Committee Minutes

FINANCE AND RESOURCE MANAGEMENT COMMITTEE
Solitude Room, The Inn at Virginia Tech
November 6, 2017

Closed Session

Board Members Present: Ms. Greta Harris, Mr. Dennis Treacy, Mr. Horacio Valeiras

VPI & SU Staff: Ms. Kay Heidbreder, Dr. Timothy Sands, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr.

1. **Motion for Closed Session:** Motion to begin closed session.

* 2. **Ratification of Personnel Changes Report:** The Committee reviewed and took action on the quarterly personnel changes report.

   The Committee recommended the Personnel Changes report to the full Board for approval.

* 3. **Approval of 2017-18 National Distinction Program:** The Committee reviewed and took action on the 2017-18 National Distinction Program. The National Distinction Program, approved by the Board in June 2017, was established to provide opportunity to recognize faculty with demonstrated national distinction and exceptional performance.

   The Committee recommended the 2017-18 National Distinction Program to the full Board for approval.

Open Session

Board Members Present: Ms. Greta Harris, Mr. C. T. Hill, Mr. Robert Mills, Mr. Seyi Olusina – undergraduate student representative, Mr. Mike Quillen, Dr. Hans Robinson – faculty representative, Mr. Robert Sebek – staff representative, Mr. Dennis Treacy, Mr. Horacio Valeiras

VPI & SU Staff: Ms. Jennifer Altman, Mr. Mac Babb, Mr. Bob Broyden, Mr. Mark Cartwright, Ms. D'Elia Chandler, Mr. John Cusimano, Dr. John Dooley, Mr. Kevin Foust, Dr. Lance Franklin, Dr. Luisa Havens, Ms. Mary Helmick, Mr. Jim Hillman, Mr. Tim Hodge, Ms. Elizabeth Hooper, Dr. Robin Jones, Dr. Chris Kiwus, Ms. Cathy Kropff, Ms. Sharon Kurek, Dr. Theresa Mayer, Ms. Nancy Meacham, Dr. Scott Midkiff, Mr. Ken Miller, Ms. Terri Mitchell, Mr. Mark Owczarski, Mr. Charlie Phlegar, Dr. Scot Ransbottom, Ms. Lisa Royal, Mr. Charlie Ruble, Dr. Tim Sands, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Dr. Gary Sherman, Ms. Kayla Smith, Dr. Ken Smith, Mr. Jason Soileau, Mr. Jon Clark Teglas, Mr. Brad Sumpter, Ms. Tracy Vosburgh, Mr. Luke Watson, Mr. Aiden Williams, Dr. Sherwood Wilson, Mr. Chris Wise

1. **Motion to Reconvene in Open Session:** Motion to begin open session.

2. **Opening Remarks**

3. **Consent Agenda:** The Committee considered for approval the items listed on the Consent Agenda.

   a. Approval of Items Discussed in Closed Session.

   b. Approval of Minutes of the September 1, 2017 Meeting

   c. Update on Advancement: Advancement provided a quarterly update to the Committee on their fundraising efforts.

   d. Annual Write-off of Delinquent Accounts: As of June 30, 2017, the amount of write-offs of delinquent accounts totaled $326,653 which represents 0.03 percent of the 2016 annual operating revenues of $1.02 billion. This current year write-off was consistent with the total write-off amounts in recent years.

* e. Approval of Pratt Fund Program and Expenditure Report: The Pratt Fund provides funding for programs in both the College of Engineering and Department of Animal Nutrition in the College of Agriculture and Life Sciences. For fiscal year 2016-17, the College of Engineering had total expenditures of $961,141 and the Animal Nutrition had total expenditures of $849,745.

   The Committee approved the items on the Consent Agenda and recommended the Pratt Fund Program and Expenditure Report to the full Board for approval.

4. **Report on Investment of Nongeneral Funds:** The Committee received a verbal report on the investment of nongeneral funds. The report provided information on

the nature and types of cash reserves and investments maintained by the university and planned investment strategies for the future.

5. **Report on Research:** The Committee received a report from the Vice President for Research and Innovation on the Virginia Tech Research Enterprise from a financial perspective. The presentation provided an in-depth review of research expenditures including a breakdown and benchmarking of expenditures from different perspectives. The presentation also discussed opportunities and strategies for Virginia Tech to achieve strategic research growth.

6. **Annual Report on the University's Student Financial Aid Resources:** The Committee received a comprehensive report on the university's scholarship and financial aid program. In its Management Agreement with the Commonwealth, the university affirmed its commitment to increase the support for student financial aid. The university continues to proactively work to ensure access and affordability. The amount of total student financial aid awarded increased from $446.2 million in fiscal year 2016 to $462.2 million in fiscal year 2017. The report also provided information on the Endowment Scholarship utilization. In recent years, university colleges and departments developed action plans under the guidance of the Office of the Vice Provost for Enrollment and Degree Management to maximize the utilization of endowment scholarships. These action plans have resulted in significant reduction of unspent cash balances and the year-end cash balances are now at an acceptable level.

7. **Report on Cost Containment and Efficiencies:** The Committee received a presentation highlighting current cost containment efficiencies and related metrics, as well as future cost containment opportunities. The university reviewed with the Committee plans for future reporting of efficiency initiatives to the Board.

8. **Presentation on Resource Development:** The Committee received information on the resource development scenarios and projections developed by the university. The report included information on hypothetical revenue scenarios, related cost assumptions, and revenue projections under each scenario for discussion purposes.

9. **Annual Report on University Debt Ratio and Debt Capacity:** The Committee received a report on the university's debt ratio and debt capacity. At the conclusion of fiscal year 2016-17, outstanding long-term debt of the university totaled $494.2 million with a debt ratio of 3.67 percent. The university is in full compliance with the internal debt ratio target of 5 percent and the Restructuring benchmark of 7

percent. The Committee affirmed its support for continuation of the 5 percent internal debt ratio target.

* 10. **Resolution to Approve Integration of the Virginia Tech Carilion School of Medicine:** The Committee reviewed for approval a resolution for the integration of the Virginia Tech Carilion School of Medicine (VTCSOM). The Board received a presentation on the VTCSOM at the Information Session on Sunday, November 5th, 2017. The Committee had previously received a presentation on the financial aspects of VTCSOM Integration at the September 11th, 2017 Board meeting.

The Committee recommended the resolution to approve the integration of the Virginia Tech Carilion School of Medicine to the full Board for approval.

* 11. **Approval of Year-to-Date Financial Performance Report (July 1, 2017 – September 30, 2017):** The Committee reviewed for approval the Year-to-Date Financial Performance Report for July 1, 2017 – September 30, 2017. For the first quarter, budget adjustments were made to reflect revisions to projected revenues and expenditures. The annual tuition and fees budget was increased by $10.3 million for the finalization of the budgets for tuition and fees, driven by higher than projected enrollment for Fall 2017.

The Committee recommended the Year-to-Date Financial Performance Report to the full Board for approval.

12. **Other Business:** The Committee discussed other topics as needed. The Committee requested information on budget allocation and deployment of resources in support of the underrepresented students.

<u>Joint Open Session with the Buildings and Grounds Committee</u>

Board Members Present: Ms. Greta Harris, Mr. C. T. Hill, Mr. Robert Mills, Mr. Mike Quillen, Mr. Robert Sebek – staff representative, Mr. Horacio Valeiras

VPI & SU Staff: Ms. Jennifer Altman, Mr. Mac Babb, Mr. Bob Broyden, Mr. Mark Cartwright, Ms. D'Elia Chandler, Mr. John Cusimano, Dr. John Dooley, Mr. Kevin Foust, Ms. Mary Helmick, Mr. Jim Hillman, Mr. Tim Hodge, Ms. Elizabeth Hooper, Dr. Robin Jones, Dr. Chris Kiwus, Ms. Cathy Kropff, Ms. Sharon Kurek, Ms. Nancy Meacham, Dr. Scott Midkiff, Mr. Ken Miller, Mr. Mark Owczarski, Mr. Charlie Phlegar, Dr. Scot Ransbottom, Ms. Lisa Royal, Ms. Savita Sharma, Mr. M. Dwight Shelton Jr., Ms. Kayla

Smith, Mr. Jason Soileau, Mr. Jon Clark Teglas, Ms. Tracy Vosburgh, Mr. Luke Watson, Mr. Aiden Williams, Dr. Sherwood Wilson, Mr. Chris Wise

* 1. **Approval of Resolution for Student Wellness Improvements:** The Committees reviewed for approval a resolution for Student Wellness Improvements. In March 2016, the Board of Visitors approved a $2.757 million planning authorization to develop a facility solution to meet expectations for student counseling services, student health services, and expanded fitness programming. The university conducted a program and facility study and identified the renovation of War Memorial Hall along with minor upfits to McComas Hall as the most efficient alternative to meet student service needs.

The proposed improvements to War Memorial Hall will provide updated space for Cook Counseling Center and Hokie Wellness, the department of Human Nutrition, Foods, and Exercise (HNFE), Recreation Sports, and School of Education for running programmatic activities to support and promote student wellness, instruction, and research. The proposed renovations to Schiffert Health Center in McComas Hall include minor renovations to accommodate student health services.

The total project cost for the major renovations to War Memorial Hall and minor renovation to McComas Hall is $63 million. This request is for a $63 million authorization to complete the Student Wellness Improvements project.

The Committees recommended the Resolution for Student Wellness Improvements to the full Board for approval.

There being no further business, the meeting adjourned at 12:08 p.m.

*** Requires full Board approval.**

University Advancement Update

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

October 17, 2017

The Office of University Advancement continues its efforts to support the work of the university through engagement, communications and garnering philanthropic support. This report summarizes the fundraising results for the first quarter of fiscal year 2018 (through September 2017) and recent activities related to the launch of the university's new brand.

FUNDRAISING UPDATE

- New Gifts and Commitments (NG&C) for the first quarter of fiscal year 2018 is just over $10.4 million. We anticipate an upswing in support as we get further into the fiscal year.

- The private gift income (Cash) total is approximately $12 million for the first three months of fiscal year 2018.

BRAND LAUNCH

On Tuesday, September 26, 2017, University Relations publicly launched the next phase of the brand refresh project, culminating with the release of the university's new academic mark. Advance notices announcing the new mark were sent to key constituents and a marketing blitz was generated campus-wide. We are working aggressively to get the word out and a special website has been created to describe the process and provide information on the brand for all of our audiences: https://vt.edu/brand.html.

CAMPAIGN PLANNING

Planning for the university's next comprehensive campaign continues. Michael Moyer, Associate Vice President of Development for Colleges, has been named the campaign director. The immediate next steps are to finalize the campaign plan, determine priorities, and recruit the campaign leadership and volunteers. This is scheduled to occur throughout the next quarter.

Presentation Date: November 6, 2017

Accounts Receivable and the Write-off of Delinquent Accounts
For the Fiscal Year Ended June 30, 2017

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

September 26, 2017

Overview

Current accounts receivable are generated by several components within the university as part of the annual operating activities. Student accounts receivable and the receivables generated through the sponsored research program represent the largest components of the total receivables. Current and noncurrent notes receivable are generally comprised of student loan receivables administered by the university. To properly account for and control these assets, the university uses a combination of centralized and decentralized systems.

The Bursar's Office is responsible for the centralized accounts receivable system operation and monitoring the activities of the decentralized operations through reviews of reports and discussions with personnel who have been delegated the responsibility for billing and collecting accounts. The Bursar's Office is also responsible for managing the collection process for all delinquent accounts. Information from the receivable systems is consolidated quarterly by the Controller's Office and reported to senior management and the State Comptroller. The quarterly report uses a combination of narratives, tables, and graphs to report receivables, analyze trends, and identify areas where emphasis or action is needed. The Controller's Office is responsible for the implementation of corrective action to ensure that the receivables are properly managed.

Composition and Aging of the Receivables

Accounts receivable: Attachment A provides the composition of the current gross receivables at June 30, 2017, with comparative data for the previous year. Attachment B provides a graph for the aging analysis of the gross receivables at June 30, 2017, with comparative data for the previous three years. The total current receivables write-offs for these four years are also overlaid on this graph as another way to put them in perspective.

Notes receivable – from students: Federal and Institutional (issued by Virginia Tech from gifts and donated funds designated to be used for loans) Loans to students require the execution of a promissory note. These loan receivables are repaid over 10 or more years after a student's last enrollment at the university and the amount due in the next 12 months is classified as a current notes receivable for the university's financial statements.

Attachment F provides the composition of the total gross federal and institutional student loan receivables at June 30, 2017, with comparative data for the previous year.

Collection Efforts and Write-offs

Because of the nature of the accounts receivables, their impact on the university's operating budget, and the university's aggressive policy for collecting delinquent accounts, the annual write-off of uncollectible accounts is relatively small. The average annual write-off for accounts receivable for the past three years is $704,748. The fiscal year 2017 write-off total of $326,653 represents only 0.03 percent (less than one tenth of one percent) of the annual operating revenues[1] per the audited financial statements for fiscal year 2016.

There were no sponsored project receivables to be written off for fiscal year 2017.

Various techniques are used for collecting delinquent accounts receivables depending on the customer and type of account. For example, students must pay past due amounts before they are allowed to enroll for the next school term. Other delinquent accounts are placed with commercial collection agencies and the State Attorney General's Office for collection. The State Comptroller provides guidance on collection policies and procedures, and the university generally complies with the State Comptroller's recommendations, except where improved practices have been implemented under the Restructuring Act.

Accounts Receivable Written Off at June 30, 2017

As authorized by a resolution passed by the Board of Visitors on August 13, 1976, the Vice President for Finance and Chief Financial Officer and the Assistant Vice President for Finance and University Controller periodically review the university's accounts and notes receivable. The review is performed to determine those delinquent accounts that are deemed to be uncollectible. Subsequently, the accounts are written off the university's records in accordance with generally accepted accounting practices. However, such accounts are not discharged or forgiven (with limited exceptions such as bankruptcies, death, etc.), and the university continues to track these accounts and sometimes collects portions of these accounts after being written off.

Normally, accounts are written off at the close of the fiscal year. For the fiscal year ended June 30, 2017, the accounts receivable written off totaled $326.653. The decrease in write-off of $226,168 over prior year is primarily the result of a decrease in Sponsored Program write offs compared to the two accounts for Theta Tech and NJ Economic Development written off last year. See Attachment C for a summary of the accounts receivable written off at June 30, 2017, with comparative data for the two previous fiscal years.

For each accounts receivable written off, appropriate collection procedures were utilized. Further collection efforts were not justified for various reasons such as bankruptcies, the inability to locate the debtor, and the cost versus the benefit for small receivable amounts. As shown in Attachment D, the $326,653 write-off total consists of 873 customers with an average account value of $374. In fact, as shown on Attachment E, of the total number of accounts written off, 64.3 percent (561) were valued at less than $100, and these low dollar accounts represent only 7.4 percent of the total dollar value of the write-offs.

[1] Operating revenue for FY16 of $1,020,613,000 was used for this calculation.

Notes Receivable – From Students Written Off at June 30, 2017

Additionally, the total of notes receivable written off at the close of the fiscal year included $18,687 of the institutional student loan portfolio. Institutional student loans are subject to the same collection techniques as other university receivables. For each loan written off, appropriate collection procedures were utilized. The notes receivable write-off consists of four loans, past due 900 or more days, with an average loan balance of $4,672. Attachment F provides the composition of notes receivable at year end. The institutional student loans are most often awarded to students with financial need who have exhausted other avenues of financial aid. Since these are long-term loan programs, issued to borrowers with limited resources, generally we have allowed more time before deeming the loan uncollectible and writing these amounts off.

Federal notes receivable are issued from funds received from the federal Department of Education over many previous years for the Perkins and Health Professions Student Loan programs, and from required matching contributions from the university. Again, the same collection procedures are followed for these loans. When these loans are deemed to be uncollectible Federal regulations require that Perkins loans be assigned and returned to the Department of Education for additional collection efforts and final resolution.

State Management Standards

The university's Management Agreement under the Restructured Higher Education Financial and Administrative Operations Act includes several financial and administrative performance standards. The university must achieve compliance with all of these performance standards to retain the financial benefits provided under the Management Agreement. There are two management standards related to accounts receivable, and both are calculated annually. The two standards are:

a. A four quarter average past due rate of 10 percent or less on receivables 121 days or more past due as a percentage of all receivables.

b. An average past due rate of 10 percent or less on Federal student loans.

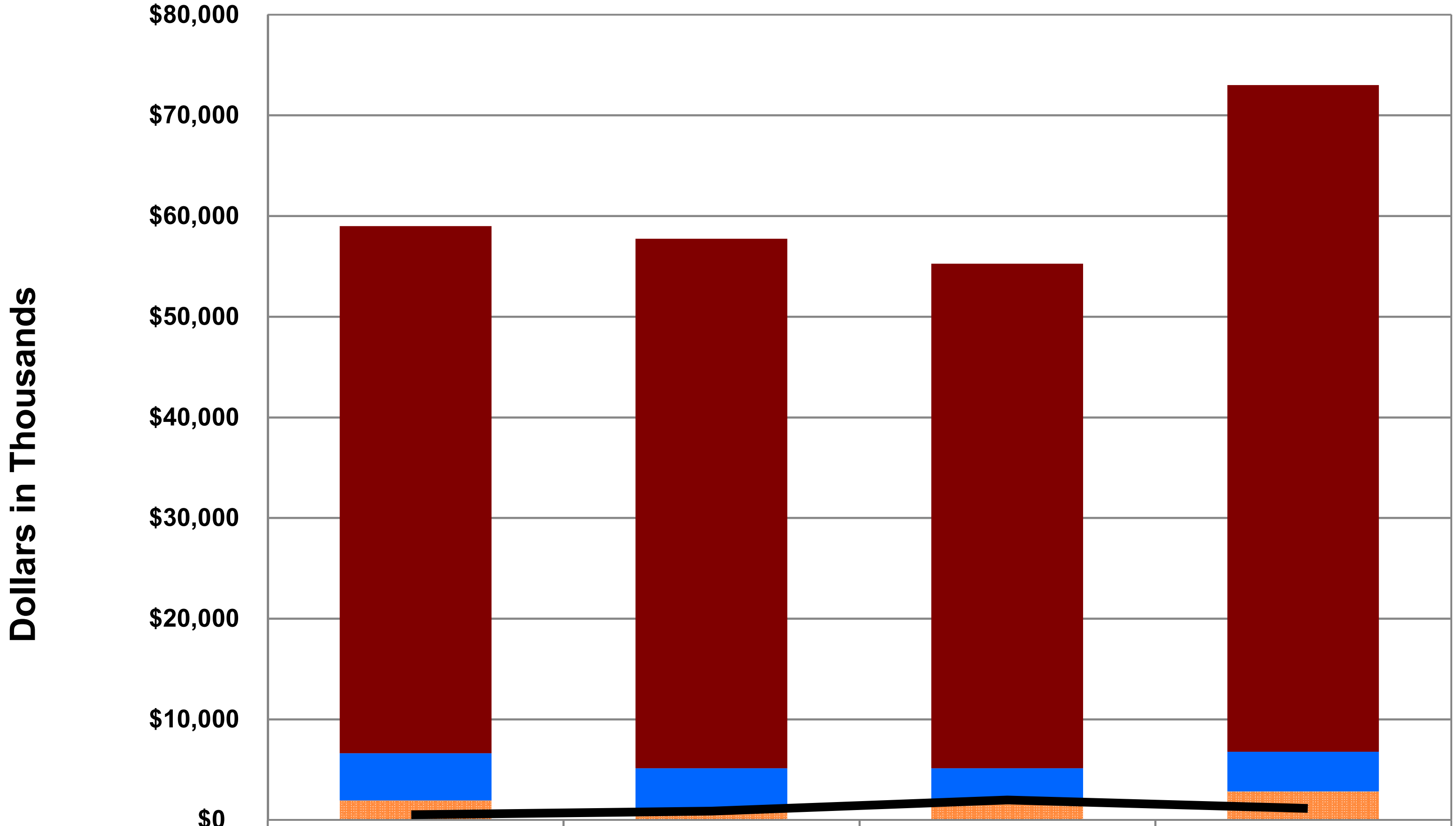
The university is currently in compliance with both standards. As of June 30, 2017, the average past due rate on current receivables 121 days or more past due is 1.29 percent for the four quarters ended and the Federal Perkins Student Loan default rate is 1.85 percent.

