

R30B31
University of Maryland Baltimore County
University System of Maryland

Operating Budget Data

(\$ in Thousands)

	<u>FY 16</u> <u>Actual</u>	<u>FY 17</u> <u>Working</u>	<u>FY 18</u> <u>Allowance</u>	<u>FY 17-18</u> <u>Change</u>	<u>% Change</u> <u>Prior Year</u>
General Funds	\$107,298	\$112,452	\$118,662	\$6,211	5.5%
Adjustments	0	788	-3,721	-4,509	
Adjusted General Fund	\$107,298	\$113,240	\$114,941	\$1,701	1.5%
Special Funds	5,067	5,514	5,290	-224	-4.1%
Adjustments	0	-422	0	422	
Adjusted Special Fund	\$5,067	\$5,092	\$5,290	\$198	3.9%
Other Unrestricted Funds	214,646	224,702	231,956	7,253	3.2%
Adjusted Other Unrestricted Fund	\$214,646	\$224,702	\$231,956	\$7,253	3.2%
Total Unrestricted Funds	327,011	342,668	355,908	13,240	3.9%
Adjustments	0	366	-3,721	-4,087	
Adjusted Total Unrestricted Funds	\$327,011	\$343,034	\$352,187	\$9,153	2.7%
Restricted Funds	86,207	92,500	92,884	384	0.4%
Adjusted Restricted Fund	\$86,207	\$92,500	\$92,884	\$384	0.4%
Adjusted Grand Total	\$413,217	\$435,534	\$445,071	\$9,537	2.2%

Note: Includes targeted reversions, deficiencies, and contingent reductions.

- A fiscal 2017 deficiency appropriation is provided to the University System of Maryland Office to partially offset the November 2016 Board of Public Works cost containment action, which will be allocated among the institutions, of which the University of Maryland Baltimore County's (UMBC) share is \$0.4 million. A fiscal 2017 deficiency appropriation is also provided to offset the underattainment of the Higher Education Investment Fund (HEIF) revenues, of which UMBC's share is estimated to be \$0.4 million.
- General fund support increases by \$1.7 million, or 1.5%, in fiscal 2018 after adjusting for deficiencies and contingent reductions.

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

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- The HEIF increases \$0.2 million, or 3.9%, in fiscal 2018 after adjusting for \$0.4 million shortfall in the HEIF in fiscal 2017, resulting in an overall growth of 1.6%, or \$1.9 million, in State funds over fiscal 2017.

Personnel Data

	<u>FY 16 Actual</u>	<u>FY 17 Working</u>	<u>FY 18 Allowance</u>	<u>FY 17-18 Change</u>
Regular Positions	1,994.16	1,997.72	1,997.72	0.00
Contractual FTEs	<u>507.21</u>	<u>478.86</u>	<u>543.65</u>	<u>64.79</u>
Total Personnel	2,501.37	2,476.58	2,541.37	64.79

Vacancy Data: Regular Positions

Turnover and Necessary Vacancies, Excluding New Positions	22.87	1.14%
Positions and Percentage Vacant as of 12/31/16	241.84	12.11%

- The fiscal 2018 allowance does not provide for any new regular positions. However, the University System of Maryland institutions have personnel autonomy and may create new positions during the year. In fiscal 2017 year-to-date, UMBC added 3.56 positions over the original appropriation.
- As of the end of December 2016, UMBC had 241.84 vacant positions, 218.97 more than what is needed to meet budgeted turnover. Of the total number of positions, 1,477.01 are State-supported of which 143.24, or 9.70%, are vacant. Non-State-supported positions totaled 520.71 of which 98.6, or 18.9%, are vacant.

Analysis in Brief

Major Trends

Enrollment: In fall 2016, total undergraduate enrollment declined 0.9%, or 101 students. Since fall 2014, undergraduate enrollment declined 2.1%, or 237 students. The drop in first-time and continuing students was 92 and 90 students, respectively.

Student Performance: The second-year retention rate improved from 82.8% with the 2010 cohort to 88.4% with the 2013 cohort, the highest level since at least the 1994 cohort. The rate subsequently declined 2.5 percentage points to 85.9% with the proceeding cohort. The third-year rate steadily improve to 78.6% with the 2013 cohort. The six-year graduation rate for first-time, full-time students has remained stable at 66.8% for the past two cohorts.

Research Expenditures and Doctorates: Since fiscal 2012, federal research and development expenditures grew 6.5% to \$48.0 million in fiscal 2015. After declining to a low of 84 in fiscal 2012, the number of earned doctorates increased to a high of 102 in fiscal 2014 before falling slightly to 100 in fiscal 2015. Approximately half of the earned doctorates were in the areas of social sciences, computer, and biological sciences.

Issues

Meeting College Expenses: Total expenditures on institutional financial aid grew 24.9%, or \$4.6 million, from fiscal 2011 to 2015, to a total of \$22.8 million. Spending subsequently declined by \$0.4 million from fiscal 2015 to 2017. During this time, spending on scholarships declined \$1.4 million, while need-based aid and athletic scholarships increased \$0.3 million and \$0.7 million, respectively.

Recommended Actions

1. See the University System of Maryland Overview for systemwide recommendations.

R30B31 – USM – University of Maryland Baltimore County

R30B31
University of Maryland Baltimore County
University System of Maryland

Operating Budget Analysis

Program Description

The University of Maryland Baltimore County (UMBC) is a mid-size public research and doctoral university offering undergraduate, master's, and doctoral programs in the arts and sciences and engineering. It is an honors university, providing academically talented undergraduate students a strong foundation and preparing them for graduate and professional study, entry into the workforce, community service, and leadership. At the graduate level, emphasis is placed on science, engineering, information technology, human services, and public policy.

While a majority of students are from the Baltimore region, an increasing number are coming from other areas of Maryland, other states, and foreign countries. UMBC pays special attention to the needs of nontraditional, evening, and part-time students. Well-qualified students are recruited through special scholarship initiatives, such as the Humanities Scholarship Program and the Meyerhoff Scholarship Program for talented high school graduates interested in science and engineering.

UMBC contributes to the economic development of the State and region through the transference of faculty research to the public and industry through the research park, business incubator, and technology transfer program. UMBC also provides workforce training, K-12 partnerships, and technology commercialization with public agencies and the corporate community.

Carnegie Classification: Doctoral Universities (high research activity)

Fall 2016 Undergraduate Enrollment Headcount		Fall 2016 Graduate Enrollment Headcount	
Male	6,183	Male	1,312
Female	4,959	Female	1,186
Total	11,142	Total	2,498
Fall 2016 New Students Headcount		Campus (Main Campus)	
First-time	1,538	Acres	439.4
Transfers/Others	1,187	Buildings	67
Graduate	691	Average Age	32.4 years
Total	3,461	Oldest	53 years
Programs		Degrees Awarded (2015-2016)	
Bachelor's	58	Bachelor's	2,521
Master's	39	Master's	666
Doctoral	24	Doctoral	82
		Total Degrees	3,269

Proposed Fiscal 2018 In-state Tuition and Fees*

Undergraduate Tuition	\$8,368
Mandatory Fees	\$3,160

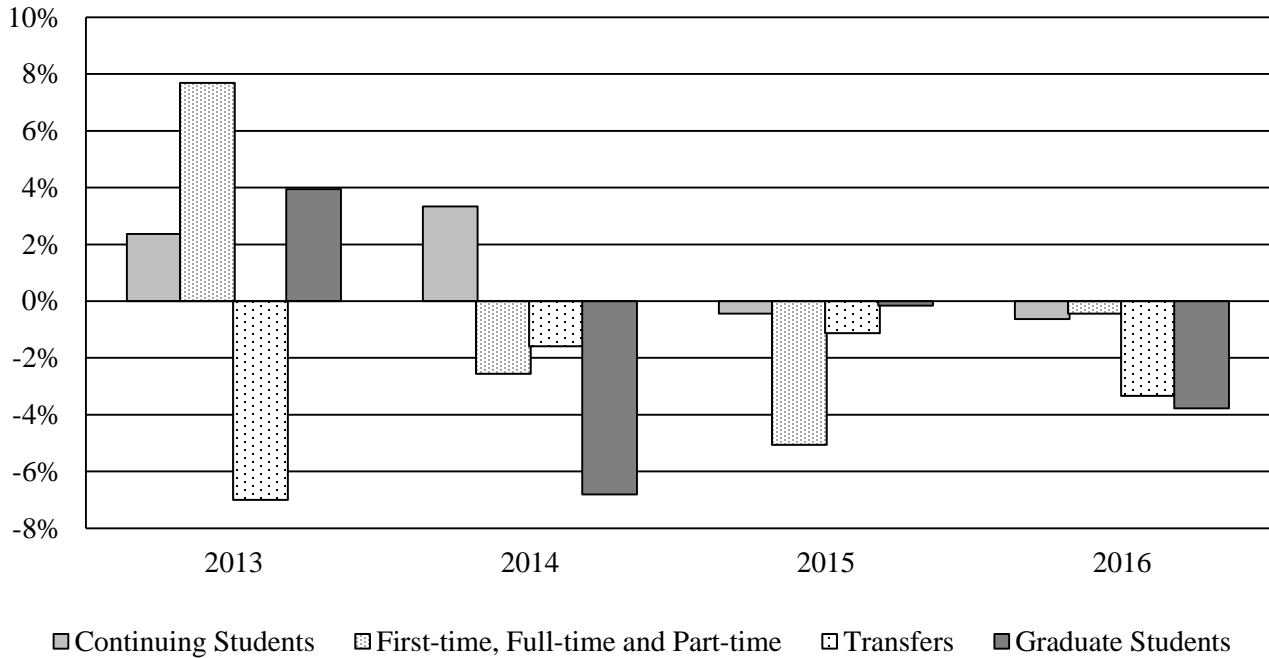
*Contingent on Board of Regents approval.

