

# Virginia Tech Board of Visitors Meeting

## Information Session

Sunday, November 5, 2017  
12:30 – 2:15 p.m.

Torgersen Hall Board Room (2100)  
Virginia Tech Campus

**12:30 – 1:15 p.m. Annual Progress Report on University Strategic Plan**

- Dr. Timothy D. Sands, President
- Mr. M. Dwight Shelton, Jr., Vice President for Finance and Chief Financial Officer
- Dr. Ken Smith, Vice Provost for Resource Management and Institutional Effectiveness

**1:30 – 2:15 p.m. Virginia Tech Carilion School of Medicine: Structured for Success**

- Dr. Cynda A. Johnson, President and Founding Dean, VTCSOM

**Scorecard - Plan for a New Horizon  
2012-2018  
Foundation Strategies**

	Measure	Metric Definition and Information Source(s)	Target	2015	2016	2017	Performance Toward Target
<b>ORGANIZATIONAL DEVELOPMENT</b>	Expenditures with SWaM suppliers	Actual expenditures as measured by percentage of annual goal achieved; this is not a static measure, as expenditures increase, achieving the same percentage increases dollars flowing to SWaM suppliers	<b>85% (VT 100%)</b>	104.0%	99.0%	93.0%	
	Management's timely response to Internal Audit Comments	Actual performance in implementing internal audit recommendations by the original target date	<b>95%</b>	98.0%	100.0%	100.0%	
	Workforce composition of faculty	Percentage of underrepresented full-time faculty (snapshot data as of September 30; underrepresented tenured & tenure-Track faculty numbers do not include those self-identifying as Asian)	<b>Growth</b>	7.7%	6.8%	7.0%	
	Workforce composition of all employees	Percentage of minority full-time employees (snapshot as of September 30; tenured & tenure-track, non-tenure-track instructional, and research faculty are included in "All Other Faculty"; faculty and staff numbers include those self-identifying as Asian.)	<b>Growth</b>	14.64%	14.88%	15.67%	
<b>EFFICIENCY, COST CONTAINMENT, &amp; INFRASTRUCTURE</b>	Classroom Utilization Rate (measured biennially)	The utilization rate reflects an overall use of campus "stations" or seats in rooms by the ratio of seats occupied to total seats available.	<b>60%</b>	-	68.1%	-	
	Classroom Laboratory Utilization Rate (measured biennially)	The utilization rate reflects an overall use of campus "stations" or seats in rooms by the ratio of seats occupied to total seats available.	<b>75%</b>	-	66.2%	-	
	E-Commerce transactions	Number of electronic payments as a percentage of total non-payroll disbursements	<b>60%</b>	65.00%	67.00%	73.00%	
		Number of electronic cash receipts versus traditional receipts - Increase in the number of cash receipts received through electronic methods versus traditional methods	<b>85%</b>	91.00%	93.00%	93.00%	
	Dollar volume of rebates earned through the virtual card	Growth in dollar volume of rebates earned through the virtual card	<b>\$450,000 / calendar year</b>	\$590,759	\$510,188	\$857,888	
	Administrative Cost Efficiency as compared to peer institutions	Delta Cost Study methodology uses IPEDS data to compute Academic Support and Institutional Support costs (loaded with O&M)) per student FTE. A rank of #1 represents the most efficient. Data is generally one or more fiscal years behind. The most recent ranking will be reported.	<b>Top 5 of peer institutions</b>	2nd	2nd	1st	
	Police Department Average Emergency Response Time	The response time is measured from the time the Communications Officer dispatches the call until the officer arrives on scene	<b>&lt; 3 min</b>	<3 min	<3 min	<3 min	
	Compliance with Best Practices of Virginia Crime Commission	This measure tracks the level of compliance with all applicable Best Practices recommended by the Virginia Crime Commission and mandated by SCHEV	<b>95%</b>	96.00%	96.00%	96.00%	
<b>RESOURCE DEVELOPMENT</b>	Progress of faculty salaries towards 60th percentile of SCHEV peers	SCHEV methodology of computing the percentile rank of the university's Salary Level as compared with peer institutions	<b>60th Percentile</b>	32nd	31st	33rd	
	Increase in undergraduate financial aid resources	Incremental institutional support for undergraduate financial aid from the following sources: unfunded, institutionally-controlled hard dollar resources and general fund support	<b>\$500,000 / year</b>	\$0.9M	\$1.9M	\$4.0M	
	Undergraduate financial aid resources	Total undergraduate financial aid resources: does not include Private Support. It is comprised of unfunded scholarships, general fund, and institutional resources.	<b>Growth</b>	\$30.9M	\$32.8M	\$36.7M	
	Maintenance Reserve Support: Auxiliaries	Maintenance reserve funding for auxiliaries	<b>Growth</b>	\$8.6M	\$9.3M	\$10.7M	
	University debt rating	Debt Rating as provided by Moody's and S&P	<b>Rating in the AA- range by at least two rating agencies</b>	Moody's: Aa1 S&P:AA	Moody's: Aa1 S&P:AA	Moody's: Aa1 S&P:AA	
	University debt ratio	The university's actual annual debt service as a percent of its total operating expenses	<b>= or &lt; 5%</b>	4.27%	4.18%	3.67%	
	Central funding of research computing	The university will centrally commit funding for the investment in research computing, enabling expanded computational science based research. This is not a static measure. The investment will be calculated as a percentage of the annual externally funded research expenditures for the previous year. The actual dollar amount for annual externally funded research expenditures for FY16 was \$282,979,826; the total university allocation for research computing in FY17 was \$8,786,924.	<b>3 - 5%</b>	3.31%	4.09%	3.11%	
	Endowment Market Value	The market value of endowment assets managed by the Virginia Tech Foundation	<b>Outperforming endowment policy benchmark over a 3, 5, and 10-year rolling period</b>	\$817.8M	\$843.0M	\$995.8M	
	VT Foundation Assets	Total of VT Foundation assets	<b>Growth</b>	\$1,507.8M	\$1,510.6M	\$1,724.0M	
	Yearly Fundraising total (cash flow) at face value	The total amount of gifts received for the fiscal year	<b>\$100M in Cash</b>	\$89.7M	\$101.5M	\$125.0M	
	Yearly New Gifts and Commitments	The total amount of new pledges and outright gifts recorded within the fiscal year	<b>\$100M in New Gifts and Commitments</b>		\$100.42M	\$162.28M	



Performance is improving annually





















Performance is level or mixed



Performance is declining

Scorecard - University Long Range Plan Goals 2012-2018

 3-Year Trend Shows Growth	 3-Year Trend Level or Mixed	 3-Year Trend Shows Decline	 Performance Below Target
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	Measure(s)	Metric Definition and Information Sources	University Target Performance	November 2017 Report		
				Performance	Comment on 3-Year Trend	
Learning	Number of graduating undergraduates who participated in research experiences.	Degrees extract and course history files - linked to credit bearing activities.	75% of graduating undergraduates.	4,037 (69.8%) in AY 2016-17	Graduating undergraduate participation in research experiences is up by 2.9% from AY 2014-15 (3,923).	
	Percent of entering students who attended First-Year Experience courses.	First time freshmen and transfer students in fall census files	80% of first-time students by the 2015-16 AY	73% (5,023) in AY 2016-17	Entering students attending First-Year Experience courses is up by 16% from AY 2014-15 (4,318).	
	Total degrees awarded by level.	Degrees extract	Within 5% of approved projections (SCHEV 2B), per proposed IPS measure #2	6,295 Assoc./Bach. 1,514 Masters 516 Doctoral 119 Professional 8,444 Total in AY 2016-17	Three-year trend shows an increase in degrees awarded at all levels.	
	Underrepresented students entering the freshman class.	Fall census files	Improve on the Fall 2011 baseline	832 in Fall 2017	Entering underrepresented freshmen is up by 89 students (12%) from Fall 2015.	
	Degrees awarded to underrepresented students by level.	Degrees extract and student census file	Improve on the AY11-12 baseline	719 Assoc./Bach. 157 Masters 44 Doctoral 11 Professional 931 Total in AY 2016-17	Three-year trend shows an increase in degrees awarded at all levels.	
	Graduate enrollment.	Fall census files	Grow by 1,000 additional graduate students over the Fall 2011 baseline	3,743 Masters 3,003 Doctoral 501 Professional 7,247 Total in Fall 2017	Three-year trend for masters enrollment is up by 2% (or, 83 students), doctoral student enrollment is down by 4% (or, 129 students), and professional student enrollment is up 2.9% (or, 14 students).	
	STEM-H degrees awarded.	Degrees extract	95% of In-state STEM-H undergraduate degrees projected in SCHEV 2B	3,080 Assoc./Bach. 960 Masters 360 Doctoral 119 Professional 4,519 Total in AY16-17	Three-year trend shows an increase in degrees awarded at all levels.	
	Student credit hours taught in special sessions.	Teaching load files	Increase special session enrollments by 3% annually	33,216 SCHs-Summer '17 6,265 SCHs-Winter '16 39,481 SCHs Total in CY 2017	Three-year trend for enrollments in summer session is down by 11% (or, 4,174 SCH's). Winter session enrollments are level.	
	Percent of graduating undergraduates who participated in virtual and/or technology assisted courses.	Degrees extract and course history files (linked to credit bearing activities). Virtual courses = 100% electronic, asynchronous instruction. Technology-assisted courses = 50% - 99% electronic instruction (asynchronous or synchronous), or 100% electronic synchronous instruction.	100% of graduating undergraduates.	92.9% (5,373) Virtual, 93.2% (5,391) in Virtual and/or Tech-Assisted in AY 2016-17	Three-year trend for graduating undergraduate participation in virtual courses and/or technology assisted courses is up .	
Discovery	Total expenditures in grants and contracts by research domain.	As reported annually to the National Science Foundation	\$680M in annual research expenditures by 2018	\$521.8M in FY 2015-16	NSF reported expenditures up 1.7% from \$513.1M in FY2013-14.	
	Count and average value of sponsored awards.	As reported in Sponsored Programs datawarehouse dashboard	Average 4% annual growth in number of awards and 5.75% annual growth in average dollar value of awards	Under Review	The Vice President for Research and Innovation is currently reviewing the methodology for this indicator.	
	Faculty publications and citations.	Academic Analytics	Top 1/3rd (66th percentile) of Very High Research Public Universities by 2022.	Books/Fac. - 14th Pctile Articles/Fac. - 49th Pctile Conf. Proceedings/Fac. - 95th Pctile Citations/Fac. - 30th Pctile for 2016	Three-year trend shows a decrease in our percentile rankings for published articles and books per faculty. The trend for citations per faculty is up and the trend for conference proceedings is level.	
	Faculty awards.	Academic Analytics	Top 1/3rd (66th percentile) of Very High Research Public Universities by 2022.	Awards/Fac. - 54th Pctile for 2016	Up from the 42nd percentile ranking in 2014	
	Number of post-doctoral appointments reported to National Science Foundation.	As reported annually to the National Science Foundation	Increase by 51% to 317 total positions by 2018	226 in Fall 2017	Three-year trend for post doctoral appointments is level.	
Engagement	Industry-funded research expenditures reported to the National Science Foundation.	As reported annually to the National Science Foundation	100% increase between FY2010-11 and FY2017-18	\$40.3M in FY 2015-16	Industry-funded research expenditures up by 40.8% from \$28.7M in FY 2013-14.	
	Number of graduating undergraduates who have participated in a study abroad experience or foreign language course.	Degrees extracts and course history files	60% of graduating undergraduates.	1,398 (24.2%) Foreign Language 1,628 (28.2%) Study Abroad 2,472 (42.7%) Either in AY 2016-17	Foreign language study and study abroad count is level from AY 2014-15.	
	Undergraduate participation in service learning and experiential programs.	Service learning course list provided by VTEngage with enrollments from course files; experiential programs come from course files	3% annual increase on the FY11-12 baseline through FY17-18	3,209 Service Learning 11,560 Experiential Learning in AY 2016-17	Three-year trend is up for experiential learning and down for service learning.	



# Annual Progress Report: Plan for a New Horizon 2012-2018

**Board of Visitors Meeting**





November 5, 2017





# Overview of Indicators Supporting Scholarship Domains

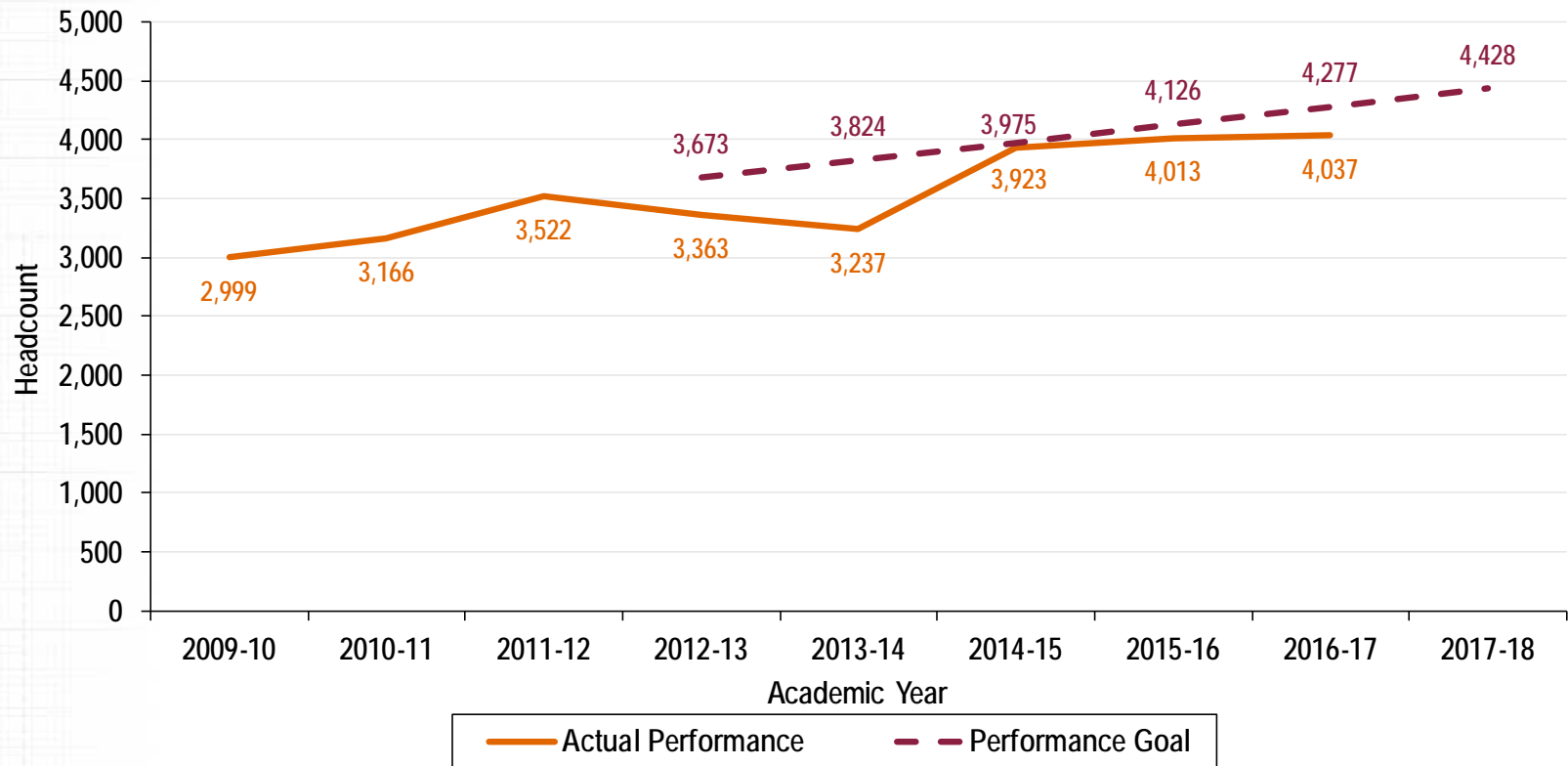
# Scorecard Indicators Key

	Performance is improving annually
	Performance is level or mixed
	There is a moderate or periodic decrease in performance where ongoing improvement was expected
	Performance is below the expected target