Composition of Gross Accounts and Notes Receivable
As of June 30, 2016 and 2017
(Dollars in Thousands)

	June 30, 2017			June 30, 2016		
		Receivable Balance	Percent		Receivable Balance	Percent
Accounts Receivable:						
Student Accounts	$	2,567	4.3%	$	1,983	3.4%
Sponsored Programs		40,830	69.2%		44,295	76.7%
Electric Service		993	1.7%		921	1.6%
Parking Service		106	0.2%		88	0.2%
Telecommunications (CNS)		61	0.1%		12	0.0%
CPE and IVTSCC [1]		524	0.9%		398	0.7%
Veterinary Medicine		426	0.7%		409	0.7%
Equine Medical Center		286	0.5%		220	0.4%
Short Term Loans/Notes		18	0.0%		9	0.0%
Other Receivables		13,165	22.4%		9,403	16.3%
Total Accounts Receivables	**$**	**58,976**	**100.0%**	**$**	**57,738**	**100.0%**
Notes Receivable						
Federal Loans - Perkins & HPSL	$	14,620	88.0%	$	15,454	88.9%
Institutional Loans		1,986	12.0%		1,926	11.1%
Total Notes Receivable	**$**	**16,606**	100.0%	**$**	**17,380**	100.0%

[1] Continuing and Professional Education / Inn at Virginia Tech & Skelton Conference Center

Aging of Current Gross Accounts Receivable
From June 30, 2014 to June 30, 2017
(Dollars in Thousands)



	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Receivables Not Past Due	$52,353	$52,618	$50,117	$66,239
1 - 120 Days Past Due	$4,694	$3,968	$3,424	$3,948
121 to Over 1 Year Past Due	$1,929	$1,152	$1,715	$2,824
Total Gross Receivables	$58,976	$57,738	$55,256	$73,011
Write-Offs	$327	$553	$1,235	$722

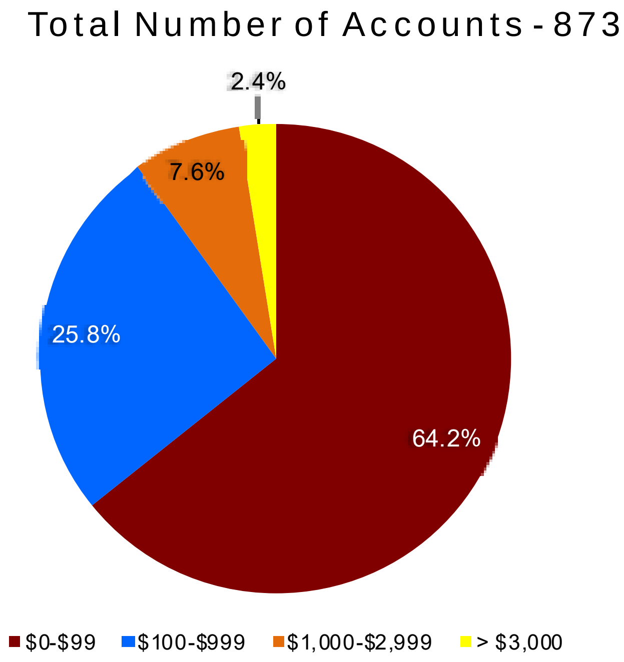
Current Accounts Receivable Write-Offs for June 30, 2017 with Comparison to 2016 and 2015

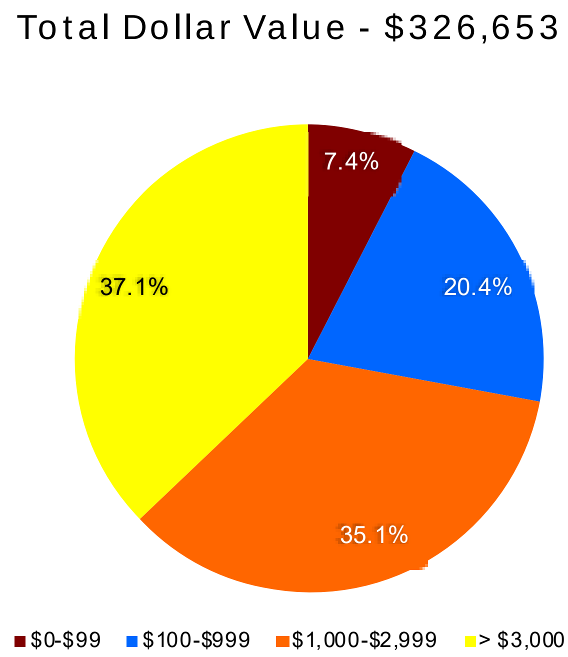
(In whole dollars)

Accounts Receivable	June 30, 2017	June 30, 2016	June 30, 2015	Three Year Average
Student Accounts	$ 134,629	$ 178,943	$ 252,868	$ 188,813
Sponsored Programs	-	138,611	771,259	303,290
Electric Service	10,889	16,726	12,777	13,464
Parking Services	20,198	16,616	21,338	19,384
Telecommunications (CNS)	-	74	92	55
CPE and IVTSCC [1]	-	939	1,284	741
Veterinary Medicine	71,397	126,105	107,779	101,760
Equine Medical Center	21,925	31,866	19,653	24,481
Short Term Loans/Notes	5,999	2,229	2,109	3,446
Other Receivables	61,616	40,711	45,612	49,313
Total Write-Offs	**$ 326,653**	**$ 552,820**	**$ 1,234,771**	**$ 704,748**

[1] Continuing and Professional Education / Inn at Virginia Tech & Skelton Conference Center

Stratification of Current Accounts Receivable Write-Offs for Fiscal Year 2017





The Virginia Tech Research Enterprise: a Financial Perspective

Board of Visitors

November 6, 2017

Why does research support matter?

DISCOVER
ask the right questions

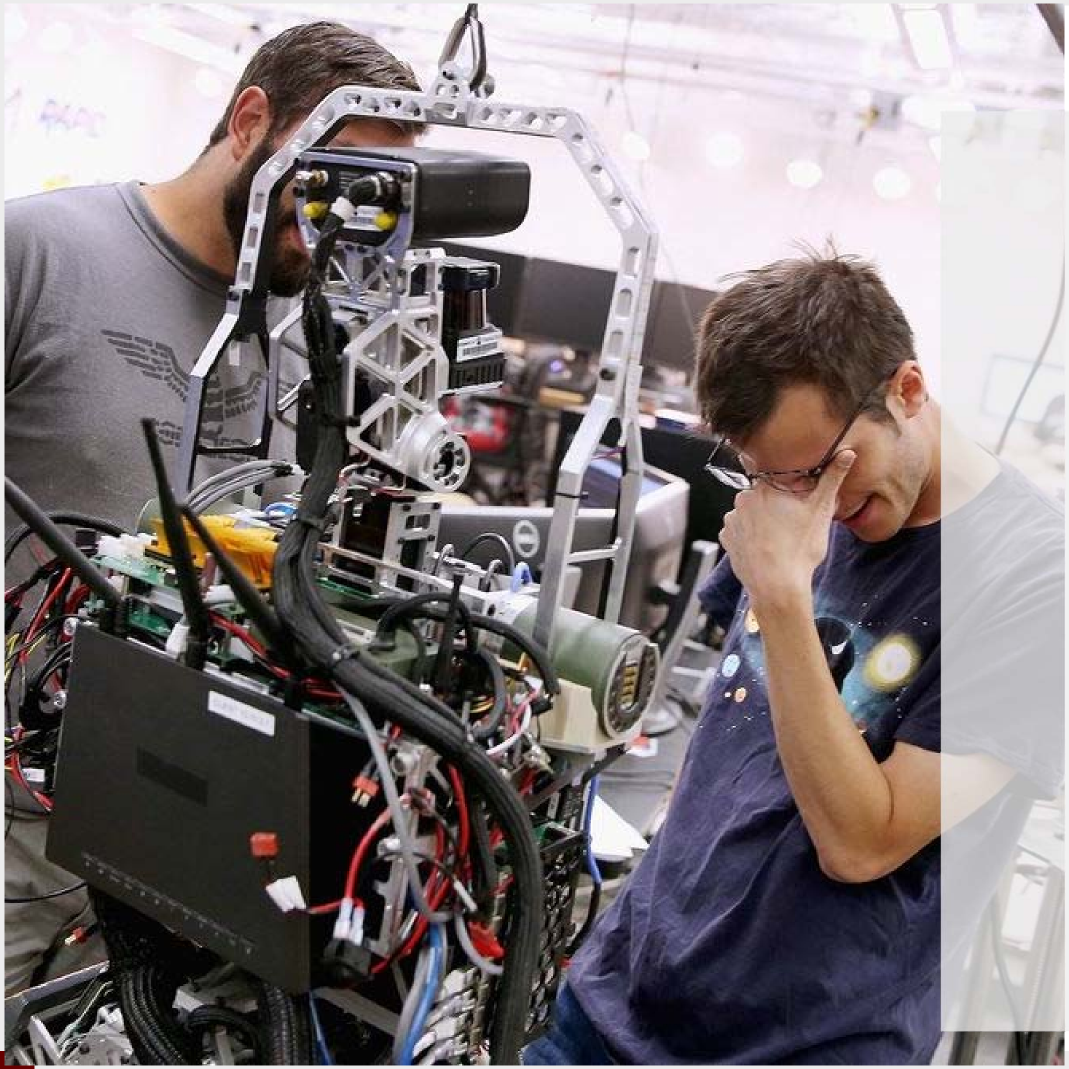
- Explore topics of human, market, social relevance
- Advance knowledge creation
- Stay on the cutting edge
- Serve national and global interests

ENGAGE
as a member of the scientific community

- Collaborate as a community
- Work alongside faculty, undergrads, and graduates
- Serve private and public sector partners
- Create experiential learning

IMPACT
deliver regional, state, national, global

- Deliver solutions to greatest challenges
- Disseminate knowledge
- Support the community
- Promote informed culture and policy change
- Commercialize discoveries
- Build the brand



Virginia Tech's contributions to science and technology are a critical and prominent element of our culture. They support the very fabric of who we are and where we hope to go.

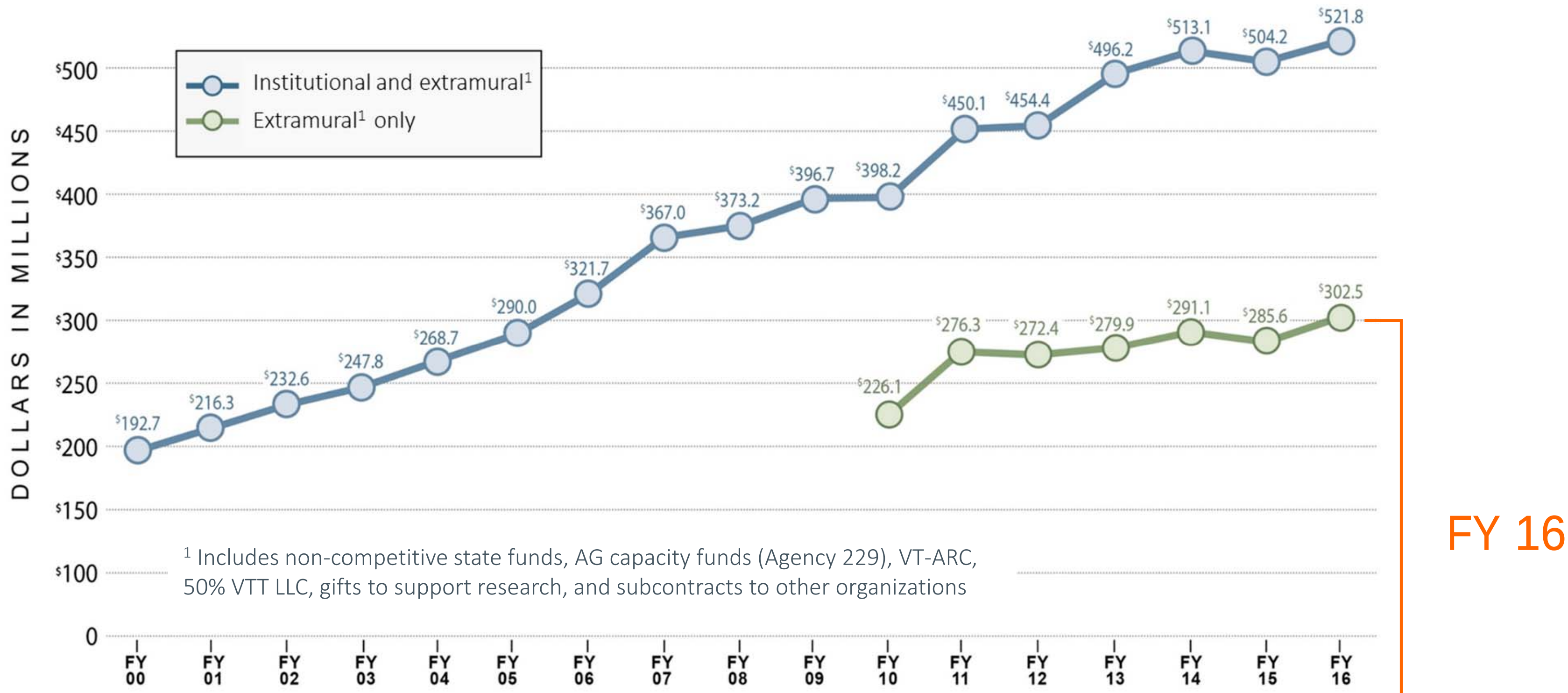
In STEM-H disciplines, a strong correlation exists between competitive external funding and other measures of success, including:

- scholarly journal articles
- advisory boards
- relevance to society
- fundamental discoveries
- transformative change in industry

VIRGINIA TECH.

Where we are: NSF-reported research expenditures

Over the last 10 years, Virginia Tech has sustained strong growth in total R&D expenditures as reported in the NSF Higher Education R&D (NSF HERD) survey, allowing us to deliver game-changing ideas and technologies.

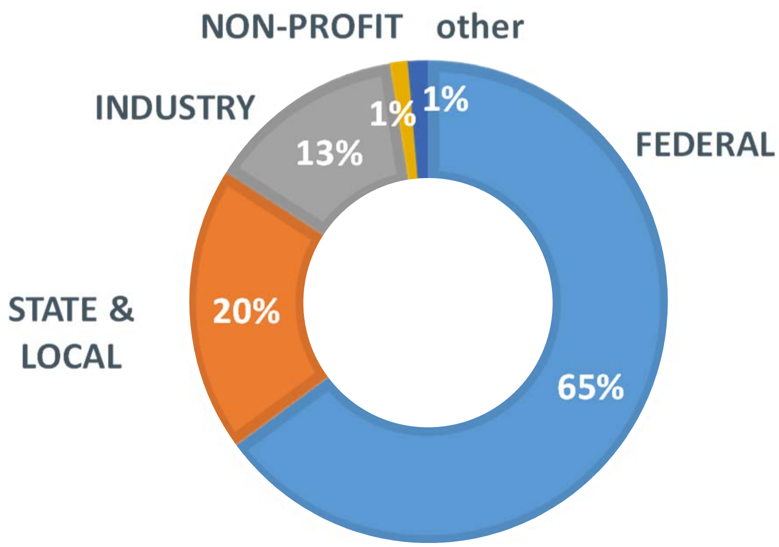


[1] Includes non-competitive state funds, AG capacity funds (Agency 229), VT-ARC, 50% VTT LLC, gifts to support research, and subcontracts to other organizations

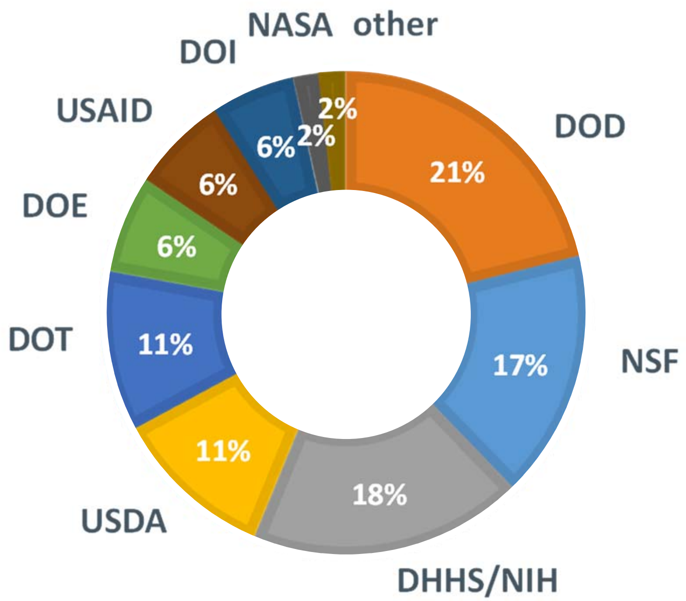
VIRGINIA TECH.

FY 16

Extramural total*: $302.5M



Federal only*: $195.6M



*Includes non-competitive state funds, AG capacity funds (Agency 229), VT-ARC, 50% VTT LLC, gifts to support research, and subcontracts to other organizations

VIRGINIA TECH.

What does external funding support?

For every*

$1.00

in Modified Total Direct Costs (MTDC) spent at Virginia Tech

Virginia Tech is reimbursed up to

$0.61

in Facilities and Administrative (F&A) costs

In FY 16, externally sponsored research expenditures totaled $249.1 M – excluding non-competitive state funds, Agency 229, VT-ARC, and VTT LLC:

$194.5 M Total Direct Costs

$54.6 M F&A Costs

= $ 151.2 M (MTDC) + $ 43.3 M (excluded DC's)

*not all grants carry the full capped F&A rate of 61% (e.g., USDA); the uncapped F&A rate on DOD contracts is 65%

VIRGINIA TECH.

The university research enterprise

The NSF Higher Education Research & Development (HERD) survey displays 30+ data sets to account for differences in university research portfolios. The university research enterprise is often viewed by expenditures in three common pillars: non-medical academic colleges, academic medical college/school, and affiliated thematic research units. Research-intensive universities typically have at least two of the three.

- Academic Colleges (Non-Medical)
- Academic Medical Schools
- Affiliated Thematic Research Units

FY 15*

NSF HERD:
a different view

Virginia Tech is #22 when ranked by all non-medical school R&D expenditures for FY 2015.

The total R&D expenditures in this table include all external funding (competitive and non-competitive) and institutional support.

Rank	Institution	Non-Medical	Medical	Total
1	Johns Hopkins U.[a]	1,679,859	625,820	2,305,679
2	Massachusetts Institute of Technology	930,719	0	930,719
3	U. Texas, M. D. Anderson Cancer Center	833,406	0	833,406
4	Texas A&M, Health Science Center	814,620	52,058	866,678
5	U. Michigan, Ann Arbor	805,834	563,444	1,369,278
6	U. California, Berkeley	788,505	0	788,505
7	Harvard U.	776,420	237,333	1,013,753
8	Georgia Institute of Technology	765,370	0	765,370
9	U. Wisconsin-Madison	763,051	306,026	1,069,077
10	Penn State, Hershey Medical Center	698,465	92,566	791,031
11	U. Texas, Austin	646,273	4,335	650,608
12	U. Washington, Seattle	645,304	535,259	1,180,563
13	U. Illinois, Urbana-Champaign	639,817	0	639,817
14	U. Minnesota, Twin Cities	635,400	245,218	880,618
15	Cornell U.	599,566	354,846	954,412
16	U. California, San Diego	561,519	539,947	1,101,466
17	Purdue U., West Lafayette	558,611	0	558,611
18	U. California, Davis	554,564	166,513	721,077
19	Rutgers, New Jersey, New Brunswick	509,678	118,935	628,613
20	U. Maryland, College Park	505,699	0	505,699
21	Michigan State U.	505,654	52,594	558,248
22	**Virginia Tech**	**504,282**	**0**	**504,282**
23	Ohio State U.	479,769	338,112	817,881
24	U. California, Los Angeles	472,843	548,384	1,021,227
25	North Carolina State U.	468,293	0	468,293

*FY 16 HERD will be released in Nov 17

What are affiliated thematic research units?

def • i • ni • tion

Affiliated Thematic Research Units are research institutes or centers in a university that conduct focused research and development in areas of strategic importance to the state and the nation. These units maintain essential "core" capabilities; support long-term strategic relationships with critical sponsors; operate in the public interest, free from real or perceived conflicts of interest; and drive economic development. Integration with the academic colleges expands the resources available to both, resulting in a stronger university research enterprise.

VIRGINIA TECH.

NSF HERD: a different view

FY 15*

Universities with affiliated research units receive sole source funding, which positions them for larger competitive S&T funding.

- Hopkins: Applied Physics Lab
- MIT: Institute for Soldier Nanotechnologies
- Georgia Tech: GT Research Institute
- UT Austin: Applied Research Lab
- Penn State: Applied Research Lab
- U Michigan: UM Transportation Research Institute

Rank	Institution	Non-Medical	Medical	Total
1	Johns Hopkins U. - $1.38B	1,679,859	625,820	2,305,679
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6	U. California, Berkeley	788,505	0	788,505
7	Harvard U.	776,420	237,333	1,013,753
8	Georgia Institute of Technology - $367M	765,370	0	765,370
9	U. Wisconsin-Madison	763,051	306,026	1,069,077
10	Penn State, Hershey Medical - $198M	698,465	92,566	791,031
11	U. Texas, Austin	646,273	4,335	650,608
12	U. Washington, Seattle	645,304	535,259	1,180,563
13	U. Illinois, Urbana-Champaign	639,817	0	639,817
14	U. Minnesota, Twin Cities	635,400	245,218	880,618
15	Cornell U.	599,566	354,846	954,412
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17	Purdue U., West Lafayette	558,611	0	558,611
18	U. California, Davis	554,564	166,513	721,077
19	Rutgers, New Jersey, New Brunswick	509,678	118,935	628,613
20	U. Maryland, College Park	505,699	0	505,699
21	Michigan State U.	505,654	52,594	558,248
22	**Virginia Tech**	**504,282**	**0**	**504,282**
23	Ohio State U.	479,769	338,112	817,881
24	U. California, Los Angeles	472,843	548,384	1,021,227
25	North Carolina State U.	468,293	0	468,293

VIRGINIA TECH.

