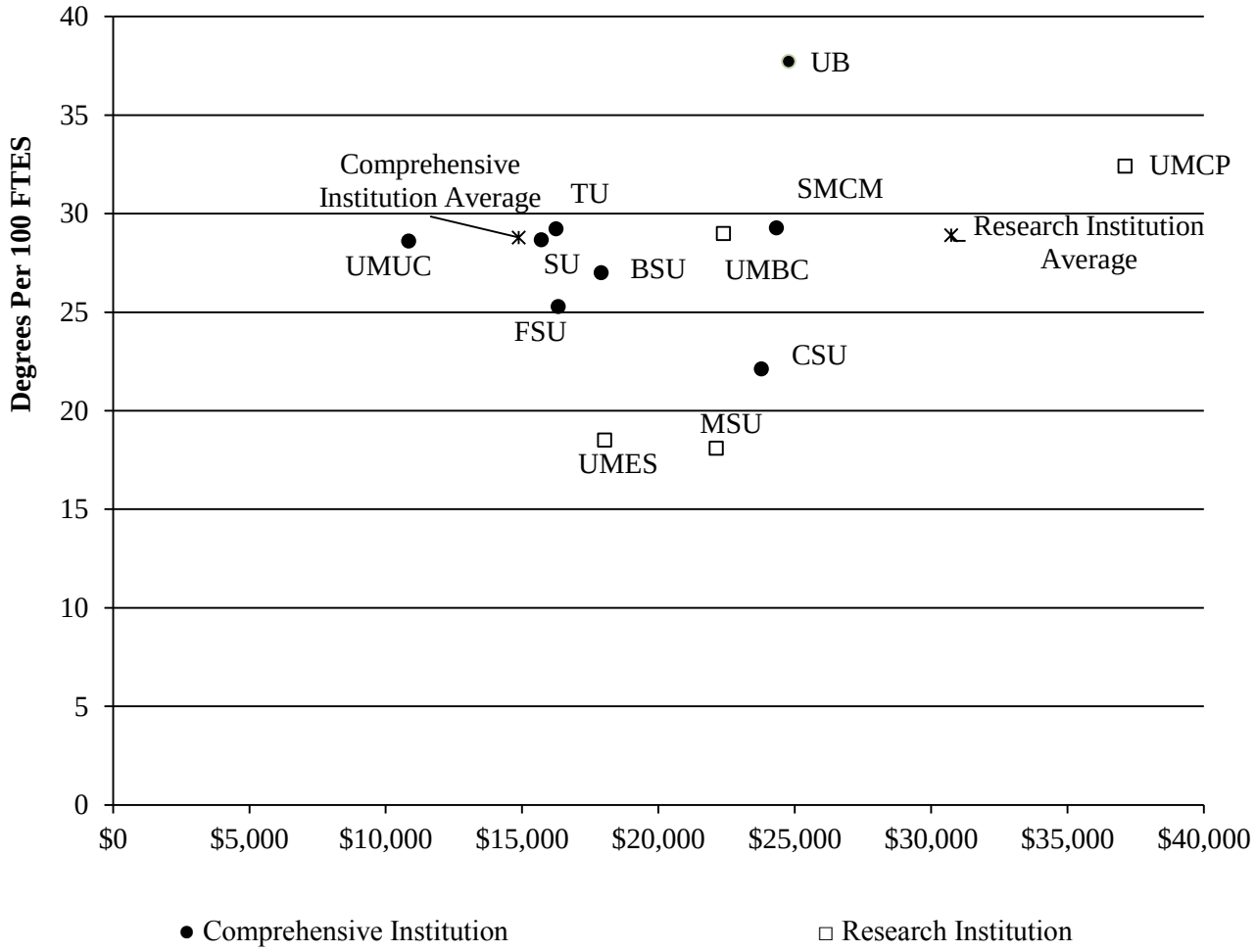
Maryland's private institutions, many of whom are nonprofit institutions represented by the Maryland Independent College and University Association (MICUA), graduate students at among the highest rates in the country. While Maryland's public four-year institutions graduate students about

3 percentage points higher than the national average, Maryland is still about 10 percentage points below Virginia and 2 percentage points below Pennsylvania. Additional graduation rate data on public four-year students, as reported by MHEC, is available in **Appendix 8**. Maryland's community colleges fare less favorably in Exhibit 8, with the third lowest rate when compared to the competitor states and below the U.S. average. Five competitor states have community college graduation rates of 20% or more, indicating an area where Maryland could do much better.

Productivity on a Per Student Basis

Another way to analyze college success is to examine what is produced for the State's investment. **Exhibit 9** shows each public four-year institution's Education and General (E&G) expenditures per full-time equivalent student (FTES) graphed against degrees awarded per 100 FTES in fiscal 2016, the most recent actual available. The colleges in the upper left quadrant of the exhibit are those that achieve higher than average graduation rates while receiving less than average revenue per FTES and are considered more efficient. By this measure, SU and TU are the most efficient residential institutions, although FSU and Bowie State University (BSU) are not far behind. UMUC's distance education enrollment is much less expensive per degree than all other institutions. Morgan State University (MSU) was among the least efficient, awarding 18.1 degrees per 100 FTES with E&G revenues of $22,114 per FTES. Similarly, the University of Maryland Eastern Shore (UMES) awarded only 18.5 degrees with revenues of $18,024 per FTES. At the other end of the spectrum is the University of Maryland, College Park (UMCP). Although it awards the most degrees per 100 FTES in the State, 32.4, it does so while spending nearly 75.0% more than the State average. This is mainly due to its resource-intensive mission to serve as a very high productivity research institution and flagship campus for the State. Given that nearly all institutions are expecting moderate increases in funding, as shown in Exhibit 1, and that the budgeted enrollment grows only 0.2%, the cost-per-degree measures will likely worsen in the near future. More information on E&G funding and enrollment is available in **Appendices 1**, **2**, **3**, **4**, and **5**.

Exhibit 9
E&G Expenditures Per FTES and Degrees Awarded Per 100 FTES
Fiscal 2016



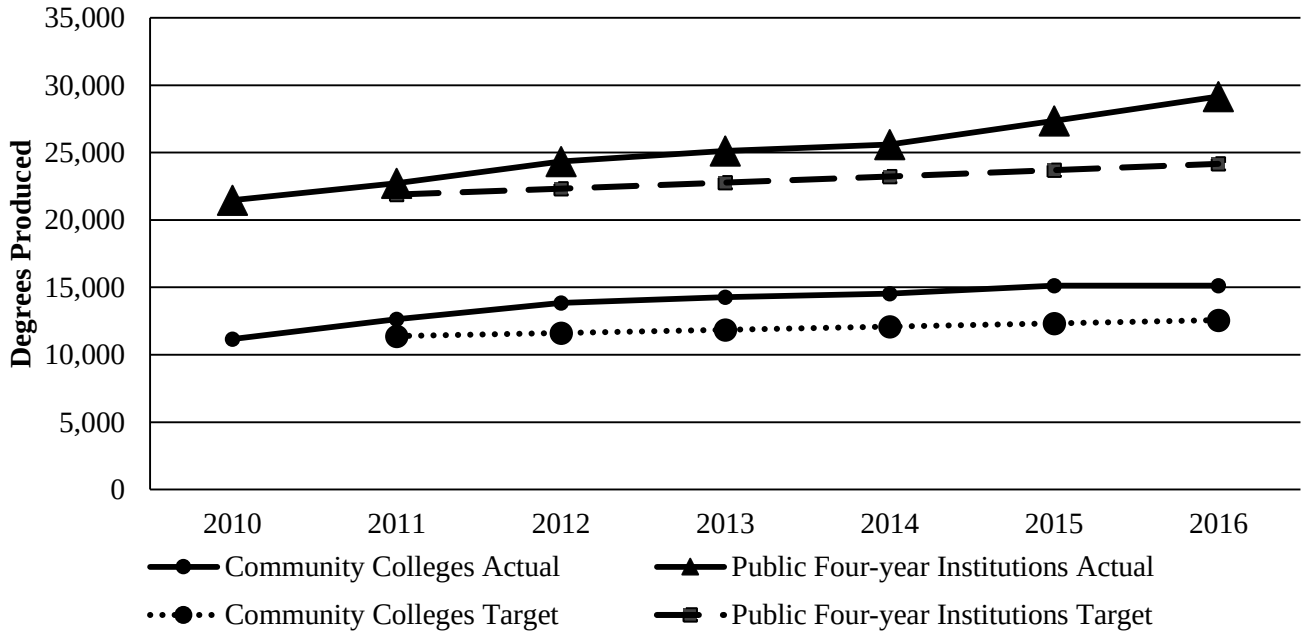
BSU: Bowie State University
CSU: Coppin State University
E&G: Education and General
FSU: Frostburg State University
FTES: full-time equivalent student
MSU: Morgan State University
SMCM: St. Mary's College of Maryland
SU: Salisbury University
TU: Towson University
UB: University of Baltimore
UMBC: University of Maryland Baltimore County
UMCP: University of Maryland, College Park
UMES: University of Maryland Eastern Shore
UMUC: University of Maryland University College

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

Progress Toward 55.0% Degree Attainment

To maintain a competitive and productive workforce, Maryland has a college completion agenda to increase degree attainment among adults to 55.0% by 2025. MHEC estimates a total of 1.8 million Marylanders will need to possess degrees to meet this goal, meaning that the State will need an additional 0.9 million degree holders between 2010 and 2025. MHEC provided an update on the State's progress in January 2017 through a *Joint Chairmen's Report* (JCR) item. After factoring in migration and mortality rates, MHEC's model determined that this goal can be reached if the public sector increases degree production by 2.0% a year, and the private sector increases by 1.7% a year. **Exhibit 10** shows the actual degrees produced and targets for the community colleges and public four-year institutions. Both sectors surpassed their respective goals in all years of data in MHEC's report, the same results as in the last JCR update provided in 2015 on the 55.0% completion goal. This raises an issue of whether the degree production goals were set too low in the model. To support best practices to reach this goal, MHEC is planning to hold its third Statewide College Completion conference in spring 2017.

Exhibit 10
55% Degree Attainment Goals by Public Sectors
Fiscal 2010- 2016

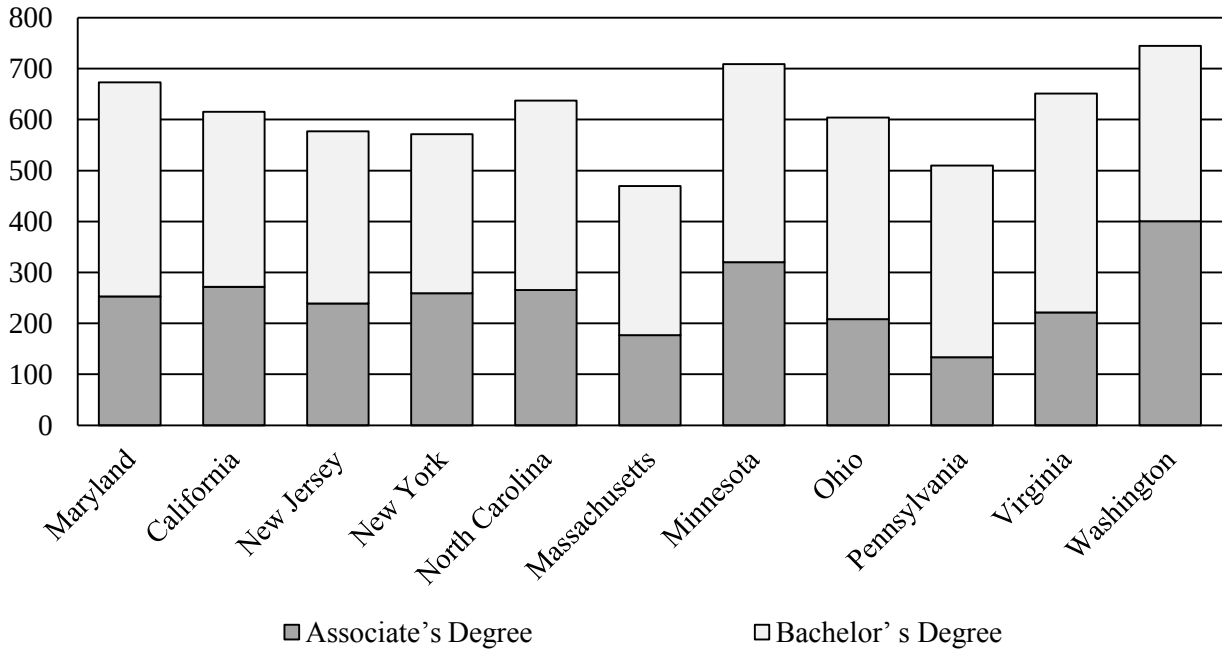


Source: Maryland Higher Education Commission

In light of the public institutions surpassing the MHEC targets, the Secretary should comment on when MHEC now projects that the State will achieve the 55% goal.

Nationally, Maryland compares favorably in terms of degrees attained per 100,000 residents. **Exhibit 11** shows Maryland, competitor states, and the national average. Among competitor states, only Virginia has a higher bachelor's degree attainment rate. Both Maryland and Virginia benefit from their proximity to Washington, DC bringing new residents with degrees to the states. Washington State stands out for having a higher associate's degree rate than bachelor's rate, and New York has similar rates of attainment across both degree types.

