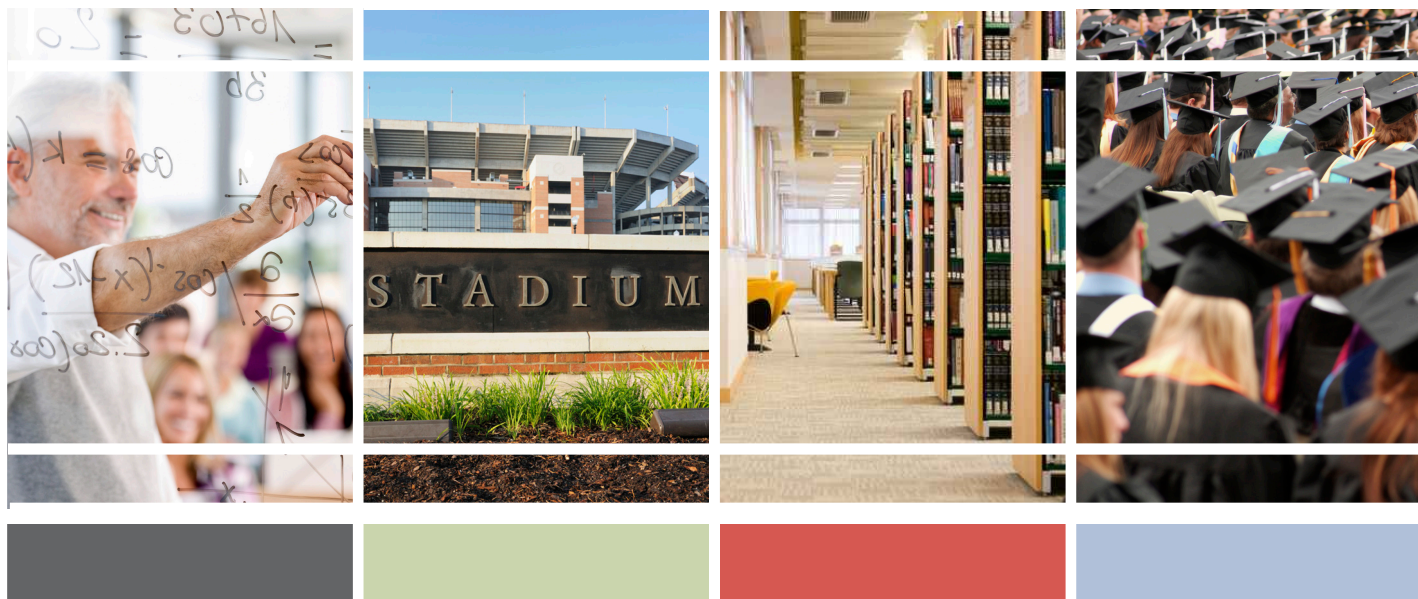


Report to the Governor and the General Assembly of Virginia

Addressing the Cost of Public Higher Education in Virginia



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COMMONWEALTH of VIRGINIA

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January 27, 2015

The Honorable John C. Watkins, Chair
Joint Legislative Audit and Review Commission
General Assembly Building
Richmond, Virginia 23219

Dear Senator Watkins:

In 2012, the General Assembly directed the Joint Legislative Audit and Review Commission to study the cost efficiency of the Commonwealth's institutions of higher education and identify opportunities to reduce the cost of public higher education in Virginia (HJR 108). This is the fifth and final report in a series of reports under HJR 108 released during 2013 and 2014. This report was briefed to the Commission and authorized for printing on November 10, 2014.

On behalf of Commission staff, I would like to thank the Secretary of Education and the State Council of Higher Education for Virginia for their assistance during this review. I would also like to acknowledge the staff at Virginia's 15 public higher education institutions, who were very accommodating to our research teams.

Sincerely,

A handwritten signature in cursive script that reads "Hal E. Greer".

Hal E. Greer
Director

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ABBREVIATIONS

Auditor of Public Accounts	APA
Christopher Newport University	CNU
College of William and Mary	CWM
Department of General Services	DGS
Department of Planning and Budget	DPB
Education and General	E&G
George Mason University	GMU
James Madison University	JMU
Longwood University	LU
Norfolk State University	NSU
Old Dominion University	ODU
Operations and Maintenance	O&M
Radford University	RU
State Council of Higher Education for Virginia	SCHEV
Six member advisory committee for institutional six-year plans	OpSix
Six-Year Capital Outlay Advisory Committee	6PAC
University of Mary Washington	UMW
University of Virginia	UVA
University of Virginia–Wise	UVA-Wise
Virginia Commonwealth University	VCU
Virginia Military Institute	VMI
Virginia State University	VSU
Virginia Student Financial Assistance Program	VSFAP
Virginia Tech	VT

Summary: Addressing the Cost of Public Higher Education in Virginia

WHAT WE FOUND

Virginia's higher education institutions are high quality but high cost

Virginia's 15 public four-year higher education institutions collectively achieve their missions—to educate and graduate students—better than most. Virginia ranked second among all states in terms of average six-year graduation rates. The graduation rates of UVA, the College of William and Mary, and Virginia Tech ranked among the nation's top 20 public colleges and universities.

The state's public institutions are also, on average, among the nation's most expensive for students. In FY 2012, Virginia had the fifth highest net cost in the country. The average net cost of attendance for all in-state students attending Virginia's public four-year institutions far exceeds the southeast regional and national averages.

Spending increased, primarily on non-academic services

Total institutional operating spending per student increased 24 percent, accounting for inflation, between FY 2002 and FY 2012. The majority of this spending growth was on the non-academic services known as auxiliary enterprises. Auxiliary enterprises accounted for 56 percent of the total increase in inflation-adjusted, per student spending. The remaining spending increase was distributed relatively evenly across instruction, support services, and other functions such as research.

Tuition revenue increased to compensate for declining state funding

As institutions spent more, they raised tuition and fees to collect additional revenue as state funding declined. On average, the decline in state funding accounted for the majority of the increase in tuition revenue. The increase in net tuition revenue varied substantially across institutions, but on average, the additional tuition revenue has exceeded the declines in state operating funding over the long term. Since FY 1998, net tuition revenue increased \$4,177 per student, exceeding the \$2,831 decline in state funding per student. This varied widely, however, with four institutions actually

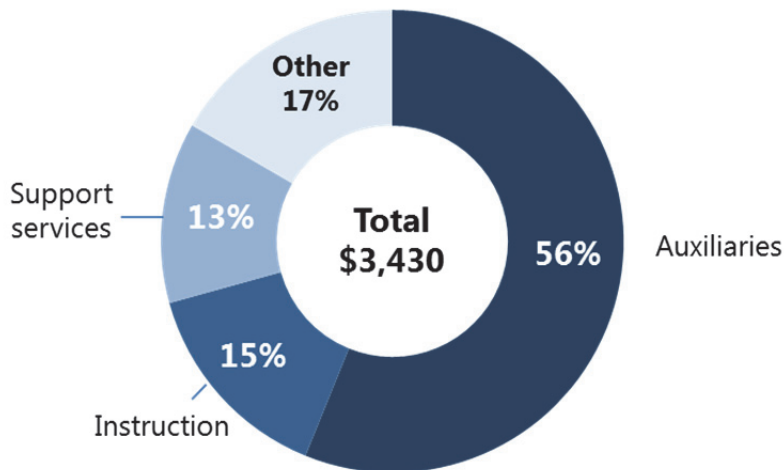
WHY WE DID THIS STUDY

The General Assembly directed JLARC to study the cost efficiency of the state's institutions of higher education and to identify opportunities to reduce costs. Interest in this topic was spurred by substantial increases in tuition and fees in recent years and the high debt load of Virginia students. This report, which is the final in JLARC's higher education series, presents options and recommendations to address the rising cost of public higher education in Virginia (HJR 108, 2012).

ABOUT HIGHER EDUCATION IN VIRGINIA

Virginia's longstanding support for public higher education can be traced to the early 19th century. Virginia's higher education system has multiple stakeholders, is highly decentralized, and provides institutions' boards of visitors with substantial autonomy. While state higher education operating funding per student has declined over the past two decades, state funding still represents six percent of general fund expenditures.

Auxiliaries were primary driver of higher spending per student (FY 2002–FY 2012)



Source: JLARC staff analysis of data from U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS).

Note: Data is in constant 2013 dollars. Statewide spending is calculated per FTE student using Delta Cost Project methodology.

receiving less combined revenue from students and the state in FY 2012 than they did in FY 1998.

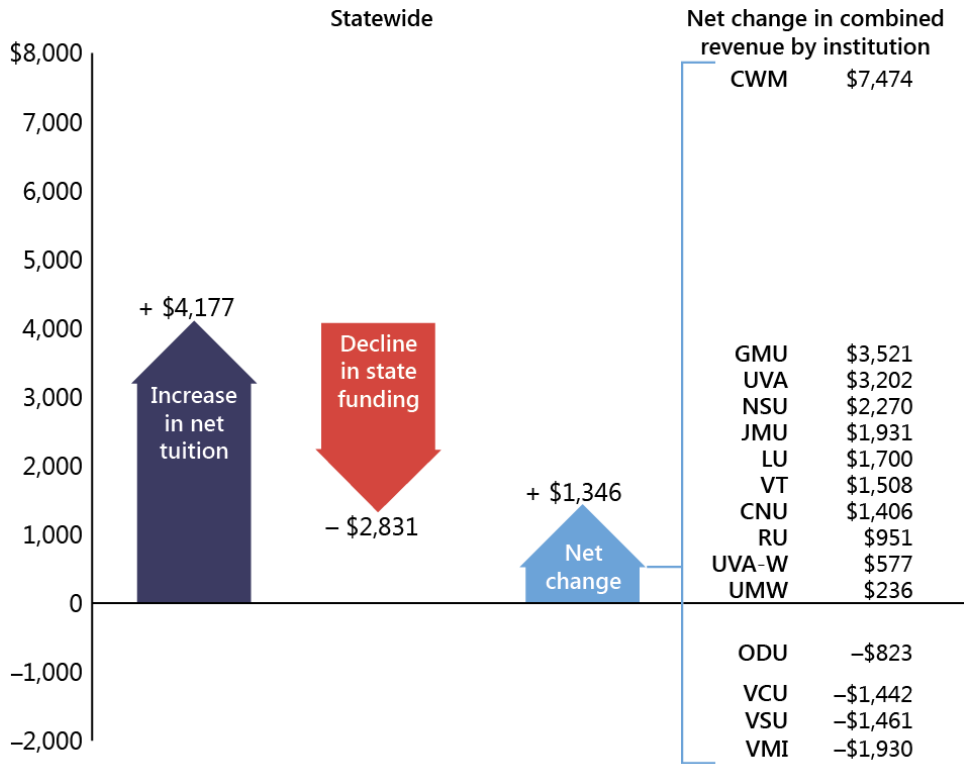
State operating funding per in-state student is one-third less than it was in the late 1990s. Virginia's funding for public higher education has consistently been below that of other states. In FY 2012, Virginia provided \$4,800 in state operating support per student, about 25 percent less than the national and southern state averages.

As a result, all institutions now rely more heavily on students to fund their core missions. In FY 1998, net tuition revenue was 42 percent of the combined revenue used to fund E&G operations coming from students and the state. By FY 2012, the net tuition portion had increased to 64 percent.

Boards of visitors appear to have limited ability to influence decisions

In Virginia's decentralized higher education system, the General Assembly has vested primary responsibility for each public higher education institution with a board of visitors. Despite being vested with this responsibility, board members responding to a JLARC staff survey reported having a limited ability to influence certain institutional decisions. For example, about half of current board members responded they have a limited ability to influence decisions about institutional efficiency or non-academic spending. Nearly one-third of current board members reported that they understand higher education operations or public finance only "somewhat," "slightly," or "not at all."

Statewide, increase in net tuition primarily occurred due to decline in state funding; net revenue increased, but not at all institutions (FY 1998–FY 2012)



Source: JLARC staff analysis of state appropriations data provided by SCHEV, Delta Cost Project data on FY 1998 net tuition revenue, IPEDS data on FY 2012 net tuition revenue, and the Consumer Price Index.

Notes: Data is in constant 2013 dollars. Net tuition revenue data is calculated per FTE student (for both in-state and out-of-state students) using Delta Cost Project methodology. State appropriations data is calculated per FTE in-state student. Statewide averages are weighted for enrollment.

State approach to providing operating funds does not sufficiently reflect varying situations at institutions

Some institutions have more difficulty than others adapting to state funding declines. Chief among these are Virginia State, UVA-Wise, Norfolk State, and ODU, because of certain characteristics, including:

- a higher reliance on state funding and tuition for total revenue (as compared to institutions that have considerable revenue from federal research or private funding sources);
- a higher percentage of in-state students, who pay much lower tuition than out-of-state students; and
- a higher percentage of students from families with lower ability to pay tuition.

In terms of state funding policy for higher education, most institutions are not fully funded according to the state’s established funding model, known as base adequacy.

The state has also not met its goal for shared funding responsibility between students and the state. Additionally, state policy does not reflect the differing abilities of institutions to raise tuition revenue.

This report includes options that would address these issues of operational funding, each with the goal of making higher education more affordable for students, but to varying degrees at different institutions.

Operating funding: Major JLARC options

JLARC options	Improve affordability & access	Increase state costs	Prioritize academics	Limit institutional autonomy
Option 2: Revise funding policy to account for characteristics that limit ability to generate additional revenue	✓	✓	✓	
Option 3: Allocate higher proportion of funding to the institutions least able to fund operations and those with students least able to afford tuition	✓		✓	
Option 5: Limit tuition increases; provide additional general funds	✓	✓		✓

Schools spent more on non-academic functions, particularly intercollegiate athletics, while having difficulty funding academics

As noted above, the primary driver of institutional spending growth has been auxiliary enterprises. These non-academic functions are funded through mandatory non-E&G fees paid by students. Five institutions in particular increased these non-E&G fees while also having basic operating funding shortfalls: UVA-Wise, Christopher Newport, Norfolk State, Longwood, and ODU.

Across all institutions in Virginia, mandatory non-E&G fees have increased substantially and now represent one-third (\$3,502) of total tuition and fees. There have been two primary drivers of this fee growth. The first is intercollegiate athletics. The second is a variety of facilities and services provided in response to on-campus enrollment growth and student demand for amenities.

On average, athletic programs generated only 31 percent of revenue needed to cover program expenses in FY 2012. Students funded the remaining 69 percent of expenditures. The funding provided by students to subsidize this shortfall equated to, on average, 12 percent of total tuition and mandatory fees (or 31 percent of mandatory non-E&G fees). Mandatory athletic fees are not directly related to the core academic mission, and in many cases the athletic programs benefit a relatively small number of students.

The expansion of auxiliary services other than athletics also contributed to student costs. Institutional debt service, which represents a fixed cost, comprises about

17 percent of mandatory non-E&G fees. This still leaves approximately half of all non-E&G fees (\$1,745 per student) going toward other non-academic services.

One former member of a board of visitors responding to JLARC’s survey noted,

While many students appreciate the services provided by the mandatory fees of the university, a much more disciplined approach to providing those services should be instituted. Do we really need the intercollegiate athletic programs as they exist? Are all of the gyms and fitness centers that have been built necessary? It is time to provide an education at affordable costs, which might mean returning to focusing on the costs of education and reducing non-essential services.

The state’s current five percent cap on the growth of mandatory non-E&G fees allows numerous exceptions, which six institutions have used to more than double these fees since the cap was established. Actual growth averaged 99 percent between FY 2003 and FY 2014 due to repeated use of exemptions, but would have been only 71 percent if institutions had strictly adhered to five percent annual growth. Cumulative growth varied substantially across institutions, ranging from 215 percent growth at Christopher Newport to 59 percent growth at JMU.

This report includes recommendations that would address these issues of spending on non-academic services. Each of the proposed changes would make higher education more affordable for students and prioritize academics.

Non-academic spending: Major JLARC recommendations

JLARC recommendations	Improve affordability & access	Increase state costs	Prioritize academics	Limit institutional autonomy
Recommendation 3: Limit mandatory athletics as a proportion of total tuition and mandatory fees	✓		✓	✓
Recommendation 4: For institutions that exceed the limit on athletic fees, submit plans to reduce fees	✓		✓	✓
Recommendation 5: Propose reductions in spending on auxiliary services (excluding athletics and debt service) funded with mandatory non-E&G fees	✓		✓	✓
Recommendations 6 and 7: Remove exemptions to fee growth cap, and require approval to exceed the cap	✓		✓	✓

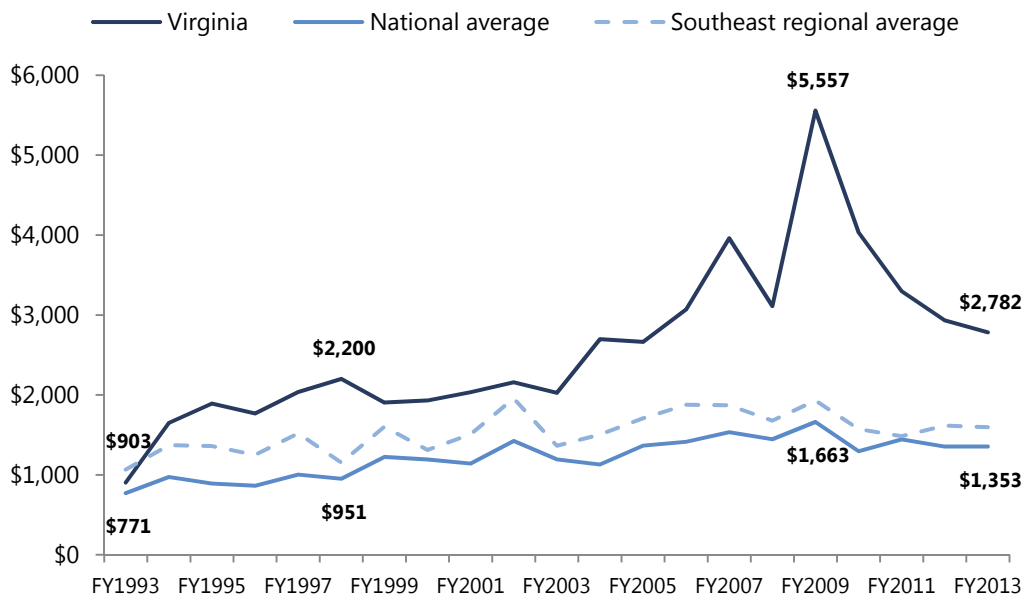
State and individual institutions have relied heavily on debt to expand or improve campuses, and maintenance needs have grown

Spending to construct and renovate non-academic facilities is often funded using debt incurred by individual institutions, which fund their debt service payments through mandatory student fees and user fees. Individual institutions have borrowed to fund construction and renovation, nearly quadrupling their annual debt service. Total annual debt service for the 15 four-year public institutions grew from \$106.2 million in FY 2002 to \$421.4 million in FY 2013. Debt service on this institutional debt is equivalent to nine percent of total E&G spending by the four-year public institutions in Virginia.

Spending to construct and renovate academic facilities is funded with debt incurred by the state. Annual state debt service payments (totaling \$3 billion since FY 2002) have increased more than 600 percent. Annual state debt service payments for capital debt grew from \$70 million in FY 2002 to \$439 million in FY 2013. Debt service payments now account for nearly one-third of all state operating and capital support.

At colleges and universities around the country, borrowing and capital spending have generally increased over the past two decades, but Virginia's borrowing and spending have been exceptionally high. On a per student basis, total state and institutional capital spending and debt service payments substantially exceed national and regional

Higher education capital spending exceeds national and regional spending



Source: JLARC staff analysis of the National Association of State Budget Officers (NASBO) annual State Expenditure Report data on higher education capital expenditures, the National Center for Education Statistics (NCES) annual Digest of Education Statistics data on FTE fall enrollments, and the Consumer Price Index.

Notes: Expenditures are reported in 2013 constant dollars. See Appendix B for methodological information.

averages. Last year, Virginia spent \$2,782 per student on capital projects, which was more than twice the national average of \$1,353.

Institutions expanded and improved their campuses, despite declines in state general funds and in student ability to afford higher education. On average, square footage per student increased 14 percent between 2004 and 2011. This has required increased borrowing by the state and individual institutions, which has created long-term, fixed costs that—particularly for institutions with stagnating or declining enrollment and lower ability to generate additional fee revenue—may be a substantial budgetary constraint moving forward.

Amid this substantial capital spending, existing facilities have deteriorated. As of FY 2011, the total deferred maintenance on E&G facilities was estimated at \$1.4 billion, or approximately 19 percent of the replacement value of Virginia’s higher education E&G facilities. This maintenance backlog has long-term cost implications. National research has found that every \$1 of deferred maintenance results in \$4 to \$5 of long-term capital liabilities.

This report includes recommendations and options that would address the deterioration of existing facilities and the high levels of capital spending for new construction and renovation. The two recommendations proposed below would make higher education more affordable for students. The option for consideration would address affordability and efficiency by increasing state funding for maintenance while providing additional state oversight of institutions’ maintenance practices.

Capital and maintenance: Major JLARC options and recommendations

JLARC recommendations and options	Improve affordability & access	Increase state costs	Prioritize academics	Limit institutional autonomy
Recommendation 9: Prioritize capital requests using objective and cross-institutional analysis	✓		✓	
Recommendation 10: Use prioritization criteria to determine which projects are recommended for funding	✓		✓	
Option 6: Increase state maintenance funds; increase state oversight	✓			✓

State student aid falls short of goal, and allocation could better prioritize needs of low- and middle-income students

Federal and state governments, institutions, and private individuals provide student aid in order to reduce the cost of higher education to students and families. Research has found that student aid increases levels of college enrollment and completion, particularly when awarded to low-income students and in a transparent manner.

Student aid in Virginia, though, meets only one-third of financial need, and financial need has grown faster than available funding over the past decade. Virginia provides student aid based on financial need through the Virginia Student Financial Assistance Program (VSFAP). The state does not meet its funding goal for VSFAP, and the portion of its funding goal met has decreased from 65 percent in FY 2010 to 43 percent in FY 2014.

VSFAP funding has not been allocated among institutions in a manner that accounts for the varying ability of students to afford higher education. While VSFAP allocations meet 77 percent of financial need recognized at UVA, they meet only 40 percent or less at six institutions that have a greater percentage of low- and middle-income students: VCU, Norfolk State, ODU, Virginia State, George Mason, and Mary Washington.

Current state policy gives institutions substantial autonomy to award VSFAP funds. Institutions have used this autonomy to award VSFAP funds to high-income students, even though average unmet need is greater among low- and middle-income students. Across institutions, eight percent of funds were awarded to high-income students. Three institutions—Christopher Newport, VMI, and William and Mary—awarded 15 percent or more to high-income students.

One-third of the state’s total student aid is currently allocated through the Tuition Assistance Grant program. Tuition Assistance Grant funds are provided to in-state students who attend private institutions. Aid through this program is allocated irrespective of financial need.

This report includes options and recommendations that would better prioritize the student aid needs of low- and middle-income students. Each of the major changes proposed below would make higher education more affordable for certain students who attend Virginia’s public higher education institutions. One change would limit institutional autonomy to varying degrees.

Student aid: Major JLARC options and recommendations

JLARC recommendations and options	Improve affordability & access	Increase state costs	Prioritize academics	Limit institutional autonomy
Recommendation 15: Reallocate state student aid across schools	✓			
Recommendation 16: Restrict state student aid funds to low- and middle-income students	✓			✓
Option 7: Redirect state aid funds from private to public institutions	✓			

See the complete list of recommendations and options on page ix.

Recommendations and Options: Addressing the Cost of Public Higher Education in Virginia

RECOMMENDATION 1

The General Assembly may wish to consider amending the Code of Virginia to require the State Council of Higher Education for Virginia (SCHEV) to annually train boards of visitors members who serve on finance and facilities subcommittees. The training should address the types of information members should request from institutions to inform decision making, such as performance measures, benchmarking data, the impact of financial decisions on student costs, and past and projected cost trends. Boards of visitors members serving on finance and facilities subcommittees should, at a minimum, participate in the training within their first year of membership on the subcommittee. SCHEV should obtain assistance in developing or delivering the training from relevant agencies such as the Department of General Services and past or present finance officers at Virginia's public four-year institutions, as appropriate (Chapter 2, page 19).

RECOMMENDATION 2

The General Assembly may wish to consider including language in the Appropriation Act to direct the State Council of Higher Education for Virginia (SCHEV) to update the underlying data for the base adequacy model and make additional modifications to the formula as warranted. SCHEV should ensure that future updates or revisions to base adequacy occur every six years as part of the state's strategic planning process. The update and modification to the base adequacy model should be completed in coordination with the re-basing of appropriated and actual salary averages, as recommended in JLARC's 2013 *Review of Academic Spending and Workload at Virginia's Public Higher Education Institutions* (Chapter 4, page 35).

RECOMMENDATION 3

The General Assembly may wish to consider amending the Code of Virginia to impose a limit on mandatory athletic fees charged to students by limiting the proportion of tuition and mandatory fees that can be collected for the purpose of funding intercollegiate athletics (Chapter 5, page 52).

RECOMMENDATION 4

The General Assembly may wish to consider including language in the Appropriation Act to direct Virginia public four-year institutions that charge mandatory student athletic fees in excess of the limit (as a proportion of mandatory student charges) set forth in the Code of Virginia, to develop plans to reduce athletic fees. Institutions should develop and submit their reduction plans to the House Appropriations and Senate Finance Committees no later than November 30, 2015, for full compliance with the limits no later than June 30, 2020 (Chapter 5, page 53).

RECOMMENDATION 5

The General Assembly may wish to consider including language in the Appropriation Act to require public four-year institutions to evaluate the non-athletic services and activities funded by mandatory non-E&G fees. Institutions should be required to report the results of the evaluation to the House Appropriations and Senate Finance Committees no later than November 1, 2015. The report should include an inventory of each service and activity and proposed reductions in spending through improved efficiency or cutbacks in service levels, or through elimination of services or activities tangential to the academic mission (Chapter 5, page 57).

RECOMMENDATION 6

The General Assembly may wish to consider amending the Appropriation Act to remove all exemptions from the annual five percent cap on mandatory non-E&G fee growth and modify the cap to a limit of the lesser of (i) five percent or (ii) the median dollar increase in the fee across all public four-year institutions from the prior academic year (Chapter 5, page 60).

RECOMMENDATION 7

The General Assembly may wish to consider including language in the Appropriation Act to require that an institution may only exceed the annual growth cap on mandatory non-E&G fees if expressly authorized through the Act (Chapter 5, page 60).

RECOMMENDATION 8

The State Council of Higher Education for Virginia should update the state's Chart of Accounts for higher education in order to improve comparability and transparency of mandatory non-E&G fees, with input from the Department of Accounts, the Department of Planning and Budget, the Auditor of Public Accounts, and institutional staff. This process should be coordinated with the standardization of tuition and fee reporting recommended in JLARC's 2013 *Review of Non-Academic Services and Costs at Virginia's Public Higher Education Institutions* (Chapter 5, page 61).

RECOMMENDATION 9

The General Assembly may wish to consider including language in the Appropriation Act to direct the State Council of Higher Education for Virginia to modify its current capital prioritization process by 2016 to (i) ensure objective analysis of institutions' capital requests and (ii) provide a statewide prioritization of higher education capital requests that may be used to determine which projects should be recommended to receive funding. It should provide the Six-Year Capital Outlay Plan Advisory Committee with a draft of the revised prioritization process for feedback and approval (Chapter 6, page 78).

RECOMMENDATION 10

The General Assembly may wish to consider including language in the Appropriation Act to require that the Six-Year Capital Outlay Plan Advisory Committee, the Department of Planning and Budget, and others as appropriate use the results of the prioritization process established by the State Council of Higher Education for Virginia in determining which capital projects should receive funding (Chapter 6, page 78).

RECOMMENDATION 11

The General Assembly may wish to consider amending the Code of Virginia to direct the State Council of Higher Education for Virginia to identify metrics on capital spending, debt, and other data of value to the capital review process and annually publish a report on how each of the 15 public four-year institutions compares across the metrics. The report should include (i) comparisons to national and regional levels of capital spending and (ii) information on the value of institutions' physical plants relative to their Carnegie classifications (Chapter 6, page 79).

RECOMMENDATION 12

The Department of General Services should centrally track facility condition by developing metrics to assess facility condition for inclusion in its current asset management system by November 1, 2016. The selection of metrics and process to collect information from public higher education institutions should be coordinated with the State Council of Higher Education for Virginia and the Department of Planning and Budget (Chapter 7, page 90).

RECOMMENDATION 13

The Department of Planning and Budget should revise the formula used to allocate the state's maintenance reserve funding to account for higher maintenance needs resulting from poor facility condition, aging of facilities, and differences in facility use, once such data is available (Chapter 7, page 90).

RECOMMENDATION 14

The General Assembly may wish to consider including language in the Appropriation Act to direct public institutions to submit long-term deferred maintenance plans to the Department of General Services and the Department of Planning and Budget at the start of each biennium. The plans should contain (i) a list of deferred maintenance projects ranked by relative priority, funding availability, and timeframe, and (ii) estimates of project funding levels and sources (Chapter 7, page 93).

RECOMMENDATION 15

The General Assembly may wish to consider including language in the Appropriation Act to allocate all Virginia Student Financial Assistance Program funds across institutions such that an equal percentage of financial need recognized by the state's Partnership Model is met at each of Virginia's public four-year institutions (Chapter 8, page 105).

RECOMMENDATION 16

The General Assembly may wish to consider amending the Code of Virginia to restrict the Virginia Student Financial Assistance Program to low- and middle-income students when program appropriations are not sufficient to fully meet these students' financial need recognized by the Partnership Model (Chapter 8, page 108).

OPTION 1

The General Assembly could create a joint subcommittee to oversee implementation of the recommendations and options from the Joint Legislative Audit and Review Commission higher education report series. The subcommittee should at minimum comprise members of the House Appropriations, House Education, Senate Education and Health, and Senate Finance Committees (Chapter 2, page 21).

OPTION 2

The General Assembly could amend the Code of Virginia to revise the cost-share goal for each public four-year institution to account for characteristics that may limit the ability of institutions to generate additional net tuition revenue. Such characteristics include a higher percentage of in-state students who receive federal Pell grants and a relatively low median expected family contribution of in-state students, both of which indicate relatively low student ability to pay the published price of higher education (Chapter 4, page 41).

OPTION 3

The General Assembly could consider allocating a higher proportion of operating funding to institutions that (i) are least able to fund academic operations and (ii) have a relatively high proportion of students who have lower ability to pay the published price of higher education (Chapter 4, page 41).

OPTION 4

The General Assembly could ensure that all public institutions have full funding under the base adequacy model before appropriating general funds to support institutional initiatives and before implementing and funding the proposed performance funding model (Chapter 4, page 44).

OPTION 5

The General Assembly could include language in the Appropriation Act to limit annual increases in tuition and mandatory E&G fees for in-state undergraduate students while providing additional state operating funding to offset forgone tuition revenue. The General Assembly could provide an exemption from the limit for institutions that substantially reduce mandatory non-E&G fees and reallocate resources to E&G operations (Chapter 4, page 45).

OPTION 6

The General Assembly could include language in the Appropriation Act to provide additional state funding for the maintenance reserve program, corresponding with additional state oversight of institutions' deferred maintenance policies and practices (Chapter 7, page 91).

OPTION 7

The General Assembly could provide more student aid funding for the Virginia Student Financial Assistance Program by reallocating funds from limiting eligibility for the Tuition Assistance Grant program to low- and middle-income students with financial need (Chapter 8, page 109).

1 Factors Increasing the Price of Public Higher Education in Virginia

SUMMARY Virginia’s 15 public higher education institutions are collectively among the nation’s best. These same institutions, though, are also among the nation’s most expensive to attend. The net cost of public higher education in Virginia is the fifth highest in the country. The cost of attendance is high due to a combination of lower state funding and higher institutional spending. State funding for public higher education has not kept pace with enrollment growth or inflation. As a result, state funding per student in FY 2012 was only about two-thirds of what it was in FY 1998. During this same time period, institutions chose to spend more per student. The majority of this increase was on non-academic activities, which include intercollegiate athletics that account for 12 percent, on average, of what students pay in tuition and mandatory fees. Most institutions also undertook substantial capital construction and renovation funded through debt that is primarily repaid by state taxpayers and students. Institutions funded this increased spending, amid state funding declines, by raising tuition and fees. These tuition increases far outpaced growth in average consumer income, which necessitated more student borrowing.

Through the mandate for this study series, the General Assembly directed the Joint Legislative Audit and Review Commission (JLARC) to review the cost efficiency of Virginia’s institutions of higher education and identify opportunities to reduce the cost of public higher education. The overarching intent of the resolution is to assess the major drivers of costs at Virginia’s 15 public four-year higher education institutions amid substantial increases in tuition and fees (Appendix A). To address the broad scope of the mandate, JLARC conducted five studies over nearly two years. For this fifth and final study, JLARC staff reviewed research literature on higher education, collected information from each Virginia institution and various national databases, and interviewed key institutional and state staff (Appendix B).

This report is organized around what JLARC staff have concluded are the key issues related to the rising price of higher education in Virginia: declining state funding per student and rising institutional spending—especially on non-academic services and facilities. The four prior studies in this series made 16 recommendations (Appendix C). This fifth report makes another 16 recommendations and includes seven options for various state entities and higher education institutions to improve affordability and efficiency.

Public higher education in Virginia is among the nation's best and most expensive

Widespread and accessible public education in Virginia was first proposed by Thomas Jefferson in 1779. The state's investment in public higher education institutions began in 1818 with the first disbursement of revenue from the state's Literary Fund to the University of Virginia. Since then, public support grew with the development of land grant universities, normal and comprehensive schools, community colleges, and Virginia's diverse contemporary system of comprehensive and research institutions.

The state's investment in public higher education operations was about six percent (\$1.1 billion) of the total general fund budget in FY 2013. The state provides funds for academic activities, including instruction, research, and operations and maintenance of academic buildings. The state does not, though, fund non-academic services typically referred to as auxiliary enterprises, which include student housing, dining, and intercollegiate athletic programs.

A higher percentage of students at Virginia higher education institutions graduate

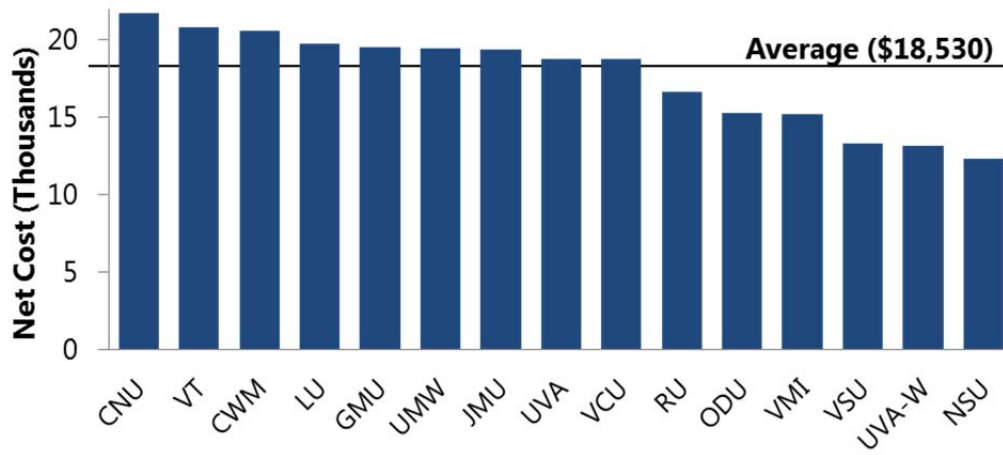
A key indicator of the collective quality of Virginia's 15 public four-year higher education institutions is the relatively high percentage of students who graduate and earn a degree. In 2012, 65 percent of students at Virginia's institutions graduated within six years, considerably higher than the national average of less than 50 percent. Virginia ranked second among all states based on the average six-year graduation rate across all 15 institutions. In 2012, UVA, the College of William and Mary, and Virginia Tech were each among the nation's top 20 institutions based on graduation rates. (See Appendix K, online only, for additional information on the strategies Virginia institutions have used to facilitate student graduation.)

Average net cost in Virginia is high, but varies greatly by institution

Net cost, or the published cost to students after accounting for financial aid, approximates the amount students are actually required to pay to attend a higher education institution. In FY 2012, Virginia had the fifth highest net cost in the nation. The average net cost of attendance for all in-state students attending Virginia's public four-year institutions (\$18,530) far exceeded average costs for students attending public institutions in the southeast region (\$12,150) and nationwide (\$14,974).

The net cost to students varies substantially across Virginia public four-year institutions (Figure 1-1). For all in-state students receiving aid, in FY 2012 the average net cost ranged from a low of \$12,319 at Norfolk State to a high of \$21,672 at Christopher Newport. (See Appendix L, online only, for net cost by income level at each institution.)

FIGURE 1-1
Average net cost per student varies substantially across institutions (FY 2012)



Source: JLARC staff analysis of IPEDS data.

Notes: Represents average net cost of attendance for in-state students, which includes tuition and fees, room and board, and allowances for books, supplies, transportation, and personal expenses. Statewide average is weighted for enrollment. See Appendix B for more information.

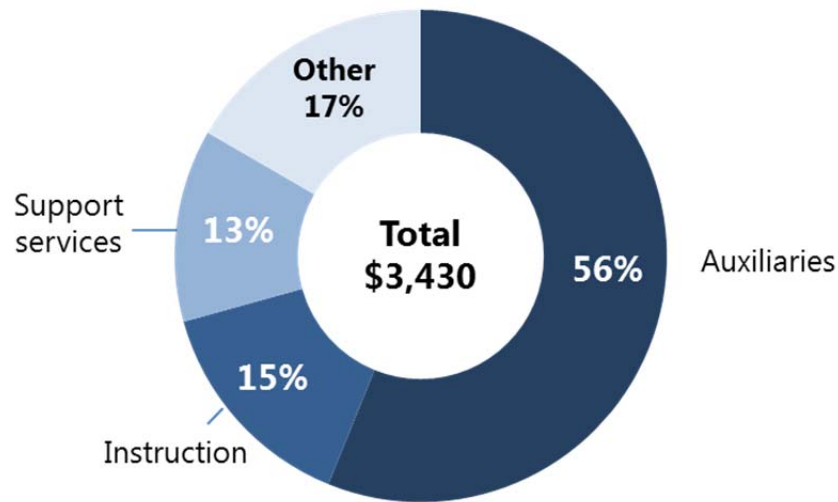
Institutions increased spending, especially on facilities and non-academic services

Tuition and fees at Virginia’s 15 public four-year higher education institutions increased 122 percent (\$3,480) between FY 2002 and FY 2012 (inflation-adjusted). This increase is attributable to a variety of factors, including higher institutional spending. During this same period, total inflation-adjusted spending per student at Virginia’s public institutions increased by approximately 24 percent (\$3,430). Within this total increase, academic spending only moderately increased. Average educational and general (E&G) spending per student grew by approximately four percent per year (inflation-adjusted). This spending increase includes factors beyond an institution’s control, such as utilities and state-mandated increases in health insurance and retirement benefit payments.

Non-academic services have been primary driver of spending increases

Higher education’s primary mission is to provide academic services to students. Despite this mission, the majority of spending growth has been on non-academic services known as auxiliary enterprises. Between FY 2002 and FY 2012, auxiliary enterprise spending accounted for 56 percent (\$1,921) of the total increase in inflation-adjusted, per student spending. The remaining spending increase was relatively evenly distributed across instruction, support services, and other functions such as research (Figure 1-2).

FIGURE 1-2
Auxiliaries were primary driver of increased spending per student (FY 2002–FY 2012)



Source: JLARC staff analysis of data from U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS).

Note: Data is in constant 2013 dollars. Statewide average spending is weighted for enrollment and calculated per full-time equivalent student using Delta Cost Project methodology.

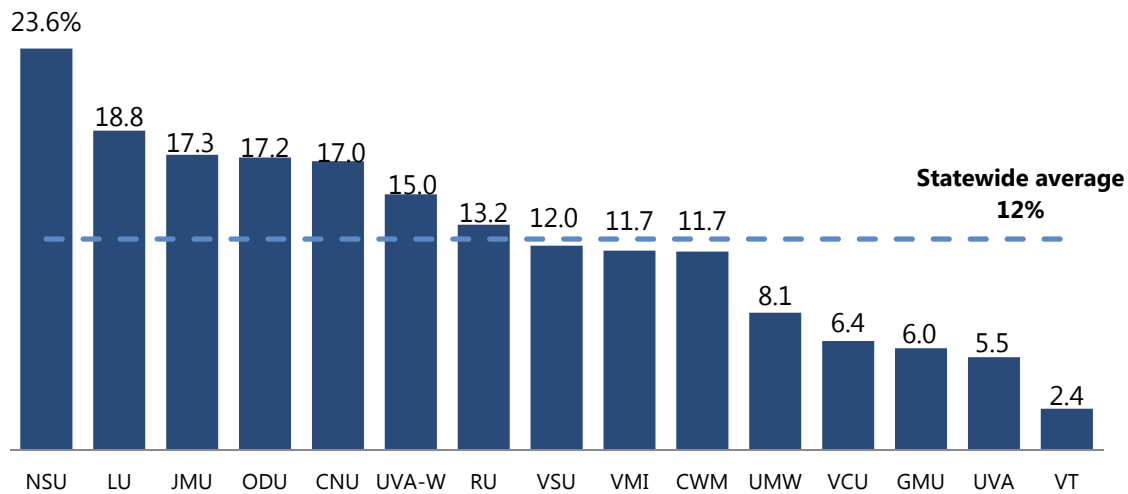
Institutions rely on two types of revenue to fund auxiliary enterprises. The first are user fees, which include what students pay for on-campus housing and dining. User fees for housing and dining are generally comparable to local market equivalents and have not been major factors in increased auxiliary spending. The second are mandatory fees, which all students must pay, that fund a variety of non-academic activities such as student recreation and intercollegiate athletics.

All athletic programs in Virginia's four-year public institutions rely to varying extents on mandatory student fees to subsidize their operations. Twelve percent of what Virginia students paid in tuition and fees in 2012-13, on average, was directed toward intercollegiate athletics (Figure 1-3). The individual percentages ranged widely across institutions: in-state undergraduate students at Virginia Tech paid two percent of their total tuition and fees toward athletics, while nearly one-fourth of what in-state undergraduates paid at Norfolk State went towards athletics.

Athletics spending at Virginia institutions increased more than the national average. Nine of the 14 intercollegiate athletics programs spent more than the median amount of their respective NCAA divisions. Christopher Newport spent almost three times the Division III (with football) median total spending, JMU and ODU both spent more than twice the Division I median, and Mary Washington spent twice the Division III (without football) median.

FIGURE 1-3

Mandatory athletic-related fees comprised an average of 12 percent of total in-state tuition and fees (2012-13)



Source: JLARC staff analysis of interviews with university administrators; SCHEV’s 2012-13 Tuition and Fee Report.
 Note: Tuition and mandatory fees for in-state undergraduate students for the 2012-13 academic year.

Institutions were authorized to spend approximately \$7 billion to renovate existing or construct new facilities

Spending also increased to repay debt used to fund a “building boom” on most campuses. Virginia’s public four-year institutions spent \$3.4 billion on instructional and research facilities between FY 2005 and FY 2012. Between FY 2002 and FY 2012, they were authorized to spend another \$3.5 billion on auxiliary facilities related to the non-academic aspects of campus living. For example, institutions have built or renovated 33 recreation facilities since 2000.

This building boom has resulted in larger campuses, even when accounting for growth in enrollment and research activity. Between FY 2005 and FY 2012, instructional square footage per student increased by more than seven percent at master’s and baccalaureate institutions and by four percent at research institutions. Research facility square footage per \$1 million in research activity increased by 17 percent. As reported in JLARC’s *Review of Academic Spending and Workload*, ODU and Virginia Tech experienced declines in normalized research square footage, while the largest increases occurred at William and Mary and UVA.

