

GEORGE MASON UNIVERSITY

AUDITED FINANCIAL STATEMENTS

FOR THE YEAR ENDED

JUNE 30, 2018



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MANAGEMENT'S DISCUSSION AND ANALYSIS

MANAGEMENT'S DISCUSSION AND ANALYSIS (Unaudited)

Introduction

This unaudited *Management's Discussion and Analysis* (MD&A) is required supplementary information under the Governmental Accounting Standards Board's (GASB) reporting model. This discussion and analysis provides an overview of the financial condition, results of operations and cash flows of George Mason University for the fiscal year ended June 30, 2018 (FY 2018). Comparative numbers are included for the fiscal year ended June 30, 2017 (FY 2017). MD&A includes highly summarized data and therefore should be read in conjunction with the full financial statements and footnotes that follow this section. The University's management is responsible for all of the financial information presented, including this discussion and analysis.

The University is an agency of the Commonwealth of Virginia and is governed by the University's Board of Visitors. The Commonwealth prepares a separate financial report that incorporates all agencies, boards, commissions, and authorities over which the Commonwealth exercises or has the ability to exercise oversight authority. The University is a component unit of the Commonwealth and is included in the financial statements of the Commonwealth.

During FY 2018 the University implemented GASB Statement No. 75, which requires the recording of the University's share of the Commonwealth's postemployment benefits other than pensions' liability (additional discussion below in the Financial Highlights section). The University's full financial statements, which follow MD&A, include a restatement of beginning net position that reduces net position as of July 1, 2017 by \$122.5 million compared to the previously reported net position as of June 30, 2017. Normally, the prior year in a comparative presentation is restated to conform to current year presentation. FY 2017 amounts have not been restated to conform to FY 2018 presentation due to the lack of information needed to reflect properly the impact of GASB Statement No. 75 on FY 2017.

Financial Highlights

The University's net position for FY18 increased by \$89.9 million, resulting in a decrease of \$35 million or 28.1% as compared to an FY17 increase of \$125 million. The University's ending net position decreased by \$32.6 million, or 5 percent, as a result of adjusting the beginning net position downward by \$122.5 million for GASB Statement 75. See the Statement of Net Position section for additional information about this change.

Revenue provided by the Commonwealth for equipment and capital projects totaled \$26.5 million, resulting in a \$24.9 million decrease from \$51.4 million for FY17.

During FY 2018, the University continued its ongoing trend to increase operating revenues in excess of increases in operating expenses, which contributed to the increase in net position, as follows:

| Increases in Operating Revenues and Expenses and Net Position (\$ in millions) | | | | | | | | |
|--------------------------------------------------------------------------------|---------|-----|---------|-----|---------|-----|---------|----|
| | FY 2018 | | FY 2017 | | FY 2016 | | FY 2015 | |
| Operating Revenues | \$55.1 | 8% | \$26.2 | 4% | \$26.4 | 4% | \$23.1 | 4% |
| Operating Expenses | \$55.1 | 7% | \$18.5 | 2% | \$7.8 | 1% | \$14.6 | 2% |
| Increase (Decrease) in Net Position | \$89.9 | 13% | \$124.9 | 21% | \$96.3 | 20% | \$60.3 | 9% |

The University holds the “Highest Research Activity” (R1) status from the Carnegie Classification of Institutions of Higher Education. In FY 2018 the University was able to increase grants and contracts revenue to \$121.9 million, a \$13.4 million increase over FY 2017.

During FY 2018, the University continued to invest in the development of facilities to support and enhance the capacity to achieve its strategic goals. A key aspect of this investment is the development of facilities and systems that enhance the quality of teaching and learning, create operating efficiencies, and support the development of diversified revenue streams, all of which are essential for the University’s continued movement to an economic model which is less reliant on state appropriations. Examples of this ongoing investment are set forth below.

The University completed a \$71 million, 165,000 square foot Health Sciences Building, which was dedicated as the Peterson Family Health Sciences Hall, on the Fairfax, Virginia campus. The Peterson Family Health Sciences Hall is home to the College of Health and Human Services whose faculty and students work in support of promoting the public’s health. The Peterson Family Health Sciences Hall is a collaborative learning environment with state-of-the-art classrooms, a multitude of learning spaces and research and learning laboratories. These include nursing simulation and skills laboratories, a nutrition kitchen, a functional performance suite complete with a gait laboratory, and bench laboratories. Completing the building is an outdoor courtyard with benches, an amphitheater and rain garden. In the coming year, the College will be opening the population health center that will offer integrated primary and behavioral health while supporting research and workforce development activities.

The University completed the Potomac Science Center, a \$33 million, 50,000 square foot facility located on a waterfront location in the Belmont Bay section of Prince William County, Virginia. The location is an environmentally unique freshwater tidal basin that has unique flora and fauna. The building is the University’s newest research facility and will serve as the home to the College of Science’s Potomac Environmental Research and Education Center (PEREC) and the Volgenau School of Engineering’s Flood Hazards Research Lab. PEREC’s mission focuses on Potomac River restoration and local sustainability practices, so that the local ecosystem will be healthy for years to come. PEREC’s research is translated into award-winning and engaging field programs for K-12 students and the larger community. The Flood Hazards Research Lab focuses on developing and promoting innovative water resources and coastal engineering ideas, methods, and systems, based on the engineering with nature philosophy, aimed at restoring and improving our urban infrastructure and society resilience. They work in the waters of the National Capital Region, the Chesapeake Bay and beyond.

The University supported the refinancing of Potomac Heights, a residence hall, located on the Fairfax campus into a 10-year capital lease for \$19.3 million. Potomac Heights houses more than 500 students, mostly upper-classmen, in 128 fully furnished apartments.

As noted in the Introduction section, during FY 2018, the University implemented GASB Statement 75-“Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions (OPEB).” GASB Statement 75 requires the liability of the University to its employees for defined benefit OPEB (OPEB liability) to be measured as the portion of the present value of projected benefit payments to be provided to current active and inactive employees that is attributed to those employees’ past periods of service (total OPEB liability), less the amount of the OPEB plan’s fiduciary net position. The Virginia Retirement System (VRS) and the Department of Human Resource Management (DHRM) worked with consultants to perform the actuarial and other technical calculations required by GASB Statement No. 75 and, based on that work, provided the University with the information the University needs to properly report its share of the Commonwealth’s total OPEB liability.

The requirement to begin reporting the University’s share of the OPEB liability has a large impact on the University’s Statement of Net Position. The \$119.0 million OPEB liability appears as part of the Current and

Noncurrent liabilities sections in MD&A and as separate lines in the Current and Noncurrent liabilities sections of the Statement of Net Position in the full financial statements. Recording this large liability along with an OPEB asset, Deferred outflows-OPEB and Deferred inflows-OPEB required a restatement of beginning Net Position of (\$122.5 million).

Overview of the Financial Statements and Financial Analysis

The University's financial report includes five financial statements and related notes:

1. The Statement of Net Position for the University
2. The Combined Statements of Financial Position for the Component Units of the University
3. The Statement of Revenues, Expenses, and Changes in Net Position for the University
4. The Combined Statements of Activities for the Component Units of the University
5. The Statement of Cash Flows for the University

The University's financial statements have been prepared in accordance with GASB principles which establish standards for external financial reporting for public colleges and universities. These principles require that the University's financial statements be presented on a consolidated basis to focus on the University as a whole, with resources classified for accounting and reporting purposes into four net position categories. As stated above, these financial statements are summarized in MD&A. Please note that although some of the University's foundations are discretely reported by separate page display in other sections of the University's financial statements, this MD&A excludes them except where specifically noted.

Statement of Net Position

The Statement of Net Position presents the assets (current and noncurrent), deferred outflows of resources, liabilities (current and noncurrent), deferred inflows of resources, and net position (assets plus deferred outflows of resources minus liabilities plus deferred inflows of resources) of the University as of the end of the fiscal year. This statement is a point of time financial statement. The purpose of the Statement of Net Position is to present readers of the financial statements a fiscal snapshot of George Mason University at the end of the fiscal year. Assets, deferred outflows, liabilities, and deferred inflows are generally measured using current values. One notable exception is capital assets, which are stated at historical cost less an allowance for depreciation.

From the information presented, readers of the Statement of Net Position are able to determine the assets available to continue the operations of the University. They are also able to determine how much the institution owes vendors and creditors, and the amount of any deferred outflows of resources and deferred inflows of resources. In addition, the Statement of Net Position provides a picture of the net position (assets plus deferred outflows minus liabilities plus deferred inflows) and their availability for expenditure by the institution. The difference between total assets plus deferred outflows of resources and total liabilities plus deferred inflows of resources, net position is one indicator of the current financial condition of the University, while the change in net position is an indicator of whether the overall condition has improved or worsened during the year.

A deferred outflow of resources is a consumption of net assets by the University that is applicable to a future reporting period. A deferred inflow of resources is an acquisition of net assets by the University that is applicable to a future reporting period.

Net position is divided into three major categories. The first category, "net investment in capital assets", provides the University's equity in the property, plant, and equipment that it owns or capital leases. The next category, "restricted net position," is divided into two subcategories, expendable and nonexpendable.

Expendable restricted net position is available for expenditure by the institution but must be spent as determined by donors and/or external entities that have placed purpose restrictions on the use of the assets. Nonexpendable restricted net position consists of endowments and similar funds where donors or other outside sources have stipulated that, as a condition of the gift instrument, the principal is to be maintained inviolate and in perpetuity, and invested for the purpose of producing present and future income to be expended or placed in a reserve fund. The final category is “unrestricted net position”. Unrestricted net position is available to the University for any lawful purpose of the institution.

A summary of the University’s assets, deferred outflows of resources, liabilities, deferred inflows of resources, and net position at June 30, 2018, and June 30, 2017, follows:

Statement of Net Position *

| | June 30, 2018 | June 30, 2017 | Dollar Change | Percent Change |
|-------------------------------------------------|------------------|------------------|-------------------|-------------------|
| Assets: | | | | |
| Current assets | \$495,345 | \$394,612 | \$100,733 | 26% |
| Capital assets, net | 1,211,399 | 1,224,502 | (13,103) | -1% |
| Other noncurrent assets | 19,245 | 12,415 | 6,830 | 55% |
| Total Assets | 1,725,989 | 1,631,529 | 94,460 | 6% |
| Deferred Outflows of Resources | 43,411 | 51,854 | (8,443) | -16% |
| Total Assets & Deferred Outflows | 1,769,400 | 1,683,383 | 86,017 | 5% |
| Liabilities: | | | | |
| Current liabilities | 187,019 | 166,656 | 20,363 | 12% |
| Noncurrent liabilities | 861,633 | 792,560 | 69,073 | 9% |
| Total Liabilities | 1,048,652 | 959,216 | 89,436 | 9% |
| Deferred Inflows of Resources | 40,966 | 11,773 | 29,193 | 248% |
| Total Liabilities & Deferred Inflows | 1,089,618 | 970,989 | 118,629 | 12% |
| Net Position: | | | | |
| Net investment in capital assets | 644,560 | 640,430 | 4,130 | 1% |
| Restricted: nonexpendable | 7,166 | 7,165 | 1 | 0% |
| Restricted: expendable | 14,727 | 6,540 | 8,187 | 125% |
| Unrestricted | 13,329 | 58,259 | (44,930) | -77% |
| Total Net Position | \$679,782 | \$712,394 | \$(32,612) | -5% |

* In thousands

Total assets and deferred outflows of resources were \$1.8 billion compared to total liabilities and deferred inflows of resources of \$1.1 billion. The difference between these two amounts, total net position, was \$680 million.

Total net position decreased by \$32.6 million from FY 2017, a 5% decrease. This decrease was composed of a \$122.5 million decrease in beginning net assets, caused by the FY 2018 implementation of GASB Statement No. 75, and a \$89.9 million increase in ending net assets from the excess of FY 2018 revenues/gains over FY 2018 expenses/losses, which is discussed further in the Statement of Revenues, Expenses, and Changes in Net Position section below. The GASB statement implementation required, for the first time, recognition in the

financial statements of the University's OPEB liability and related adjustments resulting in the beginning net position restatement.

For FY 2018 current assets exceeded current liabilities by \$308.3 million. In FY 2017, current assets were \$228.0 million greater than current liabilities. This increasing differential represents a continuation of improving liquidity that began in FY 2011 and has continued through FY 2018. The current ratio, which is the ratio of current assets to current liabilities, and is a common measure of liquidity, improved to 2.65 compared to 2.37 in FY 2017 and 1.89 in FY 2016. Much of the improvement in this ratio is attributable to the University increasing its cash reserves. These funds are set aside to be used to address facility repairs and renewals or in the event of an unforeseen emergency.

Capital assets, net of accumulated depreciation of \$723.5 million, totaled \$1.2 billion, which is a decrease of \$13.1 million compared to FY 2017 which increased by \$264 thousand. This decrease reflects the slowdown in the growth of equipment and facilities at the University as compared to seven and eight years ago during FY 2011 and FY 2010 with increases of \$93.9 and \$171.1 million, respectively.

The \$6.8 million, 55%, increase in Other noncurrent assets primarily reflects the \$6.1 million new net OPEB asset required by GASB Statement No. 75. The net OPEB asset is the University's proportionate share of the Net VSDP (Virginia Sickness and Disability Program) OPEB Asset for the Disability Insurance Program. See Footnote 16. D. for additional information.

The University retained a \$12.5 million advance from the Treasurer of Virginia which is included as cash in current assets, and as an Advance from the Treasurer of Virginia in current liabilities.

Capital Asset and Debt Administration

Development and renewal of capital assets is one of the critical factors in sustaining the high quality of the University's academic, research, and residential life functions. The University continues to maintain and upgrade current structures, and to add new facilities.

Note 5 of the Notes to Financial Statements describes the University's investment in capital assets, with total depreciable capital asset additions of \$131.9 million (excluding land, construction in progress, and works of art) and additions to construction in progress of \$35.4 million. Depreciation expense increased by \$1.3 million over the prior year to \$63.7 million.

Depreciable capital asset additions for FY 2018 included the following:

| Asset Category | Amount (in millions) |
|-----------------------|-----------------------------|
| Buildings | \$117.6 |
| Improvements | 0.1 |
| Equipment | 12.8 |
| Library materials | 1.4 |
| Total | \$131.9 |

Completed building projects included Peterson Family Health Science Hall, Johnson Center dining renovations, Hazel Hall renovation, Prince William Life Sciences Lab building fit-out, Potomac Science Center and the Potomac Heights residence hall under a capital lease between the University and George Mason University Foundation.

Major ongoing capital projects include: Utilities Distribution Infrastructure and Robinson Hall renovation.

Utilities Distribution Infrastructure – In FY17, the University also began the design of a \$49 million utility distribution infrastructure project to replace critical components of the thermal infrastructure loop system. In addition to replacing the utility system beneath plazas, roadways, sidewalks and softscapes, the project will improve and extend the North Plaza and repair all hardscape and softscape systems in all other effected areas to retain the character of the campus.

Robinson Hall Renovation – In FY17, the University began the design of a \$120 million, 218,000 square foot project to replace Robinson Hall, located on the Fairfax Campus. The project will modernize one of the Fairfax campus’ most used buildings and substantially improve the learning and collaborative environment. The building will include classrooms with whiteboards and video screens, collaboration and meeting spaces, informal learning areas outside classrooms, and conference rooms on six floors. Students and student learning are the foundation of the design of the new building. The project will also include a 2,000 square foot addition to, and a 21,000 square foot renovation of, the Harris Theater.

The University demolished nine three-story apartment style buildings constructed in 1977, three of which had been previously decommissioned. The buildings had the capacity to house approximately 500 students in one-, two-, and three-bedroom units. A 2017 study indicated that demolition was recommended based on the cost of necessary renovations and repairs relative to the value of the buildings. Demolition and restoration of this area is consistent with the University Master Plan and the University was able to absorb the decrease with more efficient use of existing housing. The University recognized a \$3.5 million loss on disposal of the asset as a result of capitalized renovations which had not fully depreciated.

Financial stewardship requires the effective management of resources, including the use of long-term debt to finance capital projects. Notes 7, 8 and 9 of the Notes to Financial Statements describe changes in the University’s long-term debt. New Virginia College Building Authority (VCBA) notes were issued in FY 2018 as follows:

| Project | Amount (in millions) |
|---------------------------------------|----------------------|
| Utilities Distribution Infrastructure | \$3.2 |
| Total | \$3.2 |

Total long-term debt outstanding, including general obligation bonds, notes payable, capital leases payable, installment purchases, and bond premiums and discounts decreased by \$18.7 million from the end of FY 2017 to the end of FY 2018, to a total of \$580.1 million, as compared to a decrease of \$37.7 million for FY 2017 from the end of FY 2016, to a total of \$598.8 million. Deferred gains and losses on refundings are included in deferred inflows and outflows of resources.

Contractual commitments for capital outlay projects under construction at year end decreased from \$13.3 million in FY 2017 to \$1.6 million in FY 2018. These obligations are for future efforts and therefore have not been accrued as expenses or liabilities on the University’s financial statements.

Statement of Revenues, Expenses, and Changes in Net Position

The change in total net position as presented in the Statement of Net Position is based on the activity presented in the Statement of Revenues, Expenses, and Changes in Net Position. The purpose of the statement is to present the University’s operating revenues earned, operating expenses incurred, and all other revenues, expenses, gains, and losses.

Generally speaking, operating revenues are earned for providing goods and services to the students and other constituencies of the institution. Operating expenses are those expenses incurred to acquire or produce the goods and services provided in return for the operating revenues, and to carry out the mission of the institution. Salaries and fringe benefits for faculty and staff are the largest type of operating expense.

Non-operating revenues are revenues received for which goods and services are not provided in exchange as part of a transaction. For example, state appropriations are non-operating revenues because they are provided by the legislature without the legislature directly receiving commensurate goods and services for those revenues. State appropriations, which are included in non-operating revenues, provide substantial support for paying operating expenses of the University. The University, like most public institutions of higher education, does not cover all operating expenses with operating revenues, and therefore expects to report an operating loss each year.

A summary of the University's Statement of Revenues, Expenses, and Changes in Net Position follows:

Statement of Revenues, Expenses, and Changes in Net Position *

| | June 30, 2018 | June 30, 2017 | Dollar Change | Percent Change |
|-------------------------------------------------------------|------------------|------------------|-------------------|-------------------|
| Operating Revenues: | | | | |
| Student tuition and fees, net of allowances | \$372,757 | \$341,059 | \$31,698 | 9% |
| Grants and contracts | 121,856 | 108,485 | 13,371 | 12% |
| Auxiliary enterprises and other | 224,388 | 214,379 | 10,009 | 5% |
| Total Operating Revenues | 719,001 | 663,923 | 55,078 | 8% |
| Operating Expenses: | | | | |
| Educational and general | 625,129 | 582,532 | 42,597 | 7% |
| Depreciation | 63,702 | 62,372 | 1,330 | 2% |
| Auxiliary enterprises | 144,953 | 133,788 | 11,165 | 8% |
| Total Operating Expenses | 833,784 | 778,692 | 55,092 | 7% |
| Operating Income (loss) | (114,783) | (114,769) | (14) | 0% |
| Nonoperating revenues and expenses (net) | 179,783 | 175,569 | 4,214 | 2% |
| Income (loss) before other revenue/expense/gain/loss | 65,000 | 60,800 | 4,200 | 7% |
| Other revenue/expense/gain/loss | 24,878 | 64,141 | (39,263) | -61% |
| Net increase in net position | 89,878 | 124,941 | (35,063) | -28% |
| Net position at beginning of year | \$712,394 | \$587,453 | \$124,941 | 21% |
| Adjusted for OPEB | (122,490) | - | (122,490) | |
| Net position at beginning of year, restated | 589,904 | 587,453 | 2,451 | 0% |
| Net position at end of year | \$679,782 | \$712,394 | \$(32,612) | -5% |

* In thousands

The \$122.5 million restatement of FY 2018 beginning net position resulted from the implementation of GASB Statement No. 75. The GASB statement implementation required, for the first time, recognition in the financial statements of the University's other postemployment benefits liability and related adjustments.

Total operating revenues, consisting primarily of tuition and fees, grants and contracts, and auxiliary enterprises, increased by \$55.1 million, or 8%, over the prior year. Student tuition and fees, net of scholarship allowances, increased by \$31.7 million, or 9%, over the prior year. This increase is attributable to a combination of tuition

and fee increases and moderate enrollment growth offset by a small increase in scholarships as a percentage of revenues. Revenue from grants and contracts increased from \$108.5 million in FY 2017 to \$121.9 million in FY 2018. The increase is primarily a result of growth in Federal grants and contracts and the University's focus on its research strategy. Auxiliary and other revenue increased by \$10.0 million, or 5%. The increase was primarily due to an increased use of on-campus auxiliary facilities and programs, increased mandatory fees, and increased room and board rates.

Total scholarships and fellowships, which is the sum of scholarship allowances and student aid expense, increased by \$13.9 million, or 11.8%, to \$131.5 million.

Total operating expenses increased by \$55.0 million, or 7.1%. The causes of this increase included an increase of \$27.8 million, or 5.5%, in compensation expenses, consisting of salaries, wages, and fringe benefits; an increase in the purchase of goods and services of \$23.6 million, or 12.8%, mainly in student facing areas and operation of plant and maintenance; an increase in student aid expense of \$2.3 million, or 8.3%, and an increase in depreciation expense of \$1.3 million, or 2.1%.

Operating expenses and operating revenues increased by similar amounts, ending in an operating loss of \$114.8 million for both fiscal years.

Nonoperating revenues net of nonoperating expenses increased by \$4.2 million, or 2%, due to a \$2.3 million increase in the restricted and unrestricted state general fund appropriations, a \$5.4 million increase in Pell grants, and a \$1.4 million increase in investment income, offset by a \$4.9 million increase in other non-operating expense.

An important number to note in the Statement of Revenues, Expenses, and Changes in Net Position is "Income/(loss) before other revenues, expenses, gains or losses" (income before capital items) because this number is a better representation of the true operating results than the Operating Income (loss) line. This number reflects other non-capital revenues used to fund operating expenses. These items are reported separately from other operating results due to GASB's reporting requirements, but from a financial perspective should be combined to understand operating results. In FY 2018 the income before capital items was \$65.0 million, which was an increase of \$4.2 million compared to the FY 2017 income of \$60.8 million. This \$4.2 million increase is a result of the \$4.2 million increase in nonoperating revenue net of nonoperating expense discussed above.

The final category on the Statement of Revenues, Expenses, and Changes in Net Position is called Other revenues, expenses, gains and losses and includes capital appropriations, capital grants and gifts, additions to permanent endowment, and gain/loss on the disposal of fixed assets. This category decreased by \$39.3 million, or 61%, caused by a decrease of \$20.3 million in capital appropriations from the Virginia College Building Authority, 21st Century capital reimbursement program and the Commonwealth's General Fund, a decrease of \$9.7 million in capital grants and gifts, an increase in loss on disposal of capital assets of \$4.5 million and a \$4.8 million loss on the new capital lease.

Statement of Cash Flows

The final statement is the Statement of Cash Flows. This statement presents information about the cash activity of the University during the year. Cash flows from operations will always be different from the operating income/(loss) on the Statement of Revenues, Expenses, and Changes in Net Position (SRECNP). This difference occurs because SRECNP is prepared on the accrual basis of accounting and includes non-cash items, such as depreciation expense, while the Statement of Cash Flows presents cash inflows and cash outflows without regard to accrual items. The Statement of Cash Flows provides information to assess the ability of the University to generate cash flows sufficient to meet its obligations.

The statement is divided into five parts. The first deals with operating cash flows and shows the net cash used by the operating activities of the institution. The second section reflects cash flows from noncapital financing activities. This section reflects the cash received and spent for nonoperating, non-investing, and noncapital financing purposes such as the state appropriations for educational and general programs and financial aid. The third section reflects the cash flows from capital financing activities and shows the purchases, proceeds, and interest received from these activities. This section deals with the cash used for the acquisition and construction of capital and related items. The fourth section deals with cash flows from investing activities. The fifth section reconciles the net cash used by operating activities to the operational loss reflected on the Statement of Revenues, Expenses, and Changes in Net Position. The fifth section is not presented in this summary presentation.

A summary of the University's Statement of Cash Flows follows:

Statement of Cash Flows *

| | June 30, 2018 | June 30, 2017 | Dollar Change | Percent Change |
|--------------------------------------------------------------------|------------------|------------------|------------------|-------------------|
| Cash provided by operating activities | \$711,969 | \$665,175 | \$46,794 | 7% |
| Cash used by operating activities | (769,811) | (726,829) | (42,982) | 6% |
| Net cash used by operating activities | (57,842) | (61,654) | 3,812 | -6% |
| Net cash provided by noncapital financing activities | 196,684 | 193,955 | 2,729 | 1% |
| Net cash provided by (used by) capital financing activities | (59,200) | (59,587) | 387 | 1% |
| Net cash provided by (used by) investing activities | 3,282 | 1,766 | 1,516 | 86% |
| Net increase (decrease) in cash | 82,924 | 74,480 | 8,444 | 11% |
| Cash, beginning of year | 330,174 | 255,694 | 74,480 | 29% |
| Cash, end of year | \$413,098 | \$330,174 | \$82,924 | 25% |

* In thousands

The above summarized Statement of Cash Flows shows that during FY 2018 the University continued to build cash reserves and generated 92.5 percent (\$712.0 million of \$769.8 million expended) of its operating cash requirements from its own operations. This continues a consistent annual improvement over the 91.5% in FY 2017, 90.3% in FY 2016 and the 87.8% in FY 2015. The remainder (\$57.8 million) was provided from noncapital financing activities, which include non-capital appropriations from the Commonwealth of Virginia, non-capital private gifts, and Pell Grants.

Operating activities used \$43.0 million more cash in FY 2018 than in FY 2017, but generated \$46.8 million more cash than in FY 2017, resulting in a reduced need for operating cash to be obtained from sources other than operating activities. Overall, operating activities resulted in a net usage of cash of \$57.8 million which was \$3.8 million less than in FY 2017.

The major sources of the \$46.8 million increase in cash provided by operating activities in FY 2018 compared to FY 2017 were student tuition and fees (\$28.7 million increase), grants & contracts (\$5.3 million increase), other receipts, which includes the INTO program and Mason Korea (\$1.2 million increase) and auxiliary enterprises (\$11.6 million increase).

The major causes of the \$43.0 million increase in cash used by operations in FY 2018 compared to FY 2017 were payments to employees for salaries, wages, and fringe benefits (\$25.3 million increase), payments for supplies and services (\$16.0 million increase), payments for scholarships and fellowships (\$2.3 million increase) and Perkins loan disbursements (\$0.6 million decrease).

Cash provided by non-capital financing activities increased \$2.7 million in FY 2018 compared to FY 2017, due to a \$2.2 million increase in state appropriations and \$5.4 million increase in Pell Grant receipts offset by a \$4.9 million increase in Other net non-operating expense.

In order to better understand cash flow from operations it's helpful to combine the two GASB required reporting categories of cash from operating activities and cash from noncapital financing activities. The general fund appropriations from the Commonwealth, Pell grants, and unrestricted gifts are not considered to be exchange transactions and therefore are not included in cash flows from operations in the GASB reporting format. They are, however, used to pay operating expenses, so it is informative to combine the two categories for a more general understanding of cash flows from operations. The FY 2018 net positive cash flow generated by the two categories was \$138.8 million (negative \$57.8 for cash flows from operating activities and positive \$196.6 from cash flows from noncapital financing activities).

From the net positive cash flow produced by this broader view of operations, \$60.1 million was used to pay debt service (principal and interest payments), which is required to be reported as a capital financing activity, although it is not financed by the cash flows provided by capital financing activities.

Cash provided by capital financing activities included capital appropriations from the Commonwealth of Virginia, capital gifts and grants, and the sale of bonds. Cash used by capital financing activities included the acquisition of capital assets and making debt principal and interest payments. Although principal and interest payments are considered to be capital financing activities, the cash to make these payments is not provided by capital financing sources but rather from the net positive cash flow provided from the broader view of operating cash flows described above. In addition, the acquisition of capital assets is considered to be a capital financing activity but not all purchases of capital assets are funded by sources of cash included in the capital financing section. Unfinanced capital asset purchases are also paid for from the net positive cash flow provided by the broader view of operating cash flows described above.

The University's net cash used by capital financing activities decreased by \$0.4 million in FY 2018 compared to FY 2017. This decrease in cash used was primarily caused by a decrease in proceeds from capital appropriations and capital grants and contributions of \$18.6 million, a decrease in the Advance from the Treasurer of Virginia of \$0.4 million and an increase in interest and principal payments of \$2.0 million, offset by an increase in proceeds from the issuance of debt of \$3.5 million and a decrease in cash used to purchase capital assets of \$17.9 million.