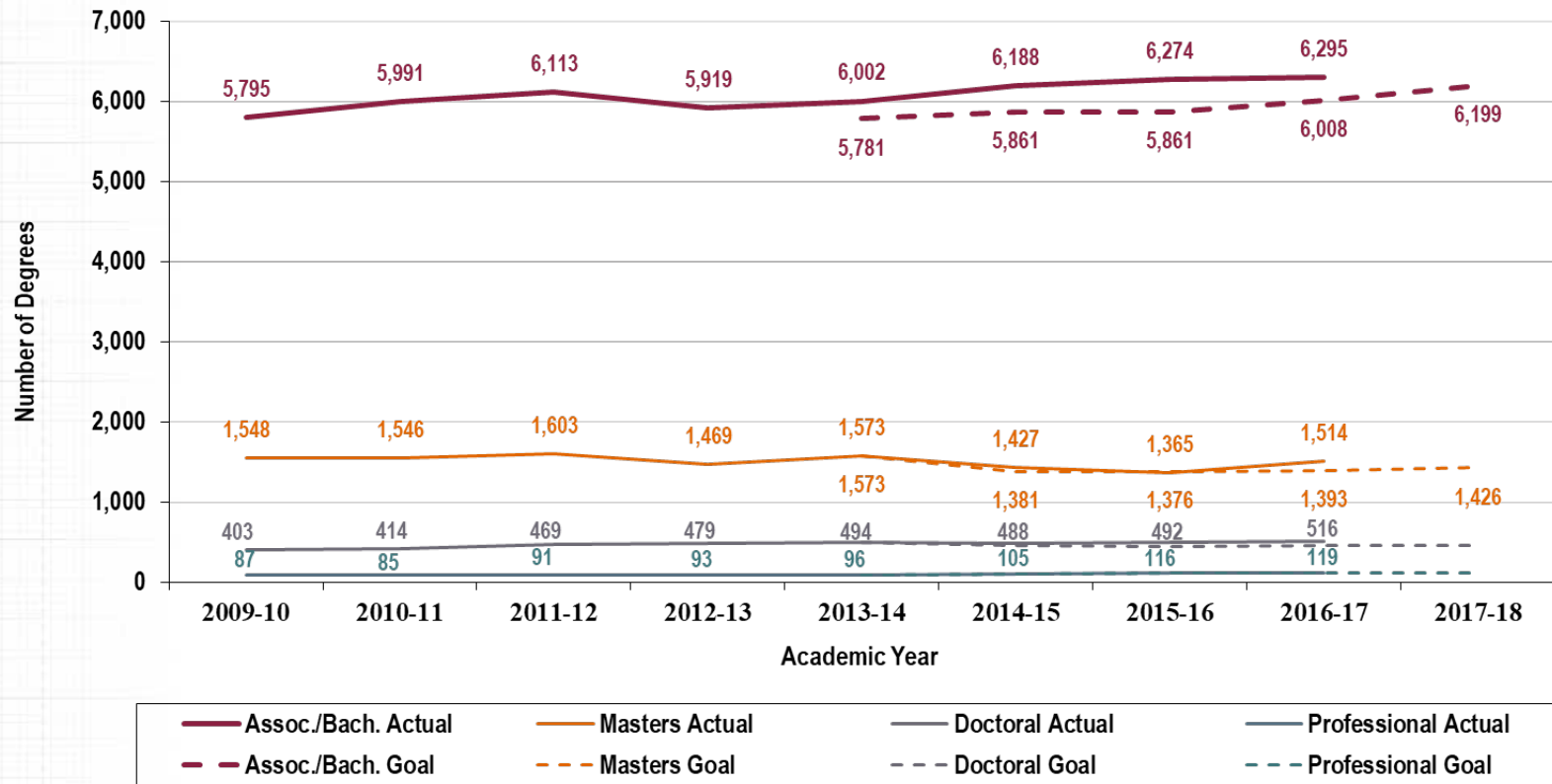
# Learning

# The Number of Graduating Undergraduates Who Participated in Research Experiences

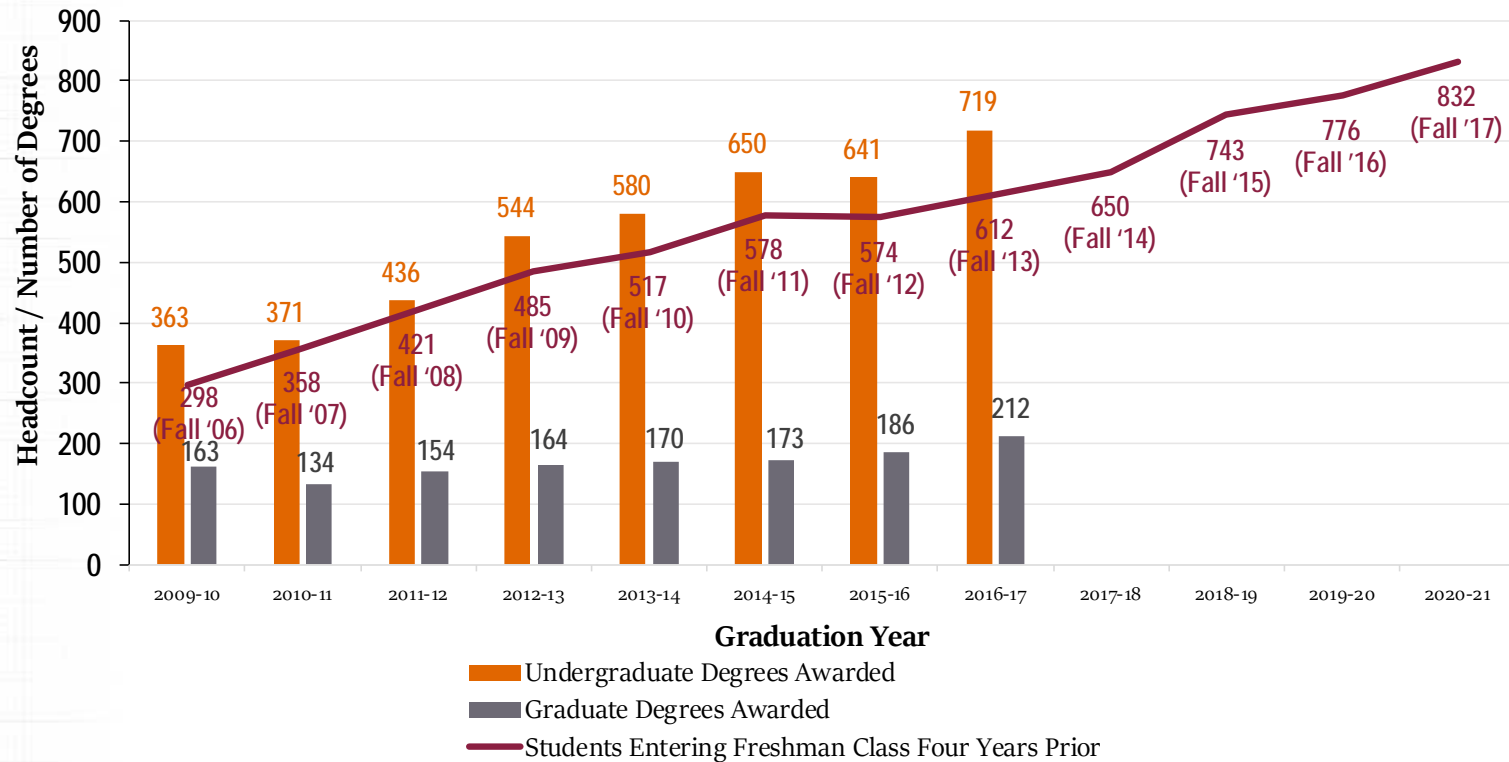




# Total Degrees Awarded by Level



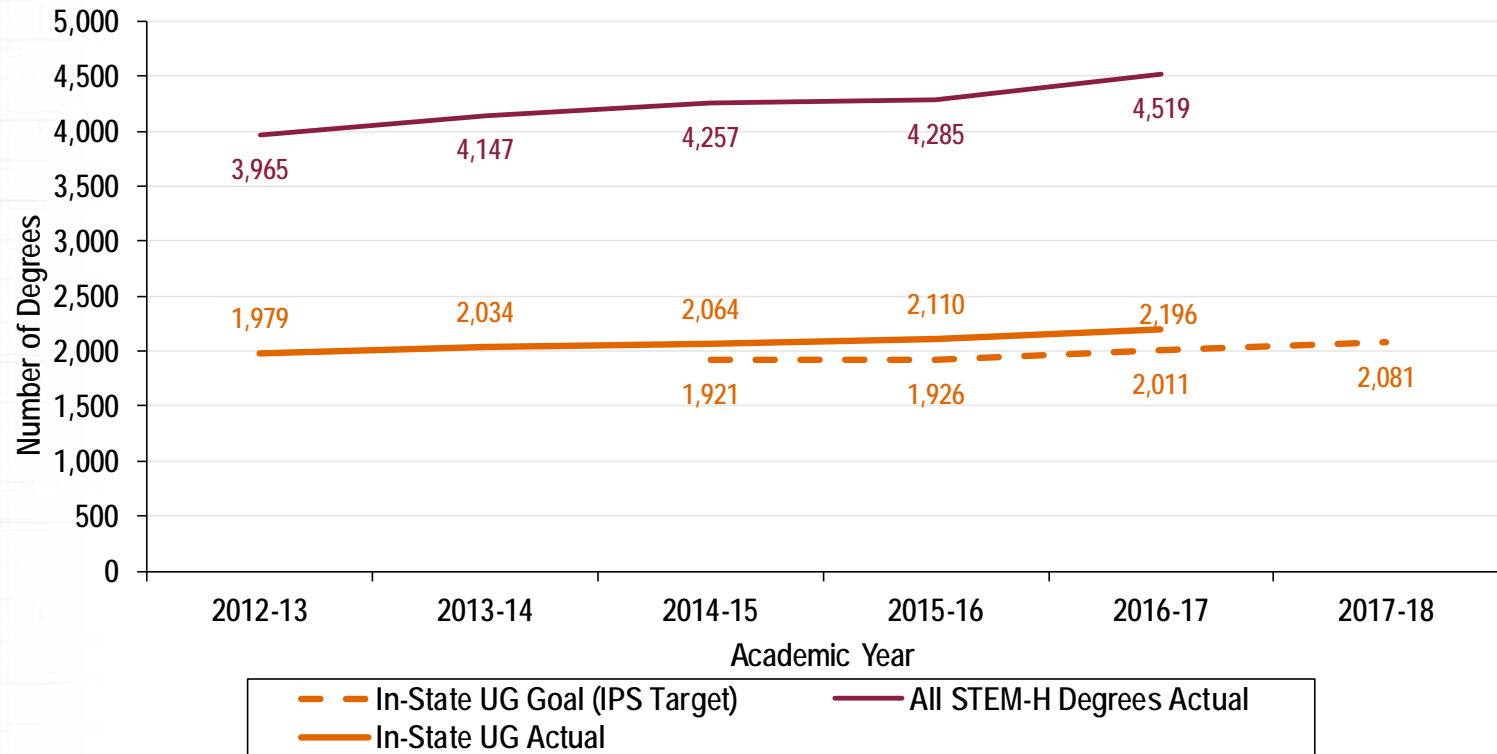
# Underrepresented Students Entering the Freshman Class and Degrees Awarded



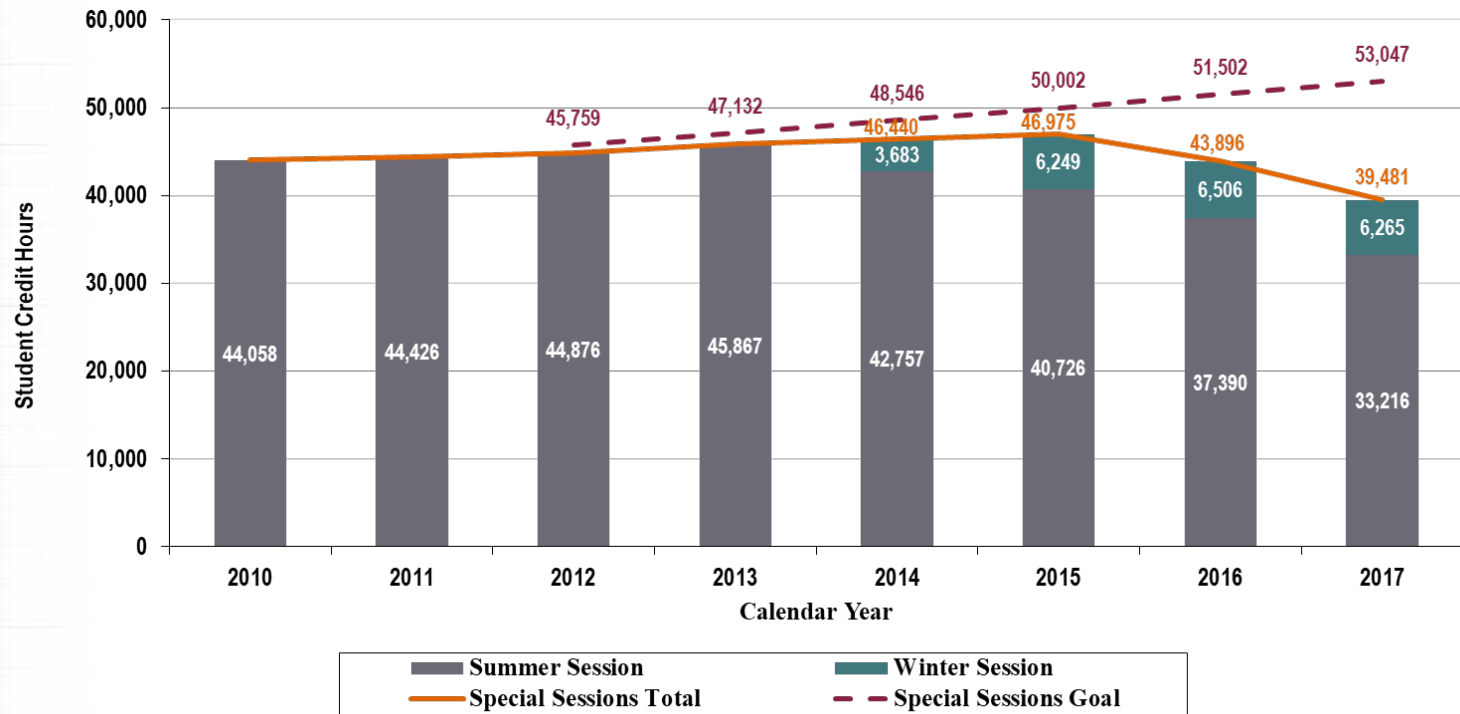
Underrepresented minority students include those who self-identify as one of the following federal race or ethnicity designations: Hispanics of any race, Black or African American, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, and all combinations of two or more races except White + Asian. Nonresident alien students are not counted as underrepresented minority students.