State funding and affordability have declined

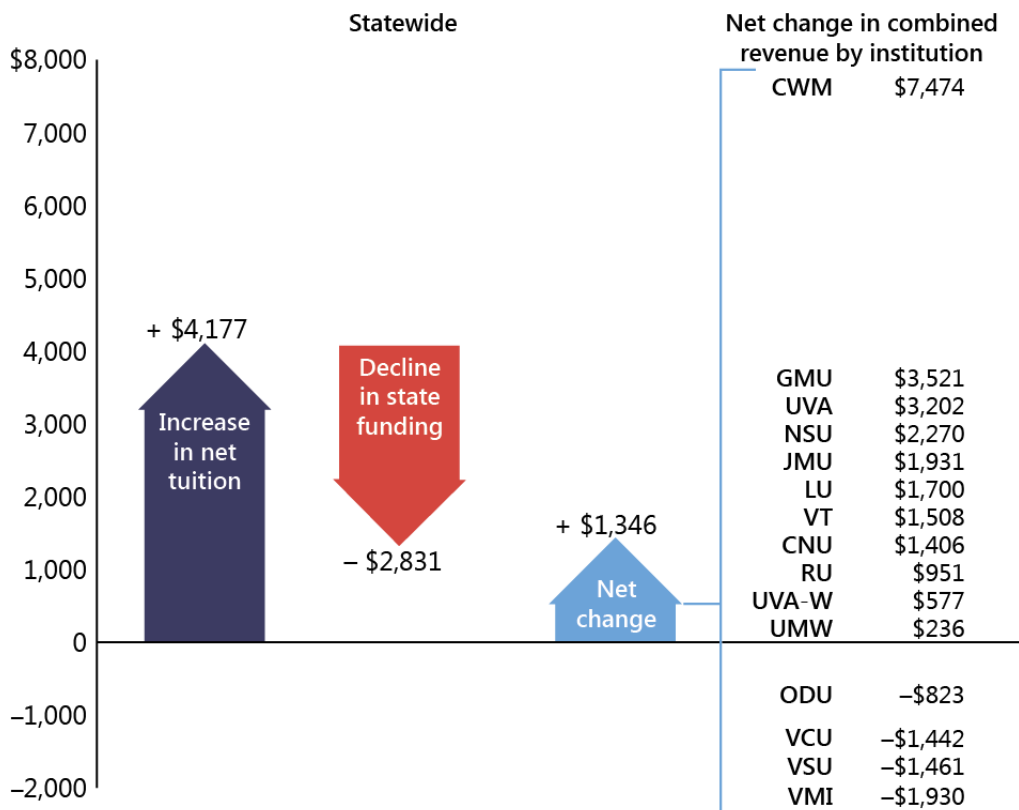
The ability of students to afford higher education is affected by two factors in addition to the level of institutional spending. The first of these factors is how state funding and tuition revenue have changed over time. The less state funding that is

provided, the more institutions must rely on tuition and fees for revenue. The second factor is how much tuition and fees have increased relative to consumer income.

Institutions now rely more on tuition for revenue than state funding

Most Virginia institutions raised tuition and fees to collect additional revenue to compensate for state funding declines. The increase in net tuition revenue varied substantially across institutions, but on average it was more than the decline in state operating funding. Between FY 1998 and FY 2012, the statewide increase in net tuition revenue of \$4,177 exceeded the decline of \$2,831 in state operating support per in-state student, resulting in a net increase in revenue from tuition of \$1,346 (Figure 1-4). This varied widely across institutions, however, with four institutions generating less combined E&G revenue from students and the state in FY 2012 than they did in FY 1998.

FIGURE 1-4
Decline in state funding accounted for majority of increased tuition revenue, although change in revenue varies widely across institutions (FY 1998–FY 2012)

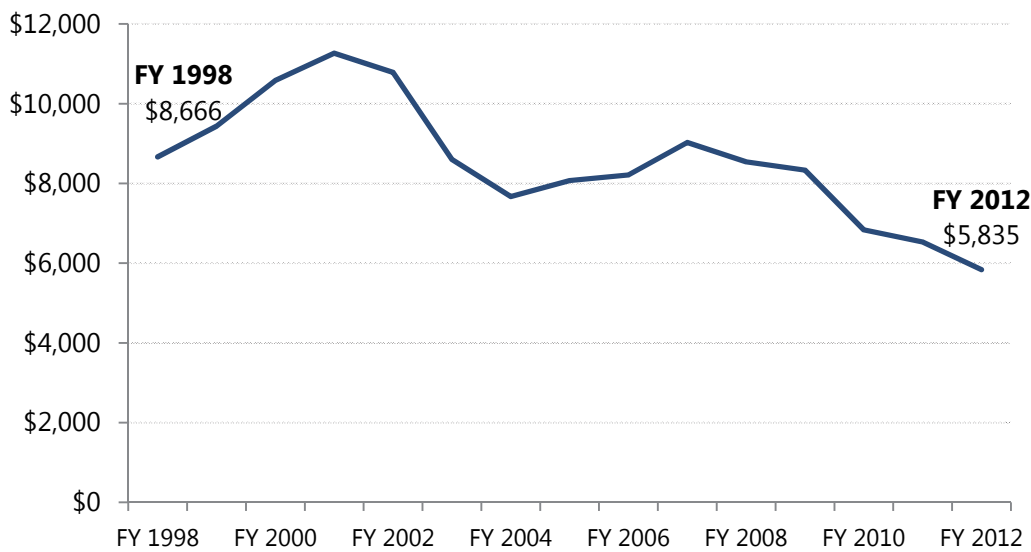


Source: JLARC staff analysis of state appropriations data provided by SCHEV, Delta Cost Project data on FY 1998 net tuition revenue, IPEDS data on FY 2012 net tuition revenue, and the Consumer Price Index.

Notes: Data is in constant 2013 dollars. Net tuition revenue is calculated per full-time equivalent student (for both in-state and out-of-state students) using Delta Cost Project methodology. State appropriations data is calculated per FTE in-state student. Statewide averages are weighted for enrollment.

State general fund appropriations per student declined as enrollments grew between FY 1998 and FY 2012. Inflation-adjusted state support per student in FY 2012 was \$5,835, a 33 percent decline from \$8,666 in FY 1998 (Figure 1-5). As a result of this state funding decline and institutions' raising of tuition, institutions rely far more on students rather than the state to fund their educational operations. In FY 2012, average net tuition revenue was about two-thirds of the combined E&G revenue coming from the state and students, more than 50 percent higher than the proportion from net tuition revenue in FY 1998 (Figure 1-6).

FIGURE 1-5
State operating support per in-state student declined substantially



Source: JLARC staff analysis of appropriations data provided by SCHEV and the annual Consumer Price Index reported by the Bureau of Labor Statistics.

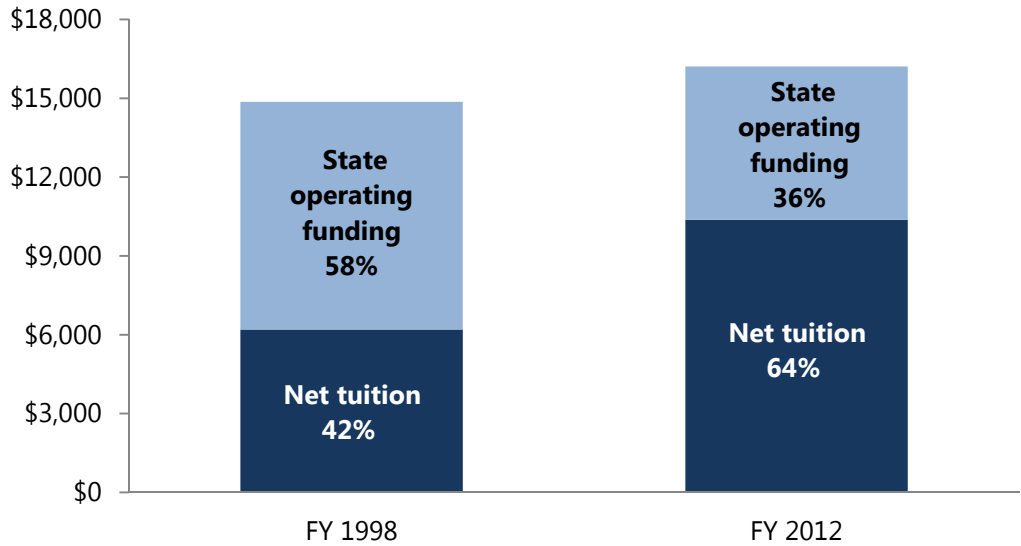
Notes: Data is in constant 2013 dollars. Appropriations calculated per full-time equivalent in-state student.

Tuition and fees increased faster than average income

The cost of higher education now accounts for a larger portion of average income than it did two decades ago (Figure 1-7). The average consumer in 1993 would have devoted about 12 percent of his or her income to pay the average tuition and fees at Virginia's institutions. By 2012, average tuition and fees at Virginia's institutions had grown to equal about 18 percent of average income. This represents a 50 percent increase in the portion of income consumed by average tuition and fees in Virginia.

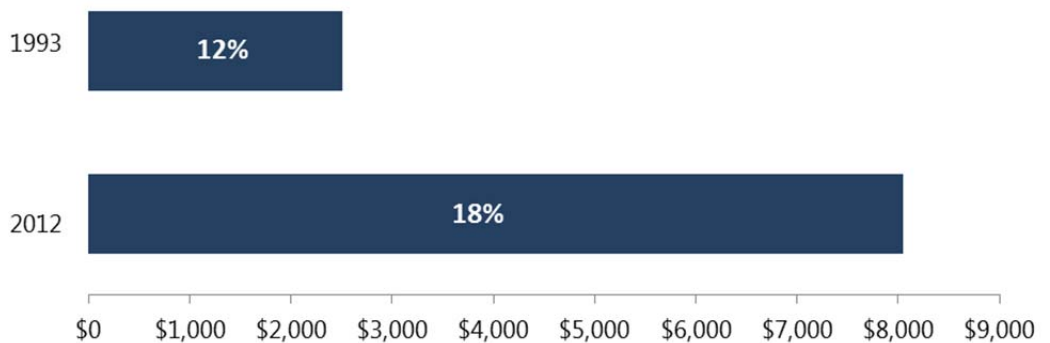
More students rely on student loans and have had to borrow substantially more than in the past. In 1992, the average student borrower at a Virginia public four-year higher education institution borrowed \$3,318. By FY 2011, annual borrowing increased to \$9,893. Inflation only accounted for about \$2,000, less than one-third of the total increase.

FIGURE 1-6
Net tuition revenue per student increased as state operating funding declined



Source: JLARC staff analysis of Delta Cost Project data on FY 1998 net tuition revenue, IPEDS data on FY 2012 net tuition revenue, and SCHEV higher education appropriations data.
Notes: Data is in constant 2013 dollars. State operating funding is per full-time equivalent, in-state student and net tuition is per full-time equivalent student. Data is weighted for enrollment.

FIGURE 1-7
Percentage of income to pay tuition and fees increased by 50 percent



Source: JLARC staff analysis of Consumer Expenditure Survey data, U.S. Bureau of Labor Statistics; tuition and fee data reported by institutions to the National Center for Educational Statistics.

Options and recommendations were developed and assessed considering four key assumptions

The options and recommendations presented in this report are in two broad categories. The first category is constraints on spending, through, for example, better controlling mandatory fee growth for auxiliary services and in capital spending. The second category is a strategic reallocation of existing state and institutional funds to more effectively address concerns with efficiency and affordability.

Four key assumptions were applied in the development and assessment of the options and recommendations presented in this report:

- **Public higher education should be more affordable.** The primary directive of HJR 108 is to address the rising cost of higher education. The options and recommendations presented in this report were developed to reduce the cost of higher education where appropriate.
- **Little or no additional state funding will be available for higher education.** Multiple stakeholders emphasized that it is unlikely substantial additional state funds will be available for public higher education in the future due to continued fiscal volatility and competing budget priorities.
- **Institutions' core academic mission should be sheltered from spending reductions or constraints.** Institutions of public higher education exist to provide instruction and conduct research, not necessarily to provide more or better student amenities.
- **Virginia's decentralized system should be preserved.** Virginia's governance structure is well established and supported by a number of strengths, and fundamentally changing the structure would present many challenges without providing a clear benefit.

The recommendations and options presented throughout this report will affect each institution to varying degrees if implemented. Some recommendations and options will not affect particular institutions at all but may result in considerable changes at others. Recommendations and options will need to be implemented with careful consideration of each institution's mission and other factors, such as how much revenue their athletic programs generate or the condition of existing facilities.

2 Public Higher Education Governance in Virginia

SUMMARY In Virginia’s highly decentralized system, the General Assembly has delegated primary authority for key decisions to each institution’s board of visitors. Despite this delegated authority, many board members do not have a background in higher education or finance. Board members also appear to have insufficient influence on certain key decisions, including those related to institutional efficiency and non-academic spending. SCHEV should provide training to board members who serve on finance and facilities subcommittees to help them better understand what information to request of institutional staff when deciding whether to approve proposals. More broadly, given the number of recommendations and options made by JLARC staff to improve higher education, the General Assembly may wish to appoint a joint legislative subcommittee to oversee higher education funding reform.

Institutional boards of visitors, the State Council of Higher Education for Virginia (SCHEV), and the legislature each have an important role in Virginia’s decentralized system of higher education governance. This report does not include recommendations or options to fundamentally alter Virginia’s decentralized higher education system. Many recommendations and options, though, will require effective governance to successfully implement.

Decentralized system has multiple and varying goals and missions

Multiple stakeholders oversee Virginia’s public higher education system, and institutions have various missions that serve different student populations. This decentralized approach to higher education governance is often viewed as a strength of Virginia’s public higher education system. It has also allowed for a multitude of state and institutional goals, which can be in conflict.

State higher education is governed by multiple entities and is more decentralized than most other states

Virginia higher education is governed by the institutions’ boards of visitors, SCHEV, the governor, the General Assembly, and several state committees. Boards of visitors have substantial autonomy, including the authority to define their academic missions, hire and fire presidents, and set tuition and fees (Figure 2-1).

Public higher education is more decentralized in Virginia than in most other states (Figure 2-2). Twenty-four states manage their higher education systems through

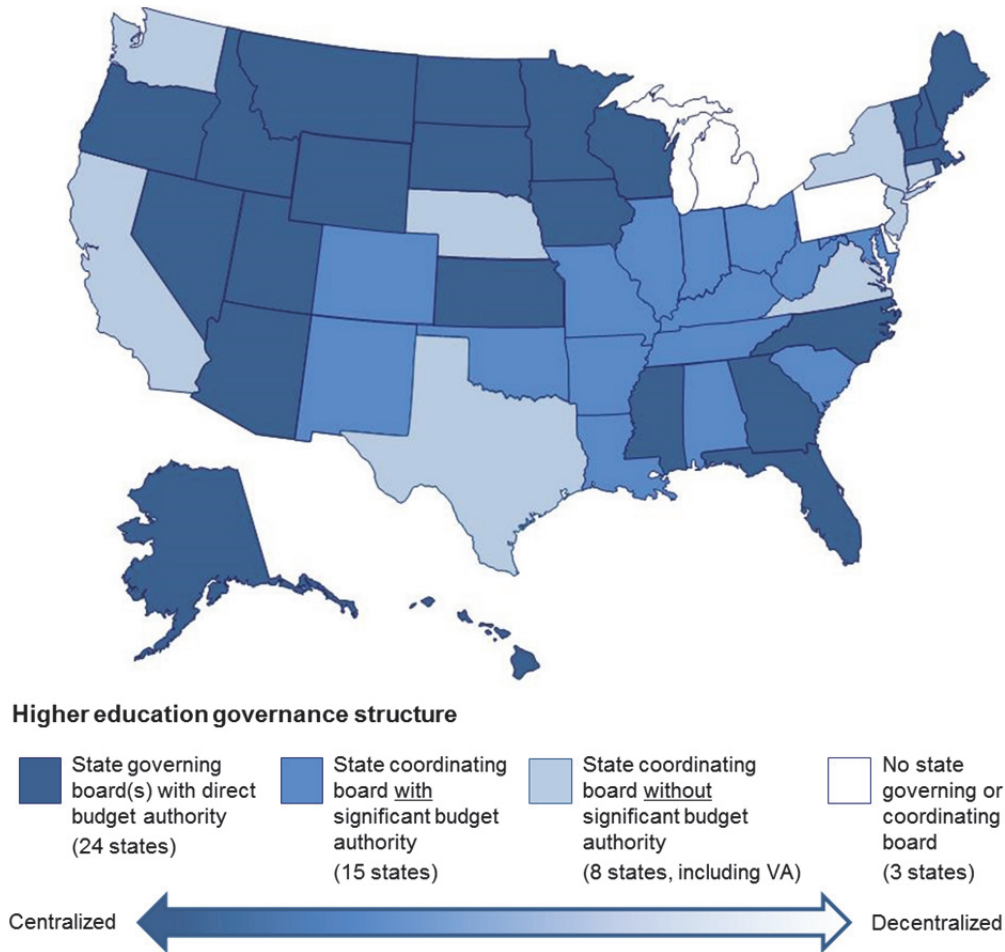
statewide governing boards that have a high degree of operational and budgetary authority over each public institution. Virginia, in contrast, is one of 23 states with a higher education coordinating board, which typically have minimal operational authority. Coordinating boards such as SCHEV usually have responsibility for statewide

FIGURE 2-1
Multiple entities have responsibility for overseeing higher education in Virginia



Source: JLARC staff analysis of agency documentation and the Code of Virginia.

FIGURE 2-2
Public higher education is more decentralized in Virginia than in most other states



Source: JLARC staff analysis of "Higher Education Governance Structure," Legislative Program Review and Investigations Committee, Connecticut General Assembly, December 2010.

strategic planning and data collection. Virginia is one of only eight states whose coordinating board has no direct budget authority. In these eight states, the coordinating board reviews and makes recommendations about each institution's budget but is not authorized to change institutional budget requests. Currently, three states have no statewide higher education governance or coordinating entities.

Research on the effect of higher education governance structures on student outcomes has not typically found a superior statewide governance model. Strong higher education systems are found in states with either governance model. Because the research literature is inconclusive, experts caution that changing a state's higher education governance structure should not be the primary way to meet statewide goals.

State has established multiple conflicting higher education goals

The state has established numerous higher education goals in the Code of Virginia and in SCHEV's statewide higher education strategic plan. Some goals relate to increasing access to higher education, such as awarding 100,000 additional degrees or improving quality. Other goals relate to the cost of higher education, including cost efficiency, stable state funding, and affordability to students.

The state's higher education goals are sometimes in conflict. For example, the goal to improve student affordability can conflict with the goal

- to provide a high-quality education, unless additional resources are made available from the state or other sources; and
- to increase student access to higher education, given that additional resources may be required to educate non-traditional students.

Institutions have widely varying missions and student populations

Institutions establish their own goals in their mission and vision statements, strategic plans, six-year operating plans, and master capital plans. Many of their goals are similar to the state's goals, including improving academic quality and promoting research. Other institutional goals bear little relation to the state's higher education agenda. For example, several institutions state in their strategic plans the goals of increasing their national prestige and expanding athletic programs.

There is wide variation in mission across Virginia's public four-year institutions. Norfolk State and Virginia State are historically black universities, and VMI offers higher education in a military environment. UVA, VCU, Virginia Tech, William and Mary, George Mason, and ODU are classified as doctoral universities, while the other institutions offer primarily baccalaureate and master's degrees. An institution's mission affects its spending, as factors such as academic programs, research activity, and on-campus student populations determine resources needed for operation.

The composition of an institution's student body also affects institutional costs and financial resources. For example, institutions enrolling a greater proportion of low-income students or in-state students tend to have less capacity to generate tuition revenue than institutions with greater shares of high-income or out-of-state students. The percentage of students who receive Pell grants, which are federal grants for low-income students, ranged from 12 percent at UVA to 67 percent at Norfolk State. At VMI, 58 percent of students are in-state, while at Christopher Newport, 96 percent of students are in-state.

Boards of visitors have limited influence in key areas

Boards of visitors play a critical role in Virginia's higher education system because of the substantial authority delegated to them by the General Assembly. In particular, their authorities to approve institutional budgets and set tuition and fees give them

an opportunity to influence student costs. Therefore, JLARC staff assessed their role and the extent to which board members are able to influence certain key institutional decisions.

Boards of visitors generally prioritize institutional goals

The Code of Virginia is unclear about the mission of boards of visitors in statewide higher education. The Code language vaguely states that boards “shall make all needful rules and regulations concerning the colleges” (§ 23-44). Although the Code does not lay out the responsibility of boards of visitors generally, for one institution the Code states that the board should “do all things . . . [that] seem best adapted to accomplish the legitimate objects of the University” (§ 23-167), suggesting that the board’s primary responsibility is to the institution. The bylaws of several institutions suggest that the board’s primary responsibility is to advance institutional goals.

According to a former member of the Virginia Commission on Higher Education Board Appointments (VCHEBA), most board members view their job as advancing institutional rather than state goals. Of current board members responding to a JLARC staff survey, 16 percent said institutional priorities take precedence extremely or very often and another 43 percent said they sometimes take precedence. The remaining 42 percent said that institutional priorities rarely or never take precedence over state goals.

Further, many board members report having an insufficient understanding of the state’s goals. Nearly half of current board members responding to the JLARC staff survey reported that Virginia’s statewide higher education goals were only “somewhat,” “slightly,” or “not at all” clear and understandable. This lack of clarity may at least partially be due to the state’s numerous and often conflicting goals.

Most boards of visitors members lack higher education background

The Code of Virginia has few professional requirements for board members. Most of the requirements specify only that a board have a minimum number of members who are Virginia residents or alumni. The only professional requirements identified in the Code of Virginia are that the UVA board have at least one physician with experience in an academic medical center, and that the Virginia Tech board include the president of the state Board of Agriculture and Consumer Services.

While there are few statutory requirements, Virginia’s appointment process does attempt to consider board members’ professional backgrounds. The Code of Virginia requires VCHEBA to evaluate potential appointments based on “substantive qualifications, including merit and experience” and make recommendations to the governor. These qualifications have included prior experience on a board, in higher education, in business, or in finance. VCHEBA also considers the needs of an institution based on its mission.

JLARC staff survey of boards of visitors members

The survey of boards of visitors members was distributed to both current and former board members. A total of 97 of 214 current board members responded (45 percent), and 115 former board members. Additional information about the survey can be found in Appendix B.

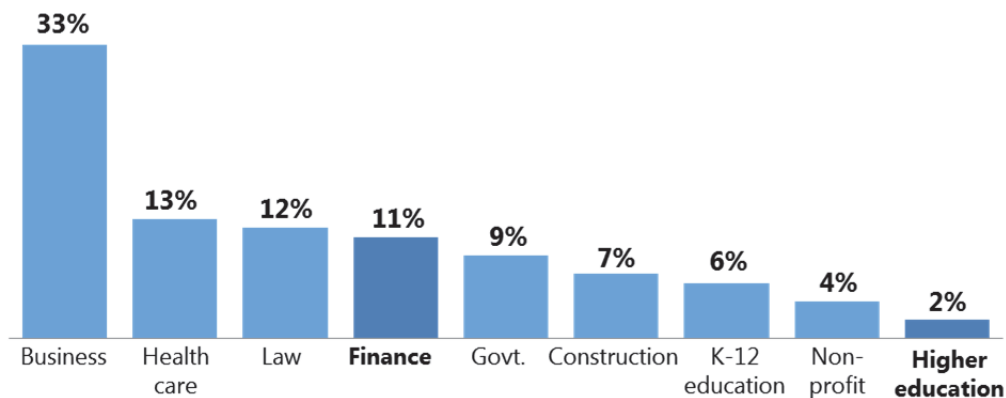
VCHEBA

The Virginia Commission on Higher Education Board Appointments is an executive advisory commission that evaluates potential appointments to boards of visitors and makes recommendations to the governor.

However, VCHEBA’s influence on board member appointments appears to vary across gubernatorial administrations. The governor is not required to follow the recommendations of VCHEBA. State stakeholders report that while some governors have selected most or all board appointments from VCHEBA’s recommendations, the recommendations were less influential during other administrations.

Most of the current boards of visitors members at Virginia’s public institutions have backgrounds in areas other than higher education. Only two percent of current board members responding to the JLARC staff survey reported having a primary professional background in higher education and 11 percent reported a background in finance (Figure 2-3). Nearly one-third of current members reported that they understand higher education operations or public finance only “somewhat,” “slightly,” or “not at all.”

FIGURE 2-3
Board members have limited background in higher education or finance



Source: JLARC staff analysis of responses from a 2014 survey of boards of visitors members.
 Notes: Current board members at Virginia’s public four-year institutions. Not shown in figure: five percent reported a professional background in science, technology, engineering, or mathematics; four percent in military; two percent in agriculture; and one percent in manufacturing.

Virginia institutions appear to have fewer board members with professional backgrounds in education than public institutions nationwide. Based on a survey by the Association of Governing Boards (national), approximately 16 percent of board members at institutions nationwide have a professional background in education. Only eight percent of current board members in Virginia responding to the JLARC staff survey reported that their primary professional background was in education (either K-12 or higher education).

Board members report limited ability to influence key spending areas

Insufficient professional backgrounds in relevant areas, such as higher education and finance, may limit board members’ ability to know what information to ask for to make certain decisions. Staff at the Association of Governing Boards said one main

factor limiting institutional governing boards' effectiveness is insufficient information. For example, board members often receive summary data but not detailed breakouts and benchmark data to better inform their decision making. Institutional staff and board members in Virginia had similar comments in interviews and on the JLARC staff survey.

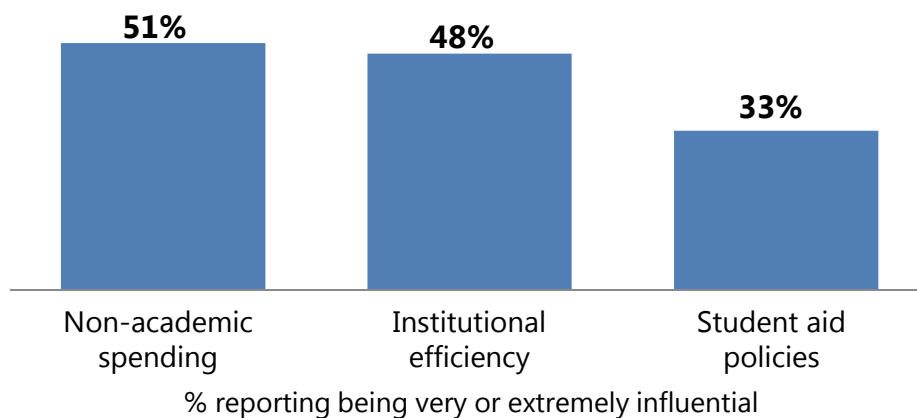
We need to find ways to empower [board] members to push back against the administration. In talking with [board] members at other institutions, they seem to have similar issues where they don't get the full story on major financial decisions until either hours before the meetings or not at all.

The issue is that people don't get placed onto boards because of their experience, so they don't understand what they need to do. It takes a board member about two years to understand their role.

The biggest issue is that new members know little about university budgeting and financial systems.

Board members report having a limited ability to influence certain institutional decisions (Figure 2-4). For example, with regard to student aid policies, only one-third of current board members responding to the JLARC staff survey reported being "very" or "extremely" influential over decisions. Only about half of current board members reported being "very" or "extremely" influential over decisions about institutional efficiency or non-academic spending.

FIGURE 2-4
Board members report limited ability to influence certain decisions



Source: JLARC staff analysis of responses from a 2014 survey of boards of visitors members.
Notes: Current board members at Virginia's public four-year institutions. The remaining survey respondents reported being not at all, slightly, or somewhat influential in the decisions.

Additional training could improve board members' ability to govern institutions

Training can be one way to improve board members' ability to influence institutional decisions. Virginia is one of 14 states that provide training for institutional board members, and one of five that statutorily requires such training. Institutions also offer their own training that is tailored to the institution.

Recent legislation has expanded training for members of boards of visitors. Since 1996, the Code of Virginia has required SCHEV to provide training for new board members, but members were not required to attend. In 2013, the General Assembly specified that SCHEV must provide training annually, that board members must attend within their first two years of service, and that the programs should address 18 topics including finance and facilities. In 2014, the General Assembly also required the training to address board members' duty to the Commonwealth.

The current training provides a broad overview of higher education finance, among other topics. According to SCHEV staff, it has primarily focused on the roles of relevant state agencies and the state's ability to fund higher education but has not focused on capital spending. The improvement most often suggested by current board members on the JLARC staff survey and in interviews was more detailed training on higher education costs and budgeting. One current board member commented that "the SCHEV training module on 'understanding costs and budgeting' had a laudable title but under-delivered on the promise. . . . Smaller breakout sessions that delved into the particulars . . . would have been a much more valuable exercise."

SCHEV should train board members serving on finance and facilities subcommittees, as recommended by national higher education experts. Such training may be particularly beneficial to these subcommittee members due to the complexity of higher education finance and capital, as well as their role in institutional spending decisions. Such training should address the importance of obtaining and using information like the following in their decision making:

- performance measures such as cost per student, cost per degree, or cost per program rather than total expenditures;
- benchmarking data based on standard cost methodologies and comparison to other similar institutions nationwide;
- impact of financial decisions on student costs; and
- past and projected cost trends.

RECOMMENDATION 1

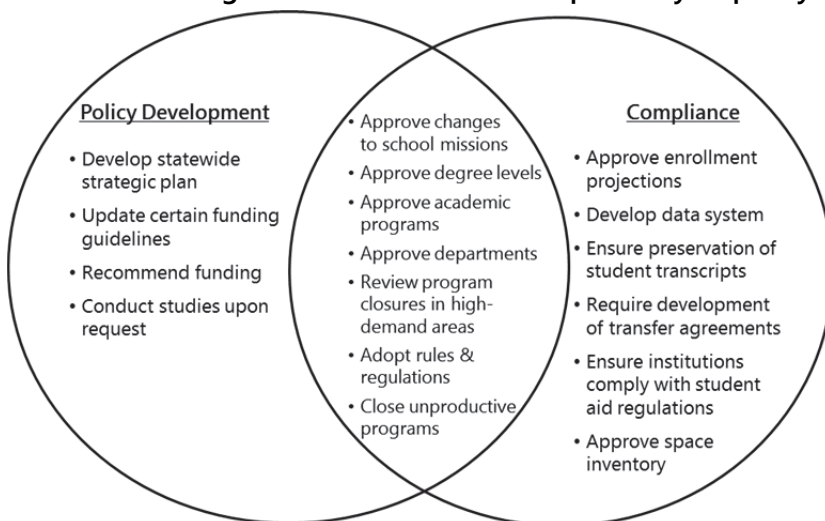
The General Assembly may wish to consider amending the Code of Virginia to require the State Council of Higher Education for Virginia (SCHEV) to annually train boards of visitors members who serve on finance and facilities subcommittees. The training should address the types of information members should request from institutions to inform decision making, such as performance measures, benchmarking data, the impact of financial decisions on student costs, and past and projected cost trends. Boards of visitors members serving on finance and facilities subcommittees should, at a minimum, participate in the training within their first year of membership on the subcommittee. SCHEV should obtain assistance in developing or delivering the training from relevant agencies such as the Department of General Services and past or present finance officers at Virginia’s public four-year institutions, as appropriate.

SCHEV has limited policy development role

According to experts, higher education coordinating boards such as SCHEV have two primary functions: to ensure that institutions comply with state regulations and to assist in the development of state higher education policies. Due to fiscal constraints, SCHEV and other state coordinating boards have diminishing resources, which are mostly devoted to fulfilling their compliance roles.

By statute, SCHEV has a limited policy development role and no direct budget authority. Most of SCHEV’s general duties are more directly related to compliance than policy development, although some duties relate to both compliance and policy development (Figure 2-5). The Code of Virginia also specifies several other duties, including disbursing student aid and reporting annually on tuition and fee charges.

FIGURE 2-5
Few of SCHEV’s general duties are related primarily to policy development



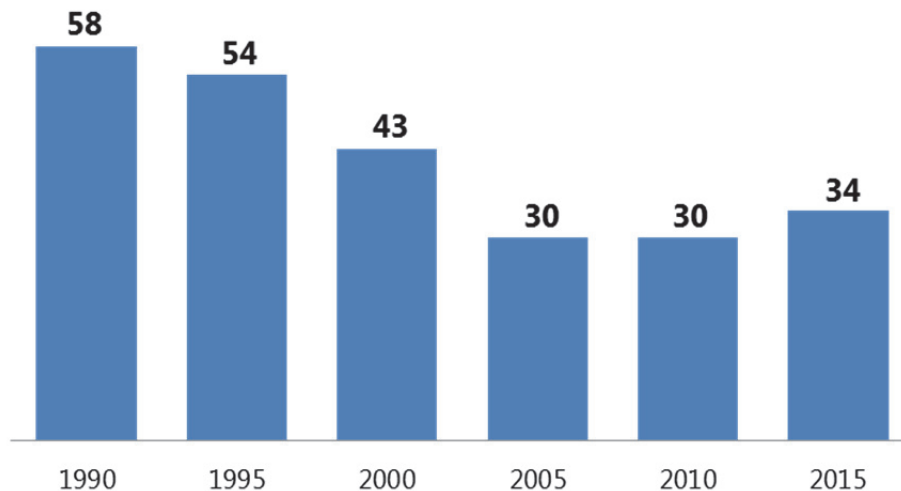
Source: JLARC staff analysis of SCHEV’s general duties in the Code of Virginia.
 Note: Code of Virginia also specifies several other duties, including disbursing student aid.

OpSix

The Six-Person Operating Advisory Committee (OpSix) reviews and provides feedback on institutions' six-year operating plans. OpSix comprises the Secretaries of Finance and Education, SCHEV, the Department of Planning and Budget, and the House Appropriations and Senate Finance Committees.

Several higher education stakeholders expressed concern that SCHEV has become less involved in policy development over time. Several factors may explain this declining policy role. First, the number of applicable SCHEV full-time-equivalent staff decreased by 41 percent from 58 to 34 full-time staff between FY 1990 and FY 2015 (Figure 2-6). SCHEV staff report that its staffing decline has reduced its ability to conduct higher education research and policy development, including evaluating institutional initiatives and proposing innovative statewide funding programs for higher education. Similarly, stakeholders report that SCHEV had to discontinue several activities, such as monitoring institutional progress toward its recommendations and visiting the institutions to independently verify facility data. Second, some of SCHEV's responsibilities have been transferred to OpSix and the Higher Education Advisory Committee. Third, due to perceptions among stakeholders that SCHEV's recommendations are based on inaccurate or outdated information or are incompatible with budget constraints, SCHEV's guidelines and recommendations are not typically followed. For example, JLARC's 2013 report on academic spending found that institutions place little emphasis on SCHEV's space utilization guidelines when making capital spending decisions, because the guidelines are outdated.

FIGURE 2-6
SCHEV staffing has declined (FY 1990–FY 2015)



Source: JLARC staff analysis of the Code of Virginia.

Notes: Number of FTE general-fund-supported staff. These staff are responsible for SCHEV's core responsibilities, which exclude responsibilities for private higher education. The number of staff increased to 39 between FY 2007 and FY 2009, but was again reduced in FY 2010.

SCHEV is in the process of expanding its policy development role, having recently hired a director of higher education innovation who is responsible for identifying best practices in Virginia and around the country to improve the quality and efficiency of higher education. Several options and recommendations included in this report would increase SCHEV's policy role in particular areas including capital funding and

student aid. Implementing some of the options in this report may necessitate funding additional personnel resources for SCHEV.

Joint legislative subcommittee could oversee higher education reforms

Virginia may benefit from establishing a temporary legislative entity to oversee higher education reforms. Higher education is a complex policy area, and reforms will require the cooperation of numerous stakeholders with differing goals. This report, and the preceding four reports in JLARC's series on higher education, collectively present seven options and 32 recommendations to address state funding, capital spending, auxiliary operations, and other matters related to costs and affordability of public four-year higher education in Virginia.

Because legislative action would be required in certain cases, a joint legislative subcommittee may be best positioned to oversee efforts to address the recommendations and options presented in the JLARC higher education series. Such a subcommittee could monitor progress on higher education reforms, draft legislation, and consider strategic issues related to the funding and performance of higher education. Unlike other higher education committees, this joint legislative subcommittee would be temporary and have broader legislative representation. The joint subcommittee could be composed of members of the House Appropriations and Senate Finance committees. Assistance to the joint subcommittee could be provided by staff of the House Appropriations and Senate Finance committees, SCHEV, higher education institutions, and other state agencies with roles in higher education.

OPTION 1

The General Assembly could create a joint subcommittee to oversee implementation of the recommendations and options from the Joint Legislative Audit and Review Commission higher education report series. The subcommittee should at minimum comprise members of the House Appropriations, House Education, Senate Education and Health, and Senate Finance Committees.

3 Reliance on Tuition Increased as State Funding Declined

SUMMARY State operating funding per student in Virginia has not kept pace with inflation or enrollment growth. Consequently, all institutions, to varying degrees, rely more heavily on tuition revenue to fund their operations. Tuition increased from 42 to 64 percent of combined state- and student-funded E&G revenue between FY 1998 and FY 2012. Statewide, increases in tuition revenue exceeded declining state operating funding, although there is considerable variation across institutions. Certain characteristics make it less likely that institutions such as Virginia State, UVA-Wise, Norfolk State, and ODU are able to adapt to state funding declines to the same degree as other institutions, especially UVA, William and Mary, and VMI. Most public institutions will likely face difficulty continuing to offset declining state funding by raising additional tuition revenue due to expected changes in the higher education environment, including reduced demand for higher education and demographic shifts.

Virginia’s public four-year institutions spent \$4.7 billion on education and general (E&G) operations (\$24,985 per student) in FY 2012, an increase of 44 percent over spending in FY 1998 (inflation-adjusted). As JLARC’s December 2013 *Review of Academic Spending at Virginia’s Public Higher Education Institutions* found, enrollment growth is the most substantial driver of increased spending on E&G operations. After accounting for increased enrollment and inflation, average E&G spending per student grew by nine percent (\$2,125) during this period, or less than one percent per fiscal year. (See Appendix F, online only, for additional information on E&G spending.)

While E&G spending increases contributed to the rising price of higher education to a limited extent, reductions in state operating funding also contributed. Many stakeholders and institutional staff expressed concerns about the resulting effect on student affordability, because the majority of Virginia’s public institutions rely primarily on state funding and tuition revenue to fund E&G functions.

Institutions rely more on tuition to fund E&G operations, due to declining state operating funding

According to experts, higher education funding is generally less stable than funding for other major state budget areas, both nationwide and in Virginia. Higher education funding has typically increased at higher rates than funding for other functional areas of the state budget during periods of growth but has disproportionately declined during periods of fiscal constraint. As stakeholders and experts note, institutions have the ability to increase tuition and fee revenue and gen-

E&G operations

Education and general (E&G) operations directly support institutions’ core missions. E&G includes instruction, research, public service, academic and institutional support services, and operation and maintenance of the physical plant.

Base year of analysis

Data presented in Chapters 3, 4, and 5 generally use FY 1998 as the base year of analysis, which allows for longitudinal comparison of spending and revenue without starting from a recessionary period.

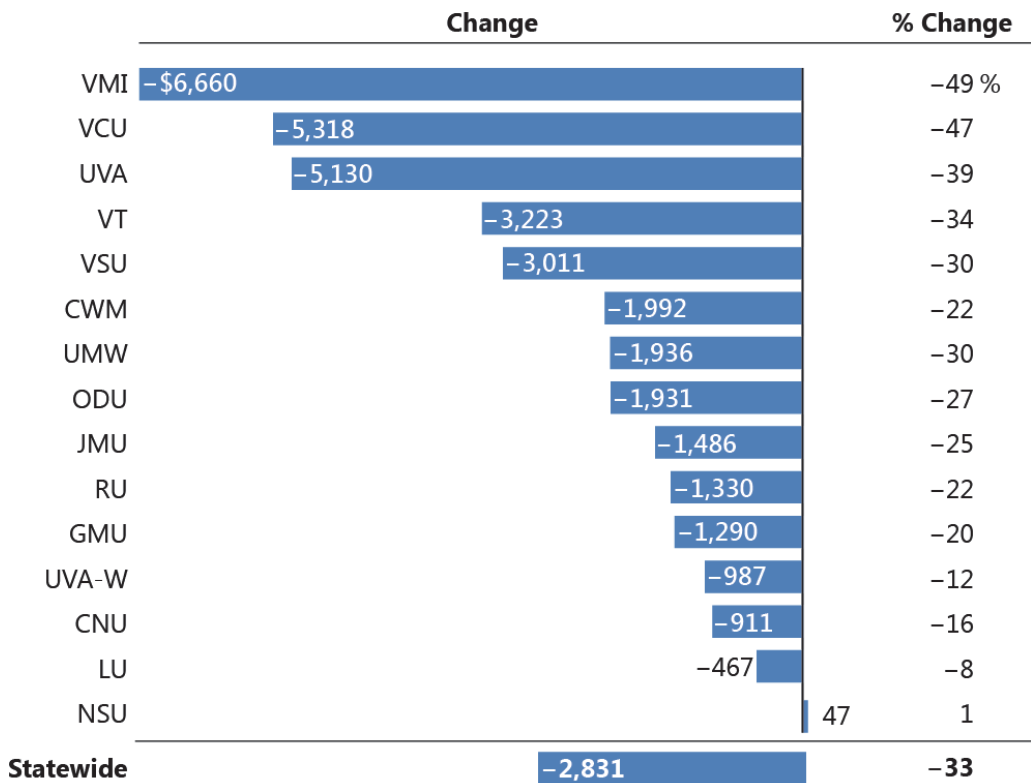
erally have more flexibility than other state agencies in their spending patterns. Additionally, many states—including Virginia—have no state constitutional mandate for higher education funding, as they have for K-12 education funding.

State operating funding per in-state student declined at all but one Virginia institution

In Virginia, state operating funding per in-state student declined at nearly all public four-year institutions, and by 33 percent on average, between FY 1998 and FY 2012 (inflation-adjusted). As a result, all institutions now rely more heavily on tuition and fee revenue to fund basic E&G operations. (The state’s base adequacy model estimates the level of funding needed to adequately maintain basic E&G operations at each institution. See Chapter 4 for additional information.)

State funding per in-state student increased only at Norfolk State (due to declining enrollment) and declined at the remaining 14 institutions to varying extents. Five institutions—Virginia State, Virginia Tech, UVA, VCU, and VMI—experienced a decline in state funding of \$3,000 per in-state student or more (Table 3-1).

TABLE 3-1
State operating funding per in-state student declined at most institutions
(FY 1998–FY 2012)



Source: JLARC staff analysis of state appropriations data provided by SCHEV and the Consumer Price Index.
 Notes: Data is in constant 2013 dollars and is calculated per full-time equivalent in-state student. Statewide average is weighted for enrollment.

Virginia's funding for public higher education institutions has consistently been below that of other states. In FY 2012, Virginia provided \$4,842 in state funding per public student, compared to \$5,923 on average nationwide and \$6,012 on average among southeast states. Virginia's funding for higher education declined at a rate similar to other states, reflecting national economic conditions and state budgetary constraints.

Substantial enrollment growth at Virginia's public institutions also contributed to declining state funding per student. In FY 2012, total operating funding for the public four-year institutions was comparable to levels of funding in the early- to mid-1990s, after accounting for inflation. However, in-state enrollment increased by 34,465 students (30 percent) between FY 1998 and FY 2012. State funding did not keep pace with enrollment growth, and operating funding per in-state student declined by \$2,831 during this period.

CASE STUDY

State funding did not keep pace with enrollment growth at VCU

VCU's state operating funding declined by \$41.3 million, or 22 percent, between FY 1998 and FY 2012 (inflation-adjusted). These reductions coincided with substantial enrollment growth and amounted to a decline of \$5,318 in state funding per in-state student.

VCU staff report that declining state funding contributed to conditions that may affect academic quality. For example, VCU's student-faculty ratio expanded by nearly 50 percent, from 13:1 in FY 2001 to 19:1 in FY 2012.

VCU partially replaced declining state operating funding with tuition revenue. The institution made substantial increases to in-state undergraduate tuition and mandatory E&G fees over this period (30 percent for the 2003-04 and 2010-11 academic years, and 23 percent for the 2013-14 academic year, inflation-adjusted).

Net tuition revenue is a growing share of combined state- and student-funded E&G revenue

Due at least in part to declining state operating funding, published tuition and mandatory E&G fees increased significantly at most of Virginia's public four-year institutions to support their academic missions. As of FY 2012, published in-state undergraduate tuition and mandatory E&G fees averaged \$6,329 per year, increasing by \$2,475 (64 percent) since FY 1999 after accounting for inflation. Growth varied widely across institutions, ranging from \$813 at Norfolk State to \$4,377 at William and Mary. Average published tuition and mandatory E&G fees increased by even more for in-state graduate students (\$3,700), out-of-state graduate students (\$6,979), and out-of-state undergraduates (\$7,948) during this period.

Net tuition revenue

The published price of tuition and mandatory E&G fees, net of institutional grant aid. Net tuition revenue is reported per student FTE for all in-state and out-of-state students.

Tuition and fee data

To provide context for changes in the price of higher education, JLARC staff relied on detailed data from SCHEV's annual tuition and fee reports. The earliest year available was FY 1999.

Institutions actually received less revenue than published tuition increases suggest because they offer grants and tuition waivers to students. This net tuition revenue per student increased \$4,177 (67 percent) between FY 1998 and FY 2012, after accounting for inflation. The amount of additional revenue that institutions generated varied widely, ranging from \$9,466 per student at William and Mary to \$1,108 per student at ODU (Table 3-2).