Changing landscape: thematic research institutes

The **Affiliated Thematic Research Institutes and Centers** provide a framework to maintain essential research, development and engineering "core" capabilities and long-term strategic relationships with critical sponsors. Institute researchers are largely funded through competitive external grants and contracts. College faculty and students participate on many of the external research programs managed by these institutes and centers.

2000

Virginia Tech Transportation Institute

grew out of University Transportation Center in 1998
VTT, LLC (SoVA Motion) started in 2010

2000

Virginia Bioinformatics Institute

rebranded as Biocomplexity Institute in 2016

2010

Virginia Tech Carilion Research Institute

2011

Virginia Tech Applied Research Corporation

2017

Hume Center for National Security and Technology

Time (years)

*VTCRI director reports to the Provost

Exemplar

Not by accident:

VTTI is now the largest transportation research institute in the country

“It’s been more than 25 years since VTTI was founded. Then, … 15 employees. Today, we stand at more than 475 employees, house the largest group of driving safety researchers in the world, sponsored research expenditures of more than $36 million annually, have an infrastructure of more than $110M, and support 140 students who are gaining a leading research experience.

VIRGINIA TECH.

Virginia Tech's changing landscape

Over the past 15 years, changes in our organizational design has resulted in an evolving assembly of research capabilities, strengths, and opportunities

2003

College of
Arts and Sciences
is splits

College of Liberal Arts and Human Sciences

ASPECT - alliance for social, political, ethical, and cultural thought*
apparel, housing, resource management
communications
english
history
human development and family science*
philosophy
political science
religion and culture
science, technology and society
sociology
education
performing arts
ROTC

College of Science

academy of integrated science
biochemistry
biological sciences*
chemistry*
computational modeling and data analytics
economics*
geosciences*
mathematics*
microbiology
nanoscience
neuroscience
physics*
psychology*
statistics*
systems biology

\+ participation in 15 Interdisciplinary Graduate Education Programs (IGEP's)

*offers Ph.D. degree

9th college to open in 2018:

The Virginia Tech Carilion School of Medicine will become a college within Virginia Tech a decade after its creation by a private-public partnership

Changing landscape: academic research institutes

The **Interdisciplinary Academic Research Institutes** provide institutional support to faculty to organize and focus strategic research, education, and outreach efforts around cross-cutting societal problems rather than traditional disciplines. The institutes provide a framework to support interdisciplinary faculty collaboration and communication, which ranges from funding to seed new interdisciplinary research initiatives to managing state-of-the-art facilities and laboratories.

2006

Institute for Critical Technology and Applied Science*

2007

Institute for Culture, Society, and Environment

2008

Fralin Life Sciences Institute

formed through the merger of:
Fralin Biotechnology Center (1995) and Institute for Biomedical and Public Health Sciences (2003)

2011

Institute for Creativity, Arts, and Technology*

Time (years)

*ICTAS director reports to the Dean of College of Engineering; ICAT director reports to the Provost

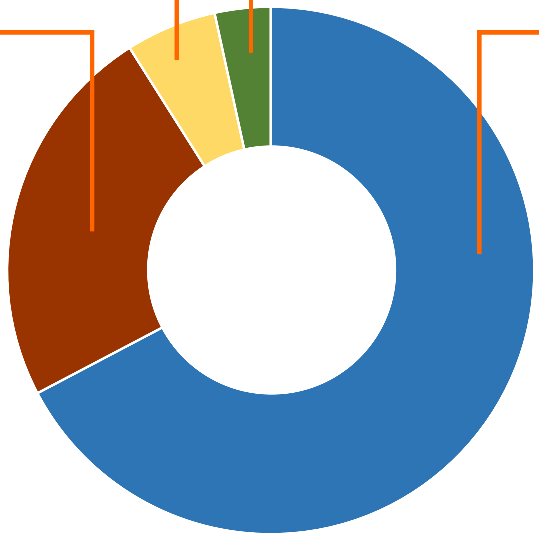
External Research Expenditures by Performing Unit

Medical Research Inst.

VTCRI	$12.6 M

Thematic Research Inst.

BI	$16.3 M
VTTI	$32.0 M
Hume	$3.9 M
VT-ARC	$6.3 M
VTT LLC	$2.2 M



International Programs

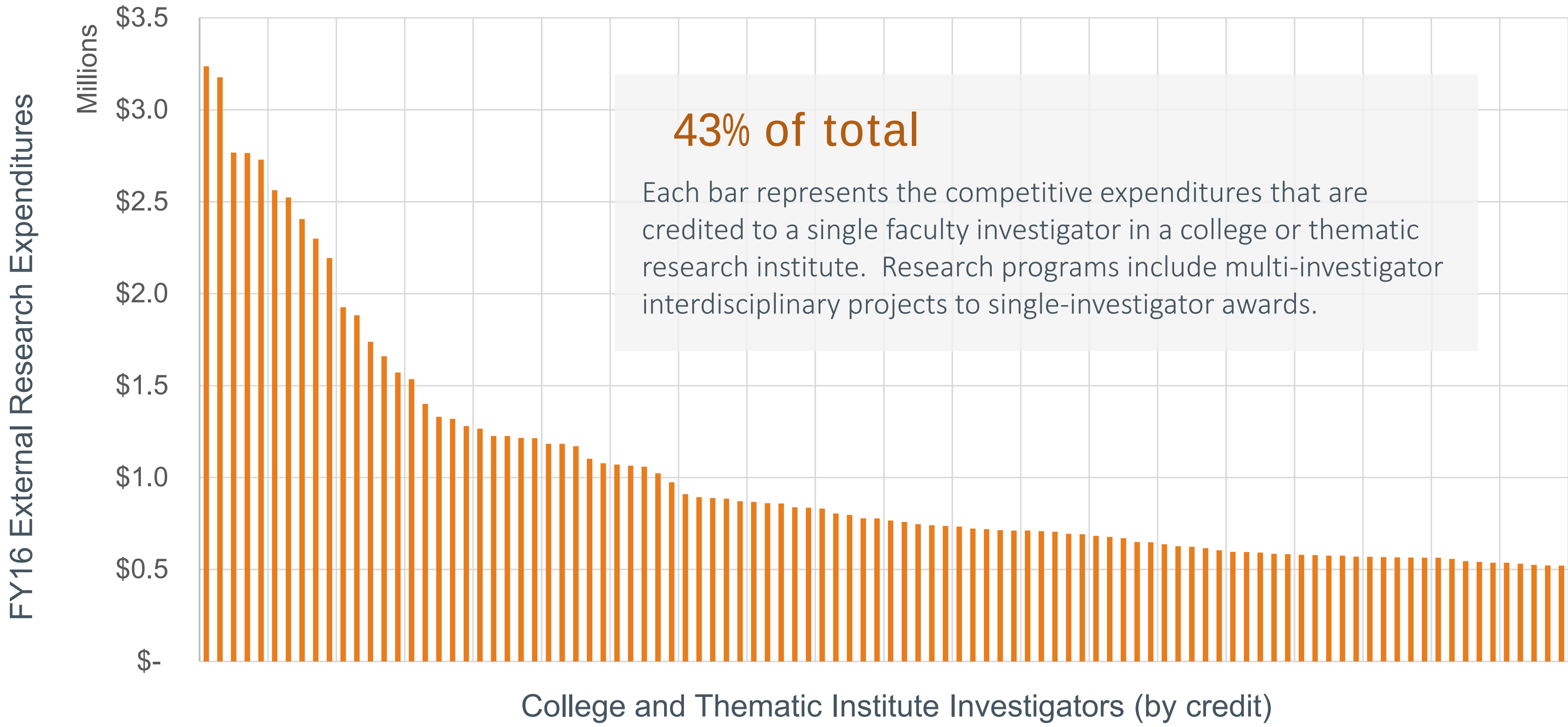
International	$7.8 M

Academic Colleges

Ag and Life Sciences	$34.9 M
Engineering	$88.9 M
Natural Resources	$14.8 M
Science	$21.5 M
Vet Med	$6.2 M
Other College/Inst.	$10.2 M

FY 16: excludes non-competitive state funds and Agency 229; includes gifts to support research and subcontracts to other organizations

Planned faculty hires provide excellent opportunity for strategic research growth



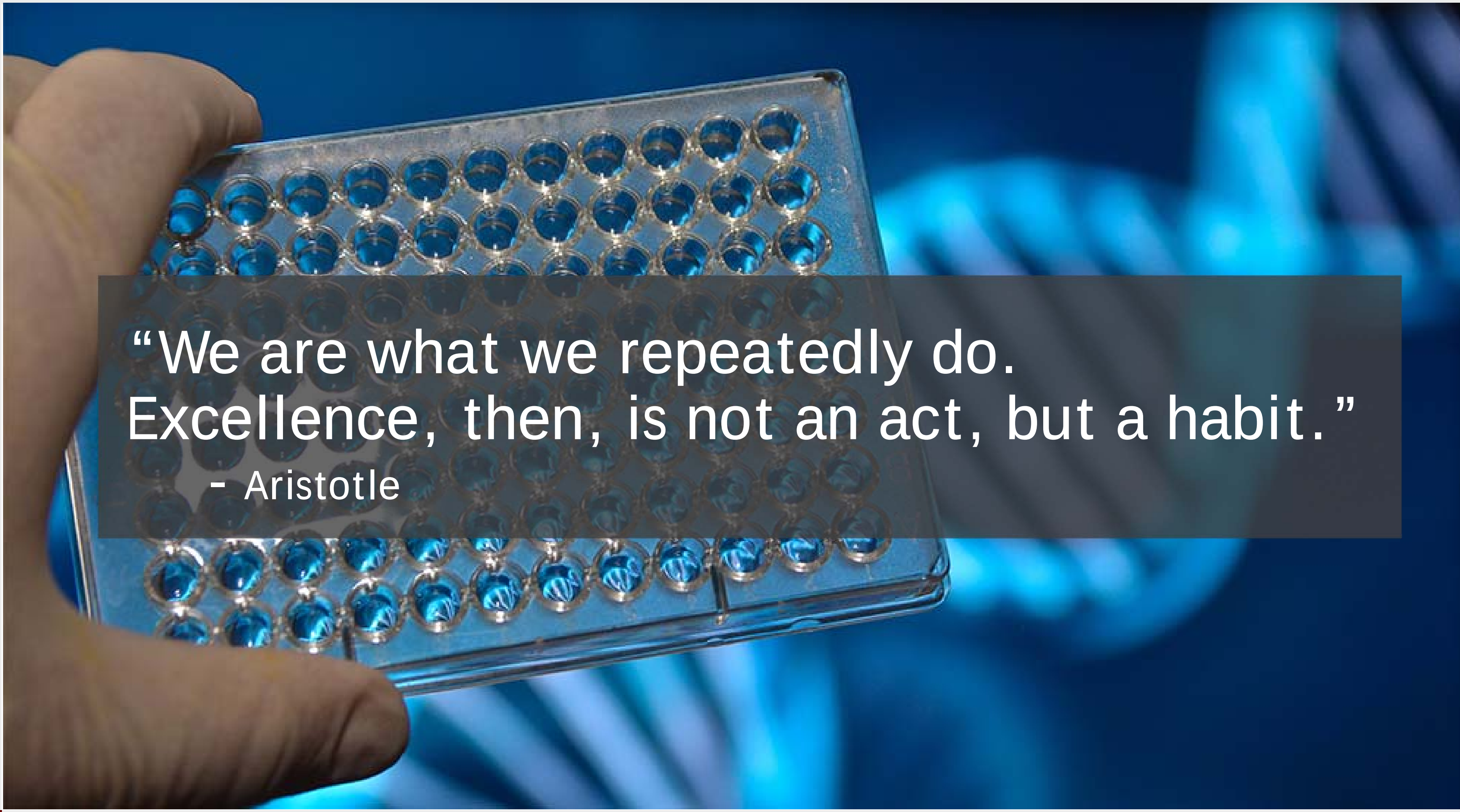
Destination Areas

Virginia Tech's approach to addressing complex, multi-disciplinary challenges through Destination Areas provides organizing principles, collaboration models, and investments to uniquely prepare our graduates to succeed.

Virginia Tech is changing the way we respond to complex, global challenges. In the form of Destination Areas, Virginia Tech is addressing technological, market, and societal needs through a multi-disciplinary, systems-of-systems approach designed to overcome traditional boundaries that separate science, technology, engineering, and mathematical fields from the liberal arts. These Destination Areas are providing Virginia Tech students of today the cross-disciplinary classes, experiences, and insights they need to ensure that they are well-positioned to tackle society's biggest challenges of tomorrow.

DESTINATION AREAS

- Adaptive Brain
- Data Analytics and Decision Sciences
- Global Systems Science
- Integrated Security
- Intelligent Infrastructure for Human Centered Communities



“We are what we repeatedly do.
Excellence, then, is not an act, but a habit.”

- Aristotle

University Support for Student Financial Aid

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

October 2, 2017

Consistent with prior years, the university is providing the Finance and Resource Management committee of the Board of Visitors with an update on the university's Student Financial Aid program. This annual report provides an overview of the types of student financial assistance programs available at the university, sources of funding for programs, and a review of the institutional undergraduate aid programs that can be controlled or influenced by the university.

This report is an integral part of the information flow to the Board of Visitors to assist in the assessment and approval of the university's tuition and fee rate proposals for the fall of 2018.

Funding Environment

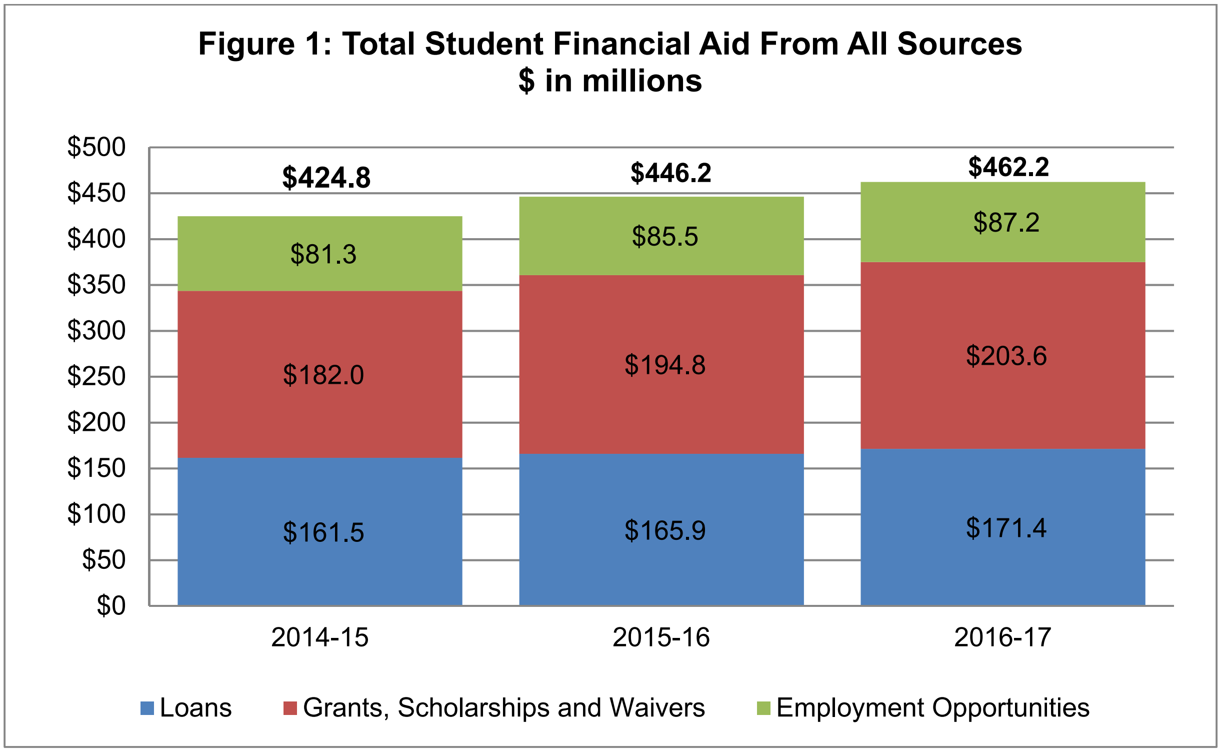
Virginia Tech is experiencing an ongoing shift in the types of resources available to support its instructional programs. These changes include periodic increases in tuition and required fees as driven by a combination of increasing costs, the requirement to maintain the quality and integrity of the instructional programs, enrollment growth to support additional Virginia students, and the inability of the state to maintain its historic level of financial support.

The state-funded share of support per student is impacted by limited General Fund resources at the state level, mandatory cost increases such as health care benefits, enrollment growth of Virginia resident students, and inflation; as a result, increases in tuition and fees are increasingly relied upon to support the university's instructional activities. In this environment, the role of student financial assistance of all types has become a more critical element of financial planning in the university's efforts to ensure access and affordability. Financial aid programs are critical to support those goals, as well as promoting the recruitment, retention, and graduation of students. The university's financial aid efforts seek to ensure that qualified students can access a Virginia Tech education and help to promote a diverse and inclusive community in support of the university's goals and objectives.

Historically, the university has strived to manage increases in tuition and fees at a reasonable level to enhance access and affordability; this strategy was predicated on a certain level of state support. However, the funding mix of higher education continues to evolve. As the state share of a student's cost has fallen significantly over time, the student's share of their cost of education has grown. Understanding this shift, the university has proactively focused its efforts to increase support for student financial aid. These efforts are specifically designed to ensure access and affordability and meet the goals of the university as described in its Management Agreement with the Commonwealth.

Types of Student Financial Aid

The university facilitates a multifaceted scholarship and financial aid program that provides assistance to undergraduate students through grants and scholarships, employment opportunities, loans, and payment strategies. Graduate students are supported through graduate assistantships, which provide tuition remission and a stipend in exchange for university service. Fund sources for this assistance are varied as are their accompanying eligibility protocols. For fiscal year 2016-17, total aid reached $462.2 million, as seen in Figure 1 below.



Financial assistance to students is provided in the four main categories of grants and scholarships, employment, loans, and payment options:

1. **Grants and Scholarships** provide aid based on academic or extracurricular achievement, or financial need, and require no exchange of service. Some of these are need-based, while others are merit-based. No repayment is expected.

   Need-based awards are offered to students who demonstrate financial need as determined by federal and institutional standards. Such standards involve the computation of the cost of attendance including estimated books and supplies, transportation, personal expenses, and room and board whether on or off campus, in addition to tuition and required fees. From this total cost of attendance the university subtracts the Expected Family Contribution (standardized through the Free Application for Federal Student Aid, the FAFSA), and any outside aid the student has obtained from sources other than the university to determine the student's financial need.

   Non-need-based awards may be merit-based and offered to students who demonstrate exceptional aptitude and academic and/or extracurricular achievement.

2. **Employment** includes wage employment, student work-study opportunities at the undergraduate level, and graduate assistantships at the graduate level. In 2016-17, 37 percent (12,518) of Virginia Tech students participated in an employment opportunity.

   Federal Work-Study – provides eligible students a financial aid allotment and a wage employment position. This program is subsidized by the federal government and is supported in part by the university. Work-study participants are employed both on and off-campus; gaining valuable work experience along with financial assistance. Award amounts, generally between $1,500 and $2,500 are based on a student's Free Application for Federal Student Aid (FAFSA) filing. In 2016-17, 621 students participated in FWS programs; 613 at the undergraduate level and 8 at the graduate/professional level.

   Wage employment opportunities - provide university employment to students based upon individual qualifications subject to departmental needs and resources. The university employed 7,621 students in wage positions during 2016-17; 6,558 at the undergraduate level and 1,063 at the graduate/professional level.

   Assistantships - offer tuition remission and a stipend in return for the student's (typically graduate-level) effort through research, service, or teaching. This funding supports both the graduate student and the university's programs. The university employed 3,741 individual graduate students, or 3,265 full-time equivalent students, as graduate assistants in administrative, teaching, and research positions in 2016-17. This represents 71 percent of the full-time graduate student population.

3. **Loans** are offered through institutional, federal, and private lenders and provide financial assistance. These loans have repayment requirements. Loans may be subsidized or unsubsidized.

   Subsidized loans - are generally from the federal government, carry a lower interest rate, and do not accrue interest or require payment during qualifying enrollment and deferment periods.

   Unsubsidized loans - generally accrue higher, market-based interest rates from the date the loan is disbursed, and may not require repayment during qualifying enrollment and deferment periods.

4. **Payment Options** include prepaid tuition plans offered by the Commonwealth of Virginia (such as tax sheltered savings plans) and the Budget Tuition Plan operated by the university. The Budget Tuition Plan is an installment payment plan which provides students and families the opportunity to spread the cost of tuition and fees over the course of the semester.