# STEM-H Degrees Awarded

(based on SCHEV definition of STEM-H)



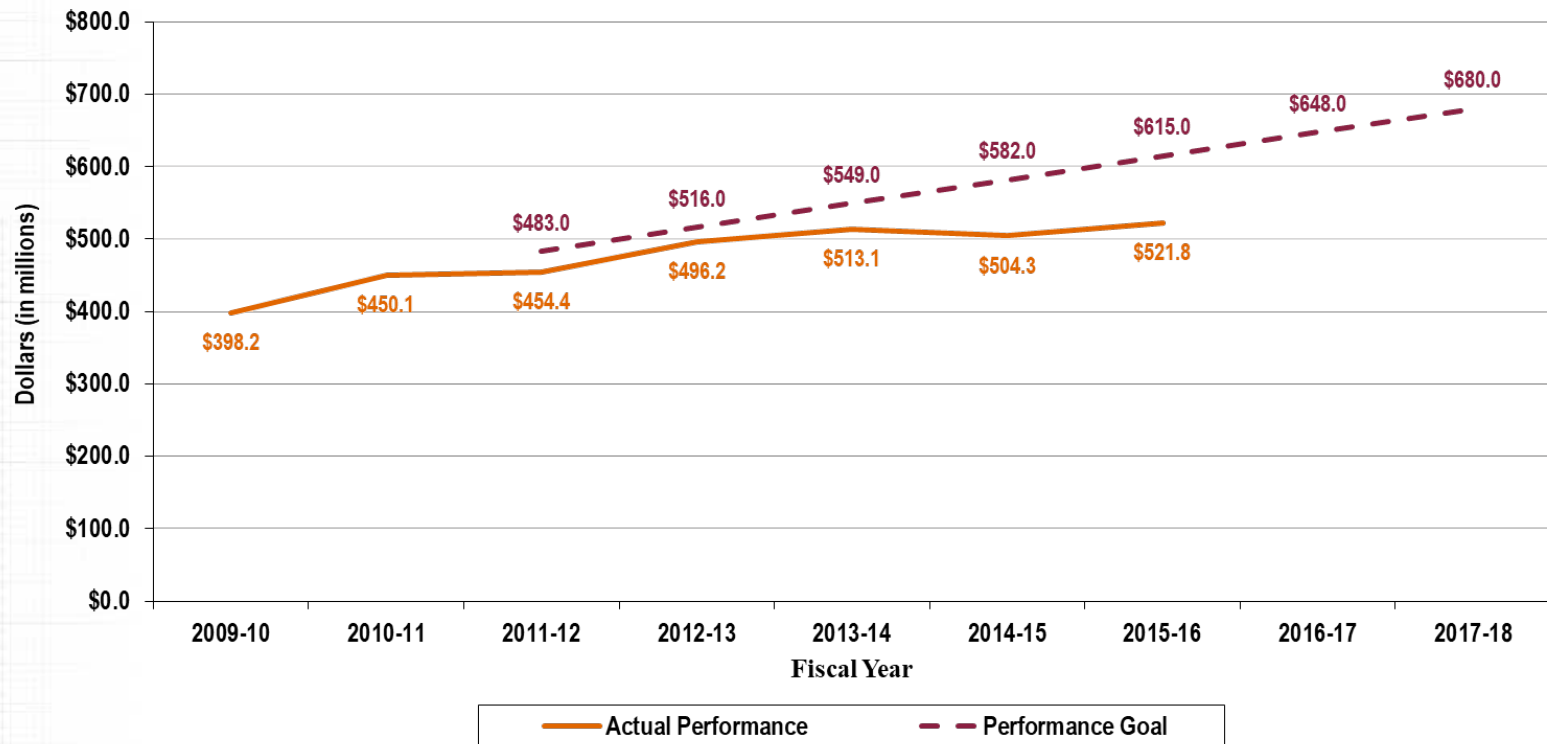
# Student Credit Hours Taught in Special Sessions



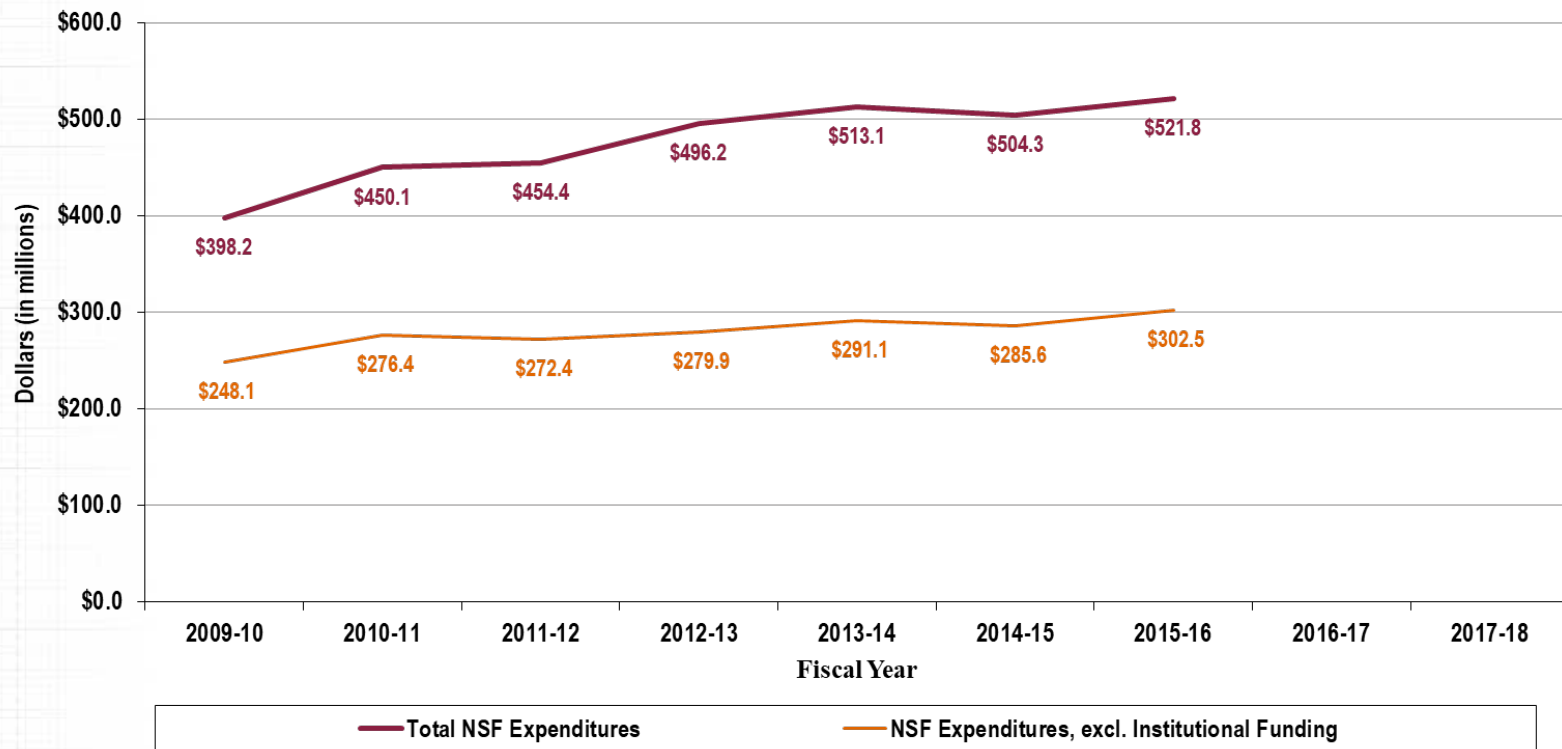


# Discovery

# Total Research Expenditures Reported to the National Science Foundation (NSF)

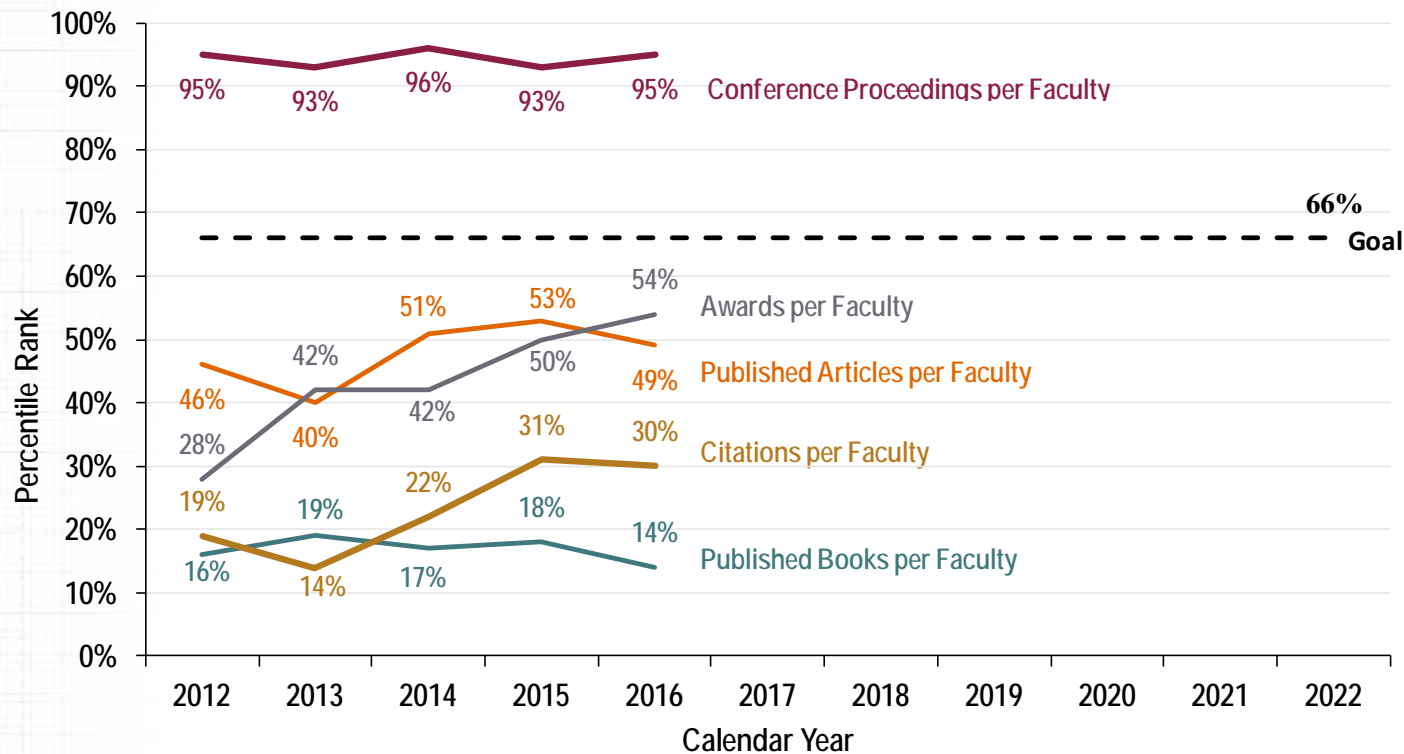


# Comparison of Total and Extramurally Funded National Science Foundation (NSF) Research Expenditures



# Percentile of Faculty Publications, Citations and Awards

(Per Academic Analytics, LLC)