TABLE 3-2
Increases in net tuition revenue per student varied widely across institutions

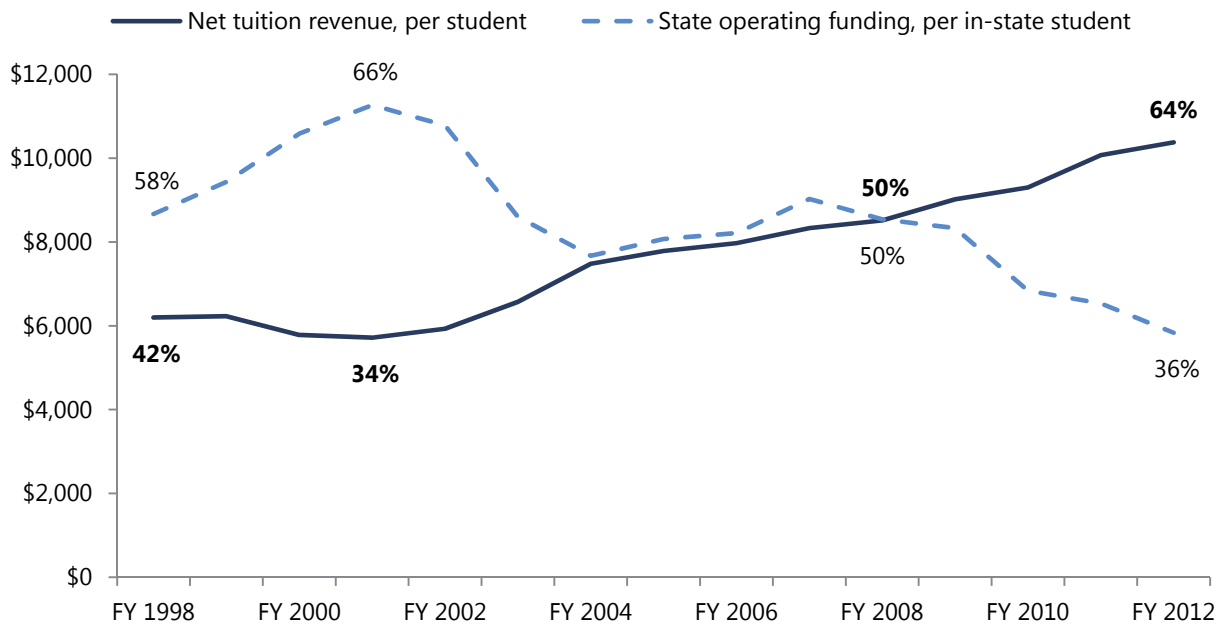
	FY 1998	FY 2012	Change	% Change
CWM	\$7,468	\$16,934	\$9,466	127%
UVA	8,285	16,617	8,332	101
GMU	6,166	10,977	4,811	78
VT	7,283	12,015	4,732	65
VMI	6,235	10,965	4,730	76
VCU	6,659	10,535	3,875	58
JMU	5,155	8,573	3,418	66
CNU	3,900	6,218	2,317	59
RU	3,939	6,221	2,281	58
NSU	4,128	6,351	2,223	54
UMW	5,564	7,736	2,172	39
LU	4,376	6,543	2,167	50
UVA-W	3,425	4,988	1,564	46
VSU	5,107	6,657	1,550	30
ODU	5,006	6,113	1,108	22
Statewide	\$6,198	\$10,376	\$4,177	67%

Source: JLARC staff analysis of Delta Cost Project data on FY 1998 net tuition revenue, IPEDS data on FY 2012 net tuition revenue, and the Consumer Price Index.

Notes: Data is in constant 2013 dollars and is calculated per full-time equivalent student using Delta Cost Project methodology. Statewide average is weighted for enrollment.

Institutions now rely more on net tuition revenue as a share of combined state- and student-funded E&G revenue. Statewide, net tuition revenue increased from 42 to 64 percent of combined state- and student-funded E&G revenue between FY 1998 and FY 2012 (Figure 3-1).

FIGURE 3-1
After the most recent recession, institutions rely more heavily on net tuition revenue

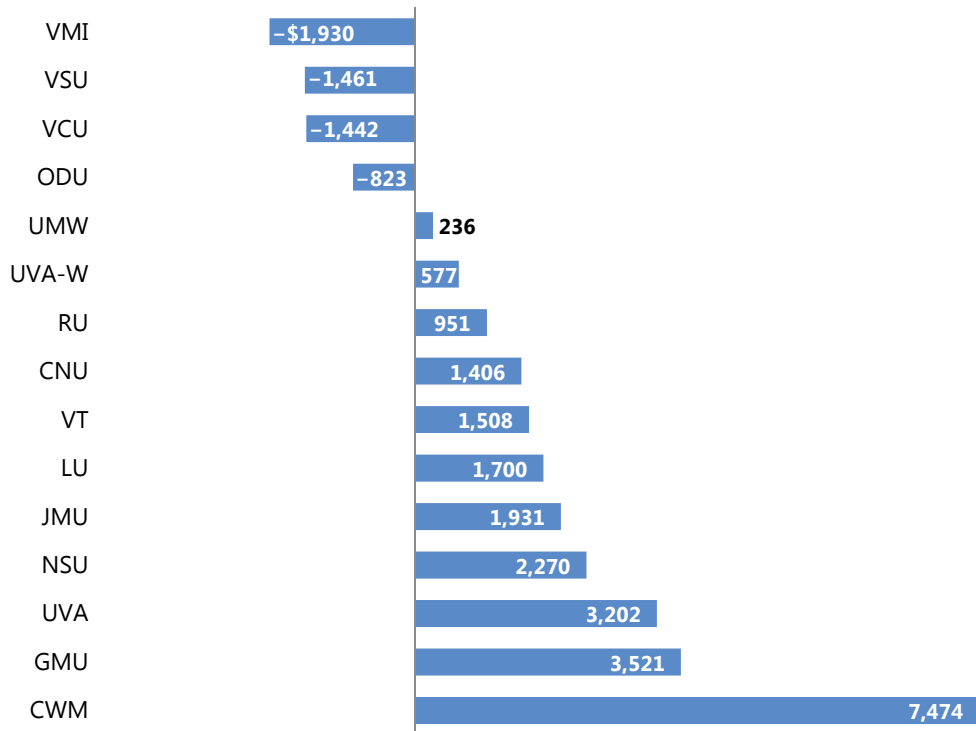


Source: JLARC staff analysis of state appropriations data provided by SCHEV, Delta Cost Project data on FY 1998-FY 2010 net tuition revenue, IPEDS data on FY 2011 and FY 2012 net tuition revenue, and the Consumer Price Index. Notes: Data is in constant 2013 dollars. Net tuition revenue is calculated per full-time equivalent student (for both in-state and out-of-state students) using Delta Cost Project methodology. State appropriations data is calculated per FTE in-state student. Statewide averages are weighted for enrollment.

On average, increases in net tuition revenue exceeded declines in state operating funding between FY 1998 and FY 2012. During this period, the statewide increase in net tuition revenue of \$4,177 exceeded the decline of \$2,831 in state operating support per in-state student after accounting for inflation, resulting in a net increase of \$1,346.

Within this statewide trend, however, increases in net tuition revenue did not offset declines in state funding at four institutions (ODU, VCU, Virginia State, and VMI). As a result, these institutions had less combined state- and student-funded E&G revenue per student in FY 2012 than in FY 1998 (Figure 3-2). Several other institutions experienced relatively small increases in combined state and student-funded E&G revenue per student, including Mary Washington, UVA-Wise, and Radford. In contrast, other institutions (William and Mary, George Mason, UVA) were able to substantially increase the amount of combined state and student-funded E&G revenue generated per student.

FIGURE 3-2
Change in combined state- and student-funded E&G revenue varied considerably by institution (FY 1998–FY 2012)



Source: JLARC staff analysis of Delta Cost Project data on FY 1998 net tuition revenue, IPEDS data on FY 2012 tuition revenue, and the Consumer Price Index.

Notes: Data is in constant 2013 dollars. Net tuition revenue is calculated per full-time equivalent student (for both in-state and out-of-state students) using Delta Cost Project methodology. State appropriations data is calculated per FTE in-state student.

Ability of institutions to increase tuition varies and for most, may be constrained in the future

Virginia’s 15 public four-year institutions vary widely in terms of their ability to adapt to continued declines in state funding. William and Mary and UVA, for example, have a far greater ability to adapt to state funding declines than institutions such as Norfolk State and ODU. The ability of institutions to adapt to not only state funding declines, but broader demographic and economic trends, may need to be a consideration in state funding policy (Chapter 4).

Not all institutions can adapt equally to declining state funding

Certain characteristics make it less likely that access institutions such as Virginia State, UVA-Wise, Norfolk State, and ODU are able to adapt to state funding declines to the same degree as the most selective institutions, notably UVA, William and Mary, and VMI. Other public institutions, such as George Mason, Radford, and VCU, may be relatively less able to adapt to declining state funding given variations in student populations and resources. (See Appendix B for a discussion of these characteristics).

For example, institutions that can better adapt to state funding declines tend to have a more diversified revenue base that includes significant federal and private funds. Some funding from these sources is often restricted for specific purposes, but institutions can use non-restricted funding for E&G operations (sidebar). Relative to the public master's and baccalaureate institutions, the state's research institutions (William and Mary, George Mason, ODU, UVA, VCU, and Virginia Tech) generally benefit most from federal contracts and grants to support sponsored research. Several of Virginia's public four-year institutions—including William and Mary, UVA, and VMI—have among the largest endowments of public institutions nationwide and regionally, in terms of total endowment and on a per-student basis, respectively. The remaining institutions rely more heavily on state funding and tuition revenue.

Institutions that can better adapt to state funding declines also tend to draw a higher percentage of out-of-state students, who pay much higher tuition, which generates more net tuition revenue for institutions. On average, an in-state undergraduate student generated \$8,847 in net tuition revenue in FY 2013, compared to \$22,218 from an out-of-state undergraduate. At UVA, William and Mary, VMI, George Mason, Virginia Tech, and JMU, net tuition revenue from out-of-state students exceeded the statewide average.

Finally, students at Virginia's access institutions typically have less ability to pay for higher education, as indicated by lower expected family contributions. As a result, access institutions generally have a lower ability to replace declining state funding with tuition revenue than other institutions. The median expected family contribution for undergraduates is less than \$5,000 at Norfolk State, Virginia State, UVA-Wise, ODU, and VCU, indicating a relatively low ability to pay (Figure 3-3). Other institutions' students generally have a relatively greater ability to pay for higher education, as indicated by higher expected family contributions.

Access institutions

Institutions that have traditionally provided access to public higher education for all Virginia residents, often with an emphasis on providing access to underrepresented populations, such as low-income students, first-generation college students, minority students, or students from a particular region of Virginia.

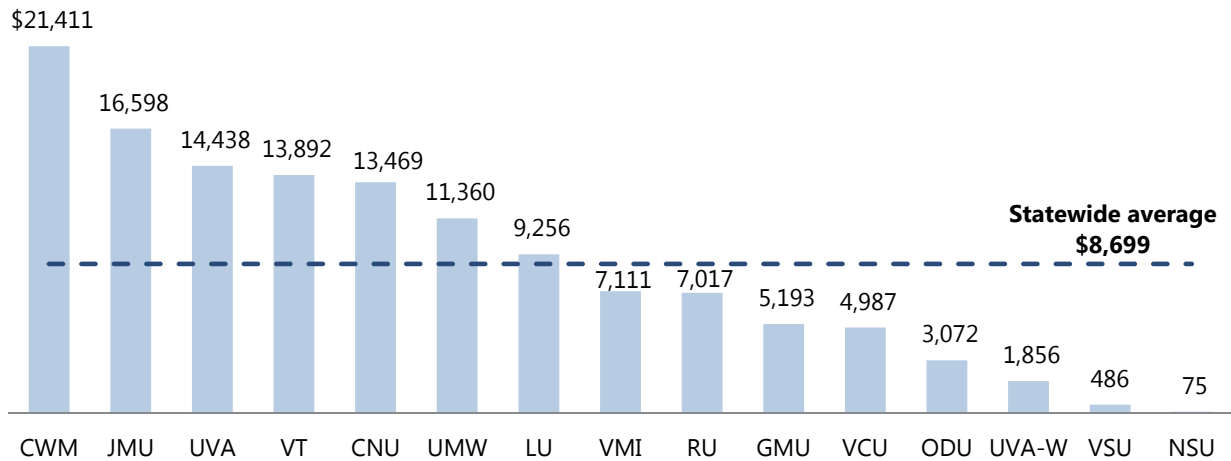
Restricted and non-restricted funds

Restricted funds are available for funding operations but are limited in use by donors or other external agencies for specific purposes, including specific academic programs or functions, such as research. Unrestricted funds have no stipulation as to the purpose for which the funds should be spent.

Expected family contribution

The amount the federal government expects a family to pay for higher education, based on factors including family income, family size, and number of family members in college.

FIGURE 3-3
Median expected family contribution of undergraduates varies widely
(FY 2012)



Source: JLARC staff analysis of student aid data provided by SCHEV, net tuition revenue data from IPEDS, and student enrollment data from SCHEV's E05 report.

Note: Median expected family contribution for in-state and out-of-state undergraduate students applying for financial aid. Statewide average is weighted for enrollment.

Institutions' ability to raise tuition to fund E&G operations may be further constrained in the future

The ability of Virginia's public institutions to continue generating additional net tuition revenue to fund E&G operations may be limited in the future. Three factors in particular will likely make it more difficult for public institutions to continue to offset state funding declines by raising tuition.

First, experts note that concerns over student affordability—intensified by depressed family incomes and net worth, unemployment or underemployment of recent college graduates, and rising debt levels of college graduates—will likely play a role in reducing the demand for higher education. Experts predict that this reduced demand may result in enrollment declines at some graduate programs and smaller institutions with lower national rankings. Several of Virginia's public four-year institutions experienced enrollment declines in recent years, including Norfolk State, Mary Washington, and, most recently, Virginia State. SCHEV's enrollment projections also forecast a declining student headcount between FY 2013 and FY 2020 at Christopher Newport (two percent), UVA-Wise (two percent), VMI (four percent), and Norfolk State (six percent), as well as declining FTE enrollments at Christopher Newport, VMI, and Norfolk State. Tuition and mandatory E&G fees, as well as mandatory non-E&G fees, may be significantly affected if an institution must spread fixed costs associated with personnel, facilities, and contracts over a smaller number of students.

Students from lower-income families tend to be more price sensitive than students from higher-income families. Higher price sensitivity may limit the ability of institutions to rely on tuition to fund their academic missions. Nationwide, 40 percent of public and private not-for-profit institutions have already begun to anticipate a flattening or decline in net tuition revenue. Experts suggest that institutions that are tuition-dependent may be challenged to make “necessary investments in personnel, programs, and facilities to remain competitive over the longer term.”

Second, experts point to demographic changes as another constraint. Federal data projections indicate that an overall slowing of college enrollments will occur simultaneously with growing enrollment among non-traditional students, minority populations, and lower-income students. Experts note that these are more likely to be first-generation college students, who may require additional support services to improve the likelihood of their retention and eventual graduation. Staff at Virginia’s public four-year institutions note that support services include more than just academic support, traditional advising, and mentoring. Several institutions have begun offering financial advising for students and recent graduates, as well as targeted advising, guided course registration, and other initiatives to help improve graduation rates.

Third, institutions that are generally better positioned to raise tuition may face constraints in setting tuition rates for out-of-state students, thereby limiting their ability to cross-subsidize the educational costs of in-state students. These institutions may be unable to continue increasing already high out-of-state tuition rates, due to concerns about continued ability to attract these students. Staff at one institution noted that its out-of-state undergraduate tuition rate is approaching rates charged by private institutions and expressed concern that this may begin to negatively affect enrollment. As noted above, a decline in out-of-state enrollment may result in the need to raise additional tuition revenue from in-state students.

Support services

Support functions facilitate an institution's core academic mission by providing services to students, including academic advising, financial advising, and resource centers, such as for writing or math.

4 Revising Allocation of State Operating Funding

SUMMARY Virginia’s funding policies and goals are intended to guide the allocation of state higher education operating funding and address the shared funding responsibility of the state and students. Although the base adequacy model objectively estimates funding needed to support basic E&G operations, the state should update the model. Institutions’ differing abilities to generate tuition revenue are not reflected in the state’s cost-share policy, and it could be modified to better reflect these concerns. The state could also allocate operating funding based on whether institutions exceed or fall below base adequacy funding guidelines to better account for the effects of resource constraints on academic services and student costs. Directing funding toward basic E&G operations before funding institutional initiatives or rewarding performance outcomes may also help address this concern. If additional state resources become available, the state could address student affordability through statewide tuition control policies paired with additional operating funding.

Virginia has established higher education funding policies and goals to guide the allocation of state operating funding and to address the shared funding responsibility of the state and students. Institutional staff, and some state stakeholders, generally support the continued use of the state’s funding policies and goals, despite some concerns with components of the funding framework that have contributed to inconsistent use of these policies. Modifications to these policies and goals could improve the equity, predictability, and transparency of the state’s higher education operating funding and benefit both institutional planning and the attainment of Virginia’s statewide higher education goals. Additionally, modifications could improve the state’s ability to manage continued resource constraints.

State’s base adequacy model is limited by outdated and inaccurate data

The state’s base adequacy model was developed to estimate funding needed to support the direct and indirect costs of institutions’ educational missions, or basic E&G operating costs. These costs represent the majority of E&G operating costs and include faculty and staff compensation, instructional materials and equipment, research, student and institutional support services, and operations and maintenance.

Use of base adequacy model provides objectivity and transparency

The base adequacy model estimates an “adequate” level of funding needed to support institutions’ basic E&G operations, regardless of fund source. The model uses national

Basic E&G operations

The base adequacy model estimates funding needed to support basic E&G operations, primarily costs directly or indirectly required to educate students. These cost estimates are based on pre-determined student-faculty ratios by academic disciplines and student level.

data on average E&G spending to establish target spending guidelines for Virginia’s public institutions, which most stakeholders view as relatively conservative estimates. The primary driver of the estimated funding guideline is the number of faculty needed to support an institution’s enrollment, depending on its academic programs and level of instruction offered. Funding needed to support other basic E&G operations, such as support services and the operation and maintenance of institutions’ physical plants, is estimated based on each institution’s faculty salary needs.

Stakeholders generally—though not universally—value the base adequacy model’s objectivity, its ability to estimate the level of funding needed to support basic operations, and its ability to benchmark the extent to which institutions are able to achieve this guideline. Additionally, experts who specialize in higher education funding models have identified a number of advantages to using funding formulas to allocate state operating funding. Formulas are visibly equitable and provide predictability and transparency to the process of allocating state funding. Funding formulas provide a “common and comprehensible foundation” for both states and institutions. States are able to allocate funding increases or reductions in a rational manner, while institutions are able to judge the impact of growing enrollments or expansion of academic programs on their state funding. Enrollment-based formulas in particular also help support state goals for access to higher education.

Base adequacy model uses outdated and inaccurate data

Stakeholders often expressed concern with the outdated data underlying the base adequacy model’s calculations. The same national spending data has been used since the model’s implementation and is now more than 15 years old. Significant changes in higher education spending and funding have occurred since the late 1990s, likely affecting the ability of the model to estimate an adequate level of funding needed to support basic E&G operations.

Another concern commonly identified by institutional staff is the use of appropriated faculty salary averages in the model. As noted in JLARC’s 2013 *Review of Academic Spending and Workload*, the state set each institution’s appropriated salary average equal to its actual salary average in 1987. These appropriated salary averages have been used in the budgeting process since then, with adjustments made for state-mandated salary increases. Most institutions have lower actual salary averages than their appropriated salary average.

The difference between actual and appropriated salary averages affects an institution’s base adequacy funding guideline, because appropriated faculty salaries serve as the basis for all other calculations in the model. Institutions with higher actual salary averages appear to exceed their funding guideline. For example, use of George Mason’s appropriated salary average (\$83,503) shows the institution at 108 percent of its base adequacy guideline in FY 2014, or above the guideline by \$36 million. However, use of George Mason’s actual salary average (\$95,307) shows the institution at 98 percent of its guideline, or below the guideline by \$8.2 million.

Appropriated vs. actual salary averages

An institution’s appropriated salary average is carried forward each year and indexed to reflect state-approved salary increases.

An institution’s actual salary average is the salary level funded through the institution’s operating budget.

SCHEV should update and improve the base adequacy model

The General Assembly may wish to direct the State Council for Higher Education in Virginia (SCHEV) to update the base adequacy model. In addition to updating and using more accurate information, the update could potentially address additional stakeholder concerns, including:

- discontinuing the use of faculty salaries as the basis to calculate all other needed E&G funding, such as funding for operating and maintaining institutions' physical plants;
- clarifying responsibility for funding operation and maintenance needs of new E&G facilities;
- incorporating the state's 60th percentile salary goal; and
- better accounting for higher operating costs at smaller institutions due to diseconomies of scale.

The effects on individual institutions from updating the base adequacy model will vary, depending on the results of updating the underlying national spending averages. The impact of incorporating re-based appropriated salary averages will also vary and is largely unknown, as institutions' actual salary averages (after removing endowment funding) are not tracked.

RECOMMENDATION 2

The General Assembly may wish to consider including language in the Appropriation Act to direct the State Council of Higher Education for Virginia (SCHEV) to update the underlying data for the base adequacy model and make additional modifications to the formula as warranted. SCHEV should ensure that future updates or revisions to base adequacy occur every six years as part of the state's strategic planning process. The update and modification to the base adequacy model should be completed in coordination with the re-basing of appropriated and actual salary averages, as recommended in JLARC's 2013 *Review of Academic Spending and Workload at Virginia's Public Higher Education Institutions*.

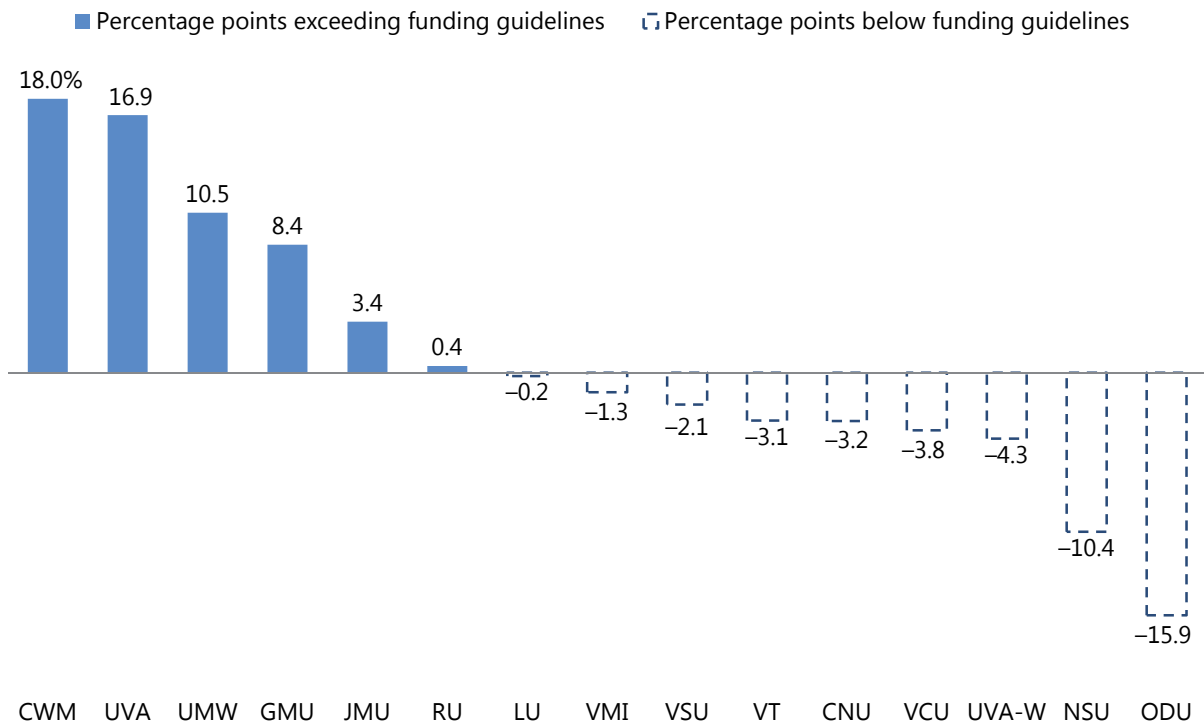
Operating funding is substantially below state goals, which negatively affects several institutions

The Virginia Higher Education Opportunity Act of 2011 (TJ21) established a higher education funding framework designed to promote "stable, predictable, equitable, and adequate funding" for institutions, in part through use of the base adequacy model to estimate and fund the cost of education at each institution. TJ21 also stipulates that the state should fairly and equitably allocate funding and seeks to ensure, to the extent possible, that the state's cost-share for in-state students is the same across institutions.

Institutions below base adequacy funding guidelines are generally those with lowest ability to generate additional tuition revenue

Nine institutions currently have less basic operating funding than estimated by the base adequacy guidelines (Figure 4-1). Collectively, these institutions would need an additional \$99 million in general and nongeneral funds to achieve the guidelines (Table 4-1). Seven of the nine institutions below base adequacy funding guidelines appear to have relatively high or moderate difficulty making up funding shortfalls without additional state support, due to constraints on their ability to generate additional net tuition revenue.

FIGURE 4-1
Majority of institutions have less funding than base adequacy guidelines (FY 2014)



Source: JLARC staff analysis of data provided by SCHEV on base adequacy funding guidelines.

Norfolk State and ODU have the greatest differential between actual funding and the base adequacy guidelines. ODU’s funding level is 16 percentage points and NSU’s is 10 percentage points below the funding guidelines. These institutions would need to generate an additional \$2,579 and \$1,549 per student, respectively, in order to adequately fund basic E&G operations as estimated by the base adequacy model. Conversely, six institutions exceeded funding needed to support basic operations ranging from 18 percentage points to a fraction of a percentage: William and Mary, UVA, Mary Washington, George Mason, JMU, and Radford.

TABLE 4-1

Nine institutions below base adequacy guidelines need \$99 million to support basic E&G operations (FY 2014)

		Difference between estimated funding and available resources	
		Total, millions	Per student
Institutions above base adequacy	UVA	\$83.4	\$6,121
	CWM	26.3	5,238
	GMU	36.0	1,703
	UMW	6.6	1,655
	JMU	8.5	602
	RU	0.5	57
	Subtotal	\$161.3	\$2,417
Institutions below base adequacy	LU	-0.1	-30
	VMI	-0.4	-313
	VSU	-1.4	-353
	CNU	-2.1	-431
	UVA-W	-1.0	-583
	VT	-18.7	-864
	VCU	-20.9	-875
	NSU	-8.0	-1,549
	ODU	-46.3	-2,579
	Subtotal	-\$99.0	-\$1,166

Source: JLARC staff analysis of base adequacy and cost of education data from SCHEV's October 2013 agenda book and data from SCHEV's E05 report on annualized FTE enrollment.

Notes: Nominal dollars. SCHEV's cost of education data rely on student FTE data from the prior fiscal year to make calculations, so student FTE are for FY 2013. Subtotal average per student is weighted for enrollment.

Decline in state's cost share reduces affordability and E&G funding at institutions with lower ability to generate tuition revenue

The state implemented its current cost-share goal in 2004. The state's goal is to fund 67 percent of the cost of education for in-state students, with the remaining 33 percent paid through nongeneral funds (typically tuition and E&G fees). Because out-of-state students are required to pay at least 100 percent of their cost of education, each institution's cost-share goal varies depending on its proportion of in-state and out-of-state students. Institutions with a higher proportion of out-of-state students have lower cost-share goals.

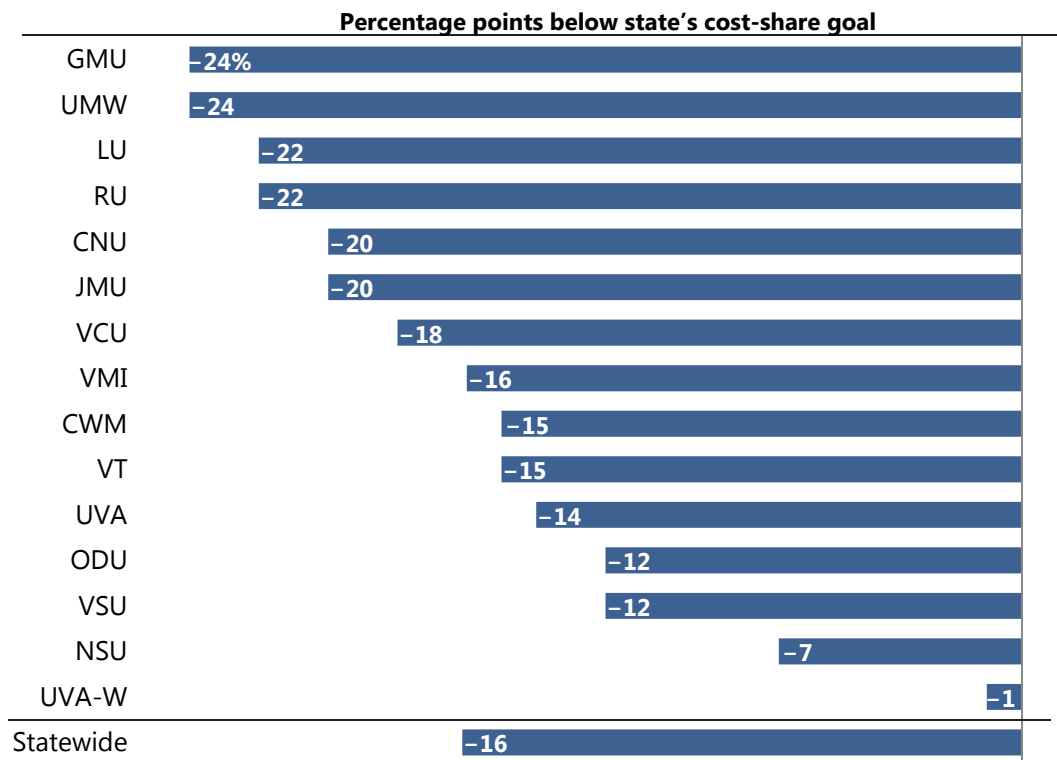
The cost-share goal is applied after base adequacy is calculated, with estimated funding allocated between general funds and nongeneral funds based on the goal for each institution. Declines in state operating funding per in-state student and large increases in the proportion of in-state students at several institutions have contributed to a larger gap between the state's goal and actual state funding allocated to institutions

Cost of education

Operating funds necessary to provide E&G services to students during a given fiscal year, excluding research and public service funding.

The cost of education for each institution is estimated by the base adequacy model. The state's cost-share goal relies on this cost to set benchmarks for state funding.

FIGURE 4-2
All institutions fall below the state's cost-share goal (FY 2014)



Source: JLARC staff analysis of base adequacy and cost of education data from SCHEV's October 2013 agenda book.

over the decade. On average, the state's actual cost-share in FY 2004 was 43 percent (compared to that fiscal year's goal of 49 percent). In FY 2014, the state's actual cost-share was 30 percent (compared to that fiscal year's goal of 47 percent). The state's cost-share goal is currently unmet at all of Virginia's 15 public four-year institutions, averaging 16 percentage points below (Figure 4-2) and generally has been unmet since its implementation in 2004.

The state would need to provide an additional \$553 million in operating funding to meet its cost-share goal. The state's inability to meet its cost-share goal directly affects student costs and institutions' abilities to fully fund basic E&G operations. For example, the state is underfunding its cost-share goal at Virginia Tech by \$4,254 per in-state student (-\$92.2 million) (Table 4-2). Virginia Tech is generating the equivalent of \$2,303 per student more from non-general funds (\$73.5 million) than calculated by the cost-share goal, and the institution's base adequacy funding guideline still remains unmet. Conversely, the state is closest to meeting its cost-share goal at UVA-Wise, with a shortfall of \$591 per in-state student (-\$1 million).

Three of the institutions below the base adequacy funding guidelines are among those that fall the most below the state's cost-share goal: Longwood (22 percentage points), Christopher Newport (20 percentage points), and VCU (18 percentage points).

TABLE 4-2

Student costs affected at institutions that fall the most below the state's cost-share goal (FY 2014)

	State funding below cost-share goal per in-state student	Tuition and nongeneral funding above cost-share per student
VCU	-\$4,528	\$3,052
GMU	-4,379	4,827
VT	-4,254	2,303
VMI	-3,865	2,117
UMW	-3,839	3,491
UVA	-3,700	5,618
JMU	-3,320	2,819
CWM	-3,298	5,186
ODU	-3,094	459
LU	-3,062	2,900
CNU	-2,952	2,410
RU	-2,806	2,683
VSU	-2,120	1,245
NSU	-1,714	141
UVA-W	-591	7
Statewide	-\$3,648	\$3,073

Source: JLARC staff analysis of base adequacy and cost of education data from SCHEV's October 2013 agenda book and data from SCHEV's E05 report on annualized FTE enrollment.

Notes: Nominal dollars. SCHEV's cost of education data rely on student FTE data from the prior fiscal year to make calculations, so student FTE are for FY 2013. Statewide amount per student is weighted for enrollment.

Institutions that are the furthest below both the state's cost-share goal and base adequacy funding guidelines, such as ODU and VCU, may face continued constraints in generating additional tuition revenue due to their students' lower ability to pay for increases in the published price of higher education.

State funding policy could better reflect magnitude of funding gap and ability to generate tuition revenue

Given persistent state and institutional resource constraints, higher education experts have suggested that states allocate their level of investment across different segments of their public higher education system based on need for funding. These policies of differential investment are intended to direct limited state resources toward institutions and students that could benefit most from them.

Institutions' differing abilities to generate net tuition revenues are generally not reflected in the state's cost share goal. While the goal does account for out-of-state enrollments, it does not account for students' ability to pay for higher education. The distribution of students' ability to pay varies greatly across institutions, as indicated

by differences in the portion of the student body receiving Pell grants or median expected family contribution (Table 4-3). For example, 68 percent of in-state students at Virginia State were Pell grant recipients in FY 2013, and in-state undergraduates had a median expected family contribution of \$0, while the state's cost-share goal for the institution was 46 percent. In contrast, only 17.5 percent of Christopher Newport's in-state students received Pell grants and in-state undergraduates had a much higher median expected family contribution of \$13,221, while the state's cost-share goal for the institution was 61 percent.

TABLE 4-3
Cost-share goal not reflective of differing financial circumstances of students across institutions

	% in-state students receiving Pell grants, FY 2013	Median expected family contribution of in-state undergraduates, FY 2012	Current cost-share goal, FY 2014
VSU	68.1%	\$0	46%
NSU	67.8	0	56
ODU	37.6	2,996	55
UVA-W	36.9	1,874	63
GMU	31.6	2,934	50
VCU	31.1	4,520	50
RU	30.3	6,580	62
LU	25.3	8,928	63
VT	19.2	10,402	41
UMW	17.9	8,551	58
CNU	17.5	13,221	61
JMU	17.0	10,623	48
CWM	14.7	14,321	39
VMI	14.3	6,639	40
UVA	14.0	10,833	36

Source: JLARC staff analysis of base adequacy and cost of education data from SCHEV's October 2013 agenda, SCHEV's FA9 report on in-state student recipients of the Pell Grant, and financial aid data provided by SCHEV.
Note: Median expected family contribution reported in nominal dollars.

Accounting for these differences in the state's cost-share goal would better connect the state's goal of student affordability to overall funding for higher education operations. The General Assembly could consider revising the cost-share goal to consider an institutions' ability to generate net tuition revenue. Doing so could address affordability concerns at Virginia's traditional access institutions and ensure their ability to maintain adequate funding for basic E&G operations. To account for changes over time in institutions' student bodies, the General Assembly may also wish to consider directing the use of a four-year rolling average of student characteristics.

OPTION 2

The General Assembly could amend the Code of Virginia to revise the cost-share goal for each public four-year institution to account for characteristics that may limit the ability of institutions to generate additional net tuition revenue. Such characteristics include a higher percentage of in-state students who receive federal Pell grants and a relatively low median expected family contribution of in-state students, both of which indicate relatively low student ability to pay the published price of higher education.

The differing abilities of institutions to fund E&G operations could also be addressed by more closely aligning increases or reductions in state operating funding in relation to the base adequacy funding guideline and the amount by which institutions fall below the state’s cost-share goal. The further an institution falls below the base adequacy funding guidelines and the state’s cost-share goal, the greater the potential effects of resource constraints on academic services and student costs. Institutions that fall significantly below both the base adequacy guidelines and the state’s cost-share goal, such as Norfolk State and ODU, also generally have limited access to out-of-state tuition revenue or a limited ability to generate additional net tuition revenue due to their students’ ability to pay for higher education.

The state appears to be using such an approach in allocating proposed budget reductions over the 2014-2016 biennium. The governor originally requested that public four-year institutions submit strategies to address five percent budget reductions in FY 2015 and seven percent in FY 2016. However, the proposed amendment to allocate the budget reductions takes a more nuanced approach, and state agency staff indicated that institutions’ ability to generate tuition revenue was one factor considered by decision-makers. As a result, the largest budget reductions are concentrated at UVA, William and Mary, and VMI, while the smallest reductions are concentrated at Virginia’s access institutions, including UVA-Wise, Norfolk State, Virginia State, and ODU.

OPTION 3

The General Assembly could consider allocating a higher proportion of operating funding to institutions that (i) are least able to fund academic operations and (ii) have a relatively high proportion of students who have lower ability to pay the published price of higher education.

Option 2 may potentially:

Improve Affordability and Access	✓
Increase State Costs	✓
Prioritize Academics	✓
Limit Institutional Autonomy	

Option 3 may potentially:

Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	

Basic operating funding could be prioritized over initiative and performance funding

Recent national research on the effects of institutional spending, state operating funding, and educational resources supports the importance of adequately funding basic operations. National research finds a positive, although moderate, relationship between higher levels of spending and resources on student outcomes. For example,

one study found that a 10 percent increase in state higher education appropriations was associated with a three percent increase in the proportion of students receiving bachelor's degrees. Other studies have identified negative effects on time-to-degree and graduation rates from increases in student-faculty ratios.

Several studies specifically identified a relationship between spending on student services and student outcomes, one of which found that increased spending on student services had a larger effect on graduation rates than spending on other E&G operations. The effects of spending on student services were found to be greater at less selective institutions. Lower levels of spending, particularly at less selective public institutions, were also found to negatively affect retention rates and graduation rates. As one study noted, some institutions' open access missions may be jeopardized due to the necessity of either raising tuition or limiting enrollment, both of which could reduce access, in order to ensure sufficient resources to support each student.

Institutional initiatives

State funding provided to enhance institutional excellence, such as funding to increase STEM-H research capacity.

OpSix membership

TJ21 designates the following as members of OpSix: Secretary of Finance, Secretary of Education, Executive Director of SCHEV, Director of DPB, and the staff Directors of the House Appropriations and Senate Finance Committees.

Performance funding

State funding provided to reward institutional performance on certain student outcome metrics, including degrees produced.

Funding for initiatives supports institutional excellence and is intended to further statewide higher education goals

TJ21 established a six-member advisory committee (OpSix) to review institutions' six-year strategic operating plans and provide informal feedback. The strategic plans contain proposals for institutional initiatives to support the goals of TJ21, such as expansion of science, technology, engineering, mathematics, and health fields (STEM-H) academic programs, and to pursue institutional excellence, such as expansion of institutional research capacity.

Institutions rank their proposals according to institutional priorities and determine the funding needed to implement each initiative. After OpSix provides feedback on the initiatives, the governor, the Senate, and the House of Delegates independently determine which initiatives they would like to fund. In FY 2014, state funding for institutional initiatives was \$16.2 million, or less than two percent of total state operating support. Some state stakeholders have mentioned the benefit of using initiative funding to account for the unique missions of each institution, support the state's higher education goals, and focus on specific issues of interest to stakeholders, such as improving student retention, when allocating state operating funding.

There do not appear to be any clearly defined criteria or metrics to guide state funding decisions related to institutional initiatives, however. Some institutional staff noted it was unclear how particular institutional initiatives had been selected for funding or how state stakeholders were prioritizing across the various higher education goals that have been established. Additionally, there is no central oversight mechanism in place to ensure that institutions successfully implement funded initiatives.

Performance funding may be of limited value until gap in base operating funding is closed

TJ21 included targeted economic and innovation incentives in its funding framework, in order to support state goals established by the legislation. In response to this aspect of the framework, the governor's Higher Education Advisory Committee (HEAC) developed a proposed performance funding model designed to assess institutional performance and allocate incentive funding based on a number of student outcomes: degree production, particularly in STEM-H fields; accelerated time-to-degree; and improved degree attainment and retention for under-represented students, including minority students, Pell grant recipients, and non-traditional adult students.

HEAC intended for SCHEV to assess institutional performance on these benchmarks in each fiscal year and allocate points based on performance. Available funding for the model would then be distributed based on the number of points an institution earned. SCHEV recommended annual funding of \$31.5 million, which is equivalent to slightly more than three percent of state operating funding. Due in part to fiscal constraints, the model did not receive state funding for the current fiscal year, the first year in which it was considered for funding. (See Appendix G, online only, for additional information on performance funding models in other states.)

Nationwide, stakeholders and higher education experts generally express concerns about the level of funding associated with performance funding models. Proposed and implemented models frequently set aside a small portion of state operating funding to incentivize institutional performance—typically five percent or less. Many experts believe such an amount would have little effect on institutional behavior or student outcomes, an opinion shared by staff at several Virginia institutions.

Some institutional staff also perceived a conflict with the state's goal to ensure access to higher education. Enrollment-based funding formulas directly provide incentives for institutions to enroll more students, supporting state goals of access. These funding formulas allocate funding based on the number of incoming and returning students. On the other hand, performance funding models provide incentives based on student outcomes, including the number of students successfully completing a degree.

As noted in JLARC's 2013 report, *Trends in Higher Education Funding, Enrollment, and Student Costs*, six of Virginia's public four-year institutions already outperform expected graduation rates based on institutional and student characteristics, while the graduation rates at eight institutions match expected outcomes. Several staff questioned the ability of their institutions to meet performance benchmarks, given that their institutions are below base adequacy funding guidelines and are unable to adequately support basic E&G operations according to the base adequacy model.

State could ensure adequate funding for basic operations before funding institutional initiatives or performance

Many institutions cited negative effects on academic quality resulting from an inability to fully fund basic operations, particularly given the differing abilities of institutions to address reductions in state funding over the last decade. As a result, the General Assembly could ensure that each public institution is able to fully support basic E&G operations before implementing and funding a model to incentivize institutional performance on student outcomes or appropriating funding for institutional initiatives. Providing sufficient funding to meet the base adequacy guidelines for all institutions could also improve academic quality.

The institutions that would benefit most from this approach are those that fall the most below base adequacy funding guidelines, including Norfolk State, ODU, UVA-Wise, and VCU. Institutions that typically benefit most from initiative funding may receive less state funding, depending on whether they exceed or fall below base adequacy funding guidelines. However, this option would still preserve autonomy, as institutions would be able to fund specific initiatives through their own revenues.

Option 4 may potentially:

Improve Affordability and Access ✓

Increase State Costs

Prioritize Academics ✓

Limit Institutional Autonomy

OPTION 4

The General Assembly could ensure that all public institutions have full funding under the base adequacy model before appropriating general funds to support institutional initiatives and before implementing and funding the proposed performance funding model.

State could address affordability through tuition control policies and additional operating funding

If additional state funding for higher education operations were to become available, it could be used to address student affordability through statewide limits on annual tuition growth combined with additional state operating funding.

Virginia set compulsory tuition controls between the mid-1990s and mid-2000s to address rising in-state undergraduate tuition and mandatory E&G fee rates. These policies included tuition freezes, a 20 percent tuition rollback, and a five percent cap on annual growth in tuition and mandatory E&G fees. During this period, the General Assembly provided additional operating funding to offset lost tuition revenue in recognition of the importance of adequately funding E&G operations. The General Assembly discontinued this funding after the recession in the early 2000s and lifted its tuition controls.

The General Assembly implemented voluntary limits on annual growth in in-state undergraduate tuition and E&G fees in the late 2000s. The Higher Education Tuition Incentive Fund provided institutions with a share of \$7.2 million in general funds in FY 2008 if tuition and E&G fee growth was limited to 6 percent, excluding

tuition increases directed toward financial aid. The Tuition Moderation Incentive Fund, provided institutions with a share of \$17.5 million in general funds during both FY 2009 and FY 2010 if tuition and E&G fee increases remained below four percent in FY 2009. The recession affected funding for the Tuition Moderation Incentive Fund, however, and only institutions that qualified in FY 2009 continued to receive funding in FY 2010. The state was able to provide a modest increase in state support for higher education operations in FY 2013, and the governor requested that institutions voluntarily keep FY 2013 and FY 2014 increases in tuition and E&G fees to the prior year’s annual increase in the Consumer Price Index.

Staff at several institutions commented that they did not adhere to the state’s voluntary limits, however, since incentive funding from the state did not offset lost tuition revenue. By adhering to the voluntary limit on annual growth, each institution’s ability to fund basic E&G operations would have been affected due to overall loss of operating revenue.