Exhibit 11
Degrees Conferred Per 100,000 Residents
Fiscal 2014



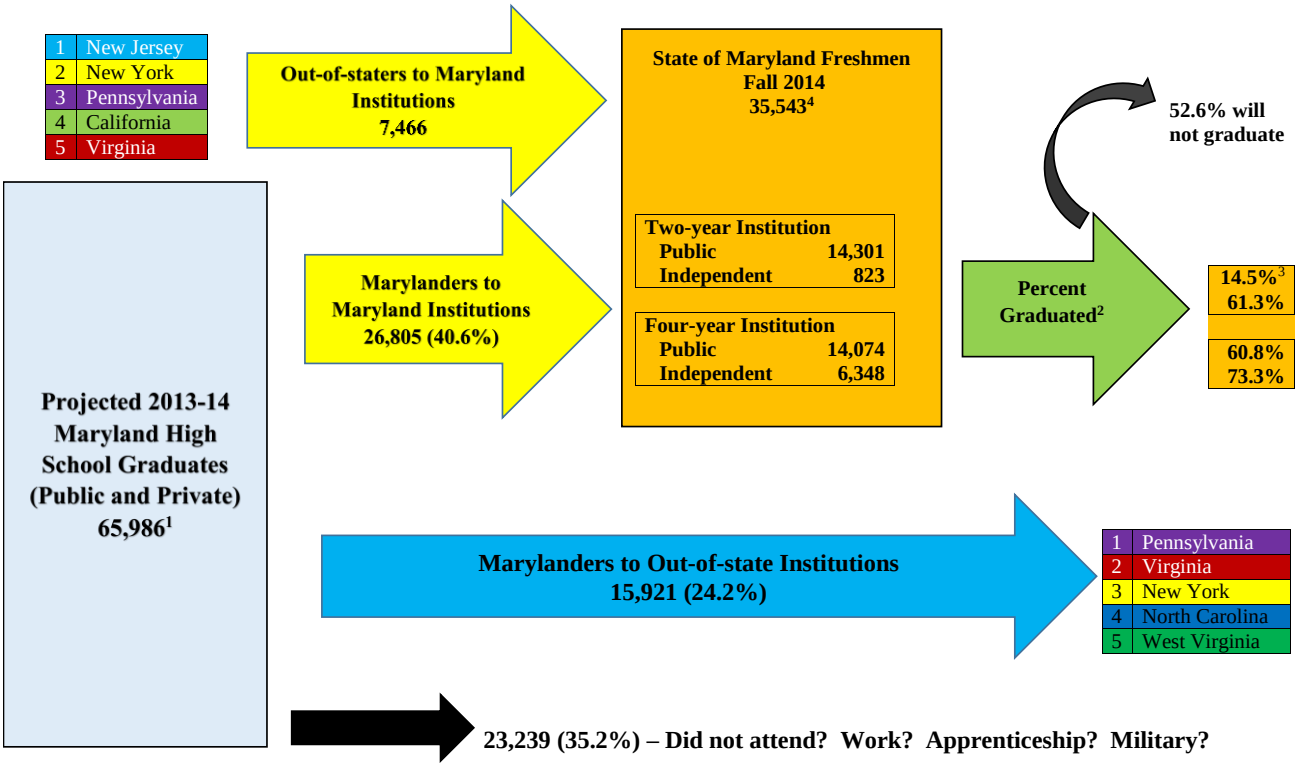
Source: *Digest of Education Statistics, Table 319.0*, National Center for Education Statistics

The Postsecondary Pipeline

To meet the 55% degree attainment goal, Maryland must maintain and improve the pipeline that moves students through the higher education system and ensure that the experience provides students a high-quality education. **Exhibit 12** shows the world of postsecondary education in Maryland and its many moving parts. The largest group moving into higher education in any given year is recent high school graduates, who numbered about 66,000 in fiscal 2014. Of this cohort, about 41% enrolled in a Maryland institution, 24% left the State to pursue higher education, and 35% left the pipeline. This final group would include students who join the workforce, the military, or pursue some other life goals separate from formal higher education enrollment. This is the first leak in the pipeline, as it is not clear

where these recent high school graduates are going and if they would have preferred to enroll in higher education but were not able to do so. Students from other states, numbering about 7,500, come into Maryland each year to attend public and private institutions.

Exhibit 12
The Postsecondary Pipeline



[1] Projections issued on Western Interstate Commission for Higher Education report; however, the Maryland State Department of Education reports 57,614 public high school graduates in the class of 2014.
[2] Rate for two-year institutions is the four-year rate of the 2009 cohort and the six-year rate for the 2007 cohort for the four-year institutions.
[3] Does not reflect students who transfer and graduate from a four-year institution.
[4] This figure includes international students.

Source: Chronicle of Higher Education; Department of Legislative Services; Maryland Higher Education Commission; Western Interstate Commission for Higher Education; University System of Maryland

The second big leak in the higher education pipeline is those students who enroll in higher education but do not graduate. Maryland's graduation rates for students in various sectors was shown in Exhibit 9. Improving those rates will mean students can graduate sooner, incur less debt, and enter

the workforce. First, however, the issue of volume moving through the pipeline, or student enrollment, must be addressed.

Higher Education Enrollment Plateaus in the Near Term

The most recent reports on higher education enrollment in Maryland present data that challenge prior assumptions regarding enrollment trends. MHEC data, discussed in more detail below, has shown that enrollment has declined in recent years and that is likely attributable to both an improving economy and a relatively flat number of high school graduates. This has been true in Maryland and the nation as a whole and led to assumptions that institutions would need to put greater focus on enrolling more nontraditional students, such as part-time students. However, both the most recent MHEC data and new Maryland high school graduate projection data suggest that there may be an increase in both the college-going rate of high school graduates and the number of high school graduates over the next decade. It is too soon to verify whether the State's college-going rate has actually changed or whether that is sustainable, but these two observations may in fact slow down the previously expected transition toward more nontraditional student enrollment at Maryland institutions.

According to MHEC, opening fall 2016 headcount enrollment in two- and four-year public and private institutions of higher education was 360,769, an increase of 2,188 students, or 0.6%, from the prior year. While fall 2016 enrollment remains about 12,600 students, or 3.4%, below the all-time high enrollment of fall 2011, the latest figures suggest enrollment has stabilized after the highly unusual declines in total enrollment in fall 2012 and 2013. With only one exception, Maryland's higher education enrollment had otherwise grown consistently from fall 1999 through fall 2011. Maryland has not experienced a period of relatively flat student enrollment since the early 1990s.

Fall 2016 enrollment outcomes varied greatly by sector. Community college enrollment declined by 3.9%, the fifth year in a row of negative growth. Public four-year institutions grew by 3.8%. However, if the mostly online UMUC is backed out of the public four-year enrollments, then residential public four-year campuses grew by only 0.1% in fall 2016. Private four-year institutions in Maryland grew by 1.1%. Broadly declining enrollment is not unique to Maryland. Data from the National Student Clearinghouse (NSC) indicates Maryland's community colleges are declining slightly faster than the national rate of 2.6%. If UMUC is backed out of the public four-year enrollment in Maryland, then Maryland's fall 2016 growth in the public four-year sector is nearly identical to NSC's rate of 0.2% for the national public four-year sector.

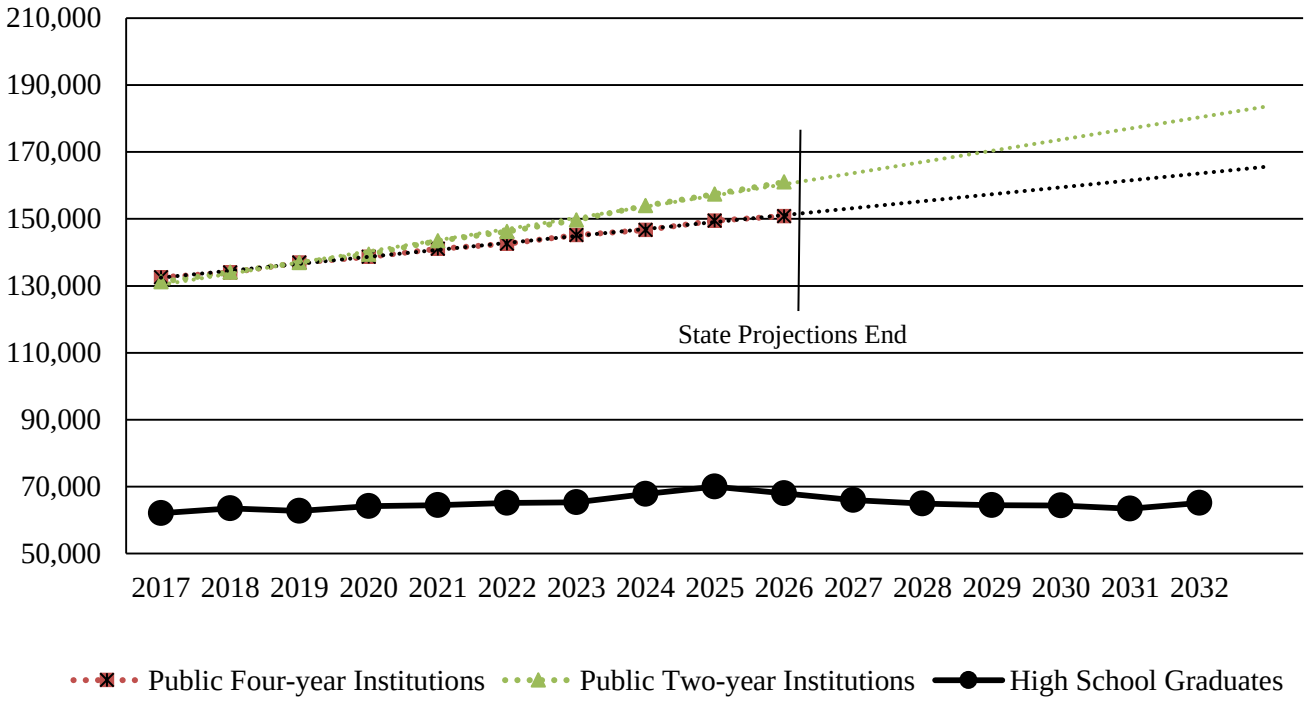
After six years of decline, first-time, full-time (FT/FT) students unexpectedly increased by 3.7% in fall 2016. This is interesting because the growth in FT/FT students appears to have occurred without a corresponding increase in the number of public high school graduates, suggesting the college-going rate of high school completers is increasing. While FT/FT students grew, the total number of full-time undergraduate students in Maryland declined for the fifth year in a row. Full-time undergraduate students are now 7.0% below the fall 2011 peak, while part-time students have declined by only 0.6%. This may signal that Maryland is moving in step with nationwide trends toward more nontraditional student enrollment. Recent enrollment projections, discussed further in this analysis, also support this conclusion.

Can Traditional Higher Education Enrollment Grow in the Long Term?

The fiscal 2018 allowance was budgeted assuming a 0.2% increase in FTES enrollment at public four-year institutions, which combines full- and part-time students into one figure. In the past, the budgeted enrollment growth and the final growth have moderately diverged. For example, one year ago, the working budget for fiscal 2016 reported growth of only 0.2%, while the final figure is a more robust 4.2%. This, however, is due entirely to rapid enrollment growth at UMUC that more than offsets enrollment underattainment at the residential four-year campuses. While UMUC's distance education programs can gain or lose enrollment quickly, the rest of the public higher education sector still relies heavily on recent high school graduates and other young adults.

Exhibit 13 shows projected undergraduate headcount enrollments by segment from MHEC's annual enrollment project report. MHEC makes estimates out to fiscal 2026, while a trend line of the estimate carries the enrollment growth out further. The lower line in the exhibit is the projected number of high school graduates in Maryland from both public and private institutions. This data is made available from the Western Interstate Commission for Higher Education, which periodically makes estimates for all states. The key finding from the latest report is that national high school graduate enrollment is expected to remain level for the next decade. However, Maryland's high school graduates are expected to grow by 9.7% from fiscal 2017 through 2026, the last year of the MHEC enrollment projections. High school graduates generally decline from fiscal 2025 to the end of the projection in fiscal 2032. The challenge for Maryland's higher education institutions is that current MHEC enrollment projections show community colleges growing by nearly 23.0% and public four-year institutions by 14.0% over the same time period of fiscal 2017 through 2026.

Exhibit 13
Projected Enrollment at Maryland Community Colleges and Public Four-year Institutions vs. Projected High School Graduates
Fiscal 2017- 2032



Note: Dotted line indicates trend of the sector's enrollment projection. High school graduates include students from public and private institutions in Maryland.

Source: *Knocking at the College Door*, Western Interstate Commission for Higher Education; *Enrollment Projections 2016-2025*, Maryland Higher Education Commission

According to the Maryland Longitudinal Data System (MLDS) Center, Maryland's college-going rate for high school graduates within one year of high school has consistently averaged about 60% in recent cohorts. The total percent of high school graduates with any postsecondary enrollment tops out at around 80%. The steady rate at which Maryland students have historically chosen to enroll in higher education means institutions will have to look to enrolling more nontraditional students or else plan on shrinking enrollment, unless the recent increase in the college-going rate is maintained. One avenue for community colleges will be to more heavily pursue dually enrolled high schools students and for both two- and four-year sectors to pursue students who have dropped out of college through programs such as reverse transfer and near completers. Both of these initiatives are discussed later in this analysis. How Maryland's institutions respond to this flat number of recent high school graduates represents an important challenge because nontraditional

students typically have longer paths to graduation. The National Center for Education Statistics (NCES) defines nontraditional students as meeting at least one of the follow characteristics:

- delayed enrollment into postsecondary education;
- attends college part time;
- works full time;
- is financially independent for financial aid purposes;
- has dependents other than a spouse;
- is a single parent; or
- does not have a high school diploma.