Performance Analysis

1. Enrollment

In fall 2016, total undergraduate enrollment declined 0.9%, or 101 students, as shown in **Exhibit 1**. Since fall 2014, undergraduate enrollment declined 2.1%, or 237 students. The drop in first-time and continuing students was 92 and 90 students, respectively. According to UMBC, it anticipated the decline in new students due to the decrease in Maryland high school graduates and stated it has implemented strategies to increase enrollment of new students in fall 2017 to the same levels experienced in fall 2012 and 2013. Strategies include increasing need-based financial aid and expanding the marketing of nonscience, technology, engineering, and mathematics degree programs. **The President should comment on what UMBC attributes the decline in the number of transfer and continuing students to and what strategies or actions are being taken to stabilize and increase enrollment of all students.**

Exhibit 1
Percentage Change Undergraduate Headcount Enrollment
Fall 2013-2016



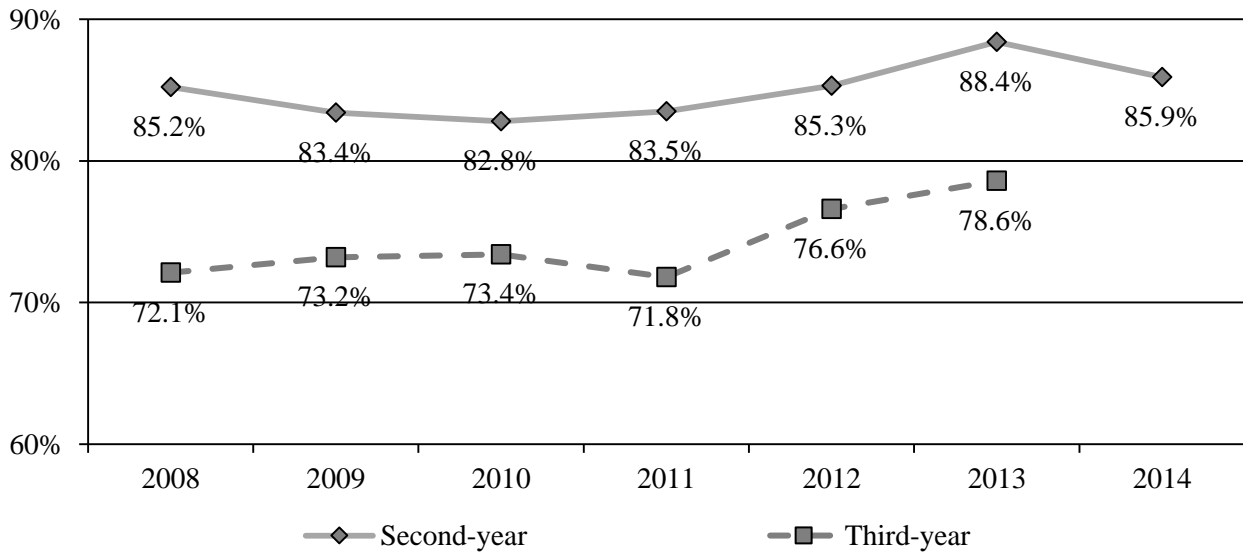
Source: University System of Maryland

Since fall 2014, graduate enrollment has dropped 11.2%, or 293 students, with most of the decline occurring in fall 2014. UMBC attributes this to a variety of factors including school districts reducing funding to reimburse teachers for graduate work, some doctoral programs admitting fewer students, and uncertainties in federal research funding.

2. Student Performance

Student persistence, or retention, provides a measure of student progress and an indication of an institution’s performance: the higher the retention rate, the more likely students will persist and graduate. As students are most likely to drop out during their first year, the second-year retention rate provides an indication if interventions are working or if further investigation is needed to identify areas of improvement. As shown in **Exhibit 2**, the second-year retention rate gradually improved from 82.8% with the 2010 cohort to 88.4% with the 2013 cohort, the highest level since at least the 1994 cohort. The rate subsequently declined 2.5 percentage points to 85.9% with the proceeding cohort.

Exhibit 2
Second- and Third-year Retention Rates
First-time, Full-time 2008-2014 Cohorts



Source: Maryland Higher Education Commission, Retention and Graduation Rates at Maryland Four-year Institutions, September 2016

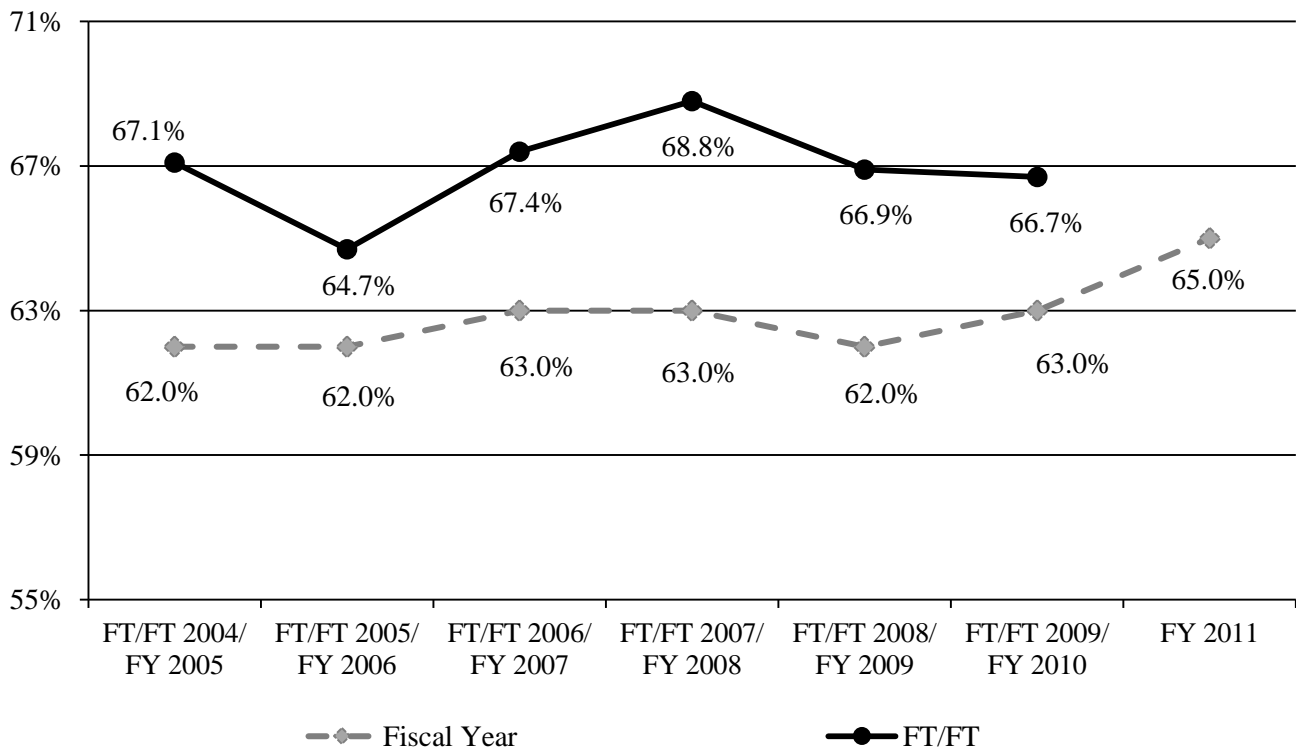
After improving to 73.4% with the 2010 cohort, the third-year retention rate dropped to 71.8% with the 2011 cohort. The third-year rate has steadily improved since then, increasing to 78.6% with the 2013 cohort. It is expected that the rate will decrease with the 2014 cohort, reflecting the trend in the second-year rate.

Completion rates are greatly influenced by time – the longer it takes a student to graduate, the more likely (s)he will dropout as other priorities compete with classes. Longer completion times translate into increased costs, not only for the student, but for the institution and State as well. According to the *Report on the Instructional Workload of the USM Faculty*, the average time to degree for students graduating from UMBC in 2016 was 4.4 years, up from 4.1 years in 2015.

Traditional student progress measures, such as those reported by the Maryland Higher Education Commission (MHEC) and the federal government, only track the success of the “traditional” first-time, full-time (FT/FT) students – those enrolled at an institution at the start of the academic year and continuously enrolled as a full-time student until completion. These measures do not include part-time students, transfer students, those who enroll in the spring, changed enrollment status, or stopped out, thereby providing only a partial picture of an institution’s performance. The University System of Maryland (USM) revised the graduation measure to include these students by defining the cohort as all new degree-seeking students who enrolled during the fiscal year. **Exhibit 3** compares the

traditional MHEC six-year graduation rate to the USM revised measure. Overall, UMBC performs well in graduating FT/FT students with the 2007 cohort achieving the highest level since the 1994 cohort of 68.8%. The rate declined to 66.9% with the proceeding cohort and remained stable with the 2009 cohort. When all students are included, graduation rates are lower, indicating transfers and other students graduate at a lower rate. However, the rate improved for each of the last three fiscal year cohorts, reaching 65% with the fiscal 2011 cohort. According to USM, students who transfer out are not enrolling at USM institutions and therefore are not included in UMBC’s fiscal year cohort rate. This results in a lower graduation rate.