During the period of mandatory tuition controls (tuition caps, rollbacks, and freezes), the state previously recognized these concerns by offsetting lost tuition revenue with additional state operating funding. The General Assembly could use this approach again by providing more operating funding for institutions while concurrently controlling growth in tuition. Because sufficient funding for institutions’ basic operations is related to positive student outcomes, particularly at less-selective institutions, it would be important to offset lost tuition revenue with state operating funding if mandatory tuition controls are implemented once again. The General Assembly may wish to also consider implementing an exemption from the limits on tuition growth for institutions that substantially reduce their mandatory non-E&G fees to reallocate resources to basic E&G operations. (See Chapter 5 for additional information.)

Option 5 may potentially:

Improve Affordability and Access	✓
Increase State Costs	✓
Prioritize Academics	
Limit Institutional Autonomy	✓

OPTION 5

The General Assembly could include language in the Appropriation Act to limit annual increases in tuition and mandatory E&G fees for in-state undergraduate students while providing additional state operating funding to offset forgone tuition revenue. The General Assembly could provide an exemption from the limit for institutions that substantially reduce mandatory non-E&G fees and reallocate resources to E&G operations.

5 Limiting Non-Academic Costs

SUMMARY Auxiliary enterprises have been the largest driver of operating spending growth at Virginia’s public four-year institutions. All institutions increased mandatory non-E&G fees substantially to fund the expansion of auxiliary services, even as several reported difficulty funding academic services. Statewide, intercollegiate athletics spending increased by at least \$86 million between FY 2007 and FY 2012, which was funded primarily through higher mandatory student fees. On average, 12 percent of tuition and mandatory fees are used to fund athletic programs. The General Assembly may wish to consider taking a series of steps to improve affordability by prioritizing academics over non-academic services. These steps include setting forth in the Code of Virginia a limit on what intercollegiate athletic fees should be as a proportion of total tuition and mandatory fees, requiring those institutions in excess of this newly-established limit to develop and make public athletic fee reduction plans, and requiring institutions to evaluate and propose spending reductions for other services and activities funded by mandatory non-E&G fees.

Prior reports in JLARC’s higher education series found that auxiliary enterprises have been the largest driver of operating spending growth at Virginia’s public four-year institutions. Auxiliary enterprises are non-academic services that do not receive state support, and state policy sets the expectation that they be self-supporting. Most public four-year institutions rely primarily on two types of revenue from students—user fees and mandatory non-E&G fees—to support auxiliary enterprises. As a result, increases in auxiliary spending generally increase the price of higher education for students.

User fees are charged to consumers of specific auxiliary services, primarily housing and dining charges for students living on campus. Although average room and board charges increased by 34 percent between FY 1999 and FY 2014, JLARC’s September 2013 *Review of Non-Academic Services and Costs at Virginia’s Public Higher Education Institutions* found that charges for these services were generally comparable to charges for private sector housing and dining.

Virginia’s public four-year institutions also fund auxiliary enterprises by assessing mandatory non-E&G fees to students, which have grown substantially over the previous decade. An institution’s non-E&G fee is influenced by various factors, including level of student enrollment, breadth of auxiliary services, and access to other revenue sources (such as private donations). Services funded through mandatory non-E&G fees typically include intercollegiate athletics and campus recreation centers.

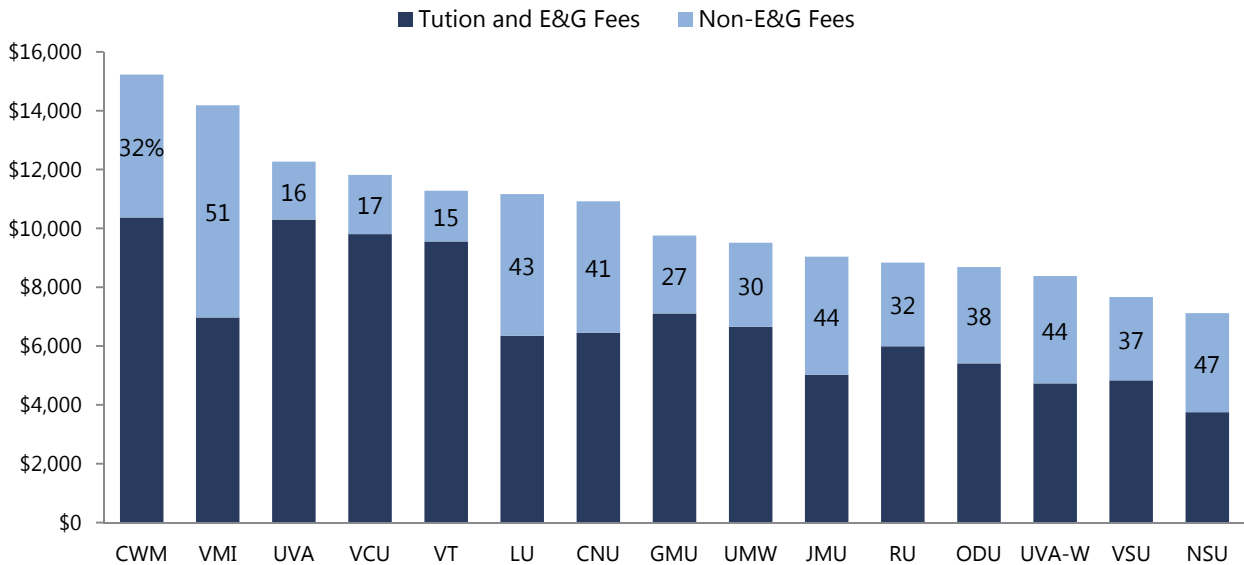
There have been two primary drivers of auxiliary spending: (1) expansion of intercollegiate athletic programs, and (2) the expansion of auxiliary services more generally in response to on-campus enrollment growth and student demand for amenities. (See Appendix F, online only, for additional information on auxiliary spending.) Increases in spending contributed to higher mandatory non-E&G fees paid by students, which this chapter addresses through options targeted at reducing and limiting future growth in (1) athletic fees specifically (one component of the total mandatory non-E&G fee charged to students) and (2) mandatory non-E&G fees more generally.

Institutions increased mandatory non-E&G fees while some faced difficulty funding E&G operations

Most Virginia institutions rely primarily on student-generated revenue to fund auxiliary services. As a result, substantial increases in auxiliary spending contributed to an increase in the published price of higher education. Average mandatory non-E&G fees at Virginia’s public four-year institutions increased by \$1,446 (70 percent) between FY 1999 and FY 2014 (inflation-adjusted).

Mandatory non-E&G fees represented one-third (\$3,502) of total in-state undergraduate tuition and mandatory fees in FY 2014, on average. This proportion ranged from 15 percent at Virginia Tech to 51 percent at VMI (Figure 5-1).

FIGURE 5-1
Non-E&G fees are a substantial portion of mandatory charges (FY 2014)



Source: JLARC staff analysis of SCHEV’s annual Tuition and Fee report data on FY 2014 tuition and mandatory fees and the Consumer Price Index.

Notes: Data is in constant 2013 dollars. Data are for average in-state undergraduate tuition and E&G fees and non-E&G fees as reported to SCHEV. Tuition and mandatory E&G fees for VCU and William and Mary are for first-time freshman and transfer students, due to changes in tuition models at these institutions. VMI’s mandatory non-E&G fees include a quartermaster charge that funds military uniforms, laundry, and haircuts.

Increases in mandatory non-E&G fees occurred while staff at some institutions expressed difficulty fully funding educational operations. Due in part to a decline in state operating funding, some institutions faced difficulty hiring enough faculty to meet growing enrollments, and many relied more heavily on adjunct faculty or higher faculty workloads in response to fiscal constraints.

Five institutions in particular increased non-E&G fees while also having basic operating funding shortfalls (Table 5-1). ODU's operating funding, for example, is approximately 16 percentage points below base adequacy funding guidelines, but 38 percent of total tuition and mandatory fees paid by in-state undergraduates funds non-E&G spending. Norfolk State's operating funding was more than 10 percentage points below base adequacy funding guidelines, but nearly half of what in-state undergraduates paid in mandatory charges funded non-E&G spending.

TABLE 5-1
Non-E&G fees are a growing share of mandatory charges at five institutions with base adequacy shortfalls (FY 2014)

Mandatory non-E&G fees as a proportion of total tuition and mandatory fees		
	FY 1999	FY 2014
UVA-W	31%	44%
CNU	31	41
NSU	42	47
LU	40	43
ODU	36	38

Source: JLARC staff analysis of data provided by SCHEV on funding under the base adequacy model and SCHEV's annual Tuition and Fee report data on mandatory non-E&G fees.

Institutions should limit how much they charge students for athletic programs

Most of Virginia's public four-year institutions rely primarily on student fee revenue to fund their athletic programs. On average, athletic programs generated only 31 percent of revenue needed to cover program expenses in FY 2012, while students funded the remaining 69 percent of expenditures. Consequently, student costs often increase significantly when an institution expands its athletic program. JLARC's September 2013 *Review of Non-Academic Services and Costs at Virginia's Public Higher Education Institutions* found that total athletics spending has increased by at least \$86 million at Virginia's public four-year institutions between FY 2007 and FY 2012 and, on average, more than 12 percent of tuition and mandatory fees were used to fund athletic programs.

NCAA athletic divisions

There are three main classifications for National Collegiate Athletic Association (NCAA) member institutions: Division I, Division II, & Division III.

Division I includes the Football Bowl Subdivision (formerly I-A), the Football Championship Subdivision (formerly I-AA), and Division I without football (formerly I-AAA).

Expansion of athletic programs increased student costs

The expansion of athletic programs increased auxiliary spending. Several public four-year institutions expanded their athletic programs within the past 20 years. Norfolk State and Longwood moved from Division II to Division I (FY 1997 and FY 2008, respectively), Christopher Newport added football (2001), and ODU reinstated its football team (FY 2009) and moved up from the NCAA Football Championship Subdivision to the NCAA Football Bowl Subdivision (FY 2014). Several institutions are also considering expanding their athletic programs. UVA-Wise is currently applying for membership in Division II, and JMU is weighing the costs and benefits associated with moving to the Football Bowl Subdivision from the Football Championship Subdivision.

Institutional staff commonly view athletics as a way to encourage community engagement and enhance student recruitment. An institution may receive an increase in applications after a notable winning season, although there is little evidence to suggest that the quality of applicants, as measured by average standardized test scores, is higher. A successful athletic program may also encourage stronger connections with alumni, although national research has generally indicated that a successful athletic program may translate into higher giving for athletics but not the institution itself.

However, increased athletics spending has contributed directly to higher student costs, and in some cases, substantial increases in student fees. For example, Longwood's board of visitors approved its transition to Division I athletics in FY 2000, and Longwood began competing in Division I in FY 2008. Institutional expenditures on athletics more than tripled because of the transition, increasing from \$2.1 million to \$6.8 million between FY 2001 and FY 2010. Students funded the majority of Longwood's increased athletic revenue during this period, and the athletic fee for undergraduates more than doubled, increasing from \$935 to \$2,135 (inflation-adjusted).

Stakeholders commonly identified reductions to student athletic fees as a way to improve student affordability

Increases in athletics spending have occurred while (i) resources to fund E&G operations—including state operating funding and student tuition and E&G fee revenue—have been constrained and (ii) student costs have risen significantly. In order to address these concerns, institutions could reduce athletics spending, the reliance of athletic programs on student subsidies, or both.

Institutional staff generally perceive barriers preventing substantial spending reductions on intercollegiate athletics. These barriers include resistance from students, alumni, and other constituents, as well as the fixed costs associated with athletic facilities and personnel. As a result, staff commonly note that substantial spending reductions would require significant changes in the way institutions and their constituents view intercollegiate athletics. However, current and former board members, state agency staff, and students often identify athletics-related costs as one area of

potential savings, suggesting that institutional efforts to minimize the cost of athletic programs to students may receive broader support than expected. For example, students interviewed by JLARC staff generally expressed the opinion that athletic fees at their institution were too high, and two-thirds expressed willingness for athletic programs to be scaled back in exchange for a reduction in the price of higher education.

Several current and former board members suggested a number of potential solutions to the growing impact of athletic programs on student costs. These suggestions included re-examination of institutional decisions to move up to a higher athletic division or subdivision, a general reduction in athletics spending, and a cap specifically on growth in athletic fees.

Reducing athletics spending is not the only option to reduce student athletic fees. Several institutions, including UVA and Virginia Tech, already have substantial revenues that reduce student subsidies for athletics, including ticket sales, distributions from conferences and the NCAA, and private giving or endowment income. Revenue diversification is one option that may be available to some institutions to reduce the impact on student costs without substantially reducing athletics spending, although many institutions' athletic programs will likely continue to rely primarily on student fee revenue.

Several institutions identified specific efforts to limit growth in intercollegiate athletics spending

Institutional staff cited limiting expansion of athletic programs as a way to minimize athletics spending. For example, several institutions do not have a football team, in order to avoid the substantial costs associated with starting and operating the sport. George Mason staff cited an estimated \$180 million stadium cost as one factor contributing to its decision to not offer football. Staff at George Mason and Radford also expressed concerns over the costs of maintaining compliance with federal Title IX requirements and long-term financial viability of implementing a football program. Other institutions, such as Virginia State, have remained in a lower athletic division due to concerns about the substantial costs associated with offering Division I athletic programs.

Additionally, William and Mary's board of visitors has taken actions to reduce the impact on student fees from the institution's athletic program, by setting a goal that no more than 50 percent of total athletic revenue should come from mandatory student fees and requiring that the construction of athletic facilities be funded entirely through private donations.

Student group interviews

To gain insight into student opinions on auxiliary enterprises, JLARC staff conducted group interviews with in-state undergraduate students at all 15 public four-year institutions for the September 2013 study on non-academic services.

Title IX

A federal anti-gender-discrimination law passed in 1972, Title IX provides for gender equity in athletic scholarships, participation, and other program areas, including (but not limited to) equipment and supplies, tutoring, coaching, and facilities.

Statutory limit on athletic fees should be established and plans to be in compliance with limit should be developed

Mandatory fees imposed on students attending Virginia’s public four-year institutions fund intercollegiate athletic programs that do not contribute to institutions’ academic missions and do not benefit the vast majority of students. Given the increased costs imposed on students by these fees, and the inability of students to opt out of paying them, the General Assembly may wish to consider limiting mandatory athletic fees that institutions charge to students. Athletic fees could be limited to a maximum proportion of total tuition and mandatory fees charged to a student. A reasonable statutory limit on athletic fees might be as low as five percent, but no higher than 15 percent of total tuition and mandatory fees. (Possible reductions in athletic fees resulting from several potential limits may be found in Appendix H, online only.)

Recommendation 3 may potentially:

Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	✓

RECOMMENDATION 3

The General Assembly may wish to consider amending the Code of Virginia to impose a limit on mandatory athletic fees charged to students by limiting the proportion of tuition and mandatory fees that can be collected for the purpose of funding intercollegiate athletics.

In order to facilitate the reduction of athletic fees as a proportion of total mandatory charges, the General Assembly may wish to consider requiring institutions not in compliance with the above newly-established limit on athletic fees to develop plans that would reduce athletic fees. Institutions directed to develop these reduction plans should submit them to the House Appropriations and Senate Finance Committees. Given VMI’s unique academic mission, in particular its physical training program, a limit unique to VMI could be established (sidebar).

Institutions will experience varying impacts on athletics depending on their current mandatory athletic fees and the strategies they identify to reduce them. Institutions that are able to diversify and increase their revenue through private giving or other ways may experience minimal impacts on athletic programs. In contrast, institutions with limited access to other revenue sources and a substantial reliance on student subsidies to support athletic programs may need to reduce the scope of their intercollegiate athletic programs.

Institutions’ plans should identify ongoing, long-term savings through actions including, but not limited to, revenue diversification, reducing the number of sports offered, or moving down to a lower athletic division. Plans should seek to have the proportion of total mandatory student charges devoted to intercollegiate athletics be in compliance with the established limit no later than 2020. Certain institutions with relatively high athletic fees may need additional time to comply with the established limit.

VMI’s mission-specific services

VMI’s mandatory non-E&G fee funds uniforms, services, facilities, and activities directly related to VMI’s mission as a military institute. For example, a significant portion of the non-E&G fee covers the costs of NCAA athletics and cadet club sports, which emphasize the physical training needed to produce “citizen soldiers.” VMI’s non-E&G fee now also includes health and accident insurance because of the nature of physical training provided.

There is no expected negative effect on academic services from this recommendation. This will directly address student affordability, although cost reductions experienced by students will differ depending on the actual degree of reductions.

RECOMMENDATION 4

The General Assembly may wish to consider including language in the Appropriation Act to direct Virginia public four-year institutions that charge mandatory student athletic fees in excess of the limit (as a proportion of mandatory student charges) set forth in the Code of Virginia, to develop plans to reduce athletic fees. Institutions should develop and submit their reduction plans to the House Appropriations and Senate Finance Committees no later than November 30, 2015, for full compliance with the limits no later than June 30, 2020.

**Recommendation 4
may potentially:**

Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	✓

Institutions should evaluate opportunities to reduce other mandatory non-E&G fees

The expansion of auxiliary services other than athletics also contributed to rising student costs. On average, 69 percent of total mandatory non-E&G fees charged to in-state undergraduates (\$2,349) funded services and activities other than intercollegiate athletic programs in FY 2013 (Figure 5-2). Of this amount, an average of \$604 funded institutional debt service payments and \$1,745 funded other non-athletic services.

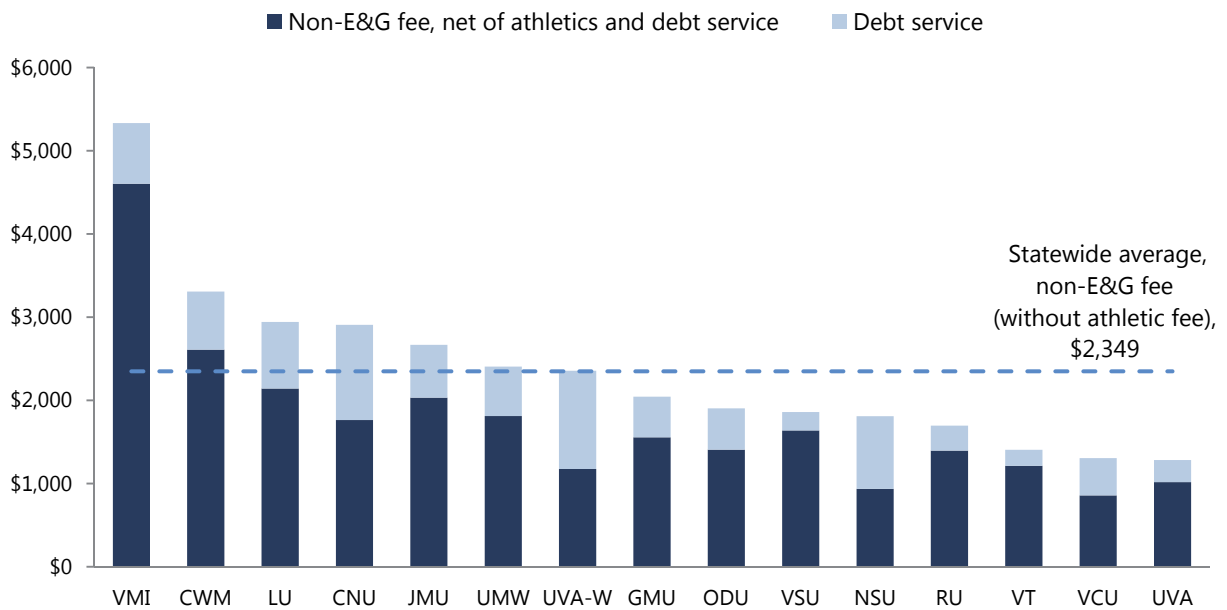
While mandatory student fees to repay institutional debt service generally represent a fixed cost that is not easily reduced, a substantial portion of the remaining student charges fund services and activities that could be more easily reduced in the near term.

Institutions increased auxiliary spending to accommodate growth in on-campus enrollment and student demand for amenities

Growth in on-campus student enrollment has been a significant driver of auxiliary spending on non-athletic services for some institutions. As institutions increase on-campus enrollment, they construct residence halls, dining facilities, and parking to serve a greater number of on-campus students. Institutions also provide or expand other auxiliary services due to student need (e.g., health centers) and demand (e.g., recreation centers). Some institutional staff also noted that federal regulations and the changing higher education environment necessitate additional spending on campus security and mental health services.

Institutional staff commonly point to benefits associated with having a higher proportion of students living on-campus. For example, staff note that having first-year students live on campus increases their engagement with the institutional community and improves their knowledge of available institutional resources. Additionally, staff commented that access to recreation facilities may improve students’ mental health, stress levels, academic performance, social interactions, and retention rates.

FIGURE 5-2
Non-E&G fees funding auxiliary services other than intercollegiate athletics
average \$2,349 (FY 2013)



Source: JLARC staff analysis of SCHEV’s annual Tuition and Fee report data on FY 2014 tuition and mandatory fees. Notes: Total non-E&G charges are for average in-state undergraduate non-E&G fees as reported to SCHEV, net of athletic fee reported by institutional staff to JLARC staff for the September 2013 *Review of Non-Academic Services and Costs* and debt service fees. Debt service fees reported by institutional staff. VMI’s mandatory non-E&G fees include a Quartermaster charge that funds military uniforms, laundry, and haircuts.

On-campus enrollments have grown substantially at several institutions, including Christopher Newport, George Mason, VCU, and ODU. Institutions with substantial increases in the proportion of students living on campus (Christopher Newport, Virginia State) also experienced larger increases in auxiliary spending. Conversely, institutions where the proportion of students living on campus declined (JMU, UVA) experienced either decreases or relatively low growth in auxiliary spending per student.

Christopher Newport experienced the largest growth in both the number and the proportion of students living on campus due to a decision to offer a residential experience for students.

CASE STUDY

Christopher Newport’s transition to a residential campus

In the 1990s, Christopher Newport, which served a commuter population, made the decision to provide a more traditional liberal arts education and residential experience for its students. The transition was supported by a \$500 million building campaign. By the early 2000s, Christopher Newport had opened several new residence halls. On-

campus enrollment increased from 220 students in 1994-95 to more than 3,700 students in 2013-14.

The opening of the Freeman Center in 2000 and expansion of other auxiliary services (including Christopher Newport's athletic program) supplemented the on-campus experiences for students. Growing on-campus enrollments also placed strain on the existing student center, according to institutional staff, so a larger facility was constructed and opened in 2006.

The costs of Christopher Newport's transition to a residential campus have been substantial. Auxiliary spending per student more than tripled between FY 1998 and FY 2012 (increasing from \$2,613 to \$8,897). As a result, student costs also increased substantially. Mandatory non-E&G fees charged to undergraduates more than doubled between FY 1999 and FY 2012, increasing from \$1,505 to \$4,202.

Stakeholders in Virginia often identified (i) increasing student expectations for auxiliary services and (ii) competition with peer institutions to provide amenities as drivers of auxiliary spending. Staff at some institutions noted the importance of having unique amenities to attract students, and many specifically noted high student expectations related to dining (e.g., substantial choice, environmental consciousness, convenience) and residence halls (e.g., wireless internet, air-conditioning, private bathrooms). Institutions appear to have responded to perceived student expectations and concerns of competitiveness through improvement and expansion of their auxiliary services.

Institutions identified specific efforts to limit growth in mandatory non-E&G fees

Some institutional staff noted efforts to minimize auxiliary spending, including the renovation of existing residence halls rather than building new facilities. Some staff commented that another way to constrain auxiliary spending is to not respond to student demand for costly amenities or services, but rather focus on meeting student needs in core areas, such as instruction. Staff at several institutions noted the benefits of this approach. Given the increased reliance of institutions on tuition and mandatory E&G fees to support instruction and E&G operations as state funding declined, increasing mandatory non-E&G fees to support auxiliary services uses limited revenue that could otherwise be used to support academic services.

Longwood and Norfolk State recently implemented strategies to reduce the cost of auxiliary services to students and better support their core missions through enhanced E&G revenue generation.

CASE STUDY

Mandatory non-E&G fee reductions at Longwood and Norfolk State

Longwood reduced its mandatory non-E&G fee by almost five percent (\$240) between the 2013-14 and 2014-15 academic years while increasing tuition and mandatory E&G fees by seven percent (\$480).

Changes to mandatory student charges resulted in a net increase of two percent (\$240) for in-state undergraduates. Staff noted that additional E&G revenue permits Longwood to spend a higher proportion of student-generated revenue on instruction and related services. Longwood was able to reduce its non-E&G fee using additional revenue from students taking online and hybrid courses and an institution-wide capital campaign. Staff also noted that higher student enrollment will allow the institution to spread costs over a greater number of students. Longwood recently enrolled its largest freshman class to date.

Staff at Norfolk State noted a similar effort underway to reallocate resources from auxiliary enterprises to academic operations with minimal impact on student costs. Norfolk State reduced mandatory non-E&G fees by almost 15 percent (\$500) between the 2013-14 and 2014-15 academic years, while increasing tuition and mandatory E&G fees by 19 percent (\$726). Changes to mandatory student charges resulted in a net increase of three percent (\$226) for in-state undergraduates. Staff at Norfolk State indicated that the increase in E&G revenue addresses a significant funding shortfall for academic services. The additional revenue will be used to hire more full-time faculty, which is expected to improve student retention. Norfolk State's non-E&G fee reduction was achieved through revenue diversification, including the use of surplus auxiliary reserve funding to offset student fees, and the early repayment of capital debt service.

Institutions should evaluate growth in auxiliary services and associated costs

Institutional board members responding to JLARC's survey often noted the value of attempting to limit spending on auxiliary enterprises and focusing resources on academic services. In particular, one former board member noted:

While many students appreciate the services provided by the mandatory fees of the University, a much more disciplined approach to providing those services should be instituted. Do we really need the intercollegiate athletic programs as they exist? Are all of [the] gyms and fitness centers that have been built necessary? It is time to provide an education at affordable costs[,] which might mean returning to focusing on the costs of education and reducing non[-]essential services.

Additionally, auxiliary spending and associated student charges have traditionally received limited state oversight because the state does not provide funding for these services. During a period of fiscal constraint and declining student affordability, average mandatory non-E&G fees increased significantly. Given (i) the mandatory nature of

these fees and the inability of students to opt out of charges, (ii) the tangential relationship of many auxiliary services to institutions' academic missions, and (iii) the significant portion of total mandatory student charges represented by these fees, potential reductions in costs would be beneficial for both students and state stakeholders.

The General Assembly may wish to consider requiring institutions to thoroughly evaluate each service and activity funded through mandatory non-E&G fees. This evaluation would exclude intercollegiate athletic programs and existing debt service that must be repaid. The evaluation should culminate with a report summarizing the evaluation and at a minimum include

- an inventory of the services and activities funded through non-E&G fees;
- the amount of growth in cost for each service and activity over the previous 10 years;
- proposed reductions in spending through improved efficiency or cutbacks in service levels; and
- proposed reductions in spending through elimination of services or activities tangential to the academic mission.

Any reductions in mandatory non-E&G fees that may result from such evaluations could serve to reduce total mandatory student charges. These reductions in mandatory non-E&G fees could allow institutions to increase tuition or mandatory E&G fees to fund institutions' core academic missions, given fiscal constraints on funding E&G operations, without increasing total student costs.

RECOMMENDATION 5

The General Assembly may wish to consider including language in the Appropriation Act to require public four-year institutions to evaluate the non-athletic services and activities funded by mandatory non-E&G fees. Institutions should be required to report the results of the evaluation to the House Appropriations and Senate Finance Committees no later than November 1, 2015. The report should include an inventory of each service and activity and proposed reductions in spending through improved efficiency or cutbacks in service levels, or through elimination of services or activities tangential to the academic mission.

Recommendation 5 may potentially:	
Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	✓

State could implement a more stringent cap on annual non-E&G fee growth to better address affordability concerns

The General Assembly established an annual five percent cap on the growth in mandatory non-E&G fees in the 2003 Appropriation Act. The General Assembly included a number of exemptions to the cap, however, which allow institutions to increase fees by more than five percent annually. The exemptions include mandatory non-E&G fees used to fund

- wage, salary, and benefit increases authorized by the General Assembly;
- federal mandates (as long as institutions submit a report to the House Appropriations and Senate Finance Committees);
- capital projects authorized by the General Assembly;
- student health services; and
- other costs specifically authorized by the General Assembly.

Following the enactment of the Restructuring Act in 2005, the General Assembly also exempted all Level III institutions (William and Mary, VCU, UVA/UVA-Wise, and Virginia Tech) from the cap.

Institutional staff typically pointed to the exemption for capital-related fees as one factor explaining fee increases exceeding five percent annually. Most commonly, institutions use mandatory non-E&G fee revenue to repay debt service for recently constructed or renovated facilities. Some institutions also use mandatory non-E&G fee revenue to directly fund renovations, improvements, or other types of facility maintenance. (See Chapter 6 for additional information.)

Many institutions have used exemptions consistently since the implementation of the cap. As a result, annual growth rates averaged six percent through FY 2015. The fastest rates of growth occurred between FY 2004 and FY 2011. During this period, 11 institutions increased mandatory fees by at least 10 percent (and as much as 39 percent) on 22 separate occasions. (See Appendix I, online only, for additional information.)

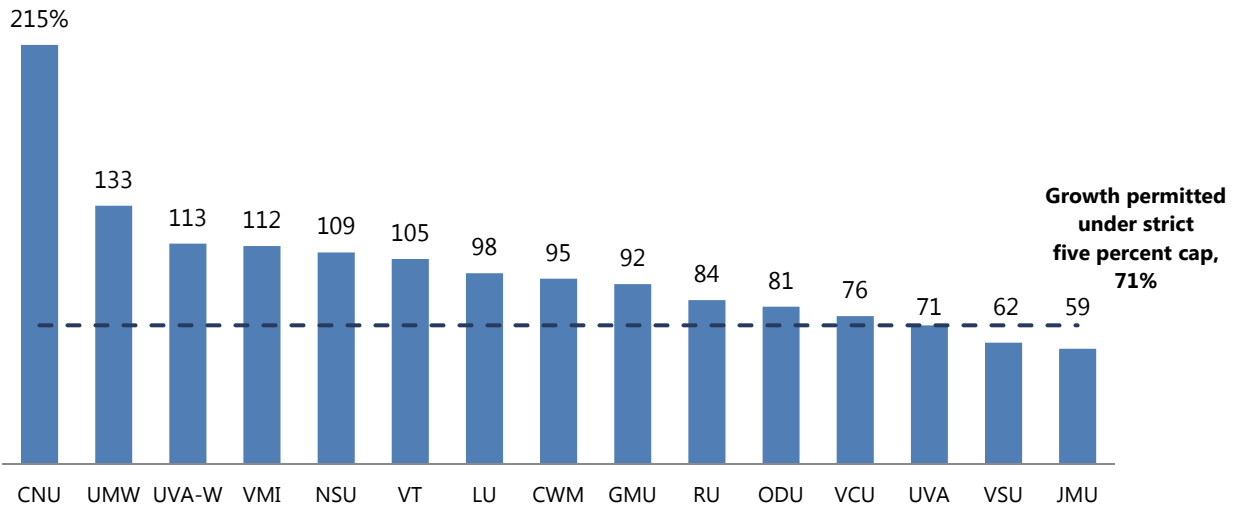
Consequently, cumulative growth in non-E&G fees was higher than if the five percent growth cap had been strictly observed. Actual growth averaged 99 percent between FY 2003 and FY 2014 due to repeated use of exemptions, but would have been only 71 percent if institutions had strictly adhered to five percent annual growth. Cumulative growth varied substantially across institutions, ranging from 215 percent growth at Christopher Newport to 59 percent growth at JMU (Figure 5-3).

Student costs were much higher at some institutions (by as much as \$2,075) than if annual growth had been strictly limited to five percent (Figure 5-4). Mandatory non-E&G fees increased by an average of \$1,767 between FY 2003 and FY 2014, compared to \$1,271 if institutions had strictly adhered to five percent annual growth. Institutional use of exemptions therefore increased the price of higher education by an additional \$496, on average.

Growth in mandatory non-E&G fees

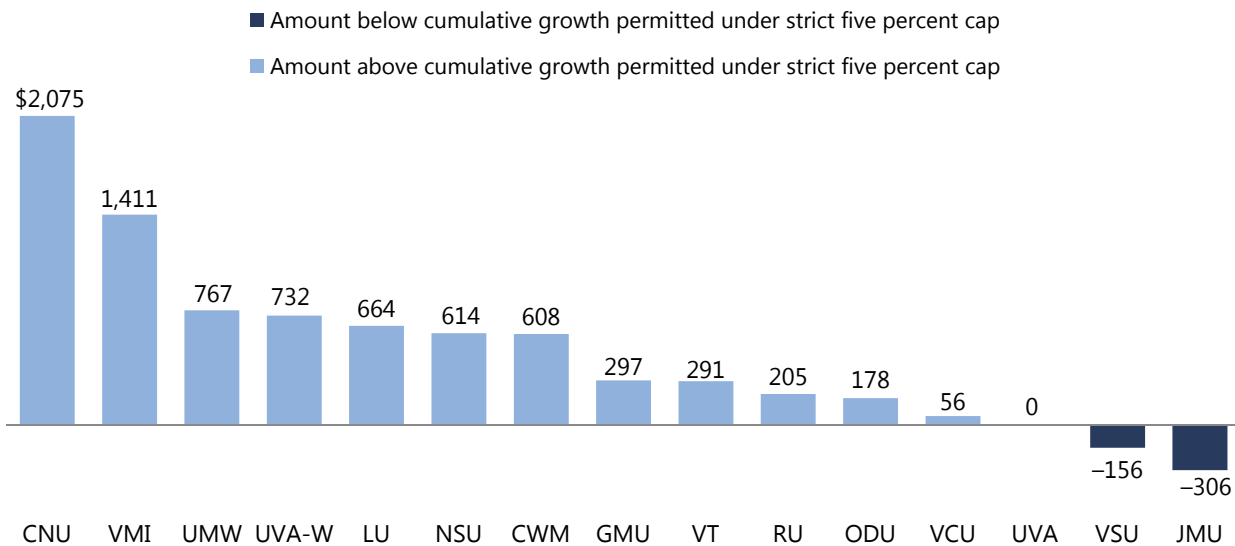
The state's annual five percent cap on mandatory non-E&G fees is evaluated nominally, as inflation is implicitly included in annual growth. As a result, data related to the state's cap is presented in nominal dollars.

FIGURE 5-3
Cumulative growth in non-E&G fees was higher at most institutions than if strict five percent limit observed (FY 2003–FY 2014)



Source: JLARC staff analysis of SCHEV’s annual Tuition and Fee reports and state’s cap on mandatory non-E&G fees.
 Notes: Data are in nominal dollars. Average in-state undergraduate non-E&G fees as reported to SCHEV. Growth permitted under cap assumes a five percent growth rate annually from FY 2003 through FY 2014. VMI’s mandatory non-E&G fees include a Quartermaster charge that funds military uniforms, laundry, and haircuts.

FIGURE 5-4
Increases in non-E&G fees above state’s cap affected student costs (FY 2003–FY 2014)



Source: JLARC staff analysis of SCHEV’s annual Tuition and Fee reports and state’s cap on mandatory non-E&G fees.
 Notes: Data are in nominal dollars. Average in-state undergraduate non-E&G fees as reported to SCHEV. Growth permitted under cap assumes a five percent growth rate annually from FY 2003 through FY 2014. VMI’s mandatory non-E&G fees include a Quartermaster charge that funds military uniforms, laundry, and haircuts.

Use of percentage and dollar limits in Ohio

Ohio implemented statewide tuition caps that provide institutions with the option of adhering to the greater of a two percent increase in tuition rates or growth of \$114 or \$188, depending on whether an institution is regional. Staff at Ohio's Board of Regents noted that the state's previous tuition caps, which were percentage-based, were not equitable for institutions starting from a lower tuition rate.

Recommendation 6 may potentially:

Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	✓

Recommendation 7 may potentially:

Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	✓

The General Assembly may wish to limit future growth in mandatory non-E&G fees by eliminating all exemptions from the state's cap on annual mandatory non-E&G growth. The General Assembly could also provide institutions with the ability to adhere to a percentage or dollar limit on annual growth, a practice used in other states to account for differences in revenue generation (sidebar). For example, although a one percent increase in non-E&G fees produced an average of \$36 in additional revenue in FY 2014, amounts varied from \$18 at Virginia Tech to \$73 at VMI. The General Assembly could consider setting this limit at the median increase in the non-E&G fee across all public four-year institutions from the prior academic year.

There may occasionally be circumstances outside an institution's control that necessitate exceeding the annual fee cap. In order to accommodate these circumstances, institutions could be allowed to exceed the annual five percent growth cap after applying for and receiving explicit authorization to do so in the Appropriation Act in a given fiscal year.

This recommendation appears to be feasible for the majority of institutions to achieve in the near-term. Annual growth rates fell below five percent at 14 institutions in FY 2013, at 12 institutions in FY 2014, and at 13 institutions in FY 2015. Although this recommendation reduces institutional autonomy related to setting tuition and fee rates, there are several benefits to implementing additional limits on mandatory non-E&G fee growth. By removing all exemptions from the five percent cap, the state would better address student affordability at the majority of institutions and would offer more predictability in the published price of higher education for students.

RECOMMENDATION 6

The General Assembly may wish to consider amending the Appropriation Act to remove all exemptions from the annual five percent cap on mandatory non-E&G fee growth and modify the cap to a limit of the lesser of (i) five percent or (ii) the median dollar increase in the fee across all public four-year institutions from the prior academic year.

RECOMMENDATION 7

The General Assembly may wish to consider including language in the Appropriation Act to require that an institution may only exceed the annual growth cap on mandatory non-E&G fees if expressly authorized through the Act.

Transparency of auxiliary spending could be improved by better reporting

Transparency of mandatory non-E&G fee growth is aided by SCHEV's Tuition and Fee Report, which lists tuition and fees at all public institutions. Institutions annually report mandatory non-E&G fee rates and components of the fee used to support specific auxiliary services or functions, such as athletic fees. However, transparency is

currently limited by inconsistencies across institutions with their reported tuition and fee rates.

Currently, the way that institutions report operating spending—particularly related to auxiliary services—limits the state’s ability to accurately compare detailed auxiliary spending across Virginia’s public institutions. The state originally developed a Chart of Accounts to ensure accurate and comparable accounting of expenditures and revenues across institutions. The last revision occurred in 1990, which has contributed to differences over time in how institutions classify certain services.

Staff at the Auditor of Public Accounts and SCHEV point to these discrepancies as one factor hindering direct comparisons of growth in tuition and fees across institutions. For example, some institutions may classify parking as an E&G service, while others classify them as an auxiliary service. Further, institutions could fund parking using (i) tuition and mandatory E&G fees, (ii) mandatory non-E&G fees, or (iii) user fees, depending on how they classify parking. The effectiveness of the state’s cap on annual mandatory non-E&G fee growth may also be limited, because not all institutions classify services in a consistent manner.

Another limitation is differences in mandatory non-E&G fee components reported by institutions. For example, one institution may include student fees used to support facility debt service in its reported athletic fee, while others may include debt service as a separate component fee. There is no consistent reporting mechanism across institutions, which stakeholders often attribute to a focus on total cost to students.

Improving accounting guidelines would improve comparability and transparency of mandatory non-E&G fee growth. Coordinating this update with the state’s Chart of Accounts will ensure that information available to stakeholders is as accurate and comparable as possible. This process will also allow the state to better monitor the major components of mandatory non-E&G fees, including athletic fees. JLARC’s September 2013 *Review of Non-Academic Services and Costs* recommended that SCHEV convene a working group to standardize the reporting of mandatory non-E&G fees, including fees supporting intercollegiate athletics, by the 2015 General Assembly session. Although the House proposed budget language requiring SCHEV and the Auditor of Public Accounts staff to determine standardized reporting for intercollegiate athletics during the 2014 General Assembly session, this language was not included in the final version of the budget.

RECOMMENDATION 8

The State Council of Higher Education for Virginia should update the state’s Chart of Accounts for higher education in order to improve comparability and transparency of mandatory non-E&G fees, with input from the Department of Accounts, the Department of Planning and Budget, the Auditor of Public Accounts, and institutional staff. This process should be coordinated with the standardization of tuition and fee reporting recommended in JLARC’s 2013 *Review of Non-Academic Services and Costs at Virginia’s Public Higher Education Institutions*.

6 Limiting Capital Spending and Debt

SUMMARY Capital spending, particularly spending funded through debt, has significantly increased student and state costs over the past decade. Mandatory student fees used to repay debt service doubled between FY 2005 and FY 2013. Annual institutional debt service payments now are equivalent to nine percent of institutions' total E&G spending. State debt service payments increased from \$70 million to \$439 million during the same period. Virginia and its public institutions spend more on higher education capital than other states. Outstanding principal and interest payments represent significant fixed, long-term costs for both institutions and the state (\$5.3 billion and \$4.1 billion, respectively, as of the end of FY 2013) and reduce budgetary flexibility. To better allocate future capital spending given limited resources, SCHEV should update its higher education prioritization process using more comprehensive information. Prioritization should be used to not only identify the highest priority projects statewide that should receive funding, but also identify lower priority projects that should not receive funding. Implementing a more informed prioritization process and reducing capital spending will be critical when considering the \$7.6 billion in new E&G projects institutions requested through FY 2020.

Prior reports in JLARC's higher education series identified capital spending, particularly spending financed through debt, as a substantial driver of higher education costs. Students generally finance the majority of institutional capital spending, since mandatory fees and user fees fully repay debt service held by many of the public four-year institutions (mainly for auxiliary facilities). Between FY 2008 and FY 2013, state debt service payments for the public four-year institutions' E&G facilities also increased by more than the declines in state operating support. As a result, recent increases in spending for capital projects contributed to higher student costs, a decline in student affordability, and budgetary inflexibility for the state and institutions.

The capital review process and allocation of capital funding involve the public higher education institutions, as well as several central state agencies, including SCHEV, the Department of Planning and Budget (DPB), the Department of General Services (DGS), and the Department of the Treasury. Because of the complexity of these processes and the effect of capital spending on higher education costs, JLARC staff examined capital spending, the use of debt to finance capital spending, and the capital review process. This chapter addresses use of capital debt by institutions and the state to fund capital projects on the campuses of Virginia's 15 public four-year institutions.

Debt service payments

Payments made in installments toward paying down the principal and interest on capital bonds.

Capital projects

In Virginia, capital projects are classified as:

- (1) acquisitions,
 - (2) new construction,
 - (3) improvements,
 - (4) equipment, or
 - (5) demolition.
-

Institutions increased student fees to repay capital debt service, resulting in long-term fixed costs

Virginia's public four-year institutions rely on a variety of revenue sources to finance spending on higher education capital projects (primarily auxiliary facilities), including institutional revenue—student fees, private donations, endowment income, indirect cost recoveries on research grants, and other revenue—and three types of capital bonds (Table 6-1). Institutions generally rely on student-generated revenue to repay the debt service on capital bonds. Institutional debt service on dining facilities and residence halls is repaid through user fees, such as room and board charges. Institutional debt service on other auxiliary facilities that do not have a dedicated funding stream, such as athletic facilities or parking facilities, is repaid through mandatory student fees.

TABLE 6-1
Institutions use three types of bonds to finance higher education capital projects

	Type of facilities	Debt service repayment
9(c) higher education bonds	Revenue-producing projects (primarily dining facilities and residence halls)	Project revenues, including user fees Backed by the full faith and credit of the Commonwealth
9(d) Pooled Bond Program	Revenue-producing projects (primarily parking and athletic facilities) May include E&G or mixed use facilities	Project revenues Institutional revenue, including mandatory student fees State intercept of institutional funds, if needed ^a
9(d) independently issued bonds^b	Revenue-producing projects May include E&G or mixed use facilities	Project revenues Institutional revenue, including mandatory student fees

Source: JLARC staff analysis of prior JLARC reports, documentation from Treasury, interviews with Treasury staff, the Code of Virginia, and the Constitution of Virginia.

^a The state has the authority to intercept an institution's appropriations if that institution has not made payments on debt service for pooled bonds. ^b Level 3 institutions (William & Mary, UVA/UVA-Wise, VCU, and Virginia Tech) are able to independently issue 9(d) revenue bonds without state oversight or approval from the General Assembly under authority granted by the 2005 Restructuring Act. Only UVA/UVA-Wise uses this authority regularly, although VCU has recently issued 9(d) bonds for several capital projects.

Each of the public four-year institutions maintains a debt policy, as well as other policies to monitor capital spending and the use of capital debt. However, as of 2013, no institution had a policy limiting the use of student fees to fund debt service payments. (See Appendix J, online only, for information on institutions' capital and debt policies. See also JLARC's 2013 report on non-academic spending.)