Historically, many of these students would have attended community colleges, but increasingly, they are also enrolling in residential four-year campuses. Recently, UMCP and the Johns Hopkins University (JHU) joined a national partnership, the American Talent Initiative, to enroll more low- and moderate-income students who might otherwise not have considered applying to more academically competitive four-year schools. This involves breaking down financial barriers to college and providing support services for students who may be the first in their family to enroll in higher education. For example, JHU will peg a student's tuition charge to a percent of family income for families below a certain income threshold.

The Chancellor of USM, the President of MSU, the President of SMCM, and the Executive Director of MICUA should comment on how four-year institutions are ensuring they are accessible to, and successful with, nontraditional students and whether the transition away from FT/FT student may be slower than previously thought.

Issues

1. Competitor State Funding Guideline Attainment

Chapter 515 of 1999 required MHEC to developed guidelines for operating funding for the public four-year higher education institutions, excluding SMCM, which receives funding through a statutory formula. MHEC identified peer institutions across the country that were similar to the Maryland institutions based on size, program and enrollment mix, and other attributes. The financial characteristics of the identified peer institutions were analyzed to determine the resources available per FTES with a goal to fund Maryland's institutions at the seventy-fifth percentile of their current peers.

The guideline for each institution is calculated by first summing the state appropriation and tuition and fee revenue per FTES of the competitor state peer institutions. This per student amount is then multiplied by the projected enrollment of the institution. The projected tuition and fee revenue is then subtracted, resulting in the recommended state investment.

The funding guidelines are a peer-based model used to inform the budget process by providing a funding standard and a basis for comparison. The guidelines were first used in fiscal 2001 to assess how Maryland's public four-year institutions were funded relative to their peers nationwide. MHEC selected the peers through a process that considered five or more variations using public institutions in the same Carnegie classification as the "home" Maryland institution. The 2008 report of the Commission to Develop the Maryland Model for Funding Higher Education included a recommendation to revise the funding guidelines to only include comparable peer institutions from Maryland's competitor states – those states in which Maryland principally competes for employers. As discussed earlier in the analysis, these states include California, Massachusetts, Minnesota, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Virginia, and Washington. The commission also recommended a funding goal of the eightieth percentile of peers for Historically Black Colleges and Universities. The report specifically defines "peer institutions" as:

> …having similar academic scope, comparable size, and a somewhat similar student profile. For consistency, schools in the same Carnegie classification have been considered whenever possible. For UMCP, as Association of American Universities (AAU) school, and other AAU schools in the competitor states have been used; for UMB, other research high institutions with medical schools or free-standing centers have been selected.

At the April 29, 2014 MHEC Commission meeting, the commission adopted the competitor state funding guideline model in which only an institution's Carnegie classification was used to identify peers, with no consideration given to other institutional characteristics such as size or student and program mix. Some institutions requested a reevaluation of their peers, which resulted in the inclusion of peer institutions not included in their Carnegie classification. This resulted in all institutions in the competitor states with the same classification as the Maryland institution being included in the group of funding peers leading to six institutions having over 60 peers. Five USM institutions with the same Carnegie classification – BSU, FSU, the University of Baltimore (UB), SU, and UMUC – all have the same funding peers despite having very different student and program mixes, while other institutions'

funding peers include those with a different Carnegie classification than the Maryland institution. Specifically:

- BSU, FSU, UB, SU, and UMUC (Carnegie Classification: Master's Colleges and Universities (Larger Programs)) all have the same 67 peer institutions representing all institutions in the competitor states with the same classification.

- TU (Carnegie Classification: Master's Colleges and Universities (Larger Programs)) has 72 peer institutions; the same 67 institutions as BSU, FSU, UB, SU, and UMUC, and 5 with a Doctoral Research University classification.

- CSU (Carnegie Classification: Master's Colleges and Universities (Smaller Programs)) has 34 peer institutions that include a mix of those with a classification of Master's Colleges and Universities (Smaller Programs) (13) and Master's Colleges and Universities (Medium Programs) (21) and that do not include any institution from Ohio.

- UMES (Carnegie Classification: Master's Colleges and Universities (Smaller Programs), which was changed in 2015 to Doctorial Universities (Moderate Research Activity)) has 54 peer institutions that include a mix of those with a classification of Master's Colleges and Universities (Smaller Programs) (14) and Master's Colleges and Universities (Medium Programs) (21), and Doctoral Universities (High Research) (19).

- UMBC (Carnegie Classification: Research University (High Research Activity) has 28 peers that include a mix of those with a classification of Research University (High Research Activity) (18) and Research University (Very High Research Activity) (10) and that do not include institutions from Minnesota.

- UMCP (Carnegie Classification: Research University (Very High Research Activity)) has 18 peers in which not all are land-grant institutions. It should be noted that no institutions from Massachusetts are included because the public institution is not a member of the Association of American Universities.

- MSU (Carnegie Classification: Doctoral Research University) has 21 peers that include a mix of those with a classification of Doctoral Research (5) and Research University (High Research Activity) (16) and that do not include institutions from Minnesota, Virginia, or Washington.

Overall, the methodology used to determine the current funding peers dilutes the purpose of the guidelines as it does not reflect a Maryland institution's funding level compared to that of its comparable peer institutions. This is a concern, for while the guidelines have been used to benchmark Maryland's funding of its institutions, Chapter 25 of 2016 uses the guidelines as a basis to increase the funding to certain institutions. **The Secretary of the Maryland Higher Education Commission should comment on the process used for selecting comparable funding peer institutions and why size, program and enrollment mix, and other attributes were not taken into consideration.**

The state of Washington conducted a similar analysis to compare per student funding and tuition levels of higher education institutions to comparable institutions in seven states that ranked the highest in the New Economy Index of 2002, which includes Maryland. The analysis was used to develop a funding trajectory for each institution that would allow the state to achieve its funding goal that institutions receive funding at least equal to 60% of their comparable peers. In selecting comparable institutions the Carnegie classification system was used to identify institutions where the mix of full- and part-time students, the selectivity, and the transfer-in rates were similar to each of the Washington intuitions. In general, 12 peer institutions were identified for each institution, except for Washington State University, whose peers were only the land-grant institutions and the University of Washington, which has 10 comparable institutions.

The current group of funding peer institutions needs to be re-evaluated, using the process as outlined in the Commission to Develop the Maryland Model for Funding Higher Education report in which peer funding institutions are selected based on comparable characteristics of the Maryland institution such as classification, size, and student and program mix. For UMB and UMCP, Chapter 25 of 2016 requires the presidents to develop an implementation plan that identifies competitor State peers for the University of Maryland. This will provide more accurate information on how Maryland compares to its competitor states in funding higher education institutions. While there may be some concern about the volatility in using a small group of comparable peer institutions in which funding of higher education varies among states based on the economy and the state's priority, **Exhibit 14** shows that the attainment level changed significantly for some institutions in Maryland using the current peers. For instance, the attainment level for MSU increased from 74% in fiscal 2016 to an estimated 96% in fiscal 2017, while that of BSU declines from 89% to 84%.

DLS recommends MHEC, in coordination with USM, MSU, DLS, and DBM, revise the funding peer institutions for each public four-year institution. In light of the recent strategic partnership with UMB and UMCP, the appropriate method to select their peer institutions should also be examined.

Exhibit 14
Funding Guideline Attainment Level
Fiscal 2016 and 2017
(in Millions)

	Fiscal 2016			Estimated Fiscal 2017		
	Funding Guideline	**Approp.**	**Attainment**	**Funding Guideline**	**Approp.**	**Est. Attainment**
Bowie State University	$46,880	$41,526	89%	$51,438	$43,931	85%
Coppin State University	34,862	44,755	128%	34,089	46,672	137%
Frostburg State University	45,445	38,471	85%	49,625	41,497	84%
Salisbury University	66,993	47,533	71%	70,310	51,857	74%
Towson University	177,856	107,050	60%	174,149	118,599	68%
University of Baltimore	53,756	34,639	64%	59,759	37,518	63%
UM, Baltimore	317,827	215,405	68%	321,678	227,355	71%
UM Baltimore County	189,588	111,151	59%	195,175	118,853	61%
UM Center for Environmental Science	27,468	22,353	81%	29,690	23,114	78%
UM, College Park	644,606	480,926	75%	638,771	521,031	82%
UM Eastern Shore	49,051	38,084	78%	52,444	40,637	77%
UM University College[1]	72,353	38,597	53%	161,418	41,914	26%
USM Office		23,568			31,129	
USM Total	**$1,726,686**	**$1,244,058**	**72%**	**$1,838,546**	**$1,344,107**	**73%**
Morgan State University	$113,745	$84,565	74%	$96,794	$92,552	96%
Total	**$1,840,431**	**$1,328,623**	**72%**	**$1,935,340**	**$1,436,659**	**74%**

UM: University of Maryland
USM: University System of Maryland

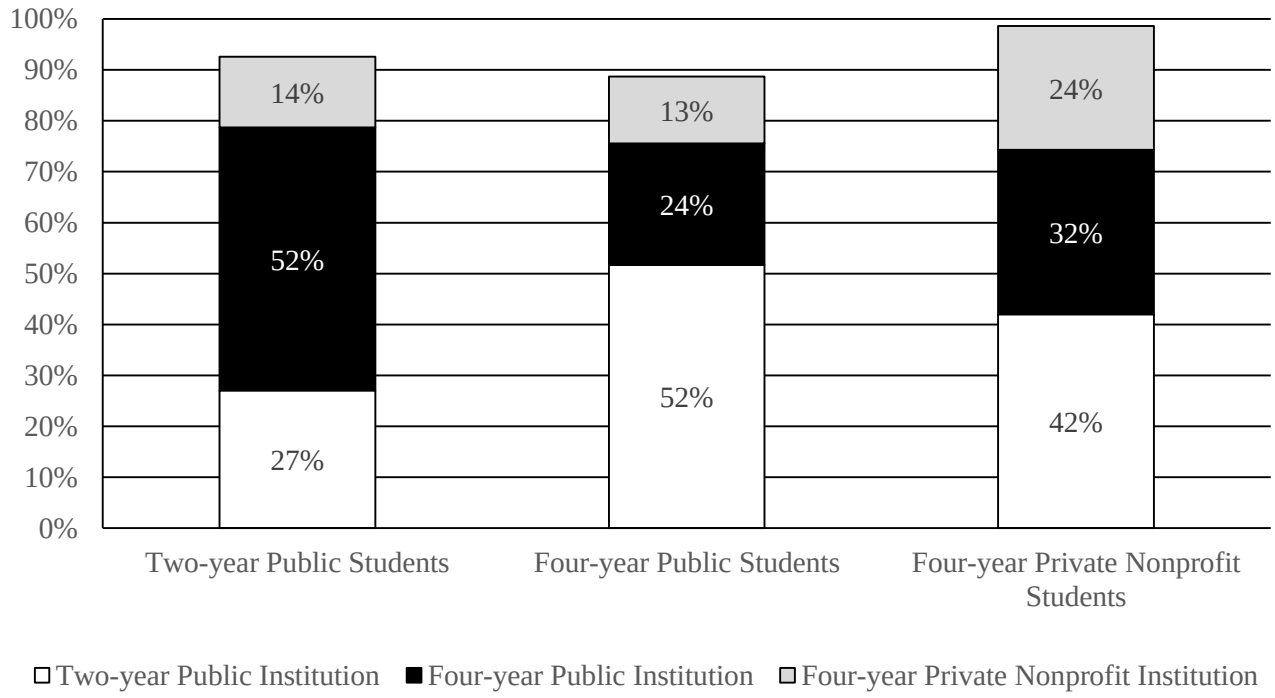
[1]Fiscal 2017 attainment level decline attributed to enrollment increase from 12,844 to 18,618 and increase in per full-time equivalent student funding.

Source: Maryland Higher Education Commission

2. Statewide Agreements Pave the Way for Transfer Students

In a national study, NCES found that 35% of college students transfer to another institution within six years of initial enrollment. A different study from NSC tracked exactly where students were going. **Exhibit 15** shows where Maryland students from the 2008 cohort first transferred using national data. Overall, 52% of community college students' first transfer was to the public four-year sector while 27% transferred to another community college. A similar percentage of public four-year institution students transferred to community colleges. Additionally, a significant portion of students from nonprofit four-year institutions, 42%, also transferred to community colleges. This data on transfer destinations, along with the knowledge that just over one-third of students end up transferring at least once, shows the importance of ensuring that transfer students are supported by institutions and State policies that maximize their success.

Exhibit 15
Destination Sector of First Transfer for Maryland Students
Fall 2008 Cohort



Note: The transfer rate reported here considers the student's first instance of movement to a different institution, before receiving a bachelor's degree and within a period of six years through summer 2014. For those students who began at two-year public institutions, transfers are also included that happened after receiving a degree at the starting two-year institution. Numbers do not sum to 100% due to incomplete or missing data.

Source: *Transfer & Mobility: A National View of Student Movement*, National Student Clearinghouse Research Center

In Maryland, just over 71,000 students, or 55.0% of all community college students, were enrolled in Associate of Arts programs designed for the continuation of education at a four-year institution in fall 2015. This transfer student body was, by headcount, 27.0% of the fall 2015 public undergraduate enrollment in Maryland at that time. Transfer students primarily come from Maryland's largest community colleges – Montgomery College, the Community College of Baltimore County (CCBC), and Anne Arundel Community College (AACC). These three institutions together accounted for 48.2% of the 9,751 community college students transferring to public four-year institutions in fall 2014. As shown in Exhibit 15, students can also transfer in the reverse direction, and in fall 2014, public four-year institutions sent 2,076 students to two-year institutions. Montgomery College and Howard Community College (HCC) together were the destination of choice of 40.0% of these students. As all of these students move across campuses, significant challenges arise concerning how college credits earned at one institution can be transferred to another. According to MHEC, in 2000, only 16.0% of community college transfer students lost no credits in the transfer process. By 2014, 45.0% of students lost no credits in the transfer process. New statewide agreements that will fully be in place by the 2017-2018 academic year should drive the no-credits-lost rate up to near 100.0%.