Exhibit 3
Comparison of Six-year Graduation Rates
Various Cohorts



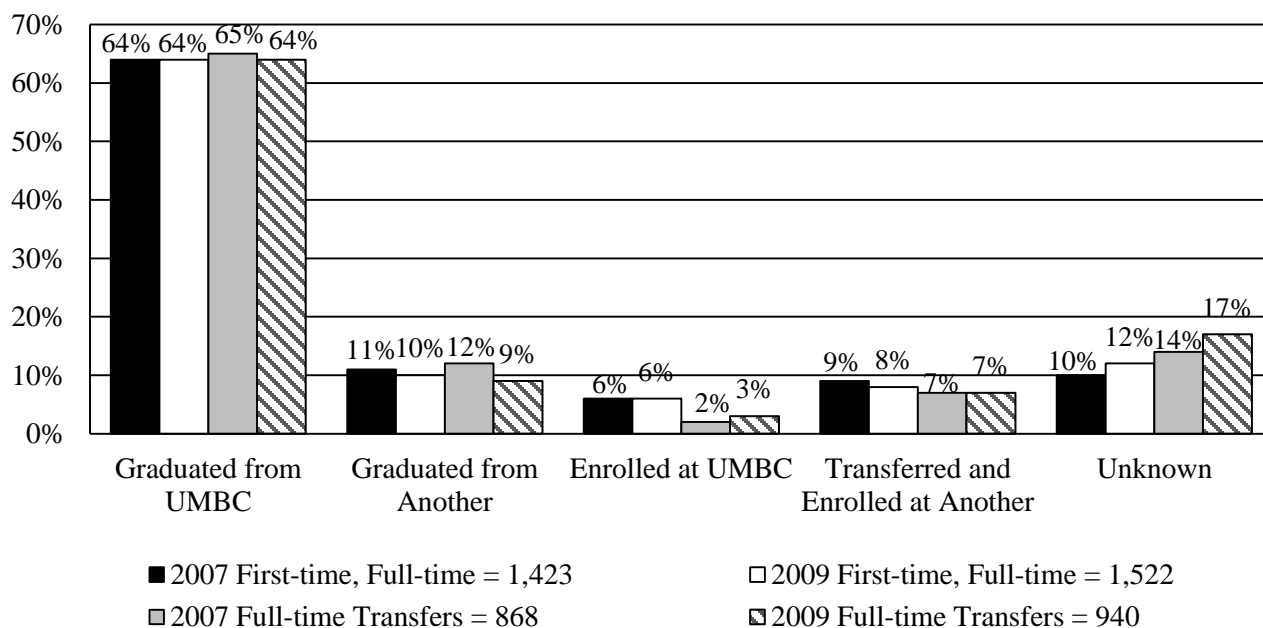
FT/FT: first-time, full-time
 FY: fiscal year

Note: FT/FT cohorts include students who persisted at and graduated from the institution that they initially enrolled in and those who transferred and graduated from any Maryland public or private four-year institution. Fiscal year cohorts include all degree-seeking students (e.g., FT/FT, part-time, transfers, and spring admits) who enrolled in the fiscal year.

Source: Maryland Higher Education Commission, Retention and Graduation Rates at Maryland Four-year Institutions, September 2016; University System of Maryland

The six-year graduation rate does not capture a comprehensive picture of student progress or persistence toward earning a degree. To help improve reporting on student persistence, the Student Achievement Measure (SAM) was created to include more students, including those who enroll in multiple institutions during their academic career. SAM is a voluntary reporting system that tracks the progress of FT/FT and full-time transfer students throughout their college careers. FT/FT and full-time transfer students perform at the same level, with 64% of the 2009 cohorts graduating within six years of enrolling at UMBC, as shown in **Exhibit 4**.

Exhibit 4
Status of First-time, Full-time and Full-time Transfers Seeking a Bachelor’s Degree After Six Years
Fall 2007 and 2009 Cohort



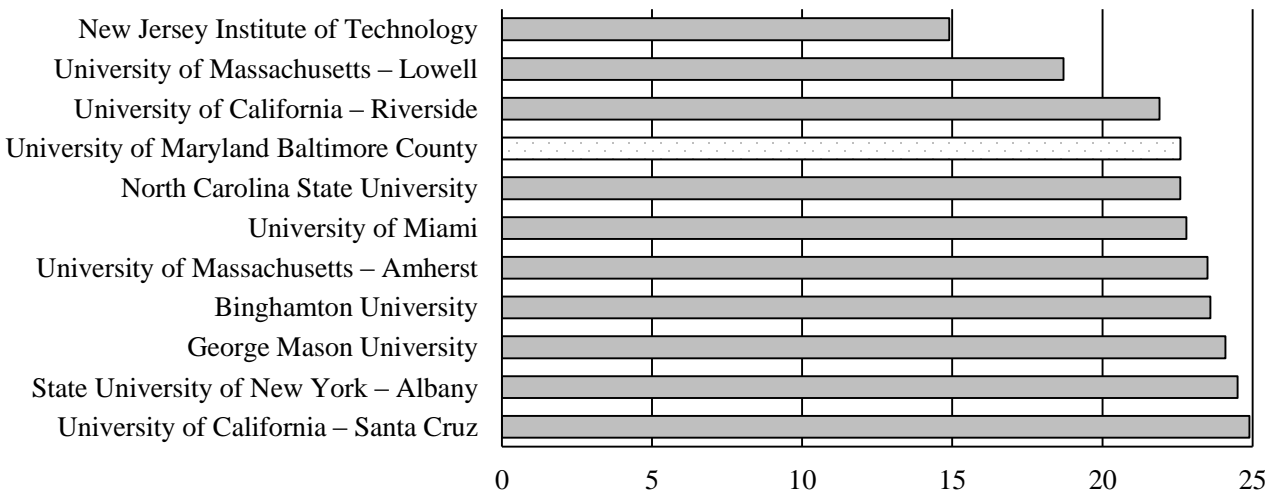
UMBC: University of Maryland Baltimore County

Source: Student Achievement Measures

Ultimately, how well an institution meets its academic mission is measured by the number of undergraduate degrees awarded. The number of undergraduate degrees awarded per 100 full-time equivalent student (FTES) shows how effectively institutions turn degree-seeking students into degree holders. **Exhibit 5** compares the three-year average of UMBC’s ratio to that of its peers. Peer institutions are those used to benchmark UMBC’s performance in USM Dashboard Indicators. Depending on the institution, the optimal value is 25.0 but would be higher for those who mainly offer upper-division programs or have a relatively high number of transfer students. Overall, seven peer

institutions have a higher ratio than UMBC at 22.6 degrees, with the University of California at Santa Cruz having the highest ratio of 24.9 degrees.

Exhibit 5
Comparison of Three-year Average of Undergraduate Degrees
Per 100 Undergraduate FTES to Performance Peers
Calendar 2011-2013



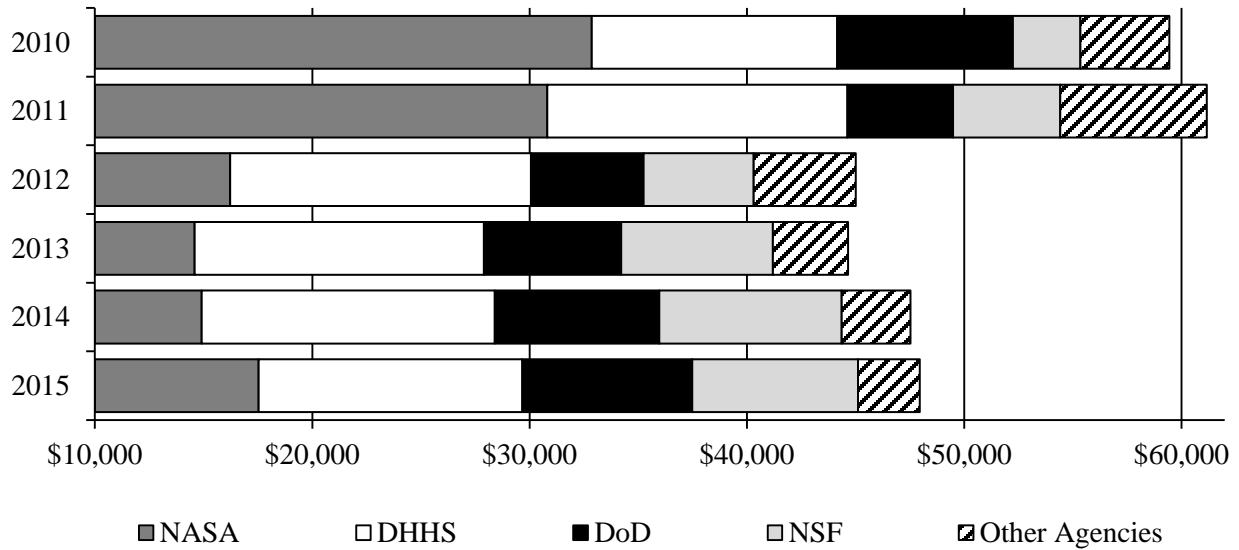
FTES: full-time equivalent student

Source: Chronicle of Higher Education, College Completion

3. Research Expenditures and Doctorates

A goal of UMBC is to be ranked among the top three public research peer institutions in a five-year average growth rate in federal research and development (R&D) expenditures. This not only serves to measure productivity but also the capacity to pursue research that attracts and retains faculty. In fiscal 2010 and 2011, federal R&D expenditures averaged \$60.3 million but fell 26.4%, or \$16.2 million, in fiscal 2012, as shown in **Exhibit 6**. This was primarily related to the loss of a National Aeronautics and Space Administration (NASA) contract. Since fiscal 2013, NASA expenditures increased 20.3%, or \$3.0 million. Overall, since fiscal 2012, expenditures grew 6.5%. According to the National Science Foundation (NSF), UMBC ranked 147 out of 428 institutions in federal R&D expenditures, which totaled \$48.0 million in fiscal 2015.