   The university is involved in the administration and distribution of each of these types of financial aid. Many programs are administered outside of the university, and students arrive with financial aid arrangements (which are in general termed "outside aid" in this report) that the university facilitates on their behalf. Other programs are developed within the institution.

Sources of Funding for Grants and Scholarships

A wide range of resources support grants and scholarships, including federal, state, institutional, and outside aid, as seen below in Table 1.

Table 1: Grants, Scholarships, & Waivers
($ in millions)

	2014-15	2015-16	2016-17
Undergraduate			
Federal	$ 18.0	$ 18.3	$ 18.3
State	15.5	15.6	16.1
Institutional			
Unfunded Scholarships	14.0	15.1	17.2
Tuition/Fee Funded Aid	0.0	1.2	1.8
Internal Resources	1.1	0.4	0.7
Other Undergraduate (1)	4.9	5.7	5.3
Private (Foundation)	21.1	22.9	24.0
Subtotal Institutional	41.1	45.3	49.0
Outside	25.9	28.2	28.8
Subtotal Undergraduate	100.5	107.4	112.2
Graduate			
Federal	0.0	0.0	0.0
State	4.5	4.5	4.9
Institutional			
Graduate Tuition Remission	64.0	68.8	71.9
Tuition/Fee Funded Aid	0.0	0.2	0.0
Other Graduate (2)	3.7	3.7	3.3
Private (Foundation)	2.6	2.7	3.0
Subtotal Institutional	70.3	75.4	78.2
Outside	6.7	7.5	8.1
Subtotal Graduate	81.5	87.4	91.2
Total Grants, Scholarships, & Waivers	$ 182.0	$ 194.8	$203.3

(1) Other Undergraduate includes external grants and contracts, waivers codified in the Code of Virginia, and educational benefits for employees.

(2) Other Graduate includes waivers codified in the Code of Virginia and educational benefits for employees, and internal resources used to support graduate students.

Federal Support comes from the federal government and is provided through Pell Grants and Federal Supplemental Educational Opportunity (FSEOG) support. These programs are administered by, and flow to the student through, the university. The appropriations for these programs are often congressionally approved and, in the case of Pell Grants, follow the student to their university.

State Support is provided by the Commonwealth from the state General Fund in several ways. The bulk of the Commonwealth's appropriation is directed to the university in support of Virginia resident undergraduate need-based scholarships. Funding is also appropriated to support graduate student assistantships. Additionally, the Commonwealth directs a small portion of funding to the university to fund students in the Soil Sciences and students participating in the Multicultural Affairs and Opportunities Program. Other state funding may flow to the university on behalf of students, and is not under the university's control.

Institutional Support is the area of financial aid that the university can impact directly, providing financial assistance in the form of scholarships and grants at the undergraduate level and assistantships at the graduate level. Institutional support comes through six main categories: unfunded scholarships, Tuition & Fee Revenue Used for Financial Aid, internal resources, codified waivers, graduate tuition remission, and private funding. In 2016-17, institutional support provided $49.0 million to 10,383 undergraduate students; an average of $4,717 per student.

Unfunded Scholarships: Section §23-1 of the Code of Virginia authorizes institutions of higher education to create need-based scholarships through the remission of tuition and fees up to certain limits at both the student and institutional level. These programs are supported by the tuition budget and are reflected in the net tuition revenue collected by the university.

Tuition & Fee Revenue Used for Financial Aid: The 2014 General Assembly session added language in Section §4-5.01 b.1.a of the Appropriation Act that authorizes institutions of higher education to create nongeneral fund appropriations for student financial assistance, as follows: (i) funds derived from in-state student tuition will not subsidize out-of-state students, (ii) students receiving these funds must be making satisfactory academic progress, (iii) awards made to students should be based primarily on financial need, and (iv) institutions should make larger grant and scholarship awards to students taking the number of credit hours necessary to complete a degree in a timely manner. These programs are supported by the tuition budget and are reflected in the net tuition revenue collected by the university.

Internal Resources: Some institutional support is available from specific resources. Given the public nature of much of the university's resources, the university is limited in its ability to generate resources for flexible scholarship support. Examples of this type of support are revenue from Virginia Tech license plate sales and net revenues from licensing and trademark activities.

Codified Waivers: While the university is generally unable to waive student charges, codified waivers are specific programs that are enacted in the Code of Virginia that authorize the waiver of charges to support specific groups targeted by the Commonwealth. These groups include:

- Dependents and spouses of military personnel such as members of the United States Armed Forces or Virginia National Guard who were killed or severely disabled in action,
- Surviving spouses and children of Virginia public safety personnel such as law-enforcement officers, campus police officers, and firefighters killed in the line of duty,
- Senior citizens with income less than $23,850 per year, as long as tuition paying students are not displaced.

Because the costs of these programs are managed by the institution, these programs are considered institutional support. The university also supports graduate students on assistantship through the waiver of the nonresident differential (the difference in the tuition rate between resident and nonresident graduate students) as authorized by the Appropriation Act for significantly employed graduate students.

Graduate Tuition Remission: The most common source of support for graduate students is the graduate assistantship. An assistantship is comprised of a stipend, health insurance, and graduate tuition remission. Assistantships support teaching, research, or other service within the university. The university funds a portion of the graduate tuition remission program, as do grants and contracts tied to specific externally sponsored activities, primarily research.

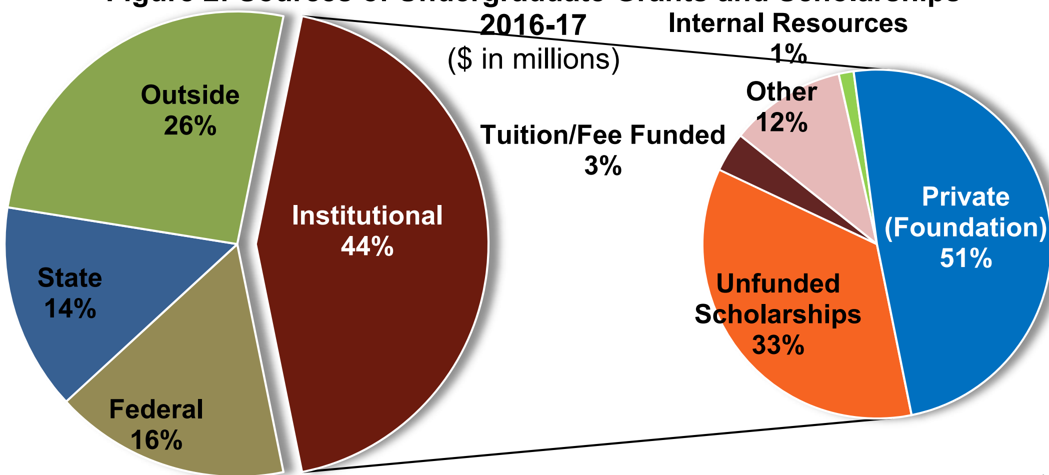
Private Funding: University Development supports the vision of Virginia Tech by raising private resources for student scholarships and endowments. These privately-funded scholarships resources are received, managed, and disbursed by the Virginia Tech Foundation on behalf of the institution. While some resources are managed by the university, the university's individual colleges and departments are responsible for awarding a significant portion of the private support and administering restricted scholarships to eligible students based upon donor intent. Utilization of these departmentally administered resources is detailed later in this report.

<u>Outside Aid</u> is aid which normally comes with a student from private external parties. This could include private organizations, nonprofit organizations, businesses, governmental entities, international organizations, and other special-interest groups. The university does not control this fund source but works to facilitate and coordinate the delivery of such support. Often these awards are tied to academic progress eligibility which the university may monitor on behalf of the awarding entity.

Undergraduate Scholarships

Of the sources of undergraduate scholarships and grants, 44 percent are derived from institutional sources, as seen in Figure 2.

Figure 2: Sources of Undergraduate Grants and Scholarships 2016-17 ($ in millions)

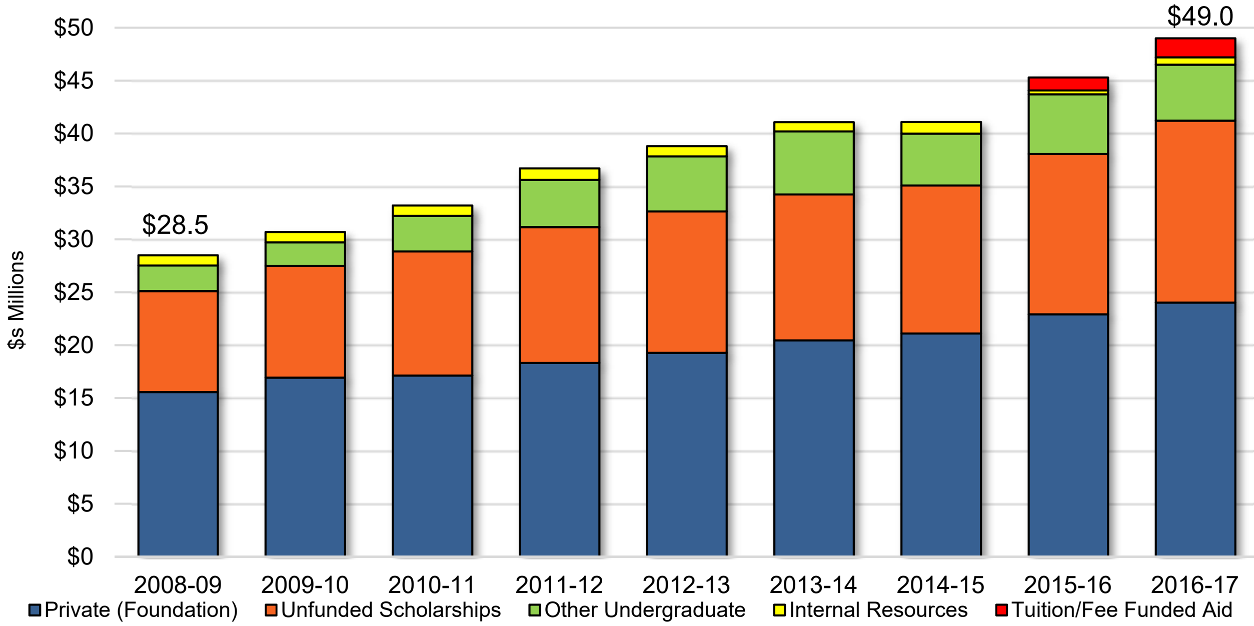


Federal:	$ 18.3
State:	16.1
Institutional:	49.0
Outside:	28.8
Total:	$ 112.2

Unfunded Scholarships:	$17.2
Tuition/Fee Funded:	1.8
Internal Resources:	0.7
Other:	5.3
Private (Foundation):	24.0
Total:	$ 49.0

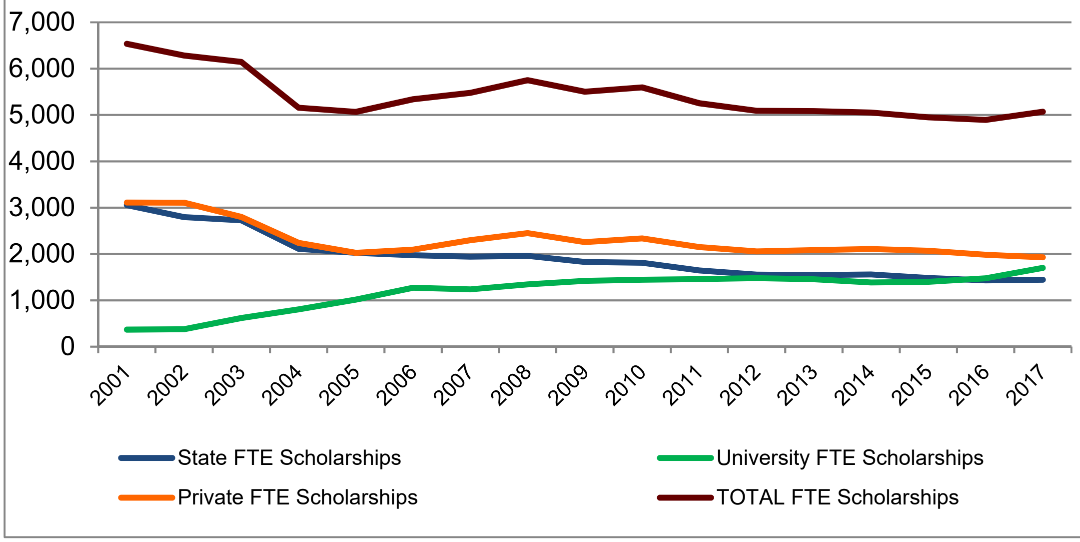
Institutional resources to support undergraduate student financial aid awards have increased over time, as seen in Figure 3.

Figure 3: Undergraduate Institutional Support at Virginia Tech



Though resources have increased over time, tuition increases and enrollment growth often have outpaced increases in state and private sources, and in most years resulted in a declining number of theoretical tuition and E&G fee scholarships that could be supported by these resources. In 2016-17, the university was able to make measured progress in the total number of Full-Time Equivalent number of awards for undergraduates. Moving forward, the university intends to continue to exert additional emphasis on raising additional funds to further increase the university's capacity to help with student affordability. Figure 4 displays the trend of this scholarship analysis from these sources.

Figure 4: Full-time Equivalent Undergraduate Scholarships



Uses of Funds

The university leverages institutional support to advance access and affordability and has also created several innovative, very successful programs. Two major undergraduate Grant and Scholarship programs are:

<u>Funds for the Future</u> –This is the university's largest undergraduate financial aid program, designed to assist returning students with financial need by mitigating all or a portion of increases in tuition and required fees based on level of family income. This program is specifically designed to provide support to both low and middle-income undergraduates. Depending upon the adjusted gross income of the student's family, the student can be fully protected from tuition and required fee increases in each year the student returns to the university. Table 2 displays the program parameters, and Table 3 shows the number of resident and nonresident students receiving this aid in 2016-17.

Table 2: Funds for the Future Protection Levels

2016-17 FFF Program Parameters			
Family Income (AGI)	Undergraduate Tuition & Fee Increase Protection *	Example Impact of FFF Protection for Undergraduate Student	
		Total Tuition & E&G Fee Increase	Net Impact of Tuition & Fee Increase
$0 - $74,999	100%	2.9%	0%
$75,000 - $87,499	50%	2.9%	1.5%
$87,500 - $99,999	25%	2.9%	2.2%

Table 3: 2016-17 Funds for the Future Award Recipients

Family Income (AGI)	Number of Virginia Undergraduates Receiving Award	Number of Nonresident Undergraduates Receiving Award
$0 - $74,999	2,571	500
$75,000 - $87,499	417	86
$87,500 - $99,999	522	129
Total	**3,510**	**715**

VT Grant – In addition to protecting students with financial need from tuition and required fee increases, the university has also been methodically working to expand its total aid program, with the goal of reducing unmet need. Additional funds have been allocated to this program annually with the goal of reducing unmet need at a measured pace over time.

Other programs that have been designed to offset the costs of attendance, achieve enrollment goals, and recognize academically talented students include:

- Presidential Scholarship Initiative to assist low-income and first-generation Virginia students with significant financial need,
- VT Scholars award to recruit academically talented students and advance university first generation enrollment goals,
- Emerging Leaders Scholarship for participants in the Corps of Cadets,
- Presidential Campus Enrichment Grants and Alumni Presidential Scholar Program that serve both students with need and students who demonstrate merit to achieve university enrollment goals,
- Yellow Ribbon program for military veterans and dependents (university support for federal matching program),
- Scholarships to defray a portion of a student's costs to study at the Steger Center for International Scholarship, and
- Scholarship support to help offset the higher costs of study abroad programs.

These programs help address the commitment to access and affordability that the university undertook as part of the Restructured Higher Education Financial and Administrative Operations Act initiative. Further, these programs have been well received by students, families, and the Commonwealth and help advance strategic goals.

Trends in Student Indebtedness

Loans

The university continues to monitor students' borrowing behavior. Table 4 below displays the average borrower debt of the graduation class at Virginia Tech and nationally for the past 5 years, as well as the percentage of each class who carried student loan debt upon graduation. According to the Institute for College Access and Success, 68 percent of 2015 graduates of public and nonprofit four-year colleges had student debt averaging of $30,100 per borrower. At Virginia Tech, only 53 percent of the class of 2015 graduated with any debt. Of those who did graduate with debt, the average was $28,873, or 4.2 percent below the national average. For Virginia residents in the class of 2015, 53% graduated with debt; the average debt for this cohort was $25,862. Though the use of student loans remains a personal decision, the university provides students and parents with information and counseling to understand the benefits and responsibilities of student loan resources. Moving forward, the university envisions enhanced aid and loan counseling programs in an effort to help reduce student debt.

Table 4: Loan Statistics of Virginia Tech Graduates

	Class Of:	**2013**	**2014**	**2015**	**2016**	**2017**
VT - All	$	$26,925	$27,925	$28,873	$28,884	$30,221
	%	55%	53%	53%	51%	49%
National Average	$	$28,400	$28,950	$30,100	NYA	NYA
	%	69%	69%	68%		
VT - Virginia Resident	$	$24,256	$25,208	$25,862	$26,273	$27,162
	%	54%	53%	53%	53%	50%

Default Rate

Virginia Tech's 2014 cohort default rate for the Federal Direct Loan (FDL) and Federal Family Education Loan (FFEL) programs was 1.4 percent, compared with a 2.8 percent average default rate among the university's peer group. While default rates are linked to the national economy, Virginia Tech has consistently had a default rate below the national average, as seen in Table 5 below.

Table 5: Cohort Default Statistics of Virginia Tech Borrowers

Cohort Default Rate	**2012**	**2013**	**2014**
VT	2.1%	1.6%	1.4%
National Peer Average	3.1%	2.8%	2.8%

Net Price

When all available financial aid resources are applied to the overall Cost of Attendance (including tuition and fees, room and board, books, travel, and other costs), a "Net Price" can be derived to represent the remaining cost to the student. Due to various discounting strategies across institutions, the Net Price can be a helpful comparison point of the choice faced by students and their families. The National Center for Educational Statistics (NCES) compiles Net Price data across five student income categories. Table 6 below compares the university's net price with national and state peers for a first year full-time Virginia undergraduate (or resident student within another state). This analysis finds that while the university remains competitive in terms of the average Cost of Attendance (sticker price), the university has an opportunity to enhance the net price competitiveness for low and middle-income students. As a result, the university is working diligently to make progress.

Table 6: Comparison of Net Price for Undergraduate Residents

	Cost of Attendance (Sticker Price)	Average Net Price by Income (2015-16 Data)				
		$0-30,000	$30,001-48,000	$48,001-75,000	$75,001-$110,000	$110,001+
Virginia Tech	$ 24,855	$ 11,998	$ 14,022	$ 17,684	$ 21,740	$ 23,948
National Peer Average	29,836	10,174	11,789	16,039	21,673	26,188
Advantage (Disadvantage)	4,981	(1,824)	(2,233)	(1,645)	(67)	2,240
Virginia Tech	24,855	11,998	14,022	17,684	21,740	23,948
Select VA Doctorals	31,601	6,961	8,183	12,306	20,736	28,860
Advantage (Disadvantage)	6,746	(5,037)	(5,839)	(5,378)	(1,005)	4,912

Unmet Need

A student's need is determined using the federal Free Application for Federal Student Aid (FAFSA). This calculation begins with the cost of attendance (tuition, fees, room, board, books and travel), subtracts the expected family contribution (EFC) along with any aid provided (including loans), and the remaining amount is considered "unmet need". While external factors such as state budget reductions and student family income significantly effect this calculation, reducing the percentage of unmet need over time is a goal of the university's student financial aid program. Table 7 below displays the unmet need of resident and nonresident undergraduates over time.

Table 7: Trend of Unmet Need

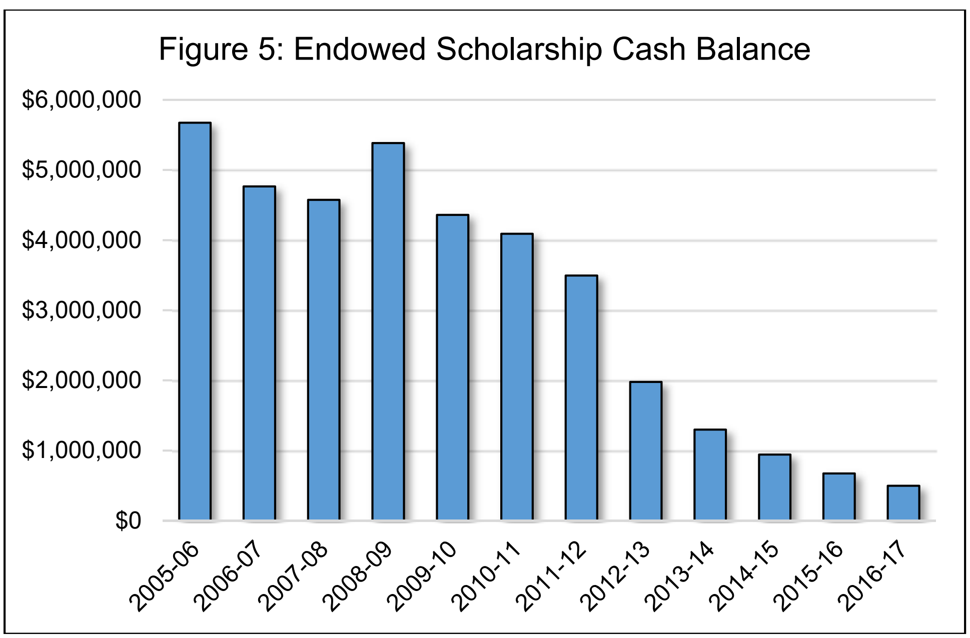
	2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**
Virginia Undergraduate	$5,668	$5,814	$5,299	$5,480	$6,200
% Average Unmet Need	36.8%	36.7%	33.2%	34.1%	35.9%
Nonresident Undergraduate	$10,273	$10,541	$9,783	$10,855	$11,617
% Average Unmet Need	45.9%	45.8%	41.8%	44.4%	44.7%

Utilization of Private Support

University colleges and departments are responsible for awarding and administering much of the university's Private support for student financial aid. In past years, the university provided an annual report to the Committee to outline Endowment Scholarship utilization and Scholarship Expenditure plans. Over the years, unspent Endowment Scholarship balances had accumulated due to lack of oversight of departmental allocations, leading to a remediation strategy to ensure maximum utilization of departmentally allocated private scholarships. Due the success of these actions, and the significant reduction in unspent balances, pertinent information from the prior report is now incorporated into this report to provide one comprehensive report on Student Financial Aid.