Statewide Transfer and Reverse Transfer Agreements

In Maryland, MHEC's Student Transfer Advisory Committee (STAC) is responsible for coordinating policies to build seamless transfer pathways and improve outcomes of transfer students. This committee first met in 1990 and was codified in 2012 (Chapter 327 of 2012). Its next biennial report on transfer student policies and outcomes is due in December 2017. In 2013, Chapter 533 was enacted (SB 740) – the College and Career Readiness and College Completion Act (CCRCCA), an omnibus bill intended to implement the policies, best practices, and strategies determined to best align the P-20 continuum of education in the State. The CCRCCA codified the goal that students earn an associate's degree before leaving the community college or transferring to a public senior higher education institution. In addition, the legislation charged MHEC, in collaboration with the public institutions of higher education, to develop and implement the following:

- a statewide transfer agreement whereby at least 60 credits of general education, elective, and major courses that a student earns at any community college in the State toward an associate's degree must be transferrable to any public four-year higher education institution in the State for credit toward a bachelor's degree by July 1, 2016; and

- a statewide reverse transfer agreement whereby at least 30 credits that a student earns at any public four-year higher education institution in the State toward a bachelor's degree are transferrable to any community college in the State for credit toward an associate's degree by July 1, 2016.

STAC, with representation from all segments of higher education, as well as faculty; the Maryland State Department of Education (MSDE); and the Department of Labor, Licensing, and Regulation, worked on this charge, and, in July 2016, MHEC submitted the *Maryland Statewide Transfer Agreement and Reverse Credit Transfer Agreement*. These agreements include provisions to improve existing transfer processes by guaranteeing or establishing:

- conditions for guaranteed transfer admission;
- transfer of either an associate's degree or 60 credits earned towards a degree at a community college to a public four-year institution;
- inclusion of a reverse transfer option where a student can transfer at least 45 credits (including general education credits) from a public four-year institution to any community college;
- improved information about transfer for students and institutions;
- equitable treatment of native and transfer students at all institutions;
- a permanent oversight structure for transfer; and
- opportunities for participation by independent institutions.

In fall 2016, MHEC submitted final revisions to regulations to align the transfer and reverse transfer agreements with the CCRCCA. MHEC expects these revisions to take effect in March 2017. These regulatory changes clarify the roles and responsibilities between institutions sending and receiving transfer students, MHEC, and the students themselves. This will also better align required credits for a degree, with a goal of students completing in a more timely fashion, thereby decreasing the cost of a degree. Prior to this, regulations did not allow students to seamlessly transfer electives or courses related to a major unless a student happened to be in one of three statewide articulation agreements in the fields of teaching, nursing, and engineering. Now, all students can transfer electives and major courses. Reverse transfer has already been implemented due, in part, to the Lumina Foundation' Credit When It's Due (CWID) grant program that resulted in 820 reverse transfer degrees in fiscal 2015. According to the CWID study, 92% of Maryland's community college students transferred to public universities without an associate's degree. This rate is much higher than Maryland's competitor states who also participated in CWID: Minnesota (79%), Ohio (75%), New York (59%), and North Carolina (58%).

Challenges Ahead on the Transfer Student Pathways

In December 2016, MHEC submitted a JCR item on *Expanding Reverse Transfer* that explored challenges to broadening the scope of reverse transfer to include students who have never attended a community college. MHEC identified two immediate challenges. First, students must complete a certain set of courses to earn a two-year degree; merely accumulating 60 credits is not sufficient for reverse transfer. Students must also earn at least 15 credits from the campus that issues the associate's degree. Second, regulations currently prohibit MHEC from approving two-year degree programs at four-year institutions, which means students must transfer back to their original community college to receive a reverse transfer degree. Due to the impending implementation of the two statewide transfer agreements, MHEC recommended reviewing their effectiveness and revisiting new reverse transfer pathways again in two years.

Another issue lies with the Articulation System of Maryland Colleges and Universities (ARTSYS), the web portal maintained by USM that serves as the central hub for transferring credit between higher education institutions in Maryland. Currently, all public institutions and eight independent institutions participate in ARTSYS. Its functionality has been dramatically improved in recent years due to the emphasis placed on transfer student success by the CCRCCA. However, ARTSYS currently does not have the ability to show two-year to two-year course equivalencies or four-year to four-year course equivalencies. This means that while Maryland is now thoroughly integrated in vertical transfer, there is more that could be done to accommodate horizontal transfer students.

In the 2017 interim, STAC will continue to work on improving the credit transfer process. The P-20 Council has also specifically requested more information on when the final transfer regulations are in place for both transfer pathways; what challenges remain for transfer student success; how many reverse transfer degrees are awarded; and how to improve the effectiveness of ARTSYS. MHEC also plans on a public outreach campaign to ensure that students and institutions are informed about these new degree pathways. STAC will also consider how to build cross-segment standards for awarding transfer credit earned through prior learning assessments and other competency-based methods, which would have large implications for online schools, like UMUC, and adult student populations, like veterans. All of this work toward standardizing credit transfer policies will greatly improve the academic paths for students who are not enrolled full time or who move between institutions during their studies.

The Secretary of Higher Education and the Chancellor of USM should comment on what resources would be needed to ensure that ARTSYS becomes a complete one-stop shop for all Maryland transfer students.

The Secretary should comment on MHEC's forthcoming campaign to educate both students and institutions about the degree pathways created by the statewide transfer and reverse transfer agreements and how the agency will track transfer student success.

3. Dual Enrollment Surges 50% in One Year

In addition to transfer student pathways, one of the main goals of the CCRCCA is to increase the availability and accessibility of college-level courses to high school students through dual enrollment. This will increase college access by introducing college credit-bearing courses to more high school students and also increase college readiness and completion by getting students through college-level coursework and earning college credit before graduating from high school. The CCRCCA also requires an annual report on dual enrollment from MLDS. The fourth, and most recent, report covers students enrolled in academic year 2014-2015 and includes significantly more information than prior reports by including enrollments at public four-year institutions, course information, and comparisons of dual enrollment policies in select states, including competitor states Minnesota and Washington.

Overall, there were 9,058 Maryland public high school students pursuing dual enrollment in academic year 2014-2015, an increase of approximately 50% from the prior year. While just over

6,500 of these students were in grade 12, the dual enrollment of students in grades 9 through 11 more than doubled in academic year 2014-2015. This indicates that dual enrollment is taking hold in high schools across the State and is spreading to more students. However, dual enrollment participation across the State is highly uneven.

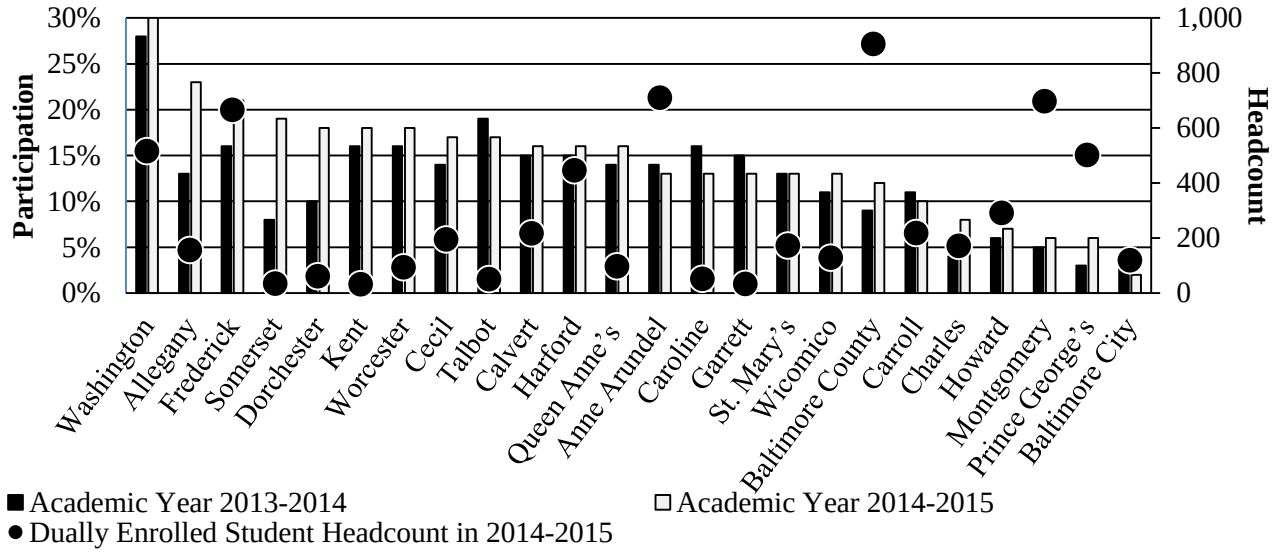
By fall 2014, all community colleges had reached Memoranda of Understanding with their respective local education agencies to offer dual enrollment. Since then, community colleges have been the overwhelming partner of choice for dual enrollment, teaching 91% of dually enrolled students in academic year 2014-2015, although this is down from 97% in fall 2013. This is due to dual enrollment expanding to other higher education sectors. For example, three four-year institutions – BSU, FSU, and UMBC – now each have approximately 70 dually enrolled students. This is relatively small compared to community colleges, which each average about 375 students but provides for more locations and greater access to dual enrollment content.

As in the fall 2012 data, white students represented only about 49% of the general high school student body but account for about 65% of dual enrollment. Similarly, female students are half of high school enrollments but 65% of dual enrollments, which is very similar to broad trends in general higher education enrollments. Three years after the CCRCCA implementation, African American students, Hispanic students, and students on free and reduced-price meals (FRPM) all remain underrepresented in dual enrollment classes. Part of this may be due to where dual enrollment has caught on, mainly in Western Maryland, and where it has not, such as the counties near the District of Columbia and in Baltimore City. **Exhibit 16** shows dual enrollment headcount and dual enrollment participation by county.

Exhibit 16

High School Student Dual Enrollment Participation Rate by County

Percent of Grade 12 Students



Source: Maryland Longitudinal Data System Center

Development of dual enrollment statewide has not been uniform. Overall, Allegany, Frederick, and Washington counties now have participation rates exceeding 20%. At the other end, some populous jurisdictions like Montgomery and Prince George's counties and Baltimore City have relatively low participation rates of around 5% or even less. Some counties with smaller populations, like Somerset and Dorchester, showed very large one-year increases in dual enrollment participation. Despite the overall growth, six jurisdictions, including Baltimore City, saw year-over-year declines in dual enrollment of 1% to 3%.

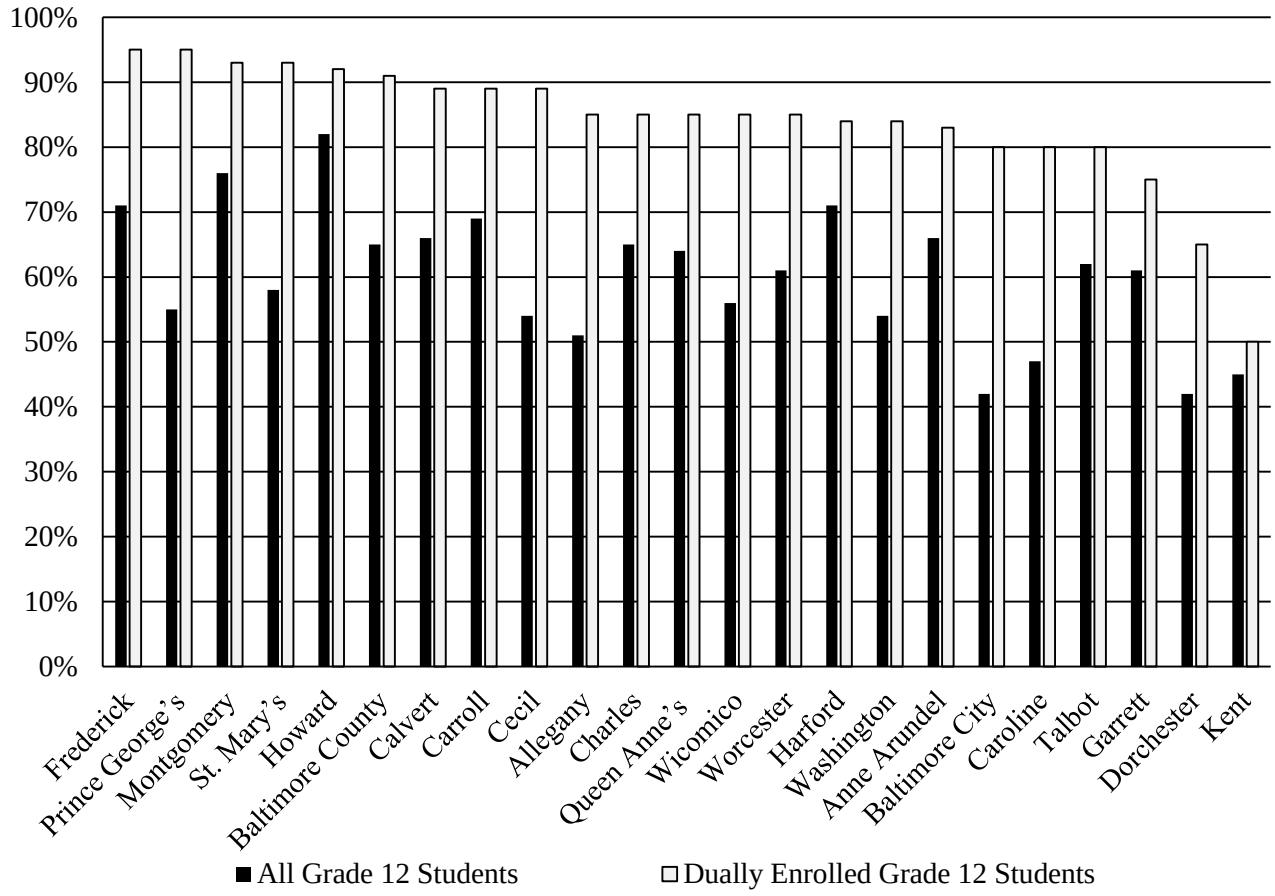
The latest MLDS report is also the first to include course information. However, only about 30% of dually enrolled students in academic year 2014-2015 had course information reported through MSDE to MDLS. This rate is expected to improve over time as local school systems become more proficient at reporting course information. The findings stemming from reviewing this new academic information are a bit unusual in that the largest number of dual enrollment courses taken (2,597) were classified as miscellaneous. This category includes independent study, career and technical education, and study skills. The next largest courses were English (2,256), physical sciences (2,173), and mathematics (1,965). Some of the reporting may improve in subsequent data collections as more course offerings are recorded and course classification codes become more well understood. As reporting improves, it remains to be seen whether the high number of miscellaneous classes is accurate or partly due to reporting errors. If the former, that would raise questions as to why students are pursuing dual enrollment and if they are doing so as part of a thought out program of study that incorporates a degree pathway. Currently, course classification reporting rates vary greatly by county, with only three jurisdictions reporting 85% or more of courses. Washington County, which has the highest participation rate in the State as shown in Exhibit 16, reported only 3% of its coursework taken. MLDS was able to locate dual enrollment course information from three states for comparison – Illinois, Iowa, and New Mexico. In those states, the most popular courses were English, mathematics, and health professions, with no catchall miscellaneous categories listed as popular. In the future, more nuanced course information will enable more trend analysis of student behavior and outcomes.