Although capital spending and use of debt have varied across institutions, collectively, the public four-year institutions spent approximately \$4.7 billion on capital pro-

Pooled Bond Program
The state established the Pooled Bond Program in 1986. The Virginia College Building Authority issues capital bonds and purchases institutional debt obligations. Institutions use the funding to finance or refinance capital projects approved by the General Assembly. If institutions do not make debt service payments on pooled bonds, the state may intercept institutions' appropriations to repay institutional obligations held by the Virginia College Building Authority.

jects between FY 2002 and FY 2013 (inflation-adjusted). This level of spending included \$3.5 billion in debt service payments: \$2.1 billion to repay 9(d) pooled bonds, \$1.3 billion to repay 9(c) bonds, and \$96.3 million to repay independently issued 9(d) bonds.

Institutions increased mandatory student fees to repay debt service

Recent increases in capital spending, the use of capital bonds to finance capital projects, and the increased reliance on student-generated revenue to repay debt service have contributed directly to an increase in student costs. Accounting for inflation, average mandatory student fees (both E&G and non-E&G) used to repay debt service on institutionally held debt increased from \$334 to \$689 between FY 2005 and FY 2013 (Table 6-2).

TABLE 6-2

Institutions more than doubled average mandatory fees to repay debt service (FY 2005-FY 2013)

	FY 2005	FY 2013	Change	% tuition & mandatory fees used to repay debt service, FY 2013
CWM	\$303	\$1,267	\$964	9%
CNU	539	1,298	759	12
VMI	157	730	573	5
LU	259	801	542	7
NSU	378	872	494	13
JMU	286	731	445	8
UVA-W	789	1,181	392	15
UVA	268	597	329	5
RU	97	299	202	3
GMU	328	487	159	5
UMW	524	680	156	7
VSU	80	222	142	3
ODU	473	496	23	6
VT	200	222	22	2
VCU	nd	449	nd	5
Statewide	334	689	354	7%

Source: JLARC staff analysis of debt service data reported by the public four-year institutions and SCHEV's annual Tuition and Fee reports.

Notes: Numbers may not add due to rounding. Data is for both E&G and non-E&G fees charged to full-time students and is reported in 2013 constant dollars. Tuition and mandatory fees are for in-state undergraduates. Due to its conversion to a new enterprise resource planning system in FY 2007 and the resulting impact on comparable longitudinal data analyses, VCU was unable to report debt service data for FY 2005.

Mandatory fees used to repay institutional debt service were highest at Christopher Newport (\$1,298) and William and Mary (\$1,267) and constituted the highest portion of total in-state undergraduate tuition and mandatory fees at UVA-Wise (15 percent), Norfolk State (13 percent) and Christopher Newport (12 percent). Radford, by contrast, has generally used a “pay-as-you-go” approach to financing capital projects with the goal of minimizing institutional debt. Even with a recent increase in student fees to repay institutional debt service, the cost to in-state undergraduates at Radford is only three percent of total tuition and mandatory fees.

As a result of increases in capital spending and borrowing, aggregate annual institutional debt service payments have increased, from \$106.2 million in FY 2002 to \$421.4 million in FY 2013 (inflation-adjusted). In FY 2013, total payments on institutional debt service were equivalent to approximately nine percent of total E&G spending by Virginia’s 15 public four-year institutions.

Recommendation 6 in Chapter 5 would remove the exemption from the state’s five percent mandatory non-E&G growth cap for fees funding capital projects. Doing so will help ensure that the rate of growth in mandatory student fees to repay institutional debt service is more limited in the future and should help to slow capital spending by institutions.

When capital debt is issued on behalf of public institutions, institutions incur substantial fixed long-term costs

Spending on capital projects increasingly represents long-term fixed costs for individual institutions. Virginia’s public four-year institutions are obligated to repay approximately \$5.3 billion through FY 2043 on debt outstanding as of the end of FY 2013 (Table 6-3). This estimate does not include outstanding debt on bonds that have been authorized by the General Assembly but not yet issued, or debt on bonds that may be issued in the future.

Outstanding debt incurred by some institutions may cause budgetary inflexibility, particularly at those institutions that are more reliant on student-generated revenue to fund their debt service payments. Nine institutions relied on student-generated revenue to fund between 95 and 100 percent of institutional debt service payments in FY 2013: Norfolk State, Radford, Longwood, UVA-Wise, Mary Washington, ODU, Virginia State, Christopher Newport, and JMU (Figure 6-1). The fixed costs of outstanding capital debt, particularly debt on auxiliary facilities, may hinder the reallocation of resources from auxiliary operations to E&G operations. In interviews, institutional staff noted that staff and board members are generally focused on total cost to students. Some institutions may be unable or unwilling to impose additional student costs in order to fund basic E&G operations.

Outstanding debt refers to future debt service payments, both principal and interest, owed by an institution or the state.

TABLE 6-3

Outstanding principal and interest payments owed by Virginia’s public four-year institutions was an estimated \$5.3 billion as of the end of FY 2013

**Total outstanding principal and interest payments,
in millions (FY 2014-FY 2043)**

UVA	\$1,542.8
GMU	849.6
VCU	658.5
VT	607.4
JMU	295.4
CWM	269.0
CNU	243.5
ODU	243.1
UMW	176.1
VSU	152.1
LU	70.4
NSU	60.9
RU	33.5
UVA-W	32.8
VMI	18.0
Statewide	\$5,253.2

Source: JLARC staff analysis of data reported by the Level 3 institutions and data provided by the APA.

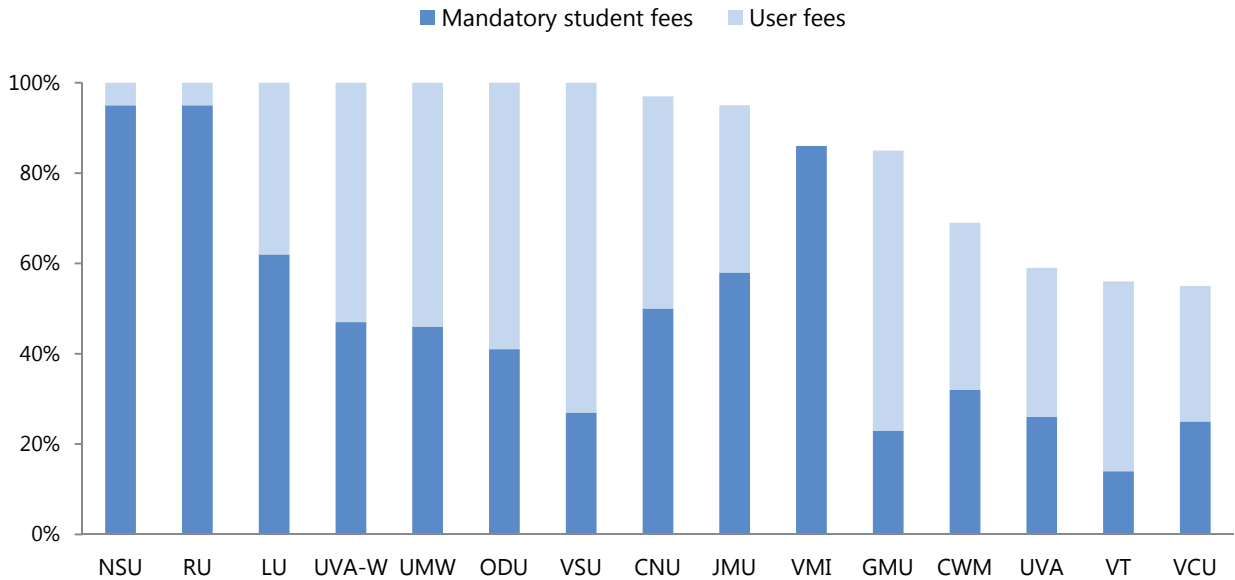
Notes: Outstanding debt includes future debt service payments (both principal and interest) on capital bonds. Debt service payments for independently issued 9(d) debt at UVA/UVA-Wise exclude projects related to UVA’s Medical Center. Debt for William and Mary includes VIMS.

When an institution depends on student-generated revenue, any decline in enrollment has the potential to negatively affect its ability to fund future debt service payments. This is particularly a concern for those institutions most dependent on student-generated revenue to fund their debt service payments. Higher education experts anticipate that enrollment may decline at smaller regional institutions due to reduced demand for higher education at current published prices. Several of Virginia’s public four-year institutions already face enrollment declines, and several others are projected to experience a decline through FY 2020. Some institutions may have difficulty meeting debt obligations, and some may further increase student fees to repay debt service.

Capital debt incurred by state government for E&G projects constrains state budgetary flexibility

To finance higher education E&G capital projects (as opposed to auxiliary projects financed through institutional debt), the state relies on revenue from the general fund and from several other sources, including two types of capital bonds (Table 6-4). The state typically uses general fund revenue to repay the debt service on capital bonds.

FIGURE 6-1
Most of Virginia’s public four-year institutions use mandatory student fees and user fees to repay all or most of debt service (FY 2013)



Source: JLARC staff analysis of debt service data reported by the public four-year institutions.
 Note: Mandatory fees include both E&G and non-E&G fees for full-time students.

9(b) general obligation bonds

9(b) general obligation bonds must be authorized by majority vote of each chamber of the General Assembly and then approved in a voter referendum. The bonds have historically been used to finance only E&G projects. These bonds are backed by the full faith and credit of the Commonwealth. Debt service payments on 9(b) general obligation bonds are financed with general fund revenue.

TABLE 6-4
Virginia uses a variety of bonds to finance higher education capital

	Type of facilities	Debt service repayment
9(b) general obligation bonds	E&G facilities Mixed-use facilities containing E&G space	General funds Backed by the full faith and credit of the Commonwealth
9(d) 21st Century College and Equipment Program	E&G facilities Mixed-use facilities containing E&G space Equipment for instruction and research	General funds Out-of-state student capital fee Institutional funds

Source: JLARC staff analysis of prior JLARC reports, documentation from Treasury, interviews with Treasury staff, the Code of Virginia, and the Constitution of Virginia.

Debt service payments represent approximately one-third of state support for higher education

Between FY 2002 and FY 2013, the state made approximately \$3 billion in payments on debt used to finance capital projects at the public four-year institutions, including \$2.3 billion to repay 21st Century Program bonds and \$709.1 million to repay 9(b) general obligation bonds (inflation-adjusted). Annual state debt service payments increased over time, corresponding to a growing use of bonds to fund higher education capital projects. In FY 2002, state debt service payments for capital projects at the public four-year institutions totaled approximately \$69.5 million. Annual payments grew to \$439.1 million by FY 2013 (Figure 6-2), due to substantial capital authorizations over this period. (See Appendix J, online only, for state payments by institution.)

While capital spending increased substantially over the past decade, state and institutional budgets have been constrained in their ability to meet the needs of existing facilities and, in some cases, basic E&G operating needs. A former board member responding to JLARC’s survey commented,

Capital and operating funds lived in two different worlds; we were cutting programs and rapidly raising tuition to offset reductions in state support while building magnificent new buildings... [the state] should better integrate capital and operating policy.

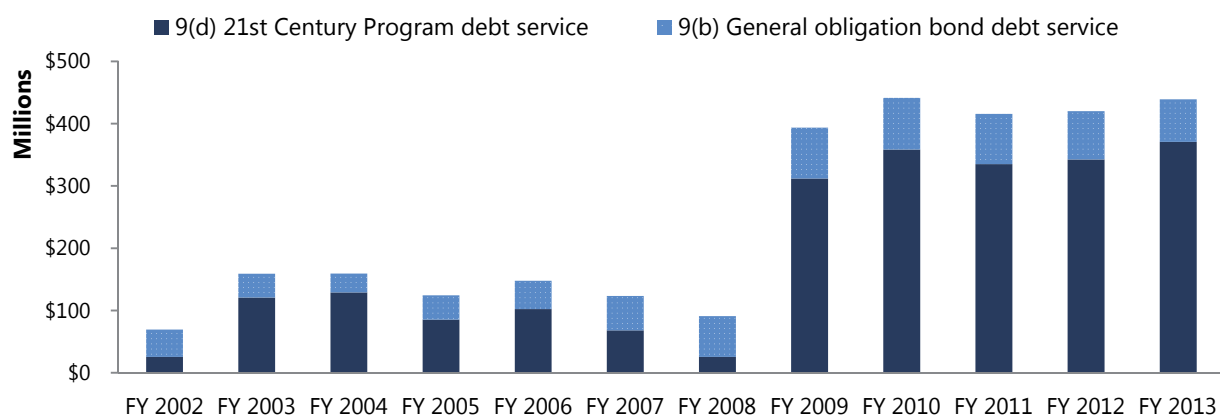
In FY 2013, state debt service payments (\$439.1 million) were approximately 32 percent of total state support for the public four-year institutions’ capital projects and E&G operations (\$1.4 billion). Payments on state debt used to finance higher education capital projects at the four-year institutions were equivalent to approximately \$2,215 per student, compared to \$6,032 per in-state student for E&G operations.

21st Century College & Equipment Program

The Virginia College Building Authority’s Equipment Program was established in 1986 to address technological deficiencies at the public institutions through bonds for equipment. The 21st Century Program was established in 1996 to finance capital projects through bonds. The two programs were combined in 1999.

21st Century Program Bonds must be authorized by the General Assembly. These bonds represent limited obligations of the Commonwealth, and debt service payments are paid through general fund revenue, revenue from an out-of-state student capital fee, and institutional revenue.

FIGURE 6-2
State debt service payments increased significantly (FY 2002–FY 2013)

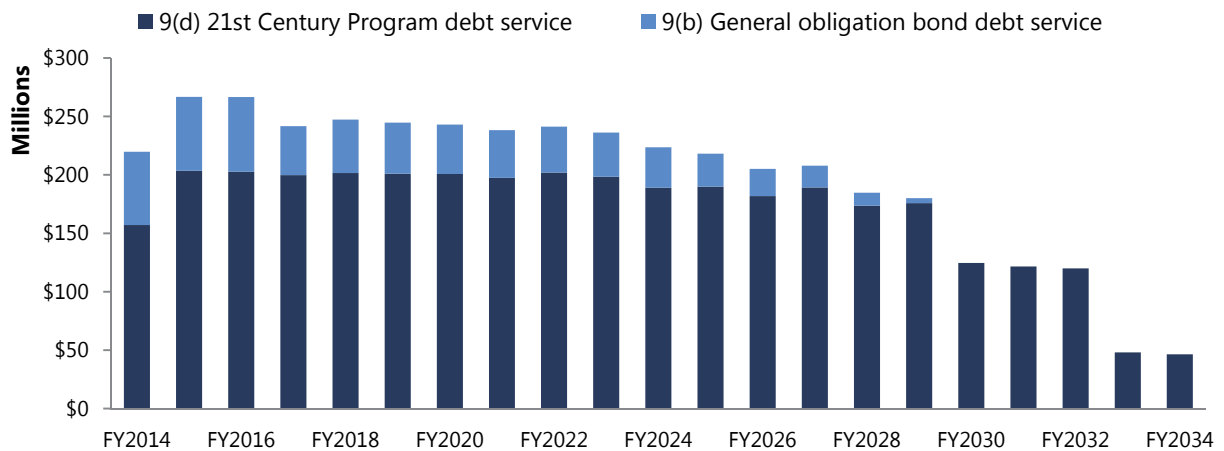


Source: JLARC staff analysis of capital data provided by DPB and Treasury and the Consumer Price Index.
Notes: Data is in constant 2013 dollars. State debt service payments on Virginia Public Building Authority capital projects at Norfolk State, Mary Washington, VCU, and William and Mary are omitted (approximately \$7 million between FY 2002 and FY 2013).

State capital debt creates substantial long-term costs that constrain state budget flexibility

Increased use of bonds to fund capital spending increased the state's long-term fixed costs during a period of fiscal constraint. The state is obligated to pay at least \$4.1 billion through FY 2034 on debt outstanding as of the end of FY 2013. This does not include debt service commitments (i) for the 21st Century Program's Equipment Program or (ii) any 21st Century Program bonds issued prior to 2002. Estimated annual state debt service payments range between \$266.7 million in FY 2015 to \$46.9 million in FY 2034 (Figure 6-3).

FIGURE 6-3
State debt service payments on outstanding principal and interest extend through FY 2034



Source: JLARC staff analysis of information on outstanding debt service payments for 9(b) general obligation bonds and 9(d) 21st Century Program debt service payments provided by Treasury.

Notes: Outstanding debt includes future debt service payments (both principal and interest) on capital bonds.

JLARC staff estimated state debt payments for the public four-year institutions based on methodology developed in conjunction with Treasury staff. See Appendix B for additional information. Debt service payments for the 21st Century Program are limited to debt issued during or after 2002 and exclude debt for equipment.

Outstanding debt for higher education capital projects may crowd out state resources that could be used to support institutions' E&G operations, student financial aid, or other higher education priorities. Between FY 2008 and FY 2013, state debt service payments for the public four-year institutions increased by more than \$348 million annually, while state operating support declined by approximately \$267 million. Future debt service payments may actually be higher, as a substantial amount of debt has been authorized by the General Assembly but not yet issued. Increases in outstanding state debt may further reduce budgetary flexibility in times of fiscal constraint, when the public institutions are already below state funding goals for E&G operations (Chapter 4) and student financial aid (Chapter 8).

Spending and debt for higher education capital projects exceed national and regional averages

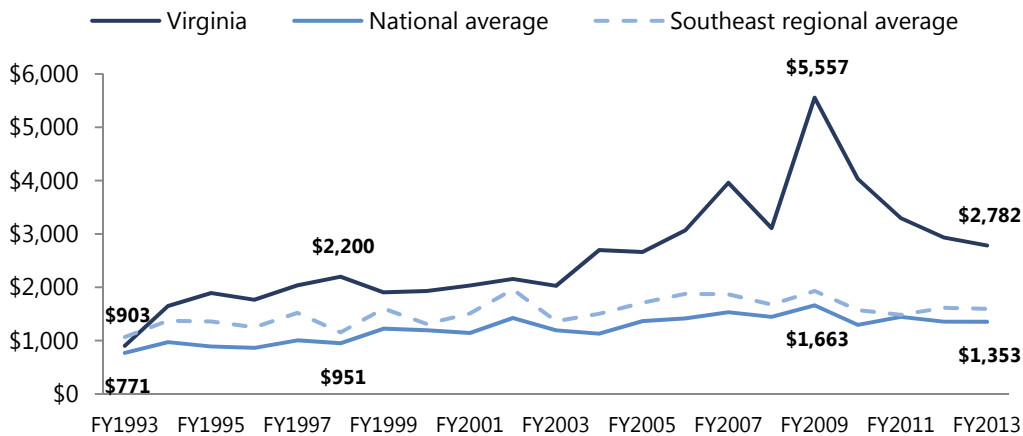
Over the past two decades, the Virginia state government and its public institutions have spent substantially on higher education capital projects. Even accounting for different rates of enrollment growth, capital spending and debt in Virginia have significantly exceeded national and regional averages.

Virginia spent more than other states for higher education capital projects over the past two decades

Unlike spending on core E&G operations and auxiliary enterprises (Appendix F, online only), spending on higher education capital projects significantly exceeded nationwide state and institutional averages. Major capital packages in FY 2002, FY 2008, FY 2011, and FY 2014 contributed to relatively high levels of capital spending by the state, and substantial authorizations contributed to high levels of institutional spending.

Even after accounting for inflation, annual capital spending at Virginia’s public institutions increased steadily over the past two decades, from \$187 million in FY 1993 to \$835 million in FY 2013. Capital spending per student also increased substantially, from \$903 in FY 1993 to \$2,782 in FY 2013 (Figure 6-4). This substantially exceeded growth in capital spending in other states, and Virginia now spends more than twice the national average of \$1,353 and nearly double the regional average of \$1,597.

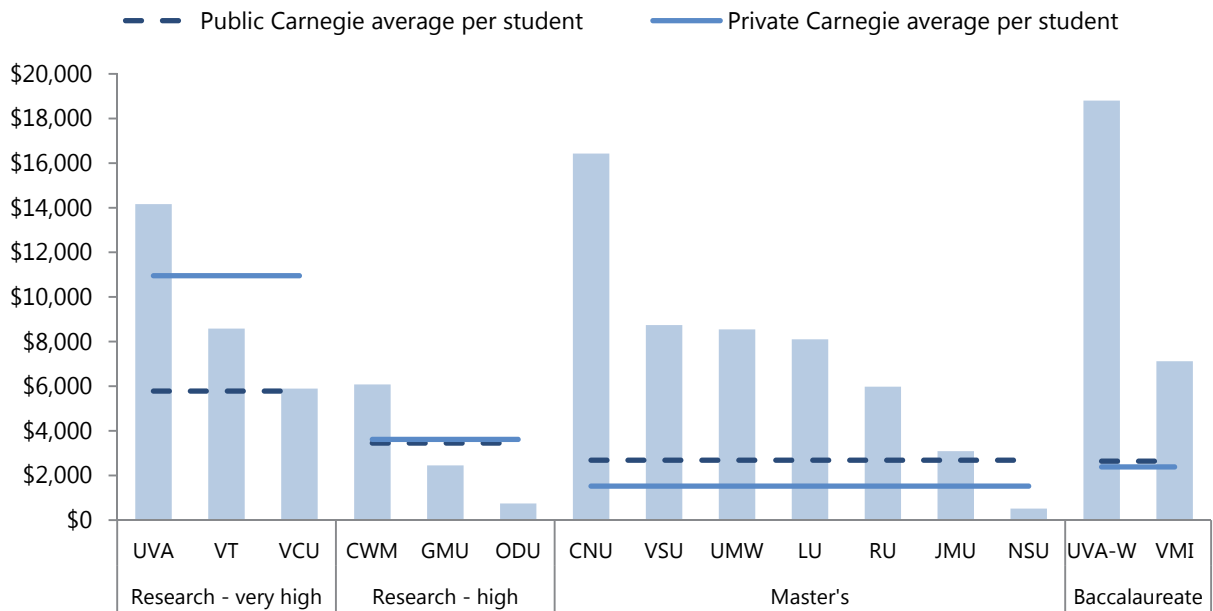
FIGURE 6-4
Higher education capital spending by Virginia’s public institutions and the state exceed national and regional spending (FY 1993–FY 2012)



Source: JLARC staff analysis of the National Association of State Budget Officers’ (NASBO) annual State Expenditure Report data on higher education capital expenditures, the National Center for Education Statistics’ (NCES)’s annual Digest of Education Statistics data on full-time equivalent fall enrollments, and the Consumer Price Index.
Notes: Expenditures are reported in 2013 constant dollars. See Appendix B for methodological information.

Most of Virginia’s public four-year institutions individually spend more than other similar institutions nationwide. In FY 2012, 12 institutions spent more than the average among public Carnegie peers (Figure 6-5), a trend which has been relatively consistent over the past decade. The majority of institutions also spend more than private Carnegie peers. At UVA-Wise and Christopher Newport, spending was approximately eight times Carnegie averages. Only GMU, ODU, and Norfolk State spent less on annual construction than Carnegie peers. This trend generally holds true when accounting for the value of institutions’ physical plants.

FIGURE 6-5
Most institutions exceed average construction spending per student of Carnegie class (FY 2012)



Source: JLARC staff analysis of IPEDS data on construction balances and annual FTE enrollments.
 Notes: Data are in 2013 constant dollars. See Appendix B for methodological information.

Virginia and its public institutions issued more debt for higher education than other states over the past two decades

As noted above, the state and public institutions fund a significant portion of capital spending through debt. In FY 2001, bonds were 39 percent of total higher education capital spending (equivalent to \$791 per student). By FY 2013, bonds were 92 percent of higher education capital spending (\$2,548 per student), compared with the national average of 47 percent (\$587 per student).

Over the past 15 years, the state approved two major capital packages that included substantial authorizations for higher education. In FY 2002, the General Assembly and voters approved a 9(b) general obligation bond package, which included

\$855.5 million (inflation-adjusted) to benefit the public four-year institutions. Following implementation of the state’s pooled process in FY 2008, the General Assembly authorized a 21st Century Program bond package, which included \$762.3 million (inflation-adjusted) for the public four-year institutions. During this period, the state also began funding its maintenance reserve program through bonds. (See Chapter 7 for additional information on the state’s maintenance reserve program.)

Enrollment growth does not fully explain high capital spending and debt in Virginia

Despite declines in (1) state general funds and (2) student ability to afford higher education, institutions expanded the size of their physical plants, even when controlling for enrollment growth. On average, square footage per student increased 14 percent between 2004 and 2011. The increase in square footage per student was much greater at certain institutions, notably Christopher Newport (87 percent) and Longwood (83 percent) (Table 6-5).

TABLE 6-5
Total square footage per student has increased at most institutions

	Square footage per student, Fall 2004	Square footage per student, Fall 2011	Change	% Change
CNU	304	567	263	87%
LU	231	422	191	83
CWM	334	438	104	31
GMU	176	258	81	46
VMI	611	686	75	12
UVA-W	186	254	68	36
ODU	203	252	48	24
RU	194	241	47	24
VSU	142	175	34	24
JMU	213	229	16	7
UVA	389	398	9	2
VT	267	272	5	2
VCU	195	197	2	1
UMW	212	194	-18	-8
NSU	222	185	-37	-17
Statewide	246	281	34	14

Source: JLARC staff analysis of data provided by SCHEV on fall space inventory.

Note: Fall space inventory data as reported to SCHEV. Total square footage includes E&G space, auxiliary space, and “other” space (including unassigned and non-assignable space). Statewide average is weighted for enrollment.

A number of factors in addition to enrollment growth appear to have driven Virginia’s higher education capital spending over the last two decades. JLARC’s 2013 report

Space need

SCHEV's space need guidelines set a target amount of square footage per student, based on current enrollment and future projections. For example, SCHEV's guideline recommends between 42.5 and 50 assignable square feet per student for instructional and academic support space.

Space utilization

SCHEV's space need guidelines establish criteria to assess how efficiently institutions use existing classroom, classroom lab, and research space. Utilization of instructional space is based on physical productivity (how many students occupy a room and for how long), while utilization of research space is based on financial productivity.

6-PAC

The General Assembly established a new capital process in 2008, which was intended to reduce capital costs, minimize cost overruns, and better monitor the use of debt for capital projects. The General Assembly created the Six-Year Capital Outlay Plan Advisory Committee to develop the state's six-year capital plan.

on academic spending found that construction and renovation of E&G facilities supported new methods of instructional delivery, served programs with specialized space needs (such as nursing), and maintained institutional or program-level accreditation. Growth in space also expanded institutional research capacity, which supports faculty recruitment, according to institutional staff.

Construction and renovation of auxiliary facilities—including residence halls, dining, recreation, and athletic facilities—allowed institutions to offer expanded auxiliary services and accommodate growing on-campus populations. Many institutions expanded their athletic programs over the past decade, and several institutions substantially increased their on-campus enrollments. Institutional staff cited the need to compete with other institutions in recruitment of students as a driver of this auxiliary spending.

Poor facility condition may contribute to increased capital spending as facilities deteriorate. Facilities with deferred maintenance represent significant long-term capital liabilities. Poor facility condition may also hinder an institution's core mission and even potentially affect student well-being. For example, buildings in poor condition may be unsafe or disrupt instruction or research if power outages occur or heating systems fail. (See Chapter 7 for additional information.)

State could likely spend less on capital and should better prioritize capital requests

The Code of Virginia requires SCHEV to “develop policies, formulae, and guidelines for the fair and equitable distribution and use of public funds among the public institutions of higher education ... [that] shall include provisions for ... capital outlay programs” (§ 23-9.9). SCHEV meets this requirement in part through prioritization of institutions' requests for capital projects eligible to receive state funding.

The process relies on three primary criteria to assess the need for construction or renovation of E&G facilities: (1) current space need, (2) future space need, and (3) programmatic justification. Two additional criteria are used to assess certain projects: space utilization, for projects containing instructional or research space, and facility condition for renovations. SCHEV assigns capital projects to a priority group based on these criteria and then provides its recommendations to the members of the Six-Year Capital Outlay Plan Advisory Committee (6-PAC).

More broadly, despite the fact that Virginia has historically spent more on higher education capital than other states, there is no guidance about the appropriate level of capital spending. Consequently, capital spending has been more a reflection of how much the state and institutions are willing to borrow, rather than what is essential to achieving each institution's core academic mission.

Use of prioritization emphasizes higher education goals and allows for information-driven and transparent funding given limited resources

The National Association of State Budget Officers has noted the growing trend among states to better connect capital planning decisions to statewide goals and strategic plans. Several other states—including Washington, Maryland, and Nebraska—support this connection by prioritizing higher education capital requests statewide across institutions. In interviews, staff at several state higher education coordinating and governing boards indicated that prioritization makes funding decisions more transparent and predictable over time. They also note that it allows for more justifiable capital funding decisions across institutions, given limited state resources.

CASE STUDY

Capital project evaluation in the state of Washington

In 2008, the Washington state legislature directed the development of “a transparent, objective, and implementable system that provides the four-year institutions opportunity to articulate their capital facility needs while enabling decision makers to identify tradeoffs and make the best strategic choices given limited state resources.”

In order to meet these goals, the state has developed scoring matrices that emphasize statewide higher education goals, preservation of physical assets, degree production, and maximal use of instructional space. Institutions submit a prioritized list of capital requests, and Capital Project Evaluation panels evaluate each project. The panels include state agency staff and academic affairs and facilities staff from the four-year institutions. Panel members evaluate and score projects within each project category. A single, prioritized list of statewide projects is then provided to state decision makers.

According to Washington’s higher education policy board, the new process provides objectivity to the decision-making process, identifies the highest need capital projects, and better supports the higher education goals of the legislature.

Deficiencies with current process prevent informed prioritization

SCHEV’s prioritization process has four significant deficiencies. As a result, prioritization has only a minimal impact on capital selection and funding decisions, according to stakeholders. These deficiencies limit the ability of decision-makers to effectively allocate capital funding, given limited state resources.

The first deficiency is the use of outdated space utilization guidelines, which impede the assessment of need for additional instructional and research space. The current guidelines have not been substantially modified since their implementation in the late 1970s and early 1980s, as noted in the 2013 JLARC report on academic spending. As a result, institutional staff often noted they placed little emphasis on the guidelines

when making space management or capital planning decisions. State agency staff also generally pointed to limited use of SCHEV's prioritization recommendations resulting from outdated space utilization guidelines.

Second, a lack of central, statewide facility condition information likely hinders the prioritization of capital requests for renovations. (See Chapter 7 for additional information.)

Third, the process does not prioritize capital requests statewide, across all public higher education institutions. A former SCHEV staff member noted that in the 1980s and early 1990s, SCHEV's prioritization process followed this ranking scheme.

Fourth, Virginia's process also does not sufficiently prioritize scarce capital resources by identifying the highest need projects. The public four-year institutions have requested \$7.6 billion in funding between FY 2015 and FY 2020 to support capital projects with an E&G component. Institutions' requests would include \$6.5 billion in state funding (general funds or state-supported debt). SCHEV recommended that the state provide \$2.5 billion, or approximately 40 percent of total state support requested by institutions.

Moving away from statewide prioritization and insufficiently identifying highest need capital requests limits decision-makers' ability to (i) identify the capital requests that should move forward, given a specific capital budget, and (ii) ensure that the highest need capital requests receive funding, regardless of which institution proposed them.

SCHEV should improve its prioritization process to better inform capital decision-making

Consistently high levels of higher education capital spending in Virginia and significant capital requests for upcoming biennia suggest that a more effective prioritization process is needed to better allocate capital resources in a time of fiscal constraint. SCHEV's prioritization process should be modified to better identify the highest need capital projects and should emphasize capital improvements and renovations.

Prioritization should better inform decision-makers through use of more quantitative metrics, a broader range of criteria, and statewide rankings of capital requests. As it modifies the prioritization process, SCHEV should update its space utilization guidelines as recommended in the 2013 JLARC report on academic spending. SCHEV should complete an updated prioritization schedule by 2016 and provide it to 6-PAC for approval before implementation.

SCHEV could also incorporate measures of facility condition. (See Chapter 7 for additional information.) Although SCHEV's prioritization process uses facility condition to rank institutions' requests for renovations, the lack of central monitoring raises questions about the reliability and consistency of facility condition data reported by institutions. As noted in Chapter 7, poor facility condition affects more than

just need for renovations and should be incorporated more broadly into prioritization to enhance capital decision-making. The addition of new square footage at a time when institutions are having difficulty sufficiently addressing current maintenance needs has the potential to further exacerbate deferred maintenance backlogs. Including facility condition and deferred maintenance needs would allow SCHEV to better evaluate requests for new construction and help improve prioritization of the highest need capital projects.

Incorporating facility condition into SCHEV's prioritization process could also address prioritization of critical deferred maintenance needs and emphasis of maintenance through the capital budget. Doing so would also improve the quality of information available to state decision-makers and allow them to make the best strategic choices about capital spending, given limited resources.

Once SCHEV's prioritization schedule is developed, it should be used to rank capital requests across institutions. Projects could be ranked higher if they are mission-critical (i.e., additional classroom space to accommodate enrollment growth), improve facilities in poor condition, or renovate existing space rather than building new space. Projects could be ranked lower if they are relatively less critical (i.e., administrative space), add new square footage when existing facilities are in poor condition, or entail new construction, which may be more costly than renovation. These lower ranked projects may not receive state funding, resulting in fewer capital projects and less total spending on capital over time.

Newly developed prioritization schedule should ensure only necessary projects are funded

The above prioritization of capital projects is important to better allocate resources among institutions' numerous capital requests. The state also needs to ensure that only necessary projects, given the current fiscal climate, are recommended for funding. Without using prioritization to identify which projects are not critical—and therefore should not be undertaken—capital construction and renovation will likely continue to play a role in driving growth in capital spending in the future.

State stakeholders involved in the capital decision-making process should use the results of SCHEV's revised capital prioritization schedule as the basis for determining which higher education capital requests should receive funding, particularly given the constraints on state and institutional resources in the near-term.

**Recommendation 9
may potentially:**

Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	

RECOMMENDATION 9

The General Assembly may wish to consider including language in the Appropriation Act to direct the State Council of Higher Education for Virginia to modify its current capital prioritization process by 2016 to (i) ensure objective analysis of institutions' capital requests and (ii) provide a statewide prioritization of higher education capital requests that may be used to determine which projects should be recommended to receive funding. It should provide the Six-Year Capital Outlay Plan Advisory Committee with a draft of the revised prioritization process for feedback and approval.

**Recommendation 10
may potentially:**

Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	✓
Limit Institutional Autonomy	

RECOMMENDATION 10

The General Assembly may wish to consider including language in the Appropriation Act to require that the Six-Year Capital Outlay Plan Advisory Committee, the Department of Planning and Budget, and others as appropriate use the results of the prioritization process established by the State Council of Higher Education for Virginia in determining which capital projects should receive funding.

State should improve accessibility of higher education capital information for decision-making

More broadly, the state's capital oversight could also be enhanced through centralized access to information currently collected by the state and national organizations. Doing so would increase the effectiveness of the state's oversight of spending and the effects on student costs. Mandatory student fees have substantially increased at several institutions in order to fund institutional debt service payments.

Decision-makers currently have access to a substantial amount of information on institutions' capital spending and debt, which is tracked by a number of state agencies. For example, Treasury tracks information on state debt service obligations, and the Bureau of Capital Outlay Management tracks information on pooled authorizations for individual institutions and agencies. Other information, compiled by national organizations, does not appear to be monitored by any state agency. For example, stakeholders have generally been unaware of how Virginia's spending on higher education capital compares to that of other states and institutions. No state entity currently tracks national comparators for higher education capital spending, even though higher education is a substantial portion of total state capital spending and debt. Annual benchmarking of higher education capital spending in other states and at other institutions would likely enhance capital decision-making.

SCHEV should conduct annual benchmarking on capital spending in Virginia, relative to other states and institutions, and provide this information to stakeholders. This information should be one component of a single, comprehensive database of higher education capital-related data. Such a database would improve accessibility for stakeholders and allow the state to better track trends across time and institutions. SCHEV should identify metrics on capital spending, debt, and other data

of value to the capital review process and develop a reporting framework in which to comprehensively present this information to decision-makers annually. SCHEV should also ensure public online access to this information. Metrics of importance to assessing institutions' deferred maintenance backlogs, facility conditions, facility age, and others of value should also be incorporated into this reporting framework once centralized state tracking is implemented. (See Chapter 7 for additional information.)

RECOMMENDATION 11

The General Assembly may wish to consider amending the Code of Virginia to direct the State Council of Higher Education for Virginia to identify metrics on capital spending, debt, and other data of value to the capital review process and annually publish a report on how each of the 15 public four-year institutions compares across the metrics. The report should include (i) comparisons to national and regional levels of capital spending and (ii) information on the value of institutions' physical plants relative to their Carnegie classifications.

**Recommendation 11
may potentially:**

Improve Affordability and Access ✓

Increase State Costs

Prioritize Academics

Limit Institutional Autonomy

7 Strategically Maintaining Facilities

SUMMARY Virginia’s public institutions expanded their physical plants even as the condition of existing facilities further deteriorated. The estimated deferred maintenance backlog for the public four-year institutions’ E&G facilities was \$1.4 billion in FY 2011, nearly one-fifth of the total replacement value of all E&G facilities. Budgetary constraints and aging facilities limited institutions’ abilities to sufficiently address maintenance needs. Deferring maintenance contributes to significantly higher capital and operating costs in the long term and may also compromise occupant safety or institutions’ core missions through disruption of facility use. The deferred maintenance backlog, though, would be considerably higher without the state’s maintenance reserve program. There are a number of options the state could consider to improve its maintenance strategies. These include centrally monitoring facility condition and incorporating it into state maintenance and capital processes, providing additional funding for maintenance reserve projects, and ensuring sufficient and realistic planning to address the existing deferred maintenance backlog.

As Virginia’s public four-year institutions requested and received authorization for billions of dollars to expand the size of their physical plants beyond enrollment growth, existing facilities continued to deteriorate. Facilities require a variety of ongoing maintenance activities in order to maintain functionality and efficiency and preserve a facility’s life cycle. While operational maintenance includes day-to-day, routine activities that maintain a building’s functionality, continuous maintenance and capital renewal involve planned activities that minimize deterioration throughout a building’s useful life. When planned maintenance activities are delayed or left unperformed, it results in a backlog of deferred maintenance.

Deferring maintenance contributes to higher capital and operating costs in the long term. Emergency repair of failing building components can be far more costly than conducting scheduled replacement or renovation. The safety and well-being of occupants may also be compromised by facilities with significant maintenance needs.

Despite maintenance reserve program, institutions had E&G maintenance backlog of \$1.4 billion

Virginia’s public four-year institutions had an estimated deferred maintenance backlog of \$1.4 billion for E&G facilities, as reported to SCHEV in FY 2011 (Table 7-1). The amount of deferred maintenance was nearly one-fifth of the total replacement value of all E&G facilities at the public four-year institutions. Deferred maintenance backlogs are the highest percentage of the total replacement value of E&G buildings

Operational maintenance

Routine, day-to-day activities that maintain a building’s functionality, including housekeeping, janitorial services, and utilities.

Continuous maintenance

Preservation activities to control deterioration, including repairs, preventive maintenance, and other activities to ensure continuing service.

Capital renewal

Planned repair and replacement of systems and components, including corrections needed to conform to safety codes and repair or replacement of inoperable equipment.

at Virginia State (66 percent), followed by JMU, ODU, and Mary Washington (32 to 33 percent). Institutions with the largest deferred maintenance backlog include Virginia Tech (\$274.5 million), JMU (\$225.0 million), and UVA (\$195.8 million).

Deferred maintenance

Planned maintenance, repairs, replacement, and renewal projects are left unperformed. Deferred maintenance results in progressive deterioration of a facility's condition or performance.

Deferred maintenance backlog

The estimated funding needed to address deferred maintenance.

TABLE 7-1

Institutions had an estimated \$1.4 billion in deferred maintenance on E&G facilities (FY 2011)

	Estimated deferred maintenance backlog (\$M)	Replacement value (\$M)
VSU	\$168.8	\$255.3
JMU	225.0	683.5
ODU	83.3	260.0
UMW	42.5	134.4
VMI	31.5	112.0
CWM	54.1	197.4
GMU	90.5	363.3
LU	43.3	189.8
VCU	153.8	727.0
VT	274.5	1,764.0
RU	29.8	235.2
NSU	38.1	307.1
UVA	195.8	2,093.8
UVA-W	5.4	174.2
CNU	0.5	225.9
Statewide	\$1,436.9	\$7,722.9

Source: JLARC staff analysis of SCHEV's 2012-2014 Facility Condition Report.

Note: Numbers may not add due to rounding. Data is reported in nominal dollars. Data is limited to deficiencies and replacement value of E&G facilities.

Budgetary constraints and aging of physical plants contributed to higher levels of deferred maintenance

Experts estimate that operation, maintenance, renovation, renewal, and demolition costs may amount to as much as 70 percent of the life cycle costs of a facility. Over the past decade, budgetary constraints and substantial growth in institutions' physical plants have limited the ability of institutions to address these needs, particularly those related to continuous maintenance and capital renewal. Further exacerbating these concerns is the aging of institutions' physical plants.

State and institutional budgetary constraints

Resource constraints have affected the ability of Virginia's public higher education institutions to fully address ongoing maintenance needs. All institutions have a dedicated funding stream used to fund auxiliary maintenance, but very few set aside a

Life cycle costs

Anticipated expenditures for each stage in the life of a building and its components.

Includes capital investment, financing, operations and maintenance, repair and replacement, facility alterations and improvements, and functional use costs.

portion of their operating budget to handle growing E&G maintenance needs. Planned maintenance activities are often considered a lower priority if institutional resources are constrained, particularly when compared with competing E&G priorities, such as the need to hire additional faculty to keep pace with enrollment growth. For example, one public institution has a specific contingency fund for E&G maintenance, which is approximately two percent of the annual E&G operating budget, but the fund is used for other purposes throughout the course of an academic year. These purposes include compensation for unanticipated reductions in revenue due to enrollment shortfalls, budget reductions, or emergency spending.

Continued fiscal constraints in Virginia will likely further exacerbate the deferment of planned maintenance. Staff at several institutions commented that they would likely defer maintenance projects and equipment replacements to help offset reductions in state operating support during the 2014-16 biennium.

Aging of physical plants

Aging facilities at Virginia's public higher education institutions also contributed to the deferred maintenance backlog. According to data provided by SCHEV, approximately 40 percent of buildings on the campuses of the public four-year institutions were constructed prior to 1960. Older facilities have more costly maintenance needs than newer facilities, due in part to lower construction quality of facilities built between the 1950s and mid-1970s, and to lower quality system components used between the mid-1970s and 1990s.

A national higher education facilities consultant recently found that at one public university, the amount of accumulated deferred maintenance was highest in facilities older than 50 years (\$160 per square foot) and between 25 and 50 years old (\$110 per square foot). Newer facilities built within the past 10 years had accumulated substantially less deferred maintenance (\$20 per square foot). The consultant also found that maintenance costs in older facilities at the public university were as much as 33 percent more per square foot than in newer facilities.

Another concern is that facilities typically require major renovations after 25 years of use and additional major renovations or facility replacement after 50 years. A substantial proportion of buildings on campuses of Virginia's public four-year institutions were built during a construction boom in the 1960s and 1970s (approximately 25 percent) and again in the 1990s (11 percent). These facilities may soon require significant capital renewal or renovation to ensure continued functionality. As higher education facility experts note, a large concentration of space in any given age category challenges institutions to address maintenance needs for all those facilities at once.

Although newer facilities cost relatively little to maintain now, costs will increase as facilities age. Newer facilities are more technologically complex. As a result, institutions must bring in more expensive maintenance personnel who have higher skill levels due to the complexity and sophistication of the building systems.

Stakeholders and experts express numerous concerns with having a large deferred maintenance backlog

State agency staff, institutional staff, and national experts identify a number of concerns with a large deferred maintenance backlog. One of the primary concerns stems from the financial implications of deferred maintenance, as it affects both capital and operating budgets. National research has found that, left unaddressed, every \$1 of deferred maintenance results in \$4 to \$5 of long-term capital liabilities, which will likely affect the levels of needed capital spending in the future. Inefficient and poorly maintained building systems may also contribute to higher utility costs, affecting institutions' operating budgets.

Over the past decade, many institutions substantially expanded their physical plants. Although some institutions replaced older, inefficient facilities with more efficient facilities that better address programmatic needs, the increase in overall square footage may have contributed to higher maintenance needs. Higher education facilities experts caution against increasing the size of the physical plant if deferred maintenance needs are high, noting that institutions unable to fully operate and maintain their existing facilities may be operating in “run-to-failure” mode, delaying maintenance until it becomes more costly to replace building systems. Institutions operating in this mode will likely experience system failures—such as with heating, ventilating, and air conditioning systems—sooner than expected. Higher education facilities experts caution that emergency repair of building components may cost three to four times more than a scheduled replacement or renovation.

Facilities with substantial deferred maintenance may potentially affect the safety and well-being of occupants, such as through unreliable infrastructure or failures of heating, air conditioning, or electrical capacity. Deferred maintenance backlogs also have the potential to adversely impact teaching and research activities, such as through structural deficiencies or system failures. For example, staff at ODU noted that water infiltration due to leaking roofs has resulted in damage to research equipment, and VCU staff similarly noted the vulnerability of research experiments and equipment to system failures (Exhibit 7-1). Staff at JMU noted that window air conditioning units are at times loud enough to disrupt classroom instruction. Severe temperature fluctuations and insufficient electrical capacity to support instructional equipment also impair effective classroom instruction.