The primary sources of cash from investing activities are interest on cash balances, interest on unspent bond proceeds, and endowment investment earnings. The primary cash outflow from investing activities is the purchase of investments. During FY 2018, these activities generated \$1.5 million more cash than they did in FY 2017. This increased cash was a result of an increase in investment earnings.

Economic Outlook

As part of the Commonwealth of Virginia's statewide system of higher education, the University's economic outlook is closely tied to that of the Commonwealth. The University receives support from the Commonwealth in the form of operating and capital appropriations, and there are pressures on state appropriations. Changes in student demographics and increasing student loan debt are external pressures impacting higher education

institutions across the country. Addressing these challenges will require a proactive, innovative response combined with a strategic deployment of resources.

Despite the challenges set forth above, Mason approaches the future with a sense of optimism towards access to excellence remaining focused on transformative learning, inclusion and well-being, research and innovation, and building a foundation for the future. The University continues to experience significant enrollment growth and for Fall 2018 began serving more than 37,000 students. The incoming Freshmen classes continue to grow in size, they are more diverse, and each year they set another record as the strongest academically. The University continues to refine its operational and financial model, developed and implemented over the last several years, to plan for and support the infrastructure of a growing University. The model has established a financial framework that supports enriching and transformative learning experiences for all of our students, and which shapes their development as engaged citizens and well-rounded scholars prepared to make a positive impact on the world.

Mason desires to be an “engine of innovation” for the county, commonwealth and the world. The University plans on growing up to 43,000 students by 2024 and we are expecting to increase research expenditures up to \$225 million and hire an additional 950 faculty and staff members. In preparation, the University is conducting due diligence on the feasibility of an “Innovation District” on the Fairfax campus that would offer opportunities for public-private development and research collaboration to meet our ever increasing enrollment growth. Mason envisions a mixed use district town center and innovation village that will attract not only the Mason and Fairfax community but also corporations that desire to innovate and work close to the academic core of the institution. There are currently two privately funded housing developments external to Mason which will have the potential for a combined inventory of over 1400 beds which are expected to open for occupancy in 2022 or 2023 depending on their individual zoning processes. One is directly across the street from our main campus in Fairfax and the other is in the heart of Fairfax City. Mason is also exploring possibilities at our Arlington and Sci Tech campuses to promote world-class research and scholarship positioning the University as an “engine for innovation” with specific focus on programs to support students.

College graduates fuel Virginia’s economy by helping to meet the growing needs of companies and other organizations whose performance depends upon access to a world-class skilled workforce. The University is implementing two strategic initiatives to provide Virginia learners with access to affordable high quality undergraduate education programs:

For Fall 2018, the University and Northern Virginia Community College (NOVA) welcomed 129 students in 21 majors, and more than 200 additional are set to enroll in the Spring into the ADVANCE program, which seeks to create greater access to a four-year degree by removing many of the obstacles that deter students along the way. Nationally, 80 percent of community college students say they intend to complete a four-year degree. Within seven years, however, only 15 percent have achieved that goal, in part because of barriers they encounter. The ADVANCE programs align Mason and NOVA curricula, advising, financial aid and other student services to remove obstacles and decrease the time and cost for NOVA transfers to graduate from Mason. The initial class offered several majors related to the high-demand technology and health industries in support of regional employers’ critical job openings. The University expects this to become a national model for supporting transfer students with goals to offer 50 ADVANCE majors by the 2019-20 academic year, and projections indicate that ADVANCE enrollment could swell to more than 6,500 students by 2030.

The University is collaborating with Old Dominion University (ODU) to develop the Online Virginia Network (OVN), an online degree completion initiative developed to support adult learners throughout the Commonwealth. OVN supports adult degree completion, increasing the number of college degree completers in Virginia, creating accessible and efficient pathways to a bachelor’s degree and providing more cost effective programs than traditional degree offerings.

The University has maintained its “Highest Research Activity” (R1) status from the Carnegie Classification of Institutions of Higher Education reflecting the University’s large and growing capacity in research and innovation. Our research enterprise continues to grow in leaps and bounds. Over the past year alone, the value of research awards grew to almost \$150 million, an increase of over 35%, and our federal research expenditures of almost \$90 million set a new University record. The projects described below illustrate how the University’s support for multidisciplinary research is yielding new research opportunities and success.

The University received a ten year, \$40 million dollar, Center of Excellence award from the Department of Homeland Security to develop technologies, strategies and insights that help predict, disrupt and thwart transnational crime. Mason faculty with expertise in fields such as criminology, computer science, geoinformatics, public policy, and computer engineering are working together and with partners in the community to advance this important work.

The University has partnered with the Inova Health System and the University of Virginia to establish the Global Genomics and Bioinformatics Research Institute (GGBRI), a research and innovation initiative to advance personalized health and well-being. Leveraging scientific advances in fields such as genomics, proteomics, and metabolomics to advance human health and well-being, GGBRI will serve as the R&D centerpiece on the Inova Center for Personalized Health (ICPH) campus in Falls Church, Virginia. The GGBRI initiative is expected to generate significant growth in the Commonwealth’s biohealth innovation economy.

The initiatives described above, the University’s commitment to continue to accrue operational and administrative efficiencies and our constant innovation in the delivery of affordable, high quality education and research programs attractive to students, employers and sponsors, make us confident that we will continue to attract a diverse and talented student population, that our research and innovation programs will continue to grow and prosper, and that we will successfully navigate the changing landscape ahead. Our commitment to academic excellence compels us to find new paradigms for higher education.

FINANCIAL STATEMENTS

Statement of Net Position as of June 30, 2018

ASSETS

Current assets

| | |
|---------------------------------------------------------------|--------------------|
| Cash and cash equivalents (Note 2) | \$ 432,720,610 |
| Accounts receivable, net of allowance of \$1,808,467 (Note 4) | 46,408,522 |
| Notes receivable, net of allowance of \$22,694 (Note 4) | 373,057 |
| Prepaid expenses | 12,087,086 |
| Inventories | 862,418 |
| Due from the Commonwealth of Virginia | 2,893,574 |
| Total Current Assets | 495,345,267 |

Noncurrent assets

| | |
|----------------------------------------------------------------------|----------------------|
| Restricted cash and cash equivalents (Note 2) | 1,390,967 |
| Restricted cash and cash equivalents in custody of others (Note 2) | 89,187 |
| Notes receivable, net of allowance of \$183,545 (Note 4) | 3,017,188 |
| Depreciable capital assets, net of accumulated depreciation (Note 5) | 1,173,484,409 |
| Nondepreciable capital assets (Note 5) | 37,914,455 |
| Net other post-employment benefits asset (Note 16D) | 6,127,000 |
| Long-term investments (Note 2) | 8,620,758 |
| Total noncurrent assets | 1,230,643,964 |

| | |
|---------------------|----------------------|
| Total assets | 1,725,989,231 |
|---------------------|----------------------|

DEFERRED OUTFLOWS OF RESOURCES

| | |
|---------------------------------------------------------------------------|-------------------|
| Deferred outflows of resources - refundings of debt (Notes 8-9) | 15,664,035 |
| Deferred outflows of resources - pension (Note 15) | 20,057,117 |
| Deferred outflows of resources - other post-employment benefits (Note 16) | 7,689,903 |
| Total deferred outflows of resources | 43,411,055 |

| | |
|--------------------------------------------------------|----------------------|
| Total assets and deferred outflows of resources | 1,769,400,286 |
|--------------------------------------------------------|----------------------|

LIABILITIES

Current liabilities

| | |
|---------------------------------------------------------------------|--------------------|
| Accounts payable and accrued expenses (Note 6) | 58,452,648 |
| Advance from Treasurer of Virginia (Note 6) | 12,500,000 |
| Unearned revenue | 46,353,272 |
| Obligations under securities lending | 21,103,038 |
| Deposits held in custody for others | 1,228,892 |
| Long-term debt- current portion (Notes 7-10) | 39,778,761 |
| Other post-employment benefits liability- current portion (Note 16) | 1,339,525 |
| Accrued compensated absences- current portion (Note 7) | 6,262,841 |
| Total current liabilities | 187,018,977 |

Noncurrent liabilities

| | |
|----------------------------------------------------|--------------------|
| Long-term debt (Notes 7-10) | 540,307,305 |
| Net pension liability (Note 15) | 188,517,000 |
| Other post-employment benefits liability (Note 16) | 117,689,507 |
| Accrued compensated absences (Note 7) | 11,484,993 |
| Other noncurrent liabilities | 3,633,941 |
| Total noncurrent liabilities | 861,632,746 |

| | |
|--------------------------|----------------------|
| Total liabilities | 1,048,651,723 |
|--------------------------|----------------------|

DEFERRED INFLOWS OF RESOURCES

| | |
|--------------------------------------------------------------------------|-------------------|
| Deferred inflows of resources - refundings of debt (Notes 8-9) | 3,315,156 |
| Deferred inflows of resources - pension (Note 15) | 19,563,000 |
| Deferred inflows of resources - other post-employment benefits (Note 16) | 18,088,119 |
| Total deferred inflows of resources | 40,966,275 |

| | |
|------------------------------------------------------------|----------------------|
| Total liabilities and deferred inflows of resources | 1,089,617,998 |
|------------------------------------------------------------|----------------------|

NET POSITION

| | |
|-------------------------------------|-------------|
| Net investment in capital assets | 644,560,195 |
| Restricted: nonexpendable (Note 18) | 7,165,536 |
| Restricted: expendable (Note 18) | 14,727,341 |
| Unrestricted | 13,329,216 |

| | |
|---------------------------|-----------------------|
| Total net position | \$ 679,782,288 |
|---------------------------|-----------------------|

The accompanying Notes to Financial Statements are an integral part of this statement.

Combined Statements of Financial Position as of June 30, 2018

| | Total Component Units |
|--------------------------------------------|--------------------------|
| ASSETS | |
| Cash and cash equivalents | \$ 41,174,563 |
| Security deposits | 84,563 |
| Restricted cash and cash equivalents | 13,615,493 |
| Accounts receivable, net | 317,671 |
| Contributions receivable, net | 32,165,785 |
| Prepays and other assets | 5,481,537 |
| Net investment in direct financing lease | 91,339,380 |
| Beneficial interest in perpetual trusts | 10,985,365 |
| Investments | 171,817,944 |
| Property and equipment, net | 98,661,673 |
| Deferred tax asset | 714,640 |
| Total Assets | \$ 466,358,614 |
| Liabilities and Net Assets | |
| LIABILITIES | |
| Accounts payable and accrued expenses | 9,759,660 |
| Accrued payroll and related expenses | 443,772 |
| Grants and student research awards payable | 2,505,293 |
| Participation rent payable | 410,000 |
| Tenant security deposits liability | 81,442 |
| Unearned revenue | 6,838,232 |
| Due to affiliate | 160,635 |
| Charitable gift annuities | 151,703 |
| Other liabilities | 1,277,656 |
| Derivative obligations | 9,413,256 |
| Long-term debt including loan payable | 195,563,896 |
| Amounts held for others | 12,230,253 |
| Total Liabilities | 238,835,798 |
| Net Assets | |
| Unrestricted | 35,854,137 |
| Temporarily restricted | 100,394,444 |
| Permanently restricted | 91,878,838 |
| GMUF Real Estate LLCs | (604,603) |
| Total Net Assets | 227,522,816 |
| Total Liabilities and Net Assets | \$ 466,358,614 |

The accompanying Notes to Financial Statements are an integral part of this statement.

Statement of Revenues, Expenses, and Changes in Net Position for the Year Ended June 30, 2018

| | |
|-------------------------------------------------------------------------|-----------------------|
| Operating revenues | |
| Student tuition and fees, net of scholarship allowances of \$76,007,435 | \$ 372,756,933 |
| Federal grants and contracts | 90,999,108 |
| State, local, and nongovernmental grants and contracts | 30,856,400 |
| Auxiliary enterprises, net of scholarship allowances of \$25,406,637 | 204,414,600 |
| Other operating revenue | 19,974,505 |
| Total operating revenues | 719,001,546 |
| Operating expenses (Note 11) | |
| Instruction | 298,215,284 |
| Research | 79,134,337 |
| Public service | 21,489,898 |
| Academic support | 66,336,882 |
| Student services | 30,744,362 |
| Institutional support | 47,945,305 |
| Operation and maintenance of plant | 51,147,736 |
| Depreciation and amortization | 63,701,629 |
| Student aid | 30,114,850 |
| Auxiliary enterprises | 144,952,985 |
| Total operating expenses | 833,783,268 |
| Operating income (loss) | (114,781,722) |
| Nonoperating revenues (expenses) | |
| State educational and general appropriation (Note 12) | 137,851,617 |
| State general fund appropriations - restricted | 25,840,056 |
| Pell Grant receipts | 35,554,211 |
| Gifts | 1,762,607 |
| ARRA Build America Bonds Subsidy | 716,752 |
| Investment income | 3,718,914 |
| Other nonoperating revenue/(expense) | (4,300,436) |
| Interest expense (Note 13) | (21,360,985) |
| Net nonoperating revenues | 179,782,736 |
| Income before other revenues, expenses, gains, and losses | 65,001,014 |
| Other revenues, expenses, gains, and losses | |
| Capital grants and gifts | 10,930,216 |
| Capital appropriations | 23,542,127 |
| Additions to permanent endowments | 495 |
| Loss on capital assets | (9,595,212) |
| Net other revenues, expenses, gains, and losses | 24,877,626 |
| Increase in net position | 89,878,640 |
| Net position beginning of year | 712,393,735 |
| Restatement of beginning net position (Note 1T) | (122,490,087) |
| Net position beginning of year - restated | 589,903,648 |
| Net position end of year | \$ 679,782,288 |

The accompanying Notes to Financial Statements are an integral part of this statement.

Combined Statement of Activities for the Year Ended June 30, 2018

| | Total Component Units |
|--------------------------------------------------------------------------|--------------------------|
| Operating revenues | |
| Contributions and grants | \$ 98,212,909 |
| Interest on direct financing lease | 5,424,899 |
| Investment and trust return | 10,595,135 |
| Miscellaneous and other income | 415,672 |
| Rental income, net | 19,259,307 |
| Service fees | 7,728,392 |
| Gain from unconsolidated joint venture | 313,441 |
| Total operating revenues | 141,949,755 |
| Operating expenses | |
| Academic program support | 93,040,327 |
| Advertising and promotion | 16,733 |
| Depreciation | 3,586,124 |
| Fundraising | 1,948,507 |
| Insurance | 197,580 |
| Interest expense | 8,724,025 |
| Maintenance | 187,411 |
| Management fees | 393,044 |
| Office and other administrative expenses | 9,780,447 |
| Salaries and wages | 5,006,499 |
| Rent, utilities and other | 3,202,925 |
| Total operating expenses | 126,083,622 |
| Change in Net Assets before Non-operating items and Other Changes | 15,866,133 |
| Non-operating items | 1,500,286 |
| Change in Net Assets | 17,366,419 |
| Beginning Net Assets | 193,083,407 |
| Adjustment to Beginning Net Assets (Note 19) | 17,072,990 |
| Beginning Net Assets - restated | 210,156,397 |
| Ending Net Assets | \$ 227,522,816 |

The accompanying Notes to Financial Statements are an integral part of this statement.

Statement of Cash Flows for the Year Ended June 30, 2018

| | |
|------------------------------------------------------------------|-----------------------|
| Cash flows from operating activities | |
| Student tuition and fees | \$ 370,897,967 |
| Grants and contracts | 114,032,259 |
| Auxiliary enterprises | 204,618,381 |
| Perkins loan receipts | 375,637 |
| Other receipts | 22,044,938 |
| Payments to suppliers | (203,969,219) |
| Payments to employees | (535,575,993) |
| Payments for scholarships and fellowships | (30,114,850) |
| Perkins loan disbursements | (151,618) |
| Net cash used by operating activities | (57,842,498) |
| Cash flows from noncapital financing activities | |
| State appropriations | 163,691,673 |
| Additions to endowments | 495 |
| Federal Direct Loan Program receipts | 157,928,099 |
| Federal Direct Loan Program disbursements | (157,928,099) |
| Pell Grant receipts | 35,554,211 |
| Other net nonoperating revenue/(expense) | (4,300,436) |
| Noncapital gifts | 1,762,607 |
| Agency transactions | (24,213) |
| Net cash provided by noncapital financing activities | 196,684,337 |
| Cash flows from capital and related financing activities | |
| Proceeds from capital appropriations available | 29,977,851 |
| Capital grants and contributions | 12,188,308 |
| Advance from Treasurer | (202,676) |
| Proceeds from sale of capital assets | 75,739 |
| Proceeds from issuance of capital related debt | 3,240,000 |
| Bond premium paid on capital related debt | 280,510 |
| Principal paid on capital related debt | (36,464,810) |
| Interest paid on capital related debt | (23,634,399) |
| Purchases of capital assets | (44,660,652) |
| Net cash used by capital and related financing activities | (59,200,129) |
| Cash flows from investing | |
| Interest on investments | 3,317,288 |
| Purchase of investments | (35,172) |
| Net cash provided by investing activities | 3,282,116 |
| Net increase in cash | 82,923,826 |
| Cash and cash equivalents - beginning of the year | 330,173,900 |
| Less: Securities Lending - Treasurer of Virginia | - |
| Net cash and cash equivalents - beginning of the year | 330,173,900 |
| Cash and cash equivalents - end of the year | \$ 413,097,726 |

The accompanying Notes to Financial Statements are an integral part of this statement.

Statement of Cash Flows for the Year Ended June 30, 2018

RECONCILIATION OF STATEMENT OF CASH FLOWS, STATEMENT OF NET POSITION

Statement of Net Position

| | |
|--------------------------------------------------|-----------------------|
| Cash and cash equivalents | \$ 434,200,764 |
| Less: Securities lending - Treasurer of Virginia | (21,103,038) |
| Net cash and cash equivalents | <u>\$ 413,097,726</u> |

RECONCILIATION OF NET OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES

| | |
|-----------------------------------------------------------------------------|------------------------|
| Operating loss | \$ (114,781,722) |
| Adjustments to reconcile net loss to net cash used by operating activities: | |
| Depreciation expense | 63,701,629 |
| Changes in assets, liabilities, deferred outflows and deferred inflows: | |
| Accounts receivable (net) | 628,826 |
| Restricted assets receivable (net) | (8,434,956) |
| Perkins loan receivable | 298,977 |
| Deferred outflows of resources- pension | 11,975,000 |
| Deferred outflows of resources- OPEB | 10,398,216 |
| Perkins loan liability | (74,958) |
| Inventory | 450,342 |
| Prepaid expenses | 1,828,070 |
| Net OPEB asset | (6,127,000) |
| Accounts payable and accrued liabilities | 2,776,416 |
| Unearned revenue | 398,129 |
| Net pension liability | (31,753,000) |
| Net OPEB liability | (3,461,055) |
| Faculty Early Retirement liability | (1,160,462) |
| Compensated absences | 2,295,548 |
| Deferred inflows of resources- pension | 13,199,502 |
| Net cash used by operating activities | <u>\$ (57,842,498)</u> |

Noncash investing, capital and financing activities:

The following transactions occurred prior to the Statement of Net Position date:

| | |
|-------------------------------------------------------------------------|---------------|
| Assets acquired through assumption of a liability | \$ 14,535,895 |
| Capital assets acquired through gifts | 562,666 |
| Amortization of bond premium/discount and gain/loss on debt refinancing | (2,990,171) |
| Loss on disposal of capital assets | (9,595,212) |
| Unrealized gain/loss on investments | 401,626 |

The accompanying Notes to Financial Statements are an integral part of this statement.

NOTES TO FINANCIAL STATEMENTS

NOTES TO THE FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. REPORTING ENTITY

George Mason University is a comprehensive, doctoral institution that is part of the Commonwealth of Virginia's statewide system of higher education. The Board of Visitors, appointed by the Governor, is responsible for overseeing the governance of the University. A separate report is prepared for the Commonwealth of Virginia that includes all agencies, boards, commissions, and authorities over which the Commonwealth exercises or has the ability to exercise oversight authority. The University is a component unit of the Commonwealth of Virginia and is included in the general-purpose financial statements of the Commonwealth.

The George Mason University Foundation, Inc. (GMUF), Mason Housing, Inc. (MHI), George Mason University Instructional Foundation (GMUIF), Mason Korea, LLC (MK) and Mercatus Center, Inc. (Mercatus) are private, independent organizations whose close relationships with the University require them to be reported as component units of the University. GMUF, MHI, GMUIF, MK and Mercatus are discretely presented herein by separate page display.

GMUF was established to receive, hold, invest and administer property, and to make expenditures for the benefit of the University. During the year ended June 30, 2018, GMUF distributed \$67,829,675 to, or on behalf of, the University for both restricted and unrestricted purposes. Separate financial information for GMUF may be obtained by writing to the GMUF Business Office at 4400 University Drive, MSN 1A3, Fairfax, VA 22030.

MHI was established to build and manage the University's faculty and staff housing. Separate financial information for MHI may be obtained by writing to Mason Housing, Inc., Attn.: General Accounting, 4400 University Drive, MSN 4B2, Fairfax, VA 22030.

GMUIF was established to transmit educational and public affairs programming to the greater Washington, DC metropolitan area for a program fee under licenses issued by the Federal Communications Commission. During FY 14 the University and GMUIF agreed that GMUIF would establish, and be the sole member of, Mason Global Pathways, LLC. The purpose of Mason Global Pathways LLC is to invest in, and own 50% of, INTO Mason, LLC. INTO Mason, LLC was established to manage a new program to recruit international students and create pathways programs, providing the students the opportunity to become degree seeking students at the University. Separate financial information for GMUIF may be obtained by writing to GMUIF, Attn.: CFO, Kelley II - 10716 Kelley Drive, MSN 1D2, Fairfax, VA 22030.

MK was established to develop and operate a campus for the University on the Incheon Global Campus in Songdo, South Korea. Separate financial information for MK may be obtained by writing to Mason Korea, LLC, Attn.: General Accounting, 4400 University Drive, MSN 4B2, Fairfax, VA 22030.

Mercatus supports the University by providing a research center that conducts research, works with students to apply ideas to problems in the world and makes research findings available to the general public to connect academic learning with real-world practice. Separate financial information for Mercatus may be obtained by writing to Mercatus Center, Inc., Attn.: Gary Leff, 3434 Washington Blvd., 4th Floor, Arlington, VA 22201.

B. BASIS OF PRESENTATION

The University's accounting policies conform with generally accepted accounting principles as prescribed by the Governmental Accounting Standards Board (GASB), in the Codification of Governmental Accounting and

Financial Reporting Standards. The University follows accounting and reporting standards for “reporting by special-purpose governments engaged only in business-type activities.”

GMUF, MHI, GMUIF, MK and Mercatus are private, nonprofit organizations that report under Financial Accounting Standards Board (FASB) standards. Their financial statements included herein are presented in accordance with those standards.

C. BASIS OF ACCOUNTING

The University’s financial statements have been prepared using the economic resources measurement focus and the accrual basis of accounting. The economic resources measurement focus considers all inflows, outflows, and balances affecting an entity’s net position. Under the accrual basis, revenues are recognized when earned and expenses are recorded when a liability is incurred, regardless of the timing of related cash flows. All significant intra-agency transactions have been eliminated. The University’s policy is to spend restricted resources before unrestricted resources when both are available for expenses that are properly chargeable to restricted resources.

D. INVESTMENTS

The University’s investments consist of an interest in an internal investment pool managed by GMUF. The internal investment pool functions like an external investment pool. Investments in external investment pools are measured at the net asset value (NAV) per share, or its equivalent, determined by the pool. All investment income, including changes in the value of investments (unrealized gains and losses), is reported as nonoperating revenue in the Statement of Revenues, Expenses, and Changes in Net Position.

E. CAPITAL ASSETS

Capital assets include land, buildings, library materials, works of art and historical treasures, equipment, improvements, infrastructure assets such as sidewalks, electrical and computer network cabling systems and intangible assets including computer software. Capital assets generally are defined by the University as assets with an initial cost of \$5,000 or more and an estimated useful life in excess of one year. Commencing with FY 2016, library books and materials are valued at averaged actual cost of purchase for library acquisitions. Prior to FY 2016, library books were valued at published averaged costs. Other capital assets are recorded at actual cost or estimated historical cost if purchased or constructed. Donated capital assets, including library books, are recorded at acquisition value at the date of donation, with the exception of intra-entity capital asset donations which are recorded at the carrying value of the asset on the transferor’s books as of the date of transfer. Expenses for major capital assets and improvements are capitalized as projects are constructed (construction in progress). Interest expense relating to construction is capitalized net of interest income earned on resources set aside for this purpose. The costs of normal maintenance and repairs that do not enhance the use of an asset, or materially extend its useful life, are not capitalized.

Depreciation is computed using the straight-line method over the estimated useful life of the asset with no residual value. Depreciation is not allocated to the functional expense categories. Normal useful lives by asset categories are listed below:

- Buildings - 25-50 years*
- Improvements and infrastructure - 10-30 years
- Equipment - 5-20 years
- Intangibles including computer software - 5-10 years
- Library materials - 10 years

* Research buildings are depreciated using the component method. The estimated useful lives of research building components range from 10-50 years.

F. INVENTORY

Inventory is composed of two distinct categories of items. The first category is natural gas, which is used to power the University's physical plant. The second category consists of the on-hand stock of materials, supplies, and parts for use in maintaining the University's physical plant. Both categories of inventory are valued at cost using the first-in, first-out inventory methodology.

G. NONCURRENT CASH AND INVESTMENTS

Cash and investments that are externally restricted for expenditure in the acquisition or construction of noncurrent assets, to make debt service payments, or maintain sinking or reserve funds are classified as noncurrent assets in the Statement of Net Position.

H. UNEARNED REVENUE

Unearned revenue represents monies collected but not earned as of June 30, 2018. This is primarily composed of student tuition collected for courses that will be offered after June 30, 2018.

I. ACCRUED COMPENSATED ABSENCES

The amount of leave earned but not taken by salaried employees and administrative faculty members is recorded as a liability. The amount reflects, as of June 30, 2018, all unused vacation, overtime, compensatory, recognition and sick leave payable upon termination under University policy. The applicable share of employer related payroll taxes also is included.

J. FEDERAL FINANCIAL ASSISTANCE PROGRAMS

The University participates in federally funded Pell Grants, Supplemental Educational Opportunity Grants, Federal Work-Study, Direct Loan, and the Perkins Loan programs. Federal programs are audited in accordance with generally accepted governmental auditing standards.

K. NET POSITION

The Statement of Net Position reports the difference between assets plus deferred outflows and liabilities plus deferred inflows as net position. Net position is classified as net investment in capital assets; restricted; and unrestricted. Net investment in capital assets consists of capital assets, net of accumulated depreciation less outstanding debt that is attributable to the acquisition, construction, or improvement of those assets. Net position is reported as restricted when constraints on the net position use are either externally imposed by creditors, grantors, or contributors; or imposed by law. Unrestricted net position consists of net position that does not meet the definitions above.

L. REVENUE CLASSIFICATIONS

Operating revenues include activities that have the characteristics of exchange transactions, such as: (1) student tuition and fees, net of scholarship discounts and allowances; (2) sales and services of auxiliary enterprises, net of scholarship allowances; and (3) federal, state, local and nongovernmental grants and contracts.

Governmental financial aid grants are treated as operating revenue, with the exception of Pell grants which are treated as nonoperating revenue in the University's financial statements.

Nonoperating revenues include activities that have the characteristics of nonexchange transactions, such as gifts and state appropriations. Nonoperating expenses include interest on debt related to the purchase of capital assets.

M. SCHOLARSHIP DISCOUNTS AND ALLOWANCES

Student tuition and fees revenues, and certain other revenues from students, are reported net of scholarship discounts and allowances in the Statement of Revenues, Expenses, and Changes in Net Position. Scholarship discounts and allowances are the difference between the stated charge for goods and services provided by the University, and the amount that is paid by students and/or third parties making payments on the student's behalf.

N. PREPAID EXPENSES

The University has recorded as a current asset certain expenses for fiscal year 2019 that were paid in advance as of June 30, 2018. These prepaid expenses consist primarily of facility rentals, insurance premiums and technology expenses.