Dual Enrollment Begins to Pay Off

Regardless of what students studied, 48% of dually enrolled grade 12 students in academic year 2014-2015 earned one to three college credits, 30% earned four to nine credits, and 5% earned more than nine credits. The remaining 17% of students had not earned credit by the end of the academic year. This reporting is likely to improve in subsequent years as currently about one-quarter of dually enrolled students were not included in these calculations due to missing data. Later, it will be possible to determine exactly how much money students are saving in bypassed credit hour tuition and fees due to accrued dual enrollment credit compared to what, if any, the student's family was charged by the local education agency (LEA) for dual enrollment.

Earning credit is crucial, but the ultimate goal of dual enrollment is to enable access and success to postsecondary education. **Exhibit 17** shows the college-going rate of all grade 12 students and grade 12 students who took dual enrollment courses. Overall, the college-going rate for dually enrolled students exceeded the all student rate by about 25 percentage points statewide. In Baltimore City and Prince George's County, the increase was approximately 40 percentage points. It is not immediately clear why Dorchester and Kent counties seem to be outliers with lower college-going rates, especially since they have higher than average dual enrollment participation, as shown earlier in Exhibit 16.

Exhibit 17
Percent of Grade 12 Students Enrolling in Higher Education One Year Later
Academic Year 2013-2014 to 2014-2015



Note: Somerset County's data is suppressed due to the size of its dual enrollment cohort.

Source: Maryland Longitudinal Data System Center

Interim 2017 Work on Dual Enrollment

In the 2017 interim, MHEC and MSDE will jointly issue a new dual enrollment report. The P-20 Council has also indicated that it is interested in discussing with MLDS the feasibility of including budgetary or anecdotal information in the annual dual enrollment report.

While the findings of the latest MLDS report indicate a positive upward trend in the number and percentage of dually enrolled students in Maryland, the true research power of the MLDS reporting

will become more apparent as the first dual enrollment cohorts that are being tracked progress through higher education. With additional years of longitudinal data, MLDS reports that it will be able to examine longer-term outcomes for dually enrolled students including college degrees earned and time to degree. Future research will also focus on using dual enrollment to predict college outcomes after controlling for student demographic characteristics. The findings also highlight the importance of continued focus on student involvement in dual enrollment, particularly students currently underrepresented in the dually enrolled population, such as male students, minority students, and students eligible for FRPMs. Under CCRCCA, LEAs are not permitted to charge FRPM students any tuition or fees for dual enrollment, so this should be an incentive for those students. This suggests a need for more outreach to make students aware of dual enrollment.

In order to fully realize the intent of dual enrollment within the CCRCCA, MHEC previously stated several challenges that need to be addressed including coordinating a statewide dual enrollment outreach campaign that would make all students and parents aware of dual enrollment opportunities and determining whether noncredit certification courses that are part of a Career and Technical Education curriculum or apprenticeships should be included in a dual enrollment program.

The Secretary of Higher Education should comment on how MHEC and higher education institutions can work with local school systems to coordinate a statewide dual enrollment outreach campaign to ensure that all Maryland students and parents are aware of dual enrollment opportunities. The Secretary and the Director of the Maryland Association of Community Colleges (MACC) should also comment on whether noncredit courses that are part of Career and Technical Education or apprenticeships can be incorporated into dual enrollment pathways. Finally, the Director of MLDS should discuss whether it is possible for the annual dual enrollment report to include data from the most recent completed academic year.

4. First in the World Maryland Mathematics Reform Initiative

In September 2015, USM received a four-year $3.0 million First in the World (FITW) grant from the U.S. Department of Education Fund for the Improvement of Post Secondary Education. FITW seeks to support the development, replication, dissemination, and evidence of innovative solutions to address the challenges of retaining at-risk students. USM will use the grant to fund its work in helping non-science, technology, engineering, and mathematics (STEM) students perform better in developmental mathematics courses through the Maryland Mathematics Reform Initiative (MMRI), a collaborative effort between USM institutions and Maryland community colleges.

The goal of MMRI is to develop and implement a new statistics curriculum for non-STEM students that is as rigorous as the traditional algebra/calculus curriculum sequence but is more relevant to what liberal arts and social science students need for their majors. It is expected that providing an alternative mathematical pathway for these students will lead to an increase in retention and graduation rates.

Overall, approximately 71% of Maryland's community college students test into developmental math courses. For those students who are non-STEM majors, successfully completing algebra II proves

to be a major obstacle in continuing their academic career. The problem is mainly due to a disconnect between algebra and the mathematics (*i.e.*, statistics) that these students need to be successful in their programs. While some community colleges offer an alternative pathway for non-STEM students, a pathway dependent on their relation with the four-year institution, most do not due to how the State general education regulations were interpreted which stated "…at or above the level of college algebra." Many inferred this as being algebra II, which led to non-STEM community college students being advised to take algebra II. Since algebra II did not necessarily align with their major requirements, it resulted in high failure and dropout rates. In 2014, the regulation was revised to allow for more flexible mathematics pathways that would better align with a student's major or career, requiring "…one course in mathematics, having performance expectations demonstrating a level of mathematical maturity beyond the Maryland College and Career Ready Standards (including problem-solving skills and mathematical concepts and techniques that can be applied in the student's program of study)."

The FITW grant funds the development, implementation, and evaluation of a new developmental statistics pathway leading to a general education statistics course. The 12 partnering institutions – 5 USM institutions (CSU, TU, UB, UMBC, and UMUC) and 7 community colleges (AACC, Cecil College, College of Southern Maryland, Garret College, Harford Community College, HCC, and Montgomery College) – serve approximately 158,000 new students each year.

These institutions are the early adopters of the new pathway that was launched in fall 2016 with the goal that evidence will show an alternative pathway is successful and thus led to adoption by all public higher education institutions. In addition, 13 affiliate institutions that do not have access to the FITW grant funding do have access to all other resources. The affiliated institutions include Allegany County Community College, BCCC, Carroll Community College, Chesapeake College, CCBC, Frederick Community College, Hagerstown Community College, Hood College, McDaniel College, MSU, Prince George's Community College, St. John's College, and Wor-Wic Community College.

Pathway Development

The focus of the initiative is the creation of a pathway in statistical reasoning by developing a developmental course that meets the needs of students who are up to two levels below college-level math, for whom algebra is not a requirement for their intended area of study, and that prepares them for success in college-level statistics.

Each partner institution has begun developing a plan for implementing the statistical pathway and determining which students this would be appropriate for. The plans include strategies for gaining buy-in across campus; communicating with faculty, staff, and students; developing new courses; advising students on the appropriate pathway; and collecting data needed for evaluating the pathway. This requires input not only from faculty but also advising, placement, registrars, enrollment staff, and management. Because this pathway will benefit students who are undecided or those whose major relies on a fundamental statistics course, each institution met with the personnel across all disciplines to determine which majors and programs required college algebra and which would be better served with a statistical pathway.

Faculty and staff at the partner institutions spent spring and summer 2016 developing their courses, launching the first courses in fall 2016. As shown in **Exhibit 18,** institutions offered 60 sections with 959 students taking the new statistics pathway. Working with Westat, the evaluator for the project, student level data was identified that could be collected to track program and success through the new pathway, as well as the progress of a comparison group who took algebra II.

Exhibit 18
Enrollment by Institution
Fall 2016

	Sections	Enrollment
Anne Arundel Community College	2	36
Cecil College	30	331
College of Southern Maryland	3	25
Coppin State University	1	13
Garrett College	2	40
Harford Community College	3	74
Howard Community College	3	45
Montgomery College	4	95
Towson University	8	179
University of Baltimore	2	40
University of Maryland Baltimore County	2	81
University of Maryland University College	n/a	n/a

Note: The University of Maryland University College will launch a new course in spring 2017.

Source: University System of Maryland

Challenges and Next Steps

The next steps over these next few years for the FITW project include:

- ensuring enough students enroll in the new pathway so as to be able to determine the effects of the developmental statistics course on a student's retention and persistence toward degree completion;

- working with partner institutions to determine the best way to ensure sections of the new statistical courses are measuring the same outcomes;

- working with partner and affiliated institutions and others in the State to ensure the new courses seamlessly transfer; and

- continuing to improve the way data is gathered to monitor the progress of the students and the project.

USM and MACC should comment on any preliminary findings or observations from the study, and how the study's results will be communicated to MSDE and LEAs in terms of modifying college and career readiness standards and degree pathways for dually enrolled and other students.

5. Changes at Maryland 529

On July 1, 2016, the College Savings Plans of Maryland officially became Maryland 529. As of fall 2016, all marketing materials have been rebranded and the website has been completely redesigned. The agency also recently submitted two JCR requests on (1) customer service issues and implementation of ABLE; and (2) development of a new savings account. The agency is also implementing a new contribution matching program.

Report on Plan Expectations and Customer Service

Maryland 529 has two existing savings plans – the Maryland College Investment Plan (MCIP) and the Maryland Prepaid College Trust (MPCT). The program manager for the MCIP, T. Rowe Price, provides all recordkeeping and customer service functions. T. Rowe Price employs 70 associate's to perform customer service, sales, and processing functions. As of November 2016, the MCIP had over 240,000 accounts and $4.7 billion in assets. The contract between Maryland 529 and T. Rowe Price outlines service requirements, such as rates at which telephone calls must be answered, timeliness of correspondence, and accuracy of check posting. The vendor has consistently met these standards. The contract to renew T. Rowe Price as the program manager for the MCIP will go before the Board of Public Works in January 2017.

The MPCT assets are exclusively handled by staff of Maryland 529. As of December 2016, the MPCT assets were almost $1.0 billion. Since May 2015, Maryland 529 has been reorganizing its operations to address a mismatch between the MPCT's growth and staff capabilities. Maryland 529 ceased contracting customer service to an external call center and will now manage customer service internally. Maryland 529 is currently hiring a director of operations, a new position to implement policies and standards to improve customer service with prospective and existing account holders. Maryland 529 is also adding five new positions (four are filled) to improve customer service, such as benefit processing. The new staff will respond to customer inquiries on the same business day. Until June 2016, Maryland 529 lacked the ability to capture routine operation data, such as call volume or benefit payment volume, making the agency unable to analyze its own business cycle. Data is now captured daily and will inform staffing and information technology needs. Maryland 529 would like to meet the same service standards that T. Rowe Price meets for the MCIP account holders. Additional steps include:

- Beginning in late 2017, Maryland 529 will deploy a new recordkeeping system for both 529 plans, the first update since 1998. This will enable improvements to the website interface for account holders and enhanced electronic communication options, including the ability to produce online statements.

- Maryland 529 is working with institutions that receive a high number of payments to explore a more efficient payment workflow through automated clearinghouse payments. This would dramatically speed up tuition benefit payment in a student's account.

Finally, Maryland 529 states that while the agency is committed to establishing Maryland's ABLE plan by October 2017, implementing the new 529 plan in-house represents an overwhelming administrative burden and would require direct State support for startup costs. Other states mentioned in the JCR required $3 million to $4 million. The fiscal 2018 allowance includes a $194,500 grant for ABLE administration. Instead, Maryland 529 will pursue contracting for a third-party administrator, contracting with another state, or joining a consortium of states to ensure Marylanders will have access to an ABLE program.