Exhibit 6
Federal Research and Development Expenditures
Fiscal 2010-2015
(\$ in Thousands)

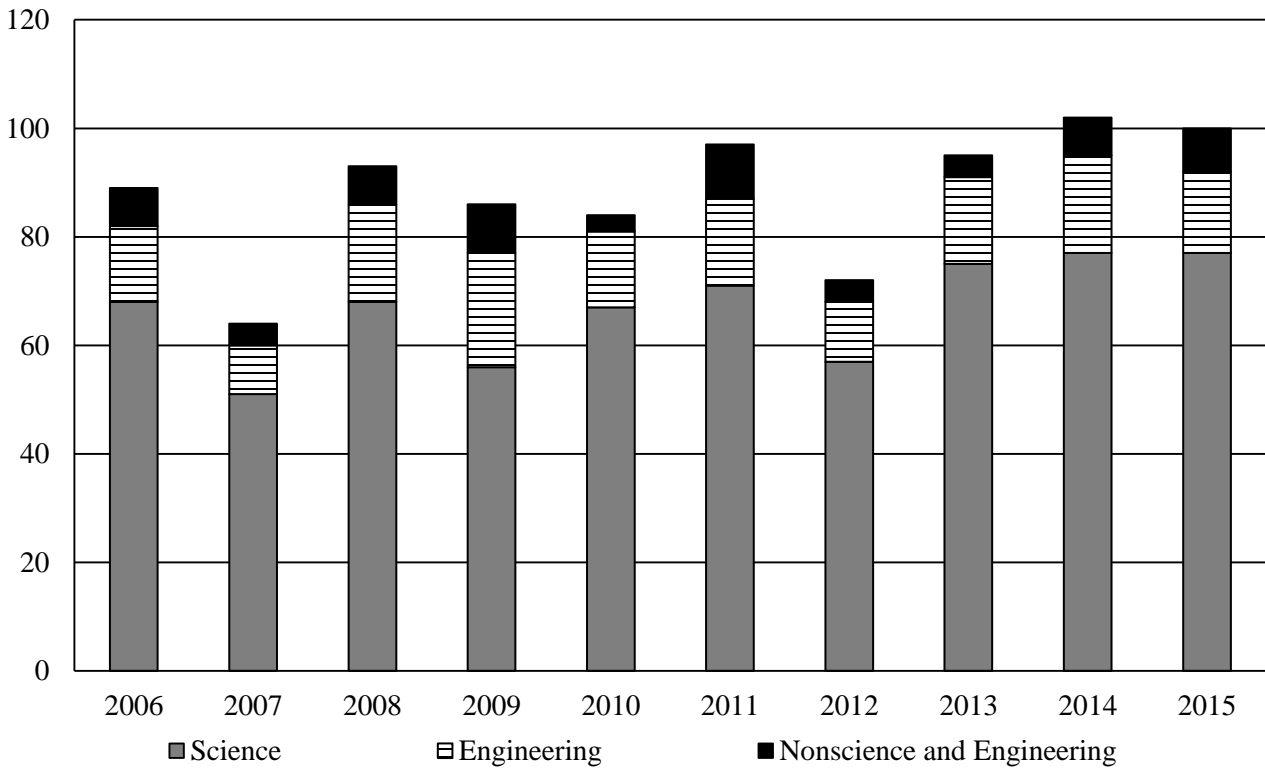


DHHS: U.S. Department of Health and Human Services
 DoD: U.S. Department of Defense
 NASA: National Aeronautics and Space Administration
 NSF: National Science Foundation

Source: National Science Foundation; National Center for Science and Engineering Statistics, *Higher Education Research and Development Survey*

After declining to a low of 84 in fiscal 2012, the number of earned doctorates increased to a high of 102 in fiscal 2014 before falling slightly to 100 in fiscal 2015, as shown in **Exhibit 7**. Overall, approximately half of the earned doctorates were in the areas of social sciences, computer, and biological sciences. In fiscal 2015, according to NSF, UMBC ranked 165 out of 905 institutions in the number of earned doctorates.

**Exhibit 7
Number of Earned Doctorate Degrees
Fiscal 2006-2015**



Source: National Science Foundation; National Center for Science and Engineering Statistics, *Survey of Earned Doctorates*

Fiscal 2016 Actions

Cost Containment and Proposed Deficiency

The November 2016 Board of Public Works (BPW) action resulted in a 1.4%, or \$1.6 million, reduction in UMBC's appropriation, of which \$0.6 million was met by the elimination of 8 vacant positions and \$0.6 million by reducing spending on contractual services. The remaining \$0.4 million was to be offset by a transfer from the Higher Education Investment Fund (HEIF) fund balance. However, due to insufficient funds, a fiscal 2017 deficiency provides the University System of Maryland Office with \$4.1 million in general funds to cover the offset at all USM institutions. A second fiscal 2017 deficiency provides \$4.7 million to USM to offset a decline in the HEIF revenues. UMBC's share of each deficiency is estimated to be \$0.4 million.

Proposed Budget

As shown in **Exhibit 8**, the general fund allowance for fiscal 2018 is 1.5%, or \$1.7 million, higher than fiscal 2017, adjusting for the fiscal 2017 deficiencies and contingent reductions in fiscal 2018. The HEIF increases 3.9%, or \$0.2 million, after adjusting for the fiscal 2017 deficiency. Overall, State funding increases 1.6%, or \$1.9 million, to \$120.2 million in fiscal 2018. Other current unrestricted funds grow 3.2%, or \$7.3 million, primarily due to tuition and fee and auxiliary revenues increasing \$2.1 million and \$3.0 million, respectively.

Exhibit 8
Proposed Budget
University of Maryland Baltimore County
(\$ in Thousands)

	FY 16	FY 17	FY 18	FY 17-18	% Change
	<u>Actual</u>	<u>Adjusted</u>	<u>Adjusted</u>	<u>Change</u>	<u>Prior Year</u>
General Funds	\$107,298	\$112,452	\$118,662		
Deficiencies		788			
Across the Board			-221		
Contingent Reductions			-3,500		
Total General Funds	107,298	113,240	114,941	\$1,701	1.5%
HEIF	5,067	5,514	5,290		
Deficiencies		-422			
Total HEIF	5,067	5,092	5,290	198	3.9%
Total State Funds	112,365	118,331	120,231	1,900	1.6%
Other Unrestricted Funds	214,646	224,702	231,956	7,253	3.2%
Total Unrestricted Funds	327,011	343,034	352,187	9,153	2.7%
Restricted Funds	86,207	92,500	92,884	383,636	0.4%
Total Funds	\$413,217	\$435,534	\$445,071	\$9,537	2.2%

HEIF: Higher Education Investment Fund

Note: Fiscal 2017 General Fund and Higher Education Investment Fund adjusted to reflect deficiencies, and fiscal 2018 General Fund adjusted to reflect across-the-board and contingent reductions.

Source: Governor's Budget Books, Fiscal 2018; Department of Legislative Services

R30B31 – USM – University of Maryland Baltimore County

Mandated State funding of \$3.5 million to increase the funding guideline attainment level of those USM institutions with the lowest estimated fiscal 2016 attainment is cut contingent on the Budget Reconciliation and Financing Act (BRFA) of 2017. The fiscal 2018 budget bill also includes a \$54.5 million (all funds) across-the-board contingent reduction for a supplemental pension payment. Annual payments are mandated for fiscal 2017 through 2020 if the Unassigned General Fund balance exceeds a certain amount at the close of the fiscal year. UMBC's share of the reduction is \$0.2 million in general funds. This action is also tied to a provision in the BRFA of 2017.

Budget changes by program area are shown in **Exhibit 9**. This data includes unrestricted funds only, the majority of which consist of general funds, the HEIF, and tuition and fee revenues. Education and general (E&G) expenditures increase 4.3%, or \$11.4 million, in fiscal 2017. Institutional support grows at the highest rate of 15.0%, or \$5.5 million, due to personnel costs, and upgrades to the enterprise resource planning, Oracle maintenance cost, and software license fees. The increase in spending on instruction of \$5.1 million is related to personnel costs. Growth of 7.7%, or \$2.5 million, in operation and maintenance of plant is due to personnel costs, utilities, and the increase in funding for facility renewal projects.

Exhibit 9
University of Maryland Baltimore County
Budget Changes for Unrestricted Funds by Program
Fiscal 2016-2018
(\$ in Thousands)

	2016	2017		2018	2017-18	2017-18
	<u>Actual</u>	<u>Adjusted Working</u>	<u>2016-17</u>	<u>Adjusted</u>	<u>Change</u>	<u>% Change</u>
Expenditures						
Instruction	\$109,541	\$114,606	4.6%	\$118,456	\$3,850	3.4%
Research	19,180	18,504	-3.5%	18,612	108	0.6%
Public Service	4,400	4,205	-4.4%	4,221	16	0.4%
Academic Support	22,197	21,895	-1.4%	21,873	-21	-0.1%
Student Services	16,947	15,819	-6.7%	15,888	69	0.4%
Institutional Support	36,660	42,155	15.0%	42,367	212	0.5%
Operation and Maintenance of Plant	33,125	35,665	7.7%	37,144	1,480	4.1%
Scholarships and Fellowships	23,373	23,640	1.1%	25,189	1,549	6.6%
Deficiency		366				
ATB Reductions				-221		
Contingent Reduction				-3,500		
Education and General Total	\$265,423	\$276,854	4.3%	\$280,030	\$3,176	1.1%
Auxiliary Enterprises	\$61,587	\$66,179	7.5%	\$72,157	\$5,978	9.0%
Total	\$327,011	\$343,034	4.9%	\$352,187	\$9,153	2.7%
Revenues						
Tuition and Fees	\$127,362	\$129,844	1.9%	\$131,993	\$2,149	1.7%
General Funds	107,298	113,240	5.5%	114,941	1,701	1.5%
Higher Education Investment Fund	5,067	5,092	0.5%	5,290	198	3.9%
Other Unrestricted Funds	24,533	22,377	-8.8%	24,605	2,228	10.0%
Subtotal	\$264,261	\$270,552	2.4%	\$276,830	\$6,278	2.3%
Auxiliary Enterprises	74,862	75,928	1.4%	\$78,929	\$3,001	4.0%
Transfer to/from Fund Balance	-12,112	-3,447		-3,572		
Total	\$327,011	\$343,034	4.9%	\$352,187	\$9,153	2.7%

ATB: across-the-board

Note: Fiscal 2017 general funds and the Higher Education Investment Funds reflect \$0.8 million and \$0.4 million deficiencies, respectively. Fiscal 2018 general funds are adjusted by \$0.2 million and \$3.5 million to reflect across-the-board and contingent reductions.