O. DISCOUNTS, PREMIUMS, AND BOND ISSUANCE COSTS

General Obligation Bonds and notes payable on the Statement of Net Position are reported net of related discounts and premiums, which are recognized over the life of the bond. Deferred gains and losses on debt refundings are recorded as deferred inflows of resources and deferred outflows of resources, respectively. The deferred inflows and outflows are recognized as a component of interest expense over the remaining life of the old bond or the life of the new bond, whichever is shorter. Bond issuance costs are expensed.

P. COMMONWEALTH EQUIPMENT AND CAPITAL PROJECT REIMBURSEMENT PROGRAMS

The Commonwealth has established several programs to provide state-supported institutions of higher education with bond proceeds for financing the acquisition of instructional and research equipment and facilities. The Commonwealth issues bonds and uses the proceeds to reimburse the University, and other institutions of higher education, for expenses incurred in the acquisition of equipment and facilities. The bond liability is assumed by the Commonwealth and is not reflected as a liability on the University's financial statements.

During Fiscal Year 2018, funding has been provided to the University from three Reimbursement Programs:

- General Obligation Bonds (GOB) Capital Project
- 21st Century Capital Project
- Equipment Trust Fund (ETF)

The Statement of Net Position line item "Due from the Commonwealth of Virginia" includes pending reimbursements at year-end from these programs. The Statement of Revenues, Expenses, and Changes in Net Position line items "Capital grants and gifts" and "Capital appropriations" include the reimbursements from these programs.

Q. DEFINED BENEFIT PENSIONS

The Virginia Retirement System (VRS) State Employee Retirement Plan and the Virginia Law Officers' System (VaLORS) Retirement Plan are single employer pension plans that are treated like cost-sharing plans. For purposes

of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Virginia Retirement System (VRS) State Employee Retirement Plan and the Virginia Law Officers' System (VaLORS) Retirement Plan; and the additions to/deductions from the VRS State Employee Retirement Plan's and the VaLORS Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

R. DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Deferred outflows of resources are defined as the consumption of net assets applicable to a future reporting period and increase net position similar to assets. Deferred inflows of resources are defined as the acquisition of net assets applicable to a future reporting period and decrease net position similar to liabilities.

S. OTHER POSTEMPLOYMENT BENEFITS

Group Life Insurance

The Virginia Retirement System (VRS) Group Life Insurance Program is a multiple employer, cost-sharing plan. It provides coverage to state employees, teachers, and employees of participating political subdivisions. The Group Life Insurance Program was established pursuant to §51.1-500 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The Group Life Insurance Program is a defined benefit plan that provides a basic group life insurance benefit for employees of participating employers. For purposes of measuring the net Group Life Insurance Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the Group Life Insurance Program OPEB, and Group Life Insurance Program OPEB expense, information about the fiduciary net position of the Virginia Retirement System (VRS) Group Life Insurance program OPEB and the additions to/deductions from the VRS Group Life Insurance Program OPEB's net fiduciary position have been determined on the same basis as they were reported by VRS. In addition, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

State Employee Health Insurance Credit Program

The Virginia Retirement System (VRS) State Employee Health Insurance Credit Program is a single employer plan that is presented as a multiple-employer, cost-sharing plan. The State Employee Health Insurance Credit Program was established pursuant to §51.1-1400 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The State Employee Health Insurance Credit Program is a defined benefit plan that provides a credit toward the cost of health insurance coverage for retired state employees. For purposes of measuring the net State Employee Health Insurance Credit Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the State Employee Health Insurance Credit Program OPEB, and the State Employee Health Insurance Credit Program OPEB expense, information about the fiduciary net position of the Virginia Retirement System (VRS) State Employee Health Insurance Credit Program; and the additions to/deductions from the VRS State Employee Health Insurance Credit Program's net fiduciary position have been determined on the same basis as they were reported by VRS. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Line of Duty Act Program

The Virginia Retirement System (VRS) Line of Duty Act Program (LODA) is a multiple-employer, cost-sharing plan. The Line of Duty Act Program was established pursuant to §9.1-400 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The Line of Duty Act Program provides death and health insurance benefits to eligible state employees and local government employees, including volunteers, who die or become disabled as a result of the performance of their duties as a public safety officer. In addition, health insurance benefits are provided to eligible survivors and family members. For purposes of measuring the net Line of Duty Act Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the Line of Duty Act Program OPEB, and Line of Duty Act Program OPEB expense, information about the fiduciary net position of the Virginia Retirement System (VRS) Line of Duty Act Program OPEB Plan and the additions to/deductions from the VRS Line of Duty Act Program OPEB Plan's net fiduciary position have been determined on the same basis as they were reported by VRS. In addition, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Disability Insurance Program

The Virginia Retirement System (VRS) Disability Insurance Program (Virginia Sickness and Disability Program) is a single employer plan that is presented as a multiple-employer, cost-sharing plan. The Disability Insurance Program was established pursuant to §51.1-1100 et seq. of the *Code of Virginia*, as amended, and which provides the authority under which benefit terms are established or may be amended. The Disability Insurance Program is a managed care program that provides sick, family and personal leave and short-term and long-term disability benefits for State Police Officers, state employees, and VaLORS employees. For purposes of measuring the net Disability Insurance Program OPEB liability (asset), deferred outflows of resources and deferred inflows of resources related to the Disability Insurance Program OPEB, and Disability Insurance Program OPEB expense, information about the fiduciary net position of the Virginia Retirement System (VRS) Disability Insurance Program OPEB Plan and the additions to/deductions from the VRS Disability Insurance Program OPEB Plan's net fiduciary position have been determined on the same basis as they were reported by VRS. In addition, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Pre-Medicare Retiree Healthcare Plan

Pre-Medicare Retiree Healthcare is a single-employer defined benefit OPEB plan that is treated like a cost-sharing plan for financial reporting purposes. The Commonwealth established the plan under Title 2.2, Chapter 28 of the *Code of Virginia* for retirees who are not yet eligible to participate in Medicare. The Department of Human Resource Management (DHRM), an agency of the Commonwealth of Virginia, is the administrator of the Commonwealth's plan. The University does not pay a portion of the retirees' healthcare premium; however, since both active employees and retirees are included in the same pool for purposes of determining health insurance rates, this generally results in a higher rate for active employees. Therefore, the University effectively subsidizes the costs of the participating retirees' healthcare through payment of the employer's portion of the premiums for active employees.

T. NEW ACCOUNTING PRONOUNCEMENTS

The GASB issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*. The Statement replaces GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, as amended. The Statement requires governments to report a liability on the face of the financial statements for the other postemployment benefits that they provide. The requirements of this Statement

were effective for reporting periods beginning after June 15, 2017. The adoption of this statement has resulted in the restatement of the University's beginning net position to record the new Other postemployment benefit liability, asset and deferred inflows and outflows. The beginning net position as of July 1, 2017 was restated by (\$122,490,087) from \$712,393,735 to \$589,903,648. See Note 17, Other Postemployment Benefits, for additional details.

The GASB issued Statement No. 81, *Irrevocable Split-Interest Agreements*. The objective of this Statement is to improve accounting and financial reporting for irrevocable split-interest agreements by providing recognition and measurement guidance for situations in which a government is a beneficiary of the agreement. The requirements of this Statement were effective for reporting periods beginning after December 15, 2016. The statement had no effect on the University's financial statements.

The GASB issued Statement No. 83, *Certain Asset Retirement Obligations*. The objective of this Statement is to provide financial statement users with information about asset retirement obligations that were not addressed in GASB standards by establishing uniform accounting and financial reporting requirements for these obligations. The requirements of this Statement were effective for reporting periods beginning after June 15, 2018. The University has not yet determined the effect this Statement will have on its financial statements.

The GASB issued Statement No. 84, *Fiduciary Activities*. The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. The University has not yet determined the effect this Statement will have on its financial statements.

The GASB issued Statement No. 85, *Omnibus 2017*. The objective of this Statement is to address practice issues that have been identified during implementation and application of certain GASB Statements. The requirements of this Statement were effective for reporting periods beginning after June 15, 2017. This statement did not have a material effect on the University's financial statements.

The GASB issued Statement No. 86, *Certain Debt Extinguishment Issues*. The primary objective of this Statement is to improve consistency in accounting and financial reporting for in-substance defeasance of debt by providing guidance for transactions in which cash and other monetary assets acquired with only existing resources — resources other than the proceeds of refunding debt — are placed in an irrevocable trust for the sole purpose of extinguishing debt. This Statement also improves accounting and financial reporting for prepaid insurance on debt that is extinguished and notes to financial statements for debt that is defeased in substance. The requirements of this Statement were effective for reporting periods beginning after June 15, 2017. This statement had no effect on the University's financial statements.

The GASB issued Statement No. 87, *Leases*. The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. The Statement requires recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. The University has not yet determined the effect this Statement will have on its financial statements.

2. CASH, CASH EQUIVALENTS AND INVESTMENTS

The University's deposits and investments are subject to the following risks:

Custodial Credit Risk - the custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the University will not be able to recover the value of investment or collateral securities that are in possession of an outside party. The University's investments consist of an interest in an internal investment pool managed by George Mason University Foundation (GMUF). The investment pool contains corporate stocks and corporate bonds, both of which are subject to custodial credit risk. The other investments held by GMUF in the investment pool are not subject to custodial credit risk.

Credit Risk - the risk that an issuer or other counterparty to an investment will not fulfill its obligations. Credit quality ratings are not required for U.S. government securities or other obligations explicitly guaranteed by the U.S. government. GMUF's investment pool contains corporate bonds, which are debt securities, and therefore subject to credit risk. Credit risk relative to these bonds is mitigated by GMUF's endowment investment policy guidelines on the credit quality of fixed income investments which state that the percentage of core fixed income assets rated below investment grade by one of the major reporting agencies (Standard and Poor's and Moody's) cannot exceed 25% of the total core fixed income allocation. The other investments held by GMUF in the investment pool are not investments of a type that are subject to credit risk.

Concentration of Credit Risk - the risk of loss attributed to the magnitude of a government's investment in a single issuer. Investments with any one issuer that represent five percent or more of total investments constitute concentration of credit risk. However, investments issued or explicitly guaranteed by the U.S. government, and investments in mutual funds, internal investment pools, and other pooled investments are excluded from the requirement. The University's interest in the internal investment pool managed by GMUF is a portion of the total investment pool managed by GMUF. In order to achieve a prudent level of portfolio diversification, GMUF's endowment investment policy guidelines require that not more than 5% of the portfolio may be invested in the securities of any one issuer, at cost, unless the issue is U.S. Government guaranteed, or an agency of the U.S. Government.

Interest Rate Risk - the risk that changes in interest rates will adversely affect the fair value of an investment. GMUF's investment pool contains money market funds. These money market funds have a maturity of less than one year. GMUF's investment pool also contains corporate bonds. These corporate bonds are subject to interest rate risk. The interest rate risk relative to these bonds is mitigated by GMUF's endowment investment policy guidelines on fixed income investments, which state that the weighted average portfolio duration of the core bond portfolio should not exceed 125% of the weighted average portfolio duration of the Barclays Aggregate Bond Index. The other investments held by GMUF in the investment pool are not investments of a type that are subject to interest rate risk.

Foreign Currency Risk - the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. The University had no foreign investments or foreign deposits for FY 2018.

A. CASH AND CASH EQUIVALENTS

Pursuant to Section 2.2-1800, et seq., *Code of Virginia*, the Treasurer of Virginia, who is responsible for the collection, disbursement, custody, and investment of state funds, maintains all state funds of the University. Cash deposits held by the University are maintained in accounts that are collateralized in accordance with the Virginia Security for Public Deposits Act, Section 2.2-4400, et seq., *Code of Virginia*. Cash represents cash with the Treasurer, cash on hand, and cash deposits including certificates of deposit and temporary investments with original maturities of three months or less.

B. INVESTMENTS

The investment policy of the University is established by the Board of Visitors and monitored by the Finance and Land Use Committee of the Board. The University has cash and cash equivalents and investments as set forth in Section D.

C. SECURITIES LENDING TRANSACTIONS

Cash equivalents held by the Treasurer of Virginia represent the University's allocated share of cash collateral received and reinvested and securities received for the State Treasury's securities lending program. Information related to the credit risk of these investments and the State Treasury's securities lending program is available on a statewide level in the *Commonwealth of Virginia's Comprehensive Annual Financial Report*. The Commonwealth's policy is to record unrealized gains and losses in the General Fund in the Commonwealth's basic financial statements. When gains or losses are realized, the actual gains and losses are recorded by the affected agencies.

D. SUMMARY OF THE UNIVERSITY'S CASH, CASH EQUIVALENTS AND INVESTMENTS

| Cash and Cash Equivalents | |
|----------------------------------------------------|---------------|
| Cash and cash equivalents: | |
| Local cash | \$16,984,693 |
| Treasurer of Virginia | 394,632,879 |
| Treasurer of Virginia (Securities Lending) | 21,103,038 |
| Subtotal | 432,720,610 |
| Restricted cash and cash equivalents: | |
| Treasurer of Virginia (State Nonarbitrage Program) | \$1,390,967 |
| Held in custody of others | 89,187 |
| Subtotal | 1,480,154 |
| Total Cash and cash equivalents | \$434,200,764 |

| Investments | |
|----------------------|---------------------|
| | <u>Market Value</u> |
| Long term: | |
| GMUF Investment Pool | \$8,620,758 |
| Total Investments | \$8,620,758 |

E. FAIR VALUE MEASUREMENT OF INVESTMENTS

The University categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are pricing inputs other than quoted prices in active markets; Level 3 inputs are not readily observable and require significant management estimation. Investments in internal investment pools are measured at the net asset value (NAV) per share, or its equivalent, determined by the pool.

Assets held in the GMUF Investment pool total \$8.6 million, all are measured at NAV.

Additional Disclosures for Investments at NAV:

| | Fair Value | Unfunded Commitment | Redemption Frequency | Redemption Notice Period |
|--------------------------|-------------|------------------------|-------------------------|-----------------------------|
| Investments held by GMUF | \$8,620,758 | N/A | N/A | N/A |

3. DONOR-RESTRICTED ENDOWMENTS

The University's endowment is managed by the George Mason University Foundation (GMUF). During FY 2018, the net appreciation on the investments of donor-restricted endowments was an overall investment gain of \$445,353, which became available for expenditure by the governing board.

Net appreciation/loss of donor restricted-endowments is recorded in the Net position of the University as an increase/decrease in Net position restricted- expendable to reflect the fact that the net appreciation must be spent in accordance with the stipulations set forth in the underlying endowment agreements.

The state law regarding the ability to spend net appreciation of donor-restricted endowments is the *Uniform Prudent Management of Institutional Funds Act*, Section 64.2-11 of the Code of Virginia.

The University's endowment policy seeks to maintain the growth of the present value of existing assets at a rate at least equal to the inflation rate plus the current spending rate. In fiscal year 2017, the spending rate was modified to fix the payout distributions for existing endowments at its fiscal year 2016 payout amount through fiscal year 2019. Payouts for exiting endowments whose fair value equals or exceeds market value were calculated at 3.75% of the fiscal year 2016 market value. Payout distributions for new or fully funded endowments are calculated at 1.25% of the gift corpus through fiscal year 2019.

Effective fiscal year 2020, a banded inflation spending policy will be implemented. For endowments in which the market value exceeds the original gift value, the prior year payout distribution will increase at the rate of the Consumer Price Index, with annual distributions to remain above 3% but not to exceed 6% of the fair market value. The endowment payout for accounts for which the market value is below the original gift value will receive a 2% of fair value payout.

4. ACCOUNTS AND NOTES RECEIVABLE

Accounts and notes receivable consisted of the following at June 30, 2018:

| Accounts Receivable | |
|----------------------------------------------|--------------|
| Student tuition and fees | \$12,395,169 |
| Grants and Contracts receivable (restricted) | 32,888,508 |
| Other accounts receivable | 2,933,312 |
| Total accounts receivable | \$48,216,989 |
| Less allowance for doubtful accounts | (1,808,467) |
| Net accounts receivable | \$46,408,522 |

| Notes Receivable | |
|--------------------------------------|--------------------|
| Current: | |
| Perkins loans receivable | \$387,741 |
| Nurse faculty loan | 8,010 |
| Less allowance for doubtful accounts | (22,694) |
| Net current notes receivable | <u>\$373,057</u> |
| Noncurrent: | |
| Perkins loan receivable | \$3,131,343 |
| Nurse faculty loan | 64,690 |
| Local loans to student | 4,700 |
| Less allowance for doubtful accounts | (183,545) |
| Net non-current notes receivable | <u>\$3,017,188</u> |

5. CAPITAL ASSETS

A summary of changes in capital assets for the year ended June 30, 2018 is as follows:

| | Beginning Balance | Additions | Reductions | Ending Balance |
|-----------------------------------------|------------------------------|----------------------|----------------------|---------------------------|
| Non-depreciable capital assets: | | | | |
| Land | \$22,328,863 | \$- | \$- | \$22,328,863 |
| Construction-in-progress | 89,356,078 | 35,415,421 | 111,713,326 | 13,058,173 |
| Works of art and historical treasures | 2,527,419 | - | - | 2,527,419 |
| Total non-depreciable capital assets | <u>114,212,360</u> | <u>35,415,421</u> | <u>111,713,326</u> | <u>37,914,455</u> |
| Depreciable capital assets: | | | | |
| Buildings | 1,347,605,723 | 103,084,927 | 7,977,392 | 1,442,713,258 |
| Buildings – capital lease | 87,444,927 | 14,535,895 | - | 101,980,822 |
| Improvements | 35,988,284 | 122,384 | - | 36,110,668 |
| Infrastructure assets | 70,876,513 | - | 948,591 | 69,927,922 |
| Equipment | 124,457,143 | 12,743,432 | 10,544,050 | 126,656,525 |
| Equipment – capital lease | 1,825,932 | - | - | 1,825,932 |
| Intangibles including computer software | 12,214,663 | - | - | 12,214,663 |
| Library materials | 104,371,039 | 1,366,146 | 158,274 | 105,578,911 |
| Total depreciable capital assets | <u>1,784,784,224</u> | <u>131,852,784</u> | <u>19,628,307</u> | <u>1,897,008,701</u> |
| Less accumulated depreciation: | | | | |
| Buildings | 431,711,922 | 44,198,421 | 5,342,084 | 470,568,259 |
| Buildings – capital lease | 10,173,016 | 2,851,850 | - | 13,024,866 |
| Improvements | 27,424,975 | 1,130,116 | - | 28,555,091 |
| Infrastructure assets | 26,124,651 | 1,805,625 | 60,077 | 27,870,199 |
| Equipment | 83,658,000 | 8,920,246 | 9,111,836 | 83,466,410 |
| Equipment – capital lease | 1,586,480 | 239,281 | - | 1,825,761 |
| Intangibles including computer software | 11,860,330 | 54,482 | - | 11,914,812 |
| Library materials | 81,955,560 | 4,501,608 | 158,274 | 86,298,894 |
| Total accumulated depreciation | <u>674,494,934</u> | <u>63,701,629</u> | <u>14,672,271</u> | <u>723,524,292</u> |
| Depreciable capital assets, net | <u>1,110,289,290</u> | <u>68,151,155</u> | <u>4,956,036</u> | <u>1,173,484,409</u> |
| Total capital assets, net | <u>\$1,224,501,650</u> | <u>\$103,566,576</u> | <u>\$116,669,362</u> | <u>\$1,211,398,864</u> |

6. ACCOUNTS PAYABLE, ACCRUED EXPENSES AND ADVANCE FROM TREASURER

Accounts payable and accrued expenses consisted of the following at June 30, 2018:

| Accounts Payable and Accrued Expenses | |
|------------------------------------------------------|---------------------|
| Employee salaries, wages and fringe benefits payable | \$31,273,338 |
| Vendors and suppliers accounts payable | 16,985,696 |
| Interest payable | 4,436,433 |
| Capital projects retainage payable | 1,158,963 |
| Capital projects and equipment accounts payable | 4,598,218 |
| Total accounts payable and accrued expenses | \$58,452,648 |

The \$12,500,000 Advance from the Treasurer of Virginia is an anticipation of federal revenues loan, which provides cash in advance of receipt of federal reimbursement for approved grants and contracts. The loan is provided without interest and is due November 17, 2018, which is one year from the first takedown under the loan. The loan will be repaid using funds from reimbursements of federal grants and contracts.

| | Beginning Balance | Additions | Reductions | Ending Balance |
|------------------------------------|--------------------------|------------------|-------------------|-----------------------|
| Advance from Treasurer of Virginia | \$12,702,676 | \$12,500,000 | \$12,702,676 | \$12,500,000 |

7. NONCURRENT LIABILITIES

Noncurrent liabilities consist of long-term debt, accruals for compensated absences and other noncurrent liabilities. A summary of changes in noncurrent liabilities for the year ended June 30, 2018 is as follows:

| | Beginning Balance | Additions | Reductions | Ending Balance | Current Portion | Non-current Portion |
|----------------------------------------------|--------------------------|----------------------|---------------------|-----------------------|------------------------|----------------------------|
| Long-term debt: | | | | | | |
| Revenue Bonds | \$184,009,051 | \$- | \$11,139,865 | \$172,869,186 | \$10,862,116 | \$162,007,070 |
| Notes Payable | 280,410,000 | 3,240,000 | 21,070,000 | 262,580,000 | 19,080,000 | 243,500,000 |
| Capital Lease Obligation | 78,998,117 | 19,250,815 | 2,574,093 | 95,674,839 | 3,197,530 | 92,477,309 |
| Installment Purchases | 8,973,710 | - | 1,680,852 | 7,292,858 | 1,696,711 | 5,596,147 |
| Bond Premium | 46,442,007 | 280,510 | 5,053,334 | 41,669,183 | 4,942,404 | 36,726,779 |
| Total Long-term debt | 598,832,885 | 22,771,325 | 41,518,144 | 580,086,066 | 39,778,761 | 540,307,305 |
| Accrued Compensated Absences | 15,452,286 | 15,497,506 | 13,201,958 | 17,747,834 | 6,262,841 | 11,484,993 |
| Net Pension Liability | 220,270,000 | - | 31,753,000 | 188,517,000 | - | 188,517,000 |
| OPEB Liability | - | 119,029,032 | - | 119,029,032 | 1,339,525 | 117,689,507 |
| Other noncurrent liabilities: | | | | | | |
| Faculty Early Retirement Incentive Liability | 1,582,142 | - | 1,160,462 | 421,680 | - | 421,680 |
| Loan Funds | 3,287,219 | - | 74,958 | 3,212,261 | - | 3,212,261 |
| Total Long-term Liabilities | \$839,424,532 | \$157,297,863 | \$87,708,522 | \$909,013,873 | \$47,381,127 | \$861,632,746 |

8. BONDS PAYABLE

A. GENERAL OBLIGATION BONDS

The Commonwealth issues General Obligation Bonds, pursuant to Article X, Section 9c of the Constitution of Virginia. These General Obligation Bonds are backed by the full faith, credit, and taxing power of the Commonwealth, and are issued to finance capital projects which, when completed, are expected to generate revenue to repay the debt.

The following schedule describes each of the bonds outstanding:

| Bond Title | Calendar Year Issued | Original Amount | Original Interest Rate | Original Bond Term | Fiscal Year Final Payment Due | Balance Outstanding at June 30, 2018 |
|--------------------------------------------|----------------------|-----------------|------------------------|--------------------|-------------------------------|--------------------------------------|
| Renovate Presidents Park Ph I | 2009 | \$1,790,000 | 3.0 to 5.0% | 10 Years | 2019 | \$240,000 |
| Student Housing VIIC | 2009 | 8,255,000 | 3.0 to 5.0% | 25 Years | 2019 | 275,000 |
| Student Housing VIII | 2009 | 7,910,000 | 4.0 to 5.0% | 25 Years | 2019 | 275,000 |
| 9(c) 2009 C Refunding (2001) | 2009 | 6,266,975 | 3.0 to 4.0% | 15 Years | 2024 | 6,126,258 |
| 9(c) 2009 C Refunding (2002) | 2009 | 4,448,039 | 3.0 to 4.0% | 13 Years | 2022 | 2,347,794 |
| 9(c) 2009 D Refunding (2005) | 2009 | 6,630,000 | 2.5 to 5.0% | 13 Years | 2022 | 4,630,000 |
| 9(c) 2009 D Refunding (2006B) | 2009 | 8,230,000 | 2.5 to 5.0% | 13 Years | 2022 | 6,740,000 |
| Renovate Presidents Park Ph II | 2010 | 2,790,000 | 2.1 to 5.0% | 10 Years | 2020 | 670,000 |
| Housing VIII | 2010 | 39,420,000 | 2.1 to 5.0% | 25 Years | 2035 | 31,200,000 |
| Smithsonian CRC - Housing | 2010 | 5,415,000 | 2.1 to 5.0% | 25 Years | 2035 | 4,285,000 |
| Renovate Commons | 2010 | 1,325,000 | 2.1 to 5.0% | 20 Years | 2030 | 945,000 |
| Student Housing VII-C | 2011 | 1,045,000 | 2.0 to 5.0% | 25 Years | 2036 | 890,000 |
| Presidential Park Renovation | 2011 | 2,700,000 | 2.0 to 5.0% | 10 Years | 2021 | 1,000,000 |
| Housing VIII | 2011 | 20,230,000 | 2.0 to 5.0% | 25 Years | 2036 | 16,830,000 |
| Smithsonian CRC - Housing | 2011 | 4,070,000 | 2.0 to 5.0% | 25 Years | 2036 | 3,470,000 |
| Renovate Commons | 2011 | 14,350,000 | 2.0 to 5.0% | 20 Years | 2031 | 11,275,000 |
| 9(c) 2012 A Refunding (2005) | 2012 | 2,674,040 | 3.0 to 5.0% | 12 Years | 2024 | 2,674,040 |
| 9(c) 2013 B Refunding (2005) | 2013 | 10,504,185 | 3.0 to 5.0% | 17 Years | 2030 | 9,532,214 |
| 9(c) 2013 B Refunding (2006) | 2013 | 9,186,889 | 4.0 to 5.0% | 13 Years | 2026 | 7,821,663 |
| 9(c) 2013 B Refunding (2007) | 2013 | 5,162,482 | 4.0 to 5.0% | 12 Years | 2025 | 5,162,482 |
| Housing VIII | 2014 | 2,235,000 | 2.0 to 5.0% | 20 Years | 2034 | 1,935,000 |
| 9(c) 2014 B Refunding (2004B) | 2014 | 6,306,209 | 2.0 to 5.0% | 6 Years | 2020 | 2,392,686 |
| 9(c) 2015 B Refunding (2006B) | 2015 | 11,765,000 | 3.0 to 5.0% | 16 Years | 2031 | 11,765,000 |
| 9(c) 2015 B Refunding (2007B) | 2015 | 7,670,410 | 3.0 to 5.0% | 17 Years | 2032 | 7,035,623 |
| 9(c) 2015 B Refunding (Housing VII 2008B) | 2015 | 1,366,447 | 3.0 to 5.0% | 18 Years | 2033 | 1,366,447 |
| 9(c) 2015 B Refunding (Housing VIIC 2008B) | 2015 | 17,565,586 | 3.0 to 5.0% | 18 Years | 2033 | 17,565,586 |
| 9(c) 2015 B Refunding (Pres Park II 2008B) | 2015 | 1,999,393 | 4.0 to 5.0% | 13 Years | 2028 | 1,999,393 |
| 9(c) 2016 B Refunding (2009B) | 2016 | 12,420,000 | 2.0 to 5.0% | 17 Years | 2034 | 12,420,000 |
| Total Bonds Payable | | \$223,730,655 | | | | \$172,869,186 |

Long-term debt from bonds as of June 30, 2018 matures as follows:

| Year | Principal | Interest | BAB Interest Subsidy* | Total Net of Subsidy |
|-----------|---------------|--------------|-----------------------|----------------------|
| 2019 | \$10,862,116 | \$7,249,928 | \$(527,908) | \$17,584,136 |
| 2020 | 11,028,039 | 6,779,795 | (506,225) | 17,301,609 |
| 2021 | 11,204,626 | 6,312,164 | (483,434) | 17,033,356 |
| 2022 | 11,408,380 | 5,831,533 | (463,203) | 16,776,710 |
| 2023 | 11,171,845 | 5,329,579 | (441,489) | 16,059,935 |
| 2024-2028 | 56,738,553 | 19,329,325 | (1,826,509) | 74,241,369 |
| 2029-2033 | 49,335,627 | 7,392,403 | (1,002,759) | 55,725,271 |
| 2034-2038 | 11,120,000 | 789,055 | (127,734) | 11,781,321 |
| Total | \$172,869,186 | \$59,013,782 | \$(5,379,261) | \$226,503,707 |

* The University expects the BAB (Build America Bonds) subsidy to occur as displayed. However, the subsidy is subject to intervening Congressional action and thus is not guaranteed.