Report on Feasibility of 529 Savings Account Plans

A second JCR examined the feasibility of developing a savings account plan at Maryland 529. This third college savings plan currently exists in 12 states, and the primary benefit is that it is insured to at least $250,000 by the Federal Deposit Insurance Corporation (FDIC). For comparison, the current maximum that can be invested in the MCIP is $350,000. However, the average account balance was about $19,000 as of June 2016. As with the existing 529 plans, interest earned on the account is tax-deferred, and the earnings are tax-free upon distribution. Virginia's two savings account plans offered annual percentage yields of 0.25% and 0.5%, which are relatively low compared to the growth potential in the MCIP. Maryland 529 is concerned the low yield in the savings account could cause unrealistic expectations for families in reaching their long-term savings goals for higher education. The other chief concern of Maryland 529 is the complex banking relationship required to implement a savings account plan. Maryland 529 found three types of savings account plans:

- ***Omnibus Program:*** account holders have an individual account as part of pooled assets managed by a third party (like the MCIP);

- ***National Online Program:*** this allows a state to contract to serve as a program manager; and

- ***Partner Depository:*** the state agency uses a regional bank to serve as the depository for funds, while assets and records are actually held by the state agency.

There are no actuarial barriers to the new plan as it would not impact the soundness of the MPCT. If there were enabling legislation for FDIC-insured accounts in Maryland, several challenges would remain.

- A new Request for Proposal would be needed as T. Rowe Price does not offer FDIC-insured products.

- State support would be needed for startup and administration because fees from the existing two 529 plans can only be used to benefit the participants of those trusts.

- Finally, 529 plans fall under municipal security regulations, which add significant regulatory and recordkeeping complexity beyond a regular bank savings account. In Virginia, only 1 of about 50 banks initially interested in the plan was willing to meet these requirements.

Maryland 529 estimates that, depending on the model of savings account plan, startup costs would range from $0.7 million to $1.0 million, and ongoing operational costs would range from $0.3 million to $0.7 million.

New Matching Contribution Initiative Begins

Among several new programs to improve the affordability of higher education in Maryland, the College Affordability Act of 2016 (Chapters 689 and 690) established a contribution State matching program at Maryland 529. To help students and families save for college, Maryland 529 now manages a contribution program that matches up to $250 for eligible new 529 plan account holders beginning January 1, 2017. The program begins with $5 million in fiscal 2018 and phases up to full funding of $10 million annually in fiscal 2020. Maryland 529 developed a marketing plan to make Marylanders aware of the new State matching program using new partnerships with the Maryland Head Start Association and Maryland public libraries. A second marketing plan is focused on increasing participation in 529 plans by State employees and families of students in local school systems with low 529 plan participation rates. Maryland 529 must report by December 1, 2017, on whether the matching program and new marketing plans have been effective in reaching low-income families.

The Secretary of Higher Education and the Director of Maryland 529 should comment on how to expand awareness of 529 plans and the new matching contribution to Marylanders.

Recommended Actions

1. Adopt the following narrative:

   Institutional Aid, Pell Grants, and Loan Data by Expected Family Contribution Category: In order to more fully understand all types of aid available to students, the committees request that data be submitted for each community college, public four-year institution, and independent institution on institutional aid, Pell grants, and student loans. Data should include, by expected family contribution (EFC), the number of loans and average loan size of federal subsidized and unsubsidized loans, and loans from private sources as reported to the Maryland Higher Education Commission (MHEC). Additionally, data should be provided on Pell grants, including the number and average award size by EFC. Finally, data should include the number of institutional aid awards and average award size by EFC for institutional grants, institutional athletic scholarships, and other institutional scholarships. The data in the response should differentiate between need-based aid and merit scholarships. Data should also include the number of institutional aid awards and average award size by EFC for tuition waivers/remissions of fees to employees and dependents and students. Waiver information for students should be reported by each type of waiver in State law. This report should cover fiscal 2017 data received by MHEC from State institutions and is to be submitted in an electronic format (Excel file).

Information Request	Author	Due Date
Report on fiscal 2017 financial aid categories by EFC	MHEC	June 30, 2018

2. Adopt the following narrative:

   Instructional Faculty Workload Report: The committees request that the University System of Maryland (USM), Morgan State University (MSU), and St. Mary's College of Maryland (SMCM) continue to provide annual instructional workload reports for tenured/tenure-track faculty. By focusing on these faculty, the committees gain a sense of the teaching activities for the regular core faculty. However, there are other types of instructional faculty at institutions such as full- and part-time nontenured/nontenure track faculty including adjunct faculty, instructors, and lecturers. Focusing on only tenured/tenure-track faculty provides an incomplete picture of how students are taught. Therefore, the report should also include the instructional workload when all types of faculty are considered. Additional information may be included at the institution's discretion. Furthermore, the USM report should include the percent of faculty meeting or exceeding teaching standards for tenured/tenure-track faculty for the University of Maryland, Baltimore.

Information Request	Authors	Due Date
Annual report on faculty workload	USM MSU SMCM	December 15, 2017

3. Adopt the following narrative:

Report on Revised Comparable Funding Peers: Funding guidelines are used to assess how Maryland's institutions are funded relative to comparable "peer" institutions in Maryland competitor states. Comparable institutions as outlined in the Commission to Develop the Maryland Model for Funding Higher Education report defines peers as those institutions of similar academic scope, comparable size, similar student profile, and same Carnegie classification. However, in the most recent update of peer institutions, peers were selected based only on their Carnegie classification resulting in five University of Maryland (USM) institutions having the same peer institutions. As a result, the funding guidelines do not allow for an accurate comparison of how Maryland funds its institutions compared to those in competitor states. Therefore, the committees request that the Maryland Higher Education Commission (MHEC), in consultation with USM, Morgan State University, the Department of Legislative Services, and the Department of Budget and Management, revise the funding peer institutions for each public four-year institution to include only those institutions in competitor states with comparable attributes to the "home" Maryland institution. Peers for the University of Maryland, College Park and the University of Maryland, Baltimore should be those institutions comparable to the University of Maryland campuses. The report should be submitted to the budget committees by September 15, 2017.

Information Request	Author	Due Date
Report on revised comparable funding peers	MHEC	September 15, 2017

Updates

1. Student Fees and Graduation

A 2016 JCR request to all public institutions in Maryland required the submission of information about the number of fees facing students, how much they are, when they are charged, and whether financial aid can be used to pay them. The responses from the sectors indicate that college students today face a wide range of fees in addition to the regular charge for tuition. However, the split of tuition revenue and fee revenue in the public four-year sector in fiscal 2010, 89%:11% was unchanged in fiscal 2016. In the public two-year sector, there was only a slight shift toward fee revenue as the revenue split moved from 84%:16% to 82%:18%. This suggests that tuition and fees are generally being charged at about the same rates in recent years.

Mandatory student fees charged by an institution of higher education make up part of a school's official cost of attendance for the academic year so they directly affect the financial aid process. Community colleges in particular noted that raising fees can negatively affect enrollment and retention of students by raising financial burdens. Certain fees like application fees are charged prior to enrollment, so students cannot use financial aid to pay for these. Course fees are covered by financial aid, as they are a direct academic cost to the student. However, some services such as transcript copies do incur fees at some institutions and these also would not be covered by financial aid. In addition, fines are never covered by financial aid. These include parking citations, residence hall smoking violations, and replacing lost student identification cards.

Fees themselves vary greatly across community colleges, since each has its own governance structure. For example, some campuses charge fees on a credit-hour basis, while others charge a flat fee when a student is taking at least 10 credit hours. Not every student will be charged every fee, but over the course of four years, students will probably become familiar with transcript fees, graduation fees, parking fees, *etc*.

USM broke out the four types of fees it charges to students (other sectors and institutions follow similar breakdowns):

- ***Mandatory Fee:*** All students pay this regardless of academic study. This provides additional funding for State-supported initiatives, like campus libraries. At USM institutions, the only mandatory fee is for campus information technology.

- ***Auxiliary Mandatory Fee:*** All students pay these regardless of academic study. These support auxiliary programs like the student union, shuttle buses, athletics, and other activities.

- ***Nonmandatory Academic Fee:*** Students are billed only if they enroll in a particular course of study or nonauxiliary activity. For example, SMCM charges a special fee to cover the additional cost of providing its scuba diving class.

- ***Nonmandatory Auxiliary Fee:*** Students are billed only if they use a support program that collects a fee, such as dining halls, residence halls, and parking lots.

Significant variation in fees occur across institutions and across sectors. Many institutions also have some ability to waive fees for low-income students. In terms of student outcomes, USM stressed that "no student, at any [USM] institution, will be denied a degree due to an outstanding financial commitment." The institution, however, may withhold a diploma or transcript until any financial liability is rectified, meaning a student can walk at graduation but may still have financial difficulties afterward. While USM denied graduation status to 1,243 students, or 7.3% of students who applied for graduation, this was entirely due to academic requirements not being met.

Appendix 1
Trends in Education and General Revenues[1]
Public Four-year Institutions
Fiscal 2013-2018
($ in Thousands)

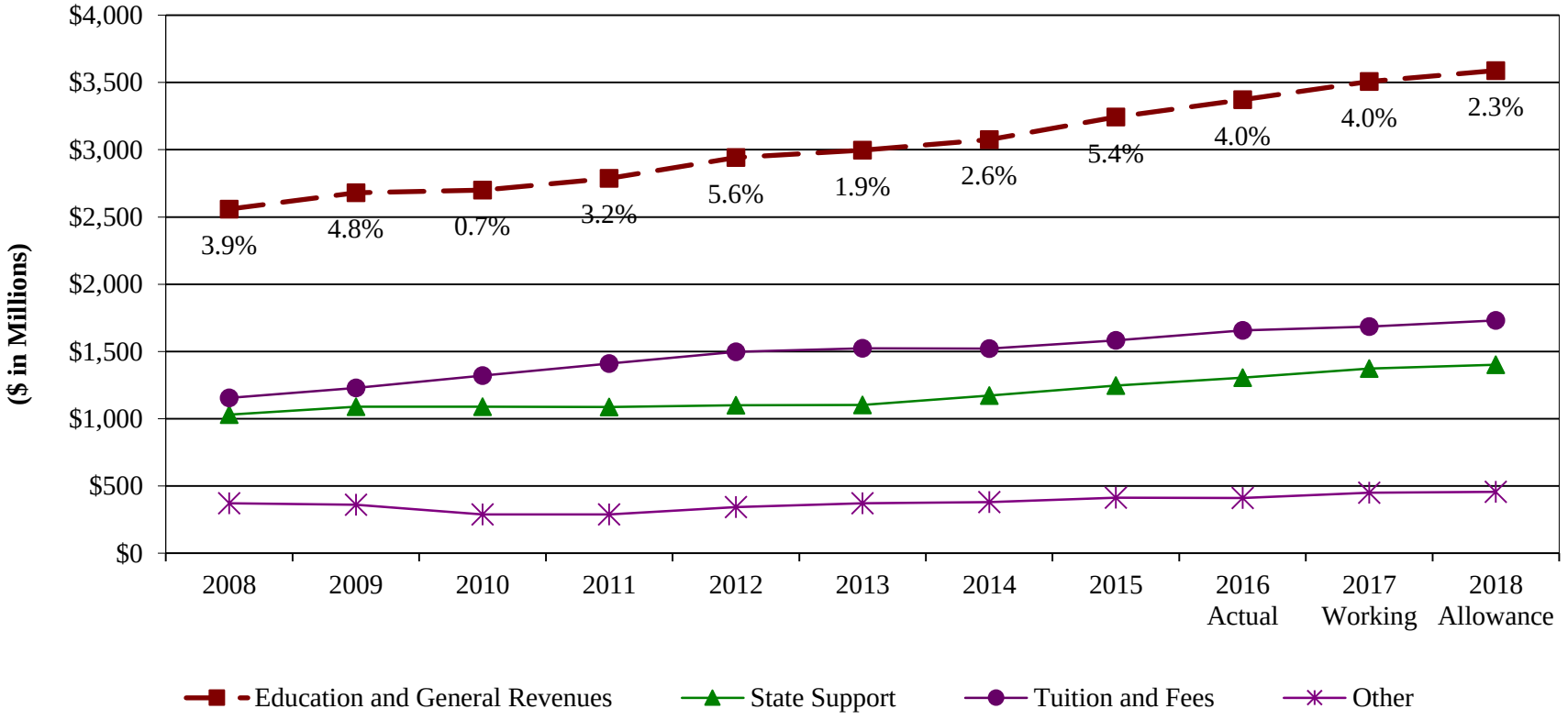
Institution	2013	2014	2015	2016	2017	2018	Annual % 2013-16	% Change 2016-17
Univ. of Maryland, Baltimore	$477,265	$477,302	$508,927	$535,444	$545,449	$564,222	2.9%	3.4%
Univ. of Maryland, College Park	1,012,101	1,079,312	1,144,998	1,192,388	1,235,503	1,272,082	4.2%	3.0%
Bowie State University	68,367	71,786	77,579	78,166	82,617	84,247	3.4%	1.8%
Towson University	263,694	277,370	287,843	301,622	314,145	321,984	3.4%	2.5%
Univ. of Maryland Eastern Shore	66,598	67,475	73,094	74,765	77,098	73,832	2.9%	-4.5%
Frostburg State University	67,942	70,044	73,893	76,230	81,701	83,559	2.9%	2.3%
Coppin State University	53,458	53,611	55,683	58,210	62,871	63,432	2.2%	0.9%
University of Baltimore	96,408	98,445	101,581	104,082	105,022	107,245	1.9%	2.1%
Salisbury University	103,627	108,617	115,980	122,471	128,307	135,042	4.3%	5.2%
Univ. of Maryland Univ. College	362,122	333,189	349,189	355,908	365,802	369,057	-0.4%	0.9%
Univ. of Maryland Baltimore County	219,027	235,291	244,803	252,148	267,103	273,258	3.6%	2.3%
Univ. of Maryland Ctr. for Env. Science	27,622	26,625	27,202	29,563	30,044	29,993	1.7%	-0.2%
Morgan State University	135,394	133,616	139,075	146,904	160,070	163,100	2.1%	2.1%
St. Mary's College of Maryland	43,343	42,437	42,381	43,929	51,456	47,463	0.3%	-7.8%
Total	**$2,996,967**	**$3,075,122**	**$3,242,228**	**$3,371,832**	**$3,507,188**	**$3,588,515**	**3.0%**	**2.3%**

[1] Education and General revenues represent tuition and fees, State funds (general and Higher Education Investment Funds), grants and contracts (federal, State, and local), and sales and services of educational activities less auxiliary program enterprise revenue. For the University of Maryland, Baltimore, hospital expenditures are excluded from Education and General revenue. Agricultural and cooperative extension programs are excluded.