The Office of the Vice Provost for Enrollment and Degree Management now provides guidance to scholarship-managing units through procedures, reports, and data analysis. Each college's annual expenditure plan of endowed scholarships is reviewed and approved to ensure that these resources are utilized effectively. Enrollment and Degree Managements efforts have resulted in enhanced utilization and significant reductions in unallocated cash balances. To continue this success, the Office of Scholarships and Financial Aid provides an annual management report to the Chief Financial Officer to affirm scholarship utilization and the status of funding.

Figure 5 below displays the trend of accumulated departmental private scholarship cash balances. The university believes that the year-end cash balances are now at acceptable levels, and the Office of the Vice President for Finance will monitor performance in future years to ensure that the cash balances remain at acceptable levels.



Current Events

The likelihood of the commonwealth significantly increasing General Fund support for financial aid for Virginia Tech is low. The university will need to continue to explore all possible opportunities to enhance access and affordability for Virginia undergraduates through increased institutional sources, with an emphasis on private fundraising.

The university is currently developing strategies to raise significant additional funding for scholarships and financial aid, specifically to reduce the net price for Virginia undergraduates in the lowest three income quintiles. Enhancing the resources available to these students through the university's student financial aid program is an important goal to advance Virginia Tech.

In addition to supporting resident student financial need, the university's scholarship program is integral to the achievement of enrollment targets, particularly of nonresident undergraduates. This enrollment strategy is designed to provide net resources to the institution to allocate towards support of resident students and university strategic initiatives. Aid to attract and retain students in targeted disciplines is a focus.

The university will continue to work to assist students and families with managing the cost of education in the future. For 2016-17, 10,922 full-time Virginia Tech undergraduate students (43 percent of the university's undergraduate full-time population) were determined to have financial need. For 2017-18, the university worked to moderate tuition increases while increasing the allocation of unfunded scholarship support for undergraduates. This plan ties into the university's commitment in its Management Agreement to increase support for need-based student financial aid to help ensure access and affordability.

The university has increased its unfunded scholarships commitment each year since expanding the program in 2001-02. While the university has been leveraging the unfunded scholarship authority to expand need-based aid, the use of unfunded scholarships has legal and practical limits. As a result, it will be important for the university to continue to work to expand funding from other sources in the future, especially by increasing private fundraising and endowed scholarships, and work to create new innovative sources.

University Support for Student Financial Aid

November 6, 2017

Tim Hodge, Assistant Vice President for Budget and Financial Planning

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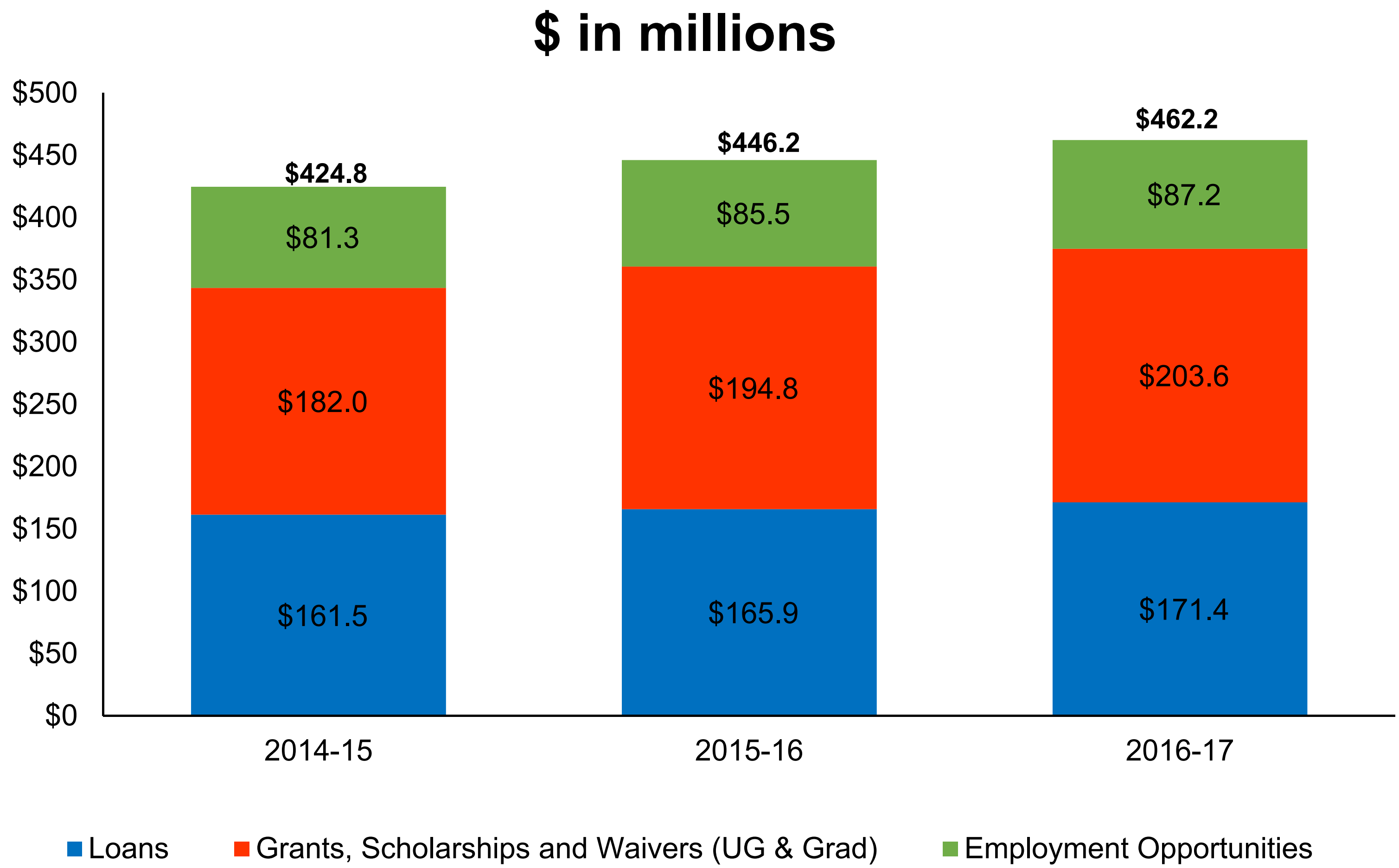
Student Financial Aid at Virginia Tech



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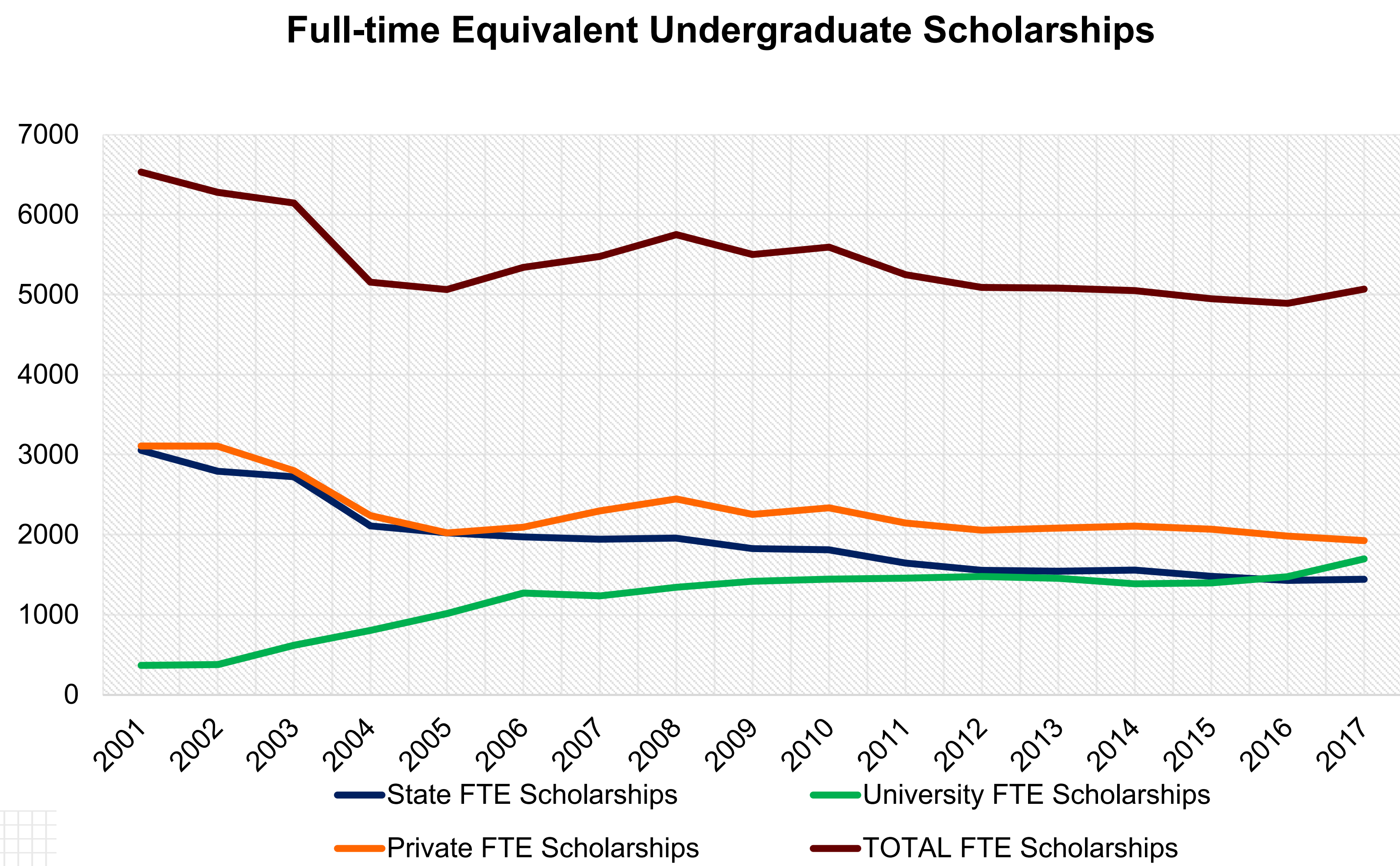
Undergraduate Grants and Scholarships

($ in millions)

	2014-15	2015-16	2016-17
Undergraduate			
Federal	18.0	18.3	18.3
State	15.5	15.6	16.1
Institutional			
Unfunded Scholarships	14.0	15.1	17.2
Tuition/Fee Funded Aid	0.0	1.2	1.8
Internal Resources	1.1	0.4	0.7
Other Undergraduate [1]	4.9	5.7	5.3
Private (Foundation)	21.1	22.9	24.0
Subtotal Institutional	41.1	45.3	49.0
Outside	25.9	28.2	28.8
Subtotal Undergraduate	100.5	107.4	112.2

[1] Other Undergraduate includes external grants and contracts, waivers codified in the Code of Virginia, and educational benefits for employees.

Analysis of State & Institutional Support for Undergraduate Scholarships



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Institutional Undergraduate Scholarship Priorities

- Support Virginia Residents in the low- to middle-income range.
- Enhance access to underrepresented and first-generation Virginians.
- Support enrollment management as part of the overall revenue strategy.

VT Grant: need-based aid to undergraduate students to reduce unmet need.

Presidential Campus Enrichment Grant need-based aid for meritorious students.

Presidential Scholarship Initiative: need-based "full-ride" program with enhanced advising and support for underrepresented and first-generation Virginia students.

VT Scholars: for underrepresented and academically talented Virginians

Provost Access Scholarship: merit-based aid for talented underrepresented Virginians.

College Access Collaborative: for underrepresented Virginia students in the K-12 pathway program.

Enrollment Management Support: merit-based aid for highly talented students.

Undergraduate Scholarships
Institutional Programs

Funds for the Future

- Mitigates tuition increases for continuing students based upon family income levels.
- Includes Virginia and non-resident undergraduates.

Family Income (AGI)	Undergraduate Tuition & Fee Increase Protection*	Example Impact of FFF Protection for Undergraduate Student	
		Total Tuition & E&G Fee Increase	Net Impact of Tuition & Fee Increase
$0 - $74,999	100%	2.9%	0%
$75,000 - $87,499	50%	2.9%	1.5%
$87,500 - $99,999	25%	2.9%	2.2%

Trends in Undergraduate Indebtedness

Average Debt per Borrower and Percentage of Students Graduating with Debt

	Class Of:	2013	2014	2015	2016	2017
VT - All	$	$26,925	$27,925	$28,873	$28,884	$30,221
	%	55%	53%	53%	51%	49%
National Average	$	$28,400	$28,950	$30,100	NYA	NYA
	%	69%	69%	68%		
VT - Virginia Resident	$	$24,256	$25,208	$25,862	$26,273	$27,162
	%	54%	53%	53%	53%	50%

National data from the Project on Student Loan Debt, an aggregator of Common Data Set submissions. *www.projectonstudentdebt.org*

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Net Price Comparison

- The university remains competitive in “Gross” price, but has an opportunity to enhance the “Net” price competitiveness for resident low and middle-income students.

	Cost of Attendance (Sticker Price)	Average Net Price by Income (2015-16 Data)				
		$0-30,000	$30,001-48,000	$48,001-75,000	$75,001-$110,000	$110,001+
Virginia Tech	$ 24,855	$ 11,998	$ 14,022	$ 17,684	$ 21,740	$ 23,948
National Peer Average	29,836	10,174	11,789	16,039	21,673	26,188
Advantage (Disadvantage)	4,981	(1,824)	(2,233)	(1,645)	(67)	2,240
Virginia Tech	24,855	11,998	14,022	17,684	21,740	23,948
Select VA Doctorals	31,601	6,961	8,183	12,306	20,736	28,860
Advantage (Disadvantage)	6,746	(5,037)	(5,839)	(5,378)	(1,005)	4,912

- Net Price is the remaining cost to the student after all available financial aid resources are applied to the total Cost of Attendance which includes tuition, fees, room & board, and other expenses.

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Current Events

- University continues to advance strategies to raise additional funding for student financial aid, specifically to reduce the net price for Virginia undergraduates in the lowest three income quintiles and enhance support for underrepresented student populations.

- Scholarship program is also integral to achieving enrollment targets, particularly nonresident undergraduate. This provides resources to support resident students and university strategic initiatives.

- In an era of modest tuition increases, institutional support for financial aid is significantly constrained and has practical limits.

- As a result, the university must continue to support institutional financial aid programs, with an emphasis on expanding student financial aid funding through private philanthropy.

Discussion

Grants & Scholarships includes Graduate Tuition Remission Program

($ in millions)

	2014-15	2015-16	2016-17
Graduate			
Federal	0.0	0.0	0.0
State	4.5	4.5	4.9
Institutional			
Tuition Remission	64.0	68.8	71.9
Tuition/Fee Funded Aid	0.0	0.2	0.0
Other Graduate [1]	3.7	3.7	3.3
Private (Foundation)	2.6	2.7	3.0
Subtotal Institutional	70.3	75.4	78.2
Outside	6.7	7.5	8.1
Subtotal Graduate	81.5	87.4	91.2

[1] Other Graduate includes waivers codified in the Code of Virginia and educational benefits for employees, and internal resources used to support graduate students.

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Cost Containment and Efficiencies

DWIGHT SHELTON,

SR. VICE PRESIDENT FOR OPERATIONS AND ADMINISTRATION

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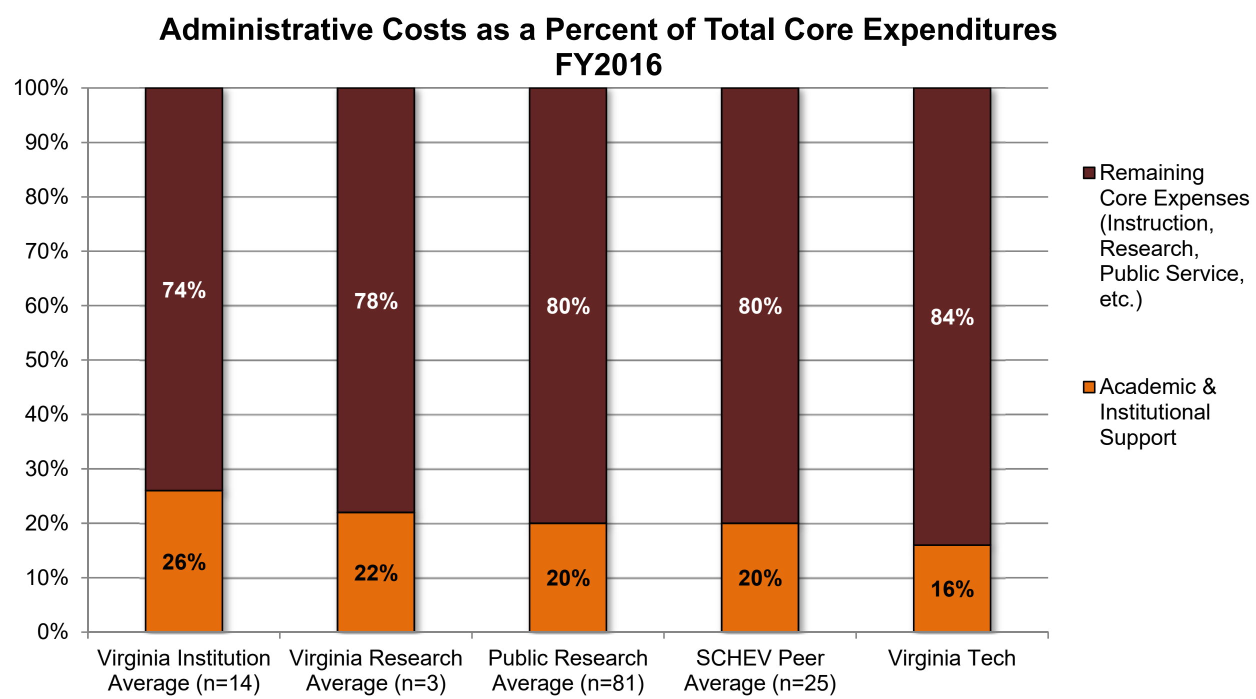
Current Status of Efficiencies

- Cost Conscious Culture
  - Administrative Cost Benchmarking
  - JLARC Study on Cost Efficiency: Study identified multiple metrics where Virginia Tech was more efficient than peer institutions.
- Ongoing and One-Time Efficiency Initiatives
- Opportunities for Improvement

Administrative Costs Benchmarking



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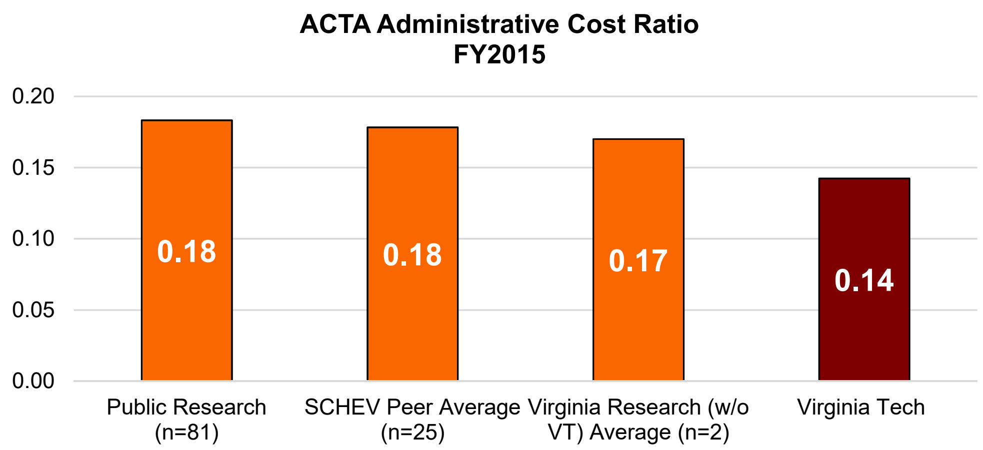
Administrative Costs Benchmarking: American Council of Trustees and Alumni (ACTA) Perspective

- July 2017, ACTA Institute for Effective Governance published a report on administrative costs in higher education.
- Key question – *How does institutional spending on administration compared to instruction measure up against similar institutions?*



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Current Efficiency Initiatives

- Energy Saving Projects
- Cooperative Procurement and Standardization
- Span of Control
- Automation of Administrative Processes
- Shared Services in Targeted Areas
- Outsourcing
- Library

Planning for Future Initiatives

- Data Driven and Outcome-based: higher education studies
  - Academic Benchmark Consortium
  - Education Advisory Board
- Expansion of Shared Services
- Targeted reviews of University Administrative Processes to confirm or identify best practices and efficiencies:
  - Peer Institutions
  - Industry
- Organizational Excellence Programs
- Academic Programs Efficiency
- Process Automation

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Discussion

Future Efficiency Initiatives

Current Efficiency Initiatives

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FINANCE AND RESOURCE MANAGEMENT
EXAMPLES OF COST CONTAINMENT INITIATIVES
November 2017

1. ***Energy Efficiencies and Conservation***: Virginia Tech has made investments in Energy Savings Plans, which include implementation of energy saving projects and contracts to reduce future energy costs. These energy savings strategies include both optimization of energy supply and reduction in building demand. The university anticipates these energy saving investments to yield long-term savings of well over $3 million.