B. PRIOR YEAR BOND DEFEASANCE

In previous fiscal years, the Commonwealth of Virginia issued bonds on behalf of the University. The proceeds were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on other debt. The bonds representing that debt are therefore considered defeased. Accordingly, the trust account's assets and liabilities for the defeased bonds are not included in the University's financial statements. On June 30, 2018, \$12,430,000 of Series 2009B 9(c) general obligation bonds were considered defeased and outstanding.

9. NOTES PAYABLE

A. VCBA NOTES

The University participates in the Public Higher Education Financing Program (Pooled Bond Program) created by the Virginia General Assembly in 1996. Through the Pooled Bond Program, the Virginia College Building Authority (VCBA) issues 9(d) bonds and uses the proceeds to purchase debt obligations (notes) of the University and various other institutions of higher education. VCBA Pooled Bonds are reported as Notes Payable by the University. The University's general revenue secures these notes.

The following schedule describes each of the notes outstanding:

| Note Title | Calendar Year Issued | Original Amount | Original Interest Rate | Original Note Term | Fiscal Year Final Pymt Due | Balance Outstanding at June 30, 2018 |
|-------------------------------------|----------------------|-----------------|------------------------|--------------------|----------------------------|--------------------------------------|
| VCBA 2007B Refunding (2005A) | 2007 | \$1,675,000 | 4.0 to 4.5% | 12 Years | 2020 | \$1,050,000 |
| Arlington Phase II | 2009 | 7,945,000 | 2.1 to 5.0% | 25 Years | 2021 | 555,000 |
| PW Performing Arts Center RB#3 | 2009 | 17,960,000 | 2.1 to 5.0% | 20 Years | 2021 | 1,810,000 |
| Parking Deck III - Phase I | 2009 | 9,790,000 | 2.1 to 5.0% | 25 Years | 2021 | 685,000 |
| PE Building, Phase I | 2009 | 2,750,000 | 2.1 to 5.0% | 20 Years | 2021 | 275,000 |
| Surge Space & Fit-Out | 2009 | 10,730,000 | 2.1 to 5.0% | 20 Years | 2021 | 1,085,000 |
| Academic VI/Research II, RB#2 | 2009 | 20,335,000 | 2.1 to 5.0% | 20 Years | 2021 | 2,050,000 |
| PE Building, Phase II | 2009 | 5,245,000 | 2.1 to 5.0% | 20 Years | 2021 | 530,000 |
| Biomedical Research Lab, RB#2 | 2009 | 6,405,000 | 2.1 to 5.0% | 20 Years | 2021 | 645,000 |
| Hotel & Conference Center | 2009 | 25,190,000 | 2.1 to 5.0% | 30 Years | 2021 | 1,250,000 |
| Student Union I Addition/Renovation | 2009 | 7,980,000 | 2.1 to 5.0% | 20 Years | 2021 | 805,000 |
| Student Union II Renovation | 2009 | 585,000 | 2.1 to 5.0% | 10 Years | 2019 | 75,000 |
| Parking Deck III, Phase II | 2009 | 13,885,000 | 2.1 to 5.0% | 25 Years | 2021 | 965,000 |

| Note Title | Calendar Year Issued | Original Amount | Original Interest Rate | Original Note Term | Fiscal Year Final Pymt Due | Balance Outstanding at June 30, 2018 |
|--------------------------------------------------|----------------------------|--------------------|---------------------------|--------------------------|----------------------------------------|-----------------------------------------------|
| West Campus Connector & Campus Entrances | 2009 | 6,010,000 | 2.1 to 5.0% | 20 Years | 2021 | 605,000 |
| Arlington Phase II | 2009 | 5,010,000 | 3.0 to 5.0% | 25 Years | 2020 | 325,000 |
| PW Performing Arts Center | 2009 | 3,390,000 | 3.0 to 5.0% | 20 Years | 2020 | 320,000 |
| Fairfax Surge Space Fit Out Data Center | 2009 | 1,685,000 | 2.0 to 5.0% | 20 Years | 2020 | 155,000 |
| PW Regional Biomedical Laboratory | 2009 | 1,950,000 | 2.0 to 5.0% | 20 Years | 2020 | 180,000 |
| Hotel & Conference Center | 2009 | 8,300,000 | 3.0 to 5.0% | 30 Years | 2020 | 390,000 |
| Student Union I Addition/Renovation | 2009 | 7,725,000 | 3.0 to 5.0% | 20 Years | 2020 | 730,000 |
| Student Union II Renovation | 2009 | 4,830,000 | 3.0 to 5.0% | 20 Years | 2020 | 455,000 |
| Student Union II Renovation | 2010 | 2,935,000 | 3.75 to 5.5% | 20 Years | 2031 | 2,225,000 |
| Student Union I Addition/Renovation | 2010 | 5,390,000 | 3.75 to 5.5% | 20 Years | 2031 | 4,080,000 |
| Smithsonian CRC-Dining | 2010 | 2,395,000 | 3.75 to 5.6% | 25 Years | 2036 | 1,975,000 |
| Krasnow Institute Addition II | 2010 | 5,215,000 | 2.0 to 5.5% | 20 Years | 2031 | 3,810,000 |
| Fieldhouse Life/Safety/Code Renovation | 2010 | 1,395,000 | 3.75 to 5.5% | 20 Years | 2031 | 1,055,000 |
| Repair Aquatic & Fitness Center HVAC | 2010 | 2,325,000 | 2.0 to 5.0% | 10 Years | 2021 | 810,000 |
| VCBA 2010B Refunding (2003A) | 2010 | 2,990,000 | 2.0 to 5.0% | 10 Years | 2021 | 2,300,000 |
| Fairfax Campus Dining | 2011 | 6,090,000 | 5.00% | 10 Years | 2022 | 3,045,000 |
| Smithsonian CRC – Dining | 2011 | 2,690,000 | 3.0 to 5.0% | 25 Years | 2037 | 1,850,020 |
| Central Utility Plant | 2011 | - | 3.0 to 5.0% | 25 Years | 2037 | 484,980 |
| VCBA 2012A Refunding (2003A) | 2012 | 5,525,000 | 3.0 to 5.0% | 12 Years | 2025 | 3,630,000 |
| VCBA 2012A Refunding (Aquatic Center 2004A) | 2012 | 3,130,000 | 5.00% | 8 Years | 2021 | 1,680,000 |
| VCBA 2012A Refunding (Research I 2004A) | 2012 | 6,310,000 | 2.75 to 5.0% | 13 Years | 2026 | 4,905,000 |
| VCBA 2012A Refunding (2005A) | 2012 | 4,260,000 | 3.0 to 5.0% | 12 Years | 2025 | 3,815,000 |
| Fieldhouse Life/Safety/Code Renovation | 2012 | 3,060,000 | 4.0 to 5.0% | 10 Years | 2023 | 595,868 |
| Central Utility Plant | 2012 | - | 4.0 to 5.0% | 10 Years | 2023 | 1,269,132 |
| W Campus Connector & Campus Entrances | 2013 | 2,135,000 | 2.0 to 5.0% | 10 Years | 2024 | 1,505,000 |
| Ike's Dining | 2013 | 7,830,000 | 2.0 to 5.0% | 20 Years | 2034 | 6,940,000 |
| Johnson Center | 2013 | 2,620,000 | 2.0 to 5.0% | 8 Years | 2022 | 917,506 |
| Central Utility Plant | 2013 | 3,065,000 | 2.0 to 5.0% | 20 Years | 2034 | 3,382,494 |
| Renovate Fieldhouse | 2013 | 3,230,000 | 1.0 to 3.5% | 10 Years | 2024 | 2,230,000 |
| VCBA 2013B Refunding (2006A) | 2013 | 7,280,000 | 1.0 to 4.0% | 14 Years | 2028 | 5,470,000 |
| VCBA 2013B Refunding (2009A) | 2013 | 1,845,000 | 1.0 to 4.0% | 15 Years | 2029 | 1,420,000 |
| VCBA 2014B Refunding (1999) | 2014 | 1,345,000 | 3.0 to 5.0% | 5 Years | 2020 | 555,000 |
| VCBA 2014B Refunding (2005A) | 2014 | 1,455,000 | 3.0 to 5.0% | 12 Years | 2027 | 1,035,000 |
| VCBA 2014B Refunding (2006A) | 2014 | 16,640,000 | 3.0 to 5.0% | 9 Years | 2024 | 14,600,000 |
| VCBA 2014B Refunding (2007A) | 2014 | 28,290,000 | 3.0 to 5.0% | 11 Years | 2026 | 28,290,000 |
| VCBA 2015B Refunding (Arlington Ph II 2009A) | 2015 | 5,595,000 | 3.0 to 5.0% | 18 Years | 2034 | 5,595,000 |
| VCBA 2015B Refunding (PW Perf Arts 2009A) | 2015 | 10,375,000 | 3.0 to 5.0% | 13 Years | 2029 | 10,375,000 |
| VCBA 2015B Refunding (Parking Deck Ph I 2009A) | 2015 | 6,520,000 | 3.0 to 5.0% | 18 Years | 2034 | 6,520,000 |
| VCBA 2015B Refunding (PE Bldg Ph I 2009A) | 2015 | 1,580,000 | 3.0 to 5.0% | 13 Years | 2029 | 1,580,000 |
| VCBA 2015B Refunding (Surge Space/Fit Out 2009A) | 2015 | 6,185,000 | 3.0 to 5.0% | 13 Years | 2029 | 6,185,000 |
| VCBA 2015B Refunding (Acad VI/Res II 2009A) | 2015 | 11,750,000 | 3.0 to 5.0% | 13 Years | 2029 | 11,750,000 |
| VCBA 2015B Refunding (PE Bldg Ph II 2009A) | 2015 | 3,020,000 | 3.0 to 5.0% | 13 Years | 2029 | 3,020,000 |
| VCBA 2015B Refunding (Biomed Rsch Lab 2009A) | 2015 | 3,685,000 | 3.0 to 5.0% | 13 Years | 2029 | 3,685,000 |
| VCBA 2015B Refunding (Hotel & Conf Ctr 2009A) | 2015 | 15,790,000 | 3.0 to 5.0% | 23 Years | 2039 | 15,790,000 |
| VCBA 2015B Refunding (SUB I Add/Renov 2009A) | 2015 | 4,600,000 | 3.0 to 5.0% | 13 Years | 2029 | 4,600,000 |
| VCBA 2015B Refunding (Park Deck III Ph II 2009A) | 2015 | 9,275,000 | 3.0 to 5.0% | 18 Years | 2034 | 9,275,000 |
| VCBA 2015B Refunding (W Campus Connect 2009A) | 2015 | 3,460,000 | 3.0 to 5.0% | 13 Years | 2029 | 3,460,000 |
| VCBA 2016A Refunding (Krasnow 2006A) | 2016 | 390,000 | 3.00% | 10 Years | 2027 | 390,000 |
| VCBA 2016A Refunding (PE Add/Renov 2006A) | 2016 | 1,750,000 | 3.0 to 5.0% | 12 Years | 2029 | 1,750,000 |
| VCBA 2016A Refunding (PE Bldg Add, Ph II 2006A) | 2016 | 805,000 | 3.0 to 5.0% | 12 Years | 2029 | 805,000 |
| VCBA 2016A Refunding (PW Bio Lab 2006A) | 2016 | 3,825,000 | 3.0 to 5.0% | 12 Years | 2029 | 3,825,000 |
| VCBA 2016A Refunding (PW Perf Arts Ctr 2006A) | 2016 | 3,105,000 | 3.0 to 5.0% | 12 Years | 2029 | 3,105,000 |
| VCBA 2016A Refunding (Student Union III 2006A) | 2016 | 1,315,000 | 3.0 to 5.0% | 11 Years | 2028 | 1,315,000 |
| VCBA 2016A Refunding (Surge Space Fit Out 2006A) | 2016 | 390,000 | 3.0 to 5.0% | 11 Years | 2028 | 390,000 |
| VCBA 2016A Refunding (Surge Space Bldg 2006A) | 2016 | 1,595,000 | 3.0 to 5.0% | 11 Years | 2028 | 1,595,000 |
| VCBA 2016A Refunding (PW Perf Arts Ctr 2007A) | 2016 | 1,285,000 | 3.0 to 5.0% | 11 Years | 2028 | 1,285,000 |

| Note Title | Calendar Year Issued | Original Amount | Original Interest Rate | Original Note Term | Fiscal Year Final Pymt Due | Balance Outstanding at June 30, 2018 |
|--------------------------------------------------|----------------------------|--------------------|---------------------------|--------------------------|----------------------------------------|-----------------------------------------------|
| VCBA 2016A Refunding (Parking Deck III 2007A) | 2016 | 7,795,000 | 3.0 to 5.0% | 16 Years | 2033 | 7,795,000 |
| VCBA 2016A Refunding (PE Bldg Ph I 2007A) | 2016 | 1,285,000 | 3.0 to 5.0% | 11 Years | 2028 | 1,285,000 |
| VCBA 2016A Refunding (Surge Space Bldg 2007A) | 2016 | 450,000 | 3.0 to 5.0% | 11 Years | 2028 | 450,000 |
| VCBA 2016A Refunding (Acad VI/Res II 2007A) | 2016 | 745,000 | 3.0 to 5.0% | 11 Years | 2028 | 745,000 |
| VCBA 2016A Refunding (PE Bldg Add, Ph II 2007A) | 2016 | 575,000 | 3.0 to 5.0% | 11 Years | 2028 | 575,000 |
| VCBA 2016A Refunding (Hotel & Conf Ctr 2007A) | 2016 | 8,345,000 | 3.0 to 5.0% | 21 Years | 2038 | 8,345,000 |
| VCBA 2016A Refunding (Sub I Renov 2007A) | 2016 | 765,000 | 3.0 to 5.0% | 11 Years | 2028 | 765,000 |
| VCBA 2016A Refunding (Student Union III 2007A) | 2016 | 2,255,000 | 3.0 to 5.0% | 16 Years | 2033 | 2,255,000 |
| VCBA 2016A Refunding (Arl Ph II 2009B) | 2016 | 3,520,000 | 3.0 to 5.0% | 18 Years | 2035 | 3,520,000 |
| VCBA 2016A Refunding (PW Perf Arts Ctr 2009B) | 2016 | 2,195,000 | 3.0 to 5.0% | 13 Years | 2030 | 2,195,000 |
| VCBA 2016A Refunding (Surge Space Fit Out 2009B) | 2016 | 1,020,000 | 3.0 to 5.0% | 13 Years | 2030 | 1,020,000 |
| VCBA 2016A Refunding (Biomed Rsch Lab 2009B) | 2016 | 1,225,000 | 3.0 to 5.0% | 13 Years | 2030 | 1,225,000 |
| VCBA 2016A Refunding (Hotel & Conf Ctr 2009B) | 2016 | 5,955,000 | 3.0 to 5.0% | 23 Years | 2040 | 5,955,000 |
| VCBA 2016A Refunding (Sub I Add/Renov 2009B) | 2016 | 4,980,000 | 3.0 to 5.0% | 13 Years | 2030 | 4,980,000 |
| VCBA 2016A Refunding (SUB II Renov 2009B) | 2016 | 3,120,000 | 3.0 to 5.0% | 13 Years | 2030 | 3,120,000 |
| Utilities Distribution Infrastructure | 2017 | 3,240,000 | 2.125 to 5.0% | 20 Years | 2038 | 3,240,000 |
| Total Notes Payable | | \$442,585,000 | | | | \$262,580,000 |

Long-term debt from Notes Payable as of June 30, 2018 matures as follows:

| Year | Principal | Interest | BAB Interest Subsidy* | Total Net of Subsidy |
|-----------|---------------|--------------|--------------------------|-------------------------|
| 2019 | \$19,080,000 | \$11,056,929 | \$(221,246) | \$29,915,683 |
| 2020 | 19,880,000 | 10,172,491 | (214,092) | 29,838,399 |
| 2021 | 20,015,000 | 9,258,011 | (199,099) | 29,073,912 |
| 2022 | 20,045,000 | 8,300,201 | (184,941) | 28,160,260 |
| 2023 | 19,710,000 | 7,331,804 | (171,847) | 26,869,957 |
| 2024-2028 | 101,775,000 | 23,057,078 | (622,276) | 124,209,802 |
| 2029-2033 | 46,140,000 | 6,373,335 | (159,713) | 52,353,622 |
| 2034-2038 | 14,415,000 | 1,213,728 | (12,544) | 15,616,184 |
| 2039-2043 | 1,520,000 | 36,131 | - | 1,556,131 |
| Total | \$262,580,000 | \$76,799,708 | \$(1,785,758) | \$337,593,950 |

* The University expects the BAB (Build America Bonds) subsidy to occur as displayed. However, the subsidy is subject to intervening Congressional action and thus is not guaranteed.

B. PRIOR YEAR DEBT DEFEASANCE

In previous fiscal years, the Virginia College Building Authority (VCBA) issued 9(d) VCBA pooled bonds. The proceeds were deposited into an irrevocable trust with an escrow agent to provide for all future debt service payments on other debt. The notes representing that other debt are therefore considered defeased. Accordingly, the trust account's assets and liabilities for the defeased notes are not included in the University's financial statements. On June 30, 2018, \$88,300,000 from Series 2009A and \$23,055,000 from Series 2009B 9(d) VCBA pooled bonds were considered defeased and outstanding.

10. INSTALLMENT PURCHASES PAYABLE & CAPITAL LEASE OBLIGATIONS

A. INSTALLMENT PURCHASES PAYABLE

The University has entered into various installment purchase contracts to finance the acquisition of photocopiers, pianos, the equipment necessary for the implementation of the Energy Performance Contract Agreements and other equipment. The remaining lengths of the purchase agreements range from two to seven years with varying rates of interest.

Principal and interest payments on these commitments for fiscal years subsequent to June 30, 2018 are as follows:

| Year | Principal | Interest | Total |
|-----------|-------------|-----------|-------------|
| 2019 | \$1,696,711 | \$99,194 | \$1,795,905 |
| 2020 | 1,679,094 | 74,481 | 1,753,575 |
| 2021 | 1,638,651 | 50,578 | 1,689,229 |
| 2022 | 662,685 | 31,973 | 694,658 |
| 2023 | 587,573 | 22,318 | 609,891 |
| 2024-2025 | 1,028,144 | 22,105 | 1,050,249 |
| Total | \$7,292,858 | \$300,649 | \$7,593,507 |

B. CAPITAL LEASE OBLIGATIONS

During FY 2011, the University entered into a twenty-five year capital lease with George Mason University Foundation (GMUF) for the provision of a 150,000 square foot administration building at the Fairfax campus. In May 2018, GMUF issued refunding revenue bonds, the proceeds of which were used to retire the outstanding bonds and the interest rate swap termination fee (See Note 20.E). The refunding did not have a material effect on the capital lease. The University has accounted for the acquisition of the administration building and its furniture and equipment as a capital lease, and therefore has recorded the building and its furniture and equipment as Depreciable capital assets, net, and has also recorded a corresponding lease liability in Long-term debt, both of which are on its Statement of Net Position as of June 30, 2018.

During FY 2013, the University began a 30 year capital lease with George Mason University Foundation (GMUF) for the provision of an 80,858 square foot residence hall at the Prince William campus. The University has accounted for the acquisition of the residence hall as a capital lease, and therefore has recorded the building as a Depreciable capital asset, net, and has also recorded a corresponding lease liability in Long-term debt, both on its Statement of Net Position as of June 30, 2018.

During FY 2014, the University began a 20 year capital lease with George Mason University Foundation (GMUF) for the provision of a 31,879 square foot office building and land in downtown Fairfax, close to the Fairfax campus. The University has accounted for the acquisition of the office building as a capital lease, and therefore has recorded land as a Nondepreciable capital asset, the building as a Depreciable capital asset, net, and has also recorded a corresponding lease liability in Long-term debt, all on its Statement of Net Position as of June 30, 2018.

During FY 2015, the University began a 29.5 year capital lease with George Mason University Foundation (GMUF) for the provision of a 75,000 square foot lab building at the Prince William campus. The University has accounted for the acquisition of the lab building as a capital lease, and therefore has recorded the building as a Depreciable capital asset, net, and has also recorded a corresponding lease liability in Long-term debt, both on its Statement of Net Position as of June 30, 2018.

During FY 2018, the University began a 10 year capital lease with George Mason University Foundation (GMUF) for the provision of an 183,000 square foot residence hall at the Fairfax campus. The University has accounted for the acquisition of the residence hall as a capital lease, and therefore has recorded the building as a Depreciable capital asset, net, and has also recorded a corresponding lease liability in Long-term debt, both on its Statement of Net Position as of June 30, 2018.

Payments of principal, interest, and executory costs on the capital leases for fiscal years subsequent to June 30, 2018 are as follows:

| Fiscal Year | Principal | Interest | Executory | Total |
|-------------|--------------|--------------|-------------|---------------|
| 2019 | \$3,197,530 | \$4,914,240 | \$342,534 | \$8,454,304 |
| 2020 | 3,773,118 | 4,758,013 | 344,470 | 8,875,601 |
| 2021 | 4,002,758 | 4,586,052 | 350,238 | 8,939,048 |
| 2022 | 4,174,766 | 4,410,012 | 349,835 | 8,934,613 |
| 2023 | 4,399,762 | 4,220,382 | 353,372 | 8,973,516 |
| 2024-2028 | 24,714,510 | 17,824,881 | 1,821,726 | 44,361,117 |
| 2029-2033 | 19,134,448 | 12,206,012 | 1,068,521 | 32,408,981 |
| 2034-2038 | 18,886,230 | 6,332,586 | 635,882 | 25,854,698 |
| 2039-2042 | 13,391,717 | 1,333,069 | 507,679 | 15,232,465 |
| Total | \$95,674,839 | \$60,585,247 | \$5,774,257 | \$162,034,343 |

11. EXPENSES BY NATURAL CLASSIFICATION

The following table shows a classification of expenses both by function as listed in the Statement of Revenues, Expenses, and Changes in Net Position and by natural classification, which is the basis for amounts shown in the Statement of Cash Flows.

| | Salaries and Wages | Fringe Benefits | Goods and Services | Student Aid | Depreciation & Amortization | Total |
|-----------------------------|--------------------|-----------------|--------------------|--------------|-----------------------------|---------------|
| Instruction | \$209,514,133 | \$59,030,960 | \$29,670,191 | \$- | \$- | \$298,215,284 |
| Research | 43,652,486 | 8,937,272 | 26,544,579 | - | - | 79,134,337 |
| Academic Support | 39,266,249 | 13,248,019 | 13,822,614 | - | - | 66,336,882 |
| Student Services | 18,350,019 | 6,147,266 | 6,247,077 | - | - | 30,744,362 |
| Public Service | 8,731,373 | 1,942,066 | 10,816,459 | - | - | 21,489,898 |
| Operation & Maintenance | 18,508,710 | 7,191,971 | 25,447,055 | - | - | 51,147,736 |
| Institutional Support | 32,687,728 | 11,529,779 | 3,727,798 | - | - | 47,945,305 |
| Depreciation & Amortization | - | - | - | - | 63,701,629 | 63,701,629 |
| Student Aid | - | - | - | 30,114,850 | - | 30,114,850 |
| Auxiliary Enterprises | 40,966,263 | 12,390,100 | 91,596,622 | - | - | 144,952,985 |
| Totals | \$411,676,961 | \$120,417,433 | \$207,872,395 | \$30,114,850 | \$63,701,629 | \$833,783,268 |

12. STATE APPROPRIATIONS- CURRENT UNRESTRICTED FUNDS

George Mason University receives appropriations from the General Fund of the Commonwealth. The Appropriation Act specifies that such unexpended appropriations shall revert, as specifically provided by the General Assembly, at the end of a biennium. For years ending at the middle of a biennium, unexpended appropriations that have not been approved for re-appropriation in the next year by the Governor become part of the General Fund of the Commonwealth and are, therefore, no longer available to the University for disbursements. The following is a summary of General Fund appropriations received by the institution including all supplemental appropriations and reversions:

| General Fund Appropriations | |
|--------------------------------------------|---------------|
| Original Appropriation | \$131,499,066 |
| Central Appropriations Distributions: | |
| State Employee Salary Increase Adjustments | 3,257,380 |

| | |
|------------------------------------------------|----------------------|
| State Employee Retirement Adjustments | (246,278) |
| State Employee Health Insurance Adjustments | 2,227,138 |
| State Employee Sickness/Disability Adjustments | (5,623) |
| State Employee Group Life Adjustments | 151,599 |
| PMIS Internal Service Fund Charges Adjustment | 52,455 |
| Other Central Appropriations Adjustments | 16,115 |
| VIVA | 43,939 |
| Virginia Degree Completion Network | 860,000 |
| Other General Fund Adjustments | (4,174) |
| Total | <u>\$137,851,617</u> |

13. INTEREST EXPENSE

During fiscal year 2018, the University incurred interest charges totaling \$21,360,985, which were expensed.

14. COMMITMENTS

A. OPERATING LEASES

The University is committed under various operating leases for rental of off-campus facilities. The future lease terms are for periods of one to nine years. Facility rental expenses for the fiscal year ended June 30, 2018 were \$5,732,585. The University had, as of June 30, 2018, the following total future minimum rental payments due under the above leases:

| Year Ended June 30 | Total |
|--------------------|---------------------|
| 2019 | \$5,562,597 |
| 2020 | 5,243,443 |
| 2021 | 5,207,893 |
| 2022 | 5,298,018 |
| 2023 | 5,095,450 |
| 2024-2028 | 13,917,331 |
| Total | <u>\$40,324,732</u> |

B. CONSTRUCTION

Outstanding commitments for capital outlay projects that were under construction at June 30, 2018 were \$1,566,236.