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

Source: Maryland State Budget, Fiscal 2013-2018

Appendix 2
Education and General Revenues at Four-year Institutions[1]
Fiscal 2008-2018
($ in Millions)



[1] Education and General revenues represent tuition and fees, State support (general funds and Higher Education Investment Funds), grants and contracts (federal, State, and local), and sales and services of educational activities less auxiliary enterprise revenue. Figures exclude funding for cooperative and agricultural extension programs and the Maryland Fire and Rescue Institute. For the University of Maryland, Baltimore, hospital expenditures are excluded.

Note: Percents represent year-over-year change in Education and General Revenues.

Source: Governor's Budget Books, Fiscal 2009-2017; Department of Budget and Management

Appendix 3
Education and General Revenues[1]
Per Full-time Equivalent Student
Public Four-year Institutions
Fiscal 2013-2018

Institution	2013	2014	2015	2016	Working 2017	Adjusted 2018	Annual % Change 2013-18	% Change 2017-18
Univ of Maryland, Baltimore (UMB)	$73,223	$74,161	$79,932	$83,415	$82,807	$85,475	3.1%	3.2%
Univ. of Maryland, College Park	32,303	34,425	35,984	37,100	38,133	39,262	4.2%	3.0%
Bowie State University	15,870	16,179	16,832	17,891	18,713	19,169	4.2%	2.4%
Towson University	14,531	14,815	15,576	16,237	16,826	17,161	3.7%	2.0%
Univ. of Maryland Eastern Shore	16,122	17,001	17,964	18,024	21,363	19,901	7.3%	-6.8%
Frostburg State University	14,857	15,217	16,036	16,323	17,684	18,086	4.5%	2.3%
Coppin State University	19,278	20,185	22,372	23,769	23,166	22,900	4.7%	-1.1%
University of Baltimore	21,626	22,182	23,509	24,764	25,089	27,741	3.8%	10.6%
Salisbury University	13,181	13,786	14,765	15,691	16,297	17,103	5.4%	4.9%
Univ. of Maryland Univ. College	14,421	13,843	12,716	10,837	11,028	11,016	-6.5%	-0.1%
Univ. of Maryland Baltimore County	19,764	20,958	21,534	22,371	23,631	24,176	4.6%	2.3%
Morgan State University	19,740	20,509	21,088	22,114	23,977	24,307	5.0%	1.4%
St. Mary's College of Maryland	22,945	23,420	23,611	24,324	30,268	27,919	7.2%	-7.8%
Average (excludes UMB)	**$20,658**	**$21,450**	**$21,881**	**$21,739**	**$22,615**	**$23,044**	**2.3%**	**1.9%**

[1] Education and General (E&G) revenues represent tuition and fees, general funds, grants and contracts (federal, State, and local), and sales and services of educational activities less auxiliary program enterprise revenue. For the University of Maryland, Baltimore, hospital expenditures are excluded from E&G revenue. Agricultural and cooperative extension programs are also excluded. University of Maryland Center for Environmental Science, which only offers joint graduate degree programs, is also excluded.

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

Appendix 4
Fiscal 2018 Revenues Per Full-time Equivalent Student By Revenue Source[1]
Public Four-year Institutions

Institution	E&G Revenues	State Funds	Tuition and Fees	FTES	E&G Revenues Per FTES	State Funds Per FTES	Tuition and Fees Per FTES	ST as % of E&G	T&F as % of E&G
Univ. of Maryland, Baltimore	$564,221,709	$234,657,010	$140,407,339	6,601	$85,475	$35,549	$21,271	42%	25%
Univ. of Maryland, College Park	1,272,082,051	470,737,405	$593,707,534	32,400	39,262	14,529	18,324	37%	47%
Bowie State University	84,246,614	45,362,164	$38,322,737	4,395	19,169	10,321	8,720	54%	45%
Towson University	321,984,045	120,042,897	$191,658,453	18,763	17,161	6,398	10,215	37%	60%
Univ. of Maryland Eastern Shore	73,832,207	40,782,395	$31,121,641	3,710	19,901	10,993	8,389	55%	42%
Frostburg State University	83,559,105	42,065,095	$40,313,169	4,620	18,086	9,105	8,726	50%	48%
Coppin State University	63,432,421	47,399,265	$16,884,355	2,770	22,900	17,112	6,095	75%	27%
University of Baltimore	107,245,192	37,628,600	$68,081,315	3,866	27,741	9,733	17,610	35%	63%
Salisbury University	135,041,713	55,056,110	$79,381,844	7,896	17,103	6,973	10,053	41%	59%
Univ. of Maryland Univ. College	369,056,528	43,953,722	$311,579,328	33,503	11,016	1,312	9,300	12%	84%
Univ. of Maryland Baltimore County	273,258,228	120,231,382	$131,993,263	11,303	24,176	10,637	11,678	44%	48%
Morgan State University	163,099,746	94,950,321	$62,662,628	6,710	24,307	14,151	9,339	58%	38%
St. Mary's College of Maryland	47,462,673	24,964,954	$24,796,838	1,700	27,919	14,685	14,586	53%	52%
Total	**$3,558,522,232**	**$1,377,831,320**	**$1,730,910,444**	**138,237**	**$25,742**	**$9,967**	**$12,521**	**39%**	**49%**

E&G: Education and General
FTES: full-time equivalent student
ST: State
T&F: tuition and fees

[1] Education and General (E&G) revenues represent tuition and fees, general funds, grants and contracts (federal, State, and local), and sales and services of educational activities less auxiliary program enterprise revenue. For the University of Maryland, Baltimore, hospital expenditures are excluded from E&G revenue. Agricultural and cooperative extension programs are also excluded. University of Maryland Center for Environmental Science, which only offers joint graduate degree programs, is also excluded.

Source: Maryland State Budget, Fiscal 2018

Appendix 5
Higher Education Enrollment Trends
Full-time Equivalent Student
Public Four-year Institutions

Institution	2013	2014	2015	2016	Working 2017	Allowance 2018	Annual % 2013-17	% Change 2017-18
Univ. of Maryland, Baltimore	6,518	6,436	6,367	6,419	6,587	6,601	0.3%	0.2%
Univ. of Maryland, College Park	31,331	31,353	31,820	32,140	32,400	32,400	0.8%	0.0%
Bowie State University	4,308	4,437	4,609	4,369	4,415	4,395	0.6%	-0.5%
Towson University	18,147	18,722	18,480	18,576	18,670	18,763	0.7%	0.5%
Univ. of Maryland Eastern Shore	4,131	3,969	4,069	4,148	3,609	3,710	-3.3%	2.8%
Frostburg State University	4,573	4,603	4,608	4,670	4,620	4,620	0.3%	0.0%
Coppin State University	2,773	2,656	2,489	2,449	2,714	2,770	-0.5%	2.1%
University of Baltimore	4,458	4,438	4,321	4,203	4,186	3,866	-1.6%	-7.6%
Salisbury University	7,862	7,879	7,855	7,805	7,873	7,896	0.0%	0.3%
Univ. of Maryland Univ. College	25,110	24,070	27,460	32,843	33,171	33,503	7.2%	1.0%
Univ. of Maryland Baltimore County	11,082	11,227	11,368	11,271	11,303	11,303	0.5%	0.0%
Morgan State University	6,859	6,515	6,595	6,643	6,676	6,710	-0.7%	0.5%
St. Mary's College of Maryland	1,889	1,812	1,795	1,806	1,700	1,700	-2.6%	0.0%
Total	**129,041**	**128,117**	**131,836**	**137,342**	**137,924**	**138,237**	**1.7%**	**0.2%**

Source: Governor's Budget Books, Fiscal 2013-2018

Appendix 6
Tuition Rates at Public Four-year Institutions
Fall 2008-2017

	2008	2013	2014	2015	2016	2017	% Change 2016-17	Avg. % Change 2008-17
In-State Full-time Undergraduate Students								
University of Maryland, College Park	$6,566	$7,390	$7,764	$8,152	$8,315	$8,481	2.0%	29.2%
Bowie State University	4,286	4,824	4,969	5,217	5,321	5,427	2.0%	26.6%
Towson University	5,180	5,830	6,124	6,430	6,560	6,691	2.0%	29.2%
University of Maryland Eastern Shore	4,112	4,628	4,767	5,005	5,105	5,207	2.0%	26.6%
Frostburg State University	5,000	5,630	5,916	6,214	6,340	6,467	2.0%	29.3%
Coppin State University	3,527	3,970	4,089	4,294	4,380	4,468	2.0%	26.7%
University of Baltimore	5,325	5,992	6,172	6,480	6,610	6,742	2.0%	26.6%
Salisbury University	4,814	5,912	6,392	6,712	6,846	6,983	2.0%	45.0%
University of Maryland University College[2]	6,900	7,740	7,980	8,370	8,520	8,690	2.0%	25.9%
University of Maryland Baltimore County	6,484	7,298	7,518	8,044	8,204	8,368	2.0%	29.1%
Morgan State University	4,280	4,816	4,960	5,060	5,161	5,264	2.0%	23.0%
Average (simple)	5,009	5,680	5,914	6,209	6,333	6,459	2.0%	32.1%
St. Mary's College of Maryland	10,472	12,245	11,195	11,195	11,419	11,647	2.0%	11.2%
Out-of-state Full-time Undergraduate Students								
University of Maryland, College Park	$21,637	$26,576	$27,905	$29,300	$30,179	$31,672	4.9%	46.4%
Bowie State University	14,507	15,391	15,545	15,700	15,857	16,016	1.0%	10.4%
Towson University	15,726	17,508	17,682	18,036	18,228	18,684	2.5%	18.8%
University of Maryland Eastern Shore	10,900	13,134	13,791	14,067	14,489	14,951	3.2%	37.2%
Frostburg State University[1]	15,196	16,278	17,434	18,314	18,864	19,816	5.0%	30.4%
Coppin State University	11,752	8,904	9,350	9,818	10,110	10,616	5.0%	-9.7%
University of Baltimore	18,831	16,550	17,046	17,898	18,434	19,356	5.0%	2.8%
Salisbury University	13,116	14,258	14,738	15,058	15,258	16,020	5.0%	22.1%
University of Maryland University College[2]	11.760	14.970	14.970	14.970	14.970	14.970	0.0%	27.3%
University of Maryland Baltimore County	15,216	18,872	19,816	20,808	21,432	22,511	5.0%	47.9%
Morgan State University	12,731	14,230	14,444	14,734	15,029	15,330	2.0%	20.4%
Average (simple)	14,670	15,789	16,339	16,883	17,260	17,904	3.7%	23.9%
St. Mary's College of Maryland	21,322	26,045	26,045	26,045	26,045	26,634	2.3%	24.9%

[1] Frostburg State University has a separate, lower out-of-state rate for non-Maryland students from within 120 miles of campus.
[2] Based on 30 credit hours.

Note: All rates are pending approval by the institutions' governing boards.