Source: Governor's Budget Books, Fiscal 2018; Department of Legislative Services

In fiscal 2017, spending on student services decreases 6.7%, or \$1.1 million, due to the fiscal 2016 actual numbers including expenditures associated with the Aetna Student Health Plan and related student reimbursements for health coverage. These costs are not normally budgeted yet were included in the fiscal 2016 actuals but not in the fiscal 2017 working appropriation. The decrease in academic support of 1.4%, or \$0.3 million, is related to reducing contractual services and supplies to offset higher personnel costs. The decrease in spending in public services (\$0.2 million) is related to contractual services, equipment maintenance. The drop in research (\$0.7 million) is due to reducing salaries in anticipation of the end of a grant.

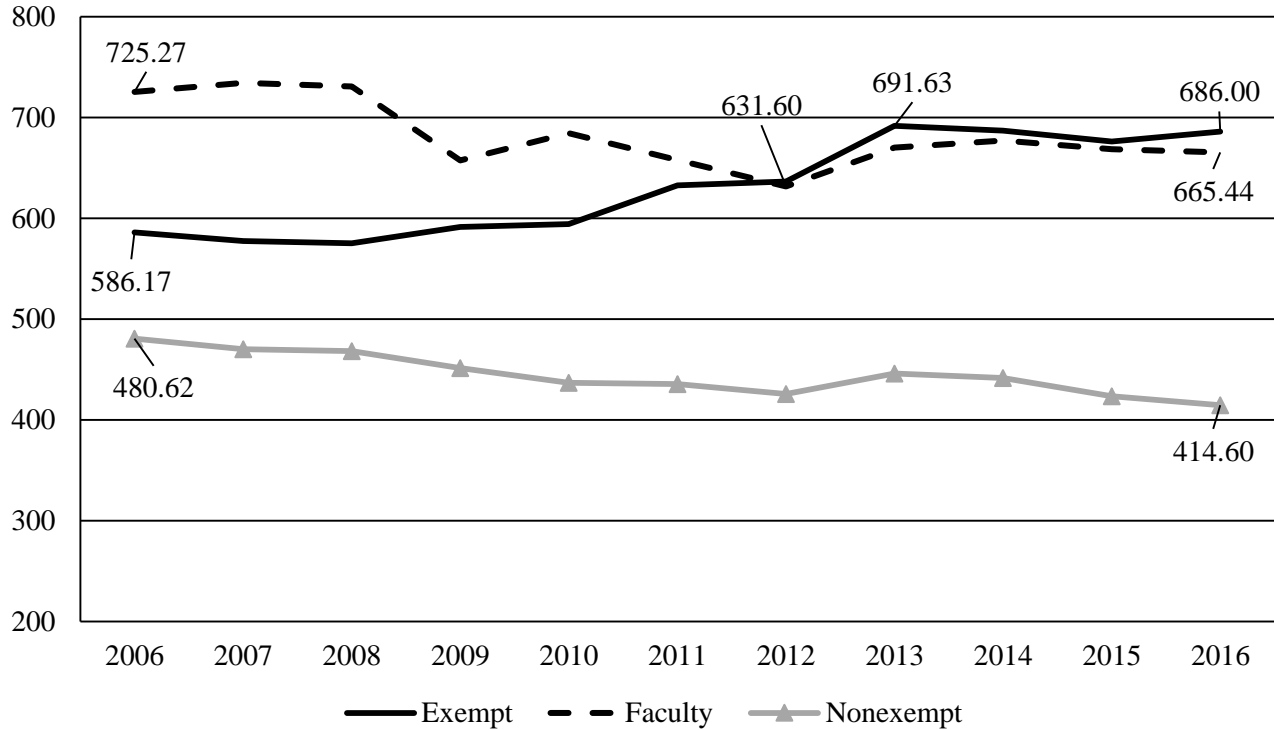
In fiscal 2018, E&G spending grows 1.1%, or \$3.2 million. Spending on instruction increases 3.4%, or \$3.9 million. However, this is overstated because the full amount of the November 2016 BPW reduction of \$1.6 million was allocated to instruction, thereby lowering total expenditures in fiscal 2017. Furthermore, the reduction was not carried forward in instruction in fiscal 2018 but rather the adjustment was made in academic support. Therefore, a comparison cannot be made between the spending in instruction and academic support between fiscal 2017 and 2018. UMBC notes that projected increases in spending in instruction and institutional support in fiscal 2018 are related to acquiring additional instructional resources and contractual staff with the funds anticipated in Chapter 25 of 2016, funding that the BRFA of 2017 proposes to cut. Of the \$1.5 million increase in spending on operation and maintenance of plant, \$1.0 million is for facility renewal projects with the remainder related to debt service.

In fiscal 2016 and 2017, E&G expenditures exceed State-supported revenues by \$1.2 million and \$6.3 million, respectively. Therefore, UMBC will need to use part of the \$13.3 million and \$9.7 million surplus in auxiliary enterprise to cover the E&G shortfall. In addition, in order to cover the projected \$3.2 million budget gap in fiscal 2018, UMBC will need to use almost half of the \$6.8 million projected auxiliary enterprise surplus. Since auxiliary enterprises are self-supporting, they typically generate a profit, which is generally transferred to the fund balance to be used to fund future projects, such as renovations and construction of auxiliary-related facilities. In times when E&G revenues may not cover academic expenses, institutions will use excess auxiliary revenues to help offset the shortfalls. In addition, UMBC has maintained a relatively high vacancy rate for State-supported positions, exceeding 9% since at least June 2015, indicating that positions are being left unfilled in order to cover E&G expenses. This, coupled with the continual use of auxiliary enterprise surpluses to cover shortfalls in E&G, raises concerns about the financial situation at UMBC. Furthermore, the two- and three-year decline in undergraduate and graduate enrollment, respectively, puts additional strain on the E&G budget. **The President should comment on the continual shortfall in E&G and what efforts are being taken to reduce costs, thereby decreasing reliance on auxiliary surpluses and vacancies to cover the shortfalls and the impact on student performance of having a high percentage of positions vacant.**

Trends in Personnel

Over the past 10 years, the total number of filled positions declined 1.5% (or 26.0 full-time equivalents (FTE)), with the number of nonexempt and faculty filled positions decreasing 59.8 and 66.0 FTEs, respectively, as shown in **Exhibit 10**. The decline in faculty is primarily related to those in research in which filled positions decreased by 52.0 FTEs.

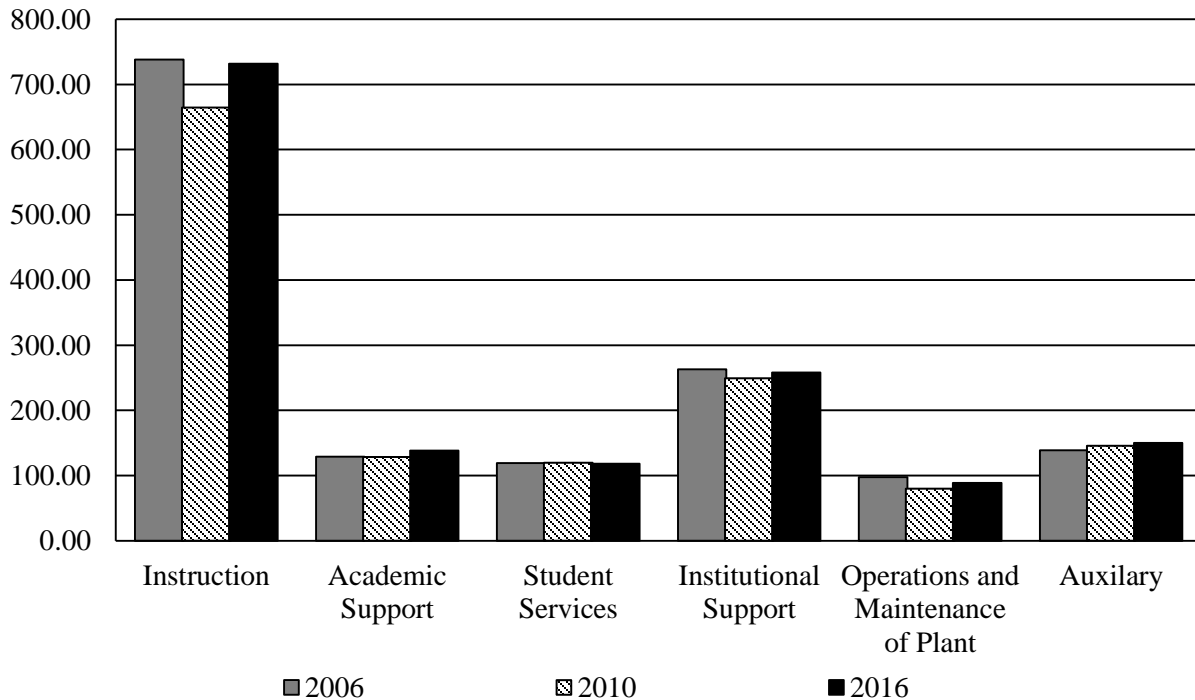
Exhibit 10
Total Filled Positions by Classification
 As of October 2006-2016



Source: University of Maryland Baltimore County

Exhibit 11 shows changes in the number of filled positions by program area, excluding research and public service, before (2006), during (2010), and after the most recent recession (2016). During the recession in 2010, there was a significant decline of 73.2 FTEs in filled instruction positions compared to other program areas, which remained fairly stable. Between 2010 and 2016, instructional positions increased 10.1%, keeping pace with the enrollment growth of 10.2% and returning close to the 2006 levels. In 2016, the number of filled positions in operations and maintenance of plant totaled 89.0 FTEs, below the prerecession level of 97.8 FTEs in 2006. This raises concerns about the ability of UMBC to maintain its existing facilities and the new performing arts and humanities facility.