15. RETIREMENT AND PENSION SYSTEMS

A. VIRGINIA RETIREMENT SYSTEM (VRS) STATE EMPLOYEE DEFINED BENEFIT RETIREMENT PLAN AND VIRGINIA LAW OFFICERS SYSTEM (VaLORS) DEFINED BENEFIT RETIREMENT PLAN

Plan Description

All full-time, salaried permanent employees of state agencies are automatically covered by the VRS State Employee Retirement Plan or the VaLORS Retirement Plan upon employment. These plans are administered by

the Virginia Retirement System (the System) along with plans for other employer groups in the Commonwealth of Virginia. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria as defined in the *Code of Virginia*, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

The System administers three different benefit structures for covered employees in the VRS State Employee Retirement Plan – Plan 1, Plan 2, and, Hybrid and two different benefit structures for covered employees in the VaLORS Retirement Plan – Plan 1 and Plan 2. Each of these benefit structures has different eligibility criteria. The specific information for each plan and the eligibility for covered groups within each plan are set out in the table below:

RETIREMENT PLAN PROVISIONS BY PLAN STRUCTURE

| PLAN 1 | PLAN 2 | HYBRID RETIREMENT PLAN |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>About Plan 1 Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.</p> | <p>About Plan 2 Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.</p> | <p>About the Hybrid Retirement Plan The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan.</p> <ul style="list-style-type: none"> • The defined benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. • The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions. • In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees. |
| <p>Eligible Members Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013, and they have not taken any refund.</p> <p>Hybrid Opt-In Election VRS non-hazardous duty covered Plan 1 members were allowed to</p> | <p>Eligible Members Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013.</p> <p>Hybrid Opt-In Election Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid</p> | <p>Eligible Members Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes:</p> <ul style="list-style-type: none"> • State employees* • Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014 |

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| <p>make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014.</p> <p>If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</p> <p>Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.</p> | <p>Retirement Plan during a special election window held January 1 through April 30, 2014.</p> <p>The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014.</p> <p>If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.</p> <p>Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.</p> | <p>*Non-Eligible Members Some employees are not eligible to participate in the Hybrid Retirement Plan. They include:</p> <ul style="list-style-type: none"> Members of the Virginia Law Officers' Retirement System (VaLORS) <p>Those employees eligible for an optional retirement plan (ORP) must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under Plan 1 or Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select Plan 1 or Plan 2 (as applicable) or ORP.</p> |
| <p>Retirement Contributions State employees, excluding state elected officials, and optional retirement plan participants, contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payment.</p> | <p>Retirement Contributions State employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction.</p> | <p>Retirement Contributions A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.</p> |
| <p>Creditable Service Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their</p> | <p>Creditable Service Same as Plan 1.</p> | <p>Creditable Service <u>Defined Benefit Component:</u> Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable</p> |

| PLAN 1 | PLAN 2 | HYBRID RETIREMENT PLAN |
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| <p>eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.</p> | | <p>service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.</p> <p><u>Defined Contributions Component:</u> Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.</p> |
| <p>Vesting Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of creditable service. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund.</p> <p>Members are always 100% vested in the contributions that they make.</p> | <p>Vesting Same as Plan 1.</p> | <p>Vesting <u>Defined Benefit Component:</u> Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of creditable service. Plan 1 or Plan 2 members with at least five years (60 months) of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component.</p> <p><u>Defined Contributions Component:</u> Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan.</p> <p>Members are always 100% vested in the contributions that they make.</p> <p>Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service.</p> <ul style="list-style-type: none"> • After two years, a member is 50% vested and may withdraw 50% of employer contributions. • After three years, a member is 75% vested and may withdraw 75% of employer contributions. |

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| | | <ul style="list-style-type: none"> • After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. <p>Distribution is not required by law until age 70½.</p> |
| Calculating the Benefit The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total service credit at retirement. It is one of the benefit payout options available to a member at retirement. An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit. | Calculating the Benefit See definition under Plan 1. | Calculating the Benefit <u>Defined Benefit Component:</u> See definition under Plan 1 <u>Defined Contribution Component:</u> The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions. |
| Average Final Compensation A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee. | Average Final Compensation A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee. | Average Final Compensation Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan. |
| Service Retirement Multiplier VRS: The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%. VaLORS: The retirement multiplier for VaLORS employees is 1.70% or 2.00%. | Service Retirement Multiplier VRS: Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members the retirement multiplier is 1.65% for creditable service earned, purchased or granted on or after January 1, 2013. VaLORS: The retirement multiplier for VaLORS employees is 2.00%. | Service Retirement Multiplier <u>Defined Benefit Component:</u> VRS: The retirement multiplier for the defined benefit component is 1.00%. For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans. VaLORS: Not applicable. <u>Defined Contribution Component:</u> Not applicable. |
| Normal Retirement Age VRS: Age 65. VaLORS: Age 60. | Normal Retirement Age VRS: Normal Social Security retirement age. VaLORS: Same as Plan 1. | Normal Retirement Age <u>Defined Benefit Component:</u> VRS: Same as Plan 2. VaLORS: Not applicable. <u>Defined Contribution Component:</u> |

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| | | Members are eligible to receive distributions upon leaving employment, subject to restrictions. |
| Earliest Unreduced Retirement Eligibility VRS: Age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service. VaLORS: Age 60 with at least five years of creditable service or age 50 with at least 25 years of creditable service. | Earliest Unreduced Retirement Eligibility VRS: Normal Social Security retirement age with at least five years (60 months) of creditable service or when their age and service equal 90. VaLORS: Same as Plan 1. | Earliest Unreduced Retirement Eligibility Defined Benefit Component: VRS: Normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90. VaLORS: Not applicable. Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions. |
| Earliest Reduced Retirement Eligibility VRS: Age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service. VaLORS: 50 with at least five years of creditable service. | Earliest Reduced Retirement Eligibility VRS: Age 60 with at least five years (60 months) of creditable service. VaLORS: Same as Plan 1. | Earliest Reduced Retirement Eligibility Defined Benefit Component: VRS: Age 60 with at least five years (60 months) of creditable service. VaLORS: Not applicable. Defined Contribution Component: Members are eligible to receive distributions upon leaving employment, subject to restrictions. |
| Cost-of-Living Adjustment (COLA) in Retirement The Cost-of-Living Adjustment (COLA) matches the first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%. Eligibility: For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date. For members who retire with a reduced benefit and who have less | Cost-of-Living Adjustment (COLA) in Retirement The Cost-of-Living Adjustment (COLA) matches the first 2% increase in the CPI-U and half of any additional increase (up to 2%), for a maximum COLA of 3%. Eligibility: Same as Plan 1 | Cost-of-Living Adjustment (COLA) in Retirement Defined Benefit Component: Same as Plan 2. Defined Contribution Component: Not applicable. Eligibility: Same as Plan 1 and Plan 2. |

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| <p>than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.</p> <p><u>Exceptions to COLA Effective Dates:</u> The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances:</p> <ul style="list-style-type: none"> • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires on disability. • The member retires directly from short-term or long-term disability under the Virginia Sickness and Disability Program (VSDP). • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins. | <p><u>Exceptions to COLA Effective Dates:</u> Same as Plan 1</p> | <p><u>Exceptions to COLA Effective Dates:</u> Same as Plan 1 and Plan 2.</p> |
| <p>Disability Coverage Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.7% on all service, regardless of when it was earned, purchased or granted.</p> <p>Most state employees are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement.</p> | <p>Disability Coverage Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted.</p> <p>Most state employees are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement.</p> | <p>Disability Coverage State employees (including Plan 1 and Plan 2 opt-ins) participating in the Hybrid Retirement Plan are covered under the Virginia Sickness and Disability Program (VSDP), and are not eligible for disability retirement.</p> <p>Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VSDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.</p> |

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| VSDP members are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits. | VSDP members are subject to a one-year waiting period before becoming eligible for non-work related disability benefits. | |
| Purchase of Prior Service Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as creditable service in their plan. Prior creditable service counts toward vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. Members also may be eligible to purchase periods of leave without pay. | Purchase of Prior Service Same as Plan 1. | Purchase of Prior Service <u>Defined Benefit Component:</u> Same as Plan 1, with the following exceptions: <ul style="list-style-type: none"> Hybrid Retirement Plan members are ineligible for ported service. <u>Defined Contribution Component:</u> Not applicable. |

Contributions

The contribution requirement for active employees is governed by §51.1-145 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement. Prior to July 1, 2012, the 5.00% member contribution was paid by the employer. Beginning July 1, 2012 state employees were required to pay the 5.00% member contribution and the employer was required to provide a salary increase equal to the amount of the increase in the employee-paid member contribution. Each state agency's contractually required employer contribution rate for the year ended June 30, 2018 was 13.49% of covered employee compensation for employees in the VRS State Employee Retirement Plan. For employees in the VaLORS Retirement Plan, the contribution rate was 21.05% of covered employee compensation. These rates were based on actuarially determined rates from an actuarial valuation as of June 30, 2015. The contribution rate for the VRS State Employee Retirement Plan also reflects the transfer in June 2016 of \$162,406,273 as an accelerated payback of the deferred contribution in the 2010-12 biennium. The contribution rate for the VaLORS Retirement Plan also reflects the transfer in June 2016 of \$16,491,559 as an accelerated payback of the deferred contribution in the 2010-12 biennium. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions from the University to the VRS State Employee Retirement Plan were \$17,194,913 and \$16,643,486 for the years ended June 30, 2018 and June 30, 2017, respectively. Contributions from the University to the VaLORS Retirement Plan were \$614,204 and \$529,133 for the years ended June 30, 2018 and June 30, 2017, respectively.

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2018, the University reported a liability of \$183,719,000 for its proportionate share of the VRS State Employee Retirement Plan Net Pension Liability and a liability of \$4,798,000 for its proportionate share of the VaLORS Retirement Plan Net Pension Liability. The Net Pension Liability was measured as of June 30, 2017 and the total pension liability used to calculate the Net Pension Liability was determined by an actuarial valuation as of

that date. The University's proportion of the Net Pension Liability was based on the University's actuarially determined employer contributions to the pension plan for the year ended June 30, 2017 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2017, the University's proportion of the VRS State Employee Retirement Plan was 3.15262% as compared to 3.25453% at June 30, 2016. At June 30, 2017, the University's proportion of the VaLORS Retirement Plan was 0.73104% as compared to 0.74563% at June 30, 2016.

For the year ended June 30, 2018, the University recognized pension expense of \$11,297,000 for the VRS State Employee Retirement Plan and \$180,000 for the VaLORS Retirement Plan. Since there was a change in proportionate share between June 30, 2016 and June 30, 2017, a portion of the pension expense was related to deferred amounts from changes in proportion and from differences between employer contributions and the proportionate share of employer contributions.

At June 30, 2018, the University reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------|
| Differences between expected and actual experience | \$404,000 | \$5,576,000 |
| Net difference between projected and actual earnings on pension plan investments | - | 7,981,000 |
| Change in assumptions | 1,785,000 | 312,000 |
| Changes in proportion and differences between employer contributions and proportionate share of contributions | 59,000 | 5,694,000 |
| Employer contributions subsequent to measurement date | 17,809,117 | - |
| Total | \$20,057,117 | \$19,563,000 |

\$17,809,117 reported as deferred outflows of resources related to pensions resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the Fiscal Year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense in future reporting periods as follows:

| Year Ended June 30 | |
|--------------------|---------------|
| FY 2019 | \$(9,571,000) |
| FY 2020 | (1,121,000) |
| FY 2021 | (1,255,000) |
| FY 2022 | (5,368,000) |

Actuarial Assumptions

The total pension liability for the VRS State Employee Retirement Plan was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

| | |
|---------------------------------------|---------------------------------------------------------------------------|
| Inflation | 2.5 percent |
| Salary increases, including inflation | 3.5 percent – 5.35 percent |
| Investment rate of return | 7.0 percent, net of pension plan investment expense, including inflation* |

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of pension liabilities.

Mortality rates:

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increase rate from 14% to 25% |

The total pension liability for the VaLORS Retirement Plan was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

| | |
|---------------------------------------|---------------------------------------------------------------------------|
| Inflation | 2.5 percent |
| Salary increases, including inflation | 3.5 percent – 4.75 percent |
| Investment rate of return | 7.0 percent, net of pension plan investment expense, including inflation* |

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of pension liabilities.

Mortality rates:

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 1 year.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decrease rate from 50% to 35% |

Net Pension Liability

The net pension liability (NPL) is calculated separately for each system and represents that particular system's total pension liability determined in accordance with GASB Statement No. 67, less that system's fiduciary net position.

As of June 30, 2017, NPL amounts for the VRS State Employee Retirement Plan and the VaLORS Retirement Plan are as follows (amounts expressed in thousands):

| | State Employee Retirement Plan | VaLORS Retirement Plan |
|------------------------------------------|-----------------------------------------------|---------------------------------------|
| Total Pension Liability | \$ 23,617,412 | \$ 2,002,184 |
| Plan Fiduciary Net Position | <u>17,789,888</u> | <u>1,345,887</u> |
| Employers' Net Pension Liability (Asset) | <u>\$ 5,827,524</u> | <u>\$ 656,297</u> |

| | | |
|-------------------------------------------------------------------------------|--------|--------|
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 75.33% | 67.22% |
|-------------------------------------------------------------------------------|--------|--------|

The total pension liability is calculated by the System's actuary, and each plan's fiduciary net position is reported in the System's financial statements. The net pension liability is disclosed in accordance with the requirements of GASB Statement No. 67 in the System's notes to the financial statements and required supplementary information.

Long-Term Expected Rate of Return

The long-term expected rate of return on pension System investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension System investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

| Asset Class (Strategy) | Target Allocation | Arithmetic Long-Term Expected Rate of Return | Weighted Average Long-Term Expected Rate of Return |
|--------------------------------------|--------------------------|-----------------------------------------------------|-----------------------------------------------------------|
| Public Equity | 40.00% | 4.54% | 1.82% |
| Fixed Income | 15.00% | 0.69% | 0.10% |
| Credit Strategies | 15.00% | 3.96% | 0.59% |
| Real Assets | 15.00% | 5.76% | 0.86% |
| Private Equity | 15.00% | 9.53% | 1.43% |
| Total | <u>100.00%</u> | | <u>4.80%</u> |
| Inflation | | | 2.50% |
| * Expected arithmetic nominal return | | | <u>7.30%</u> |

* The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019 the rate contributed by the University for the VRS State Employee

Retirement Plan and the VaLORS Retirement Plan will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, all agencies are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the University's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the University's proportionate share of the VRS State Employee Retirement Plan net pension liability using the discount rate of 7.00%, as well as what the University's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

| | 1.00% Decrease (6.00%) | Current Discount Rate (7.00%) | 1.00% Increase (8.00%) |
|--------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------|
| University's proportionate share of the VRS State Employee Retirement Plan Net Pension Liability | \$271,378,000 | \$183,719,000 | \$110,104,000 |

The following presents the University's proportionate share of the VaLORS Retirement Plan net pension liability using the discount rate of 7.00%, as well as what the University's proportionate share of the net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

| | 1.00% Decrease (6.00%) | Current Discount Rate (7.00%) | 1.00% Increase (8.00%) |
|--------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------|
| University's proportionate share of the VaLORS Retirement Plan Net Pension Liability | \$6,693,000 | \$4,798,000 | \$3,231,000 |

Pension Plan Fiduciary Net Position

Detailed information about the VRS State Employee Retirement Plan's Fiduciary Net Position or the VaLORS Retirement Plan's Fiduciary Net Position is available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at <http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf>, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Payables to the Pension Plan

As of June 30, 2018, the University had a payable to VRS in the amount of \$1,157,014. Of this amount, \$1,090,246 was for the VRS State Employee Retirement Plan and \$66,768 was for VaLORS. These amounts represent current legally required contributions to the pension plan not yet remitted to VRS in accordance with the payment terms.

The University's employer pension contribution amounts for each month are calculated based on employee salaries as of the first business day of each month multiplied by the legally required contribution rate and paid to VRS no later than the 10th of the following month.

B. HYBRID RETIREMENT PLAN – DEFINED CONTRIBUTION COMPONENT

The University's expenses also include the amount assessed by the Commonwealth for the employer's required contributions to the defined contribution component of the Hybrid retirement plan.

During FY 2018, the employer's required retirement contribution rate was 1% for the defined contribution component of the Hybrid Plan. These contributions totaled \$355,808 for the year ended June 30, 2018. All participants were required to contribute 1% to the defined contribution portion of the Hybrid Plan.

During FY 2018, participants were permitted to make voluntary contributions of up to 4% to the Hybrid plan which the University is required to match with an employer contribution of up to 2.5%. The employer matching contribution totaled \$338,777 for the year ended June 30, 2018.

Contributions to the Hybrid plan were calculated using plan's covered payroll of \$35,580,823 for the year ended June 30, 2018.

C. FACULTY RETIREMENT PLANS

Most full-time faculty and certain administrative staff participate in one faculty retirement plan with two investment providers rather than the VRS. These are defined contribution plans where the retirement benefits received are based upon the employer's contribution plus interest and dividends.

For plan participants hired prior to July 1, 2010, the employer's contribution was 10.4% and the participant was not required to make contributions to the plan. Plan participants hired after June 30, 2010 received an employer contribution of 8.5% and were required to contribute 5%. The plan structure for participants hired after June 30, 2010 is designated in the table below with a 2 following the investment providers' names.

Individual contracts issued under the plan provide for full and immediate vesting of the University's contributions. Total pension expense under these plans was \$17,820,814 for the fiscal year ended June 30, 2018 based on total covered payroll of \$186,186,742. The University's outstanding liability for accrued pension expense as of June 30, 2018 was \$623,643. The change in the accrued liability amount from the prior year end was an increase of \$9,100, which accounts for the difference between the pension contributions made to plan trustees, as set forth in the table below, and the pension expense amount stated above. FY 2018 pension contributions were calculated using the plan's covered payroll of \$186,031,811 for Fiscal Year 2018.

The following table summarizes the contributions and participation in the optional retirement plans:

| Faculty Retirement Plan | Pension Contributions Made to Plan Trustees | Plan's Covered Payroll | Contribution Percentage |
|-------------------------|---------------------------------------------|------------------------|-------------------------|
| TIAA-CREF* | \$7,907,814 | \$76,036,675 | 10.4% |
| TIAA-CREF 2 | 3,342,948 | 39,328,803 | 8.5% |
| Fidelity Investments | 3,034,136 | 29,174,380 | 10.4% |
| Fidelity Investments 2 | 3,526,816 | 41,491,954 | 8.5% |
| Total | \$17,811,714 | \$186,031,812 | |

*Teachers Insurance and Annuity Association/College Retirement Equities Fund

D. DEFERRED COMPENSATION

Employees of the University are employees of the Commonwealth of Virginia. State employees may participate in the Commonwealth's Deferred Compensation Plan. Participating employees can contribute to the plan each pay period with the Commonwealth matching up to \$20 per pay period. The dollar amount match can change depending on the funding available in the Commonwealth's budget. The Commonwealth's Deferred Compensation Plan is a qualified defined contribution plan under Section 401(a) of the Internal Revenue Code.

Employees may also participate in a University sponsored 403(b) plan or Roth plan, and receive Employer matching contributions on the same basis as the Commonwealth's plan.

Employer contributions under these Deferred Compensation Plans were \$1,227,036 for the fiscal year ended June 30, 2018.

16. OTHER POSTEMPLOYMENT BENEFITS

The University participates in postemployment benefit programs that are sponsored by the Commonwealth and administered by the Virginia Retirement System. These programs include the Group Life Insurance Program, Retiree Health Insurance Credit Program, Line of Duty Act Program and Virginia Sickness and Disability Program. The University also participates in the Pre-Medicare Retiree Healthcare Plan, which is sponsored by the Commonwealth and administered by the Department of Human Resources Management.

A. GROUP LIFE INSURANCE PROGRAM

Plan Description

All full-time, salaried permanent employees of the state agencies, teachers and employees of participating political subdivisions are automatically covered by the VRS Group Life Insurance Program upon employment. This plan is administered by the Virginia Retirement System (the System), along with pensions and other OPEB plans, for public employer groups in the Commonwealth of Virginia.

In addition to the Basic Group Life Insurance benefit, members are also eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance Program. For members who elect the optional group life insurance coverage, the insurer bills employers directly for the premiums. Employers deduct these premiums from members' paychecks and pay the premiums to the insurer. Since this is a separate and fully insured program, it is not included as part of the Group Life Insurance Program OPEB.

The specific information for Group Life Insurance Program OPEB, including eligibility, coverage and benefits is set out in the table below:

| GROUP LIFE INSURANCE PROGRAM PLAN PROVISIONS | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Eligible Employees | |
| The Group Life Insurance Program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program, including the following employers that do not participate in VRS for retirement: | |
| <ul style="list-style-type: none">• City of Richmond• City of Portsmouth | |

- City of Roanoke
- City of Norfolk
- Roanoke City Schools Board

Basic group life insurance coverage is automatic upon employment. Coverage ends for employees who leave their position before retirement eligibility or who take a refund of their member contributions and accrued interest.

Benefit Amounts

The benefits payable under the Group Life Insurance Program have several components.

- **Natural Death Benefit** – The natural death benefit is equal to the employee’s covered compensation rounded to the next highest thousand and then doubled.
- **Accidental Death Benefit** – The accidental death benefit is double the natural death benefit.
- **Other Benefit Provisions** – In addition to the basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances. These include:
 - Accidental dismemberment benefit
 - Safety belt benefit
 - Repatriation benefit
 - Felonious assault benefit
 - Accelerated death benefit option

Reduction in Benefit Amounts

The benefit amounts provided to members covered under the Group Life Insurance Program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.

Minimum Benefit Amount and Cost-of-Living Adjustment (COLA)

For covered members with at least 30 years of creditable service, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at \$8,000 by statute. This amount is increased annually based on the VRS Plan 2 cost-of-living adjustment and is currently \$8,111.

Contributions

The contribution requirements for the Group Life Insurance Program are governed by §51.1-506 and §51.1-508 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the Group Life Insurance Program was 1.31% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.79% (1.31% X 60%) and the employer component was 0.52% (1.31% X 40%). Employers may elect to pay all or part of the employee contribution, however the employer must pay all of the employer contribution. Each employer’s contractually required employer contribution rate for the year ended June 30, 2018 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015. The actuarially determined rate, when combined with employee

contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the Group Life Insurance Program from the University were \$1,686,252 and \$1,586,028 for the years ended June 30, 2018 and June 30, 2017, respectively.

GLI OPEB Liabilities, GLI OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the Group Life Insurance Program OPEB

At June 30, 2018, the University reported a liability of \$25,016,000 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2017 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation as of that date. The University's proportion of the Net GLI OPEB Liability was based on the University's actuarially determined employer contributions to the Group Life Insurance Program for the year ended June 30, 2017 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2017, the University's proportion was 1.66% as compared 1.68% at June 30, 2016.

For the year ended June 30, 2018, the University recognized GLI OPEB expense of \$244,000. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2018, the University reported deferred outflows of resources and deferred inflows of resources related to the GLI OPEB from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|--------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------|
| Differences between expected and actual experience | \$- | \$553,000 |
| Net difference between projected and actual earnings on GLI OPEB program investments | - | 942,000 |
| Change in assumptions | - | 1,289,000 |
| Changes in proportion | - | 197,000 |
| Employer contributions subsequent to measurement date | 1,686,252 | - |
| Total | \$1,686,252 | \$2,981,000 |

\$1,686,252 reported as deferred outflows of resources related to the GLI OPEB resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB Liability in the Fiscal Year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

| Year Ended June 30 | |
|--------------------|-------------|
| FY 2019 | \$(610,000) |
| FY 2020 | (610,000) |
| FY 2021 | (610,000) |
| FY 2022 | (610,000) |
| FY 2023 | (374,000) |
| Thereafter | (167,000) |

Actuarial Assumptions

The total GLI OPEB liability was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

| | |
|-----------------------------------------|-----------------------------------------------------------------|
| Inflation | 2.5 percent |
| Salary increases, including inflation – | |
| General state employees | 3.5 percent – 5.35 percent |
| Teachers | 3.5 percent – 5.95 percent |
| SPORS employees | 3.5 percent – 4.75 percent |
| VaLORS employees | 3.5 percent – 4.75 percent |
| JRS employees | 4.5 percent |
| Locality – General employees | 3.5 percent – 5.35 percent |
| Locality – Hazardous Duty employees | 3.5 percent – 4.75 percent |
| Investment rate of return | 7.0 percent, net of pension plan expenses, including inflation* |

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of the OPEB liabilities.

Mortality rates – General State Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|

| | |
|-------------------------|-------------------------------------------------------------------------------------------------|
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 25% |

Mortality rates – Teachers

Pre-Retirement:

RP-2014 White Collar Employee Rates to age 80, White Collar Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020.

Post-Retirement:

RP-2014 White Collar Employee Rates to age 49, White Collar Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males 1% increase compounded from ages 70 to 90; females set back 3 years with 1.5% increase compounded from ages 65 to 70 and 2.0% increase compounded from ages 75 to 90.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with Scale BB to 2020; 115% of rates for males and females.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the four-year period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |

Mortality rates – SPORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

Mortality rates – VaLORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

Mortality rates – JRS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% compounding increase from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the four-year period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Decreased rates at first retirement eligibility |
| Withdrawal Rates | No change |
| Disability Rates | Removed disability rates |
| Salary Scale | No change |

Mortality rates – Largest Ten Locality Employers - General Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages and extended final retirement age from 70 to 75 |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each |

| | |
|-------------------------|--------------------------------|
| | age and service year |
| Disability Rates | Lowered disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 20% |

Mortality rates – Non-Largest Ten Locality Employers - General Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages and extended final retirement age from 70 to 75. |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Lowered disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 15% |

Mortality rates – Largest Ten Locality Employers – Hazardous Duty Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Increased disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 70% |

Mortality rates – Non-Largest Ten Locality Employers – Hazardous Duty Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 60% to 45% |

Net GLI OPEB Liability

The net OPEB liability (NOL) for the Group Life Insurance Program represents the program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of June 30, 2017, NOL amounts for the Group Life Insurance Program is as follows (amounts expressed in thousands):

Group Life
Insurance
OPEB Program

| | |
|-------------------------------------------|---------------------|
| Total GLI OPEB Liability | \$ 2,942,426 |
| Plan Fiduciary Net Position | <u>1,437,586</u> |
| Employers' Net GLI OPEB Liability (Asset) | <u>\$ 1,504,840</u> |

| | |
|--------------------------------------------------------------------------------|--------|
| Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability | 48.86% |
|--------------------------------------------------------------------------------|--------|

The total GLI OPEB liability is calculated by the System's actuary, and each plan's fiduciary net position is reported in the System's financial statements. The net GLI OPEB liability is disclosed in accordance with the requirements of GASB Statement No. 74 in the System's notes to the financial statements and required supplementary information.

Long-Term Expected Rate of Return

The long-term expected rate of return on the System's investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of System's investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

| Asset Class (Strategy) | Target Allocation | Arithmetic Long-Term Expected Rate of Return | Weighted Average Long-Term Expected Rate of Return |
|--------------------------------------|-------------------|----------------------------------------------|----------------------------------------------------|
| Public Equity | 40.00% | 4.54% | 1.82% |
| Fixed Income | 15.00% | 0.69% | 0.10% |
| Credit Strategies | 15.00% | 3.96% | 0.59% |
| Real Assets | 15.00% | 5.76% | 0.86% |
| Private Equity | 15.00% | 9.53% | 1.43% |
| Total | <u>100.00%</u> | | <u>4.80%</u> |
| Inflation | | | 2.50% |
| * Expected arithmetic nominal return | | | <u>7.30%</u> |

* The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total GLI OPEB liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made per the VRS guidance and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the University for the GLI OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected

future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

Sensitivity of the University's Proportionate Share of the Net GLI OPEB Liability to Changes in the Discount Rate

The following presents the University's proportionate share of the net GLI OPEB liability using the discount rate of 7.00%, as well as what the University's proportionate share of the net GLI OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

| | 1.00% Decrease (6.00%) | Current Discount Rate (7.00%) | 1.00% Increase (8.00%) |
|-----------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------|
| University's proportionate share of the Group Life Insurance Program Net OPEB Liability | \$32,356,000 | \$25,016,000 | \$19,067,000 |

Group Life Insurance Program Fiduciary Net Position

Detailed information about the Group Life Insurance Program's Fiduciary Net Position is available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at <http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf>, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Payables to the VRS Group Life Insurance OPEB Plan

As of June 30, 2018, the University had a payable to VRS GLI OPEB Plan in the amount of \$141,095. These amounts represent current legally required contributions to the VRS GLI OPEB plan not yet remitted to VRS in accordance with the payment terms.

B. STATE EMPLOYEE HEALTH INSURANCE CREDIT PROGRAM

Plan Description

All full-time, salaried permanent employees of state agencies are automatically covered by the VRS State Employee Health Insurance Credit Program. This plan is administered by the Virginia Retirement System (the System), along with pension and other OPEB plans, for public employer groups in the Commonwealth of Virginia. Members earn one month of service credit toward the benefit for each month they are employed and for which their employer pays contributions to VRS. The health insurance credit is a tax-free reimbursement in an amount set by the General Assembly for each year of service credit against qualified health insurance premiums retirees pay for single coverage, excluding any portion covering the spouse or dependents. The credit cannot exceed the amount of the premiums and ends upon the retiree's death.

The specific information about the State Health Insurance Credit Program OPEB, including eligibility, coverage and benefits is set out in the table below:

STATE EMPLOYEE HEALTH INSURANCE CREDIT PROGRAM (HIC) PLAN PROVISIONS

Eligible Employees

The State Employee Retiree Health Insurance Credit Program was established January 1, 1990 for retired state employees covered under VRS, SPORS, VaLORS and JRS who retire with at least 15 years of service credit.

Eligible employees are enrolled automatically upon employment. They include:

- Full-time and part-time permanent salaried state employees covered under VRS, SPORS, VaLORS and JRS.

Benefit Amounts

The State Employee Retiree Health Insurance Credit Program provides the following benefits for eligible employees:

- **At Retirement** – For State employees who retire, the monthly benefit is \$4.00 per year of service per month with no cap on the benefit amount.
- **Disability Retirement** – For State employees, other than state police officers, who retire on disability or go on long-term disability under the Virginia Sickness and Disability Program (VSDP), the monthly benefit is \$120.00 or \$4.00 per year of service, whichever is higher.

For State police officers employees with a non-work-related disability who retire on disability or go on long-term disability under the Virginia Sickness and Disability Program (VSDP) the monthly benefit is \$120.00 or \$4.00 per year of service, whichever is higher.

For State police officers employees with a work-related disability, there is no benefit provided under the State Employee Retiree Health Insurance Credit Program if the premiums are being paid under the Virginia Line of Duty Act. However, they may receive the credit for premiums paid for other qualified health plans.

Health Insurance Credit Program Notes:

- The monthly Health Insurance Credit benefit cannot exceed the individual premium amount.
- Employees who retire after being on long-term disability under VSDP must have at least 15 years of service credit to qualify for the health insurance credit as a retiree.