2. ***Cooperative Procurement and Standardization***: Virginia Tech has utilized cooperative procurement as a best practice since the early 1980's. Operating under a concept of "piggy-backing" off other institutions' negotiated contracts, cooperative procurement provides greater leverage in negotiations to offer vendors a contract utilized by more than one entity across the state.

   In 2012 - 2013, Virginia Tech and the University of Virginia worked together with the Secretary of Education to explore the benefits of both regional and state-wide purchasing collaborations. Based upon regional collaborations in other regions of the country and supported by the Lumina Foundation, this work eventually resulted in the creation of the Virginia Higher Education Procurement Collaborative (VHEPC). The VHEPC was organized and financially supported by thirteen Virginia higher education institutions in 2015 without any state financial support. By utilizing the collective buying power of these institutions, the VHEPC is positioned to identify strategic sourcing opportunities, leverage vendors, and negotiate strategic contracts to maximize savings and cost containment for all participating institutions.

   Virginia Tech is an active participant in VHEPC and is achieving cost-savings not fully available as a stand-alone institution. The VHEPC has renegotiated existing contracts utilizing the total spend of all institutions to achieve greater discount opportunities. Successes include consolidated agreements with Grainger, Enterprise Rent-A-Car, Ferguson Plumbing Supplies and numerous other agreements representing commonly purchased goods and services by the Commonwealth's higher education agencies. After consolidating from four (4) individually awarded Grainger contracts into one (1) enhanced VHEPC negotiated agreement, all twelve (12) Virginia Association of State College and University Purchasing Professionals (VASCUPP) schools committed to using the one VHEPC Grainger contract. Results were a collective savings of $700,000 (15%) in year one of which Virginia Tech's share was

$213,000. The university was also able to save 8.6 percent (approximately $200,000 annually) on Enterprise car rentals with all schools committing to use the one VHEPC agreement. In 2016-17, Virginia Tech served as the lead institution in negotiating the first VHEPC advertised RFP for a collaborative laboratory supplies contract. The contract was awarded to Fisher Scientific for an overall negotiated discount of 22 percent resulting in total anticipated annual savings of approximately $900,000 to all institutions; Virginia Tech's share of those savings is estimated at $227,000 annually.

3. ***Span of Control:*** The university hired consultants in Summer 2017 to conduct a review of organizational structures and staffing analysis across seven administrative and academic support areas. This study concluded that overall most aspects of the organizational structures at Virginia Tech look reasonable and provided recommendations for streamlining the organizational structures for greater operational efficiencies. The university is in the process of evaluating the recommendations for implementation.

4. ***Automation of Administrative Processes***: The University has developed and implemented plans for the automation of administrative systems that have supported administrative efficiencies. Some examples implemented in fiscal year 2017 include:

    a. The AcademicWorks platform was implemented as a means for improving scholarship management processes. This cloud-based software which was deployed in August 2017, introduces a single scholarship website for Virginia Tech which should make it easier to promote all available scholarships to the student population.

    b. Education Advisory Board's Student Success Collaborative (SSC) was implemented in Spring 2017. This hosted solution enables Virginia Tech to use data and analytics to measurably improve student outcomes. By improving identification of at-risk students and managing student risk to resolution, improvements in student retention are being realized. The system uses predictive models to produce analytics concerning progress toward all degrees for use in real-time risk assessments, student behavioral trend analysis, and outcomes analysis. The SSC platform also provides a robust advising platform that includes tools for scheduling advising appointments, facilitating communications between advisors and students, and targeting resources based upon academic performance. This combination of analytics, interaction and workflow technology, and consulting tools is making it possible to support students and help them stay enrolled and graduate.

c. StarRez Housing System: The cloud-hosted StarRez housing software was implemented to replace the Banner housing module. By using the StarRez system, students are empowered to submit online housing applications and perform online roommate matching and room selection without extensive involvement from the housing staff.

d. OneCampus, a next-generation campus portal that makes it easy to locate and organize Virginia Tech web-based campus services in one mobile-friendly location, went into production in the summer of 2017. OneCampus provides a Google-like search tool that allows students, faculty, and staff to quickly locate and access services from any computer or mobile device.

5. ***Shared Services in Targeted Areas***: The shared services model is being implemented by multiple management areas (University Advancement, VP for Operations, VP for Finance, etc.) to integrate financial, administrative, and information technology support at varying levels to enhance the quality and consistency of information and service to the departments. For example, the integration of information technology (IT) support at the management level provides a strategic approach to departmental IT needs. This includes consistent IT support, coordinated implementation of IT security and distributed system development. The university is exploring additional opportunities for the shared services model for effective and efficient service delivery.

Resource Development

November 6, 2017

DWIGHT SHELTON,
INTERIM SR. VICE PRESIDENT FOR OPERATIONS AND ADMINISTRATION

TIM HODGE,
ASSISTANT VICE PRESIDENT FOR BUDGET AND FINANCIAL PLANNING

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Factors Considered in Revenue Budget Development

- Six-Year Plan (2.9%)
- General Fund support
- Nongeneral Fund Cost Assignments
- Cost Drivers
  - Compensation, fringe benefit rates
  - Other Costs (fixed costs, utilities, health & safety)
- University Budget Priorities
  - Enhanced Student Financial Aid to help Low- to Middle-Income families
  - Enrollment Growth
  - Strategic Initiatives (Destination Areas)
- Market Considerations
  - Currently studying elasticity of demand
- Many of these factors are not yet known for 2018-19
  - Yet we can make assumptions & run scenarios

Potential Options for Resourcing the Institution

- Enrollment
  - Target 30,000 undergraduates over 5 to 6 years. Pace reassessed annually
  - Fall 2017 undergraduate on-campus enrollment reached 27,140
    - 460 above the state enrollment plan
  - Residency mix currently 71% of undergraduates are from Virginia.
    - Regulated by the state. Other institutions: UVA: 69%, CWM: 65%
- Rate
  - Six-year plan included placeholder of 2.9% increase for 2018-19 and 2019-20
    - VT's 2017-18 in-state undergraduate increase of 2.9% was the lowest in the state (state average 5.4%)
- Program-Specific Fees
  - Benchmarking study identified capacity to increase current and implement new program fees in key majors
- General Fund – Unrestricted resources can support university needs
- Philanthropy - Long-range strategy, unlikely to support basic operating needs

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Tuition or Tuition & Mandatory Fees?

- Tuition & Mandatory Fees are paid by all students by residency. Excludes optional room and board charges.
- Because components can move independently, the same overall change in Tuition & Mandatory Fees can be achieved through multiple approaches, as shown below:

	2017-18	**Example 1**		**Example 2**	
Virginia Undergraduate	Rate	Future Rate	% Change	Future Rate	% Change
Tuition and E&G Fees	$ 11,263	$ 11,627	**3.2%**	$ 11,590	**2.9%**
Comprehensive Fee	1,967	1,987	**1.0%**	2,024	**2.9%**
Tuition & Mandatory Fees	$13,230	**$ 13,614**	**2.9%**	**$13,614**	**2.9%**

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Virginia Public Four-Year Tuition and Fees 2017-18

Institutions	Tuition and E&G Fees $	Tuition and E&G Fees Rank	Tuition & Mandatory Fees $	Tuition & Mandatory Fees Rank	Total Cost $	Total Cost Rank
William and Mary (Freshmen)	$ 16,506	1	$ 22,044	1	$ 33,843	1
Virginia Military Institute	8,884	5	18,214	2	27,450	2
University of Virginia (First Year)	13,810	2	16,068	3	27,060	3
Christopher Newport University	8,270	8	13,654	4	24,878	4
Virginia Commonwealth University	11,483	3	13,624	5	23,811	5
Longwood University	7,620	9	12,720	7	23,138	6
George Mason University	8,672	6	11,924	9	23,014	7
University of Mary Washington	8,306	7	12,128	8	22,344	8
Virginia Tech	**11,263**	**4**	**13,230**	**6**	**21,920**	**9**
James Madison University	6,250	12	10,878	10	20,990	10
Old Dominion University	6,648	11	10,350	12	20,472	11
UVA-Wise	5,529	14	9,825	13	20,139	12
Radford University	7,461	10	10,627	11	19,758	13
Virginia State University	5,547	13	8,726	15	19,606	14
Norfolk State University	5,478	15	9,036	14	18,902	15

SCHEV's Salary Analysis

Inst	Est. FY 2018 Ranking to Peers	Annual Salary Increase	Req Tuit Incr if no add'l GF in FY2019
CNU	34%	4.0%	2.2%
CWM	25%	4.0%	1.9%
GMU	4%	5.0%	2.4%
JMU	36%	4.0%	1.8%
LU	42%	3.0%	1.5%
NSU	55%	3.0%	1.9%
ODU	24%	4.0%	2.3%
RU	25%	4.0%	2.2%
UMW	29%	4.0%	2.5%
UVA	40%	3.0%	1.3%
UVAW	75%	2.0%	2.1%
VCU	29%	4.0%	1.9%
VMI	28%	4.0%	1.2%
VSU	33%	4.0%	3.0%
VT	27%	4.0%	1.7%
RBC	68%	2.0%	1.2%
VCCS	47%	3.0%	1.1%

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Costs for hypothetical scenarios

Salary/Fringe/Operation (NGF share)	$124M over 6 years
Enrollment Growth	Enrollment Driven
Initiatives	$33M over 6 years

- Salary/Fringe/Operation (NGF share) — $124M over 6 years
  - Compensation
  - Health Insurance and Fringe Benefit increases
  - Fixed Costs (leases, insurance, utilities)
  - O&M New Facilities
  - Library Inflationary Costs
- Enrollment Growth — Enrollment Driven
  - Partnership for Incentive Based Budget (PIBB)
  - Academic Support
  - Student Financial Aid
- Initiatives — $33M over 6 years
  - Destination Areas
  - Learning Systems & Effectiveness
  - Critical Needs

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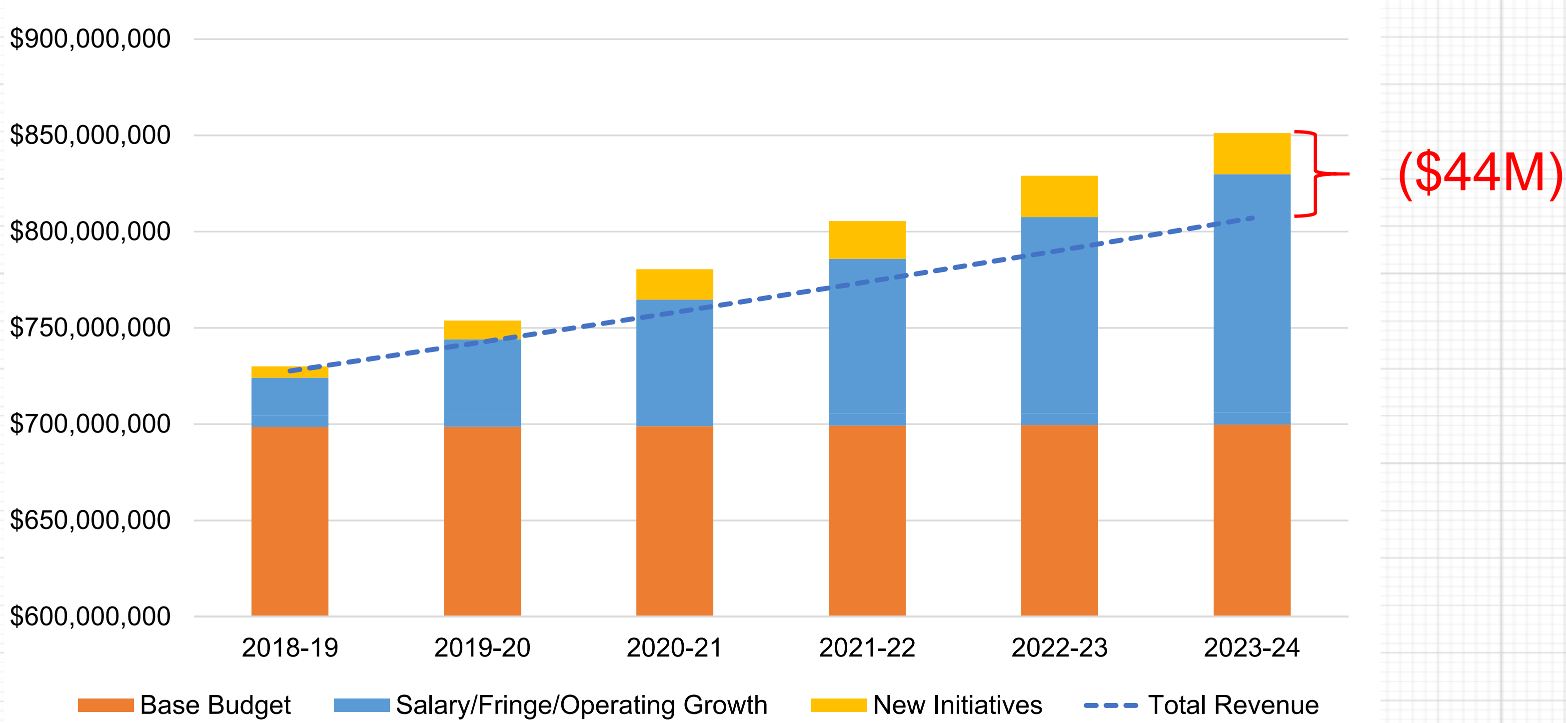
Resource Assumptions (in all hypothetical scenarios)

- General Fund
  - Mandated Costs — Traditional fund split
  - Unrestricted — No new funding assumed
- Reallocations — $11.4M over 6 years
- Pricing — Vary by Scenario
- Enrollment Mix — Vary by Scenario

Problem Statement – Higher Education Model

- No enrollment growth. Revenue 2.9% tuition increases will fall short of known and projected expenses.



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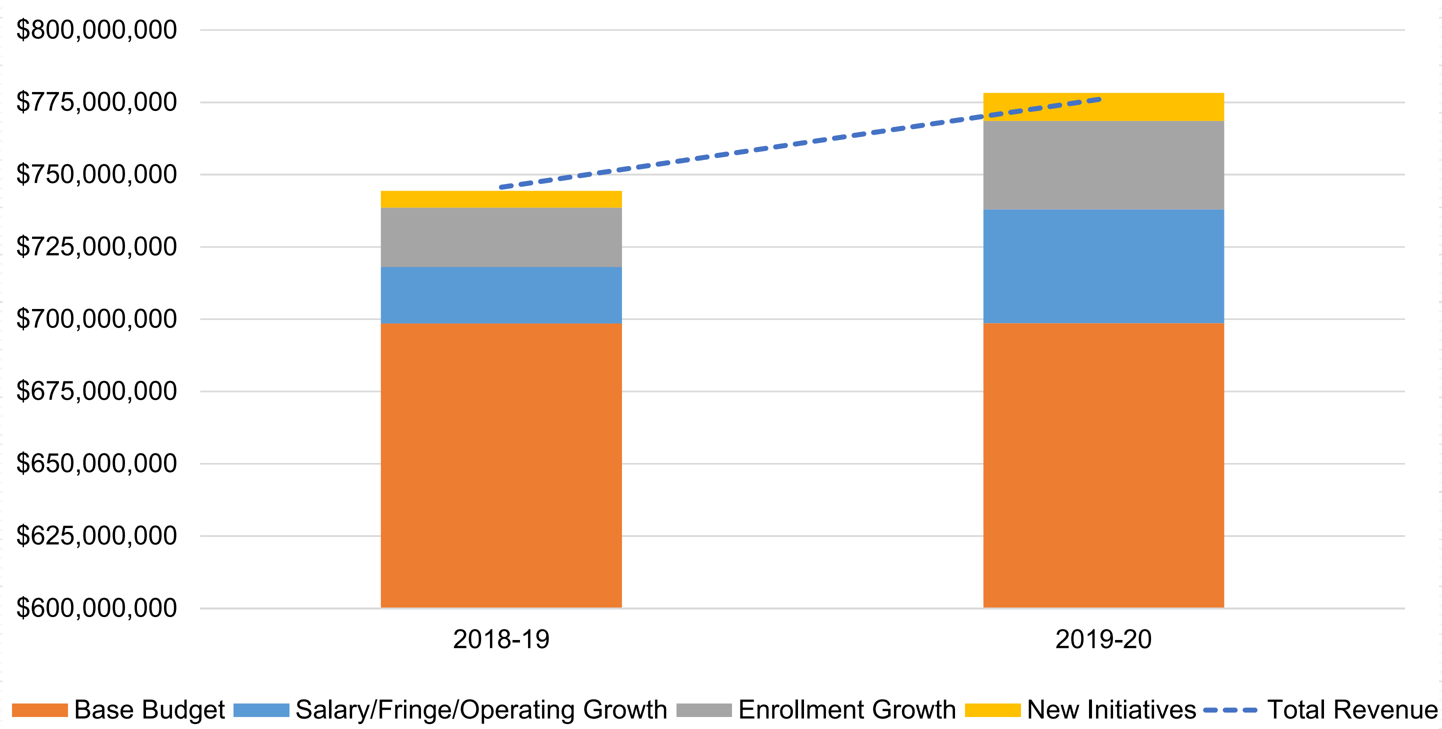
Near-term and Future Scenarios

- University has near-term plan to address 2018-20 biennium
  - Assumes no material change in residency mix of the undergraduate class
  - Continues modest enrollment growth
  - Continued moderation of tuition increases
  - Enhanced program fees in select programs

- For the subsequent four years (FY21-FY24), **explore alternative hypothetical scenarios**
  - Continues growth to 30,000 by Fall 2023
  - Continued moderation of tuition increases
  - Consider mix of incremental enrollment
  - Rebasing of tuition

Short-term Solution 2018-20 Biennium

- Enrollment growth, moderate tuition increase of 2.9% per year, and enhanced program fees in specific programs can support known and projected expenses in the first two years.