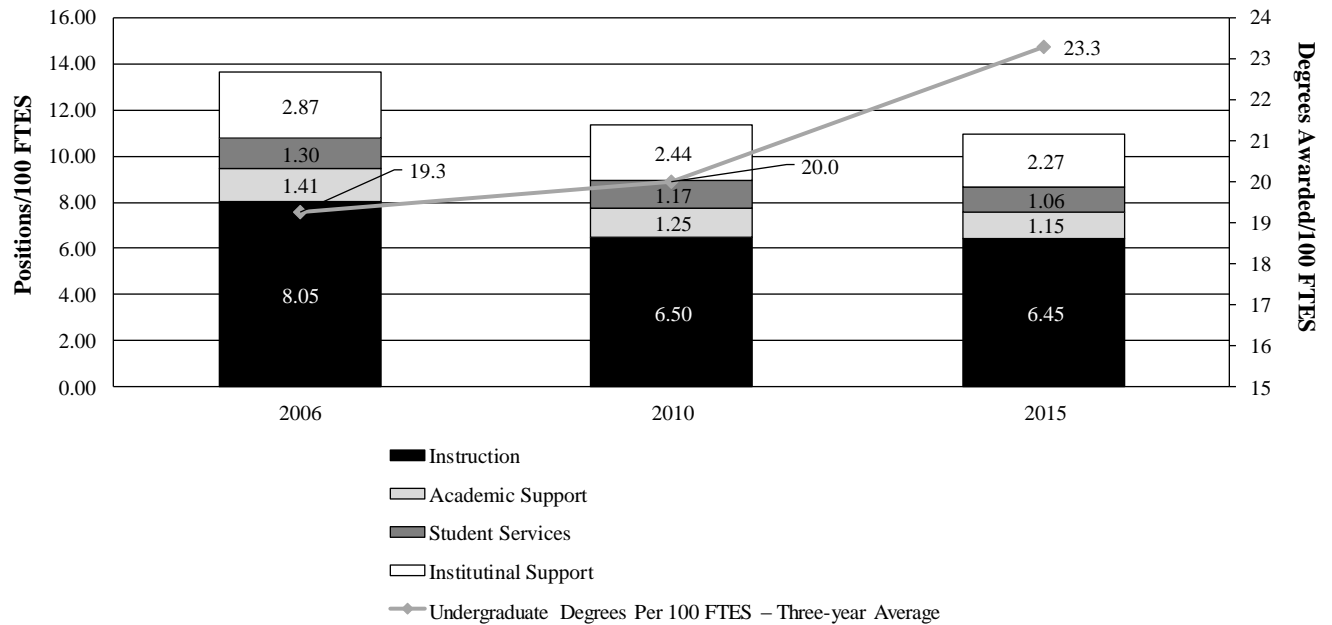
Exhibit 11
Filled Positions by Program Area
October 2006, 2010, and 2016



Source: University of Maryland Baltimore County

Exhibit 12 considers the impact that the positions have on institution performance by comparing the number of filled positions related to the academic enterprise on a per 100 undergraduate FTES basis to the number of undergraduate degrees awarded per 100 undergraduate FTES. Overall, between calendar 2006 and 2015, positions per 100 FTES declined in all program areas with the instruction ratio declining from 8.05 to 6.45 100 FTES enrollment. This is to be expected considering from 2006 to 2015, enrollment grew 23.9% while filled positions decreased 0.5%. Overall, despite fewer academic-related positions, UMBC steadily improved its performance with the average number of degrees awarded per 100 undergraduate FTES increasing from 19.3 in 2006 to 23.3 in 2015, indicating other factors besides the number of personnel are impacting student performance.

Exhibit 12
Academic-related Positions Per 100 Undergraduate FTES Compared to
Undergraduate Degrees Per 100 Undergraduate FTES
2006, 2010, and 2015



FTES: full-time equivalent student

Source: University of Maryland Baltimore County; Integrated Postsecondary Education System; Department of Legislative Services

Issues

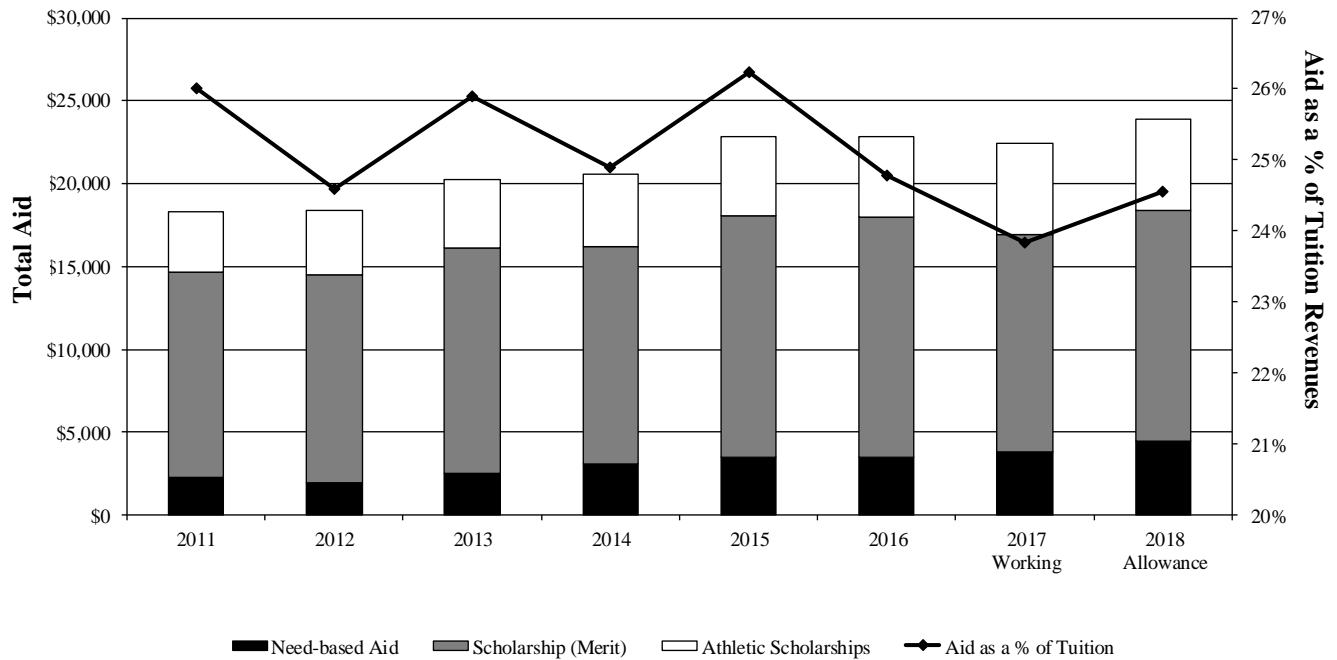
1. Meeting College Expenses

As the cost of college continues to increase, students and families are relying on a variety of financial aid to pay for college with more students taking out loans. When accounting for the average amount of federal, State, and institutional aid awarded to all UMBC students, the average net price for a FT/FT Maryland undergraduate student at UMBC was \$14,741 in fiscal 2016 compared to the list price of \$26,506 (based on tuition, mandatory fees, books and supplies, other expenses, and the weighted average of room and board), according to the National Center for Education Statistics' College Navigator. This amounts to a 44.4% reduction in the net cost of attendance. For those with a family income up to \$30,000, the average net price was \$11,645 in fiscal 2016.

In fiscal 2016, 28% of UMBC's undergraduate students received Pell awards, which are given to those who otherwise could not afford college and have an expected family contribution (EFC) of less than a specific amount, which was \$5,815 in fiscal 2016. EFC is an indicator of the amount that a family is able to contribute for a student's college education: the lower the EFC, the greater the financial aid.

Total expenditures on institutional aid grew 24.9%, or \$4.6 million, from fiscal 2011 to 2015, as shown in **Exhibit 13**. Scholarships accounted for \$2.2 million of the increase, and need-based aid and athletic scholarships each accounted for \$1.2 million. Total spending on financial aid decreased by \$0.4 million from fiscal 2015 to 2017. Expenditures on scholarships declined by \$1.4 million, while need-based aid and athletic scholarships increased by \$0.3 and \$0.7 million, respectively. Spending on need-based aid is budgeted to increase by \$0.7 million in fiscal 2018 reflecting UMBC's previously discussed strategy to increase FT/FT enrollment. Overall, the portion of institutional aid going toward need-based aid increased from 12.6% in fiscal 2011 to 18.7% in fiscal 2018. However, approximately 67.0% of aid goes toward scholarships.