EXHIBIT 7-1

Poor facility condition affects institutions' academic and research missions

Building Exteriors



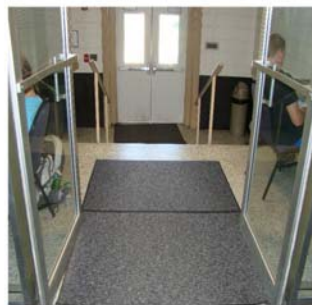
Brick buildings may develop cracked or failing mortar joints, which may lead to water infiltration or structural damage. Aging roofs can leak, potentially damaging a facility's interior, including research or instructional equipment. Brickwork (left) is cracked, and slate roof (right) is 30 years past its expected useful life of 50 years (Rollins Hall, ODU).

Building Systems



Systems past their useful expected life may be at risk of failure. Air handler (left) uses refrigerants no longer approved by the EPA (Koch Hall, ODU). Building (right) contains deteriorated chilled water piping (West Hospital, VCU).

Accessibility



Students, professors, staff, and visitors who need ADA accessibility can have difficulty navigating a building (left) that is aging and unrenovated (Jackson Hall, JMU). A renovated building (right) provides proper ADA accessibility (Harrison Hall, JMU).

Source: Documentation provided by institutional staff from ODU, VCU, and JMU.

Another concern raised by higher education facilities experts and institutional staff is that poor facility quality makes it challenging to recruit students. When campuses are in relatively poor condition compared to those of other public institutions in Virginia or in the southeast, staff noted that students may choose to enroll at institutions with better facilities. This may contribute to further enrollment declines or a reduction in out-of-state enrollments at a time when smaller, regional institutions are faced with a growing need for revenue but constraints on raising tuition.

Maintenance reserve project

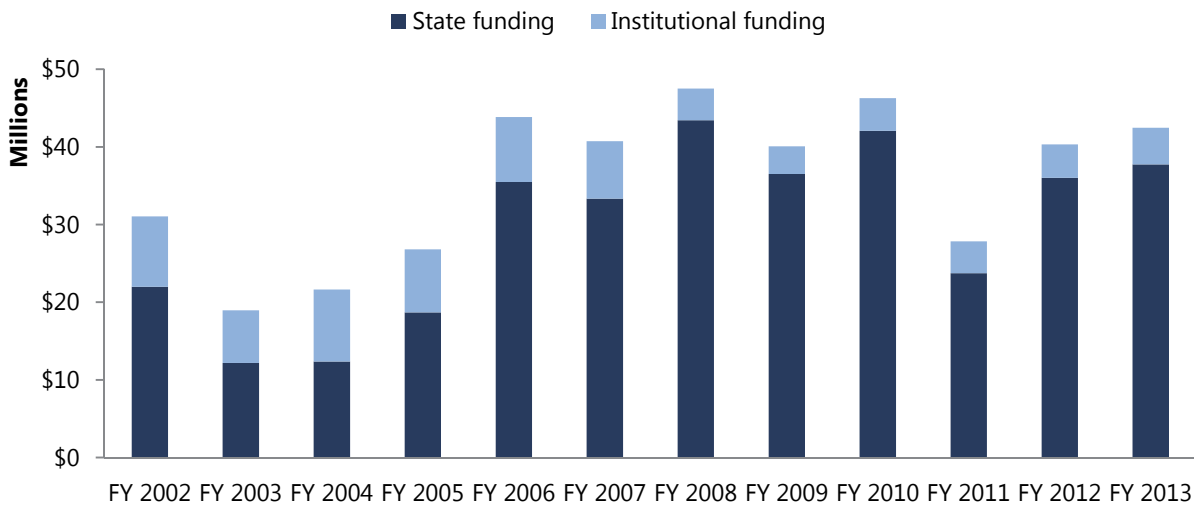
A single project involving major repair or replacement to the physical plant, property, or equipment, normally costing between \$25,000 and \$1,000,000. Includes the repair or replacement of damaged or inoperable equipment, corrections of deficiencies required to meet building and safety codes, or correction of deficiencies with handicapped access.

State’s maintenance reserve program provides funding for major E&G maintenance needs

The deferred maintenance backlog on institutions’ E&G buildings would be considerably higher without the state’s maintenance reserve program. Through the program, the state provides assistance to institutions in order to fund life cycle costs of E&G facilities. These maintenance projects are not usually addressed through institutions’ operating budgets but are too small to qualify for capital outlay funding.

The state’s maintenance reserve program has funded the majority of maintenance reserve projects on E&G buildings (Figure 7-1). Collectively, the state and the public four-year institutions spent \$428 million on maintenance reserve projects between FY 2002 and FY 2013. Of this amount, \$354 million was funded by the state through general funds and state-supported bonds. The remaining \$74 million was funded through institutional revenues, including general fund support, tuition revenue, indirect cost recoveries, and auxiliary revenues.

FIGURE 7-1
The state provides the majority of maintenance reserve funding



Source: JLARC staff analysis of data provided by DPB on maintenance reserve spending.
Note: Data are in constant 2013 dollars. Institutional data is limited to spending at the 15 public four-year institutions and includes spending at VIMS.

Facility condition and deferred maintenance needs could better inform capital decision-making

Experts identify a number of key components of strategies to address continuous maintenance, capital renewal and replacement, and other major maintenance needs (Table 7-2). Virginia's current approach to addressing facility maintenance contains several components recommended by experts, including a maintenance reserve program. Virginia is one of few states that provide dedicated funding for deferred maintenance through a statewide program, which partially addresses the need to emphasize facility maintenance and capital renewal.

Chapters 6 and 7 of this report, and JLARC's December 2013 *Review of Academic Spending and Workload*, cite several limitations with Virginia's current approach to continuous maintenance and capital renewal. Several recommendations and options address these limitations.

State should return to monitoring facility condition and improve information used to allocate maintenance funding

Stakeholders and experts commonly note the benefits of centrally monitoring and assessing facility condition, including implementing common reporting standards across institutions and state agencies. Perhaps the most important benefit, however, is the value of incorporating facility condition into capital decision-making.

The state implemented the Facility Inventory Condition and Assessment System (FICAS) in 2005 to centrally measure and assess building condition for the higher education institutions and other state agencies. FICAS was intended to provide state decision-makers with comprehensive information that could improve capital planning and better allocate resources to ensure maximum return on facility investments. The General Assembly removed funding for FICAS from the FY 2011 budget due to fiscal constraints. Use of the system is now optional and must be funded through institutional or agency revenues.

TABLE 7-2

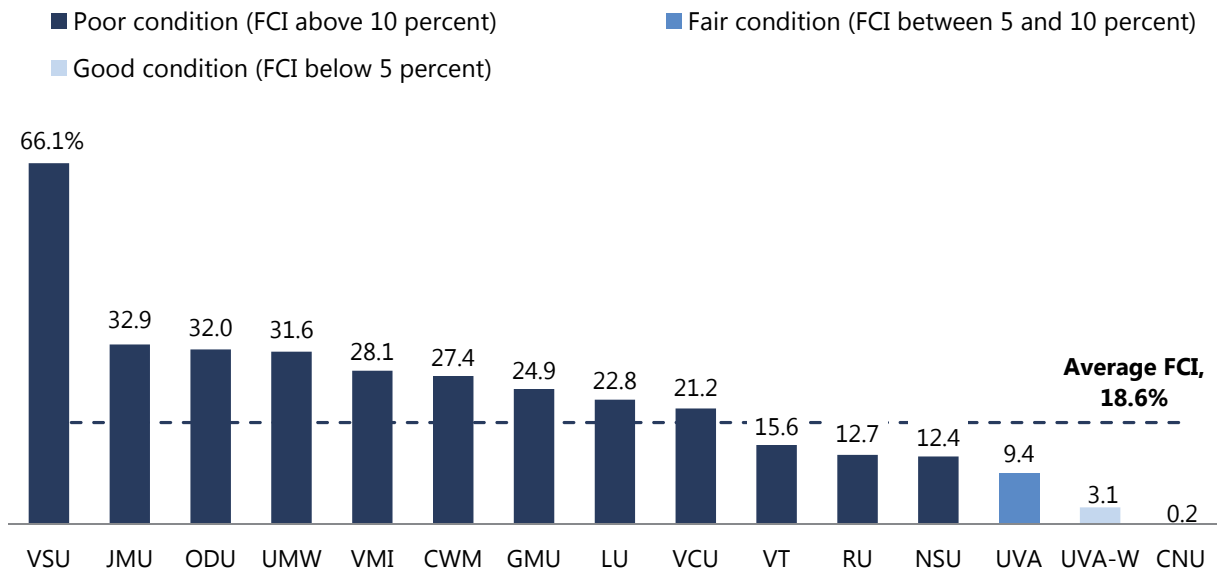
Virginia’s current capital and maintenance strategies lack key components identified by higher education facility experts

Key component of maintenance & capital renewal strategy	Used in Virginia?
Planning capital projects based on: <ul style="list-style-type: none"> <li data-bbox="558 464 756 527">(i) use of existing facilities <li data-bbox="558 569 756 663">(ii) evaluation of alternatives to new construction <li data-bbox="558 705 756 768">(iii) ongoing O&M costs 	<p>Partially. Guidelines last updated in the late 1970s and 1980s prevent accurate assessment of space utilization. JLARC’s 2013 report on academics recommended that SCHEV update space utilization guidelines.</p> <p>Yes. Capital budget requests are required to address alternatives to new construction, including capital leases and renovation.</p> <p>Partially. Capital budget requests require information on O&M costs and funding sources during the next six years, although the facility may not be operational until the last year or two.</p>
Funding maintenance & repairs at adequate levels to avoid accumulation of backlogs	<p>No. Experts recommend budgeting a minimum of 1.5 percent of the current replacement value of the physical plant to prevent further accumulation of deferred maintenance.</p> <p>Option 6: Although the recommended funding level may not be feasible given budgetary constraints, the state could consider increasing maintenance reserve program funding.</p>
Conducting facilities audits and assessments of conditions	<p>No. SCHEV and DGS no longer conduct on-site facility audits, and the state no longer centrally monitors facility condition.</p> <p>Recommendation 12: The state should centrally monitor facility condition through DGS’s asset management system.</p> <p>Recommendation 14: In conjunction with the collection of institutional maintenance plans, (i) DGS should provide additional oversight of maintenance plans and (ii) SCHEV could routinely audit its facility data.</p>
Prioritizing critical maintenance needs	<p>No. The state does not currently collect information on prioritization of scheduled and deferred maintenance projects. This is also not a consideration in the prioritization of renovation requests.</p> <p>Recommendation 9: SCHEV should revise its capital prioritization process.</p> <p>Recommendation 14: The state should require institutions to submit deferred maintenance plans.</p>
Adjusting operating & capital budgeting practices to emphasize maintenance & capital renewal	<p>Partially. Maintenance reserve funding is not allocated based on facility condition or deferred maintenance needs. SCHEV’s prioritization places higher priority on renovations, to a limited extent.</p> <p>Recommendation 9: SCHEV should revise its capital prioritization process.</p> <p>Recommendation 13: DPB should consider facility condition and facility age when allocating maintenance reserve funding.</p>

Source: JLARC staff analysis of best practices identified by APPA, the National Association of State Budget Officers, and the *Chronicle of Higher Education*; and documentation and interviews about Virginia’s capital processes.

Given aging physical plants and continued growth of square footage, as well as resource constraints facing the public institutions and the state, facility condition is of growing importance to the capital decision-making process. As of FY 2011, SCHEV reported an average facility condition index across the public four-year institutions' E&G buildings of 18.6 percent, indicating relatively poor facility quality (Figure 7-2).

FIGURE 7-2
Estimated facility condition rating is poor at most Virginia institutions (FY 2011)



Source: JLARC staff analysis of SCHEV's 2012-2014 Facility Condition Report.
 Note: Data is reported in nominal dollars. Data is limited to deficiencies and replacement value of E&G facilities.

Although the information reported to SCHEV is limited by constraints in reporting and inconsistent definitions across institutions, as well as lack of verification by the state, this information suggests that there is a high level of maintenance needed at certain institutions. In general, facility condition varies considerably, due in part to differences in facility age and resource constraints across institutions, from extremely poor at Virginia State to good at Christopher Newport.

Staff at DGS noted the value of centrally monitoring facility condition and other related metrics in order to improve allocation of limited taxpayer-supported funds. Centrally monitoring facility condition would address several key components identified by experts as necessary for a comprehensive maintenance and capital renewal strategy. These include assessments of facility condition, prioritization of critical deferred maintenance needs (through differences in overall facility condition across institutions), and adjustments to capital budgeting to emphasize facility maintenance.

DGS should reinstate tracking facility condition (including the value of facility deficiencies), facility age, and higher education facility type (E&G or auxiliary) through its current asset management system. DGS staff noted that including metrics on fa-

Facility condition index

The quality of facilities can be measured using a facility condition index (FCI), which compares deferred maintenance deficiencies to the current replacement value of a facility.

The higher a facility's FCI, the worse its condition. SCHEV and national higher education facility experts use the following guidelines to assess condition: under 5 percent (good), 5 to 10 percent (fair), and over 10 percent (poor).

cility condition and deferred maintenance would be possible through DGS’s new asset management system, at relatively low cost as noted by DGS staff (although an exact cost would require evaluation from DGS staff).

**Recommendation 12
may potentially:**

Improve
affordability
and access

Increase
state costs



Prioritize
academics

Limit
institutional
autonomy

RECOMMENDATION 12

The Department of General Services should centrally track facility condition by developing metrics to assess facility condition for inclusion in its current asset management system by November 1, 2016. The selection of metrics and process to collect information from public higher education institutions should be coordinated with the State Council of Higher Education for Virginia and the Department of Planning and Budget.

The state should use better information to allocate maintenance reserve funding across institutions, incorporating facility condition into the maintenance reserve funding formula once DGS has included facility condition in its asset management system. Staff at several institutions raised concerns with the state’s current allocation of maintenance reserve funding. Because of the limited availability of data about facility condition across institutions, state allocation is based on square footage without accounting for differences in facility condition. As a result, institutions with relatively better facility condition but more total square footage may receive more state funding than institutions with relatively worse facility conditions.

Staff at DPB noted that the process to allocate state maintenance reserve funds would ideally account for square footage, facility age, facility condition, and facility use. Using these measures to allocate maintenance reserve funds would align with best practices and emphasize maintenance needs through the budgeting process.

RECOMMENDATION 13

The Department of Planning and Budget should revise the formula used to allocate the state’s maintenance reserve funding to account for higher maintenance needs resulting from poor facility condition, aging of facilities, and differences in facility use, once such data is available.

State could increase maintenance funding to reduce long-term costs

Given substantial maintenance backlogs at the public four-year institutions and the efficiencies that would result from meeting deferred maintenance needs, the state could consider several options to better address institutions’ maintenance needs.

Higher education facilities experts recommend implementing an annual renewal and reinvestment budget for operational and continuous maintenance and renewal. Such a budget would keep facilities in more reliable operating condition and prevent further accumulation of deferred maintenance. The recommended value of this budget often varies, although the National Association of College and University Business Officers recommends between 1.5 and 3.5 percent of the current replacement value

of an institution’s physical plant. Experts caution that this level of funding does not take into account the one-time funding associated with reducing the existing deferred maintenance backlog.

SCHEV currently recommends annual state funding for higher education maintenance needs at one percent of current replacement value, estimated at approximately \$92 million for the public four-year institutions’ E&G buildings in FY 2015. State maintenance reserve funding for the public four-year institutions tends to be below SCHEV’s recommendations, however, averaging \$29.5 million (inflation-adjusted) annually between FY 2002 and FY 2013. State maintenance reserve funding for the public four-year institutions totaled \$37.8 million in FY 2013.

In order to address the aging of institutions’ physical plants and growing constraints on institutions’ operating budgets, the General Assembly could increase state funding for the maintenance reserve program. Although state resources are constrained, funding maintenance reserve projects may result in significant cost avoidance of future capital spending. Additional state funding would allow institutions to focus on renewal of existing facilities, which may be otherwise hindered by constrained institutional operating budgets.

OPTION 6

The General Assembly could include language in the Appropriation Act to provide additional state funding for the maintenance reserve program, corresponding with additional state oversight of institutions’ deferred maintenance policies and practices.

State could collect information about institutions’ plans to address deferred maintenance backlogs

Effectively sequencing maintenance projects across institutions requires institutional plans based on sound maintenance principles and realistic funding assumptions. Given that the state provides the majority of maintenance funding for E&G facilities, effective maintenance funding requires these plans be available and used to inform funding decisions for the state’s maintenance reserve.

There is no current plan, though, aimed at comprehensively addressing the substantial deferred maintenance backlog at the public institutions. The lack of comprehensive and centralized information on how to address deferred maintenance needs—and anticipated levels of needed funding to do so—hinders state oversight and does not allow the state to effectively target maintenance reserve funds. Currently, institutions provide information to DPB on their maintenance reserve projects after expending state maintenance reserve funding. Staff at several institutions noted the benefits of this approach, especially given the substantial deferred maintenance backlog and the necessity of numerous maintenance projects.

DGS staff and higher education facilities experts noted the importance of also ensuring that state maintenance reserve funds are maximized and each institution se-

Option 6 may potentially:	
Improve affordability and access	✓
Increase state costs	
Prioritize academics	
Limit institutional autonomy	✓

State maintenance funding plan

In 1999, SCHEV developed a 10-year plan to ensure that each public institution could achieve a campus-wide facility condition equal to “good” (facility condition index of five percent or less). For a variety of reasons, this plan has not been used by state stakeholders to allocate maintenance funding, and SCHEV has now taken a different approach to its funding recommendations. Some state stakeholders noted that the 10-year plan may have been too ambitious given the state’s budgetary constraints.

quences maintenance projects based on sound practices. Such practices include prioritizing facility safety and mechanical systems and protecting a facility's interior from weather-related damage, such as by replacing roofs or windows. Higher education experts indicate that, particularly at institutions with substantial deferred maintenance backlogs, establishing clear priorities is important to determining which maintenance projects should be deferred, and in what order, given insufficient resources to address the entire backlog.

California is considering ways to enhance state oversight of the deferred maintenance backlog at its higher education institutions.

CASE STUDY

California's proposed solution to address deficiency of institutional maintenance information

In California, the Legislative Analyst's Office recently reviewed the maintenance needs of the state public higher education system and identified limitations similar to those in Virginia. A lack of adequate data to assess the magnitude of the deferred maintenance backlog impairs the state's ability to track how institutions are prioritizing deferred and scheduled maintenance projects and to anticipate future levels of deferred maintenance. California also lacks a long-term plan for eliminating the existing deferred maintenance backlog of its higher education system.

The Legislative Analyst's Office recommended that California require public institutions to submit plans that address the nature and extent of maintenance needs. The plans would include a description of sources used to fund scheduled and deferred maintenance and a description of the types of needed deferred maintenance projects and estimated costs. The Legislative Analyst's Office also recommended that institutions submit a multiyear expenditure plan for addressing the deferred maintenance backlog, including funding sources, and provide information on how they plan to avoid accumulating additional deferred maintenance in the future, including the total level of needed annual funding based on industry standards.

Virginia could consider collecting information about institutions' plans to address deferred maintenance backlogs. Information in these plans could include (i) actions being taken to maintain current facility condition or reduce the amount of deferred maintenance and (ii) the timeline for addressing institutional deferred maintenance needs. This information could better inform DPB's state maintenance reserve program allocation and funding, as well as the prioritization of requests for renovations. DGS staff could review and provide feedback on institutional plans as needed. DGS would likely require additional staff resources to conduct this work. Additionally, SCHEV staff could periodically audit facility-related information obtained through SCHEV's facility data collection.

RECOMMENDATION 14

The General Assembly may wish to consider including language in the Appropriation Act to direct public institutions to submit long-term deferred maintenance plans to the Department of General Services and the Department of Planning and Budget at the start of each biennium. The plans should contain (i) a list of deferred maintenance projects ranked by relative priority, funding availability, and timeframe, and (ii) estimates of project funding levels and sources.

**Recommendation 14
may potentially:**

- Improve affordability and access

 - Increase state costs ✓

 - Prioritize academics

 - Limit institutional autonomy ✓
-

8 Reallocating State Student Aid

SUMMARY Student aid is a primary strategy used to reduce the cost of higher education to students. Student aid can increase college enrollment and completion, particularly when awarded to lower-income students and in a transparent manner. Student aid from all sources meets only one-third of total financial need among students at Virginia’s public four-year institutions, and funding has not kept pace with increases in financial need. Consequently, average student debt has increased, and Virginia graduates spend eight percent of median monthly income for median student loan payments. To better reflect its existing goal of providing student aid to low- and middle-income students, the state should allocate Virginia Student Financial Assistance Program funding across institutions in proportion to state-recognized financial need. The state should also restrict the program’s eligibility to low- and middle-income students when funding is insufficient to fully meet these students’ financial need. The state could consider providing more aid through the Virginia Student Financial Assistance Program by limiting eligibility for the Tuition Assistance Grant program to low- and middle-income students.

House Joint Resolution 108 (2012) directs the Joint Legislative Audit and Review Commission (JLARC) to study “student aid programs” and “opportunities to reduce the cost of public higher education in Virginia.” Student aid is financial assistance to students that does not have to be repaid. Two aspects of aid for in-state students were examined: (1) the total amount of student aid, and (2) the extent to which student aid is awarded to students with the greatest financial need.

Federal and state governments, institutions, and other entities provide student aid

Student aid is a primary strategy used by governments, institutions, and other entities to reduce the cost of higher education to students. Students can receive student aid directly through grants or tuition waivers, or indirectly through tax preferences. Student aid can be awarded based on financial need, academic merit, both criteria, or neither criteria.

Federal government, the state, institutions, and other sources provide direct student aid through grants and tuition waivers

Several higher education stakeholders provide aid directly to students through grants and tuition waivers (Table 8-1). Students typically apply by submitting an online application for federal financial aid, which requests information such as family income

Financial need

Financial need is the cost of attending a higher education institution minus the expected family contribution. The cost of attendance includes tuition and fees, room and board, and books. The federal government determines the expected family contribution toward higher education costs using information that students provide when they apply for federal financial aid.

TABLE 8-1
Several key grant programs exist for students at Virginia’s public four-year institutions

	Award basis	Award amount (FY 2015)	Description
Federal government			
Pell Grant	Need	Up to \$5,700/year	Grants for low-income undergraduates and some graduate students
Supplemental Educational Opportunity Grant	Need	Up to \$4,000/year	Grants for undergraduate students with greatest financial need
State government			
Virginia Commonwealth Award ^a	Need	Up to tuition & fees	Grants for students with financial need
Virginia Guaranteed Assistance Program ^a	Need & merit	Up to tuition, fees, & books	Grants for students with financial need and a minimum 2.0 high school grade point average
Two-Year College Transfer Grant	Need & merit	Up to \$1,000/year ^b	Grants for students with financial need who earned a Virginia associate’s degree with a minimum 3.0 grade point average
Public institutions			
Grants	Varies	Varies	Varies
Tuition waivers	Varies	Varies	Represent forgone tuition revenue. Many are required by the state while others are optional ^c

Source: JLARC staff analysis of material from SCHEV, the Code of Virginia, and the U.S. Department of Education.

^aThe Virginia Commonwealth Award and the Virginia Guaranteed Assistance Program together make up the Virginia Student Financial Assistance Program (VSFAP). ^bUp to \$2,000 if enrolled in a science, teaching, engineering, mathematics, or nursing degree program. ^cRequired waivers include those for senior citizens and dependents of certain military and public service personnel. Optional waivers include those for certain foreign exchange students and students from particular states.

and number of children in college. Institutions use this information to determine the student’s eligibility for federal, state, and institutional student aid. Students are responsible for pursuing other aid, such as aid from local governments or private sources, on their own.

Collectively, these sources awarded nearly \$700 million in grants to students at Virginia’s public four-year institutions in FY 2013. Institutions provided the most grant funding, approximately \$203 million. The federal government provided \$194 million, other sources provided \$170 million, and the state provided \$120 million in grants.

The largest state grant program is the Virginia Student Financial Assistance Program (VSFAP), which includes the Virginia Commonwealth Award and the Virginia Guaranteed Assistance Program. VSFAP accounted for 94 percent of state student aid to undergraduates at public four-year institutions in FY 2013. The state has a funding

goal for VSFAP that is determined by the Partnership Model. The model is based on the standard definition of financial need, which is the cost of attendance minus the expected family contribution. However, the model also subtracts 30 percent of the cost of attendance to acknowledge other stakeholders' responsibility for funding higher education through student employment, financial resources from family members or other private sources, and student loans. The model also subtracts student aid, excluding aid from institutional endowments. Finally, the model deducts any amount beyond tuition and mandatory fees (typically room and board and book costs) because VSFAP is only intended to cover academic expenses.

VSFAP award amounts vary across Virginia institutions because institutions are allowed to set their own award amounts under broad state restrictions. A low-income student with \$18,000 of financial need after accounting for other student aid, for example, could receive a Commonwealth Award ranging from \$2,900 at Virginia Tech to \$10,388 at William and Mary. Similarly, that student could receive a Virginia Guaranteed Assistance Program award ranging from \$3,400 at Virginia Tech to \$10,600 at William and Mary.

Institutions typically fund grants using tuition and fee revenue, endowment funds, and other resources. In response to the 2005 Restructuring Act, Level III institutions formally committed to providing student aid. For example, William and Mary guarantees grant funding to meet 100 percent of financial need for students with household incomes of less than \$40,000 and is transitioning to the William and Mary Promise, which guarantees a certain tuition level for an in-state student's full four years while providing additional aid to students with financial need. UVA originally guaranteed meeting 100 percent of student financial need through student aid, but recently began including loans in response to constrained institutional resources.

Federal and state governments provide indirect student aid through tax preferences

In addition to direct student aid, federal and state governments provide student aid indirectly through tax preferences. Taxpayers claim most tax preferences on their income tax returns the following year. Therefore, students still need sufficient resources initially to pay the higher education costs.

The federal and state governments offer several tax preferences for students attending public institutions. The federal government allows taxpayers to claim income tax credits for tuition and related expenses, deduct student loan interest payments, and exempt income from higher education grants. The federal and state governments offer several income tax deductions and exemptions for contributions to, and earnings from, higher education savings accounts. Virginia also exempts college textbooks from the retail sales and use tax.

Virginia's tax preferences for higher education savings primarily benefit higher-income individuals. Although 73 percent of Virginia taxpayers had incomes below

Partnership Model

The Partnership Model identifies the amount of student financial need that the state recognizes. The model serves as a basis for recommended funding levels and funding allocations across institutions through the Virginia Student Financial Assistance Program.

\$100,000 in 2012, they accounted for only 33 percent of taxpayers claiming the college savings plan subtraction and 18 percent of taxpayers claiming the education savings trust deduction. Furthermore, Virginia taxpayers with incomes below \$100,000 accounted for only 21 percent of the amount claimed through the college savings plan subtraction and 11 percent of the amount claimed through the education savings trust deduction.

State's student aid goal focuses on low- and middle-income students

Virginia has established a goal of providing student aid to low- and middle-income students. The 2005 Restructuring Act required Level III institutions to commit to providing need-based student aid for low- and middle-income students to encourage enrollment and completion. The most recent statewide strategic plan for higher education and the 2011 Higher Education Opportunity Act similarly articulate a state objective to provide student aid for low- and middle-income families to make college affordable.

As directed by the 2011 Higher Education Opportunity Act, the Higher Education Advisory Committee defined low- and middle-income students based on the federal poverty level. JLARC staff used these definitions to assess student aid. In 2014,

- low-income students have household incomes less than 200 percent of the federal poverty level, or \$47,700 for a family of four;
- middle-income students have household incomes of 200 to 400 percent of the federal poverty level, or between \$47,700 and \$95,400 for a family of four; and
- high-income students have household incomes exceeding 400 percent of the federal poverty level, or \$95,400 for a family of four.

Student aid can facilitate college enrollment and completion

Student aid can reduce the cost of higher education to students, thereby making it more accessible. The existing research literature generally finds that student aid is associated with increased college attendance and completion. Students often cite financial challenges as a reason for not completing their degree.

Research literature finds student aid can improve student outcomes

Several studies indicate that student aid can increase the likelihood that a student will enroll in and complete college. However, certain aspects of the student aid program, including its target population and simplicity, can enhance these impacts. The research literature has generally focused on the impact of grant programs, with only a few studies having assessed tax preferences.

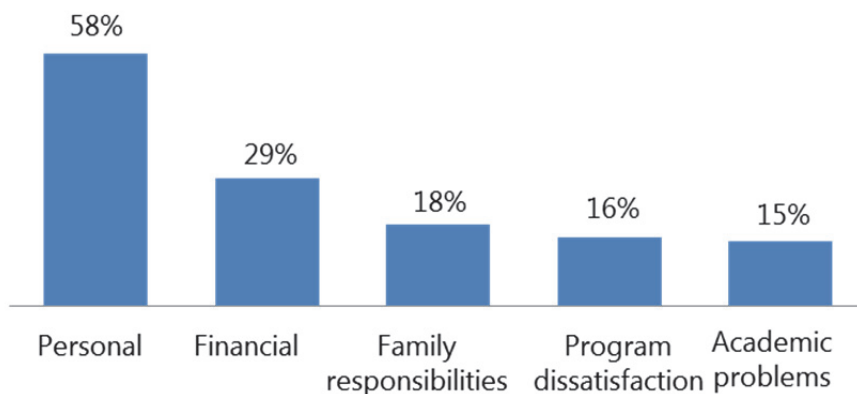
There is consensus in the research literature that a \$1,000 decrease in published price, or a \$1,000 grant through state merit-based aid programs, is associated with a three- to five-percentage point increase in college attendance. The research literature finds that the impact on college enrollment and completion is greater when student aid is targeted to lower-income students, as they are more sensitive to price than higher-income students. Studies also suggest that the impact on student outcomes is greater when student aid is easier for students and parents to understand. The research literature typically finds increased college attendance and graduation rates from aid programs with simple eligibility rules and application procedures.

Students often cite financial challenges as reason for dropping out

Understanding why students do not complete college can provide further insight into the impact of financial need on student outcomes. A study by the Delta Cost Project (2012) found that insufficient financial resources is one of the primary reasons students do not complete a four-year degree. “Financial reasons” was the second most common reason students cited for dropping out, selected by 29 percent of students who left after the first year (Figure 8-1). Several other reasons may be related to insufficient financial resources. For instance, “family responsibilities” could include insufficient resources to pay for a child’s daycare. Only 15 percent cited “academic problems.”

Staff at Virginia’s institutions report similar findings. A 2003 study by Virginia Tech concluded that the primary reason students dropped out after the first year was financial, including insufficient student aid and a lower cost of attendance at other institutions. Other reasons included inadequate academic advising and a lack of social

FIGURE 8-1
Insufficient finances is second most common reason students drop out



Source: JLARC staff analysis of FY 2012 data from the American Institutes for Research.

integration. Norfolk State and Virginia State staff also reported that most students who drop out cite financial or personal reasons. (Appendix K, online only, describes strategies that Virginia institutions use to improve graduation rates, including rates for students who transfer from community colleges.)

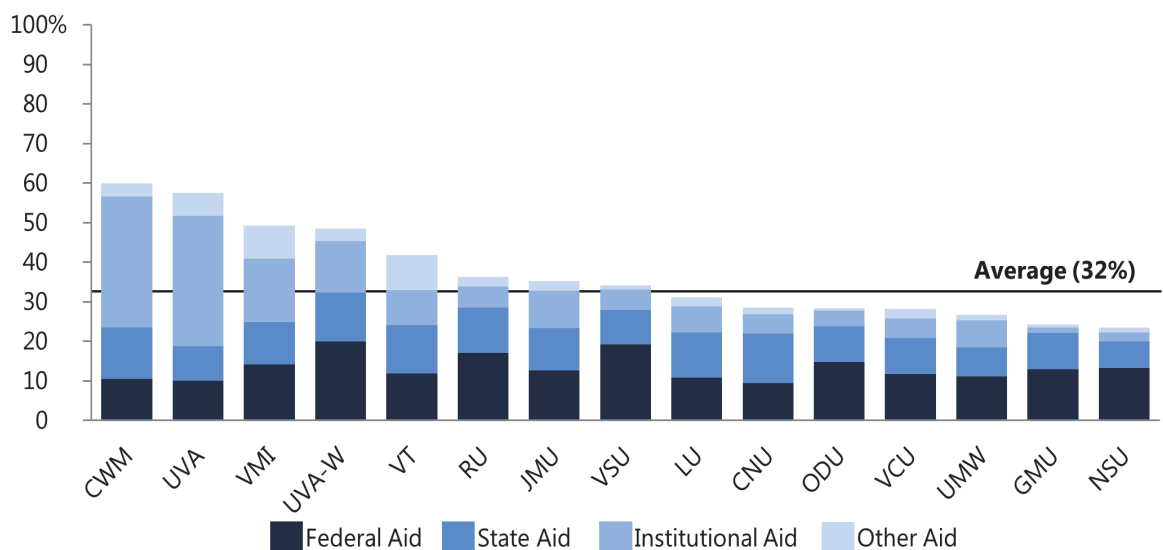
Student aid meets only one-third of financial need

There are several measures of the sufficiency of student aid levels. One measure is the percentage of financial need that student aid meets. Another measure is the percentage of the state’s VSFAP funding goal that it meets. A third measure is the amount of student debt, since students often borrow to cover any higher education costs that remain after the expected family contribution and student aid.

Majority of financial need at Virginia’s public four-year institutions is not met

Statewide, student aid from all sources met only one-third of financial need for in-state students in FY 2013 (Figure 8-2). The percentage of financial need met ranged from 23 percent at Norfolk State to 60 percent at William and Mary. This wide variation reflects the institutions’ differing student populations and institutional resource levels. For instance, Norfolk State had over four times the amount of financial need as William and Mary but only about one-third the amount of institutional student aid.

FIGURE 8-2
Student aid met one-third of financial need statewide but varies by school



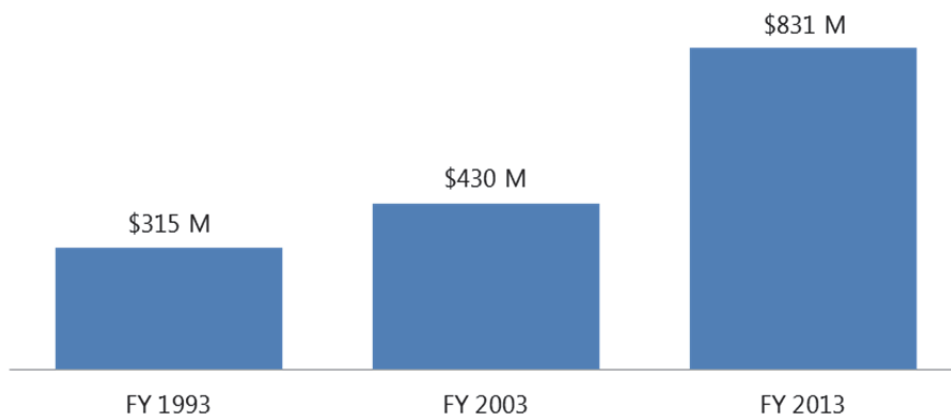
Source: JLARC staff analysis of FY 2013 data from SCHEV.

Note: Actual financial need, rather than projected financial need, for FY 2013. Limited to aid that does not have to be repaid, excluding tax preferences, and is awarded to in-state students at Virginia’s public four year institutions who applied for federal student aid and have financial need. Excludes aid in excess of a student’s financial need.

Student aid funding from all sources has increased over time, but less than the increase in financial need. Consequently, the total amount of unmet financial need for in-state students more than doubled from \$315 million to \$831 million between FY 1993 and FY 2013, after adjusting for inflation (Figure 8-3). Unmet financial need has also increased for the average student with financial need from approximately \$7,500 to \$10,500 between FY 1993 and FY 2013. The increase in financial need has resulted from a confluence of several factors, including the increased cost of higher education, a decline in the average expected family contribution, and more students seeking aid.

Unmet financial need:
the amount of financial need remaining after subtracting student aid.

FIGURE 8-3
Unmet financial need has grown substantially (FY 1993–FY 2013)



Source: JLARC staff analysis of data from SCHEV.

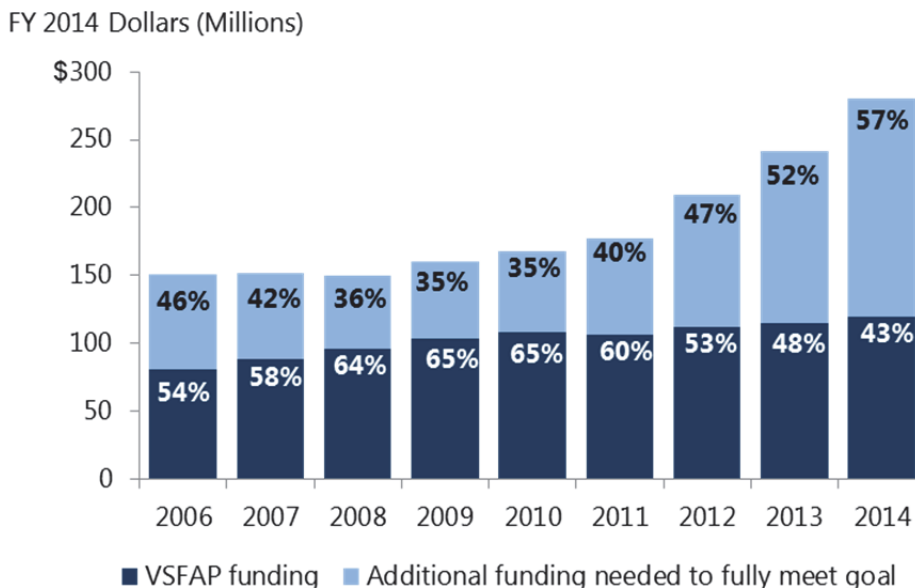
Note: Adjusted for inflation. Limited to aid that does not have to be repaid, excluding tax preferences, and is awarded to in-state students who applied for federal financial aid and have financial need. Excludes aid awarded in excess of a student’s financial need.

Students in Virginia receive less total student aid than nationwide and Southeast averages. First-time, full-time undergraduates at Virginia’s public four-year institutions received an average of \$4,097 in student aid from all sources in FY 2012. This is substantially less than the southeast regional average of \$5,285 and national average of \$5,115 per FTE first-time undergraduate student. Virginia ranked 37th overall on this measure.

Virginia has not met state goal for VSFAP funding

Despite an increase in total VSFAP funding over the past decade, the state has not met its goal to fund 100 percent of financial need recognized in the Partnership Model (Figure 8-4). Total VSFAP funding increased steadily from \$79 million in FY 2006 to \$120 million in FY 2014 after adjusting for inflation (a 51 percent increase). While the percentage of the funding goal that the state met increased from 54 to 65 percent between FY 2006 and FY 2010, it decreased to 43 percent by FY 2014. This decline was due to a greater increase in financial need than VSFAP funding.

FIGURE 8-4
State has consistently not met its VSFAP funding goal (FY 2006–FY 2014)



Source: JLARC staff analysis of data from SCHEV.

Student debt has increased and is substantial

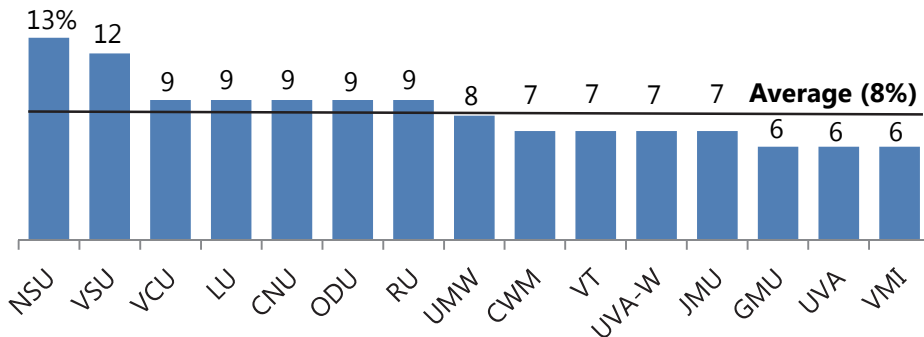
Student borrowing in Virginia has increased over the past decade. The total known student debt of recent in-state graduates increased 13 percent after adjusting for inflation, from nearly \$21,000 to \$24,000 between FY 2003 and FY 2012. The percentage of recent in-state graduates who borrowed also increased, from 54 to 59 percent during this time.

On average, recent graduates spend a substantial portion of their income on student loan payments. Statewide, the median monthly student loan payment was \$222 in FY 2010, an amount that equates to eight percent of median monthly post-graduation gross income (Figure 8-5). The percentage ranged from six percent at VMI to 13 percent at Norfolk State.

There is growing concern about the potential effects of increasing student loan debt on both borrowers and the economy. For example, student loans can make it difficult to save for a downpayment on a house or qualify for a mortgage. According to data from the Federal Reserve, student loan borrowers had lower home ownership rates than those without student debt in 2012.

FIGURE 8-5

Virginia graduates spend eight percent of median monthly income for median student loan payment



Source: JLARC staff analysis of FY 2010 data from SCHEV’s EOM02 and WG01 reports.

^aBased on median total debt of in-state undergraduate student borrowers graduating in FY 2010 and assumes a standard 10-year repayment term with a 6.3 percent interest rate. ^bBased on median income, 18 months after graduation, of in-state and out-of-state undergraduate students who graduated in FY 2006–FY 2010.

Virginia’s current student aid funding could better address student financial need

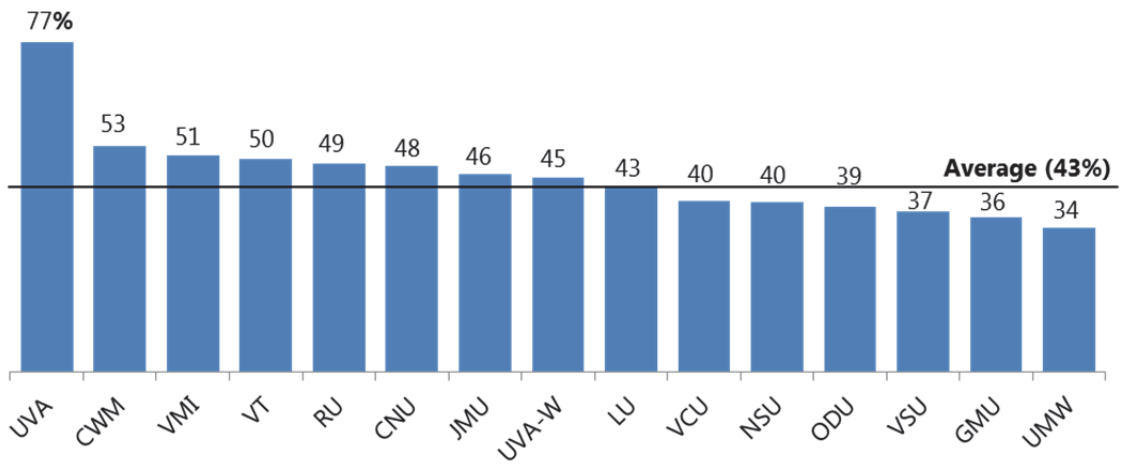
There are several ways to better address financial need through state student aid. Given the state’s limited financial resources, the state could better ensure that its current student aid funding is awarded to students with the greatest financial need. The state could also increase VSFAP funding by reallocating other state funds.

Current state student aid funds should be reallocated across institutions in proportion to students’ financial need

In addition to setting the total amount of desired state VSFAP funding, SCHEV’s Partnership Model is also intended to inform the state’s allocation of VSFAP funds across institutions. For instance, an institution that accounts for five percent of total financial need at all institutions would receive five percent of VSFAP funds. This results in the same percentage of financial need being met at each institution, ensuring that finite state funds are allocated across the institutions in proportion to students’ financial need.