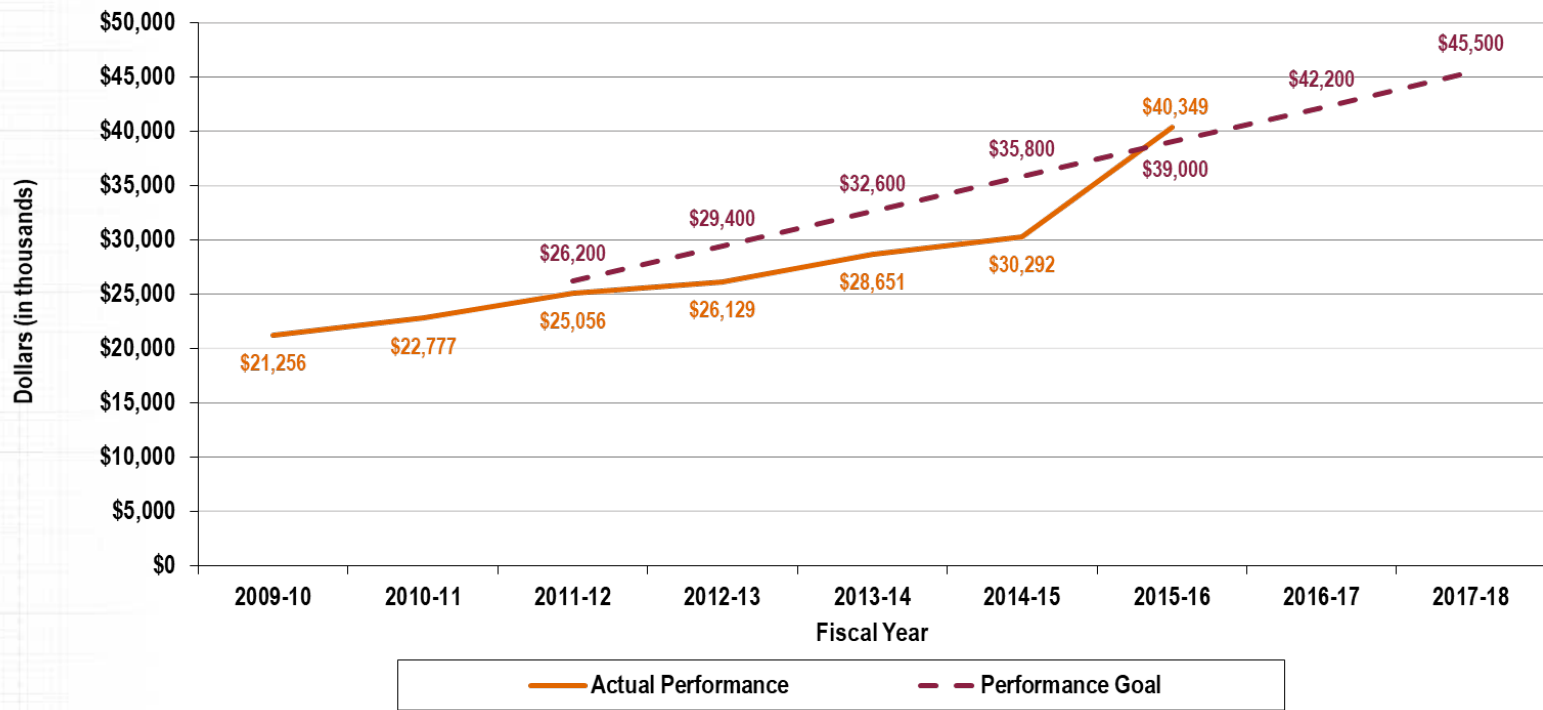




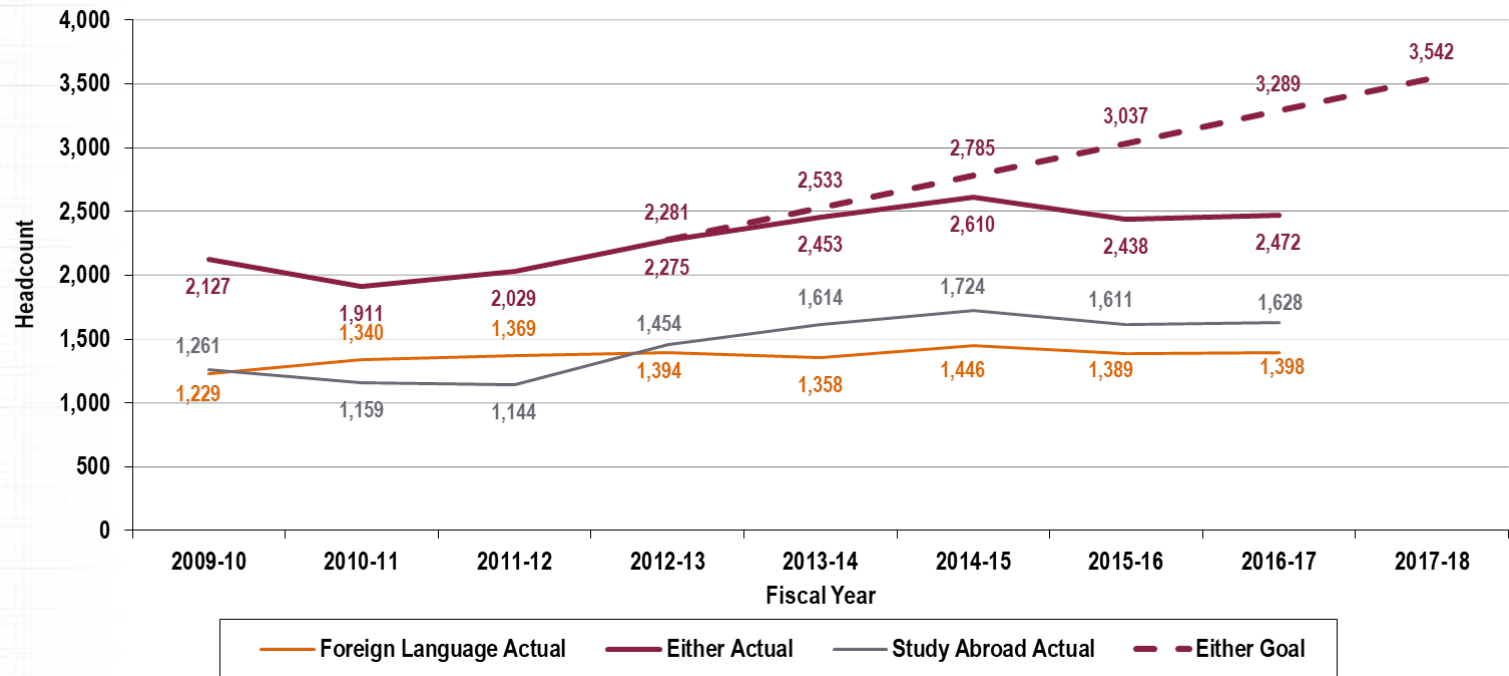


# Engagement

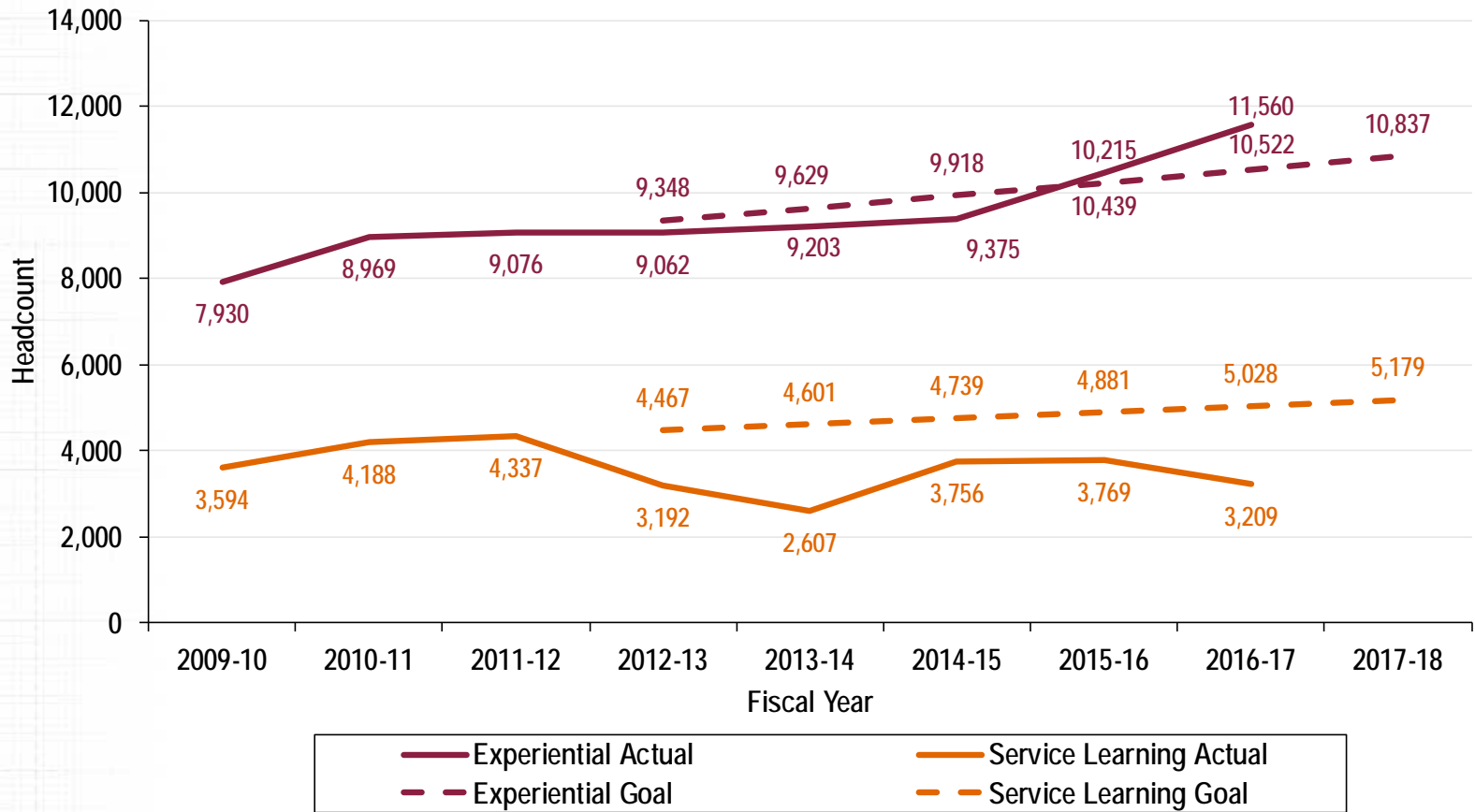
# Industry Funded Research Expenditures Reported to the National Science Foundation



# Number of Graduating Undergraduates who Have Participated in a Study Abroad Experience or Foreign Language Course



# Undergraduate Participation in Service Learning and Experiential Programs





# Indicators Supporting Foundation Strategies:

- Organizational Development
- Campus Infrastructure
- Resource Development

# Scorecard Indicators Key



Performance is improving annually



Performance is level or mixed



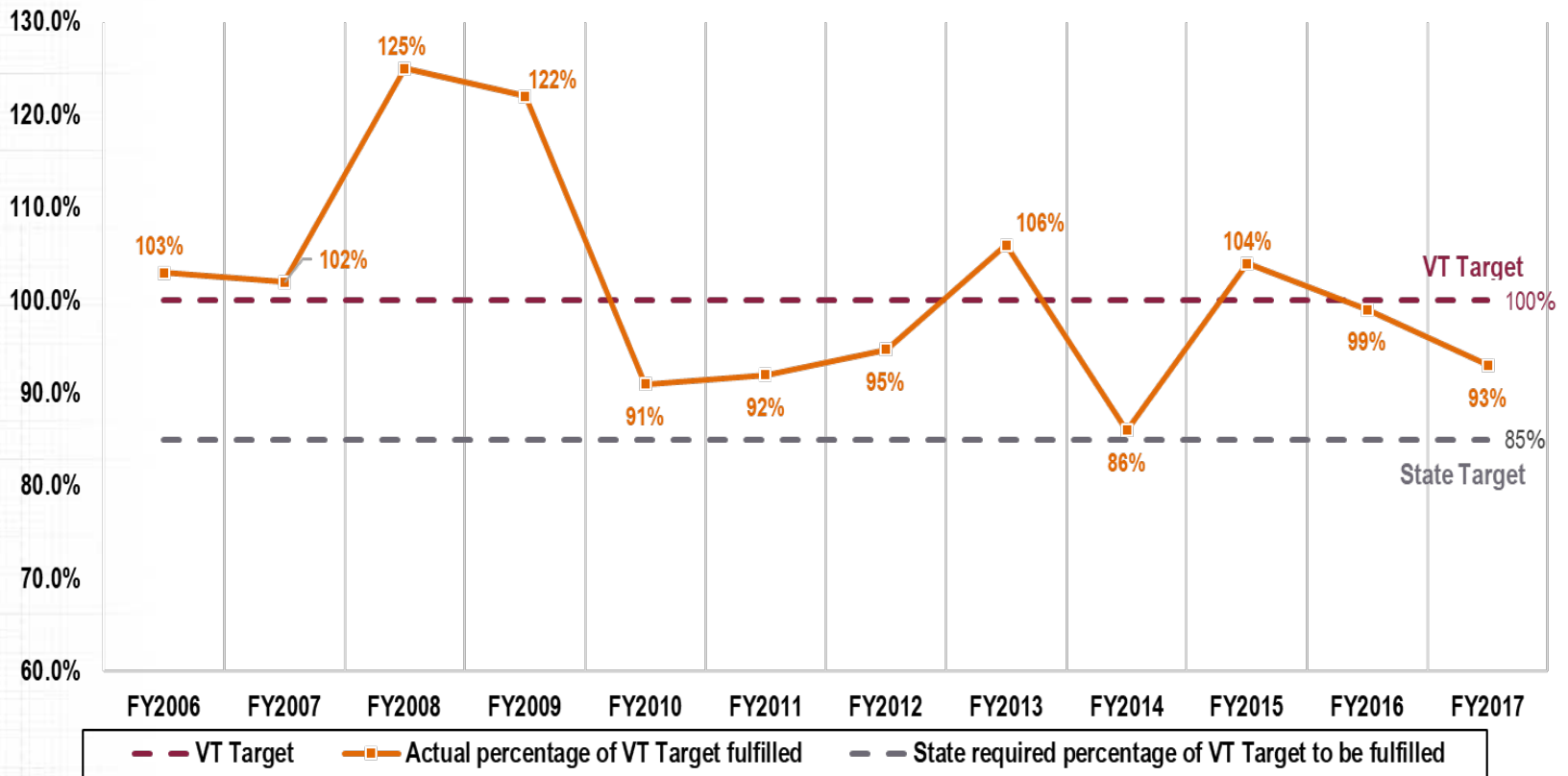
There is a moderate or periodic decrease in performance where ongoing improvement was expected

# Indicators for Organizational Development

- Expenditures with SWaM suppliers as measured by percentage of annual goal achieved
- Management's Timely Response to Internal Audit Comments
  - Workforce Composition of Faculty: Snapshot of census data as of September 30
  - Workforce Composition of All Employees: Snapshot of census data as of September 30