Exhibit 13
Institutional Aid: Total Aid and Aid as a Percentage of
Undergraduate Tuition Revenues
Fiscal 2011-2018
(\$ in Thousands)



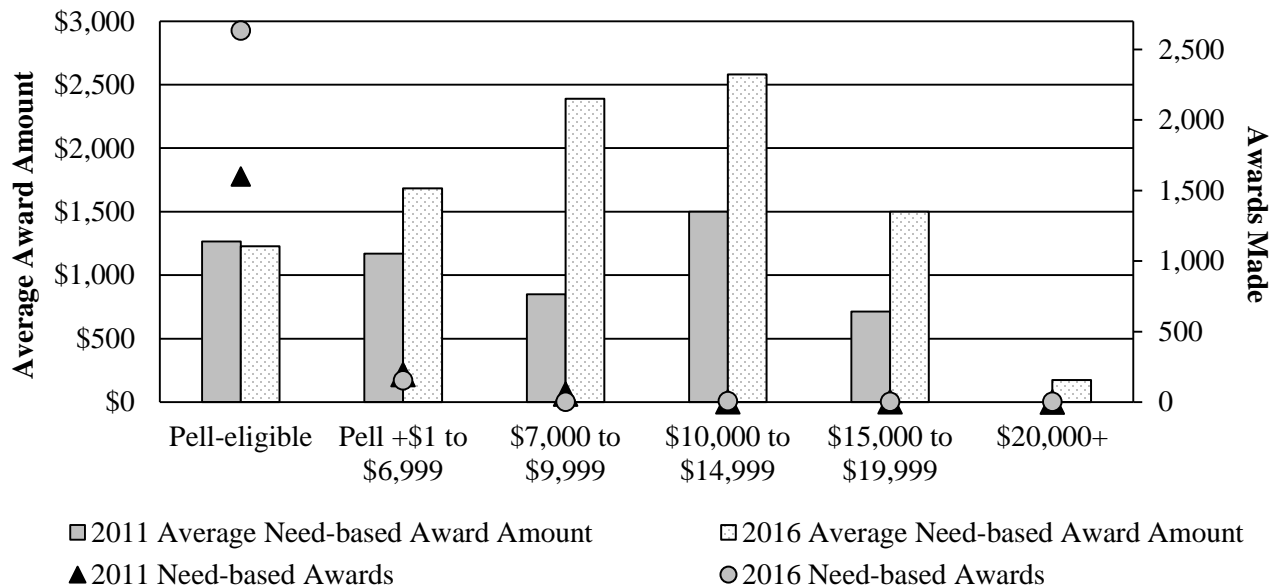
Source: University System of Maryland; Department of Legislative Services

The President should comment on the decrease in spending on institutional aid in fiscal 2016 and 2017, particularly the decline in scholarships. The President should also comment on whether the budgeted increase of \$0.7 million in need-based aid in fiscal 2018 is sufficient to have a significant impact on increasing FT/FT students. The President should also comment on if consideration is being given to shift funds from scholarships to need-based aid.

The USM Board of Regents has instructed institutions to use a portion of annual tuition revenue increases for institutional aid directing toward those undergraduate students with the highest financial need, offsetting increases in tuition rates, and holding harmless those with the greatest need. The percentage of institutional aid as a percentage of undergraduate tuition revenue declines from a high of 25.9% in fiscal 2015 to 23.8% in fiscal 2017.

Between fiscal 2011 and 2016, the number of need-based aid awards going to Pell-eligible students increased from 1,597 to 2,634, with the average award decreasing \$38, as shown in **Exhibit 14**. During this time period, the portion of awards going toward Pell-eligible students increased from 82.6% to 94.0%. The average award amount increased for students in other EFC categories, particularly for all the categories with EFCs above \$7,000. However those categories account for only a combined 12 students.

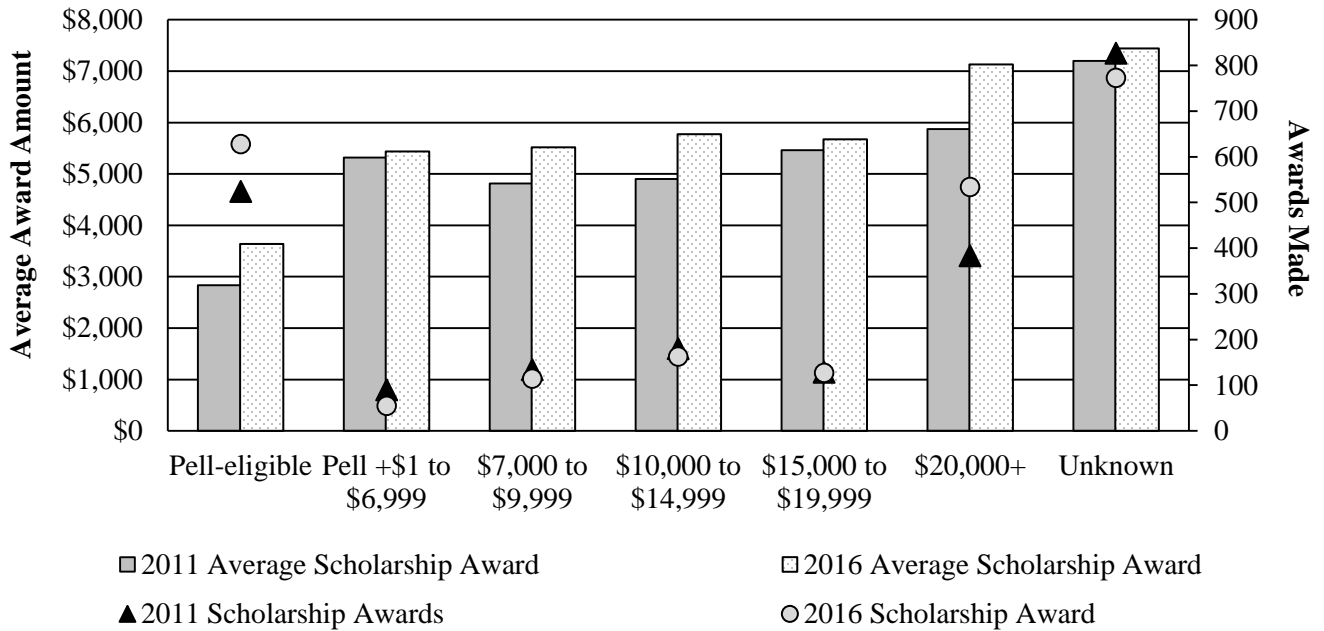
Exhibit 14
Comparison of Number and Average Amount of Need-based Aid
Received Per Recipient by Expected Family Contribution
Fiscal 2011 and 2016



Source: University System of Maryland

The average scholarship award amount increased across all EFC categories with students in the unknown (students who did not file a Free Application for Federal Student Aid or FAFSA) category receiving the highest award of \$7,443 in fiscal 2016, as shown in **Exhibit 15**. Overall, the number of awards declined for all EFC categories except for Pell-eligible students and those with an EFC over \$20,000, which increased by 104 and 151, respectively.

Exhibit 15
Comparison of Number and Average Amount of Scholarship
Received Per Recipient by Expected Family Contribution
Fiscal 2011 and 2016

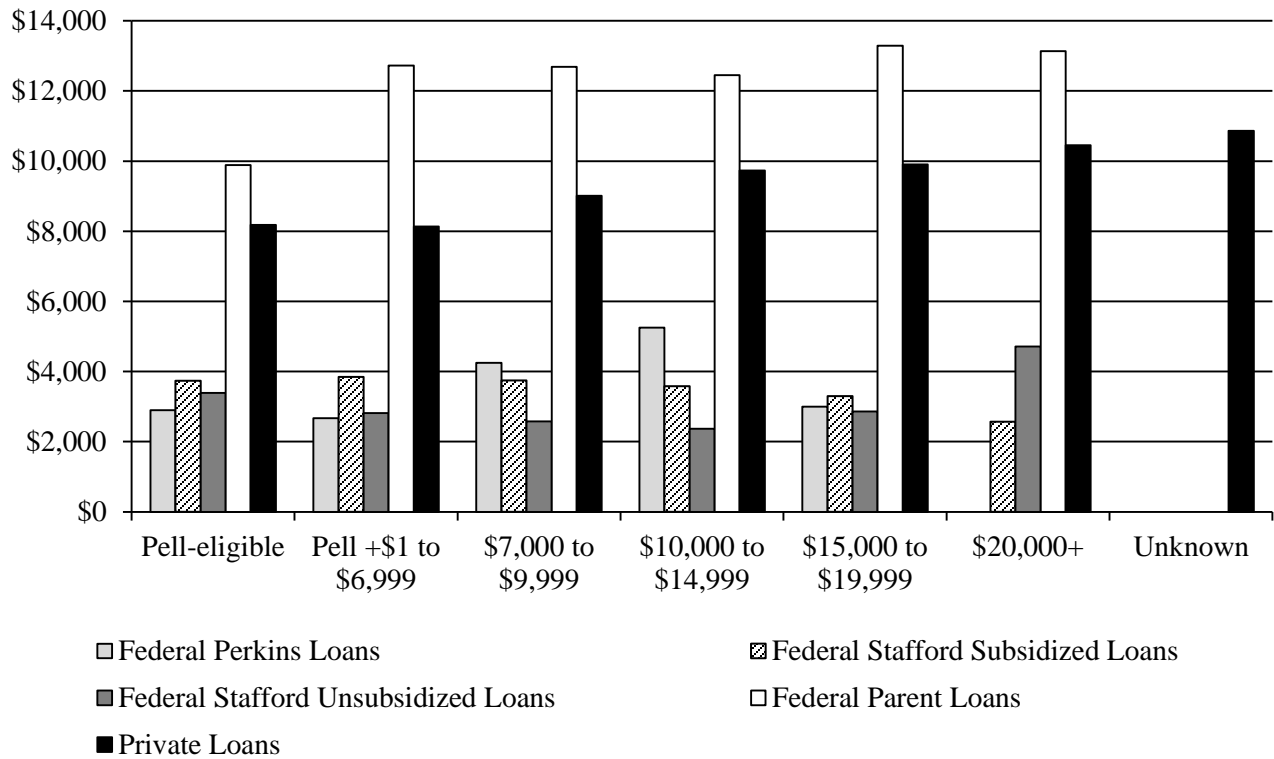


Source: University System of Maryland

While students with the greatest financial need typically receive Pell and institutional aid, it is not enough to cover the cost of attending college. As shown in **Exhibit 16**, students in all EFC categories take out various types of loans to finance their education. There are three types of loans:

- federal subsidized loans, which are based on the financial need with the government paying the interest while the student is enrolled in school (Perkins and Stafford loans);
- federal unsubsidized loans, which are generally for those who do not demonstrate financial need with interest added to the balance of the loan while the student is enrolled in school (Stafford and Parent loans); and
- private loans.