However, VSFAP allocations to institutions have not been based on financial need (Figure 8-6). The program has met a widely varying percentage of financial need recognized in the Partnership Model across institutions, ranging from 34 percent at Mary Washington to 77 percent at UVA in FY 2014. According to SCHEV staff and other stakeholders, this variation occurred partially because the funding allocation was not rebased when the state transitioned from a prior state student aid funding model to the current Partnership Model. SCHEV staff also report that the variation

FIGURE 8-6
Percentage of VSFAP funding goal met varied widely across schools (FY 2014)



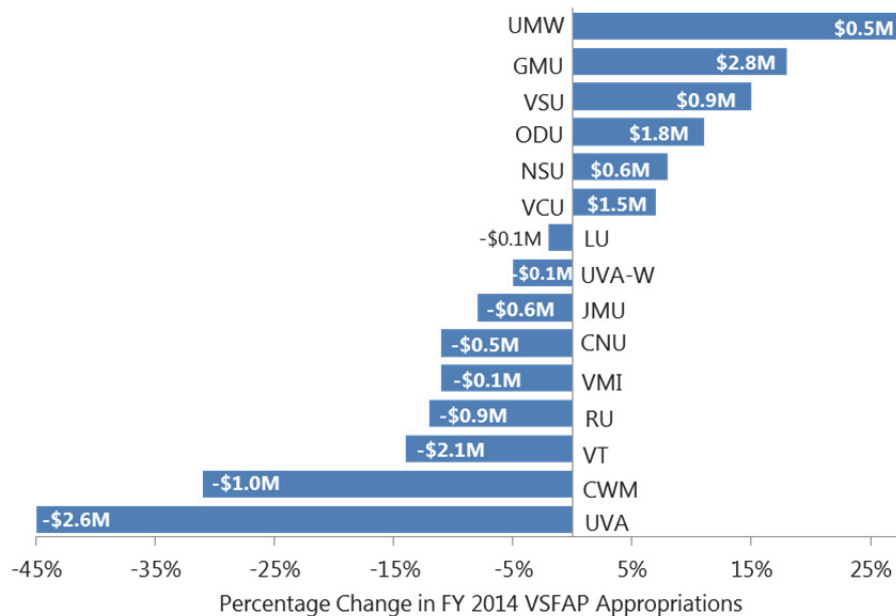
Source: JLARC staff analysis of data from SCHEV.

occurred partially because the funding allocation was not adjusted to reflect changes in financial need across institutions that resulted from changing student populations over time. Additionally, the state has wanted to ensure that each institution receives at least a portion of incremental state student aid funding.

The state has provided disproportionately more funding to institutions that have less financial need. Institutions with a greater proportion of their funding goal met by the state had average financial need of \$11 million. Institutions with a lesser proportion of their funding goal met had average financial need of \$27 million.

Reallocating total VSFAP appropriations across institutions at levels proportional to financial need recognized in the state's Partnership Model would better address student affordability without requiring additional state or institutional funding. The same percentage of financial need would be met at each institution, or 43 percent in FY 2014. Schools with greater financial need—George Mason, ODU, Virginia State, VCU, Norfolk State, and Mary Washington in FY 2014—would have more funding to either increase the award amount or increase the number of students receiving an award (Figure 8-7). The remaining institutions would receive less state student aid, but an amount proportional to their total financial need.

FIGURE 8-7
Distributing VSFAP funds in proportion to students' financial need would have varying effects on schools (FY 2014)



Source: JLARC staff analysis of data from SCHEV.

RECOMMENDATION 15

The General Assembly may wish to consider including language in the Appropriation Act to allocate all Virginia Student Financial Assistance Program funds across institutions such that an equal percentage of financial need recognized by the state's Partnership Model is met at each of Virginia's public four-year institutions.

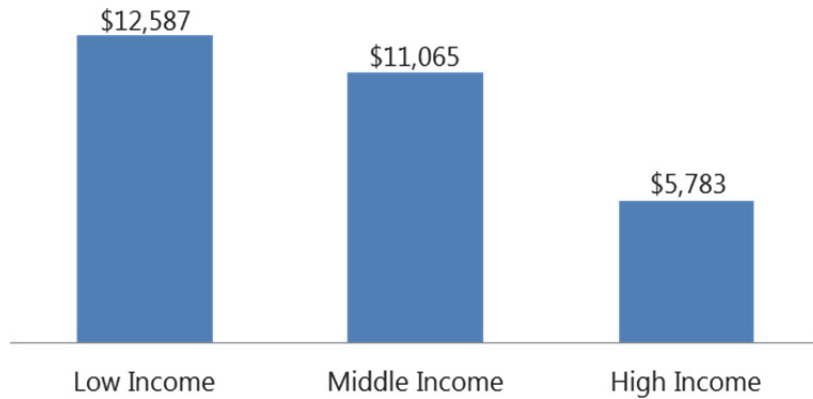
Recommendation 15 may potentially:	
Improve Affordability and Access	✓
Increase State Costs	
Prioritize Academics	
Limit Institutional Autonomy	

VSFAP funding could be reallocated to better meet the financial need of low- and middle-income students

Although low- and middle-income students receive more student aid dollars than high-income students, they still have more unmet financial need (Figure 8-8). The average low- and middle-income in-state student with financial need had approximately \$13,000 and \$11,000 of unmet financial need, respectively, in FY 2013. Higher-income students with financial need had approximately half that (\$6,000), on average, because they have higher expected family contributions.

Current state student aid policy gives institutions substantial autonomy to select which eligible students receive VSFAP awards. The primary state restriction is that recipients must have financial need, which included students with family incomes exceeding \$200,000 and expected family contributions exceeding \$20,000 in FY 2013. The Appropriation Act also requires that students with greater financial need are awarded first.

FIGURE 8-8
Average low- or middle-income student has more unmet financial need

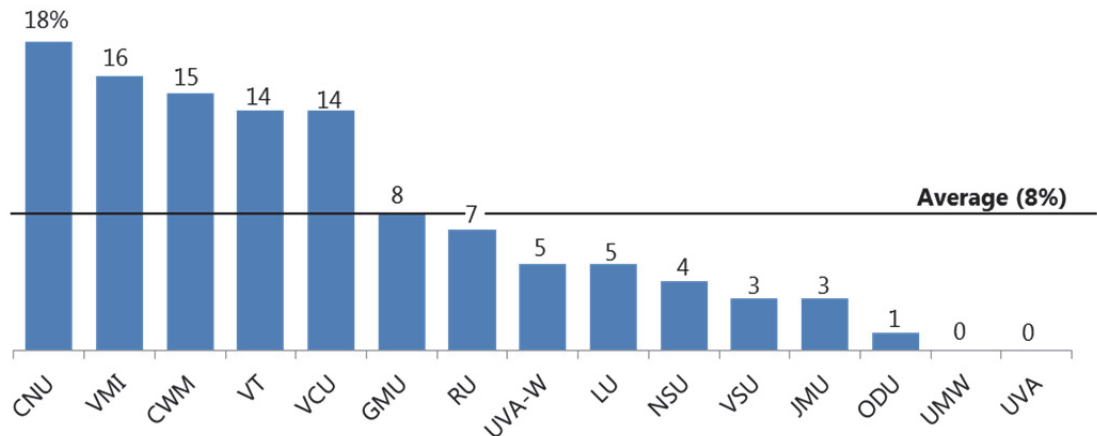


Source: JLARC staff analysis of FY 2013 data from SCHEV.

Notes: Limited to aid that does not have to be repaid, excluding tax preferences, and is awarded during the regular academic term to students who applied for federal need-based aid and have financial need. Low-income, middle-income, and high-income students have household incomes less than 200 percent of the federal poverty level, between 200 to 400 percent of the federal poverty level, and exceeding 400 percent of the federal poverty level, respectively.

Institutions awarded some state student aid to high-income students while their lower-income students had more unmet financial need. Statewide, institutions awarded an average of eight percent of VSFAP funds to high-income students in FY 2013 (Figure 8-9). The percentage of VSFAP funds allocated to high-income students varied widely, from zero percent at UVA and Mary Washington to 18 percent at Christopher Newport.

FIGURE 8-9
Schools awarded eight percent of VSFAP to high-income students (FY 2013)



Source: JLARC staff analysis of data from SCHEV.

Institutional staff cited several reasons that VSFAP funds were provided to high-income students even though substantial unmet need remained among low- and middle-income students. Institutions give funding preference to students who apply for financial aid by a priority deadline, and students who apply after the priority deadline are typically awarded on a first-come first-served basis. According to the research literature and some institutional staff, higher-income students are more likely to apply earlier for student aid than lower-income students because they are more informed and decide sooner whether they want to attend college. Some institutional staff also noted that they set award amounts to ensure that each student with financial need who applies by the priority deadline will receive an award.

Other states that allow institutions, rather than the state, to select the state's need-based student aid recipients typically have stricter eligibility criteria than Virginia. For instance, Washington requires recipients to have family incomes below 70 percent of the state's median income (\$58,500 for a family of four). Nebraska, Florida, and Texas require recipients to have an expected family contribution of no more than \$5,600, \$5,300 and \$4,000, respectively.

Restricting VSFAP awards to low- and middle-income students would ensure that students with the greatest financial need receive the state's limited student aid. This restriction would align the state's student aid policies and practices with its student aid goal in the Code of Virginia, which focuses on low- and middle-income students. It would increase the impact of state student aid on student enrollment and completion. Such an approach would not require additional state or institutional resources.

Implementing this eligibility restriction would eliminate the \$539 of state student aid given to the average high-income student and increase student aid for the average low- and middle-income student by \$163. The average award for low- or middle-income students would not increase by the full \$539 because there are substantially more low- and middle-income students with financial need. The impact on an individual low- or middle-income student would vary depending on the institution's award schedule. The institution may decide to increase the award amount for current low- and middle-income VSFAP recipients, use the additional funding to award eligible low- and middle-income students who did not previously receive a VSFAP award, or do a combination of the above.

This restriction would only apply when VSFAP appropriations do not fully cover the amount of financial need recognized in the Partnership Model for low- and middle-income students. When VSFAP appropriations are sufficient to meet these students' financial need recognized in the Partnership Model, the maximum income level for eligibility could be increased.

Recommendation 16 may potentially:

Improve Affordability and Access ✓

Increase State Costs

Prioritize Academics

Limit Institutional Autonomy ✓

RECOMMENDATION 16

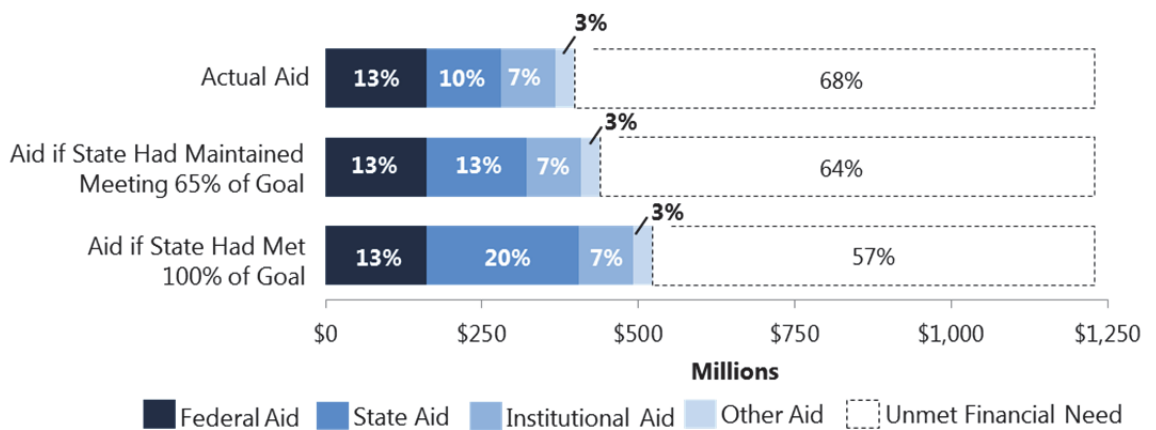
The General Assembly may wish to consider amending the Code of Virginia to restrict the Virginia Student Financial Assistance Program to low- and middle-income students when program appropriations are not sufficient to fully meet these students' financial need recognized by the Partnership Model.

State could increase VSFAP appropriation by reallocating Tuition Assistance Grant funds

Increasing the relatively low state funding levels for student aid could improve student outcomes. Insufficient student aid is a primary reason students report not completing college, as discussed previously. Increasing student aid may also reduce student debt, which, in turn, could improve the broader economy.

If the state wished to reduce the cost of higher education to students with financial need, it could consider increasing the VSFAP appropriation. If the state had provided an additional \$41 million to meet 65 percent of its funding goal in FY 2013, which is the highest percentage the state has met, the percentage of financial need met by all student aid would have increased from 32 to 36 percent (Figure 8-10). If the state had provided an additional \$125 million to fully meet its funding goal in FY 2013, the percentage of financial need met by all student aid would have increased from 32 to 43 percent. There still would have been unmet financial need, however, because the Partnership Model does not recognize certain higher education costs as discussed earlier in this chapter.

FIGURE 8-10 Meeting higher percentage of state funding goal would reduce amount of unmet financial aid (FY 2013)



Source: JLARC staff analysis of data from SCHEV.

Notes: Numbers may not add due to rounding. Limited to aid that does not have to be repaid, excluding tax preferences, and is awarded to students who applied for federal aid and have financial need. Excludes aid awarded in excess of a student's financial need. The highest percentage of the state's funding goal that it has met was 65 percent in 2010.

One option for the state to increase VSFAP funding without additional resources is reallocating Tuition Assistance Grant funds. The program provides aid to in-state students attending private institutions, regardless of financial need or academic merit, and accounts for approximately one-third of the state’s total student aid. Virginia appears to be one of only four states with an aid program for students attending private institutions that is not based on financial need or on academic merit. The state could consider reducing funding for the Tuition Assistance Grant program by, for instance, basing the program on financial need or discontinuing it.

Restricting the Tuition Assistance Grant program to students who have financial need or who are low- or middle-income could moderately increase VSFAP funding. Restricting the Tuition Assistance Grant program to students with financial need would have reduced program costs by an estimated \$8 million to \$12 million in FY 2013. Reallocating these funds would have increased VSFAP funding by seven to 11 percent. Restricting the program to low- and middle-income students would have reduced program costs by an estimated \$15 million to \$19 million in FY 2013. If these funds had been reallocated to VSFAP, VSFAP funding would have increased by 13 to 17 percent.

OPTION 7

The General Assembly could provide more student aid funding for the Virginia Student Financial Assistance Program by reallocating funds from limiting eligibility for the Tuition Assistance Grant program to low- and middle-income students with financial need.

Option 7 may potentially:

- Improve Affordability and Access

- Increase State Costs

- Prioritize Academics

- Limit Institutional Autonomy

Appendix A: Study Mandate

HOUSE JOINT RESOLUTION NO. 108

*Directing the Joint Legislative Audit and Review Commission to study the cost efficiency of the Commonwealth's institutions of higher education and to identify opportunities to reduce the cost of public higher education in Virginia.
Report.*

Agreed to by the House of Delegates, February 10, 2012

Agreed to by the Senate, February 28, 2012

WHEREAS, "Preparing for the Top Jobs of the 21st Century: The Virginia Higher Education Opportunity Act of 2011" has set a goal of awarding 100,000 more degrees over the next 15 years; and

WHEREAS, the State Council of Higher Education for Virginia has reported that the average increase for in-state undergraduate tuition and mandatory fees from the 2009-2010 school year to the 2010-2011 school year was 13.1 percent at four-year institutions; and

WHEREAS, the Joint Legislative Audit and Review Commission has reported in its 2011 Review of State Spending that tuition revenue for Virginia's public colleges and universities increased 110 percent between 2002 and 2009, while inflation increased only 23 percent during that period; and

WHEREAS, the Joint Legislative Audit and Review Commission has reported that Virginia's average annual in-state tuition and fees at public four-year institutions of higher education was \$8,814 in 2010, ranking as the fourteenth highest average in the nation; and

WHEREAS, the increasing costs of higher education have forced many students to incur significant debt in order to complete their degrees, with the Institute for College Access and Success reporting that the average student debt for Virginia public institutions of higher education is \$19,918, and that 57 percent of students have debt related to their higher education; and

WHEREAS, the increasing costs of higher education and the growing debt burden for students may limit access to educational opportunities, adversely affect growth in other sectors of Virginia's economy, and be an obstacle to the goal to award 100,000 more degrees over the next 15 years; and

WHEREAS, in December 2009 the Joint Legislative Audit and Review Commission authorized its staff to complete a study of the cost efficiency of higher education in Virginia, but, because of workload demands from joint study resolutions adopted by the General Assembly, such a study could not be completed; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, that the Joint Legislative Audit and Review Commission be directed to study the cost efficiency of the Commonwealth's institutions of higher education and to identify opportunities to reduce the cost of public higher education in Virginia.

In conducting its study, the Joint Legislative Audit and Review Commission (JLARC) shall consider (i) teaching loads and productivity of faculty; (ii) the impact of faculty research on tuition and other

costs; (iii) incentives created by existing faculty compensation models; (iv) design and utilization of facilities; (v) operation of enterprise activities; (vi) the use of technology for academic programs and administrative functions; (vii) administrative staffing and costs; (viii) scholarships and other student aid programs; (ix) the use of outsourcing and public-private partnerships; (x) the use of cooperative procurement; (xi) the impact of nonacademic activities and programs on tuition and fees; (xii) sources of revenue and income, and how these sources are allocated toward academic, administrative, and other costs; (xiii) opportunities to reduce the cost of public higher education in Virginia; and (xiv) such other related matters as it may deem appropriate

Technical assistance shall be provided to the Joint Legislative Audit and Review Commission by the State Council for Higher Education for Virginia and all state-supported institutions of higher education. All agencies of the Commonwealth shall provide assistance to JLARC for this study, upon request.

The Joint Legislative Audit and Review Commission shall complete its meetings for the first year by November 30, 2013, and for the second year by November 30, 2014, and the Chairman shall submit to the Division of Legislative Automated Systems an executive summary of its findings and recommendations no later than the first day of the next Regular Session of the General Assembly for each year. Each executive summary shall state whether JLARC intends to submit to the General Assembly and the Governor a report of its findings and recommendations for publication as a House or Senate document. The executive summaries and reports shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.

Appendix B: Research Activities and Methods

JLARC staff conducted the following primary research activities:

- structured phone interviews with staff at Virginia’s public four-year higher education institutions, state agency staff, higher education experts, current and former board of visitors members, and higher education administrators in other states;
- quantitative analysis of institutions’ revenue and expenditures related to operating funding, capital funding, and student aid;
- survey of current and former board of visitors members at Virginia’s four-year public higher education institutions; and
- review of documents and research literature.

Structured interviews

Structured interviews were a key research method used by JLARC staff in conducting research for this report. JLARC staff conducted structured interviews with staff at all 15 four-year public institutions in Virginia, as well as with several state agencies, higher education experts, current and former board of visitors members, and other states.

Structured interviews of staff at Virginia’s public four-year higher education institutions

Structured phone interviews were conducted with staff at each public four-year institution in Virginia to obtain information about topics such as higher education operations (academic and auxiliary operations), capital review processes and spending, student costs, and student aid. Institutional staff were also asked to discuss potential options for institutions, the state, or the General Assembly to improve cost efficiency and reduce student costs. These interviews allowed JLARC staff to collect qualitative information and opinions from all 15 four-year public institutions to supplement quantitative analysis conducted.

Structured interviews of state agency staff

JLARC staff conducted structured interviews with the Secretary of Education and staff at State Council of Higher Education for Virginia (SCHEV), Auditor of Public Accounts (APA), Department of Planning and Budget (DPB), Department of General Services (DGS), Virginia Community College System (VCCS), Department of Taxation, Department of Treasury, the Virginia Commission on Higher Education Board Appointments, and staff of the House Appropriations and Senate Finance Committees. Topics discussed included the budgeting and appropriation process for public higher education institutions; capital spending, debt, and review process; student costs; student aid; institutions’ strategic planning process; higher education governance; and the availability of various types of data.

Structured interviews of higher education experts

JLARC staff interviewed several higher education experts throughout the course of the project, including the Association of Governing Boards, National Association of State Budget Officers, National Association of State Student Grant and Aid Programs, National Center for Higher Education Management Systems, and Western Interstate Commission for Higher Education. These interviews were conducted to obtain information on national trends and best practices in student affordability; state higher education governance structures; state funding for higher education operations; capital funding and review processes; and student aid.

Structured interviews of current and former board of visitors members

JLARC staff conducted structured interviews with several current and former board of visitors members to pre-test potential survey questions about board composition, state and institutional training for board members, board oversight responsibilities, and ways that higher education can be more efficient and affordable. In addition, JLARC staff also inquired about institutions' preferences regarding the distribution of an electronic survey of board of visitors members (described in more detail below).

Structured interviews of higher education administrators in other states

Finally, JLARC staff also conducted phone interviews with staff at statewide higher education governing or coordinating boards in 11 other states: Florida, Iowa, Kentucky, Louisiana, Maryland, Minnesota, Ohio, Oregon, Tennessee, Texas, and Washington. These states were selected for interviews primarily because they (i) had relatively low published tuition, net tuition, or student debt; (ii) had unique higher education policies in operating funding, capital funding, or student aid; or (iii) were cited in the higher education research literature as having best practices. These interviews were conducted to obtain information on national trends and best practices in student affordability; state higher education governance structures; and state funding for higher education operations, capital funding and review processes, and student aid.

Quantitative analysis

JLARC staff analyzed data from a variety of sources to assess the net cost of higher education to students as well as higher education operating, capital, and student aid revenues and expenditures. JLARC staff collected data from several state entities, including the 15 public four-year higher education institutions, APA, Department of Taxation, Department of Treasury, and SCHEV. Additionally, JLARC staff collected data from national sources including the National Association of State Budget Officers (NASBO) and National Center for Education Statistics (NCES).

Net cost analysis (Chapter 1)

JLARC staff used data from the National Center for Education Statistics' Integrated Postsecondary Education Data System (IPEDS) to compare the average net costs for students in Virginia to those nationwide in FY 2012. The analysis was limited to in-state, first-time, full-time, degree-seeking undergraduates at public four-year institutions, and excluded private student aid and tax benefits. The analysis had three primary steps. First, JLARC staff calculated the average grant aid per student by dividing total grant aid by the total number of students. Second, JLARC staff calculated the net

price by subtracting average grant aid per student from the published price for students living on-campus. Third, JLARC staff calculated average net price by state, weighted by the number of first-time, full-time, degree-seeking undergraduates at each institution. The actual net cost will be higher for students who did not receive aid and lower for students who did receive aid.

E&G operating data analysis (Chapter 3)

Unless otherwise noted, JLARC staff used the Consumer Price Index to report financial data in constant 2013 dollars.

JLARC staff used IPEDS' Analytics Delta Cost Project (DCP) database to conduct detailed analysis of institutional spending. DCP developed a methodology to ensure comparability of IPEDS data from 1986-87 through 2009-10, accounting for differences (i) in financial reporting over time and (ii) across different types of institutions. The DCP methodology specifies calculation of full-time equivalent (FTE) enrollments, estimated by multiplying part-time fall headcount by the following factors and then adding to full-time headcount: public four-year undergraduates (.403543), public four-year graduates (.361702), private four-year undergraduates (.392857), and private four-year graduates (.382059). JLARC staff used the DCP methodology to incorporate IPEDS financial data for 2010-11 and 2011-12 and ensure use of the most recently available financial data. JLARC staff used the updated DCP database to analyze total spending and spending per student on education and general (E&G) operation for all 15 of Virginia's public four-year institutions in FY 1998 and FY 2012, as well as changes over time.

SCHEV staff provided data on state education and general (E&G) appropriations for each public four-year institution between FY 1993 and FY 2014. JLARC staff obtained annualized FTE enrollment from SCHEV's E05 report between FY 1994 and FY 2013, as well as enrollment projections for FY 2014 through FY 2020 from SCHEV's Table 1. Both sources distinguished between in-state and out-of-state enrollment. JLARC staff used this data to analyze (i) changes in state appropriations per in-state student FTE, over time and by institution, and (ii) changes in total enrollment and enrollment by residency status over time.

The updated DCP database was also used to analyze changes in net tuition revenue over time. Net tuition revenue was calculated by subtracting institutional grant aid from total tuition revenue generated by all students (in- and out-of-state; undergraduate, graduate, and first professional). Net tuition revenue per student was calculated using DCP's methodology to estimate student FTE enrollment. JLARC staff used DCP data on net tuition revenue and data provided by SCHEV on state E&G appropriations to (i) calculate total core E&G revenue per student for each institution; (ii) calculate changes in the proportion of core E&G revenue comprised by state appropriations and by net tuition revenue; and (iii) analyze changes in core E&G revenue over time, by institution.

JLARC staff obtained data from the annual NCES Digest on state appropriations for public degree-granting institutions and full-time equivalent (FTE) fall enrollment for all public four-year and two-year degree-granting institutions in each state between FY 1987 and FY 2012. Data from NCES was used to analyze total higher education appropriations per student FTE by state.

JLARC staff obtained data from the Common Data Set on VCU's reported student-faculty ratio in FY 2001 and FY 2012. JLARC staff also relied on data previously reported in JLARC's December

2013 *Review of Academic Spending and Workload at Virginia's Public Higher Education Institutions* on (i) distance of VCU faculty salaries from the state's 60th percentile faculty salary goal and (ii) proportion and compensation of VCU's supplemental teaching and research faculty.

JLARC staff collected detailed tuition and fee data reported in SCHEV's annual Tuition and Fee Reports between 1999-00 and 2014-15. The 1999-00 Tuition and Fee Report included data on 1998-99 tuition and fees for graduate students, as well as the growth in undergraduate tuition and fees between 1998-99 and 1999-00, which JLARC staff used to calculate tuition and fee rates in 1998-99. JLARC staff used this data to analyze growth in tuition and mandatory E&G fees over time and by institution.

Institutions' need and ability to generate net tuition revenue (Chapter 3)

JLARC staff also conducted an analysis of institutions' need and ability to generate additional net tuition revenue, which relied on data from numerous sources, which focused on explaining changes in institutions' net tuition revenue per student between FY 1998 and FY 2012 (as calculated based on DCP and IPEDS data—see above).

TABLE B-1
Various characteristics affect need and ability to generate net tuition revenue

	Characteristic	Relationship
Need to generate additional net tuition revenue	Base adequacy funding	Institutions further away from full funding under base adequacy have more difficulty supporting basic E&G operations than institutions closest to, or exceeding, full funding and have relatively high need for revenue to support these operations.
	Access to non-core E&G revenues	Institutions with significant access to other revenue sources may be able to manage reductions in state support with less need to rely on student-generated revenue.
Ability to generate additional net tuition revenue	Admissions selectivity	Institutions with higher selectivity generally have greater ability to attract out-of-state students and a student body with less financial need, allowing them to generate additional net tuition revenue more easily than access institutions.
	Out-of-state enrollment	Out-of-state students generate significant net tuition revenue. Institutions (i) experiencing low growth or declines in out-of-state enrollment or (ii) that have a low proportion of out-of-state students may be less able to generate additional net tuition revenue.
	Student ability to pay	Institutions with student bodies that have a lower expected family contribution have less ability to generate additional net tuition revenue because of students' sensitivity to increases in published tuition rates.

Source: JLARC staff analysis of national research literature and interviews with institutional and state agency staff and experts.

JLARC staff selected various institutional and student characteristics that appeared to best explain changes in net tuition revenue over time, as well as differences across institutions (Table B-1, above).

Two factors appeared to best illustrate institutions' need to generate additional net tuition revenue: (i) base adequacy funding status over time and (ii) access to non-core E&G revenue (Table B-2). SCHEV staff provided data on base adequacy funding status for all public four-year institutions between FY 2004 and FY 2014, with FY 2004 the earliest available data. JLARC staff used this data to assess institutions' distance from full funding under base adequacy over time.

TABLE B-2
Institutions' need to generate additional tuition revenue

	Base adequacy funding FY 2014	Change in base adequacy funding FY 2004–FY 2014	% faculty salaries paid through state- and student-funded E&G revenue FY 2012
CWM	118.0%	26.1%	94%
UVA	116.9	28.8	62
GMU	108.4	23.0	74
VT	96.9	8.5	69
VMI	98.7	–23.0	86
VCU	96.2	15.0	72
JMU	103.4	21.5	99
CNU	96.8	18.2	100
RU	100.4	22.5	100
NSU	89.6	–16.1	100
UMW	110.5	25.7	99
LU	99.8	24.8	100
UVA-W	95.7	9.6	100
VSU	97.9	10.9	100
ODU	84.1	8.3	100

Source: JLARC staff analysis of Delta Cost Project data and IPEDS data on net tuition revenue; data provided by SCHEV on base adequacy funding; data reported to JLARC staff in 2013 by institutions on funding sources for faculty salaries.

Note: Change in net tuition revenue in constant 2013 dollars.

JLARC staff used data previously reported by the institutions for JLARC's December 2013 *Review of Academic Spending and Workload at Virginia's Public Higher Institutions* on sources used to fund teaching and research faculty salaries as a proxy for access to non-core E&G resources.

The faculty salary data demonstrated actual ability to use other revenue sources to fund E&G operations, a distinction unable to be drawn out through use of broader revenue data (such as that reported by the Delta Cost Project or IPEDS) given the restrictions on spending placed on some endowment income, private donations, and grants and contracts. Point-in-time data was used due to the relative consistency of access to non-core E&G revenue over time.

Three primary factors appeared to best illustrate institutions' ability to generate additional net tuition revenue: (i) admissions selectivity, (ii) out-of-state student enrollment, and (iii) students' ability to pay for higher education (Table B-3). JLARC staff used data from IPEDS on acceptance rates and SAT scores for incoming students to evaluate admissions selectivity. JLARC staff added average 75th percentile scores for critical reading and math to obtain an overall SAT score.

TABLE B-3
Institutions' ability to generate additional tuition revenue

	Acceptance rate FY 2012	Average 75th percentile of SAT scores FY 2012	Growth out-of-state students FY 1998–FY 2012	% out-of-state students FY 2012	% cost of education paid by out-of-state students FY 2014	Median EFC for in-state undergrads FY 2012	Median EFC for out-of-state undergrads FY 2012
CWM	35%	1450	28%	39%	146%	\$14,321	\$26,112
UVA	33	1460	24	42	161	10,833	16,402
GMU	53	1250	152	20	171	2,934	9,449
VT	67	1310	41	32	150	10,402	17,854
VMI	46	1230	17	41	155	6,639	7,408
VCU	71	1190	156	16	153	4,520	6,384
JMU	60	1290	25	28	156	10,623	22,173
CNU	59	1240	25	5	128	13,221	16,264
RU	80	1110	–48	6	149	6,580	10,283
NSU	65	950	–53	16	144	0	236
UMW	76	1250	–41	13	142	8,551	19,950
LU	75	1110	140	5	150	8,928	12,664
UVA-W	77	1070	8	6	144	1,874	1,739
VSU	58	930	48	30	127	0	1,015
ODU	75	1120	15	12	160	2,996	3,373

Source: IPEDS data on acceptance rates; JLARC staff analysis of IPEDS data on standardized SAT test scores for incoming first-year students; data provided by SCHEV on out-of-state enrollment; and JLARC staff analysis of data provided by SCHEV on financial aid.

Note: Median EFC is for degree-seeking students who applied for financial aid.

JLARC staff analyzed (i) changes in out-of-state enrollment between FY 1998 and FY 2012 and (ii) the proportion of out-of-state students in FY 2012 using data obtained from SCHEV on annualized student FTE enrollments (see above). This data was used to evaluate institutions' abilities to attract higher paying out-of-state students. JLARC staff also collected data on the percentage of cost of education paid by out-of-state students from SCHEV's 2013-14 Full Cost Report, as reported in SCHEV's July 2013 agenda book.

Finally, JLARC staff used data provided by SCHEV on student financial aid (see below for more information) to calculate median expected family contributions of in-state and out-of-state undergraduates. This information allowed JLARC staff to assess students' ability to pay for the price of higher education or future increases in the published price.

State funding policy data analysis (Chapter 4)

SCHEV data on base adequacy funding status included detailed information on the calculations for each institution in FY 2014, which were used to calculate George Mason's estimated funding need using the institution's appropriated salary average and actual salary average (provided by staff at George Mason). The base adequacy data and annualized FTE enrollment data were also used to calculate the amount of funding needed to achieve full funding at all public four-year institutions, in total and per student FTE.

SCHEV's data on base adequacy funding also included data on the cost-share goal for each public four-year institution. This included general fund and nongeneral fund resources needed to achieve the cost-share goal for each public four-year institution, as well as available resources and the actual cost-share at each institution. JLARC staff calculated the distance from the state's cost-share goal (general fund support) for each institution and analyzed changes in cost-share attainment over time, across all four-year institutions and for individual institutions. The cost-share data also included the amount of additional general fund support needed to achieve the state's cost-share goal at each institution. The cost-share data and annualized FTE enrollment data were also used to calculate the amount of funding per student FTE needed to achieve the state's cost-share goal at all public four-year institutions.

JLARC staff also obtained data on (i) the percentage of in-state federal Pell Grant recipients from SCHEV's FA9 report and (ii) the median expected family contribution of in-state undergraduates from financial aid data provided by SCHEV to analyze differences in students' financial circumstances across institutions, compared with the current approach to calculating cost-share, which is based solely on the proportion of in-state and out-of-state students.

Tuition and mandatory E&G fee data from SCHEV's annual Tuition and Fee reports was used to assess institutional adherence to mandatory and voluntary statewide tuition control policies. JLARC staff also used annual Consumer Price Index data to assess adherence to the most recent voluntary policies, which were tied to annual inflation. Tuition and fee data used in this analysis is presented in nominal dollars.

Auxiliary operating data analysis (Chapter 5)

Unless otherwise noted, JLARC staff used the Consumer Price Index to report financial data in constant 2013 dollars.

The updated DCP database (see above) was used to analyze total spending and spending per student on auxiliary operations. Spending at Virginia's public four-year institutions was also compared to public Carnegie and private Carnegie averages. The "research" classification included research-very high, research-high, and doctoral institutions; the "master's" classification included master's-large, master's-medium, and master's-small; and the "baccalaureate" classification included baccalaureate-arts & sciences and baccalaureate-diverse fields. Institutions not reporting spending data to IPEDS were omitted from analyses, as were substantial outliers.

JLARC staff used detailed tuition and fee data from SCHEV's annual Tuition and Fee Reports to analyze (i) growth in mandatory non-E&G fees and room and board charges; (ii) changes in the proportion of total tuition and mandatory fees comprised by mandatory non-E&G fees over time; (iii) annual and cumulative growth in mandatory non-E&G fees since the implementation of the state's growth cap; and (iv) revenue generated by a one percent increase in mandatory non-E&G fees. Data used for analysis of mandatory non-E&G fee growth relative to the state's cap was in nominal dollars and is also reported in Appendix I (online only).

JLARC staff collected data from SCHEV's E02 report on fall headcount for on-campus and off-campus enrollment between FY 1993 and FY 2014, which were all available years of data. JLARC

staff analyzed staff analyzed the growth in on-campus enrollment over time by institution, as well as changes in the proportion of students living on-campus, during this period.

JLARC staff used data previously reported in JLARC's September 2013 *Review of Non-Academic Services and Costs at Virginia's Public Higher Institutions* on (i) the percent of revenue generated by athletic programs and the percent of athletic revenue coming from student charges; (ii) athletic expenditures at Longwood; (iii) athletic fees as derived by JLARC staff to ensure comparability across institutions; and (iv) derived athletic fees as a proportion of total tuition and mandatory non-E&G fees.

JLARC staff also used data on enrollment projections between FY 2014 and FY 2020 from SCHEV's Table 1 (see above) to analyze projected declines in enrollment at the public four-year institutions.

Capital data analysis (Chapter 6)

JLARC staff collected data from a number of sources in order to analyze state and institutional capital spending and debt (Table B-4). This data is reported in both Chapter 6 and Appendix J (online only). DPB provided data on cash spending on higher education capital projects at each public four-year institution and whether spending was financed through state funds (primarily general funds) or institutional revenue.

The APA provided a database of issued debt, debt service payments, and outstanding debt (as of June 30, 2013) for the public institutions and state agencies. The data reported underestimates total debt service payments, since debt that had been repaid in prior years is excluded. The data provided by the APA reported aggregated data for UVA and UVA-Wise, so JLARC staff collected disaggregated data from UVA staff. JLARC staff excluded capital projects relating to UVA's Medical Center.

JLARC staff also collected data from the Level 3 institutions (William and Mary, UVA/UVA-Wise, VCU, and Virginia Tech) on debt independently issued under authority granted by the Restructuring Act. This data included total amount of debt issued, annual debt service payments made through FY 2013, and outstanding debt service payments by year. Only UVA/UVA-Wise and VCU had issued this type of debt, and UVA and VCU staff provided the relevant data.

The APA database also included data on outstanding 9(c) higher education debt, 9(d) Pooled Bond Program debt, and 9(d) higher education debt (issued prior to the establishment of the Pooled Bond Program). JLARC staff also obtained institutionally-reported data from UVA/UVA-W and VCU on outstanding debt for independently issued bonds, as well as data from UVA/UVA-W on other types outstanding institutional debt (which were reported in aggregate in the APA's database). Outstanding debt data was reported as future debt service payments in individual fiscal years. JLARC staff analyzed this data to assess changes in outstanding debt over time, for the state, all public four-year institutions, and institutions individually.

All 15 public four-year institutions reported data on funding sources for institutional debt service payments in FY 2005, FY 2012, and FY 2013. Only VCU was unable to provide data for FY 2005. Data included the proportion of debt service payments funded through (i) mandatory E&G and non-E&G student fees, (ii) user fees, including room and board charges, and (iii) other funding sources. Institutions also reported data on mandatory fees charged to students to make institutional debt service payments. This data was used to assess the proportion of institutional debt service payments borne by students and changes in mandatory fees for debt service over time.

TABLE B-4
Data sources used to analyze state and institutional capital spending and debt

	Data	Entity	Bond type	Analysis
State	Authorizations	Appropriation Acts	General obligation bonds, 21st Century Program, cash spending	Changes in authorized capital spending over time
		DGS	21st Century Program	
	Issuances	APA Treasury	General obligation bonds, 21st Century Program	Changes in issued capital debt over time
	Cash spending	DPB	---	Changes in capital spend- ing and in general fund spending over time
	Historical debt service (FY 2002–FY 2013)	Treasury	General obligation bonds	Changes in state debt ser- vice payments over time
DPB		21st Century Program		
Outstanding debt service (FY 2014–FY 2034)	Treasury	General obligation bonds, 21st Century Program	Amount of outstanding debt	
Institutions	Authorizations	Appropriation Acts	9(c) higher education, 9(d) Pooled Bond Program, cash spending	Changes in authorized capital spending over time
		APA	9(c) higher education, 9(d) Pooled Bond Program	
	Issuances	VCU, UVA	9(d) independently issued	Changes in issued capital debt over time
		DPB	---	
	Cash spending	DPB	---	Changes in capital spend- ing and in spending fund- ed through institutional revenue over time
Historical debt service (FY 2002–FY 2013)	APA	9(c) higher education, 9(d) Pooled Bond Program	Changes in state debt ser- vice payments over time	
	VCU	9(d) independently issued		
Outstanding debt service (FY 2014–FY 2044)	UVA ^a	9(c) higher education, 9(d) Pooled Bond Program, 9(d) independently issued	Amount of outstanding debt	

Source: JLARC staff analysis of data provided by state agency staff and institutional staff.

^a UVA provided data for both UVA and UVA-Wise, since data obtained from APA reported aggregated data for the two institutions and UVA's Medical Center.

Treasury provided data on aggregate, historical debt service payments for general obligation bonds. JLARC staff worked with Treasury staff to develop a methodology to estimate debt service payments for individual public four-year institutions based on general obligation bond project authori-

zations. (The same methodology was used to estimate outstanding debt on general obligation debt.) JLARC staff used annualized FTE enrollment data obtained from SCHEV to analyze changes in debt service payments per student over time. JLARC staff also used appropriations data obtained from SCHEV to estimate the proportion of total state support for the public four-year institutions represented by annual state debt service payments.

Treasury also provided data on outstanding debt service payments for general obligation and 21st Century Program bonds. JLARC staff worked with Treasury staff to develop a methodology to estimate 21st Century Program debt service payments for individual public four-year institutions. Estimated debt service payments were based on a proxy debt service schedule developed by Treasury staff. This data was limited to debt issued during or after FY 2002 for facilities (equipment debt was excluded). Outstanding debt is reported in nominal dollars.

JLARC staff also obtained data from the National Association of State Budget Officers' (NASBO) annual State Expenditure Report for spending on higher education capital by state between FY 1993 and FY 2013. The data included spending on public four-year and two-year institutions, as well as any state capital spending benefiting private institutions. Data from the National Center for Education Statistics' (NCES) annual Digest of Education Statistics were also obtained for FTE enrollment at public higher education institutions by state between FY 1993 and FY 2013. Data from NASBO and NCES were used to analyze total capital spending per student FTE and capital spending by fund source, including capital bonds. National and regional spending comparisons were used to benchmark Virginia's levels of capital spending over time. Regional comparisons used the 16 Southern Regional Education Board (SREB) member states: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

JLARC staff collected data from IPEDS on annual construction spending by institution. Construction spending reflects spending on construction in progress, or capital assets that are under development or construction in the given fiscal year and have not yet been placed in service. Data were obtained for both public and private not-for-profit institutions between FY 2008 and FY 2012, as well as for just public institutions between FY 2004 and FY 2007 (due to reporting limitations among private institutions during that period). Annual construction spending at Virginia's public four-year institutions was compared to public Carnegie and private Carnegie averages. The "research" classification included research-very high, research-high, and doctoral institutions; the "master's" classification included master's-large, master's-medium, and master's-small; and the "baccalaureate" classification included baccalaureate-arts & sciences and baccalaureate-diverse fields. Institutions not reporting spending data to IPEDS were omitted from analyses, as were substantial outliers.

SCHEV staff provided fall space inventory data on square footage at each of the public four-year institutions between fall 2002 and fall 2011. Reported square footage included E&G space for instruction, academic support, research, public service, libraries, institutional and student services, and operation and maintenance of physical plant; auxiliary space for self-supporting auxiliary enterprises, such as dormitories, dining halls, and athletic facilities; and other types of space used for independent operations, unassigned E&G or auxiliary space, non-assignable space (not available for use but necessary for a building's operation). Due to reporting limitations, data analyses were limited to fall

2004 through fall 2011. JLARC staff used annualized FTE enrollment data obtained from SCHEV to analyze changes in square footage per student over time.

JLARC staff obtained data from SCHEV on the public four-year institutions' E&G capital requests for the FY2014-FY2020 period, which was included in SCHEV's 2014-2016 budget recommendations from November 2013. JLARC staff calculated total requested funding by subtracting requests made by the Virginia Community College System and Richard Bland College from the total reported by SCHEV. JLARC staff also obtained data on institutions' auxiliary capital requests for the 2014-2016 biennium from DPB's capital request summary as published on the DPB website. JLARC staff limited results to projects only requests authorization for nongeneral funds.

JLARC staff obtained data from the public four-year institutions on cost savings resulting from value engineering studies as part of a document and data request to the institutions. JLARC staff requested these studies for the two most recent projects undergoing value engineering. The reported cost savings and estimated construction costs for all projects was used to calculate an estimate of the value of total savings resulting from conducting value engineering (both dollar and percentage savings).

As part of the document and data collection process, JLARC staff also obtained information on institutions' target debt burden ratios and the actual ratio in FY 2005, FY 2012, and FY 2013. This information was used to assess changes in institutions' debt burden ratio over time and assess distance from the target ratio. This information is reported in Appendix J (online only).

Facility maintenance data analysis (Chapter 7)

JLARC staff obtained information from SCHEV's June 2011 Facility Condition Report on institutions' replacement value, total deficiencies, and facility condition index of E&G buildings. SCHEV's reported noted that inconsistencies with institutional reporting required them to limit information to buildings, excluding infrastructure and other types of capital assets. JLARC staff used this information to assess the condition of E&G facilities system-wide and at each public four-year institution, as well as the amount of estimated funding needed to resolve the deferred maintenance backlog on E&G buildings.

As part of JLARC's December 2013 *Review of Academic Spending and Workload*, SCHEV staff provided information on facility age as reported in the state's Facility Inventory Condition and Assessment System (FICAS) as of February 2011. JLARC staff used this information to analyze facility age—based on year of original construction—across the public four-year institutions.

JLARC staff obtained information from SCHEV on SCHEV's funding recommendations for maintenance reserve allocations in the 2014-2016 biennium (as reported in SCHEV's October 2013 agenda book). DPB also provided information on maintenance reserve program spending, by institution and funding source, between FY 2002 and FY 2013. JLARC staff used this information to assess state and institutional funding for maintenance reserve projects, as well as compare Virginia's policies toward maintenance funding compared with recommendations of national experts.

Student aid data analysis (Chapter 8)

JLARC staff obtained SCHEV's student aid records on all undergraduates at Virginia's public four-year institutions from FYs 1993 to 2013. For each student who applied for federal student aid, the records included data on student characteristics such as family size, expected family contribution, and income. The records also included detailed data on student aid awards by source, excluding tax preferences and any awards that were not reported to the institution. The analyses were limited to (i) student aid that does not have to be repaid, which included grants but excluded loans and work-study programs, and (ii) in-state undergraduate students.

Using the student aid records, JLARC staff classified students who applied for federal student aid as low-, middle-, or high-income. The classifications were based on the Higher Education Advisory Committee's definitions that low-income students have household incomes of less than 200 percent of the federal poverty level, middle-income students have household incomes between 200 and 400 percent of the federal poverty level, and high-income students have household incomes greater than 400 percent of the federal poverty level. Table B-5 lists the FY 2013 income cutoffs for each family size, which are based on the 2011 federal poverty level guidelines since 2011 income data was used to apply for federal student aid.