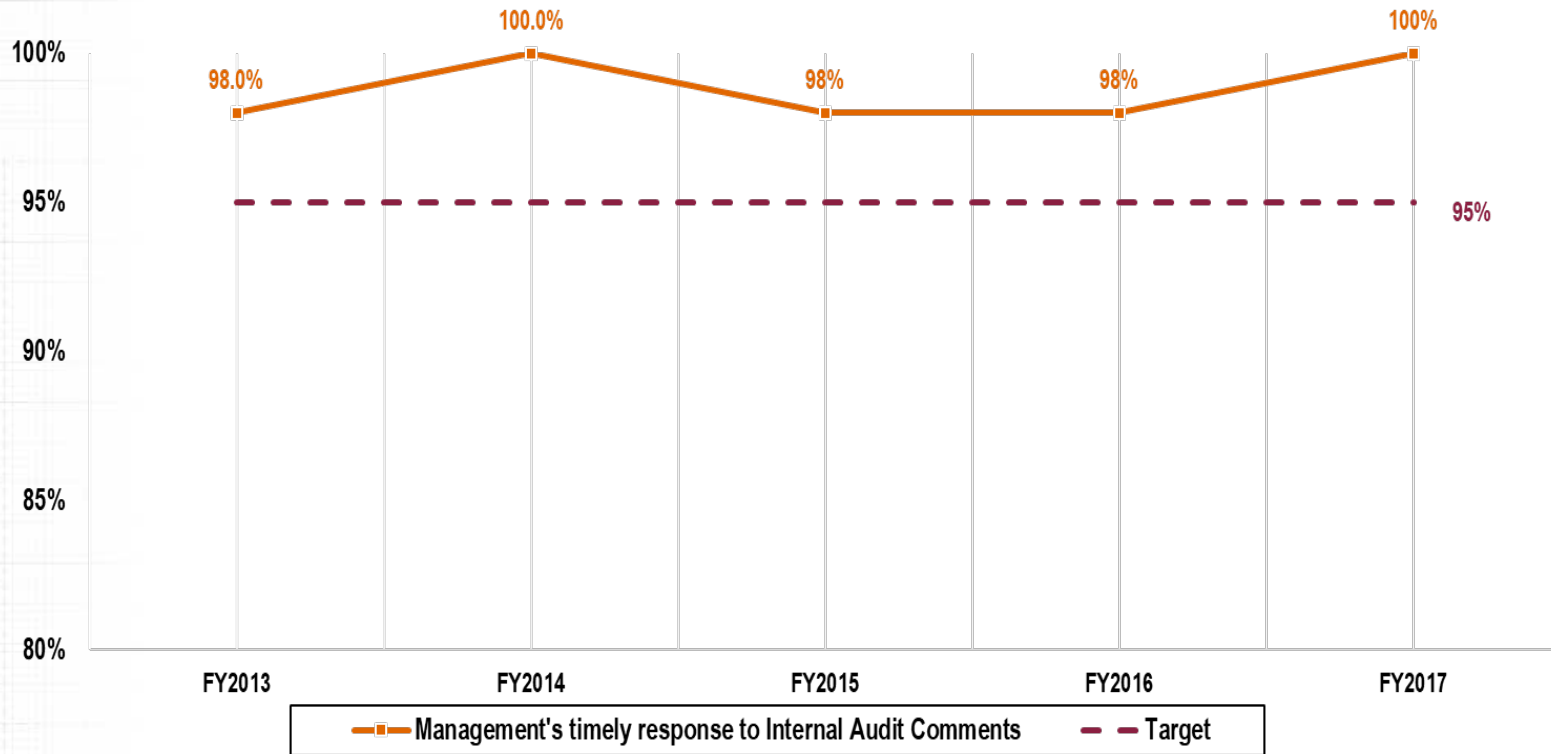
# Expenditures with SWAM Suppliers

as measured by Percentage of Annual VT Target

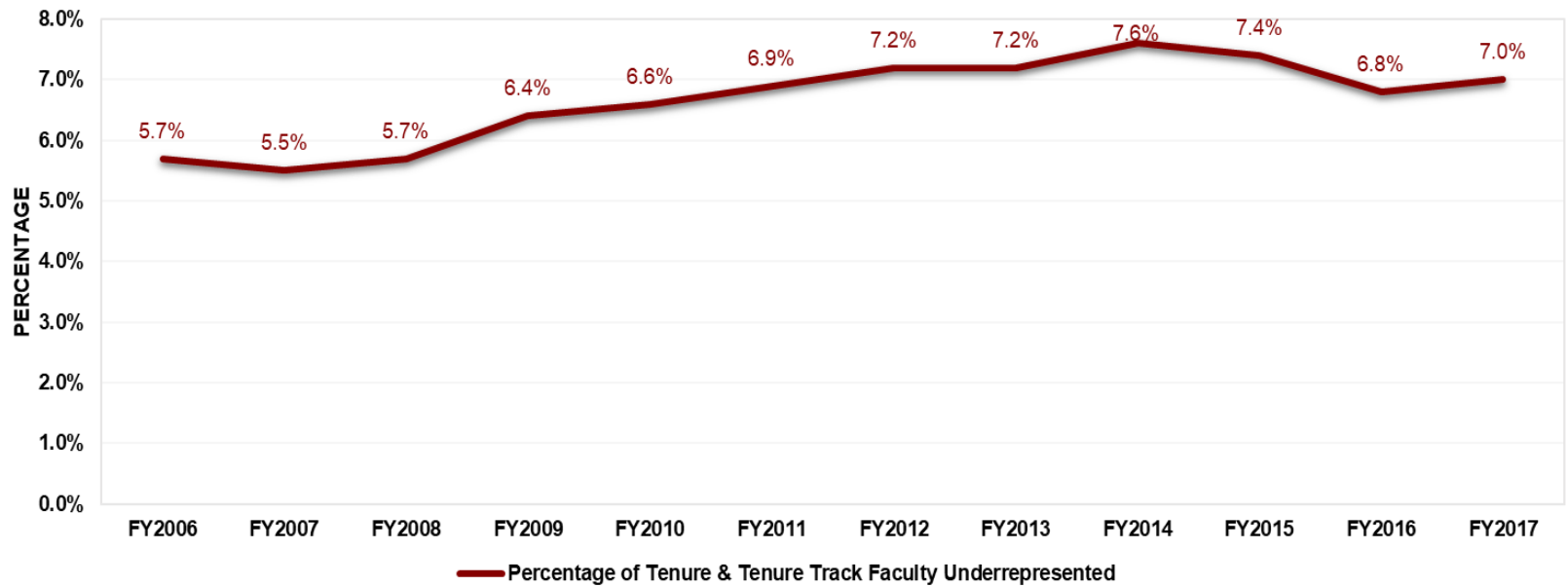




# Management's Timely Response to Internal Audit Comments

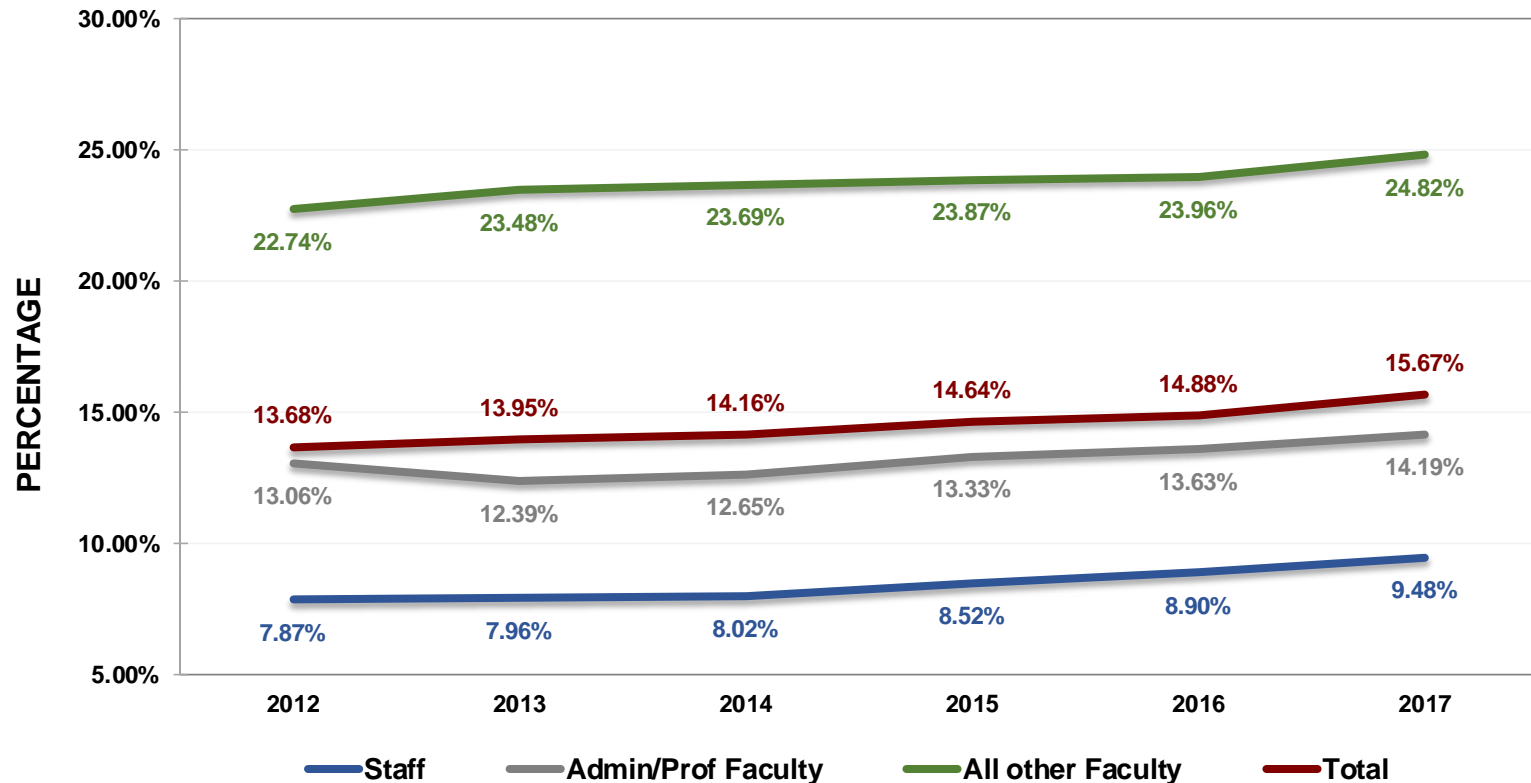


# Percentage of Underrepresented Tenured & Tenure-Track Faculty



PERCENTAGE OF UNDERREPRESENTED FULL-TIME FACULTY  
SNAPSHOT DATA AS OF SEPTEMBER 30  
UNDERREPRESENTED NUMBERS DO NOT INCLUDE THOSE SELF-IDENTIFYING AS ASIAN

# Percentage of Total Minority Faculty & Staff



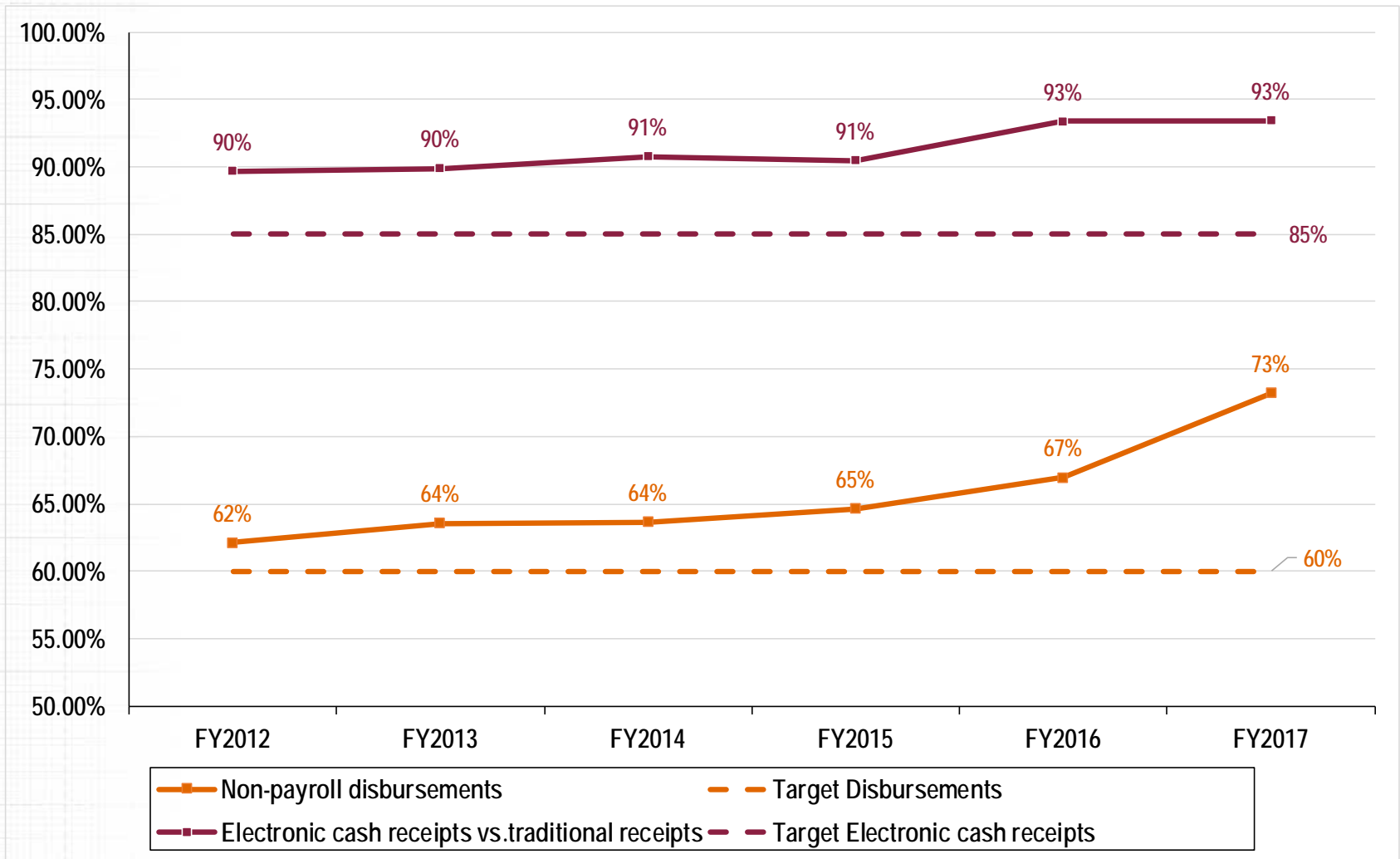
Percentage of minority full-time employees (snapshot as of September 30; tenured & tenure-track, non-tenure-track instructional, and research faculty are included in "All Other Faculty"; faculty and staff numbers include those self-identifying as Asian.)



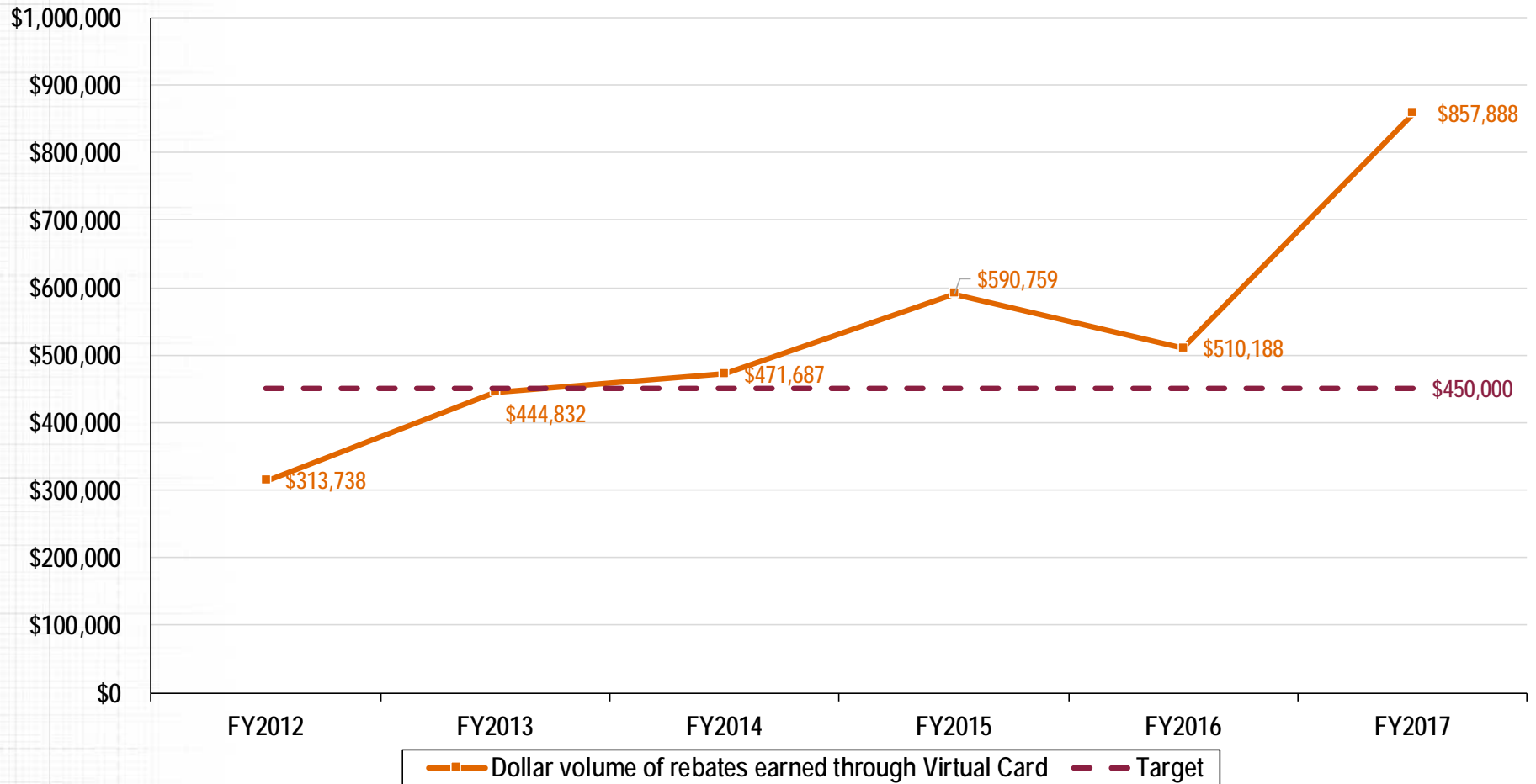
# Indicators for Efficiency, Cost Containment, & Infrastructure

- E-Commerce Transactions
- Dollar Volume of Rebates earned through the Virtual Card
- Administrative Cost Efficiency