**Exhibit 16
Mean Loan Amount by Type and Expected Family Contribution
Fiscal 2016**



Source: University System of Maryland

In fiscal 2016, of the 3,429 Pell-eligible students, 76.8% and 57.6% used subsidized and unsubsidized loans, respectively, to help pay for their college education with average loans of \$3,741 and \$3,395. In addition, 176 of these students took out an average of \$8,177 in private loans. In general, federal parent loans were the highest loan amount in all EFC categories, with those who have an EFC of \$15,000 to \$19,999 taking out the highest average loan amount of \$13,289.

According to College Insight, the percentage of students graduating with debt from UMBC decreased from 51% to 49% between fiscal 2009 and 2014, lower than the national average of 61% in fiscal 2014. During this time period, the average debt for the UMBC graduate increased 34% from \$19,353 to \$25,925, although that is still below the national average of \$27,022 in fiscal 2014.

The President should comment on financial literacy efforts to inform and guide students in making financial decisions, especially Pell-eligible students, given the relatively low percentage using federal subsidized and unsubsidized loans to pay for college.

Recommended Actions

1. See the University System of Maryland Overview for systemwide recommendations.

Appendix 1
Current and Prior Year Budgets
USM – University of Maryland Baltimore County
(\$ in Thousands)

	<u>General Fund</u>	<u>Special Fund</u>	<u>Federal Fund</u>	<u>Other Unrestricted Fund</u>	<u>Total Unrestricted Fund</u>	<u>Restricted Fund</u>	<u>Total</u>
Fiscal 2016							
Legislative Appropriation	\$103,698	\$5,067	\$0	\$218,115	\$326,880	\$83,816	\$410,696
Deficiency Appropriation	1,214	0	0	0	1,214	0	1,214
Budget Amendments	2,386	0	0	3,800	6,186	5,884	12,070
Reversions and Cancellations	0	0	0	-7,269	-7,269	-3,493	-10,763
Actual Expenditures	\$107,298	\$5,067	\$0	\$214,646	\$327,011	\$86,207	\$413,217
Fiscal 2017							
Legislative Appropriation	\$110,177	\$5,514	\$0	\$227,348	\$343,040	\$86,911	\$429,951
Cost Containment	-1,637	0	0	0	-1,637	0	-1,637
Budget Amendments	3,912	0	0	-2,646	1,266	5,589	6,854
Working Appropriation	\$112,452	\$5,514	\$0	\$224,702	\$342,668	\$92,500	\$435,168

USM: University System of Maryland

Note: Does not include targeted reversions, deficiencies, and contingent reductions. Numbers may not sum to total due to rounding.

Fiscal 2016

For fiscal 2016, the general fund appropriation for the University of Maryland Baltimore County (UMBC) increased by \$3.6 million, which included a \$1.2 million deficiency related to a shortfall in health benefits. A budget amendment added a further \$2.4 million related to the restoration of a 2% pay reduction.

Other unrestricted funds decreased by \$3.5 million. Budget amendments added \$3.8 million including:

- \$3.7 million related to an additional 2% increase in the undergraduate tuition rate over the rate of the working budget and other fee increases;
- \$0.3 million in direct cost recovery;
- \$24,748 in the sales of educational activities; and
- \$23,457 related to an increase use of fund balance.

These increases were partially offset by a decrease of \$0.2 million in auxiliary enterprises and \$91,158 in miscellaneous income. Cancellation of current restricted funds amounted to \$7.3 million, mainly related to deferring spending for the Event Center Construction and start-up funding for recruitment of faculty and other expenditures being lower than anticipated.

Restricted funds increased by \$2.4 million. Budget amendments increased funds by \$5.9 million due to federal (\$6.7 million) and private (\$0.6 million) grant and contract activity. The increase was partially offset by a \$1.5 million decrease in State and local contract and grant activity. Cancellation of current restricted funds amounted to \$3.5 million due to contract and grant expenditures being less than budgeted.

Fiscal 2017

To date, in fiscal 2017, the general fund appropriation for UMBC has increased by \$2.3 million. A budget amendment added \$3.9 million, including \$3.2 million related to salary increments and a \$0.7 million transfer from the University of Maryland System Office to support student completion initiatives. This was partly offset by \$1.6 million in cost containment measures. Other unrestricted funds decreased \$2.6 million including:

- \$2.7 million in miscellaneous income related to numerous small declines in various accounts;
- \$1.2 million in auxiliary enterprises to realign budget with current projections;

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- \$0.7 million in the sales and services of education activities; and
- \$54,111 related to increasing the amount transferred to fund balance.

These decreases are partially offset by increases of \$1.3 million in tuition and fee revenues associated with increase enrollment in graduate programs and \$0.6 million in indirect cost recovery.

Current restricted funds increased \$5.6 million due to federal (\$2.2 million), private (\$2.1 million), and State and local (\$1.3 million) contract and grant activity.

Appendix 2
Special Review Audit

Audit Period for Last Audit:	July 2012 – February 2016
Issue Date:	November 2016
Number of Findings:	3
Number of Repeat Findings:	0
% of Repeat Findings:	0%
Rating: (if applicable)	n/a

Finding 1: The University of Maryland Baltimore County (UMBC) Facilities Management Department used an on-call maintenance contract as a means to process the work of other vendors, thereby circumventing UMBC’s Simplified Procurement Procedures.

Finding 2: UMBC did not document its rationale for reevaluating a technical proposal submitted by a vendor that was initially rejected, but subsequently selected as one of the on-call maintenance contractors, nor did UMBC adequately document the subsequent reevaluation of the bid proposal.

Finding 3: Invoices submitted by two vendors did not always provide sufficient detail to substantiate the propriety of the charges, and one vendor submitted invoices with questionable charges. In addition, some of the work performed by one of these vendors could likely have been performed by UMBC employees or the on-call maintenance contractors at a lower cost.

*Bold denotes item repeated in full or part from preceding audit report.

Appendix 3
Object/Fund Difference Report
USM – University of Maryland Baltimore County

<u>Object/Fund</u>	<u>FY 16 Actual</u>	<u>FY 17 Working Appropriation</u>	<u>FY 18 Allowance</u>	<u>FY 17 - FY 18 Amount Change</u>	<u>Percent Change</u>
Positions					
01 Regular	1,994.16	1,997.72	1,997.72	0.00	0%
02 Contractual	507.21	478.86	543.65	64.79	13.5%
Total Positions	2,501.37	2,476.58	2,541.37	64.79	2.6%
Objects					
01 Salaries and Wages	\$ 239,144,498	\$ 255,626,737	\$ 260,154,665	\$ 4,527,928	1.8%
02 Technical and Spec. Fees	1,495,572	2,224,304	2,278,931	54,627	2.5%
03 Communication	969,415	1,021,066	1,022,097	1,031	0.1%
04 Travel	5,727,345	4,609,824	4,609,824	0	0%
06 Fuel and Utilities	10,941,643	13,559,543	14,198,865	639,322	4.7%
07 Motor Vehicles	846,584	1,337,038	1,338,062	1,024	0.1%
08 Contractual Services	53,029,610	52,576,292	54,056,128	1,479,836	2.8%
09 Supplies and Materials	17,570,798	14,712,679	14,712,679	0	0%
11 Equipment – Additional	6,975,112	6,743,514	6,743,514	0	0%
12 Grants, Subsidies, and Contributions	50,996,891	52,456,681	54,006,076	1,549,395	3.0%
13 Fixed Charges	20,934,485	25,019,085	29,389,523	4,370,438	17.5%
14 Land and Structures	4,585,152	5,281,400	6,281,400	1,000,000	18.9%
Total Objects	\$ 413,217,105	\$ 435,168,163	\$ 448,791,764	\$ 13,623,601	3.1%
Funds					
40 Unrestricted Fund	\$ 327,010,565	\$ 342,668,163	\$ 355,908,128	\$ 13,239,965	3.9%
43 Restricted Fund	86,206,540	92,500,000	92,883,636	383,636	0.4%
Total Funds	\$ 413,217,105	\$ 435,168,163	\$ 448,791,764	\$ 13,623,601	3.1%

USM: University System of Maryland

Note: Does not include targeted reversions, deficiencies, and contingent reductions.

Appendix 4
Fiscal Summary
USM – University of Maryland Baltimore County

<u>Program/Unit</u>	<u>FY 16</u> <u>Actual</u>	<u>FY 17</u> <u>Wrk Approp</u>	<u>FY 18</u> <u>Allowance</u>	<u>Change</u>	<u>FY 17 - FY 18</u> <u>% Change</u>
01 Instruction	\$ 110,341,498	\$ 114,767,311	\$ 118,617,013	\$ 3,849,702	3.4%
02 Research	63,797,763	68,419,378	68,814,081	394,703	0.6%
03 Public Service	20,801,504	22,651,080	22,763,738	112,658	0.5%
04 Academic Support	22,197,237	21,894,702	21,873,321	-21,381	-0.1%
05 Student Services	16,946,815	15,818,782	15,888,009	69,227	0.4%
06 Institutional Support	36,660,292	42,155,263	42,367,360	212,097	0.5%
07 Operation and Maintenance of Plant	33,125,062	35,664,659	37,144,293	1,479,634	4.1%
08 Auxiliary Enterprises	61,587,456	66,179,318	72,156,884	5,977,566	9.0%
17 Scholarships and Fellowships	47,759,478	47,617,670	49,167,065	1,549,395	3.3%
Total Expenditures	\$ 413,217,105	\$ 435,168,163	\$ 448,791,764	\$ 13,623,601	3.1%
Unrestricted Fund	\$ 327,010,565	\$ 342,668,163	\$ 355,908,128	\$ 13,239,965	3.9%
Restricted Fund	86,206,540	92,500,000	92,883,636	383,636	0.4%
Total Appropriations	\$ 413,217,105	\$ 435,168,163	\$ 448,791,764	\$ 13,623,601	3.1%

USM: University System of Maryland

Note: Does not include targeted reversions, deficiencies, and contingent reductions.