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Program Fees

University & Colleges share incremental revenue; split may vary by budget scenario

Current Fees with potential for increase

- College of Engineering
- Pamplin College of Business
- Building Construction Program
- Architecture + Design Program

Potential New Program Fees

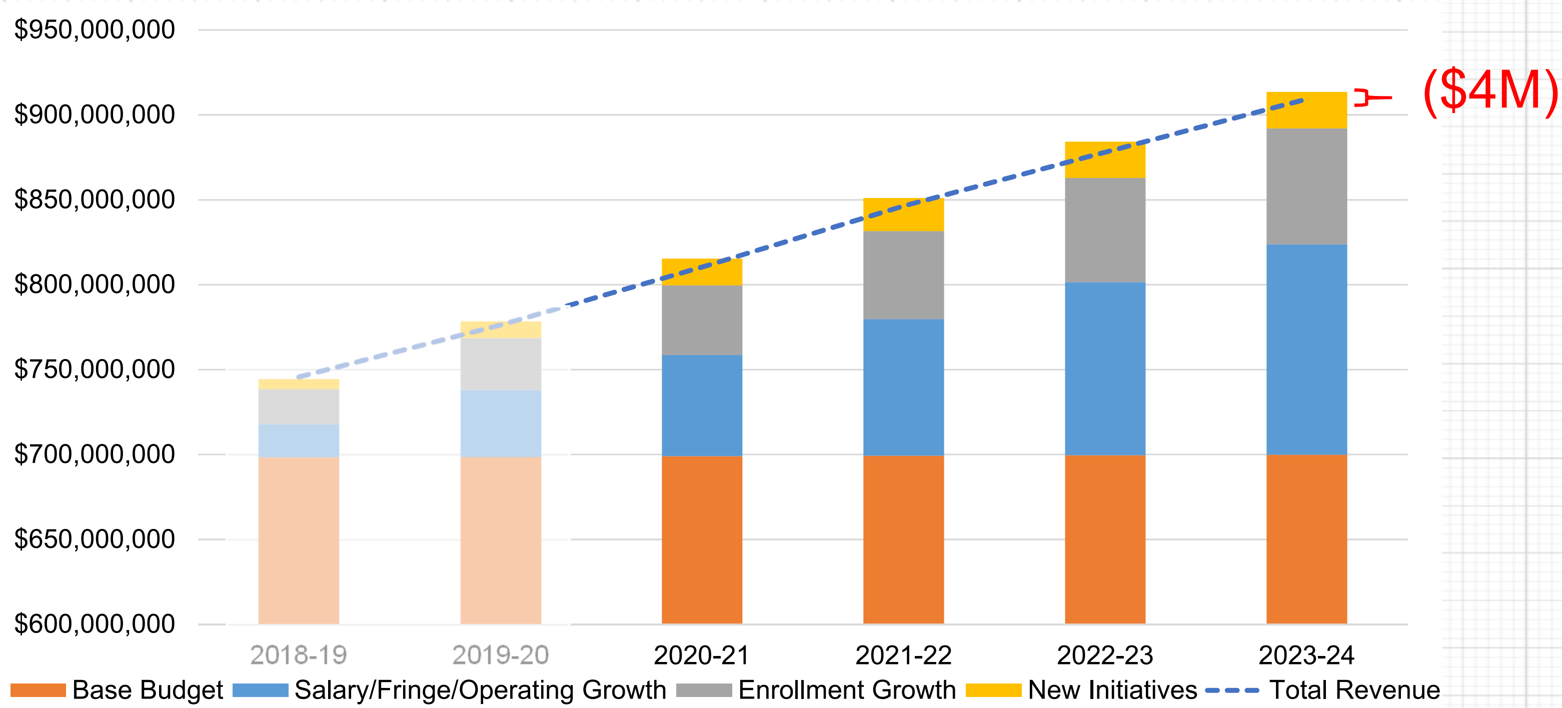
- Neuroscience
- Communications
- Agriculture
- Computational/Data Analytics

Potential New Service Fee

- Immigration Services

Scenario A: Illustrates Covering Costs

- After first two years, options exist to address long-term needs and goals.
  - *Growth of 1361:1446 over 4 years (result in 69%) and keep tuition increases to 2.9%.*



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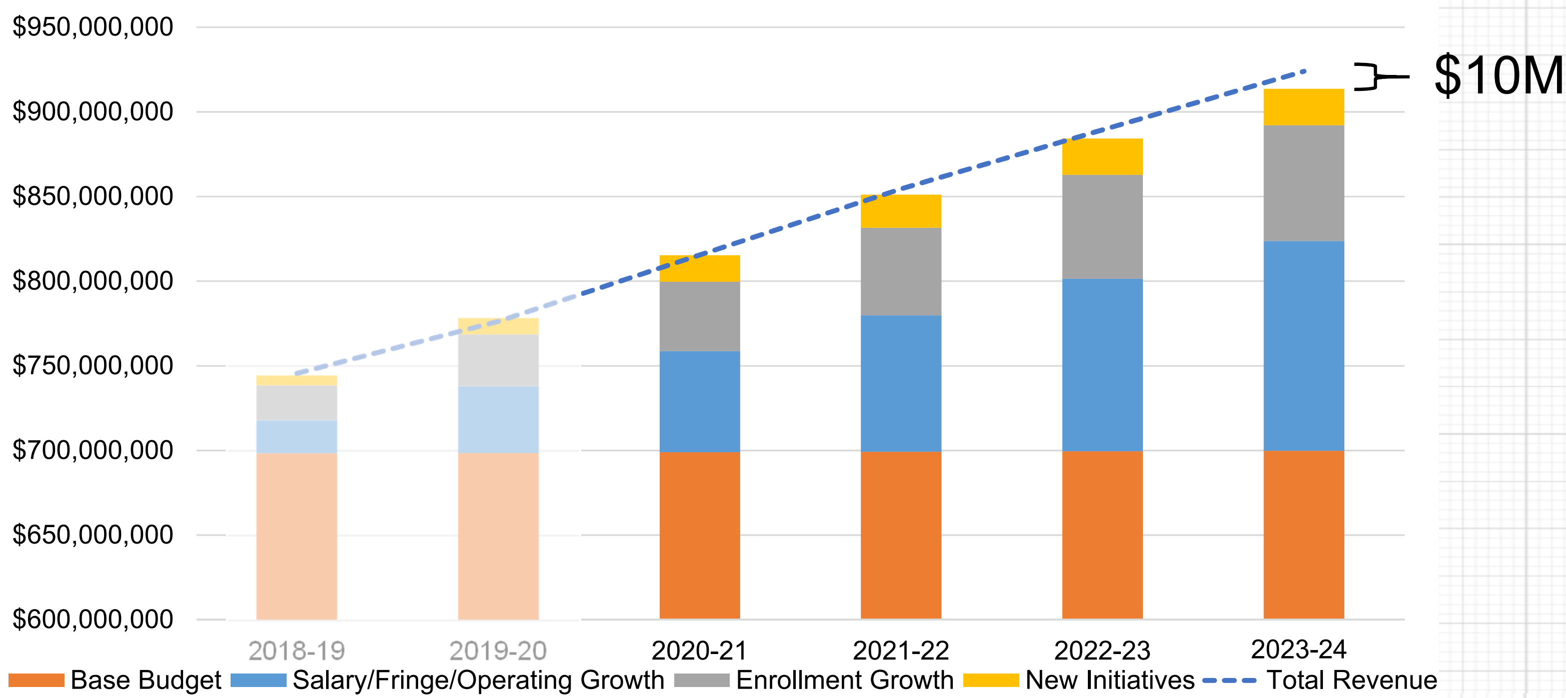
Scenario B: Illustrates Advancing New Initiatives

- After first two years, options exist to address long-term needs and goals.
  - *Growth of 1361:1446 over 4 years (results in 69%), add step increase of $1,000 for ISUG, move tuition at 1.9% for ISUG and 2.9% for OSUG.*



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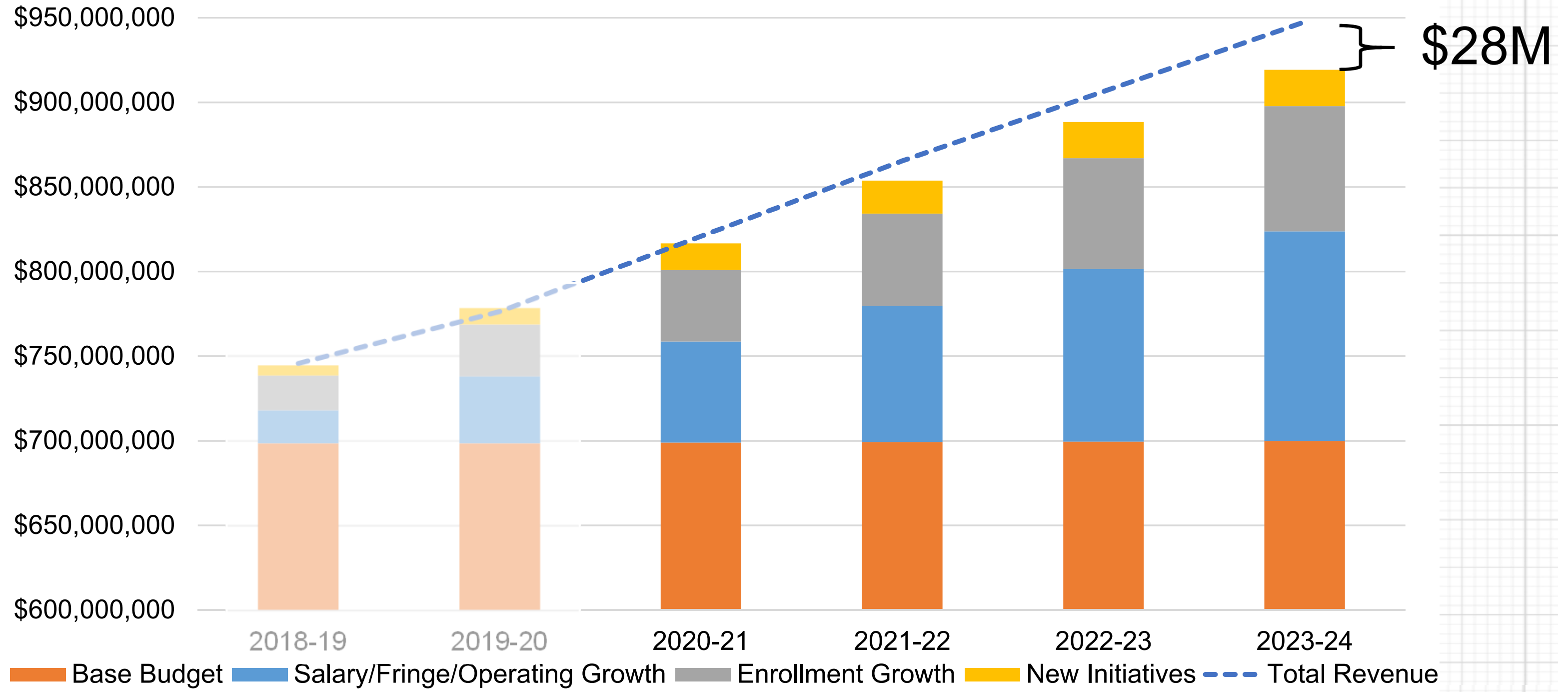
Scenario D: Strategic Investments in Research Faculty and Student Financial Aid

- After first two years, options exist to address long-term needs and goals.
  - *Growth 161:2646 over 4 years (results in 65%), add "step" increase of $1,000 for ISUG, move tuition at 1.9% for ISUG and 2.9% for OSUG.*



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Review of FY21-FY24 Hypothetical Scenarios

Scenario	UG Size	IS:OOS Growth Mix in FY24	FY19-FY20 Tuition Increase (IS/OOS)	FY21-FY24 Tuition Increase (IS/OOS)	Step Increase (ISUG)	New/Increased Program Fees	Net Position by FY24
No Growth *Graph*	27,193	0:0 71% ISUG	2.9%	2.9%	-	N/A	($44M)
A *Graph*	30,000	1361:1446 69% ISUG	2.9%	2.9%	-	Yes	($4M)
B *Graph*	30,000	1361:1446 69% ISUG	2.9%	1.9%/2.9%	$1,000	Yes	$10M
C	30,000	1361:1446 69% ISUG	2.9%	1.9%/2.9%	$1,000 *2 Years*	Yes	$27M
D *Graph*	30,000	161:2646 65% ISUG	2.9%	1.9%/2.9%	$1,000	Yes	$28M
E	30,000	161:2646 65% ISUG	2.9%	1.9%/2.9%	$1,000 *2 Years*	Yes	$44M

Discussion

Virginia Tech

University Debt Ratio and Debt Capacity

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

October 6, 2017

Background:

The university has provided an annual debt report to the Board of Visitors since 2006. The Restructuring Act and the university's debt policy require that the university maintain a debt service to operations ratio of no greater than seven percent. In addition to the seven percent limitation, and based on guidelines provided by the Board of Visitors, management internally targets a five percent benchmark for planning purposes and subsequent recommendations to the Board.

The management of debt is critical to the success of the university's capital program and to meeting one of the conditions of eligibility for restructured operational authority with the Commonwealth. The required condition is that the university maintain an unenhanced bond rating from Moody's, Standard and Poor's, or Fitch of at least AA- or its equivalent.

An established committee including representatives from Capital Assets and Financial Management, Investments and Debt Management, the Controller's Office, and the Budget Office meets regularly to review debt activities and the timing of debt issuances to ensure compliance with the five percent debt ratio and potential impacts to credit ratings. The Vice President for Finance and Chief Financial Officer provides oversight of these activities.

Status:

The university currently has a Aa1 rating from Moody's and a AA rating from S&P. At the conclusion of fiscal year 2017, the university had outstanding long-term debt of $494.2 million with a debt ratio of 3.67 percent. The estimated maximum outstanding debt capacity over the six-year projection period is $616 million using a five percent maximum debt ratio in accordance with the Board's guidance.

As part of the university's capital outlay planning and debt management program, the university will continue to develop capital outlay plans that advance projects within the debt policy and restructuring conditions and will carefully review each project in consideration of the university's debt capacity before submitting project authorizations for debt to the Board.

Planning for Governmental Accounting Standards Board Statement No. 87:

The Governmental Accounting Standards Board (GASB) issued Statement No. 87 on June 28, 2017 to revise governmental lease accounting effective fiscal year 2021. The revision eliminates the distinction between operating and capital leases resulting in the recognition of operating lease commitments as long-term debt. Operating lease payments are currently recognized as operating expenses on the financial statements with no associated long-term debt obligation. The university projects that GASB 87 will result in higher debt ratios because of increased debt service due to the recognition of operating leases as long term debt in the debt report. Based on a review of the university's historical trend of operating lease commitments and expenditures, the anticipated impact is an average increase of 110 basis points or 1.1 percent to the projected debt ratio beginning in fiscal year 2021. The university will continue to monitor GASB 87 implementation and actively consult with rating agencies regarding potential impact on credit ratings.

Attachments:

Attachment A includes the outstanding long term debt and debt ratio calculation for the current fiscal year and a summary of estimated potential issuances through fiscal year 2023, along with future debt ratios and related capacity for each year. The schedule includes a three-year trailing period through fiscal year 2026 to show the full impact of loading principal and interest payments.

Attachment B shows an illustration of the estimated timing of potential debt issuances for certain projects.

Attachment C shows a trend line of the university's debt ratio from fiscal year 2002 to 2026. The debt ratio is calculated as debt service over operating expenditures. Management routinely examines, prioritizes, and adjusts the allocation plan to ensure the debt ratio remains within five percent.

Attachment D shows an estimated impact of GASB 87 on the university's debt ratio from fiscal year 2021 to 2026.

Attachment E shows a benchmark comparison of fiscal year 2016 debt ratios from Moody's for Virginia Tech and 23 other peer institutions, which are calculated as debt service over operating expenditures.

RECOMMENDATION:

That the report on University Debt Ratio and Debt Capacity for fiscal year 2017, including the ongoing guidance to manage debt issuances at a level that ensures that the debt ratio does not exceed five percent of operating expenditures, be accepted.

November 6, 2017

University Debt Ratio and Debt Capacity Based on Expected Debt Issuances
FINANCE AND RESOURCE MANAGEMENT COMMITTEE
October 2, 2017
(Dollars in Thousands)

	Actual	Estimated Issuances						Trailing Period		
Fiscal Year	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**
Long-Term Debt Outstanding, Start of Year	$ 525,553	$ 494,210	$ 488,640	$ 516,073	$ 709,192	$ 676,945	$ 770,460	$ 801,452	$ 748,311	$ 693,419
Net New Long-Term Debt Issuance	-	26,293	61,115	228,099	9,450	136,200	81,000	-	-	-
Current Year Refunding Bonds	91,791									
Current Year Refunded / Defeased Bonds	(87,914)									
Net Long-Term Debt Repayment	(35,220)	(31,863)	(33,682)	(34,981)	(41,697)	(42,685)	(50,008)	(53,141)	(54,893)	(56,840)
Total Long-Term Debt Outstanding, End of Year	**$ 494,210** (1)	**$ 488,640**	**$ 516,073**	**$ 709,192**	**$ 676,945**	**$ 770,460**	**$ 801,452**	**$ 748,311**	**$ 693,419**	**$ 636,579**
Total Debt Service	$ 50,071 (1)	$ 51,593	$ 53,751	$ 57,658	$ 59,796	$ 69,933	$ 71,751	$ 78,098	$ 79,261	$ 81,867
Total Operating Expenditures	1,364,733 (1)	1,404,720	1,446,861	1,490,267	1,534,975	1,581,024	1,628,455	1,669,166	1,710,896	1,753,668
Debt Ratio	**3.67%**	**3.67%**	**3.72%**	**3.87%**	**3.90%**	**4.42%**	**4.41%**	**4.68%**	**4.63%**	**4.67%**
5% of Operating Expenditures	$ 68,237	$ 70,236	$ 72,343	$ 74,513	$ 76,749	$ 79,051	$ 81,423	$ 83,458	$ 85,545	$ 87,683
Additional Allowable Debt Service	18,166	18,643	18,592	16,856	16,953	9,118	9,672	5,361	6,284	5,816
Additional Debt Capacity (at 5%)	**$271,513**	**$269,817**	**$266,645**	**$238,481**	**$237,707**	**$127,271**	**$133,801**	**$74,162**	**$86,934**	**$80,460**

Assumptions:

* Total Operating Expenditures for FY18 through FY26 are estimated based on the following growth rate: 2.93% for FY18, 3.0% for FY19-FY23, and 2.5% for FY24 and thereafter.

* Estimated Cost of Capital includes: 3.30% for FY18; 3.40% for FY19; 3.55% for FY20; 3.65% for FY21, 3.70% for FY22, and 3.80% thereafter.

Notes:

(1) Unaudited actual.

(2) Debt ratio projections for fiscal years 2021 and beyond do not include the estimated impact of revisions to GASB 87 on governmental lease accounting. Attachment D provides an initial projection of the impact on the debt ratios.

Attachment B

Illustration of Debt Allocations Within a Five Percent Ratio
FINANCE AND RESOURCE MANAGEMENT COMMITTEE
As of October 2, 2017
(Dollars in Thousands)

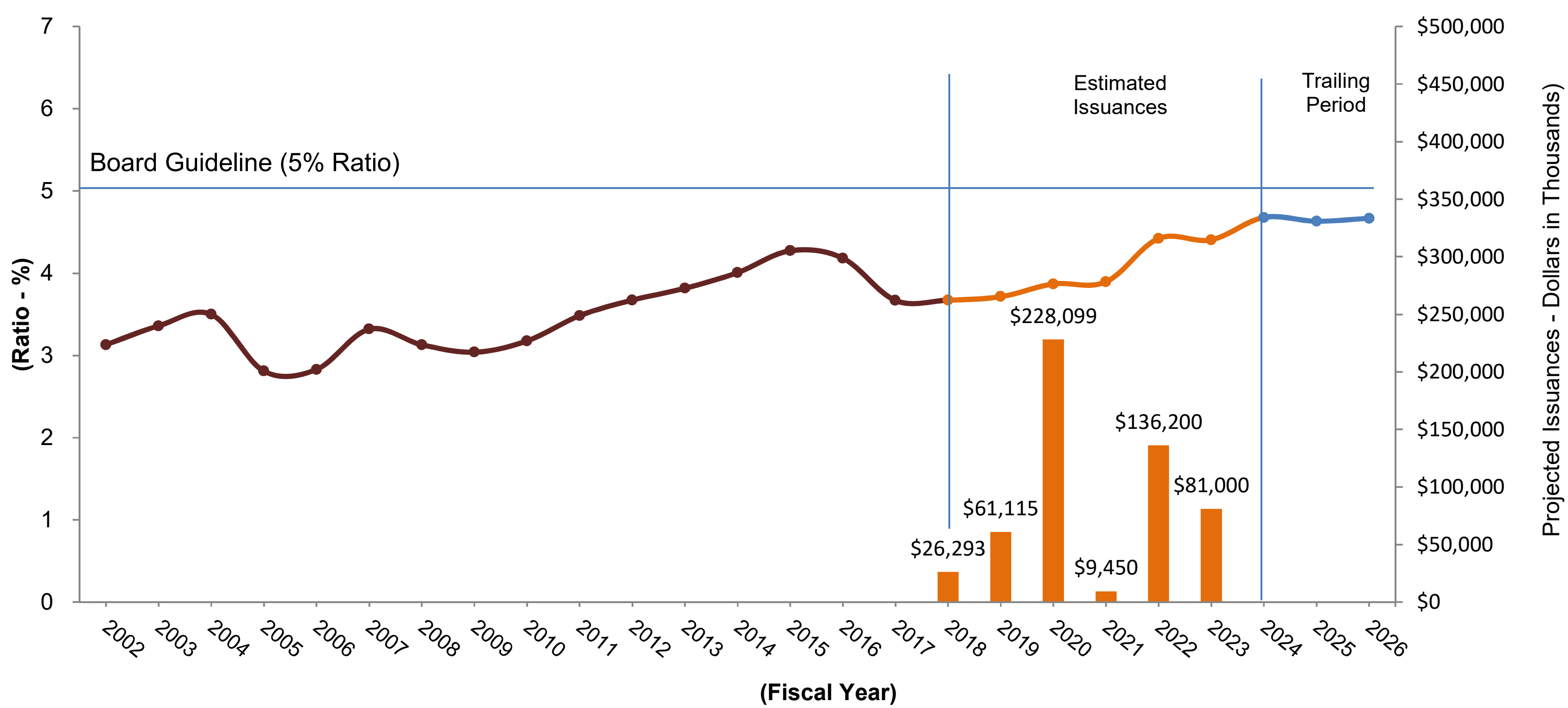
	Actual	Planning Projections						Trailing Period			
	2016-17	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**Total**
Authorized Projects											
Scheduled Issuances											
Virginia Automation Park		$ 2,500									$ 2,500
Health Sciences and Technology (HS&T)		23,793									23,793
HS&T Professional Development *			$ 8,422								8,422
HS&T Comparative Oncology Center *			9,343								9,343
Holden Hall Renovation & Expansion			17,500								17,500
O'Shaughnessy Renovation				$ 12,633							12,633
		26,293	35,265	12,633	-	-	-	-	-	-	74,191
Placeholder Issuances for High Priority Planning Items											
Building Envelope Repairs			9,450	9,450	$ 9,450	$ 9,450					37,800
Applied Projects Building			8,400								8,400
University Data Center			5,500								5,500
VTTI Intern Hub			2,500								2,500
Creativity & Innovation District Residential Community (528 beds + academic)				94,650							94,650
Student Wellness Services				61,000							61,000
Smart Dining Hall				25,000							25,000
Corps Leadership & Military Science				10,116							10,116
Food Processing Center & Warehouse				7,000							7,000
Intelligent Infrastructure Hitt Hall				6,250							6,250
Dietrick First Floor & Plaza Renovation				2,000							2,000
Residential Learning Community (350 beds) - Business						36,750					36,750
Residential Learning Community (350 beds) - Global						36,750					36,750
Business Learning Community (academic)						35,000					35,000
Engineering Renewal - Randolph Hall						18,250					18,250
Residential Renovations of Existing Facilities							$ 24,000				24,000
Owens Hall Renewal							57,000				57,000
	-	-	25,850	215,466	9,450	136,200	81,000	-	-	-	467,966
Total Authorized and Placeholder Issuances	$ -	$ 26,293	$ 61,115	$ 228,099	$ 9,450	$ 136,200	$ 81,000	$ -	$ -	$ -	$ 542,157
Net Capacity at five percent ratio	$271,513	$269,817	$266,645	$238,481	$237,707	$127,271	$133,801	$74,162	$86,934	$80,460	

* Debt to be authorized.