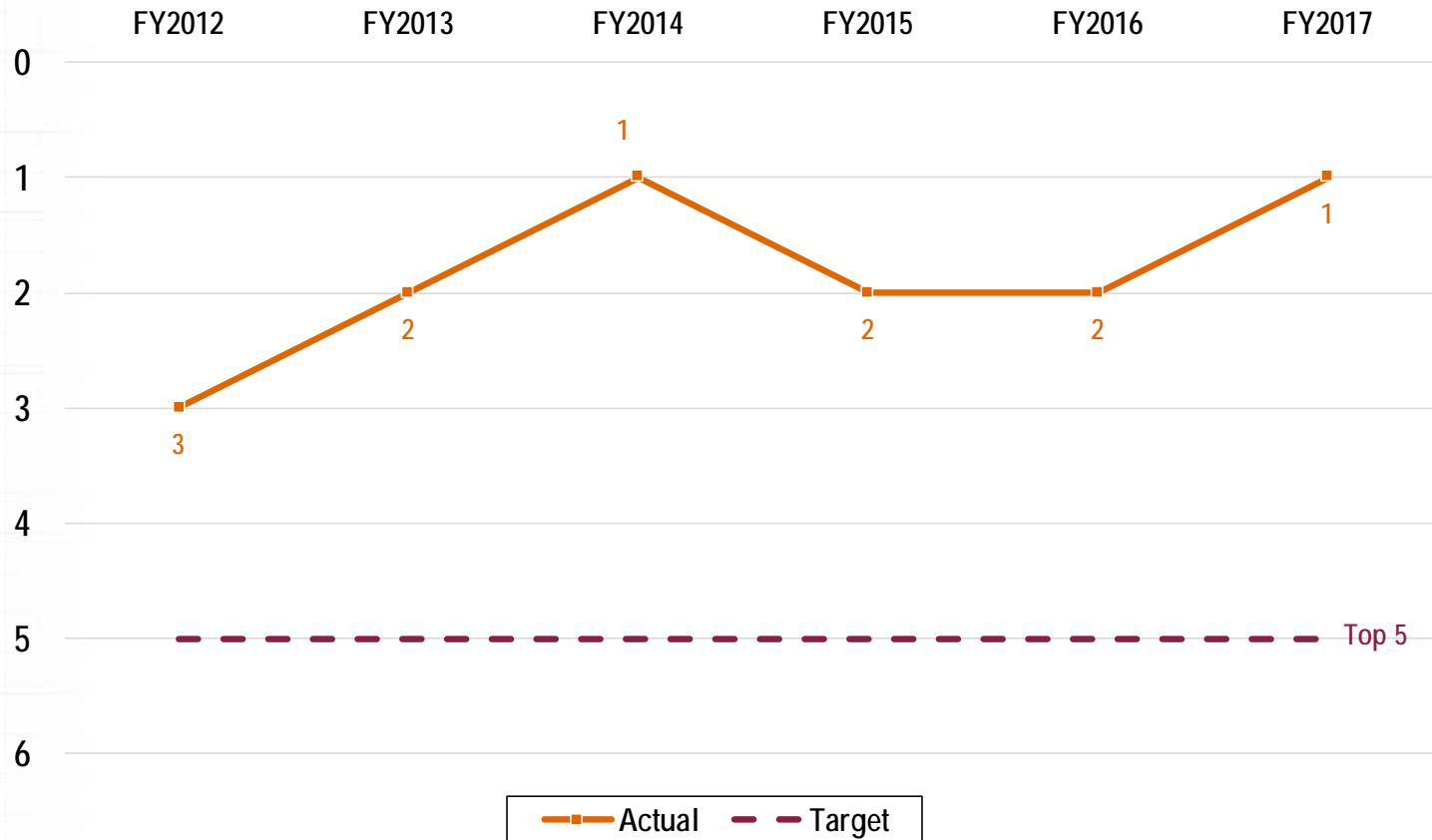
# E-Commerce Transactions



# Dollar Volume of Rebates



# Administrative Cost Efficiency as compared to Peer Institutions



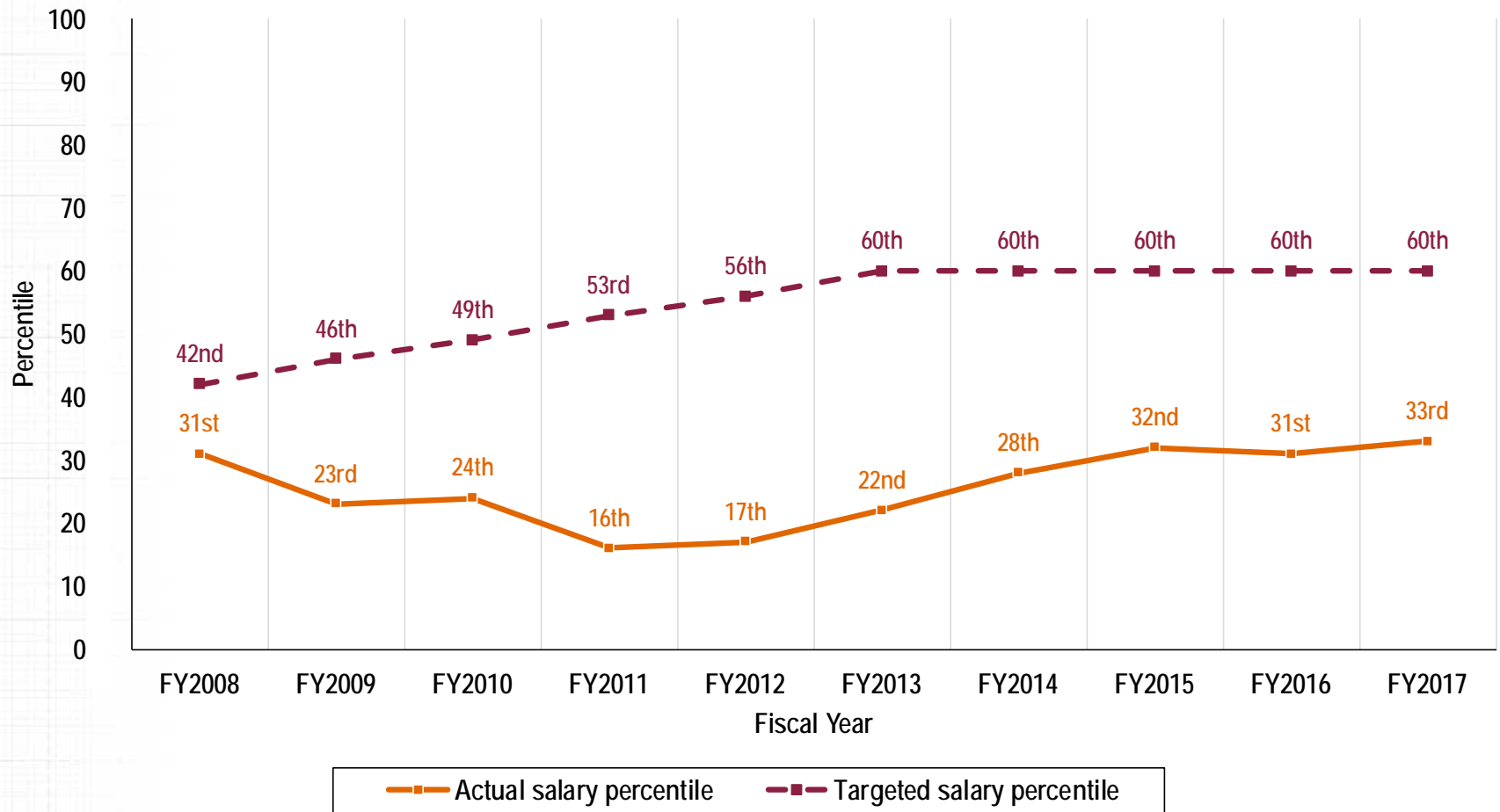
Data collected from the Integrated Postsecondary Education Data System (IPEDS)

# Indicators for Resource Development

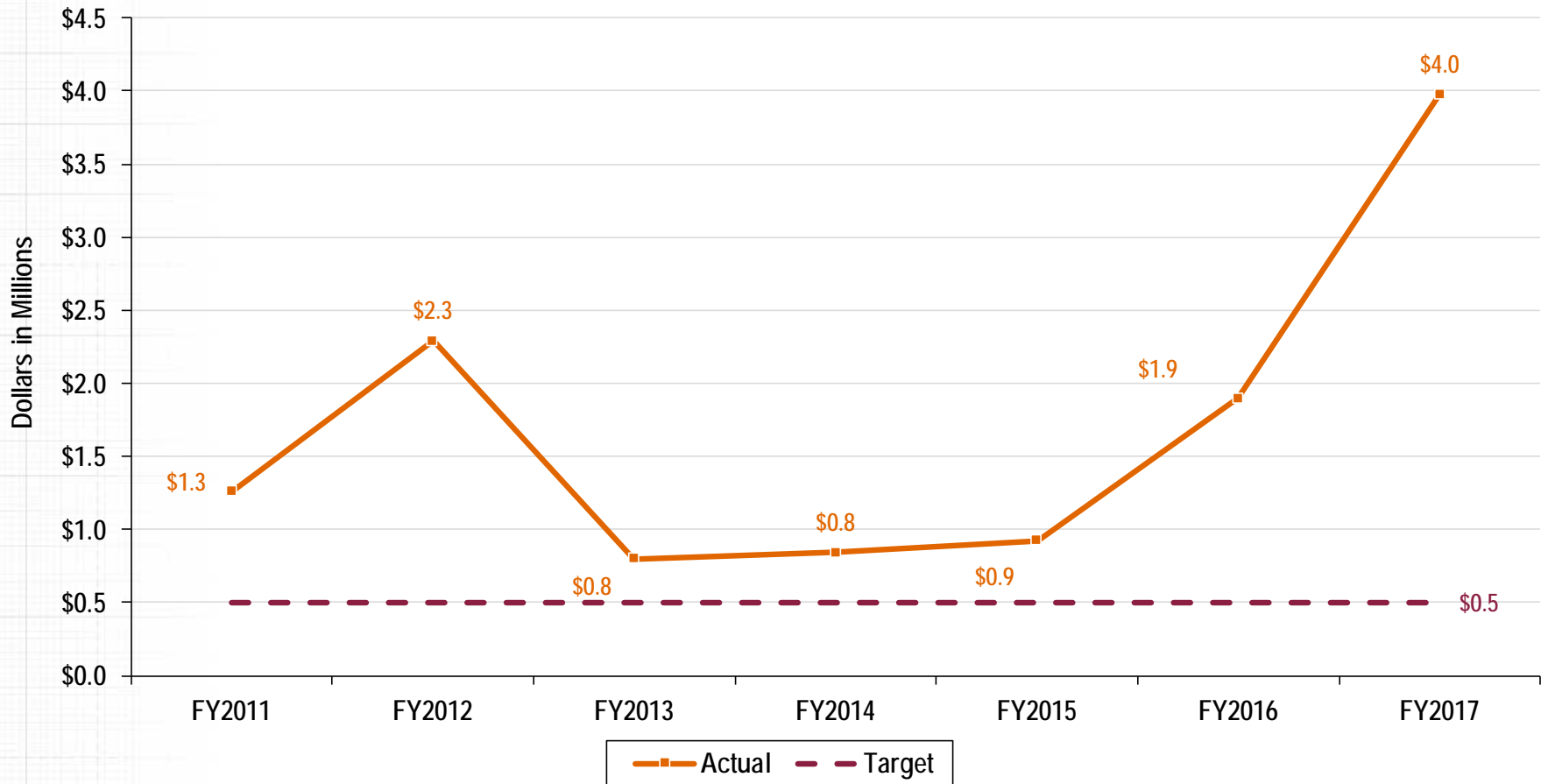
- Progress of Faculty Salaries
- Undergraduate Financial Aid Resources
- Maintenance Reserve Support
- University Debt Ratio
- Central Funding of Research Computing



# Progress of faculty salaries towards 60th percentile of SCHEV peers

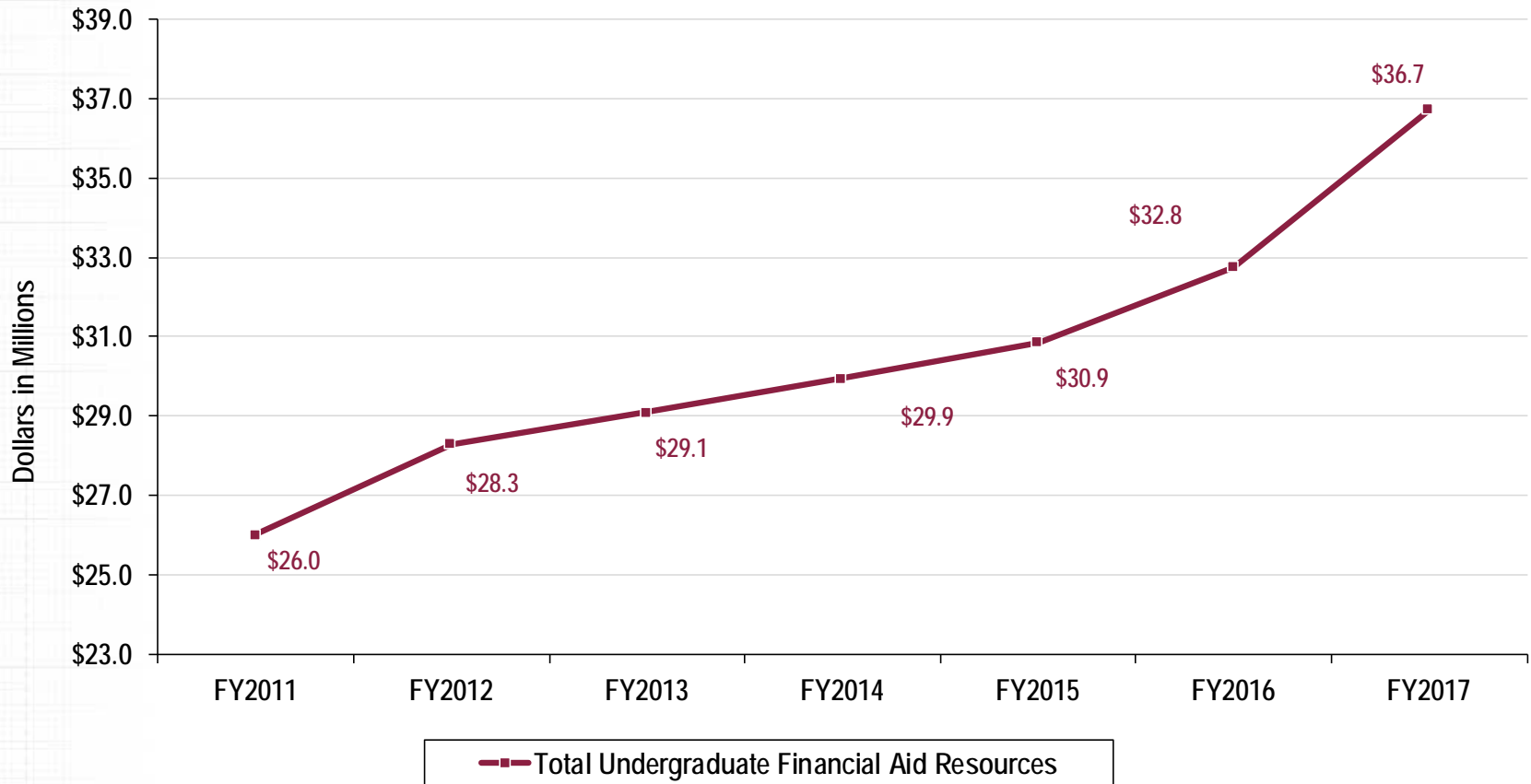


# Increase in Undergraduate Financial Aid Resources (Dollar in Millions)



# Undergraduate Financial Aid Resources

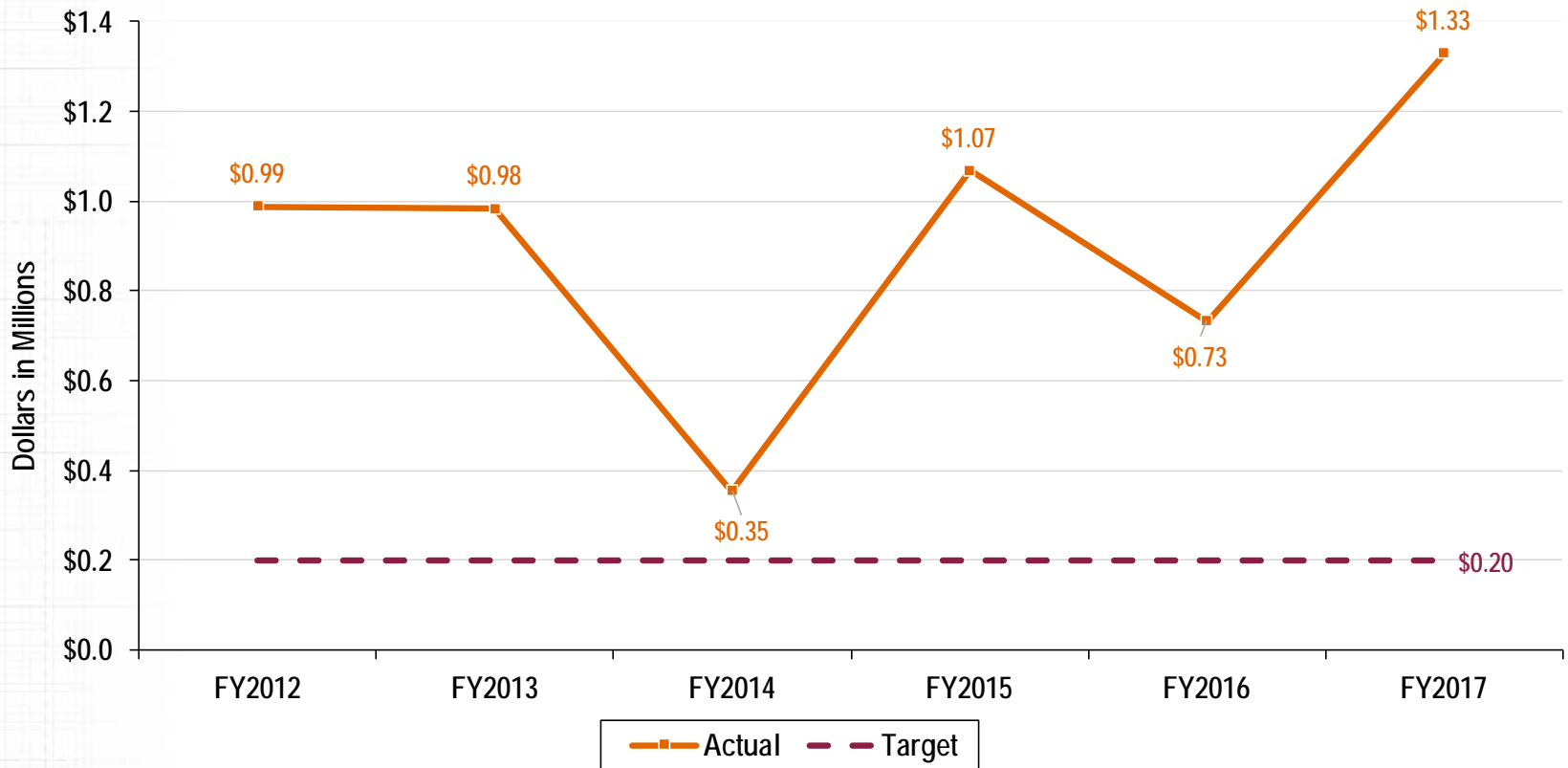
(Dollars in Millions)