Source: Morgan State University; St. Mary's College of Maryland; University System of Maryland

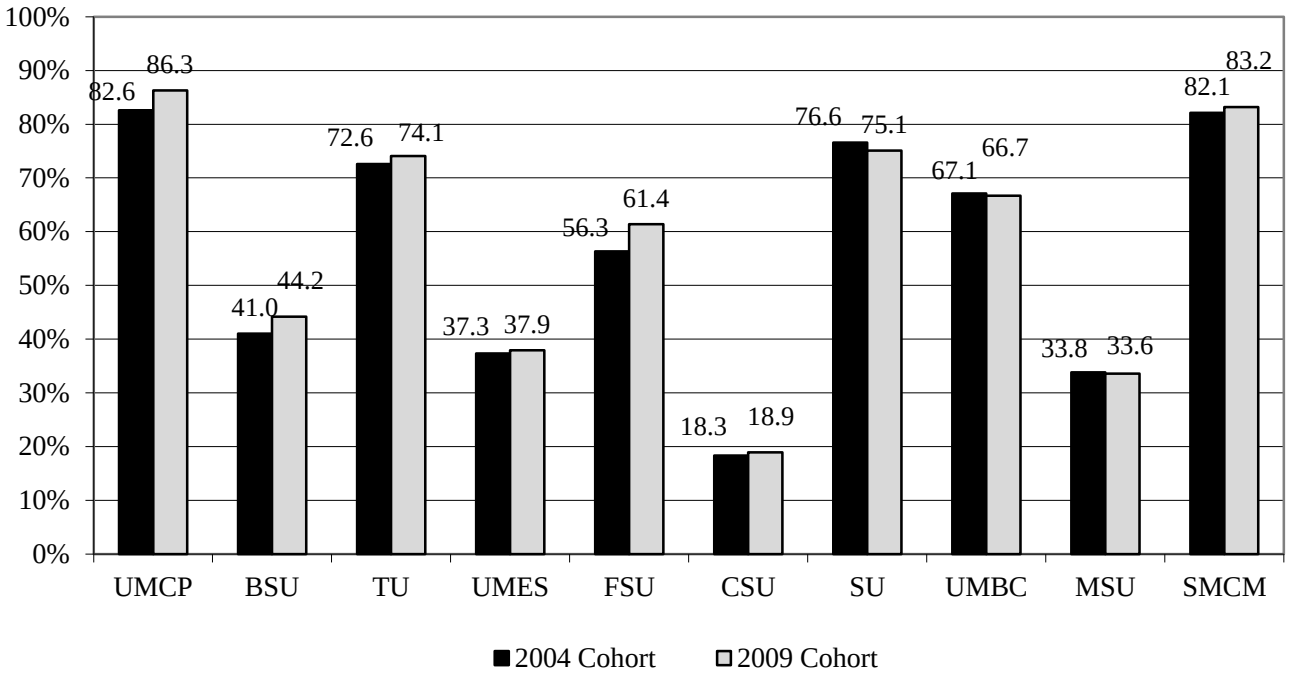
Appendix 7
Tuition and Fee Rates at Public Two-year Institutions
Fall 2016

Community College	Resident of Service Area			Outside Service Area			Out-of-state Resident		
	Tuition	Fees	Total	Tuition	Fees	Total	Tuition	Fees	Total
Allegany College of Maryland	$3,420	$415	$3,835	$6,750	$415	$7,165	$8,100	$415	$8,515
Anne Arundel Community College	3,240	770	4,010	6,240	770	7,010	11,010	770	11,780
Baltimore City Community College	3,030	608	3,638	3,030	608	3,638	7,725	608	8,333
Community College of Baltimore County	3,540	892	4,432	6,660	1,192	7,852	10,110	1,492	11,602
Carroll Community College	3,960	852	4,812	5,760	1,212	6,972	8,070	1,674	9,744
Cecil College	3,210	390	3,600	5,910	390	6,300	7,260	390	7,650
Chesapeake College	3,600	1,100	4,700	5,640	1,130	6,770	7,950	1,130	9,080
College of Southern Maryland	3,690	849	4,539	6,390	1,470	7,860	8,250	1,898	10,148
Frederick Community College	3,570	685	4,255	7,770	685	8,455	10,530	685	11,215
Garrett College	2,884	896	3,780	6,300	896	7,196	7,420	896	8,316
Hagerstown Community College	3,510	420	3,930	5,490	420	5,910	7,230	420	7,650
Harford Community College	3,480	696	4,176	6,090	696	6,786	8,700	696	9,396
Howard Community College	4,020	674	4,694	6,510	674	7,184	7,860	674	8,534
Montgomery College	3,660	1,242	4,902	7,470	2,004	9,474	10,320	2,574	12,894
Prince George's Community College	3,150	1,400	4,550	5,790	1,400	7,190	8,700	1,400	10,100
Wor-Wic Community College	3,180	510	3,690	7,110	510	7,620	8,760	510	9,270
Average	**$3,447**	**$775**	**$4,221**	**$6,182**	**$905**	**$7,086**	**$8,625**	**$1,014**	**$9,639**

Note: This assumes a student enrolls in 30 credits per academic year.

Source: Maryland Association of Community Colleges

Appendix 8
Six-year Graduation Rate for First-time, Full-time Students
2004 and 2009 Cohort

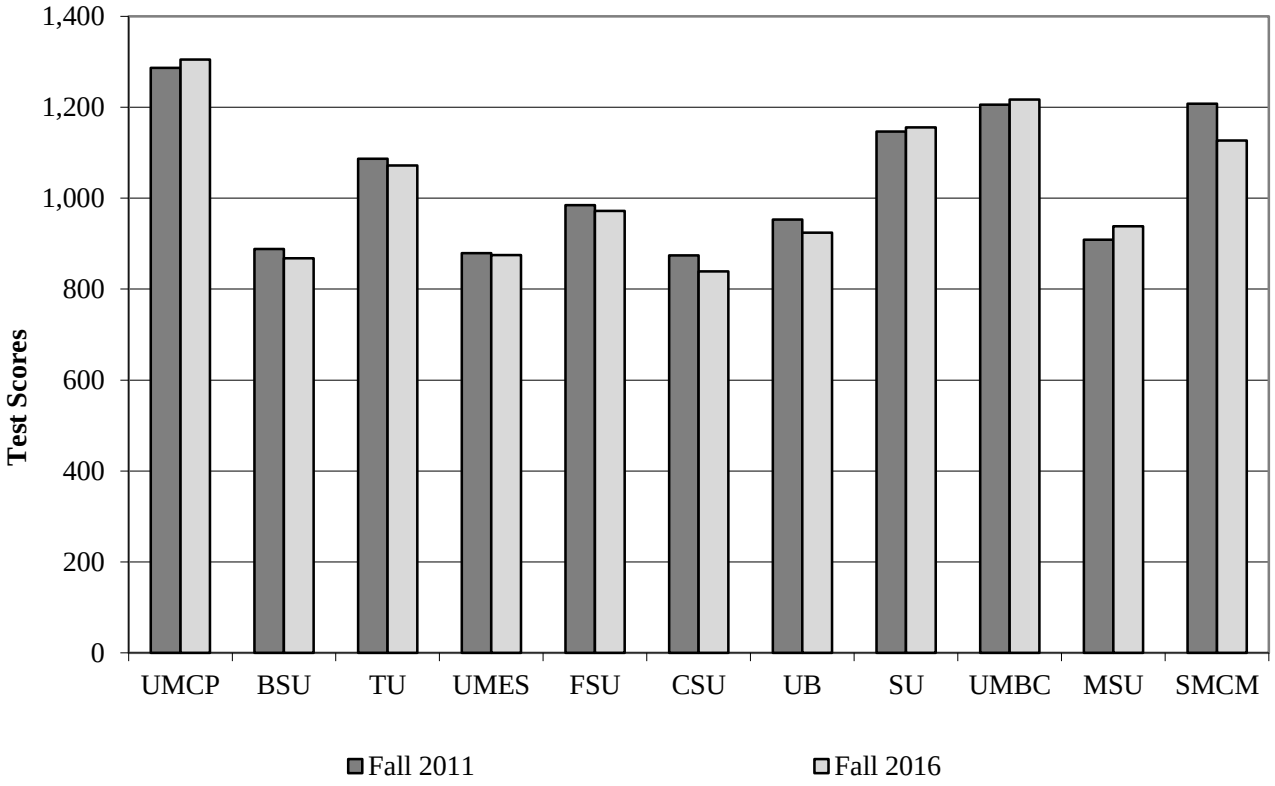


	2004	2005	2006	2007	2008	2009
Univ. of Maryland, College Park (UMCP)	82.6	82.3	81.9	84.4	84.6	86.3
Bowie State University (BSU)	41.0	43.8	37.1	38.7	39.5	44.2
Towson University (TU)	72.6	68.3	69.9	68.0	70.6	74.1
Univ. of Maryland Eastern Shore (UMES)	37.3	36.0	37.0	38.6	43.1	37.9
Frostburg State University (FSU)	56.3	53.0	52.4	56.1	55.6	61.4
Coppin State University (CSU)	18.3	18.0	19.7	16.0	18.0	18.9
Salisbury University (SU)	76.6	71.6	73.1	73.2	72.9	75.1
Univ. of Maryland Baltimore County (UMBC)	67.1	64.7	67.8	68.8	66.9	66.7
Morgan State University (MSU)	33.8	30.7	30.7	34.9	33.7	33.6
St. Mary's College of Maryland (SMCM)	82.1	82.4	79.4	83.2	86.8	83.2
All Students Average	**64.1**	**63.3**	**61.6**	**63.8**	**63.7**	**66.1**

Note: The data shows the percentage of students who graduated from any Maryland campus within six years after starting in the year and at the institution indicated. The exam changed in March 2016, so 2016 data may not be directly comparable to prior years.

Source: Maryland Higher Education Commission

Appendix 9
Scholastic Aptitude Test Scores of First-year Students

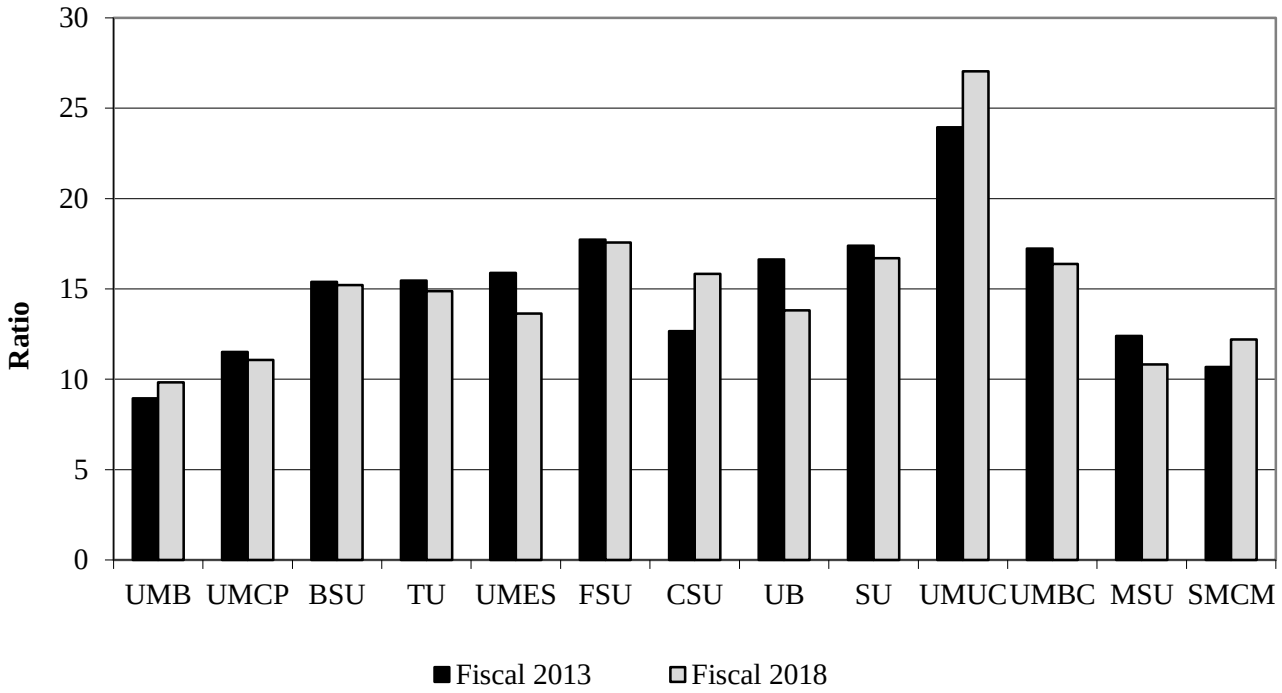


	2011	2012	2013	2014	2015	2016
Univ. of Maryland, College Park (UMCP)	1,287	1,289	1,299	1,304	1,306	1,305
Bowie State University (BSU)	888	899	890	881	873	868
Towson University (TU)	1,087	1,087	1,088	1,084	1,087	1072
Univ. of Maryland Eastern Shore (UMES)	879	880	881	861	844	875
Frostburg State University (FSU)	985	985	980	985	969	972
Coppin State University (CSU)	874	882	877	890	895	839
University of Baltimore (UB)	953	953	944	925	974	924
Salisbury University (SU)	1,147	1,155	1,160	1,156	1,160	1156
Univ. of Maryland Baltimore County (UMBC)	1,206	1,223	1,218	1,214	1,210	1217
Morgan State University (MSU)	909	895	905	889	890	938
St. Mary's College of Maryland (SMCM)	1,208	1,209	1,187	1,173	1,149	1127
Average (unweighted)	**1,038**	**1,042**	**1,039**	**1,033**	**1,032**	**1,027**

Note: Reflects verbal (maximum 800) and math (maximum 800) scores only.

Source: Maryland Higher Education Commission

Appendix 10
Student-to-faculty Ratio



	2013	2014	2015	2016	2017	2018
Univ. of Maryland, Baltimore (UMB)	9.0	8.7	9.6	9.4	9.9	9.8
Univ. of Maryland, College Park (UMCP)	11.5	11.0	10.8	10.9	11.2	11.1
Bowie State University (BSU)	15.4	15.4	15.9	14.6	15.3	15.2
Towson University (TU)	15.5	15.4	15.4	14.9	14.8	14.9
Univ. of Maryland Eastern Shore (UMES)	15.9	15.0	15.3	15.3	13.3	13.6
Frostburg State University (FSU)	17.7	17.8	17.4	17.8	17.6	17.6
Coppin State University (CSU)	12.7	12.1	13.5	14.3	15.5	15.8
University of Baltimore (UB)	16.6	15.9	15.3	14.9	15.1	13.8
Salisbury University (SU)	17.4	16.4	16.2	16.2	16.9	16.7
Univ. of Maryland Univ. College (UMUC)	23.9	23.8	28.0	26.5	26.8	27.0
Univ. of Maryland Baltimore County (UMBC)	17.2	17.2	17.0	17.7	17.4	16.4
Morgan State University (MSU)	12.4	11.8	12.4	11.5	10.8	10.8
St. Mary's College of Maryland (SMCM)	10.7	10.2	11.0	12.1	12.1	12.2

Note: Full-time equivalent.

Source: Department of Budget and Management