Contributions

The contribution requirement for active employees is governed by §51.1-1400(D) of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Each state agency's contractually required employer contribution rate for the year ended June 30, 2018 was 1.18% of covered employee compensation for employees in the VRS State Employee Health Insurance Credit Program. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015. The actuarially determined rate was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions from the University to the VRS State Employee Health Insurance Credit Program was \$3,809,658 and \$3,577,947 for the years ended June 30, 2018 and June 30, 2017, respectively.

State Employee Health Insurance Credit Program OPEB Liabilities, State Employee Health Insurance Credit Program OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to State Employee Health Insurance Credit Program OPEB

At June 30, 2018, the University reported a liability of \$42,921,000 for its proportionate share of the VRS State Employee Health Insurance Credit Program Net OPEB Liability. The Net VRS State Employee Health Insurance Credit Program OPEB Liability was measured as of June 30, 2017 and the total VRS State Employee Health Insurance Credit Program OPEB liability used to calculate the Net VRS State Employee Health Insurance Credit Program OPEB Liability was determined by an actuarial valuation as of that date. The University's proportion of the Net VRS State Employee Health Insurance Credit Program OPEB Liability was based on the University's actuarially determined employer contributions to the VRS State Employee Health Insurance Credit Program OPEB plan for the year ended June 30, 2017 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2017, the University's proportion of the VRS State Employee Health Insurance Credit Program was 4.71% as compared to 4.77% at June 30, 2016.

For the year ended June 30, 2018, the University recognized VRS State Employee Health Insurance Credit Program OPEB expense of \$3,651,000. Since there was a change in proportionate share between June 30, 2016 and June 30, 2017 a portion of the VRS State Employee Health Insurance Credit Program Net OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2018, the University reported deferred outflows of resources and deferred inflows of resources related to the VRS State Employee Health Insurance Credit Program OPEB from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|-----------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------|
| Differences between expected and actual experience | \$- | \$- |
| Net difference between projected and actual earnings on State HIC OPEB plan investments | - | 105,000 |
| Change in assumptions | - | 484,000 |
| Changes in proportionate share | - | 408,000 |
| Employer contributions subsequent to measurement date | 3,809,658 | - |
| Total | \$3,809,658 | \$997,000 |

\$3,809,658 reported as deferred outflows of resources related to the State Employee HIC OPEB resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction of the Net State Employee HIC OPEB Liability in the Fiscal Year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the State Employee HIC OPEB will be recognized in the State Employee HIC OPEB expense in future reporting periods as follows:

| Year Ended June 30 | |
|--------------------|-------------|
| FY 2019 | \$(197,000) |
| FY 2020 | (197,000) |
| FY 2021 | (197,000) |
| FY 2022 | (197,000) |
| FY 2023 | (171,000) |
| Thereafter | (38,000) |

Actuarial Assumptions

The total State Employee HIC OPEB liability for the VRS State Employee Health Insurance Credit Program was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

| | |
|-----------------------------------------|--------------------------------------------------------------------|
| Inflation | 2.5 percent |
| Salary increases, including inflation – | |
| General state employees | 3.5 percent – 5.35 percent |
| SPORS employees | 3.5 percent – 4.75 percent |
| VaLORS employees | 3.5 percent – 4.75 percent |
| JRS employees | 4.5 percent |
| Investment rate of return | 7.0 percent, net of plan investment expenses, including inflation* |

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of the OPEB liabilities.

Mortality rates – General State Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |

| | |
|-------------------------|-------------------------------------------------------------------------------------------------|
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 25% |

Mortality rates – SPORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

Mortality rates – VaLORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

Mortality rates – JRS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% compounding increase from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the four-year period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Decreased rates at first retirement eligibility |
| Withdrawal Rates | No change |
| Disability Rates | Removed disability rates |
| Salary Scale | No change |

Net State Employee HIC OPEB Liability

The net OPEB liability (NOL) for the State Employee Health Insurance Credit Program represents the program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of June 30, 2017, NOL amounts for the VRS State Employee Health Insurance Credit Program is as follows (amounts expressed in thousands):

State
Employee
HIC OPEB Plan

| | |
|-----------------------------------------------|-------------------|
| Total State Employee HIC OPEB Liability | \$ 990,028 |
| Plan Fiduciary Net Position | <u>79,516</u> |
| State Employee net HIC OPEB Liability (Asset) | <u>\$ 910,512</u> |

| | |
|-----------------------------------------------------------------------------------------------|-------|
| Plan Fiduciary Net Position as a Percentage of the Total State Employee HIC OPEB Liability | 8.03% |
|-----------------------------------------------------------------------------------------------|-------|

The total State Employee HIC OPEB liability is calculated by the System's actuary, and the plan's fiduciary net position is reported in the System's financial statements. The net State Employee HIC OPEB liability is disclosed in accordance with the requirements of GASB Statement No. 74 in the System's notes to the financial statements and required supplementary information.

Long-Term Expected Rate of Return

The long-term expected rate of return on VRS System investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of VRS System investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

| Asset Class (Strategy) | Target Allocation | Arithmetic Long-Term Expected Rate of Return | Weighted Average Long-Term Expected Rate of Return |
|--------------------------------------|-------------------|----------------------------------------------|----------------------------------------------------|
| Public Equity | 40.00% | 4.54% | 1.82% |
| Fixed Income | 15.00% | 0.69% | 0.10% |
| Credit Strategies | 15.00% | 3.96% | 0.59% |
| Real Assets | 15.00% | 5.76% | 0.86% |
| Private Equity | 15.00% | 9.53% | 1.43% |
| Total | <u>100.00%</u> | | <u>4.80%</u> |
| Inflation | | | 2.50% |
| * Expected arithmetic nominal return | | | <u>7.30%</u> |

* The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total State Employee HIC OPEB was 7.00%. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made in accordance with the VRS funding policy at rates equal to the actuarially determined contribution rates adopted by the VRS Board of Trustees. Through the fiscal year ending June 30, 2019, the rate contributed by the University for the VRS State Employee Health Insurance Credit Program will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, all agencies are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the State Employee HIC OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments of current

active and inactive employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total State Employee HIC OPEB liability.

Sensitivity of the University's Proportionate Share of the State Employee HIC Net OPEB Liability to Changes in the Discount Rate

The following presents the University's proportionate share of the VRS State Employee Health Insurance Credit Program net HIC OPEB liability using the discount rate of 7.00%, as well as what the University's proportionate share of the net HIC OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

| | 1.00% Decrease (6.00%) | Current Discount Rate (7.00%) | 1.00% Increase (8.00%) |
|-------------------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------|-----------------------------------|
| University's proportionate share of the VRS State Employee HIC OPEB Plan Net HIC OPEB Liability | \$47,460,000 | \$42,921,000 | \$39,019,000 |

State Employee HIC OPEB Fiduciary Net Position

Detailed information about the VRS State Employee Health Insurance Credit Program's Fiduciary Net Position is available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at <http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf>, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Payables to the State Employee Health Insurance Credit Program OPEB Plan

As of June 30, 2018, the University had a payable to VRS State Employee Health Insurance Credit Program in the amount of \$132,117. These amounts represent current legally required contributions to the pension plan not yet remitted to VRS in accordance with the payment terms.

C. LINE OF DUTY ACT PROGRAM

Plan Description

All paid employees and volunteers in hazardous duty positions in Virginia localities and hazardous duty employees who are covered under the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), or the Virginia Law Officers' Retirement System (VaLORS) are automatically covered by the Line of Duty Act Program (LODA). As required by statute, the Virginia Retirement System (the System) is responsible for managing the assets of the program. Participating employers made contributions to the program beginning in FY 2012. The employer contributions are determined by the System's actuary using anticipated program costs and the number of covered individuals associated with all participating employers.

The specific information for Disability Insurance Program OPEB, including eligibility, coverage and benefits is set out in the table below:

LINE OF DUTY ACT PROGRAM (LODA) PLAN PROVISIONS

Eligible Employees

The eligible employees of the Line of Duty Act Program (LODA) are paid employees and volunteers in hazardous duty positions in Virginia localities and hazardous duty employees who are covered under the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS), or the Virginia Law Officers' Retirement System (VaLORS).

Benefit Amounts

The Line of Duty Act Program (LODA) provides death and health insurance benefits for eligible individuals:

- **Death** – The Line of Duty Act program death benefit is a one-time payment made to the beneficiary or beneficiaries of a covered individual. Amounts vary as follows:
 - \$100,000 when a death occurs as the direct or proximate result of performing duty as of January 1, 2006, or after.
 - \$25,000 when the cause of death is attributed to one of the applicable presumptions and occurred earlier than five years after the retirement date.
 - An additional \$20,000 benefit is payable when certain members of the National Guard and U.S. military reserves are killed in action in any armed conflict on or after October 7, 2001.
- **Health Insurance** – The Line of Duty Act program provides health insurance benefits.
 - Prior to July 1, 2017, these benefits were managed through the various employer plans and maintained the benefits that existed prior to the employee's death or disability. These premiums were reimbursed to the employer by the LODA program.
 - Beginning July 1, 2017, the health insurance benefits are managed through the Virginia Department of Human Resource Management (DHRM). The health benefits are modeled after the State Employee Health benefits Program plans and provide consistent, premium-free continued health plan coverage for LODA-eligible disabled individuals, survivors and family members. Individuals receiving the health insurance benefits must continue to meet eligibility requirements as defined by the Line of Duty Act.

Contributions

The contribution requirements for the Line of Duty Act Program (LODA) are governed by §9.1-400.1 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Each employer's contractually required employer contribution rate for the Line of Duty Act Program (LODA) for the year ended June 30, 2018 was \$567.37 per covered full-time-equivalent employee. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015 and represents the pay-as-you-go funding rate and not the full actuarial cost of the benefits under the program. The actuarially determined pay-as-you-go rate was expected to finance the costs and related expenses of benefits payable during the year. Contributions to the Line of Duty Act Program (LODA) from the University were \$23,262 and \$23,830 for the years ended June 30, 2018 and June 30, 2017, respectively.

Line of Duty Act Program (LODA) OPEB Liabilities, LODA OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the LODA OPEB

At June 30, 2018, the University reported a liability of \$580,000 for its proportionate share of the Net LODA OPEB Liability. The Net LODA OPEB Liability was measured as of June 30, 2017 and the total LODA OPEB liability used to calculate the Net LODA OPEB Liability was determined by an actuarial valuation as of that date.

The University's proportion of the Net LODA OPEB Liability was based on the University's actuarially determined pay-as-you-go employer contributions to the LODA OPEB plan for the year ended June 30, 2017 relative to the total of the actuarially determined pay-as-you-go employer contributions for all participating employers. At June 30, 2017, the University's proportion was 0.22% as compared to 0.26% at June 30, 2016.

For the year ended June 30, 2018, the entity recognized LODA OPEB expense of \$41,000. Since there was a change in proportionate share between measurement dates, a portion of the LODA OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2018, the agency reported deferred outflows of resources and deferred inflows of resources related to the LODA OPEB from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------|
| Differences between expected and actual experience | \$- | \$- |
| Net difference between projected and actual earnings on LODA OPEB plan investments | - | 1,000 |
| Change in assumptions | - | 60,000 |
| Changes in proportion | - | 85,000 |
| Employer contributions subsequent to measurement date | 19,003 | - |
| Total | \$19,003 | \$146,000 |

\$19,003 reported as deferred outflows of resources related to the LODA OPEB resulting from the University's contributions subsequent to the measurement date will be recognized as a reduction of the Net LODA OPEB Liability in the Fiscal Year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to LODA OPEB will be recognized in LODA OPEB expense in future reporting periods as follows:

| Year Ended June 30 | |
|--------------------|------------|
| FY 2019 | \$(18,000) |
| FY 2020 | (18,000) |
| FY 2021 | (18,000) |
| FY 2022 | (18,000) |
| FY 2023 | (17,000) |
| Thereafter | (57,000) |

Actuarial Assumptions

The total LODA OPEB liability was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

| | |
|--------------------------------------------------------------------|-----------------------------|
| Inflation | 2.50 percent |
| Salary increases, including inflation – General state employees | 3.50 percent – 5.35 percent |

| | |
|---------------------------------------|-----------------------------------------------------------------------------|
| SPORS employees | 3.50 percent – 4.75 percent |
| VaLORS employees | 3.50 percent – 4.75 percent |
| Locality employees | 3.50 percent – 4.75 percent |
| Medical cost trend rates assumption – | |
| Under age 65 | 7.75 percent – 5.00 percent |
| Ages 65 and older | 5.75 percent – 5.00 percent |
| Investment rate of return | 3.56 percent, net of OPEB plan investment expenses, including inflation* |

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 3.56%. However, since the difference was minimal, a more conservative 3.56% investment return assumption has been used. Since LODA is funded on a current-disbursement basis, the assumed annual rate of return of 3.56% was used since it approximates the risk-free rate of return.

Mortality rates – General State Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 25% |

Mortality rates - SPORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table - RP- 2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

Mortality rates – VaLORS Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

Mortality rates - Largest Ten Locality Employers with Public Safety Employees

Pre -Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post -Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post -Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table - RP – 2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Increased disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 70% |

Mortality rates - Non- Largest Ten Locality Employers with Public Safety Employees

Pre -Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post -Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post -Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement , post-retirement healthy, and disabled) | Updated to a more current mortality table - RP – 2014 projected to 2020 |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each age and service year |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 60% to 45% |

Changes to the LODA Program Associated with HB 1345 {2016} and HB 2243 {2017}

The following changes were made to the LODA Program as a result of legislation in 2016 and 2017, but were specifically not considered in the June 30, 2016 actuarial valuation results which were rolled forward to the measurement date of June 30, 2017. There was no current actuarial experience on which to base the adjustments and the combined impact of the changes was not considered to be material to the final results. These changes will be factored into future actuarial valuations for the LODA Program.

- The discontinuance of spouse health care coverage, if a covered spouse divorces a disabled employee or a covered surviving spouse remarries.
- The potential for VRS's periodic review of the disability status of a disabled employee.
- For those beneficiaries who become eligible for health care benefits as the result of a disability occurring after June 30, 2017, the suspension of health care benefits in years when VRS certifies current income exceeds salary at the time of the disability, indexed for inflation.
- The extension of health care benefits for dependent children to age 26.
- The expansion of the definition of presumption of death or disability to include infectious diseases.

Net LODA OPEB Liability

The net OPEB liability (NOL) for the Line of Duty Act Program (LODA) represents the program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of June 30, 2017, NOL amounts for the Line of Duty Act Program (LODA) is as follows (amounts expressed in thousands):

| | |
|---------------------------------------|--------------------------------------------|
| | <u>Line of Duty Act Program</u> |
| Total LODA OPEB Liability | \$ 266,252 |
| Plan Fiduciary Net Position | <u>3,461</u> |
| Employers' Net OPEB Liability (Asset) | <u>\$ 262,791</u> |

Plan Fiduciary Net Position as a Percentage
of the Total LODA OPEB Liability

1.30%

The total LODA OPEB liability is calculated by the System's actuary, and each plan's fiduciary net position is reported in the System's financial statements. The net OPEB liability is disclosed in accordance with the requirements of GASB Statement No. 74 in the System's notes to the financial statements and required supplementary information.

Long-Term Expected Rate of Return

The long-term expected rate of return on LODA OPEB Program's investments was set at 3.56% for this valuation. Since LODA is funded on a current-disbursement basis, it is not able to use the VRS Pooled Investments 7.00% assumption. Instead, the assumed annual rate of return of 3.56% was used since it approximates the risk-free rate of return. This Single Equivalent Interest Rate (SEIR) is the applicable municipal bond index rate based on the Bond Buyer General Obligation 20-year Municipal Bond Index published monthly by the Board of Governors of the Federal Reserve System as of the measurement date of June 30, 2017.

Discount Rate

The discount rate used to measure the total LODA OPEB liability was 3.56%. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made per the VRS Statutes and that they will be made in accordance with the VRS funding policy and at rates equal to the actuarially determined contribution rates adopted by the VRS Board of Trustees. Through the fiscal year ending June 30, 2019, the rate contributed by participating employers to the LODA OPEB Program will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly.

Sensitivity of the Covered Employer's Proportionate Share of the Net LODA OPEB Liability to Changes in the Discount Rate

The following presents the covered employer's proportionate share of the net LODA OPEB liability using the discount rate of 3.56%, as well as what the covered employer's proportionate share of the net LODA OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (2.56%) or one percentage point higher (4.56%) than the current rate:

| | 1.00% Decrease (2.56%) | Current Discount Rate (3.56%) | 1.00% Increase (4.56%) |
|-----------------------------------------------------------------------------|---------------------------|----------------------------------|---------------------------|
| University's proportionate share of the total LODA Net OPEB Liability | \$658,000 | \$580,000 | \$515,000 |

Sensitivity of the Covered Employer's Proportionate Share of the Net LODA OPEB Liability to Changes in the Health Care Trend Rate

Because the Line of Duty Act Program (LODA) contains a provision for the payment of health insurance premiums, the liabilities are also impacted by the health care trend rates. The following presents the University's proportionate share of the net LODA OPEB liability using health care trend rate of 7.75% decreasing to 5.00%, as well as what the University's proportionate share of the net LODA OPEB liability would be if it were calculated using a health care trend rate that is one percentage point lower (6.75% decreasing to 4.00%) or one percentage point higher (8.75% decreasing to 6.00%) than the current rate:

| | 1.00% Decrease (6.75% decreasing to 4.00%) | Health Care Trend Rates (7.75% decreasing to 5.00%) | 1.00% Increase (8.75% decreasing to 6.00%) |
|-------------------------------------------------------------------|--------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------|
| University's proportionate share of total LODA Net OPEB Liability | \$492,000 | \$580,000 | \$689,000 |

LODA OPEB Plan Fiduciary Net Position

Detailed information about the Line of Duty Act Program (LODA) Fiduciary Net Position is available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at <http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf>, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

D. DISABILITY INSURANCE PROGRAM (VIRGINIA SICKNESS AND DISABILITY PLAN)

Plan Description

All full-time and part-time permanent salaried state employees who are covered under the Virginia Retirement System (VRS), the State Police Officers' Retirement System (SPORS) or the Virginia Law Officers' Retirement System (VaLORS) hired on or after January 1, 1999 are automatically covered by the Disability Insurance Program (VSDP) upon employment. The Disability Insurance Program also covers state employees hired before January 1, 1999 who elected to transfer to VSDP rather than retain their eligibility to be considered for disability retirement. This plan is administered by the Virginia Retirement System (the System), along with pensions and other OPEB plans, for public employer groups in the Commonwealth of Virginia.

The specific information for Disability Insurance Program OPEB, including eligibility, coverage and benefits is set out in the table below:

| DISABILITY INSURANCE PROGRAM (VSDP) PLAN PROVISIONS |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Eligible Employees</p> <p>The Virginia Sickness and Disability Program (VSDP), also known as the Disability Insurance Trust Fund was established January 1, 1999 to provide short-term and long-term disability benefits for non-work-related and work-related disabilities.</p> <p>Eligible employees are enrolled automatically upon employment. They include:</p> <ul style="list-style-type: none"> • Full-time and part-time permanent salaried state employees covered under VRS, SPORS, and VaLORS (members new to VaLORS following its creation on October 1, 1999, have been enrolled since the inception of VSDP). • State employees hired before January 1, 1999, who elected to transfer to VSDP rather than retain their eligibility to be considered for VRS disability retirement. • Public college and university faculty members who elect the VRS defined benefit plan. They may participate in VSDP or their institution's disability program, if offered. If the institution does not offer the program or the faculty member does not make an election, he or she is enrolled in VSDP. |
| <p>Benefit Amounts</p> <p>The Virginia Sickness and Disability Program (VSDP) provides the following benefits for eligible employees:</p> <ul style="list-style-type: none"> • Leave – Sick, family and personal leave. Eligible leave benefits are paid by the employer. |

- **Short-Term Disability** – The program provides a short-term disability benefit beginning after a seven-calendar-day waiting period from the first day of disability. The benefit provides income replacement beginning at 100% of the employee's pre-disability income, reducing to 80% and then 60% based on the period of the disability and the length of service of the employee. Short-term disability benefits are paid by the employer.
- **Long-Term Disability** – The program provides a long-term disability benefit beginning after 125 workdays of short-term disability and continuing until the employee reaches his or her normal retirement age. The benefit provides income replacement of 60% of the employee's pre-disability income. If an employee becomes disabled within five years of his or her normal retirement age, the employee will receive up to five years of VSDP benefits, provided he or she remains medically eligible. Long-term disability benefits are paid for by the Virginia Disability Insurance Program (VSDP) OPEB Plan.
- **Income Replacement Adjustment** – The program provides for an income replacement adjustment to 80% for catastrophic conditions.
- **VSDP Long-Term Care Plan** – The program also includes a self-funded long-term care plan that assists with the cost of covered long-term care services.

Disability Insurance Program (VSDP) Plan Notes:

- Employees hired or rehired on or after July 1, 2009, must satisfy eligibility periods before becoming eligible for non-work-related short-term disability benefits and certain income-replacement levels.
- A state employee who is approved for VSDP benefits on or after the date that is five years prior to his or her normal retirement date is eligible for up to five years of VSDP benefits.
- Employees on work-related short-term disability receiving only a workers' compensation payment may be eligible to purchase service credit for this period if retirement contributions are not being withheld from the workers' compensation payment. The rate will be based on 5.00% of the employee's compensation.

Cost-of-Living Adjustment (COLA)

- During periods an employee receives long-term disability benefits, the LTD benefit may be increased annually by an amount recommended by the actuary and approved by the Board.
 - Plan 1 employees vested as of 1/1/2013 – 100% of the VRS Plan 1 COLA (The first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%).
 - Plan 1 employee non-vested as of 1/1/2013, Plan 2 and Hybrid Plan employees – 100% of the VRS Plan 2 and Hybrid COLA (The first 2% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 2%) up to a maximum COLA of 3%).
- For participating full-time employees taking service retirement, the creditable compensation may be increased annually by an amount recommended by the actuary and approved by the Board, from the date of the commencement of the disability to the date of retirement.
 - 100% of the increase in the pay over the previous plan year for continuing VSDP members in the State, SPORS, and VaLORS Plans, with a maximum COLA of 4.00%
- For participating full-time employees receiving supplemental (work-related) disability benefits, the creditable compensation may be increased annually by an amount recommended by the actuary and approved by the Board, from the date of the commencement of the disability to the date of retirement.
 - 100% of the increase in the pay over the previous plan year for continuing VSDP members in the State, SPORS, and VaLORS Plans, with a maximum COLA of 4.00%.

Contributions

The contribution requirements for the Disability Insurance Program (VSDP) are governed by §51.1-1140 of the *Code of Virginia*, as amended, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Each employer's contractually required employer contribution rate for the Disability Insurance Program (VSDP) for the year ended June 30, 2018 was 0.66% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015. The actuarially determined rate was expected to finance the costs of benefits payable during the year, with an adjustment to amortize the accrued OPEB assets. Contributions to the Disability Insurance Program (VSDP) from the University were \$772,464 and \$725,892 for the year ended June 30, 2018 and June 30, 2017, respectively.

Disability Insurance Program (VSDP) OPEB Liabilities (Assets), VSDP OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the VSDP OPEB

At June 30, 2018, the University reported a liability (asset) of \$(6,127,000) for its proportionate share of the Net VSDP OPEB Liability (Asset). The Net VSDP OPEB Liability (Asset) was measured as of June 30, 2017 and the total VSDP OPEB liability used to calculate the Net VSDP OPEB Liability (Asset) was determined by an actuarial valuation as of that date. The University's proportion of the Net VSDP OPEB Liability (Asset) was based on the University's actuarially determined employer contributions to the VSDP OPEB plan for the year ended June 30, 2017 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2017, the University's proportion was 2.98% as compared to 3.03% at June 30, 2016. For the year ended June 30, 2018, the University recognized VSDP OPEB expense \$523,000. Since there was a change in proportionate share between measurement dates, a portion of the VSDP OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2018, the University reported deferred outflows of resources and deferred inflows of resources related to the VSDP OPEB from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------|
| Differences between expected and actual experience | \$- | \$- |
| Net difference between projected and actual earnings on VSDP OPEB plan investments | - | 481,000 |
| Change in assumptions | - | 459,000 |
| Changes in proportion | 63,000 | - |
| Employer contributions subsequent to measurement date | 772,464 | - |
| Total | \$835,464 | \$940,000 |

\$772,464 reported as deferred outflows of resources related to the VSDP OPEB resulting from the University's contributions subsequent to the measurement date will be recognized as an adjustment of the Net VSDP OPEB Liability (Asset) in the Fiscal Year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the VSDP OPEB will be recognized in VSDP OPEB expense in future reporting periods as follows:

| Year Ended June 30 | |
|--------------------|-------------|
| FY 2019 | \$(174,000) |
| FY 2020 | (174,000) |
| FY 2021 | (174,000) |
| FY 2022 | (174,000) |
| FY 2023 | (54,000) |
| Thereafter | (127,000) |

Actuarial Assumptions

The total VSDP OPEB liability was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

| | |
|-------------------------------------|-------------------------------------------------------------------------|
| Inflation | 2.5 percent |
| Salary increases, including | |
| Inflation – General state employees | 3.5 percent – 5.35 percent |
| SPORS employees | 3.5 percent – 4.75 percent |
| VaLORS employees | 3.5 percent – 4.75 percent |
| Investment rate of return | 7.0 percent, net of OPEB plan investment expenses, including inflation* |

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of OPEB liabilities.

Mortality rates – General State Employees:

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increase rate from 14% to 25% |

Mortality rates – SPORS Employees:

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

Mortality rates – VaLORS Employees:

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with Scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Life Mortality Table projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

Net VSDP OPEB Liability (Asset)

The net OPEB asset (NOA) for the Disability Insurance Program (VSDP) represents the program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of June 30, 2017, NOA amounts for the Disability Insurance Program (VSDP) is as follows (amounts expressed in thousands):

| | <u>Disability Insurance Program</u> |
|---------------------------------------------------------------------------------|------------------------------------------------|
| Total VSDP OPEB Liability | \$ 237,013 |
| Plan Fiduciary Net Position | <u>442,334</u> |
| Employers' Net OPEB Liability (Asset) | <u>\$ (205,321)</u> |
| Plan Fiduciary Net Position as a Percentage of the Total VSDP OPEB Liability | 186.63% |

The total VSDP OPEB liability is calculated by the System's actuary, and each plan's fiduciary net position is reported in the System's financial statements. The net OPEB asset is disclosed in accordance with the requirements of GASB Statement No. 74 in the System's notes to the financial statements and required supplementary information.

Long-Term Expected Rate of Return

The long-term expected rate of return on System investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of VRS System investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

| Asset Class (Strategy) | Target Allocation | Arithmetic Long-Term Expected Rate of Return | Weighted Average Long-Term Expected Rate of Return |
|------------------------|--------------------------------------|----------------------------------------------|----------------------------------------------------|
| Public Equity | 40.00% | 4.54% | 1.82% |
| Fixed Income | 15.00% | 0.69% | 0.10% |
| Credit Strategies | 15.00% | 3.96% | 0.59% |
| Real Assets | 15.00% | 5.76% | 0.86% |
| Private Equity | 15.00% | 9.53% | 1.43% |
| Total | 100.00% | | 4.80% |
| | Inflation | | 2.50% |
| | * Expected arithmetic nominal return | | 7.30% |

* The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total VSDP OPEB liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that employer contributions will be made per the VRS Statutes and that they will be made in accordance with the VRS funding policy and at rates equal to the actuarially determined contribution rates adopted by the VRS Board of Trustees. Through the fiscal year ending June 30, 2019, the rate contributed by participating employers to the VSDP OPEB Program will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, participating employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the VSDP OPEB Program's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total VSDP OPEB liability.

Sensitivity of the University's Proportionate Share of the Net VSDP OPEB Liability (Asset) to Changes in the Discount Rate

The following presents the University's proportionate share of the net VSDP OPEB liability (asset) using the discount rate of 7.00%, as well as what the University's proportionate share of the net VSDP OPEB liability (asset) would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

| | 1.00% Decrease (6.00%) | Current Discount Rate (7.00%) | 1.00% Increase (8.00%) |
|-------------------------------------------------------------------------------|---------------------------|----------------------------------|---------------------------|
| University's proportionate share of the total VSDP Net OPEB Liability (Asset) | \$(5,832,000) | \$(6,127,000) | \$(6,639,000) |

VSDP OPEB Fiduciary Net Position

Detailed information about the Disability Insurance Program (VSDP) Fiduciary Net Position is available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at <http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf>, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

Payables to the Disability Insurance Program (VSDP) OPEB Plan

As of June 30, 2018, the University had a payable to Disability Insurance Program OPEB plan in the amount of \$39,733. Of this amount, \$38,039 was for the General State Employee plan and \$1,694 was for VaLORS. These amounts represent current legally required contributions to the pension plan not yet remitted to VRS in accordance with the payment terms.