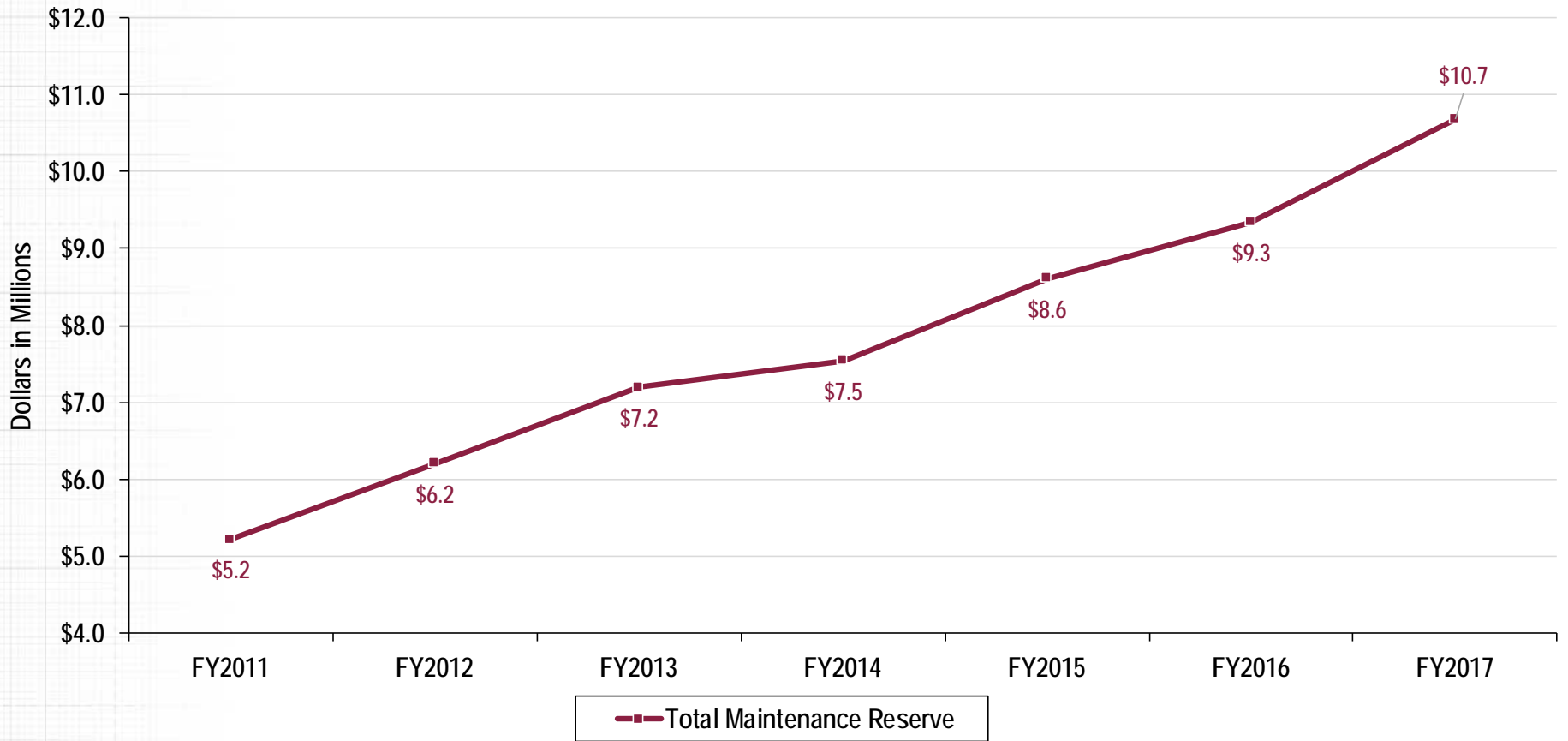
Total Undergraduate Financial Aid Resources does not include Private Support. It is comprised of Unfunded Scholarships, General Fund, and Institutional Resources.

# Incremental Maintenance Reserves Support: Auxiliaires

(Dollars in Millions)



# Maintenance Reserve Support: Auxiliaires (Dollars in Millions)



# University Debt Rating

Aaa	AAA		Aaa	AAA		Aaa	AAA		Aaa	AAA
Aa1	AA +		Aa1	AA +		Aa1	AA +		Aa1	AA +
Aa2	AA		Aa2	AA		Aa2	AA		Aa2	AA
Aa3	AA-		Aa3	AA-		Aa3	AA-		Aa3	AA-
A1	A+		A1	A+		A1	A+		A1	A+
A2	A		A2	A		A2	A		A2	A
A3	A-		A3	A-		A3	A-		A3	A-
Baa1	BBB+		Baa1	BBB+		Baa1	BBB+		Baa1	BBB+
Baa2	BBB		Baa2	BBB		Baa2	BBB		Baa2	BBB
Baa3	BBB-		Baa3	BBB-		Baa3	BBB-		Baa3	BBB-
MOODY'S	S&P		MOODY'S	S&P		MOODY'S	S&P		MOODY'S	S&P
2014			2015			2016			2017	



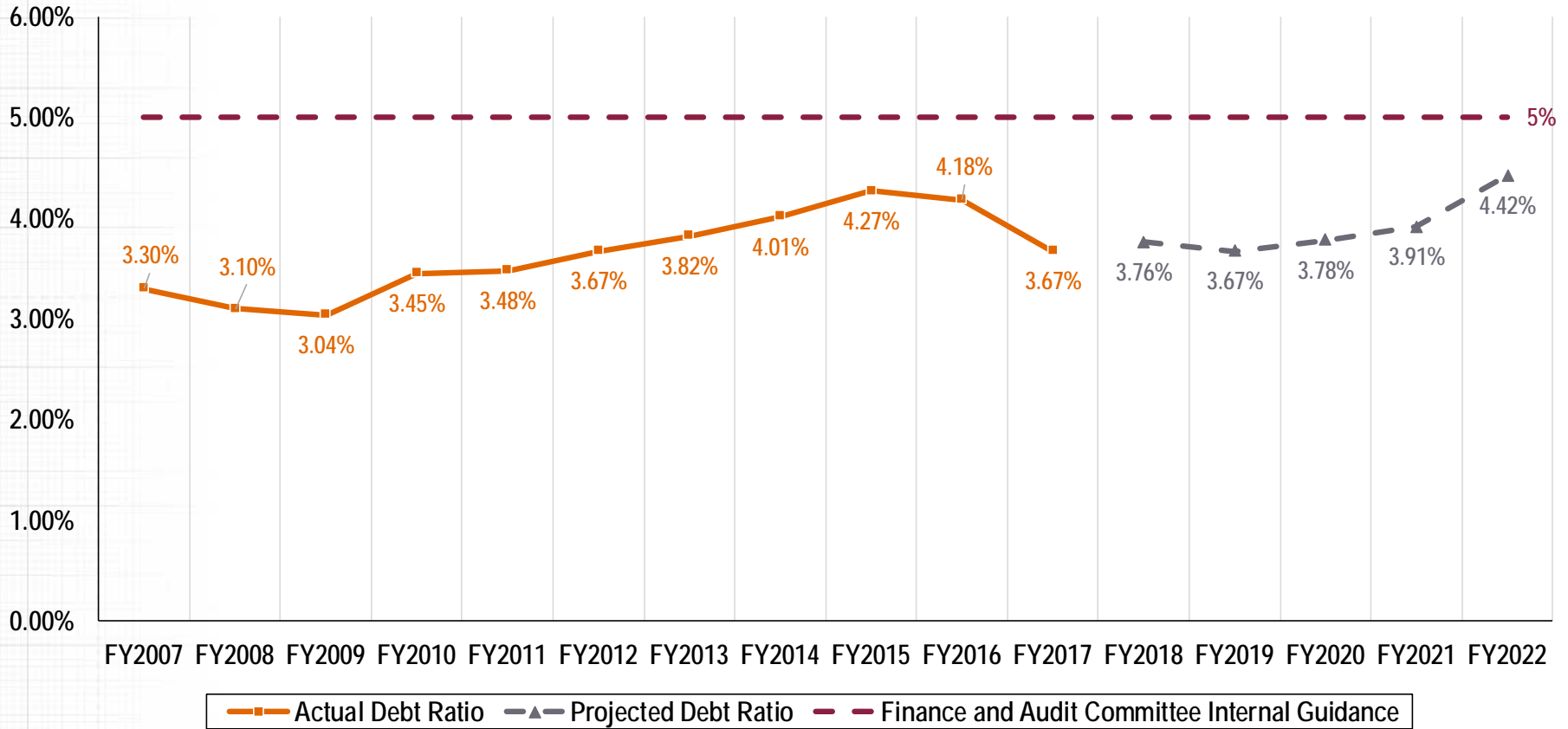
VT's Rating



Restructuring requirement



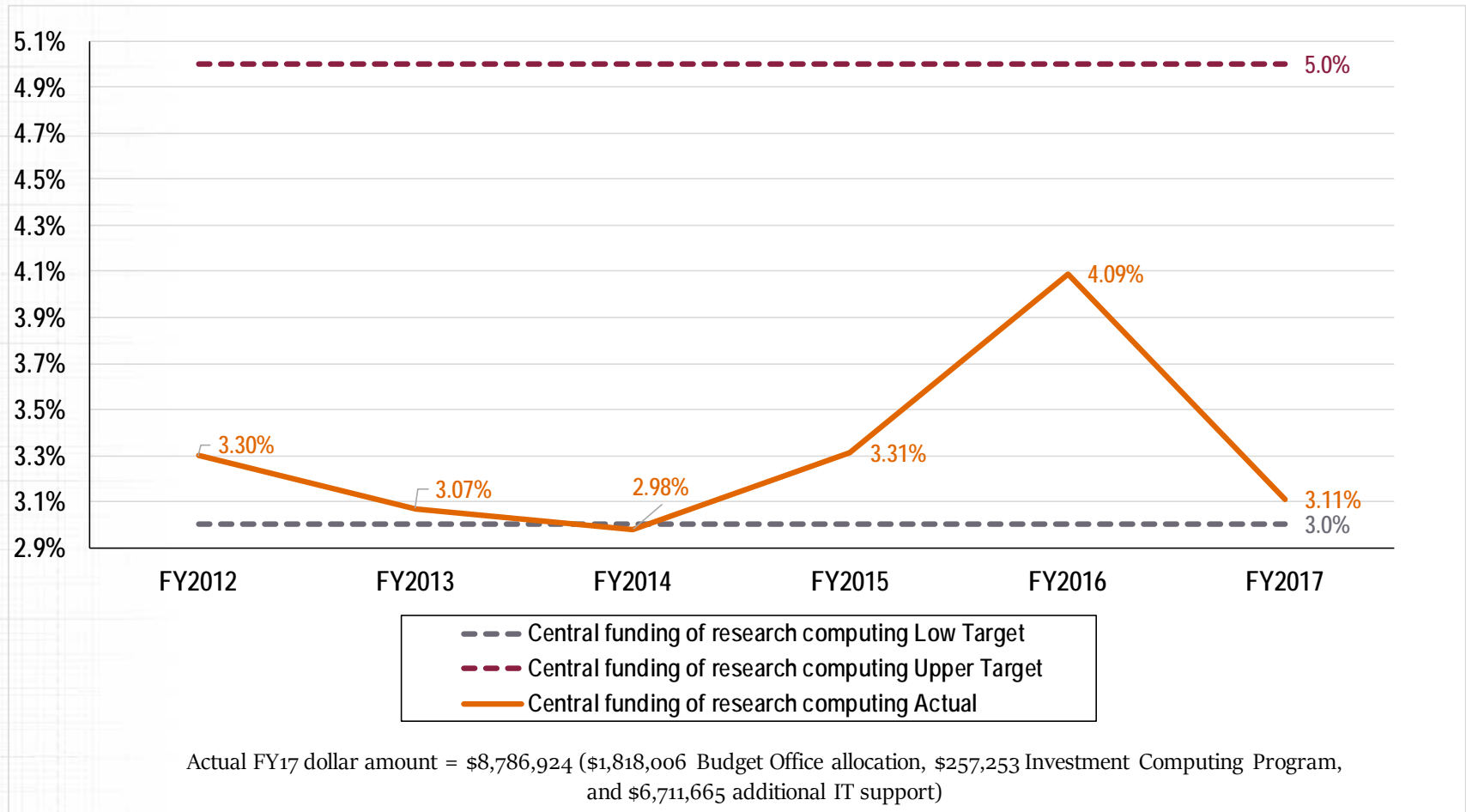
# University Debt Ratio



Preliminary ratio for Fiscal Year 2017

# Central Funding of Research Computing

(as percentage of annual externally funded research expenditures for previous year)





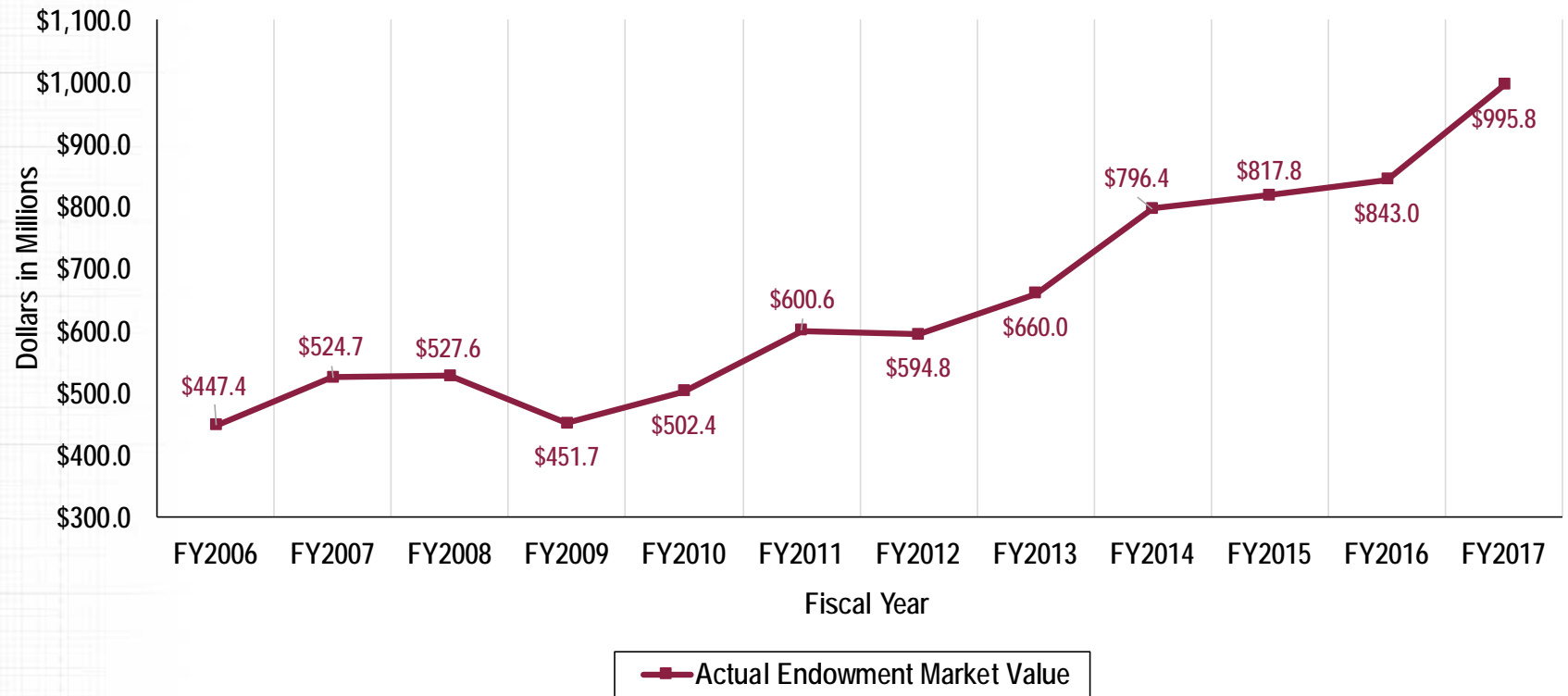


# Measures for Effective Resource Development

- Endowment Market Value
- Virginia Tech Foundation Assets
- Yearly Fundraising Total (cash flow) at Face Value
- Yearly New Gifts and Commitments