TABLE B-5
Income levels were defined based on the federal poverty level (FY 2013)

Family size	Low income	Middle income	High income
1	\$0 – 21,779	\$21,780 – 43,560	\$43,561+
2	0 – 29,419	29,420 – 58,840	58,841+
3	0 – 37,059	37,060 – 74,120	74,121+
4	0 – 44,699	44,700 – 89,400	89,401+
5	0 – 52,339	52,340 – 104,680	104,681+
6	0 – 59,979	59,980 – 119,960	119,961+
7	0 – 67,619	67,620 – 135,240	135,241+
8	0 – 75,259	75,260 – 150,520	150,521+
9	0 – 82,899	82,900 – 165,800	165,801+
10	0 – 90,539	90,540 – 181,080	181,081+

Source: JLARC staff analysis of the 2011 federal poverty guidelines.

Note: Students in FY 2013 were classified based on 2011 federal poverty level guidelines.

Using the student aid records, JLARC staff also calculated the amount of financial need and unmet financial need for each student who applied for federal student aid. Financial need represents the portion of a student's higher education costs that the federal government does not expect the student's family to pay. It was defined as the cost of attendance, as reported by the institution on the student aid record, minus the expected family contribution. The portion of financial need that remained after accounting for student aid was defined as unmet financial need.

JLARC staff also obtained data from SCHEV's EOM02 and WG01 reports on the total known debt of student borrowers who graduated in FY 2010 and the income of students 18 months after graduation. This data was used to calculate the percentage of the monthly median income used to pay the monthly median student loan payment. The calculation of the monthly student loan payment

assumed a standard 10-year repayment term with a 6.3 percent interest rate, which was the average interest rate of federal subsidized loans from FYs 2007 to 2010.

SCHEV also provided data on the state's student aid funding goal based on the Partnership Model, as well as actual state student aid appropriations. JLARC staff used this data to calculate how much funding would be needed to fully meet the state's goal, and how the percentage of the goal met at each institution would change if student aid appropriations were based on the Partnership Model.

JLARC staff analyzed FY 2013 data from SCHEV on the Tuition Assistance Grant (TAG) program. Using the SCHEV FA04 report on TAG recipients by income level, JLARC staff classified recipients with incomes up to \$50,000 as low-income, recipients with incomes between \$50,000 and \$100,000 as middle-income, and recipients with incomes greater than \$100,000 as high-income. JLARC staff estimated the amount of TAG funding awarded to students without financial need by multiplying the average award amount from the SCHEV FA03 report by the number of recipients who (i) did not have financial need according to the FA04 report, for a lower estimate, and (ii) did not have financial need or had unknown financial need because they did not apply for federal student aid, according to the FA04 report, for a high estimate. Similarly, JLARC staff estimated the amount of TAG funding awarded to high-income students by multiplying the average award amount from the SCHEV FA03 report by the number of recipients who (i) were high-income according to the FA04 report, for a lower estimate, and (ii) were high-income or had unknown income because they did not apply for federal student aid, according to the FA04 report, for a high estimate.

The Department of Taxation provided 2012 data on the amount claimed through, and the number of taxpayers claiming, the state's education savings trust deduction and the college savings plan subtraction. This data was provided by federal adjusted gross income. Taxpayers with federal adjusted gross income of \$0 to \$49,999 were considered low-income, taxpayers with federal adjusted gross income of \$50,000 to \$99,999 were considered middle-income, and taxpayers with federal adjusted gross income of \$100,000 or more were considered high-income.

Survey of current and former board of visitor members at Virginia's 15 public four-year higher education institutions

JLARC staff surveyed current and former board of visitor members at Virginia's public four-year institutions to address several research areas. Board members were asked about board composition, state and institutional training for board members, board oversight responsibilities, and ways that higher education can be more efficient and affordable. A total of 97 current board members responded to the survey for a 45 percent response rate. JLARC staff also received 115 responses from former board members. A response rate for former board members could not be estimated because the total number of former members who received the survey from higher education institutions on behalf of JLARC staff was unknown. See Appendix E (online only) for a summary of the survey results.

Review of research literature and documents

Throughout the course of the study, JLARC staff conducted a review of the research literature regarding the affordability of higher education, state governance of higher education, higher education operating and capital funding, and student aid. JLARC staff relied upon the advice of several higher education experts to help identify and summarize some of the relevant research literature.

JLARC staff also requested and reviewed documentation from Virginia's 15 public four-year institutions. This included institutional policies or studies in several areas including institutional training provided to board of visitor members, operating and capital spending, student aid, graduation rates, and student affordability. All institutions responded to the document request, although some institutions stated that they did not have any relevant documentation in several requested areas. JLARC staff also obtained and reviewed institutions' mission statements, vision statements, strategic plans, six-year operating plans, and board of visitors bylaws from institutions' websites.

JLARC staff requested and reviewed documents from SCHEV on various topics including statewide training to boards of visitors members, operating and student aid funding models, state higher education affordability measures, institutions' S5 plans for awarding student aid, institutions' six-year capital plans, and institutions' capital project requests. JLARC staff used the S5 plans to identify the amount each institution planned to award a student with \$18,000 of unmet need through the Virginia Student Financial Assistance Program. JLARC staff selected this amount because this was the approximate amount of unmet financial need for a low-income undergraduate student in FY 2013 given two assumptions: (i) the student has an expected family contribution of zero, to help JLARC staff interpret some institutions' S5 schedules; and (ii) only federal student aid was known at the time of awarding, which is the minimum amount of student aid that SCHEV expects institutions to know at that time.

JLARC staff also requested and reviewed documents from other states and higher education stakeholders on similar topics. These documents included survey results from the National Association of State Student Grant Aid Programs and the Association of Governing Boards, as well as other states' policies related to higher education.

Appendix C: Recommendations made in prior JLARC reports in series on higher education

This appendix lists the recommendations made in three prior JLARC reports in the series on higher education.

Review of Non-Academic Services and Costs at Virginia's Public Higher Education Institutions (September 2013)

1. Boards of visitors should require their institutions to clearly list the amount of the athletic fee on their website's tuition and fees information page. The boards should consider requiring institutions to list the major components of all mandatory fees, including the portion attributable to athletics, on a separate page attached to student invoices (Chapter 2).
2. SCHEV should convene a working group of institution financial officers to create a standard way of calculating and publishing mandatory non-E&G fees, including for intercollegiate athletics. The group should report its findings to the House Appropriations and Senate Finance Committees by the 2015 General Assembly (Chapter 2).
3. Boards of visitors should assess the feasibility and impact of raising additional revenue through campus recreation and fitness enterprises to reduce reliance on mandatory student fees. The assessments should address the feasibility and impact of raising additional revenue through charging for specialized programs and services, expanding membership, and/or charging all users of recreation facilities (Chapter 3).

Review of Academic Spending and Workload at Virginia's Public Higher Education Institutions (December 2013)

1. The General Assembly may wish to consider regularly re-basing appropriated and actual average faculty salaries (Chapter 2).
2. The State Council of Higher Education for Virginia should benchmark average faculty salaries at the discipline level and improve the transparency of the peer group process by reporting the outcomes of its statistical model, as well as the rationale for making modifications to the peer groups selected through the model (Chapter 2).
3. Boards of visitors should consider requiring their institutions to conduct and participate in national faculty teaching load assessments that facilitate benchmarking average faculty teaching loads against similar institutions. The assessments should measure national average teaching loads by discipline and faculty type (Chapter 3).
4. The General Assembly may wish to consider appropriating funding for the State Council of Higher Education for Virginia to coordinate a committee of institutional representatives, such as the previously authorized Learning Technology Advisory Committee. In addition to the objectives set out in the Appropriation Act for the Learning Technology Advisory Committee,

the committee should identify instructional technology initiatives and best practices for directly or indirectly lowering institutions' instructional expenditures per student while maintaining or enhancing student learning (Chapter 4).

5. The General Assembly may wish to consider amending the Code of Virginia to direct the State Council of Higher Education for Virginia to track State funding for higher education research from all sources and develop a process for institutions to report on the progress of State-supported research projects (Chapter 6).
6. The State Council of Higher Education for Virginia should convene a working group of institutional staff to develop instructional and research space guidelines that adequately measure current use of space and plans for future use of space at Virginia's public higher education institutions (Chapter 7).

Review of Support Function Spending at Virginia's Public Higher Education Institutions (October 2014)

1. Boards of visitors at all Virginia institutions should direct staff to perform a comprehensive review of their organizational structure, including an analysis of spans of control and a review of staff activities and workload, and identify opportunities to streamline their organizational structure. Boards should further direct staff to implement the recommendations of the review to streamline their organizational structures where possible (Chapter 3).
2. Boards of visitors at all Virginia institutions should require periodic reports on average and median spans of control and the number of supervisors with six or fewer direct reports (Chapter 3).
3. Boards of visitors at all Virginia institutions should direct staff to revise human resource policies to eliminate unnecessary supervisory positions by developing standards that establish and promote broader spans of control. The new policies and standards should (i) set an overall target span of control for the institution, (ii) set a minimum number of direct reports per supervisor, with guidelines for exceptions, (iii) define the circumstances that necessitate the use of a supervisory position, (iv) prohibit the establishment of supervisory positions for the purpose of recruiting or retaining employees, and (v) establish a periodic review of departments where spans of control are unusually narrow (Chapter 3).
4. The General Assembly may wish to consider including language in the Appropriation Act and appropriating funding for a review of cooperative procurement. The review should be performed by a consultant and involve the Auditor of Public Accounts, Department of General Services, Department of Planning and Budget, State Council of Higher Education for Virginia, and Virginia Information Technologies Agency. The review should determine (i) the categories of goods and services for which cooperative procurement would enable higher education institutions to achieve savings; (ii) for each category of goods and services, to what extent institutions would realize greater savings by using the Department of General Services or Virginia Information Technologies Agency, or a higher education cooperative; and (iii) for

each category of goods and services, to what extent state agencies would pay higher costs if institutions used a higher education cooperative instead of the Department of General Services or Virginia Information Technologies Agency. Findings from the review should be reported to the Chairs of the House Appropriations and Senate Finance Committees and the House and Senate General Laws Committees by September 1, 2016 (Chapter 4).

5. The General Assembly may wish to consider amending the Code of Virginia, as appropriate, based on the findings of the consultant review of higher education procurement, to direct all higher education institutions in Virginia to participate fully in joint procurement through higher education cooperatives or state contracts negotiated by the Department of General Services and the Virginia Information Technologies Agency (Chapter 4).
6. Boards of visitors at all Virginia institutions should direct institution staff to set and enforce policies to maximize standardization of purchases of commonly procured goods, including requirements to use institution-wide contracts (Chapter 4).
7. Boards of visitors at all Virginia institutions should consider directing institution staff to provide an annual report on all institutional purchases, including small purchases, that are exceptions to the institutional policies for standardizing purchases (Chapter 4).

Appendix D: Agency Responses

As part of an extensive validation process, state agencies and other entities involved in a JLARC assessment are given the opportunity to comment on an exposure draft of the report. JLARC staff provided an exposure draft of this report to the Secretary of Education and the following state agencies and institutions:

- Department of General Services
- Department of Planning and Budget
- State Council of Higher Education for Virginia
- Christopher Newport University
- College of William and Mary
- George Mason University
- James Madison University
- Longwood University
- Norfolk State University
- Old Dominion University
- Radford University
- University of Mary Washington
- University of Virginia
- University of Virginia-Wise
- Virginia Commonwealth University
- Virginia Military Institute
- Virginia State University
- Virginia Tech

Appropriate corrections resulting from technical and substantive comments have been made in this version of the report.

This appendix includes written response letters provided by:

- State Council of Higher Education for Virginia
- George Mason University
- James Madison University
- Norfolk State University
- University of Virginia
- Virginia Military Institute
- Virginia Tech
- Department of General Services

NOV 03 2014



Peter Blake
Director

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October 31, 2014

Mr. Hal E. Greer
Director
Joint Legislative Audit and Review Commission
Suite 1100, General Assembly Building
Richmond, VA 23219

Dear Mr. Greer:

Thank you for the opportunity to comment on JLARC's report, *Addressing the Cost of Public Higher Education in Virginia*. I commend you for undertaking and now completing your review of the cost efficiency of the state's four-year institutions of higher education.

I would like to acknowledge your thorough review of auxiliary enterprises, and particularly the significant increases in the related mandatory fees charged to students to fund these self-supporting activities. While these charges represent, on average, the same portion (about one-third) of total mandatory charges to in-state undergraduate students today as they did in 1998, I would agree that it is time to look at amending the current five percent cap on annual increases to better address student affordability. Affordable access will be Goal 1 of the Council's new statewide Strategic Plan.

I also would like to applaud your focus on the growing deferred maintenance backlog of our educational and general facilities—and agree that deferring maintenance contributes to significantly higher capital and operating costs in the long-term and may also disrupt the institutions' core missions and compromise safety. SCHEV has recommended state funding for these needs using what one legislative staff member described as a conservative 1% annual reinvestment rate of building replacement value through the state's maintenance reserve program. Any additional funding that would move current funding levels toward this goal would be a good investment.

Educational and general programs, those programs that support instruction, are the primary focus of our higher education institutions. In total, they represent a little more than \$4.2 billion and just under 60 percent of all higher education funding. Auxiliary enterprises, by comparison, represent a little more than \$1.3 billion and just over 21 percent of all funding. Auxiliary


Mr. Hal E. Greer
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enterprises are expected to be self-supporting and thus receive no general fund support from the state. Educational and general programs are a shared responsibility between the state and students. I continue to believe that the relationship between general fund state support and increases in tuition and fees for educational and general programs cannot be overstated. The strength of this relationship was most recently proven just last biennium. In fiscal years 2013 and 2014, the General Assembly provided additional general fund operating support (the first such increase in five years)—and tuition and fee increases were the lowest we had seen in a decade.

State general fund support has been reduced nine of the last 15 years and seven of the last nine years. Adjusting for inflation, general fund support per student has been reduced by nearly 50 percent while total tuition revenue (nongeneral fund) per student has increased by about 63 percent. **In terms of the bottom line—total support per student (including both general fund and tuition revenue) has not increased between FY2001 and FY2016. In fact, it has decreased by just under 1 percent over this period.** Had institutions not increased tuition revenue at levels greater than the general fund reductions, total support per student would have declined even more, and we would not have been able to make gains in student enrollment and graduation. Increased student revenue, driven by both increased enrollment and tuition rates, has allowed our institutions to keep their collective noses closer to the water line than otherwise would have been the case.

Finally, I was disheartened to see the second of your four key assumptions that were applied in the development and assessment of the options and recommendations presented in this report, namely that little or no additional state funding will be available for higher education in the future. If the current trend of regularly reducing support for higher education operations continues, then access, affordability and quality will suffer, as will the Commonwealth's economic and cultural prosperity.

Thanks again for the opportunity to comment on your final report of House Joint Resolution 108. I look forward to continuing to work together to strengthen our system of higher education.

Sincerely,

Peter Blake



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Phone: 703-993-1000; Web: www.gmu.edu

October 30, 2014

Mr. Hal E. Greer, Director
Joint Legislative Audit and Review Commission
201 North 9th Street
General Assembly Building, Suite 1100
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for providing us with the opportunity to review and comment upon JLARC's most recent higher education report, *Addressing the Cost of Public Higher Education in Virginia*.

We commend the significant efforts of JLARC in conducting a thorough assessment of the complex issues facing higher education. The rigor and care with which the commission undertook this study is evidenced by the report and we find strengths in a number of sections, particularly opportunities to rebasing appropriated salary levels to align with actual salary averages; options to provide increase to state maintenance reserve funding; and better align Virginia Student Financial Assistance Program allocations. Through this letter, we would like to share some concerns with certain points and provide our comments on other areas found in the report:

Chapter 4 – Revising Allocation of State Operating Funding

We support the recommendation that consideration be given to update the underlying data for the Base Budget Adequacy Model. In particular, the consideration to rebasing appropriated salary levels to align with actual institutional experiences. The use of artificially low appropriated salaries in the calculation of Base Budget Adequacy results, as demonstrated in the draft report, in the significant understatement of George Mason University's financial need and at the same time suggests that our faculty salaries are even further below the Commonwealth 60th percentile salary goal objective than is actually the case. We welcome the correction to these fundamental issues.

Chapter 7 – Strategically Maintaining Facilities

We support the recommendation to revise the formula used to allocate the state's maintenance reserve funding to account for higher maintenance needs as well as the option provided to consider appropriating additional state funding for the maintenance reserve program. As noted in the *Support Costs & Staffing at Virginia's Higher Education Institutions* report, George Mason University has historically received approximately \$2.8 million in annual maintenance reserve to be used to fund a maintenance need of typically over \$10.0 million each year.

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Chapter 8 – Reallocating State Student Aid

We support the recommendation that consideration be given to allocating all Virginia Student Financial Assistance Program funds across institutions such that an equal amount of financial need is met. George Mason University has seen an increase in the number of students applying for financial aid, as well as an increase in average student financial need. At the same time, decreases in federal and state resources available to students and limited private funds, exacerbate the gap between resources and need. The proportion of student unmet need for full-time undergraduate students at Mason increased from 29% to 41% over the past five years. For full-time freshmen, the proportion of unmet need increased from 26% to 38% during the same five-year period, and by 10 percentage points over the last 10 years. We welcome future dialog as it relates to meeting student financial aid needs.

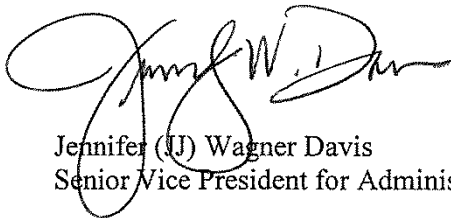
Appendixes – Case Studies

The draft report highlights George Mason's successful Pathway to Baccalaureate program which is a consortium of ten educational institutions in Northern Virginia – K-12 public school systems, Northern Virginia Community College (NOVA) and George Mason University – who have joined forces to provide a seamless web of support to students as they pursue a four-year college degree. The Pathway to Baccalaureate program has emerged as an award-winning program model that has demonstrated remarkable outcomes in the areas of college access, success and persistence.

In addition, the draft report highlights George Mason's nationally recognized debt management policy. The University's debt management policy establishes a debt advisory team that reviews future capital requests and debt issuance, along with other matters that impact the University's overall debt. We appreciate the National Association of College and University Business Officers (NACUBO) recognizing the University's debt management policy as a best practice.

George Mason University appreciates the opportunity to participate in this process. The report was very insightful and provides clarity to numerous complex issues impacting higher education. The Commonwealth's institutions of higher education have been a successful investment and we are fully committed to continuing the delivery of a quality higher education experience in an efficient and transparent manner.

Very truly yours,



Jennifer (JJ) Wagner Davis
Senior Vice President for Administration and Finance



October 31, 2014

Mr. Hal E. Greer
Director
Joint Legislative Audit and Review Commission (JLARC)
201 North 9th Street
General Assembly Building, Suite 1100
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for this opportunity to submit a formal written response to the recent draft *Addressing the Cost of Public Higher Education in Virginia* report. Through this correspondence, we hope to offer suggestions we feel will further clarify the cost of public education in Virginia.

We are impressed by the scope of the report and with the clarity with which the material is organized and presented. We appreciated the balanced approach adopted by JLARC in the presentation of the material.

General Comments

We feel it is important to note the following points for consideration:

- Throughout the years, JMU has become known for our high quality educational experience and sense of community as evidenced by very high student satisfaction rates, record numbers of applicants, and impressive graduation rate. We have built our reputation for offering an efficient and difference-making higher education experience. JMU, like several other Virginia institutions, is frequently cited as a “best value” institution nationally by many different surveys and publications. JMU ranks 12th out of 15th for the total cost of an in-state student, which clearly demonstrates that the University understands the importance of controlling the cost of education.
- The concept of value goes beyond what students and parents pay in tuition and fees. It also represents a way to describe and better understand the competition and market forces that exist between institutions and the reason why JMU and other Virginia institutions are experiencing strong demand for their services. We feel that it is important to acknowledge that it is in the state’s best interest for students to want to attend Virginia institutions. To ensure this desire and the subsequent strong demand, institutions must provide an overall “value” that includes high quality academics *and* student services.
- Institutions allocate costs between tuition and fees in a variety of ways. Furthermore, student fees reflect different types of institutional missions (e.g., institutions with more on-campus residents provide more and different services than those with primarily commuter students). Many of these student support services have been shown by research to be critical to retention, graduation rates, and the enhancement of student learning.

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October 31, 2014
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- Institutions grow and evolve over time and develop on different trajectories and at varying times to meet evolving state and regional needs. Therefore, it does not make sense to penalize or constrain institutions that have evolved more recently when undergoing changes that other institutions might have experienced a generation or more ago.
- Use of the term “amenities” implies that services provided to students are extra, unnecessary, or frivolous. Services that may be perceived as amenities are necessary to the health, well-being, and overall development of our students. For example, given the incredible cost of health care resulting from an overweight and out-of-shape population, it is important that college students learn about maintaining their health. University recreation centers, health centers, and dining services provide such an opportunity to students whose core academic courses do not directly address these issues. Further, it is worth noting that many students whose core academic requirements relate directly to university student services obtain practical learning opportunities not available elsewhere.

2 – Public Higher Education Governance in Virginia

- The Commonwealth’s strength is the uniqueness of the Virginia higher education system and Board of Visitors members currently provide critical institutional guidance. While additional SCHEV training may be beneficial, at JMU new Board of Visitors members are provided training to include financial information and most board members serving on finance committees are experienced business professionals.

5 – Limiting Non-Academic Costs

- There is an indirect cost correlation between auxiliaries and support of education and general programs that should be emphasized when there is discussion of auxiliary enterprises. The indirect cost revenues provide institutional support funding for daily education and general operations of the institution. Currently at JMU, auxiliary enterprises contribute an estimated 9.6% of revenues to indirectly fund education and general programs.
- With regard to other student services, it is inaccurate to suggest that intercollegiate athletics programs benefit only those students who are members of varsity teams. Many other students (as well as faculty, staff, alumni, and community members) also benefit. For example, at JMU we have academic programs that work directly with intercollegiate athletics (e.g., sports medicine, athletic training, etc.). The Marching Royal Dukes are a nationally recognized, award-winning program that includes almost 500 students each year from virtually every academic major across campus. Academic credit is awarded for this program, and they would not exist or have such opportunities without the athletics program. Students in many disciplines receive practical experience by working directly with our athletics programs.
- Athletics spending is subject to a number of external factors that inflate the overall cost and that do not apply to other programs in the same way (e.g., NCAA and conference requirements, Title IX standards). However, to meet Title IX compliance in 2007, JMU reallocated resources and reduced athletic programs from 28 to 18 teams, which is near the minimal number of teams to compete at the Division I level.

Mr. Hal E. Greer
October 31, 2014
Page 3

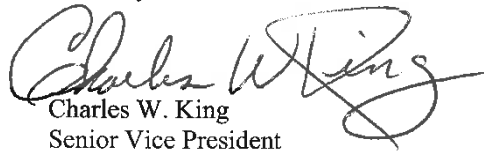
- Athletic scholarships allow students to get an education, and thus, have a core academic purpose.
- Many athletic facilities are used for multiple purposes, including significant academic uses (e.g., a convocation center). Thus, it creates a false dichotomy to label them as either “athletic” or “educational/academic.”
- Institutions may need to explore a variety of options for the long term to address athletic budgets. For example, the institutions cited for minimizing their reliance on student fees have done so not because they have minimized expenses but because they have increased revenues through conference affiliation. They have also increased alumni giving for athletics in this manner. JMU is working very hard to improve athletic private giving which is evident by a 323% increase in annual giving from 2004 to 2014.
- The suggestion that donors give solely to athletics is not consistent with our experiences or donor surveys. Many donors support both athletics and academics.

7 – Strategically Maintaining Facilities

- The Facilities Inventory Condition and Assessment System (FICAS) is a central system that currently provides facilities data and building condition assessments for higher education. Enhanced system utilization by central agencies regarding maintenance reserve funding decisions would be beneficial to higher education institutions as there would not be duplicative and multiple data requests or a need for further oversight and additional reporting requirements.

Thank you again for the opportunity to review and provide timely comments on the Exposure Draft. It is our sincere hope that you and the readers of the document find these comments helpful. We would also like to share our appreciation for the professionalism of your staff as well as their openness and attention to detail throughout the process of developing the report.

Sincerely,


Charles W. King
Senior Vice President

CWK:DLS/pjm

c: Mr. Jonathan Alger, President, JMU



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October 31, 2014

Hal E. Greer
Director
Joint Legislative Audit and Review Commission
201 North 9th Street
General Assembly Building, Suite 1100
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for providing an opportunity for Norfolk State University (NSU) to respond to the exposure draft of the Joint Legislative Audit and Review Committee's (JLARC) Report: Addressing the Cost of Public Higher Education in Virginia. Overall, we support the general recommendations presented in the report and applaud the acknowledgement of the varying missions and student populations amongst Virginia's institutions of higher education.

The following comments are offered to provide context regarding the anticipated impact of the recommendations and options on Norfolk State University and its ability to provide an enriching student experience—academically and developmentally.

1. NSU has made intentional and significant efforts to maintain low tuition and fees for our students for many years. As the lowest cost four-year public institution, there is a heightened sensitivity to caps and limits of financial support based on percentages. This approach inherently places Norfolk State University at a competitive disadvantage when compared to institutions with higher tuition and fees. With that, we suggest that JLARC consider a recommendation that any caps or limits being contemplated use a specified dollar amount rather than a percentage.
2. NSU supports the recommendation that the General Assembly may wish to direct the State Council of Higher Education for Virginia (SCHEV) to update the underlying data and make modifications as needed to the base adequacy model and formula. We further support the option that "the General assembly could consider that all public institutions have full funding under base adequacy guidelines before appropriating general funds to support institutional initiatives or implementing and funding the proposed performance funding model."
3. It is noteworthy that NSU has the lowest expected family contribution (\$75.00) in the Commonwealth of Virginia as reflected in Table 3-3 on page 29. As such, we fully support a more equitable distribution of financial aid funds based on unmet need as well as the use of a formula that reflects "true" need. When compared to the highest expected family contribution of \$21,411 for the College of William and Mary, this differential

Hal E. Greer
October 31, 2014
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underscores the extreme disadvantage that NSU experiences when the Partnership Model incorporates a 30% reduction in the cost of attendance to reflect an expectation of contribution by students and families. A stringent review of the financial aid model that is used to distribute funds under the Virginia Student Financial Assistance Program (VSFAP) should be a priority.

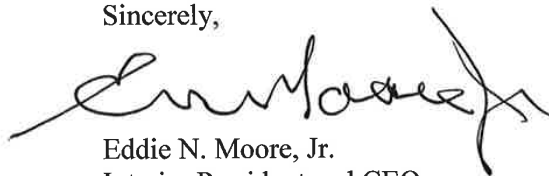
4. As recommendations are being developed with respect to VSFAP, institutional differentiation should be taken into account. As institutions, such as Norfolk State University, seek to attract and retain a more diverse body of students from Virginia, it is imperative that our low income students have the adequate financial aid support that is needed. The mean family income for an NSU undergraduate student is \$44,000 compared to the state average per capita personal income of \$48,733 (in 2013 dollars). With over 90% of our students receiving some form of student financial aid, it is clear that Norfolk State's financial assistance requirements are greater than the norm.
5. As a result of the unique financial needs of our students, NSU continues to be sensitive about increased cost to students and specifically those associated with intercollegiate athletics. Recognizing the cost, we believe that intercollegiate athletics represents an important part of the overall undergraduate experience. In fact, NSU's graduation rate calculations for the 2007-2008 Freshman cohort reflect a student-athlete 4-year graduation rate (49%) exceeding that of the University's overall 4-year graduation rate (36%).
6. NSU's ability to operate its intercollegiate athletic program at a 15% of tuition and mandatory fees cap would be a major challenge given that our alumni and supporters are generally not as affluent as compared to other institutions. This limits the University's ability to diversify its revenue sources. Economies of scale should also be considered. Larger institutions have many more students from whom they are able to generate fee revenues when funding similar programs, projects and activities. Establishing caps of equal amounts for all institutions is a detriment to smaller and mid-size institutions. Given the historical disadvantage in diversified revenue sources, the amount of time granted to institutions to achieve any new limit is a concern for NSU.
7. The University utilizes non-E&G mandatory fees to provide direct support for student programming and services, to which many low-income students at NSU may not otherwise have access. These services, such as health services, may be contractual in nature and are generally based on an institution's ability to generate enough revenue to offset cost. As such, it is recommended that a long-range historical analysis (i.e., beyond three to five years) would not assist institutions with focusing on areas and methods for adjusting fees in the future.

Hal E. Greer
October 31, 2014
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Norfolk State University's commitment to higher education priorities and initiatives, particularly those related to access and affordability in Virginia, are worthy of note in this report. NSU continues to face challenges—many of which are resource-related such as providing adequate financial assistance to students in need and to provide high-achieving students with financial support to attend the institution.

Thank you again for the opportunity to provide some insight related to the exposure draft. Do not hesitate to contact me or Ms. Clementine Cone, Executive Assistant to the President for University Compliance at (757) 823-8485, if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Moore, Jr.", written in a cursive style.

Eddie N. Moore, Jr.
Interim President and CEO



October 31, 2014

Mr. Hal E. Greer
Director, Joint Legislative Audit and Review Commission
General Assembly Building, Suite 1100
201 North 9th Street
Richmond, Virginia 23219

Dear Hal:

Thank you for providing the University of Virginia (U.Va.) an opportunity to review and comment on the draft report *Addressing the Cost of Public Higher Education in Virginia*. The report presents a thorough review and analysis of the various factors that contribute to the cost of public higher education in Virginia. Per your letter of October 17, 2014, I submit this letter on behalf of the University to address several substantive issues about the recommendations and options presented in the final report.

First, we would like to acknowledge that the report begins with context about the quality of Virginia's four-year public institutions. As the report states, collectively institutions achieve the missions of educating and graduating students "better than most" and that Virginia ranks second in the country in terms of average six-year graduation rates (p. i). It is critical that members of JLARC and the General Assembly, as well as the citizens of the Commonwealth, be aware of the quality of public higher education in Virginia. This overall commitment to quality makes higher education in Virginia among the best in the country. We do, however, recognize that there are opportunities to achieve greater efficiencies without sacrificing academic quality. Improving the efficient and effective use of all resources is a top priority of U.Va., and we remain committed to continue targeting greater efficiencies while maintaining a high standard of academic excellence.

Second, we would like to raise two general concerns. The first is the broad-based nature of the recommendations. While we recognize your directive was to examine the cost of public higher education in broad terms, the diversity of the 15 public four-year institutions in terms of size, scope, complexity, and mission must be considered when proposing recommendations. It is not prudent to recommend across-the-board legislative or managerial changes in most instances. Any proposed recommendations should be consistent with the respective institutional missions. As such, it may prove difficult for institutions to implement various recommendations proposed in the report while remaining competitive in their respective peer groups.

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Mr. Hal E. Greer
October 31, 2014
Page 2

Further, several recommendations would require legislative action and likely result in increased oversight and control by the state. As you know, in 2005 the General Assembly enacted and then-Governor Warner signed the Restructured Higher Education Financial and Administrative Operations Act (Restructuring Act) providing all public institutions of higher education greater managerial and administrative flexibility in exchange for our commitment to meet the statewide goals. Since the passage of this act, many institutions have also negotiated with the General Assembly and the Administration additional autonomy in various functional areas. This additional autonomy has allowed our operations to become more efficient which we demonstrate biennially in the reporting of the financial and administrative performance measures. Several of the proposed recommendations have the distinct potential to erode the autonomy we achieved through Restructuring. We strongly suggest that the General Assembly, Governor, State Council of Higher Education for Virginia (SCHEV), and other state agencies not implement proposals that would impact negatively the benefits we have achieved as a result of Restructuring. We remain committed to meeting the statewide goals and performing at the highest levels, which is evident with the recent certification by the SCHEV, and hope that the General Assembly and Governor maintain their commitment to allowing institutions to operate as provided for in the Restructuring Act and resulting memoranda of understanding and management agreements.

Thank you again for the opportunity to comment on the draft report. We enjoyed working with your staff over the course of the study, and commend their comprehensive review of higher education in the Commonwealth. Please do not hesitate to contact Colette Sheehy at 434-924-3349 or cc@virginia.edu if you have any questions or need additional information related to our response.

Sincerely,



Patrick D. Hogan
Executive Vice President and Chief Operating Officer



Colette Sheehy
Vice President for Management and Budget

cc: President Teresa A. Sullivan, U.Va.
John Simon, Executive Vice President and Provost, U.Va.

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31 October 2014

Mr. Hal E. Greer
Director
Joint Legislative Audit and Review Commission
201 North 9th Street
General Assembly Building, Suite 1100
Richmond, Virginia 23219

Dear Mr. Greer:

Thank you for the opportunity to review and comment on the draft report, *Addressing the Cost of Public Higher Education in Virginia*. As this two-year study concludes, the Institute extends its appreciation for the professional courtesies and cooperation demonstrated by the JLARC staff throughout this process.

This letter addresses several substantive issues in the report. The first issue is that of the authority of the Boards of Visitors. The report affirms that the decentralized system of higher education in Virginia should be preserved. A cornerstone of decentralization is the authority of the Boards of Visitors to set policy for the institutions and to set tuition and fee charges at levels they deem appropriate. It is Board members, appointed by the Governor, who are in the best position to balance the interests of the Commonwealth with the unique missions and needs of the institutions they govern. External controls such as tuition and fee limits “infringe” upon the ability of the Boards to exercise their responsibility, thereby threatening the strength of individual institutions and the strength of a decentralized system. The unpredictability of State funding over the last decade also offers institutions and their Boards no assurance that imposed limits could be offset by greater general fund appropriations as suggested in the report. In fact, a key assumption in the report (page 9) is that little or no additional state funding will be available for higher education.

VMI is mentioned as one institution that can better adapt to state funding declines. Factors mentioned in the report that contribute to an institution’s ability to adapt are large endowments, a higher percentage of out-of-state students, and greater shares of students from families with high incomes. The Institute has concerns about the presentation of this information and the conclusions drawn from the presentation. First, it is our understanding that the Code of Virginia §23-9.2 prevents the General Assembly from considering endowments in its higher education funding decisions. The Code states that endowment funds should be used in accordance with donor wishes and to strengthen the services rendered by the institution to the people of the



Commonwealth. VMI uses its endowment to build “excellence” into programs and reduce net costs to Virginia cadets. It should be noted that the VMI Foundation is a separate entity with its own Board that sets spending levels for resource transfer to V.M.I. V.M.I. does not control those decisions. The reason the Foundation has been successful is due to its conservatism and also protection of donor desires which often are restrictive. Thus, E and G Funding is critical. Secondly, about 66 percent of the Institute’s out-of-state cadets qualify for need-based aid as reflected in the lower than average Expected Family Contribution (EFC) among the 15 senior institutions. Recent admissions yields indicate that VMI may not be able to sustain its current out-of-state enrollment or the level of financial assistance presently required for out-of-state students with need.

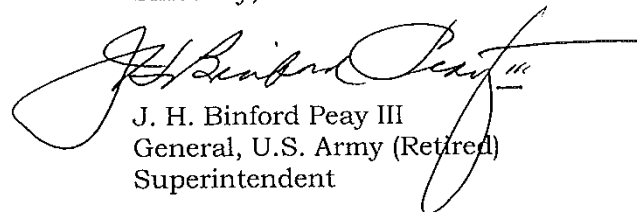
The suggestion that VMI can better adapt to State funding declines becomes particularly troublesome given the recommendation that the General Assembly consider amending the Code of Virginia to revise the cost-share goal for each institution based upon its ability to generate additional net tuition revenue. This recommendation would be a “complete reversal” of the position held by the General Assembly in its unanimous passage in 2011 of the Virginia Higher Education Opportunity Act (TJ21) that codified the current cost-share goal. VMI believes that a more productive approach to financial management would be to embrace the codified cost-share goal and concentrate efforts on fully funding it.

VMI appreciates the sidebar (page 52) that explains the relationship of its mandatory non-E&G fees to its mission as a military institute, especially the role of competitive athletics. In keeping with the Institute’s mission, the majority of cadets participate in athletics, either in intercollegiate competition or in rigorous club sports. Therefore, VMI would be concerned about the General Assembly imposing a limit on the athletic fee or removing exemptions to the five percent cap on fee increases.

In summary, the Institute believes strongly that Boards of Visitors should retain authority to set tuition and fee levels without arbitrary external limits. VMI cautions that changes to the State’s cost-share goal should be carefully considered and not based upon erroneous assumptions about an institution’s ability to generate additional tuition revenue. The Institute also cautions that the report be understood in its entirety and that recommendations not be “cherry-picked” – an action which could result in unintended consequences that would negatively impact institutions’ core missions. Finally, “excellence costs.”

We thank you again for the opportunity to provide these written comments for inclusion in the appendices of the final report.

Sincerely,



J. H. Binford Peay III
General, U.S. Army (Retired)
Superintendent

Cc: Mr. George P. Ramsey III, President, VMI Board of Visitors
The Honorable Anne Holton, Secretary of Education, Commonwealth of Virginia



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October 31, 2014

Hal E. Greer
Director
Joint Legislative Audit and Review Commission
201 North 9th Street
General Assembly Building, Suite 1100
Richmond, VA 23219

Dear Mr. Greer:

Virginia Tech appreciates the opportunity to review and provide feedback on the exposure draft of the JLARC report *Addressing the Cost of Public Higher Education in Virginia*. The university has enjoyed a very positive and collaborative working relationship with JLARC personnel during the entire course of this study. This final report presents a thorough and multi-faceted analysis of the issues surrounding the costs of higher education in Virginia.

The system-wide perspective of trends throughout this report and prior JLARC reports affirm that Virginia Tech effectively controls administrative costs, has the lowest cost of auxiliary services and intercollegiate athletics, minimizes the financial impacts on students from debt, strategically and conservatively manages debt and other long-term commitments of future revenue, strategically grows and manages its space relative to enrollments and research productivity, and effectively prioritizes academic programs. This overall set of conclusions is consistent with our internal analysis of strengths of our management control functions.

While this final JLARC report provides many recommendations and options for policy makers to consider, the university's response offers additional clarification and suggestions for change for some selected areas of the report. The general tone of the recommendations is that more oversight and regulation by central state agencies or the legislature will provide a viable solution to problems faced by higher education. However, this conclusion is in sharp contrast to JLARC's statements regarding Virginia institutions' overall success in educating and graduating students, in comparison to students not attending Virginia's public colleges and universities.

Institutional Autonomy

Institutional autonomy is a long-standing strength of the Virginia system of higher education. Virginia Tech's management and Board of Visitors, as cited in the report, have been effective institutional stewards within this environment. As autonomy has expanded with the implementation of the Restructuring Act, the university's ability to manage locally has generated and continues to generate more productive outcomes, in terms of efficiency and impact. This

Invent the Future

type of performance reflects the visionary insight of the long-standing Code of Virginia and the Restructured Higher Education Financial and Administrative Operations Act (Restructuring Act) to place strong oversight with institutional Boards of Visitors. This forward thinking posture positions Virginia to be competitive with other states and countries in higher education, even though we often have fewer financial resources than those entities.

While institutional autonomy has served Virginia Tech and the system well, this report bases many recommendations on system-wide averages that marginalize the success that some institutions have achieved under the authorities granted by the Restructuring Act. For example, some recommendations could unfairly penalize or restrict institutions which have been effective at cost control. Recommendations that potentially curtail institutional autonomy are a significant concern as it will adversely impact the strategic plans of an institution like Virginia Tech.

Management of Mandatory non-Educational and General fees

As the JLARC reports have affirmed, Virginia Tech has the lowest athletic fee and has been successful in managing and constraining non-instructional costs effectively. JLARC's first report shows that auxiliary revenue, as a portion of total institutional revenue, varies widely from 3 percent to 42 percent at Virginia's institutions. Recommendation #7 suggests implementation of a fee cap "*limit of the lesser of five percent or the median increase in the fee rate across all public institutions from the prior academic year*". Institutions which have managed costs and as a result, have a low level of fees would be unfairly controlled relative to institutions with higher fees, if a percentage growth cap were implemented. Table G-2 (page146) highlights that Virginia Tech has the 3rd to lowest average annual growth per year in dollars over the last 12 years at \$81. Limiting future increases to a percentage of existing revenue unfairly limits those institutions that have been successful at containing costs. Students and parents pay dollars not percentages. In addition, several of the JLARC recommendations and options would limit flexibility at the state and institution level, curtailing both the state's and institution's ability to respond to changing conditions or opportunities which could have unintended consequences.

Capital

This report, along with prior reports in the series, focuses on capital projects as a separate element of operations of higher education institutions. This report provides system-wide average data for space growth, debt service, and deferred maintenance. The underlying data show a significant variation of performance for the measures with what appears to be substantial distance between standard deviations from the mean. The appendix tables show Virginia Tech performs significantly better than the system-wide average for these measures. For example, the report states research space growth of 17 percent per \$1 million of research expenditures. Virginia Tech's research space per \$1 million activity declined 18.7 percent during the same period, meaning our research program became much more productive per square foot during the period and substantially out-paced the system. As mentioned in JLARC's third report about academic spending and workload, we were able to leverage our investments in research facilities to grow our research expenditures by 81 percent from fiscal years 2003 through 2011

(from \$248 million to \$450 million), increase our National Science Foundation ranking from 55 to 41, and significantly increase productivity as measured in millions of research dollars per square feet.

We believe the above accomplishments demonstrate the effective use of our decentralized authorities under Restructuring Act related to strategically managing tuition and fees, institutional debt, and capital projects. Consistent with other elements of our operating environment, Virginia Tech's operational success with regard to capital outlay activities is significantly enhanced by the autonomy authorized under prior decentralization and Restructuring policies and agreements. Any curtailment of local autonomy will adversely impact our operating performance and ultimately, create unintended consequences, and drive up costs to Virginia Tech students and their parents.

Financial Aid/Cost of Education

Recommendation # 16 asks "*the General Assembly to consider allocating all Virginia Student Financial Assistance Program funds across institutions such that an equal percentage of financial need recognized by the state's Partnership Model is met at each of Virginia's public four-year institutions*". While we agree that net price is a sensitive issue, this recommendation runs the risk of taking aid away from students with financial need. Furthermore, rebalancing state aid based on historical need does not address current and future student choice.

There seems to be an underlying assumption that only certain institutions with a higher proportion of students with greater financial need face limits on raising tuition and other institutions still have a great deal of capacity and flexibility in setting their tuition. This seems to ignore several important changes occurring in the last decade. The ongoing erosion of state support and resulting successive rounds of increasing tuition have also begun to limit this capacity for all institutions. Further, as indicated by the General Assembly's request for this JLARC study, there is a great deal of concern by parents, students, and General Assembly about rising tuition and fees.

Conclusion

The commonwealth has provided the largest degree of autonomy to four Management Agreement institutions, and it has subsequently provided an intermediary level of autonomy to several Level Two institutions. As a result most institutions are able to exercise some expanded degree of autonomy.

In recent years, the commonwealth has assigned several significant goals to higher education, including increasing the number of graduates, increasing the number of STEM graduates (higher cost programs), increasing research expenditures (also high cost programs, but effective economic engines for the commonwealth), and maintaining the excellent academic quality of these institutions and their facilities. To support these goals, the commonwealth needs to make ongoing and strategic investments in higher education, and we believe one of its best

investments has been the assignment of additional autonomy through the Restructuring Act. The investment in autonomy doesn't cost money, rather it saves financial resources by providing opportunities for increased efficiency and effectiveness.

As a result, we do not believe that it would be wise to invoke across-the-board changes in the operating environments of our various institutions to address issues that may exist with a subset of institutions.

We appreciate the opportunity to participate in the JLARC review process and to contribute Virginia Tech's experiences and perspective to the ongoing discussion of higher education enhancement in the commonwealth. We share the commonwealth's vision to provide high quality education to our citizens while ensuring access and affordability.



M. Dwight Shelton, Jr.

Vice President for Finance and
Chief Financial Officer

cc: Timothy D. Sands
Mark G. McNamee

NOV 05 2014



COMMONWEALTH of VIRGINIA

Department of General Services

Richard F. Sliwoski, P.E.
Director

Joseph F. Damico
Deputy Director

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November 5, 2014


Hal E. Greer, Director
Joint Legislative Audit and Review Commission
201 North 9th Street
General Assembly Building, Suite 1100
Richmond, VA 23219

Dear Mr. Greer:

Thank you for the opportunity to review Chapters 6 and 7 from the Joint Legislative Audit and Review Commission (JLARC) draft report on *Addressing the Cost of Public Higher Education in Virginia*.

The Department of General Services has no comments on the draft report content.

Sincerely,


Richard F. Sliwoski, P. E.

JLARC.VIRGINIA.GOV

General Assembly Building
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