E. PRE-MEDICARE RETIREE HEALTHCARE PLAN

Pre-Medicare Retiree Healthcare

The Commonwealth provides a healthcare plan established by Title 2.2, Chapter 28 of the *Code of Virginia* for retirees who are not yet eligible to participate in Medicare. For a retiree to participate in the Plan, the participant must be eligible for a monthly annuity from the VRS or a periodic benefit from one of the qualified Optional Retirement Plan (ORP) vendors, and:

- be receiving (not deferring) the annuity or periodic benefit immediately upon retirement;
- have his or her last employer before retirement be the state;
- be eligible for coverage as an active employee in the State Health Benefits Program until his or her retirement date (not including Extended Coverage); and,
- have submitted within 31 days of his or her retirement date an Enrollment Form to his or her Benefits Administrator to enroll.

The University does not pay a portion of the retirees' healthcare premium; however, since both active employees and retirees are included in the same pool for purposes of determining health insurance rates, this generally results in a higher rate for active employees. Therefore, the University effectively subsidizes the costs of the participating retirees' healthcare through payment of the employer's portion of the premiums for active employees.

This fund is reported as part of the Commonwealth's Healthcare Internal Service Fund. Benefit payments are recognized when due and payable in accordance with the benefit terms. Pre-Medicare Retiree Healthcare is a single-employer defined benefit OPEB plan that is treated like a cost-sharing plan for financial reporting purposes, and is administered by the Department of Human Resource Management. There were approximately 5,600 retirees and 91,000 active employees in the program in fiscal year 2017. There are no inactive employees entitled to future benefits who are not currently receiving benefits. There are no assets accumulated in a trust to pay benefits.

Actuarial Assumptions and Methods

The total Pre-Medicare Retiree Healthcare OPEB liability was based on an actuarial valuation with a valuation date of June 30, 2017. The Department of Human Resource Management selected the economic, demographic and healthcare claim cost assumptions. The actuary provided guidance with respect to these assumptions. Initial healthcare costs trend rates used were 8.62 percent for medical and pharmacy and 4.0 percent for dental. The ultimate trend rates used were 5.0 percent for medical and pharmacy and 4.0 percent for dental.

| | |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Valuation Date | Actuarially determined contribution rates are calculated as of June 30, one year prior to the end of the fiscal year in which contributions are reported. |
| Measurement Date | June 30, 2017 (one year prior to the end of the fiscal year) |
| Actuarial Cost Method | Entry Age Normal |
| Amortization Method | Level dollar, Closed |
| Effective Amortization Period | 6.43 years |

| | |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Discount Rate | 3.58% |
| Projected Salary Increases | 4.0% |
| Medical Trend Under 65 | Medical & Rx: 8.62% to 5.00% Dental: 4.00% Before reflecting Excise tax |
| Year of Ultimate Trend | 2025 |
| Mortality | Mortality rates vary by participant status |
| Pre-Retirement: | RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with Scale BB to 2020; males setback 1 year, 85% of rates; females setback 1 year |
| Post-Retirement | RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with Scale BB to 2020; males set forward 1 year; females setback 1 year with 1.5% increase compounded from ages 70 to 85 |
| Post-Disablement: | RP-2014 Disabled Mortality Rates projected with Scale BB to 2020; males 115% of rates; females 130% of rates |

The discount rate was based on the Bond Buyers GO 20 Municipal Bond Index as of the measurement date which is June 30, 2017.

Changes of Assumptions: The following assumptions were updated since the July 1, 2016 valuation based on the results of a Virginia Retirement System actuarial experience study performed for the period of July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

- Mortality rates - updated to a more current mortality table – RP-2014 projected to 2020
- Retirement rates - lowered rates at older ages and changed final retirement from 70 to 75
- Withdrawal rates - adjusted rates to better fit experience at each year age and service through 9 years of service

The discount rate was increased from 2.85% to 3.58% based on the Bond Buyers GO 20 Municipal Bond Index. Spousal coverage was reduced from 70% to 50% based on a blend of recent spousal coverage election rates and the prior year assumption. Based on the 2017 census, new retirees since 1/1/2015 have chosen to cover their spouses approximately 20% of the time. However, active employees cover their spouses at a rate close to 53%.

Pre-Medicare Retiree Healthcare OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources

At June 30, 2018, the University reported a liability of \$50,512,033 for its proportionate share of the collective total Pre-Medicare Retiree Healthcare OPEB liability of \$1.3 billion. The Pre-Medicare Retiree Healthcare OPEB liability was measured as of June 30, 2017 and was determined by an actuarial valuation as of June 30, 2017. The covered employer's proportion of the Pre-Medicare Retiree Healthcare OPEB liability was based on each employer's healthcare premium contributions as a percentage of the total employer's healthcare premium contributions for all participating employers. At June 30, 2017, the University's proportion was 3.89% as compared to 3.91% at June 30, 2016. For the year ended June 30, 2018, the University recognized Pre-Medicare Retiree Healthcare OPEB expense of \$3,978,064.

At June 30, 2018, the University reported deferred outflows of resources and deferred inflows of resources related to Pre-Medicare Retiree Healthcare from the following sources:

| | Deferred Outflows of Resources | Deferred Inflows of Resources |
|-------------------------------------------------------------------------|--------------------------------------|-------------------------------------|
| Differences between actual and expected experience | \$- | \$2,031,667 |
| Change in assumptions | - | 10,708,598 |
| Changes in proportion | - | 283,854 |
| Subtotal | - | 13,024,119 |
| Amounts associated with transactions subsequent to the measurement date | 1,339,525 | N/A |
| Total | \$1,339,525 | \$13,024,119 |

\$1,339,525 reported as deferred outflows of resources related to the Pre-Medicare Retiree Healthcare OPEB resulting from amounts associated with transactions subsequent to the measurement date will be recognized as a reduction of the total OPEB Liability in the fiscal year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the Pre-Medicare Retiree Healthcare OPEB will be recognized in the Pre-Medicare Retiree Healthcare OPEB expense as follows:

| Year Ended June 30 | |
|--------------------|---------------|
| FY 2019 | \$(2,398,548) |
| FY 2020 | (2,398,548) |
| FY 2021 | (2,398,548) |
| FY 2022 | (2,398,548) |
| FY 2023 | (2,398,548) |
| Total Thereafter | (1,031,379) |

Sensitivity of the University's Proportionate Share of the OPEB Liability to Changes in the Discount Rate

The following presents the University's proportionate share of the Pre-Medicare Retiree Healthcare OPEB liability using the discount rate of 3.58%, as well as what the University's proportionate share of the Pre-Medicare Retiree Healthcare OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (2.58%) or one percentage point higher (4.58%) than the current rate:

| | 1% Decrease (2.58%) | Current Discount Rate (3.58%) | 1% Increase (4.58%) |
|----------------|------------------------|----------------------------------|------------------------|
| OPEB Liability | \$54,109,917 | \$50,512,033 | \$47,064,874 |

Sensitivity of the University's Proportionate Share of the OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the University's proportionate share of the Pre-Medicare Retiree Healthcare OPEB liability using healthcare cost trend rate of 8.62% decreasing to 5%, as well as what the University's proportionate share of the Pre-Medicare Retiree Healthcare OPEB liability would be if it were calculated using a healthcare cost

trend rate that is one percentage point lower (7.62% decreasing to 4.0%) or one percentage point higher (9.62% decreasing to 6.0%) than the current rate:

| | 1% Decrease (7.62% decreasing to 4.00%) | Trend Rate (8.62% decreasing to 5.00%) | 1% Increase (9.62% decreasing to 6.00%) |
|----------------|--------------------------------------------------------|-------------------------------------------------------|--------------------------------------------------------|
| OPEB Liability | \$44,942,900 | \$50,512,033 | \$57,040,744 |

17. RISK MANAGEMENT AND EMPLOYEE HEALTH CARE PLANS

The University is exposed to various risks of loss related to torts; theft, or damage to and destruction of assets; errors and omissions; non-performance of duty; injuries to employees; and natural disasters. The University participates in insurance plans maintained by the Commonwealth of Virginia. The Department of Human Resource Management administers the Commonwealth employee health care and worker's compensation plans, and the Department of Treasury, Division of Risk Management, administers the risk management insurance plans. Risk management insurance includes property, general liability, faithful performance of duty bond, automobile, and air and watercraft plans. The University pays premiums to each of these departments for its insurance coverage. Information relating to the Commonwealth's insurance plans is available at the statewide level in the Commonwealth's Comprehensive Annual Financial Report.

18. RESTRICTED NET POSITION

At June 30, 2018 restricted net position included the following purpose restrictions:

| Restricted, nonexpendable | |
|----------------------------------|-------------|
| Student aid | \$1,406,281 |
| Instruction | 4,631,000 |
| Research | 1,128,255 |
| Total restricted, nonexpendable | \$7,165,536 |

| Restricted, expendable | |
|-------------------------------|--------------|
| Instruction | \$6,978,434 |
| Scholarships & Fellowships | 57,927 |
| Capital | 7,690,980 |
| Total restricted, expendable | \$14,727,341 |

19. COMPONENT UNITS

Component unit combining financial statements and additional disclosures in accordance with FASB standards are presented below.

| Combining Statement of Financial Position | | | | | | |
|-----------------------------------------------|----------------------------------------------------|--------------------------------------|------------------------------------------------|----------------------------------|---------------------------------------------|-----------------------------|
| As of June 30, 2018 | | | | | | |
| | George Mason University Foundation (GMUF) | Mason Housing, Inc. * (MHI) | GMU Instructional Foundation* (GMUIF) | Mason Korea, LLC ^ (MK) | Mercatus Center, Inc. # (Mercatus) | Total Component Units |
| Assets | | | | | | |
| Cash and cash equivalents | \$13,414,011 | \$126,604 | \$4,979,511 | \$3,032,864 | \$19,621,573 | \$41,174,563 |
| Security deposits | - | 84,563 | - | - | - | 84,563 |
| Restricted cash and cash equivalents | 8,950,314 | 4,665,179 | - | - | - | 13,615,493 |
| Accounts receivable, net | - | 15,976 | 101,969 | 65,438 | 134,288 | 317,671 |
| Contributions receivable, net | 31,265,785 | - | - | - | 900,000 | 32,165,785 |
| Prepays and other assets | 5,135,678 | 3,105 | 6,275 | 30,079 | 306,400 | 5,481,537 |
| Net investment in direct financing lease | 91,339,380 | - | - | - | - | 91,339,380 |
| Beneficial interest in perpetual trusts | 10,985,365 | - | - | - | - | 10,985,365 |
| Investments | 169,715,152 | 901,259 | - | - | 1,201,533 | 171,817,944 |
| Property and equipment, net | 67,888,418 | 22,969,235 | 7,140,267 | - | 663,753 | 98,661,673 |
| Deferred tax asset | 714,640 | - | - | - | - | 714,640 |
| Total Assets | 399,408,743 | 28,765,921 | 12,228,022 | 3,128,381 | 22,827,547 | 466,358,614 |
| Liabilities and Net Assets | | | | | | |
| Liabilities | | | | | | |
| Accounts payable and accrued expenses | 7,714,072 | 188,956 | 862,956 | 54,864 | 938,812 | 9,759,660 |
| Accrued payroll and related expenses | - | 16,505 | - | 427,267 | - | 443,772 |
| Grants and student research awards payable | - | - | - | - | 2,505,293 | 2,505,293 |
| Participation rent payable | - | 410,000 | - | - | - | 410,000 |
| Tenant security deposits liability | - | 81,442 | - | - | - | 81,442 |
| Unearned revenue | 4,114,571 | 31,017 | 2,639,645 | 52,999 | - | 6,838,232 |
| Due to affiliate | - | - | - | - | 160,635 | 160,635 |
| Charitable gift annuities | - | - | - | - | 151,703 | 151,703 |
| Other liabilities | 1,276,456 | - | 1,200 | - | - | 1,277,656 |
| Derivative obligations | - | 9,413,256 | - | - | - | 9,413,256 |
| Long-term debt including loan payable | 156,078,928 | 37,656,191 | 1,265,925 | 562,852 | - | 195,563,896 |
| Amounts held for others | 12,230,253 | - | - | - | - | 12,230,253 |
| Total Liabilities | 181,414,280 | 47,797,367 | 4,769,726 | 1,097,982 | 3,756,443 | 238,835,798 |
| Net Assets | | | | | | |
| Unrestricted | 26,623,198 | (19,031,446) | 7,458,296 | 2,030,399 | 18,773,690 | 35,854,137 |
| Temporarily restricted | 100,097,030 | - | - | - | 297,414 | 100,394,444 |
| Permanently restricted | 91,878,838 | - | - | - | - | 91,878,838 |
| Real Estate LLCs | (604,603) | - | - | - | - | (604,603) |
| Total Net Assets | 217,994,463 | (19,031,446) | 7,458,296 | 2,030,399 | 19,071,104 | 227,522,816 |
| Total Liabilities and Net Assets | \$399,408,743 | \$28,765,921 | \$12,228,022 | \$3,128,381 | \$22,827,547 | \$466,358,614 |

* March 31, 2018 year-end

^ December 31, 2017 year-end

August 31, 2017 year-end

| Combining Statement of Activities For the Year Ended June 30, 2018 | | | | | | |
|--------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------|-------------------------------------------------|----------------------------------|---------------------------------------------|-----------------------------|
| | George Mason University Foundation (GMUF) | Mason Housing, Inc. * (MHI) | GMU Instructional Foundation * (GMUIF) | Mason Korea, LLC ^ (MK) | Mercatus Center, Inc. # (Mercatus) | Total Component Units |
| Operating Revenue | | | | | | |
| Contributions and grants | \$65,845,197 | \$- | \$282,172 | \$1,706,587 | \$30,378,953 | \$98,212,909 |
| Interest on direct financing lease | 5,424,899 | - | - | - | - | 5,424,899 |
| Investment and trust return | 10,494,950 | - | 41,298 | - | 58,887 | 10,595,135 |
| Miscellaneous and other income | 26,270 | 100,630 | - | - | 288,772 | 415,672 |
| Rental income, net | 14,182,413 | 3,652,921 | 1,423,973 | - | - | 19,259,307 |
| Service fees | 1,171,149 | - | 669,850 | 5,887,393 | - | 7,728,392 |
| Gain from unconsolidated joint venture | - | - | 313,441 | - | - | 313,441 |
| Total Operating Revenue | 97,144,878 | 3,753,551 | 2,730,734 | 7,593,980 | 30,726,612 | 141,949,755 |
| Operating Expenses | | | | | | |
| Academic program support | 67,563,323 | - | - | 583,107 | 24,893,897 | 93,040,327 |
| Advertising and promotion | - | 16,733 | - | - | - | 16,733 |
| Depreciation | 2,399,730 | 1,124,022 | 62,372 | - | - | 3,586,124 |
| Fundraising | 266,352 | - | - | - | 1,682,155 | 1,948,507 |
| Insurance | 115,162 | 70,116 | 12,302 | - | - | 197,580 |
| Interest expense | 6,607,246 | 2,051,454 | 65,325 | - | - | 8,724,025 |
| Maintenance | - | 187,411 | - | - | - | 187,411 |
| Management fees | - | 111,938 | 46,874 | 234,232 | - | 393,044 |
| Office and other administrative expenses | 6,226,567 | 121,708 | 282,872 | 975,710 | 2,173,590 | 9,780,447 |
| Salaries and wages | - | 293,614 | 724,670 | 3,988,215 | - | 5,006,499 |
| Rent, utilities and other | 2,285,870 | 27,076 | 443,927 | 446,052 | - | 3,202,925 |
| Total Operating Expenses | 85,464,250 | 4,004,072 | 1,638,342 | 6,227,316 | 28,749,642 | 126,083,622 |
| Change in net assets before non-operating items and other changes | 11,680,628 | (250,521) | 1,092,392 | 1,366,664 | 1,976,970 | 15,866,133 |
| Non-operating items | (143,922) | 1,447,669 | - | 175,395 | 21,144 | 1,500,286 |
| Change in Net Assets | 11,536,706 | 1,197,148 | 1,092,392 | 1,542,059 | 1,998,114 | 17,366,419 |
| Beginning Net Assets | 206,457,757 | (20,228,594) | 6,365,904 | 488,340 | 17,072,990 | 210,156,397 |
| Ending Net Assets | \$217,994,463 | \$(19,031,446) | \$7,458,296 | \$2,030,399 | \$19,071,104 | \$227,522,816 |

* March 31, 2018 year-end

^ December 31, 2017 year-end

August 31, 2017 year-end

A. INVESTMENTS

Investments, which are reported at fair value, consisted of the following as of June 30, 2018:

| | GMUF | MHI* | Mercatus# | Total |
|--------------------------------|---------------|-----------|-------------|-------------|
| Cash and money market funds | \$5,332,069 | \$- | \$78,474 | \$5,410,543 |
| Equities | 47,245,412 | - | - | 47,245,412 |
| Fixed income | 92,282,429 | - | - | 92,282,429 |
| Liquid alternatives | 2,348,496 | - | - | 2,348,496 |
| Hedge funds | 12,917,835 | - | - | 12,917,835 |
| Managed futures | 2,509,052 | - | - | 2,509,052 |
| Private equity and real assets | 7,044,589 | - | - | 7,044,589 |
| Other funds | 35,270 | - | - | 35,270 |
| Mutual funds | - | 451,766 | 1,123,059 | 1,574,825 |
| Certificates of deposits | - | 449,493 | - | 449,493 |
| Total | \$169,715,152 | \$901,259 | \$1,201,533 | 171,817,944 |

* March 31, 2018 year-end

August 31, 2017 year-end

B. CONTRIBUTIONS RECEIVABLE

Contributions receivable as of June 30, 2018 are as follows:

| | GMUF | Mercatus# |
|--------------------------------------|--------------|-----------|
| Due in less than one year | \$12,956,484 | \$900,000 |
| Due in one to five years | 14,006,114 | - |
| Due in more than five years | 6,314,943 | - |
| | 33,277,541 | 900,000 |
| Less allowance for doubtful accounts | (293,270) | - |
| Less discount present value | (1,718,486) | - |
| Total | \$31,265,785 | \$900,000 |

August 31, 2017 year-end

Discount rates range from 0.87 percent to 3.58 percent.

As of June 30, 2018, the GMUF has \$22,621,700 of conditional promises to give. These conditional promises to give are not recognized as assets in the consolidated statement of financial position until they become unconditional, that is, when the conditions on which they depend are substantially met.

C. FAIR VALUE MEASUREMENT

FASB Accounting Standards Codification (“ASC”) 820, Fair Value Measurements and Disclosures, establishes a framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under FASB ASC 820 are described below:

Level 1 – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Foundation has the ability to access.

Level 2 – Inputs to the valuation methodology include quoted prices for similar assets or liabilities in active markets, quoted prices for similar assets or liabilities in inactive markets, inputs other than quoted prices that are observable for the asset or liability, or inputs that are derived principally from or corroborated by observable market data by correlation or other means. If the asset or liability has a specified (contractual) term the Level 2 input must be observable for substantially the full term of the asset or liability.

Level 3 – Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of the observable inputs and minimize the use of unobservable inputs.

Level 2 fair value measurements are derived from the underlying assets of the perpetual and third-party trusts which substantially consists of investments with readily determinable fair values. The fair value of the assets in the third-party trusts is reduced by the net present value of the expected payments to other beneficiaries, discounted at a risk adjusted interest rate.

Other investments include those investments carried at NAV as published by the applicable fund manager, as a practical expedient.

The following table presents George Mason University Foundation's fair value hierarchy for those assets and liabilities measured at fair value on a recurring basis as of June 30, 2018:

| GMUF Financial Assets: | Level 1 | Level 2 | Level 3 | Reported at NAV* | Total |
|------------------------------------------|---------------|--------------|---------|------------------|---------------|
| Cash and cash equivalents | \$5,332,069 | \$- | \$- | \$- | \$5,332,069 |
| Equities: | | | | | |
| Domestic large cap | 709,492 | - | - | - | 709,492 |
| Domestic small/mid cap | 5,914,436 | - | - | - | 5,914,436 |
| International (developed countries) | 37,143,759 | - | - | - | 37,143,759 |
| International (emerging markets) | 3,477,725 | - | - | - | 3,477,725 |
| Fixed income: | | | | | |
| Short-term bonds | 55,274,553 | 951,393 | - | - | 56,225,946 |
| Intermediate bonds | 12,861,893 | 7,930,019 | - | - | 20,791,912 |
| Long-term bonds | 17,598 | 152,740 | - | - | 170,338 |
| Multi-sector bonds | 56,183 | - | - | - | 56,183 |
| World bonds | 5,093,984 | - | - | - | 5,093,984 |
| Bank loans | 7,004,647 | - | - | - | 7,004,647 |
| Preferred stock | 2,939,419 | - | - | - | 2,939,419 |
| Other funds | 35,270 | - | - | - | 35,270 |
| Liquid alternatives | 2,348,496 | - | - | - | 2,348,496 |
| Hedge funds | - | - | - | 12,917,835 | 12,917,835 |
| Managed futures | - | - | - | 2,509,052 | 2,509,052 |
| Private equity and real assets | - | - | - | 7,044,589 | 7,044,589 |
| Investments | 138,209,524 | 9,034,152 | - | 22,471,476 | 169,715,152 |
| Beneficial interests in perpetual trusts | - | 10,985,365 | - | - | 10,985,365 |
| Total GMUF financial assets | \$138,209,524 | \$20,019,517 | \$- | \$22,471,476 | \$180,700,517 |

* Certain investments that are measured at NAV, as a practical expedient, have not been categorized in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the consolidated statement of financial position.

For investments in entities that calculate or its equivalent whose fair value is not readily determinable, the following table presents the nature and risk of assets with fair values estimated using NAV held at June 30, 2018:

| | Fair Value | Unfunded Commitment | Redemption Frequency | Redemption Notice Period |
|-----------------------------------------------|--------------|---------------------|------------------------|----------------------------------------|
| Hedge funds - Multi-strategies ^(a) | \$6,382,532 | N/A | Quarterly, Annually | 60 days, 65 days, 90 days, 105 days |
| Hedge funds - Directional ^(b) | 6,535,303 | N/A | Annually | 105 days |
| Managed futures ^(c) | 2,509,052 | N/A | Daily | 1 day |
| Private equity and real assets ^(d) | 7,044,589 | \$4,145,786 | N/A | N/A |
| Total | \$22,471,476 | \$4,145,786 | | |

- (a) Hedge funds - Multi-strategies: This class includes investments that use multiple strategies to obtain absolute returns. Direct and indirect investments are made using capital structure arbitrage, distressed debt, equity long/short, multi-strategy credit, multi-strategy event driven, value and other trading strategies. The investments in this class are redeemable based on the redemption frequencies and notice periods described above.
- (b) Hedge funds - Directional: This class includes investments that use directional strategies, primarily long/short strategies. Investments held by this fund primarily consist of equities. The investments in this class are redeemable based on the redemption frequency and notice period described above.
- (c) Managed futures: This class includes investments with the objective to seek long-term capital appreciation. This is a multi-manager fund traded by approximately 20 commodity trading advisors (“CTAs”) across different styles of managed futures trading. Geographic distribution of investments is approximately 50% to North America and 50% to Europe. Currently, all investments in this class are redeemable.
- (d) Private equity and real assets: This class includes investments in private equity and real asset funds. The real asset funds invest in global real estate investments for purpose of generating income and capital appreciation. The private equity funds, which include venture capital funds, make direct and indirect investments in privately and publicly issued debt equity securities. Strategies employed by the private equity funds include distress, growth equity, buyout, alternative credit and opportunistic strategies across a variety of industries and geographies. A portion of this class also invests in social impact companies. These investments can never be redeemed with the funds. Instead, the nature of the investments in this class is that distributions are received through liquidation of the underlying assets of the funds. It is estimated that the underlying assets will be liquidated over 1 to 10 years.

The following table presents the Mason Housing, Inc.’s fair value hierarchy for those assets and liabilities measured at fair value on a recurring basis as of March 31, 2018:

| MHI Financial Assets and Liability: | Level 1 | Level 2 | Level 3 | Total |
|-------------------------------------|------------------|--------------------|------------|--------------------|
| Assets: | | | | |
| Mutual funds | \$451,766 | \$- | \$- | \$451,766 |
| Certificates of deposits | 449,493 | - | - | 449,493 |
| Investments | <u>\$901,259</u> | <u>\$-</u> | <u>\$-</u> | <u>\$901,259</u> |
| Liability: | | | | |
| Interest rate swap | <u>\$-</u> | <u>\$9,413,256</u> | <u>\$-</u> | <u>\$9,413,256</u> |

The following table presents the Mercatus Center, Inc.'s fair value hierarchy for those investments measured at fair value on a recurring basis as of August 31, 2017:

| Mercatus Financial Assets | Level 1 | Level 2 | Level 3 | Total |
|-----------------------------|-------------|---------|---------|-------------|
| Money markets | \$78,474 | \$- | \$- | \$78,474 |
| Mutual funds – fixed income | 762,392 | - | - | 762,392 |
| Mutual funds – equities | 360,667 | - | - | 360,667 |
| Total Investments | \$1,201,533 | \$- | \$- | \$1,201,533 |

D. PROPERTY AND EQUIPMENT

The following comprises property and equipment for the component units at June 30, 2018:

| | GMUF | MHI * | GMUIF * | MK ^ | Mercatus# |
|-------------------------------------------|--------------|--------------|-------------|----------|-------------|
| Land | \$27,109,091 | \$- | \$6,435,556 | \$- | \$- |
| Land improvements | - | 92,185 | - | - | - |
| Buildings and building improvements | 65,310,112 | 31,267,734 | 600,000 | - | 20,218 |
| Furniture, fixtures and equipment | 1,037,375 | 620,704 | 796,706 | 17,525 | 3,367,958 |
| Total | 93,456,578 | 31,980,623 | 7,832,262 | 17,525 | 3,388,176 |
| Accumulated depreciation and amortization | (25,568,160) | (9,011,388) | (691,995) | (17,525) | (2,724,423) |
| Net property and equipment | \$67,888,418 | \$22,969,235 | \$7,140,267 | \$- | \$663,753 |

* March 31, 2018 year-end, ^ December 31, 2017 year-end and # August 31, 2017 year-end

E. LONG-TERM DEBT – GEORGE MASON UNIVERSITY FOUNDATION

George Mason University Foundation, Inc. (Potomac Heights and University Park Projects) - Fairfax County Economic Development Authority Bonds

On October 7, 2003, the Fairfax County Economic Development Authority (“FCEDA”) issued \$35,125,000 of variable rate bonds to finance a housing project for use by the University and to refinance existing properties the Foundation owns and rents to the University. On May 1, 2013, the Foundation refinanced the remaining \$25,520,000 of the FCEDA bonds with the same commercial bank. On November 7, 2016, the commercial bank agreed to release the lien of the deed of trust from the University Park Projects. On December 21, 2017, the Foundation, through its newly established subsidiary, GMUF Potomac Heights, LLC, refinanced with a second commercial bank, the remaining \$16,597,500 of FCEDA bonds as well as the interest rate swap termination fee. Bonds were issued including \$16,795,000 of FCEDA Refunding Revenue Note, Series 2017A (GMUF Potomac Heights, LLC Issue) tax-exempt fixed rate bonds, and \$1,380,000 of FCEDA Refunding Revenue Note, Series 2017B (GMUF Potomac Heights, LLC Issue) taxable fixed rate bonds. The Foundation began leasing the property to the University in fiscal year 2018 with a 10 year lease term and the lease payments service the bonds’ principal and interest payments.

GMUF Mason Administration, LLC (Merten Hall) - Fairfax County Economic Development Authority Bonds

On April 21, 2010 the FCEDA issued its \$36,100,000 Revenue Bond Series 2010A (Tax Exempt - GMUF Mason Administration, LLC Project) and its \$1,900,000 Revenue Bond Series 2010B (Taxable - GMUF Mason

Administration, LLC Project) and sold such bonds to a commercial bank pursuant to a Bond Purchase and Loan Agreement dated April 1, 2010. The Foundation borrowed \$32,100,000 of the Revenue Bond Series 2010A and the entire \$1,900,000 of the Revenue Bond Series 2010B.

The Series 2010A Bonds were subject to mandatory repayment at the option of the commercial bank on December 1, 2023. On November 4, 2016, the Foundation executed a loan modification agreement in which the commercial bank shall not exercise the mandatory prepayment option but the Foundation is now obligated to prepay the Series 2010A Bonds on June 1, 2024.