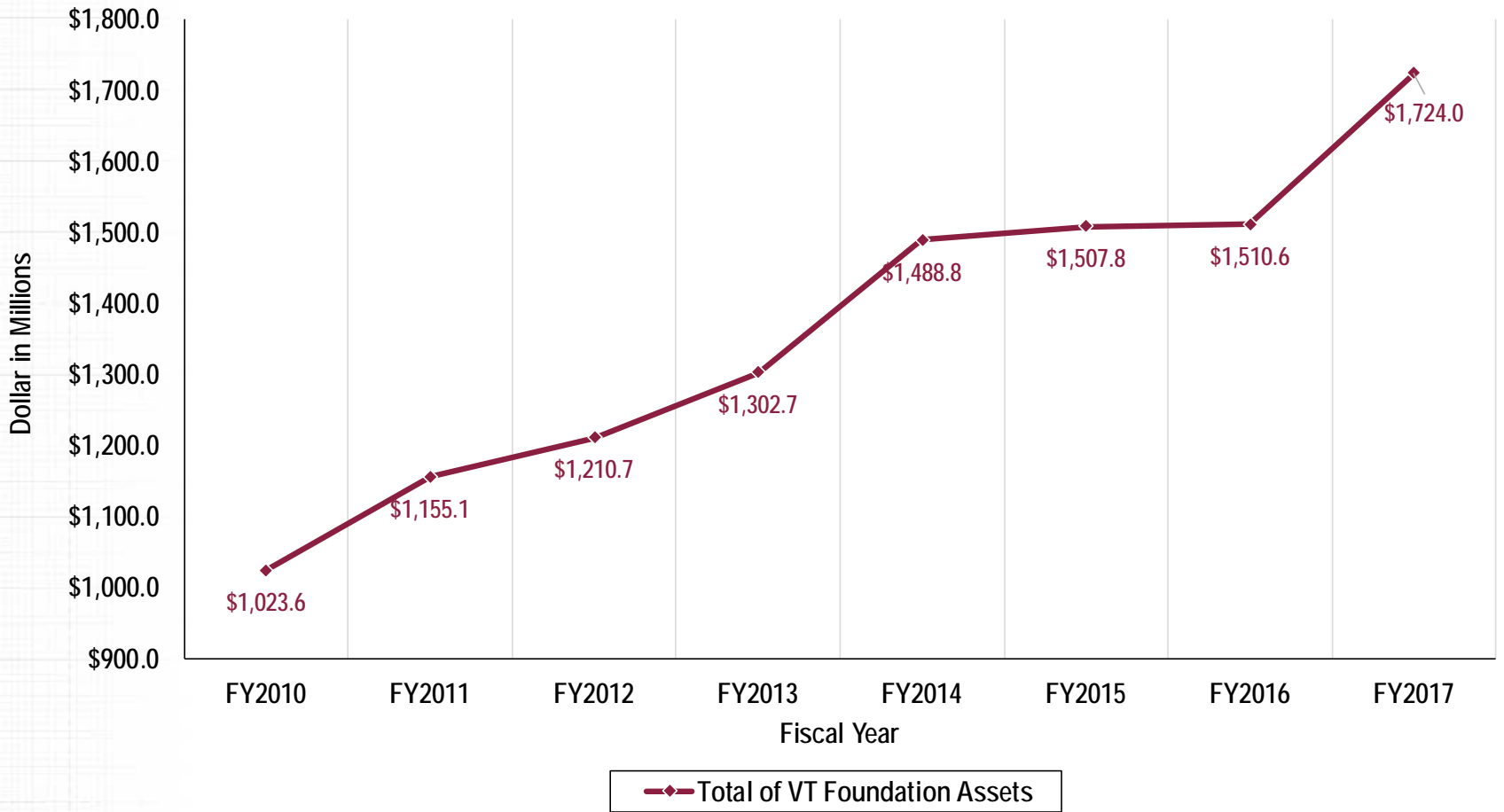
# Endowment Market Value

(Dollars in Millions)

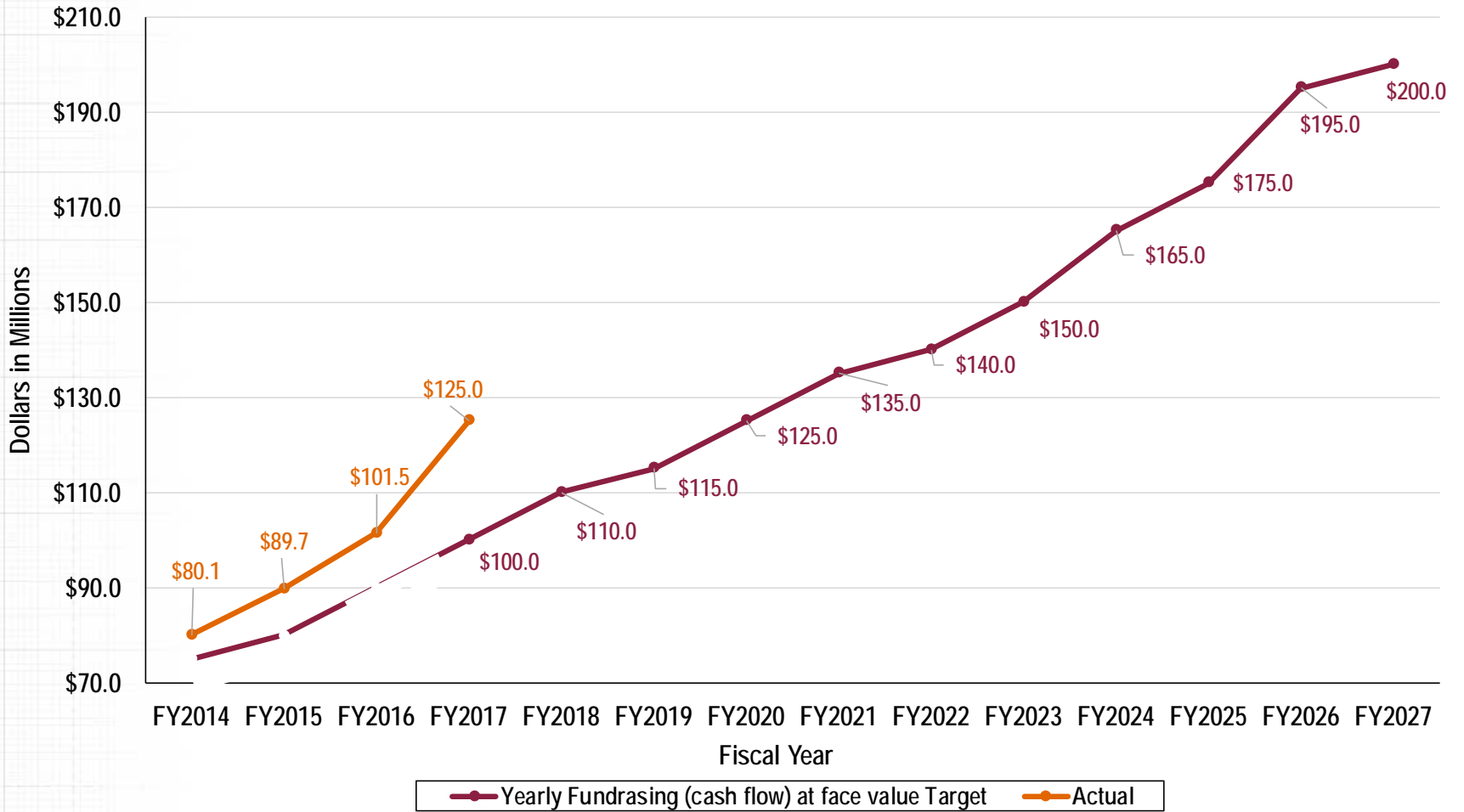


# VT Foundation Assets

(Dollars in Millions)



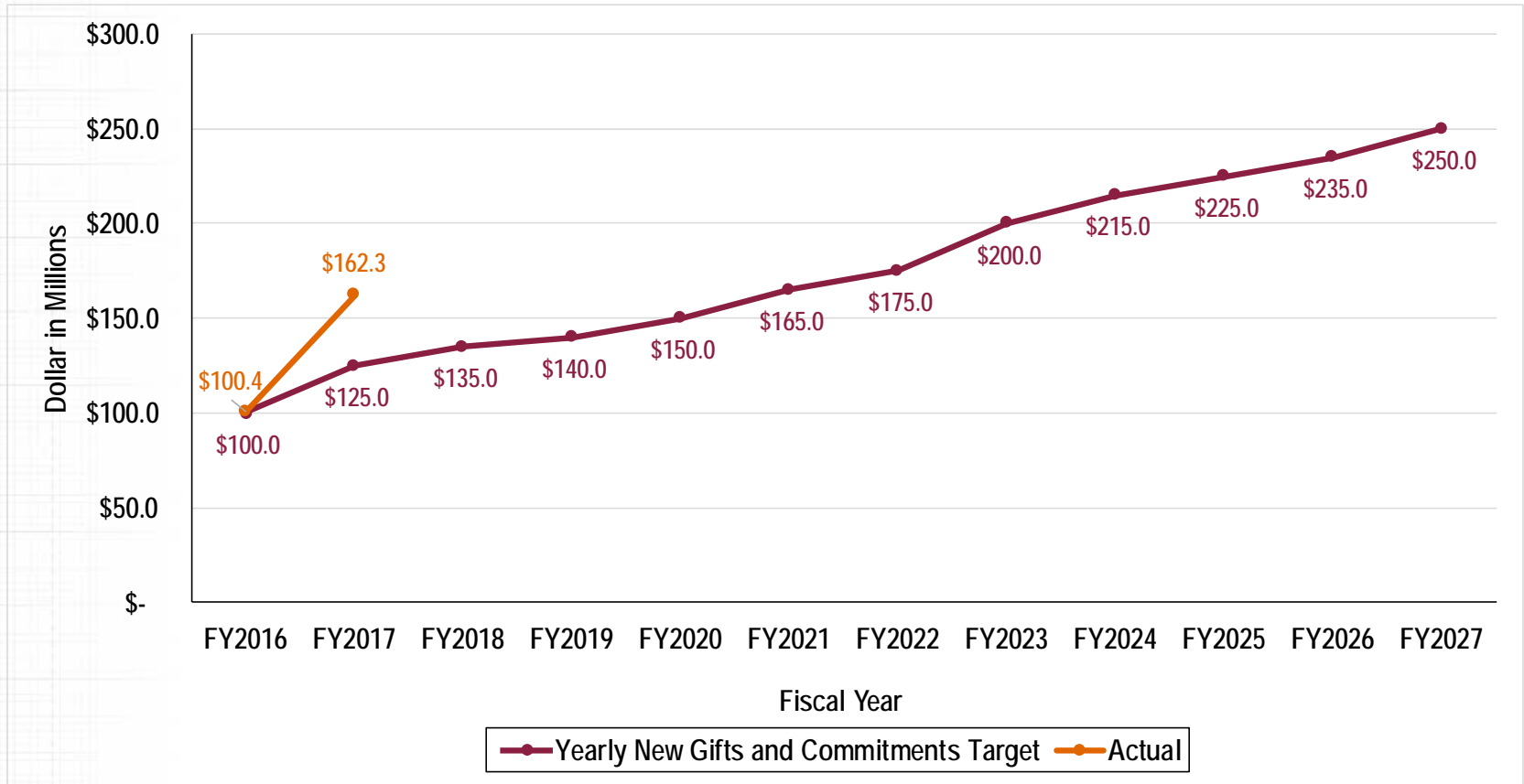
# Yearly Fundraising total (cash flow) at face value (Dollars in Millions)



The total amount of gifts received for the fiscal year.

# Yearly New Gifts and Commitments

(Dollars in Millions)



The total amount of new pledges and outright gifts recorded within the fiscal year.



Questions?



# Virginia Tech Carilion School of Medicine: Structured for Success

Virginia Tech Board of Visitors

Cynda Ann Johnson, M.D., M.B.A.  
President and Founding Dean

November 5, 2017



Virginia Tech Carilion  
School of Medicine and Research Institute



# Mission Statement

To develop **physician thought leaders** through inquiry, research, and discovery, using an **innovative curriculum** based upon **adult learning methods** in a **patient-centered context**. Our graduates are physicians with **outstanding clinical skills** and significantly **enhanced research capabilities** who will remain **life-long learners**. They have an understanding of the importance of **interprofessionalism** to enable them to more effectively function as part of a modern healthcare **team**.



# VTC SOM Admissions Profile



Chosen from over 4400 AMCAS applications.

# 42

different paths to medical school



48% Males  
52% Females

## Academic Metrics:

### MCAT (previous version)

Range: 31-35, Average: 33  
(91st percentile)

### MCAT (new)

Range: 503-520, Average: 511  
(87th percentile)

### Undergraduate GPA

Range: 3.32-3.92, Average: 3.6



Socio-Economically Distance Traveled and First Generation: 35%



Racial Diversity: Under-Represented in Medicine : 14%



Advanced Degrees: 23%

Average Graduate GPA: 3.7

— ONE DREAM —

## CLASS OF 2021



14 States



27 Colleges and Universities

# VTCSOM Student Success

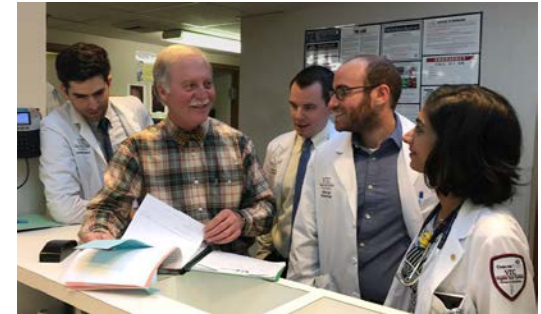
Class	** USMLE Step 1		USMLE Step 2 CK***	
	VTCSOM	National Average	VTCSOM	National Average
2014	241	227	246	240
2015	232	228	243	240
2016	237	229	245	242
2017	237	229	243	242
2018	238	228	251*	TBD
2019	234	TBD		

- 100% pass rate among graduates who have taken USMLE Step 3
- 150/161 (93.2%) VTCSOM graduates matched into their specialty of 1<sup>st</sup> choice
- Each of the 1<sup>st</sup> four graduating classes had a 100% match rate

\*With 38 scores reported (three yet to be reported)

\*\*United States Medical Licensing Examination

\*\*\*Clinical Knowledge





# Curricular Enhancements by Value Domains

- Basic Science
  - Technological upgrade to the Virginia Intercollegiate Anatomy Lab (VIAL); donation of Anatomage table to VT Vet School
  - Launched MD/MS Degree with the TBMH Program
- Clinical Science
  - Entrustable Professional Activities (EPAs) Assessment
  - National Exposure for Bedside Ultrasound Program
- Research
  - Enhanced Biostatistics and Epidemiology Curriculum
  - Research Immersion: 3-year longitudinal, hypothesis-driven, individual student project
- Interprofessionalism
  - Culinary Medicine Track – partner with Virginia Western

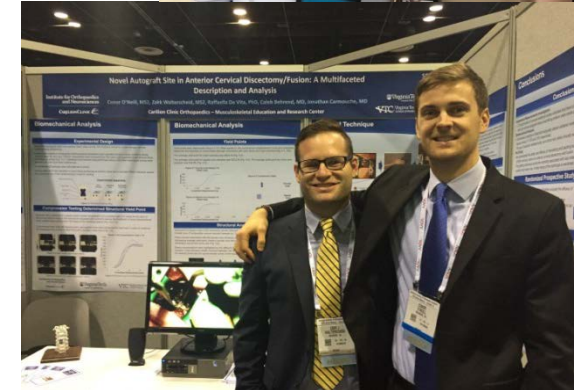
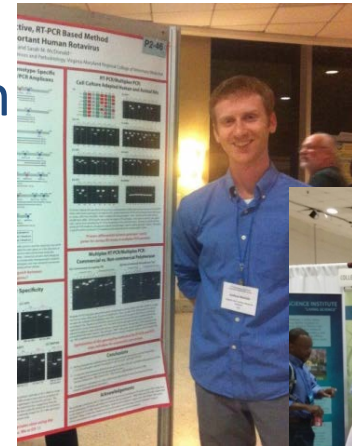
# Current VTCSOM Student Research

## ON-GOING

- 126 on-going research projects with 73 VTCSOM faculty mentors
- 49% of students are working with VT faculty (both VTCRI and Blacksburg)

## SUCCESS WITH OUR 4-YEAR RESEARCH PROGRAM

- Over 250 presentations (37 podium)
- 61 publications to date; 38 with VTCSOM students as first authors
- 14 awards at meetings; 11 research fellowships
  - Fulbright scholarship
  - HHMI fellowship
  - St. Baldrick's Foundation (cancer research)





# Academic Year 2017-2018 Independent Student Analysis (ISA) of VTCSOM

- Requirement for Liaison Committee on Medical Education accreditation
- Number of questions on ISA ( *N = 338* )
- Number of measurements taken across all four classes ( *N = 902* )
- 100% of students completed the survey
- Students chose measurements with  $\geq 97\%$  of students being satisfied/very satisfied as strengths of the school
- Students chose measurements with  $< 75\%$  being satisfied/very satisfied as opportunities for improvement

Over half of the measurements reached the “97% student satisfaction threshold.”

Overall, 97.1% of measurements reached the “75% student satisfaction threshold” and only 2.9% of measurements did not.