University Debt Ratio Trend

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

October 2, 2017



Source: Restructuring Management Performance Metrics; 2017 Data.

Projected ratios for fiscal years 2021 and beyond do not include the estimated impact of revisions to GASB 87 on governmental lease accounting. Attachment D provides an initial projection of the impact on the debt ratios.

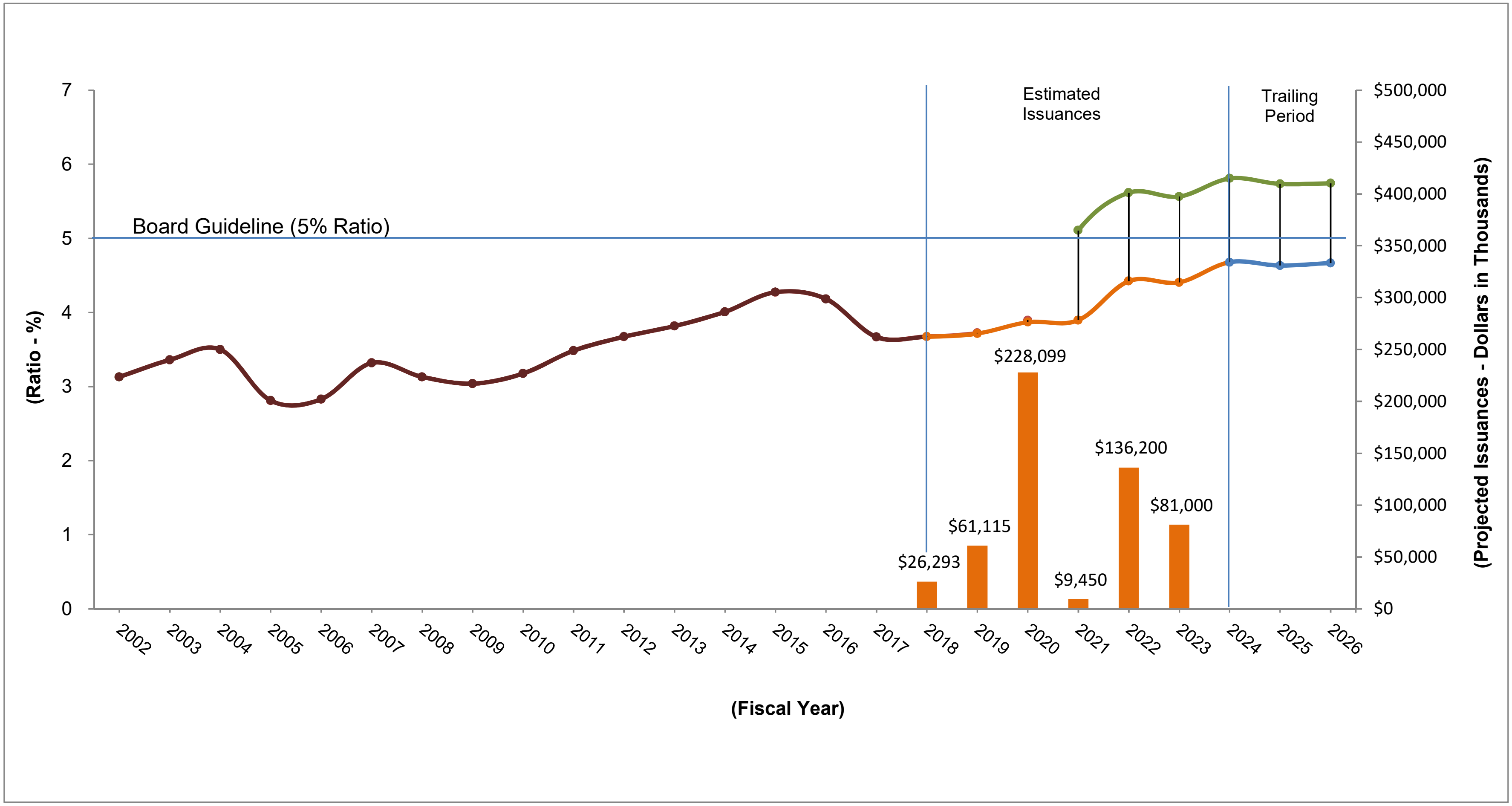
Maroon = Actual Debt Burden Ratio
Orange = Projected Debt Burden Ratio
Blue = Trailing Period Debt Burden Ratio

Attachment D

University Debt Ratio Trend
Projected Impact of GASB 87 - - Inclusion of Operating Leases

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

October 2, 2017



Maroon = Actual Debt Burden Ratio
Orange = Projected Debt Burden Ratio
Blue = Trailing Period Debt Burden Ratio
Green = Impact of Operating Leases

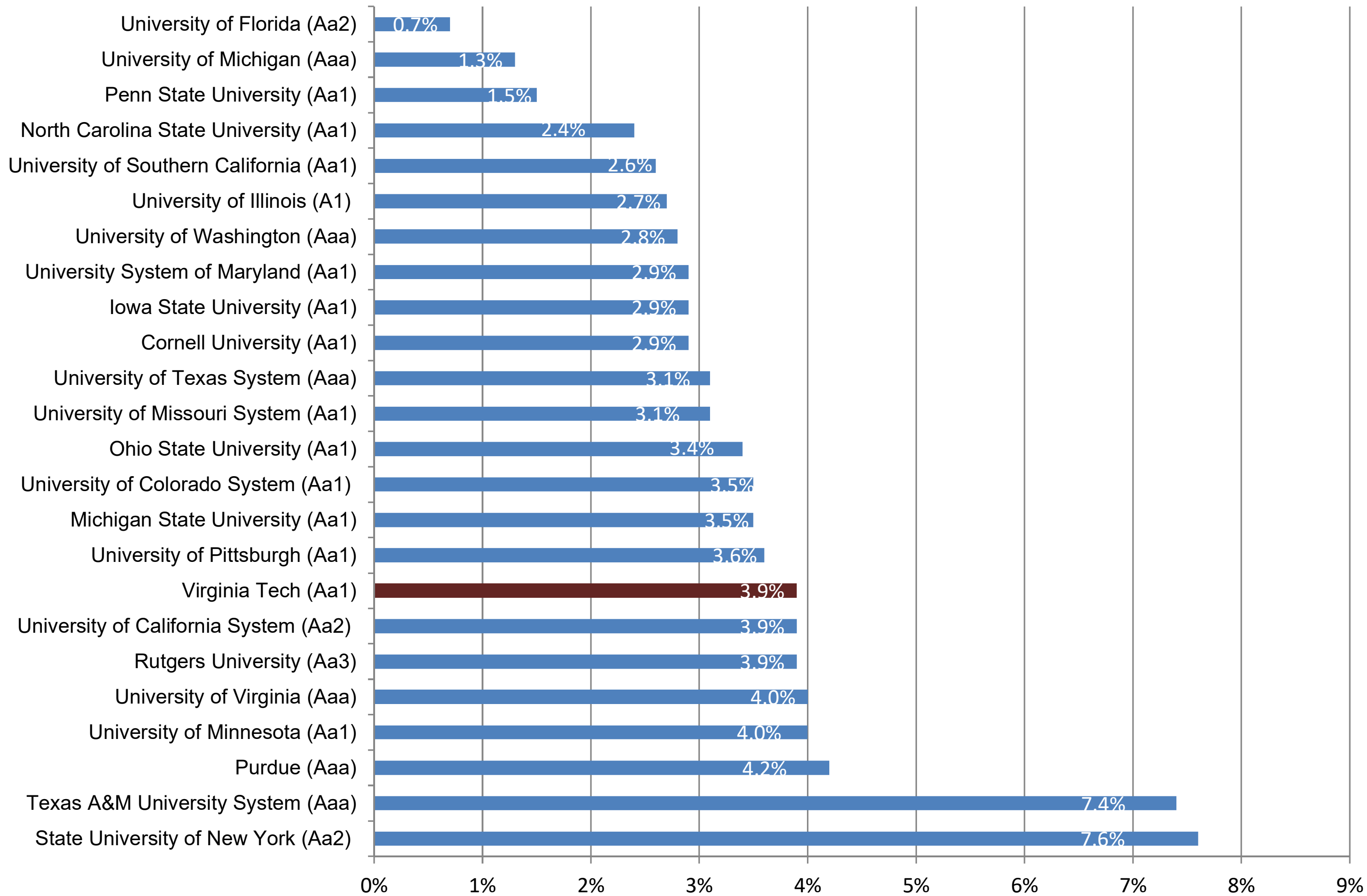
Presentation Date: November 6, 2017

Attachment E

Fiscal Year 2016 Debt Ratio Benchmarking of Peers

FINANCE AND RESOURCE MANAGEMENT COMMITTEE

October 2, 2017



Based on SCHEV Peer Group and UVA

Source: Moody's Performance Metrics, Moody's Investors Service, September 12, 2017; 2016 Data.

Debt Ratio and Debt Capacity

November 6, 2017

Bob Broyden, Assistant Vice President for Capital Assets and Financial Management

John Cusimano, University Treasurer and Associate Vice President for Finance-VT Foundation

VIRGINIA TECH.

Debt Ratio and Credit Rating Requirements

5.0%

Debt Ratio

AA-

Credit Rating

Current Status: Debt Ratio and Credit Ratings

5.0%
Debt Ratio

3.67%

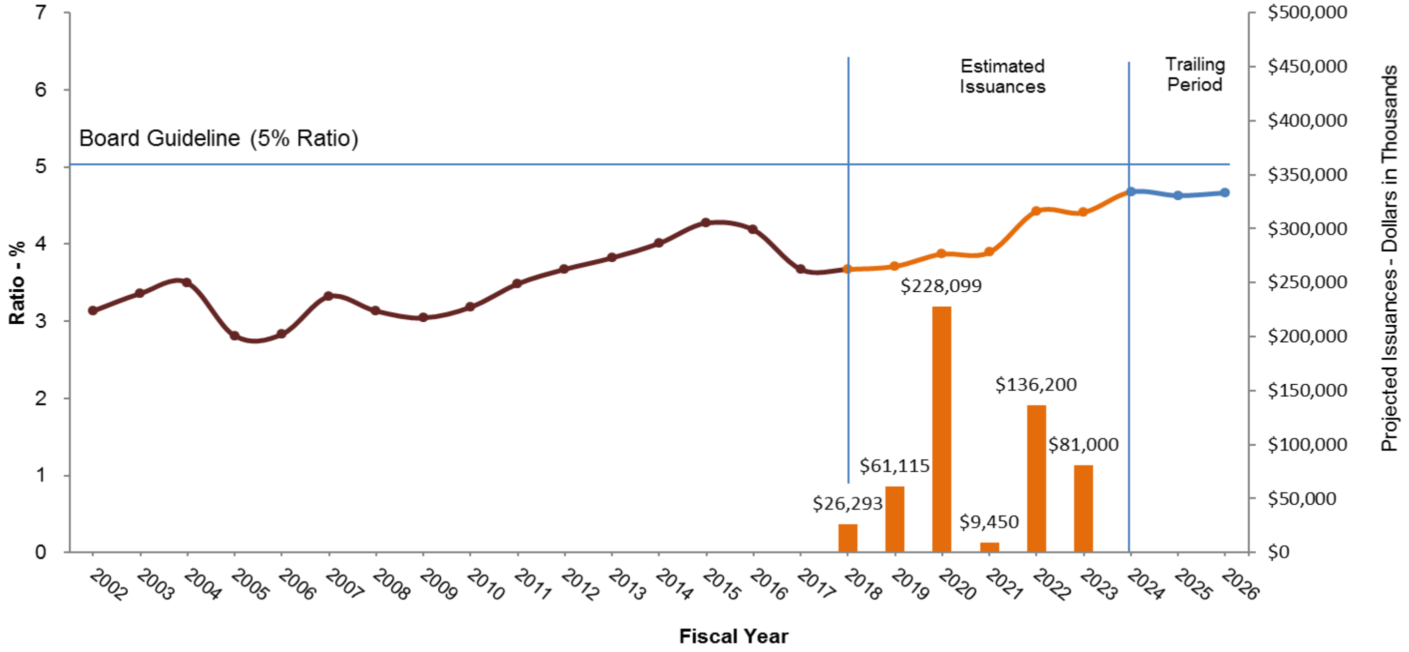
AA-
Credit Rating

AA
S&P

Aa1
Moody's

Gross Capacity Projections FY2023

University Debt Ratio Trend

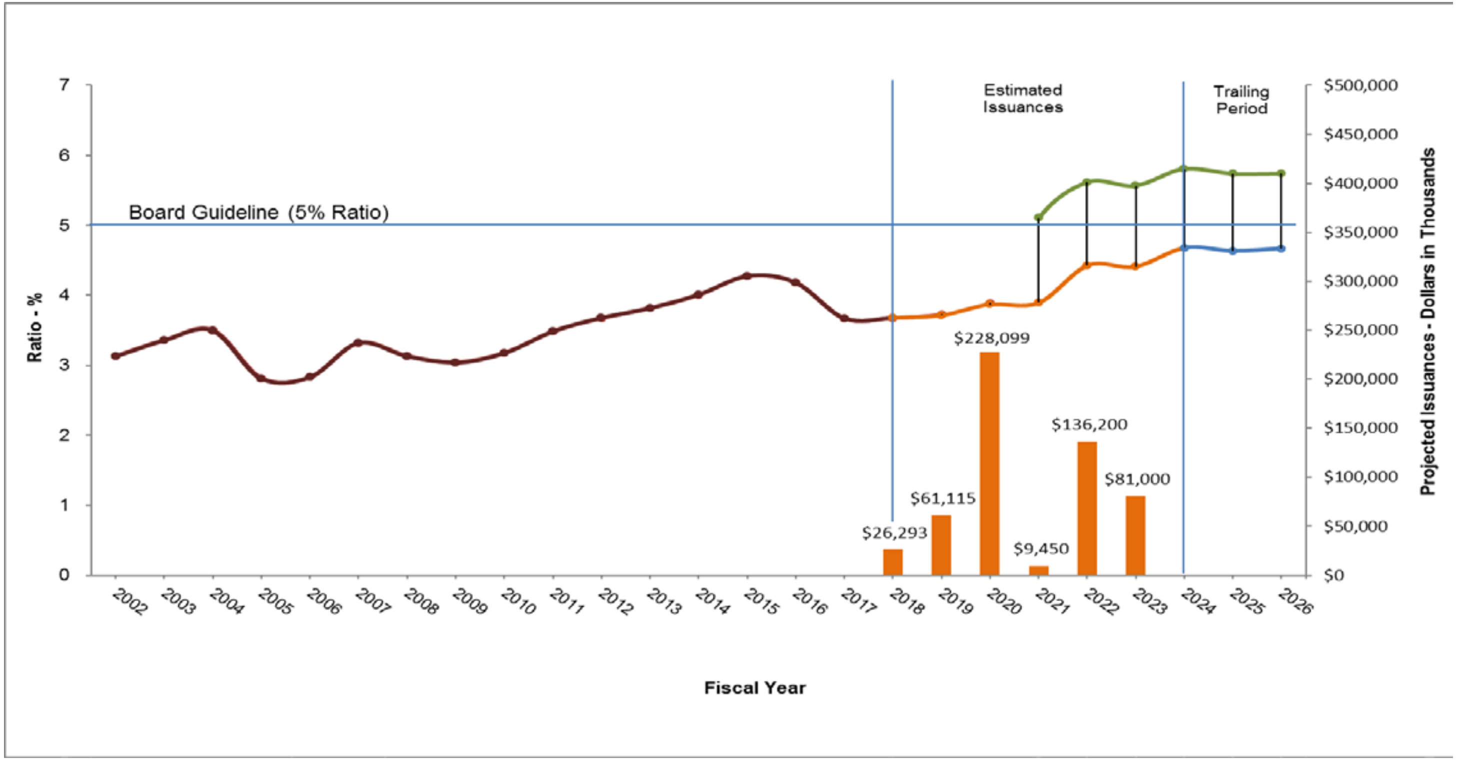


Source: Restructuring Management Performance Metrics; 2017 Data.

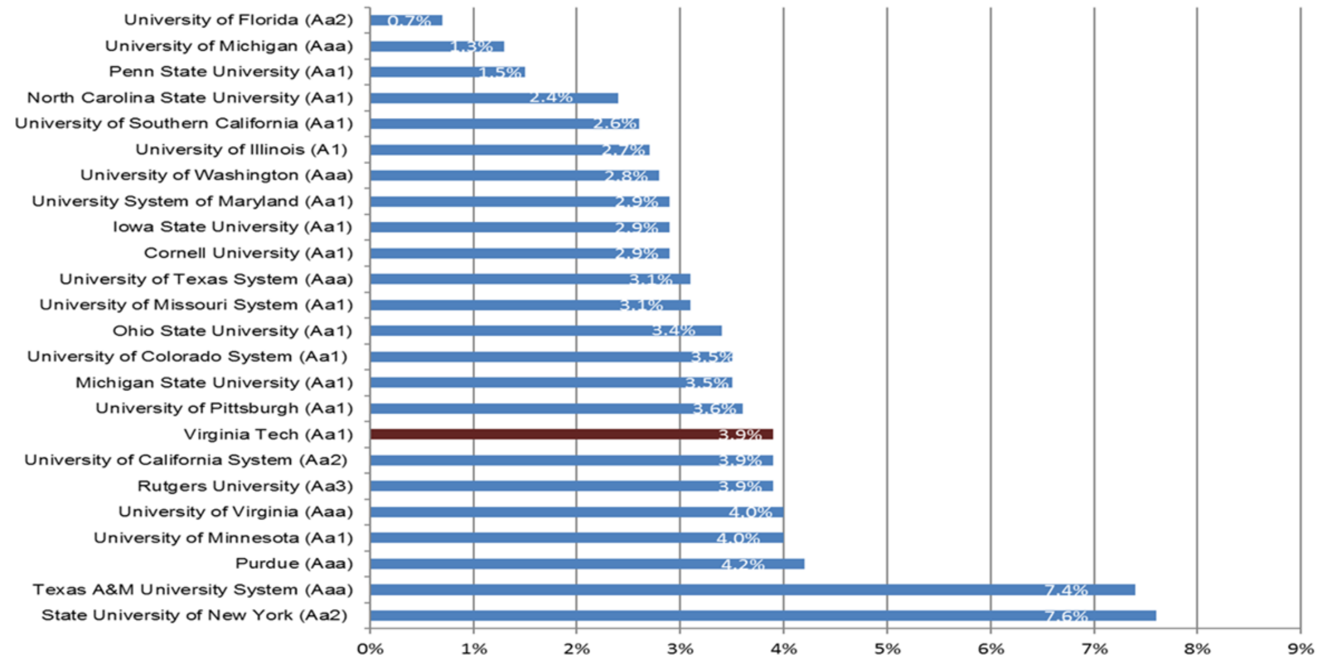
Projected ratios for fiscal years 2021 and beyond do not include the estimated impact of revisions to GASB 87 on governmental lease accounting.

VIRGINIA TECH

Impact of Governmental Accounting Standards Board (GASB) Statement No. 87



Benchmarking of Peers



Based on SCHEV Peer Group and UVA

Source: Moody's Performance Metrics, Moody's Investors Service, September 12, 2017; 2016 Data.

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Questions?