Proceeds were used in the acquisition, construction, renovation and equipping of a five-story administration building for classrooms, administrative office and retail space. The building was substantially completed in May 2011, with remaining construction for retail space completed in fiscal year 2014. The Foundation's loan obligation is limited to that portion of the bond issuance which it drew upon pursuant to the Bond Purchase and Loan Agreement.

As part of this transaction, the Foundation simultaneously entered into two forward floating-to-fixed interest rate swaps with a commercial bank to effectively fix the interest rates on the tax-exempt and taxable bonds. See Note F for discussion regarding the interest rate swaps.

On May 18, 2018, the FCEDA issued its \$30,395,000 Refunding Revenue Bond, Series 2018 (GMUF Mason Administration, LLC Project) and sold such bonds to a commercial bank pursuant to a loan and financing agreement. Proceeds were used to retire the \$28,243,403 of outstanding FCEDA Revenue Bond Series 2010A (Tax-Exempt – GMUF Mason Administration, LLC Project) bonds as well as the interest rate swap termination fee. The Foundation began leasing the property to the University in fiscal year 2011 with a 25 year lease term and the lease payments service the bonds' principal and interest payments.

GMUF Prince William Housing, LLC (Beacon Hall) - Industrial Development Authority of the County of Prince William Bonds

On August 11, 2011, the Industrial Development Authority of the County of Prince William issued its \$14,640,000 Revenue Bond Series 2011A (Tax-Exempt George Mason University Foundation Prince William Housing LLC Project) and its \$985,000 Revenue Bond Series 2011B (Taxable George Mason University Foundation Prince William Housing LLC Project). Proceeds were used to finance the acquisition, construction and equipping of a student residence hall, University program space, and unimproved "shell space" designated for retail tenants.

The Series 2011A and Series 2011B Bonds are special, limited obligations of the issuer, payable solely from the revenues pledged therefore under the indenture. Neither the Foundation nor the University is liable for payments of the principal or redemption price of interest on the Bonds. The Foundation began leasing the property to the University in fiscal year 2013 with a 30 year lease term, and the lease payments service the bonds' principal and interest payments.

GMUF Prince William Life Sciences Lab, LLC - Industrial Development Authority of the County of Prince William Bonds

On August 11, 2011, the Industrial Development Authority of the County of Prince William issued its \$31,065,000 Revenue Bond Series 2011AA (Tax-Exempt George Mason University Foundation Prince William Life Sciences Lab LLC Project) and its \$2,145,000 Revenue Bond Series 2011BB (Taxable George Mason University Foundation Prince William Life Sciences Lab LLC Project) pursuant to a Trust Indenture dated August 1, 2011. Proceeds were used to finance the acquisition, construction and equipping of life sciences lab facilities and the

acquisition and construction of unimproved “shell space” designated for commercial laboratory use. The project was completed in fiscal year 2015.

The Series 2011AA and Series 2011BB Bonds are special, limited obligations of the issuer, payable solely from the revenues pledged therefore under the indenture. Neither the Foundation nor the University is liable for payments of the principal or redemption price of interest on the Bonds. The Foundation began leasing the property in fiscal year 2013 to the University with a 29.5 year lease term, and the lease payments service the bonds’ principal and interest payments. The Series 2011BB Bonds matured on September 1, 2016.

During fiscal year 2017, the Industrial Development Authority of the County of Prince William issued its \$35,330,000 Revenue Bond Series 2017 (“Series 2017 Bonds”) pursuant to a Trust Indenture dated February 1, 2017. Proceeds were used by the Foundation to execute an advanced refunding and to legally defease the Series 2011AA Bonds. As a result, the Series 2011AA Bonds are deemed extinguished for accounting purposes resulting in a loss of \$3,933,325 during fiscal year 2017. The Foundation entered into this advanced refunding to eliminate the private business use restrictions on the building, allowing the Foundation more flexibility in utilizing the space and to take advantage of historically low long-term interest rates. The University’s lease payments fund the debt service of the Series 2017 Bonds.

All of the term bonds for the Industrial Development Authority of the County of Prince William Series 2017 Bonds are subject to mandatory redemption by operation of sinking fund installments.

GMUF Commerce Buildings, LLC - Industrial Development Authority of the Town of Clifton, VA

On May 24, 2013, the Industrial Development Authority of the Town of Clifton, VA issued its \$6,500,000 Revenue Bond Series 2013 (GMUF Commerce Buildings, LLC Project) and sold such bonds to a commercial bank pursuant to a bond purchase and loan agreement dated May 24, 2013. Proceeds were used for the purposes of (a) refinancing \$2,260,000 of the FCEDA bonds, (b) renovating existing office buildings owned by the Foundation in the City of Fairfax, Virginia, and (c) paying certain other expenditures associated with the bond issuance, such as debt issuance costs. The project was completed in fiscal year 2014, and the Foundation had drawn a total of \$6,232,503 of the loan with the commercial bank.

The Foundation’s loan obligation is limited to that portion of the bond issuance which it drew upon pursuant to the Bond Purchase and Loan Agreement.

On March 16, 2015, GMU Commerce Buildings, LLC modified its existing loan with the commercial bank resulting in a taxable loan of \$5,720,000 at a fixed rate of 3.63%, maturing March 1, 2030. The Foundation leases the property to the University with a 15 year lease term and the lease payments made by the University service the notes’ principal and interest payments as well as operating costs.

GMUF Arlington Campus, LLC Notes

On August 18, 2006, GMUF Arlington Campus, LLC secured a 10-year \$68.5 million loan by executing a deed of trust on real property located at 3434 North Washington Street, Arlington, VA, with a financial institution.

During fiscal year 2016, GMUF Arlington Campus, LLC extinguished its existing loan and terminated a related letter of credit. Effective June 1, 2016, GMUF Arlington Campus, LLC negotiated a new loan of \$60 million with another commercial bank at a fixed rate of 4.05%, maturing June 1, 2033.

The following represents the Foundation’s bonds and notes payable at June 30, 2018.

| | 2018 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| Fairfax County Economic Development Authority Bonds (FCEDA) | |
| GMUF Potomac Heights, LLC Tax-Exempt Revenue Bonds, term interest rate 2.41%, maturing on November 1, 2027 | 16,795,000 |
| GMUF Potomac Heights, LLC Taxable Revenue Bonds, term interest rate 2.05%, maturing on November 1, 2018 | 743,468 |
| GMUF Mason Administration, LLC Tax-Exempt Revenue Bond, interest rate 3.47% maturing on April 1, 2036 | 30,281,518 |
| Industrial Development Authority of the County of Prince William (IDA-PW) | |
| Prince William County Series 2011A Bonds, serial with interest rates ranging from 4.25% to 5.00%, maturing at various dates from September 1, 2022 to September 1, 2026 | \$1,895,000 |
| Prince William County Series 2011A Bonds, term interest rate 5.50%, maturing September 1, 2031 | 3,190,000 |
| interest rate 5.125%, maturing September 1, 2041 | 9,555,000 |
| Prince William County Series 2011B Bonds, term interest rate 3.375%, maturing September 1, 2021 | 745,000 |
| Prince William County Series 2017 Bonds, serial with interest rates ranging from 1.206% to 4.424%, maturing at various dates from October 1, 2017 to October 1, 2036 | 24,265,000 |
| Prince William County Series 2017 Bonds, term interest rate 4.524%, maturing October 1, 2041 | 10,315,000 |
| Bank Notes | |
| GMUF Arlington Campus, LLC Note with interest rate of 4.05% maturing June 1, 2033 | \$54,912,427 |
| GMUF Commerce Buildings, LLC Note with interest rate of 3.63% maturing March 1, 2030 | 4,686,910 |
| Notes and bonds payable at face value | 157,384,323 |
| Plus: Unamortized net premium | 60,350 |
| Less: Debt issuance costs, net | (1,365,745) |
| Total long-term debt | \$156,078,928 |

Scheduled maturities and sinking fund requirements are as follows:

| Year Ended June 30 | Total |
|--------------------|---------------|
| 2019 | \$6,989,191 |
| 2020 | 7,280,572 |
| 2021 | 7,586,827 |
| 2022 | 7,843,004 |
| 2023 | 8,159,821 |
| Thereafter | 119,524,908 |
| Total | \$157,384,323 |

Interest expense on notes, bonds and related swaps along with the amortization of deferred financing charges was \$6,607,246 for the year ended June 30, 2018.

The carrying value of debt approximated the fair value as of June 30, 2018. The Foundation estimated the fair value of bonds payable using valuations provided by an independent financial institution.

For certain debt issuances, on a periodic basis, the Foundation is required to comply with administrative reporting and debt covenant calculations. As of June 30, 2018, the Foundation was in compliance with its required debt covenant calculations.

F. DERIVATIVE INSTRUMENTS – GEORGE MASON UNIVERSITY FOUNDATION

George Mason University Foundation, Inc. Interest Rate Swaps and Cap

In October 2003, the Foundation entered into an interest rate swap agreement with a financial institution against the floating rate bonds in the notional amount of \$22,425,000 at a fixed interest rate of 4.045%, including all costs, on a 20-year amortization schedule. Concurrently, the Foundation entered into a 20-year interest rate cap agreement with the same financial institution in the notional amount of \$12,700,000, at a rate of 10%. The interest rate swap was used as a cash flow hedge to synthetically fix the rate of the bonds and to eliminate changes in the market interest rates. With the refinancing of the FCEDA bonds (see Note E), the interest rate swap was amended on April 30, 2013 resulting in a notional amount of \$20,818,750 at a fixed interest rate of 3.032% and a termination date of February 1, 2029. The interest rate cap agreement remained in place.

At June 30, 2017, the notional amount on the swap was \$16,850,000, and on the cap was \$9,975,000. The fair value of the interest rate swap at June 30, 2017 totaled a derivative liability of \$1,601,047. The net change in value has been recorded as a gain on derivatives in the consolidated statement of activities. The interest rate swap has a liability threshold of \$3,500,000. Should the derivative obligation exceed \$3,500,000, the Foundation is required to post collateral in excess of the threshold amount. As of June 30, 2017, no collateral balance was required. The fair value of the interest rate cap totaled a derivative asset of \$366 at June 30, 2017, and was a component of other assets. All assets or liabilities related to the interest rate swap and interest rate cap convert to zero at contract maturity.

On December 21, 2017, the interest rate swap was terminated for a fee of \$1,318,468, which was equal to the derivative obligation at closing. On January 4, 2018, the interest rate cap was terminated at no cost.

GMUF Mason Administration, LLC Interest Rate Swaps

In March 2010, as part of the GMUF Mason Administration, LLC project, the Foundation entered into a forward floating-to-fixed interest rate swap to effectively fix the interest rate on the \$32,100,000 tax-exempt notional amount at a fixed interest rate of 4.675 percent and a second forward floating-to-fixed interest rate swap to effectively fix the interest rate on the \$1,900,000 taxable notional amount at a fixed interest rate of 4.5 percent with a commercial bank. The swap transactions became effective on June 1, 2011. The termination date is June 1, 2036 for the tax-exempt notional amount and the taxable swap was terminated on December 1, 2013. At June 30, 2017, the notional amount on the tax-exempt swap was \$29,005,000.

The fair value of the interest rate swaps at June 30, 2017 totaled a derivative liability \$3,121,730. The net change in value has been recorded as gains or losses on derivatives in the consolidated statement of activities. The remaining interest rate swap has a liability threshold of \$5,000,000. Should the derivative obligations exceed \$5,000,000, GMUF Mason Administration, LLC is required to post collateral in excess of the threshold amount. As of June 30, 2017, no collateral balance was required.

On May 18, 2018, the interest rate swap was terminated for a fee of \$1,790,000, which was equal to the derivative obligation at closing.

G. LONG-TERM DEBT – MASON HOUSING, INC

In October 2008, the Fairfax County Economic Development Agency (EDA) issued \$39,760,000 of variable rate bonds (the Bonds) in order to provide financing for the development of Mason Housing. Bank of America (the Bond Purchaser) purchased these bonds and the proceeds received from the purchase were deposited to U.S. Bank National Association (the Trustee). Concurrently, the Organization entered into a loan agreement with EDA to borrow the proceeds received from the sale of the bonds. EDA entered into a trust indenture with the Trustee to secure the repayment of the bonds by the assignment of its rights under the loan agreement. In addition, the Organization entered into two interest rate swap agreements with Bank of America which exchanged the variable rate borne by the Organization with a fixed rate.

Principal payments are due annually on August 1 from 2011 to 2039. The Bonds bear interest at a variable rate, not to exceed 12%, which is determined by the remarketing agent, Bank of America Securities LLC, on a weekly index floating rate and flexible rate basis. The Bonds bear interest at an index floating rate, which is 1.10% plus the Securities Industries and Financial Market Association (SIFMA) through October 1, 2016. On November 1, 2016, the agreement was amended to change the interest to 1.15% plus 70% of the London Interbank Offered Rate (LIBOR) monthly floating rate through January 1, 2018. On January 1, 2018, the current interest being charged was extended through January 31, 2022. Commencing February 1, 2022, the Bond Purchaser may select an interest rate, as defined, pursuant to the terms of the trust indenture. The interest rate on the Bonds as of March 31, 2017 was 1.15%. The Bonds are secured by a Trust Indenture dated October 1, 2008. The trust indenture was supplemented on October 1, 2013 to reflect the Bonds as directly held by the bond purchaser.

In October 2008, an interest rate swap agreement was entered into on a notional amount of \$38,400,000. The swap went into effect December 1, 2008, and is set to expire on August 1, 2039. Per the agreement, the Organization pays a fixed rate of 3.97% and Bank of America pays a variable rate of the one-month LIBOR-BBA for each month (1.23991% at March 31, 2018).

In October 2008, an interest rate swap agreement was entered into on a notional amount of \$1,360,000. The swap went into effect December 1, 2008, and is set to expire on August 1, 2039. Per the agreement, the Organization pays a fixed rate of 3.035% and Bank of America pays a variable rate of the one-month LIBOR-BBA for each month (1.23991% at March 31, 2018).

The loan payable is secured by the Organization's building and improvements and future rental income. Interest is payable monthly on the loan payable, commencing in November 2008. Annual principal payments commenced in August 2011. Pursuant to the master covenant agreement with the bond purchaser, the Organization is required to maintain a debt service coverage ratio of at least 1.20.

During the year ended March 31, 2018, interest expense of \$1,973,082 was incurred and was included in interest expense on the statement of activities and changes in unrestricted net deficit. As of March 31, 2018, the outstanding principal balance was \$38,815,000. As of March 31, 2018, accrued interest payable was \$165,492.

Debt issuance costs on the above note are being amortized using an imputed rate of 5.34% at March 31, 2018. As of March 31, 2018, unamortized debt issuance costs was \$1,158,809.

Aggregate maturities of the loan payable over the next five years and thereafter is as follows:

| Year Ended March 31 | Total |
|----------------------------|---------------------|
| 2019 | \$330,000 |
| 2020 | 406,667 |
| 2021 | 505,000 |
| 2022 | 598,333 |
| 2023 | 706,667 |
| Thereafter | 36,268,333 |
| Total | \$38,815,000 |

H. LONG-TERM DEBT – GMU INSTRUCTIONAL FOUNDATION

GMUIF has a note payable with a bank, in the original amount of \$2,850,000 that commenced on March 1, 2010; collateralized by a deed of trust on 50 acres of land owned by GMUIF. The note bears interest at a fixed rate of 4.75% per annum with monthly payments of principal and interest of \$17,686. The note matures on March 1, 2025.

The minimum five years payments for the years ending March 31 are as follow:

| Year Ended March 31 | Total |
|----------------------------|--------------------|
| 2019 | \$155,478 |
| 2020 | 163,026 |
| 2021 | 170,940 |
| 2022 | 179,239 |
| 2023 | 187,941 |
| Thereafter | 409,301 |
| Total | \$1,265,925 |

I. LONG-TERM DEBT – MASON KOREA

During 2013, Mason Korea entered into an operation support agreement with the Incheon Global Campus Foundation (IGCF). As part of the agreement, IGCF agreed to provide Mason Korea with an interest-free loan for ten years. The total amount should not exceed \$10,000,000 during the ten year period and the repayment period of the loan shall be ten years from the end of the year when the revenues arising from the operation of Mason Korea equals or exceeds expenses. No more than 50% of the amount in which operational revenues exceeds expenses in any given year will be applied to repay the loan. As such, Mason Korea does not have fixed principal payments, as the repayment terms are contingent on future income. As of December 31, 2017, the notes payable balance was \$562,852 as reported in the Statements of Financial Position.

Mason Korea entered into a Korean government subsidy agreement in 2017 with Incheon Global Campus Foundation (“IGCF”). In the agreement, IGCF agreed to provide Mason Korea with a government subsidy of USD \$1,000,000. In return, Mason Korea shall use the funds to pay personnel expenses. In 2017, Mason Korea spent all subsidies for its purpose so there is no outstanding balance as of December 31, 2017.

J. ADJUSTMENT TO BEGINNING NET ASSETS

The Adjustment to Beginning Net Assets of \$17,072,990 on the Combined Statement of Activities represents the Beginning Net Assets of Mercatus Center Inc. Mercatus is a new component unit of the University in this fiscal year.

K. SUBSEQUENT EVENTS – COMPONENT UNITS

GMUF is a beneficiary in a trust that became irrevocable upon the decedent's death in May 2018. Due to the complex nature of the trust and assets involved, the Foundation was not able to make a reasonable estimate of the expected proceeds as of June 30, 2018. Subsequent to June 30, 2018, the Foundation received information ascertaining the trust's value and structure. The residual proceeds expected to be received by the Foundation are estimated at \$50,000,000 and will be used to establish an endowed chair. The Foundation has received \$15,000,000 thus far in FY19 and may receive the remainder before the end of the fiscal year.

In October 2018, GMUIF, F Corporation, donated an uplink satellite dish located at the Fairfax campus to the University. The total value of the donation was \$35,000, of which \$23,500 was in cash and \$11,500 was in services.

In March 2019, GMUIF, Capitol Connection, invested in a Convertible Promissory Note and Warrant Purchase Agreement with Senseware, Inc. in the amount of \$50,000.

In March 2018, Mason Korea paid off the remaining balance of its loan from Incheon Global Campus Foundation (IGCF).

20. SUBSEQUENT EVENTS

On December 4, 2018, the University entered into a promissory note with the Virginia College Building Authority (VCBA) to participate in the Educational Facilities Revenue Bonds, Series 2018A, issued by the VCBA under its Public Higher Education Financing Program. The total principal amount of the note was \$21,925,000. The University will use the proceeds to finance the Utilities Distribution Infrastructure Project (Project Code 18208). Interest payments on the note will be made semi-annually, with the coupons ranging from 4 to 5 percent. Principal payments are made annually with the final payment due September 1, 2038.

REQUIRED SUPPLEMENTARY INFORMATION

Required Supplementary Information (RSI)
Cost-Sharing Employer Plans – VRS State Employee Retirement Plan
and VaLORS Retirement Plan
For the Fiscal Year Ended June 30, 2018

| Schedule of Employer's Share of Net Pension Liability | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|---------------|---------------|
| VRS State Employee Retirement Plan | | | | |
| For the Years Ended June 30, 2018, 2017, 2016 and 2015* | | | | |
| | 2018 | 2017 | 2016 | 2015 |
| Employer's Proportion of the Net Pension Liability (Asset) | 3.15% | 3.25% | 3.28% | 3.27% |
| Employer's Proportionate Share of the Net Pension Liability (Asset) | \$183,719,000 | \$214,498,000 | \$200,645,000 | \$182,878,000 |
| Employer's Covered Payroll | \$123,376,471 | \$126,225,866 | \$124,140,373 | \$126,146,921 |
| Employer's Proportionate Share of the Net Pension Liability (Asset) as a Percentage of its Covered Payroll | 148.91% | 169.93% | 161.63% | 144.97% |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 75.33% | 71.29% | 72.81% | 74.28% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the fourth year for this presentation, there are only four years available. However, additional years will be included as they become available.</i> | | | | |
| * The amounts presented have a measurement date of the previous fiscal year end. | | | | |

Schedule of Employer's Share of Net Pension Liability
VaLORS Retirement Plan
For the Years Ended June 30, 2018, 2017, 2016 and 2015*

| | 2018 | 2017 | 2016 | 2015 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|
| Employer's Proportion of the Net Pension Liability (Asset) | 0.7310% | 0.7456% | 0.7670% | 0.7099% |
| Employer's Proportionate Share of the Net Pension Liability (Asset) | \$4,798,000 | \$5,772,000 | \$5,451,000 | \$4,785,000 |
| Employer's Covered Payroll | \$2,513,696 | \$2,577,844 | \$2,595,671 | \$2,502,219 |
| Employer's Proportionate Share of the Net Pension Liability (Asset) as a Percentage of its Covered Payroll | 190.87% | 223.91% | 210.00% | 191.23% |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 67.22% | 61.01% | 62.64% | 63.05% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the fourth year for this presentation, there are only four years available. However, additional years will be included as they become available.</i> | | | | |
| * The amounts presented have a measurement date of the previous fiscal year end. | | | | |

Schedule of Employer Contributions
VRS State Employee Retirement Plan
For the Years Ended June 30, 2009 through 2018

| Contributions in Relation to | | | | | |
|------------------------------|-------------------------------------|-------------------------------------|----------------------------------|----------------------------|-----------------------------------------|
| Date | Contractually Required Contribution | Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
| 2018 | \$17,194,913 | \$17,194,913 | \$0 | \$127,464,144 | 13.49% |
| 2017 | 16,643,486 | 16,643,486 | 0 | 123,376,471 | 13.49% |
| 2016 | 17,646,376 | 17,646,376 | 0 | 126,225,866 | 13.98% |
| 2015 | 15,306,508 | 15,306,508 | 0 | 124,140,373 | 12.33% |
| 2014 | 11,050,470 | 11,050,470 | 0 | 126,146,921 | 8.76% |
| 2013 | 10,404,379 | 10,404,379 | 0 | 118,771,449 | 8.76% |
| 2012 | 3,663,572 | 3,663,572 | 0 | 114,127,310 | 3.21% |
| 2011 | 2,149,857 | 2,149,857 | 0 | 100,932,263 | 2.13% |
| 2010 | 4,819,167 | 4,819,167 | 0 | 97,458,101 | 4.94% |
| 2009 | 5,686,241 | 5,686,241 | 0 | 91,271,931 | 6.23% |

**Schedule of Employer Contributions
VaLORS Retirement Plan
For the Years Ended June 30, 2009 through 2018**

| Date | Contributions in Relation to | | | | |
|------|-------------------------------------------|-------------------------------------------|----------------------------------------|----------------------------------|-----------------------------------------------|
| | Contractually Required Contribution | Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
| 2018 | \$614,204 | \$614,204 | \$0 | \$2,917,834 | 21.05% |
| 2017 | 529,133 | 529,133 | 0 | 2,513,696 | 21.05% |
| 2016 | 485,408 | 485,408 | 0 | 2,577,844 | 18.83% |
| 2015 | 458,655 | 458,655 | 0 | 2,595,671 | 17.67% |
| 2014 | 370,328 | 370,328 | 0 | 2,502,219 | 14.80% |
| 2013 | 445,945 | 445,945 | 0 | 3,013,140 | 14.80% |
| 2012 | 213,333 | 213,333 | 0 | 3,013,181 | 7.08% |
| 2011 | 136,739 | 136,739 | 0 | 2,670,676 | 5.12% |
| 2010 | 328,465 | 328,465 | 0 | 2,883,746 | 11.39% |
| 2009 | 377,114 | 377,114 | 0 | 2,650,137 | 14.23% |

***Notes to Required Supplementary Information
For the Year Ended June 30, 2018***

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation. The 2014 valuation includes Hybrid Retirement Plan members for the first time. The hybrid plan applies to most new employees hired on or after January 1, 2014 and not covered by enhanced hazardous duty benefits. Because this is still a fairly new benefit and the number of participants was relatively small, the impact on the liabilities as of the measurement date of June 30, 2017 are not material.

Changes of assumptions

The following changes in actuarial assumptions were made for the VRS - State Employee Retirement Plan effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Update to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increase rate from 14% to 25% |

The following changes in actuarial assumptions were made for the VaLORS Retirement Plan effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Update to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience, age, and service through 9 years of service. |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decrease rate from 50% to 35% |

Required Supplementary Information (RSI)
Cost-Sharing Employer Plans – Group Life Insurance Program
For the Fiscal Year Ended June 30, 2018

| Schedule of Employer's Share of Net OPEB Liability Group Life Insurance (GLI) Program For the Year Ended June 30, 2018* | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| | 2018 |
| Employer's Proportion of the Net GLI OPEB Liability (Asset) | 1.66% |
| Employer's Proportionate Share of the Net GLI OPEB Liability (Asset) | \$25,016,000 |
| Employer's Covered Payroll | \$305,005,397 |
| Employer's Proportionate Share of the Net GLI OPEB Liability (Asset) as Percentage of its Covered Payroll | 8.20% |
| Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability | 48.86% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | |
| * The amounts presented have a measurement date of the previous fiscal year end. | |

| Schedule of Employer Contributions Group Life Insurance (GLI) Program For the Year Ended June 30, 2018 | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------|-----------------------------------|------------------------------------------------|
| Date | Contractually Required Contribution | Contributions in Relation to Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
| 2018 | \$1,686,252 | \$1,686,252 | \$0 | \$324,279,275 | 0.52% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | | | | | |

***Notes to Required Supplementary Information
For the Fiscal Year Ended June 30, 2018***

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

General State Employees:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 25% |

Teachers:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |

SPORS Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

VaLORS Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |

| | |
|-------------------------|-------------------------------------------------------------------------------------------------|
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

JRS Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Decreased rates at first retirement eligibility |
| Withdrawal Rates | No change |
| Disability Rates | Removed disability rates |
| Salary Scale | No change |

Largest Ten Locality Employers - General Employees:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages and extended final retirement age from 70 to 75 |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Lowered disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 20% |

Non-Largest Ten Locality Employers - General Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages and extended final retirement age from 70 to 75. |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Lowered disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 15% |

Largest Ten Locality Employers – Hazardous Duty Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages |

| | |
|-------------------------|----------------------------------------------------------------------------------|
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Increased disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 70% |

Non-Largest Ten Locality Employers – Hazardous Duty Employees:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 60% to 45% |

Required Supplementary Information (RSI)
Cost-Sharing Employer Plans –
VRS State Employee Health Insurance Credit Program
For the Fiscal Year Ended June 30, 2018

| Schedule of Employer's Share of Net OPEB Liability Health Insurance Credit Program (HIC) For the Year Ended June 30, 2018* | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| | 2018 |
| Employer's Proportion of the Net HIC OPEB Liability (Asset) | 4.71% |
| Employer's Proportionate Share of the Net HIC OPEB Liability (Asset) | \$42,921,000 |
| Employer's Covered Payroll | \$331,193,685 |
| Employer's Proportionate Share of the Net HIC OPEB Liability (Asset) as a Percentage of its Covered Payroll | 12.96% |
| Plan Fiduciary Net Position as a Percentage of the Total HIC OPEB Liability | 8.03% |
| <i>Schedule in intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | |
| * The amounts presented have a measurement date of the previous fiscal year end. | |

| Schedule of Employer Contributions Health Insurance Credit Program (HIC) For the Year Ended June 30, 2018 | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|-------------------------------------------------|-------------------------------------------|--------------------------------------------------------|
| | Contributions in Relation to | | | | |
| Date | Contractually Required Contribution | Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
| 2018 | \$3,809,658 | \$3,809,658 | \$0 | \$322,852,386 | 1.18% |
| <i>Schedule in intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | | | | | |

***Notes to Required Supplementary Information
For the Fiscal Year Ended June 30, 2018***

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

General State Employees:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 25% |

SPORS Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

VaLORS Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

JRS Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Decreased rates at first retirement eligibility |
| Withdrawal Rates | No change |
| Disability Rates | Removed disability rates |
| Salary Scale | No change |

Required Supplementary Information (RSI)
Cost-Sharing Employer Plans – Line of Duty Act Program (LODA)
For the Fiscal Year Ended June 30, 2018

| Schedule of Employer's Share of Net OPEB Liability Line of Duty Act Program (LODA) For the Year Ended June 30, 2018* | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| | 2018 |
| Employer's Proportion of the Net LODA OPEB Liability (Asset) | 0.22% |
| Employer's Proportionate Share of the Net LODA OPEB Liability (Asset) | \$580,000 |
| Covered-Employee Payroll | \$2,636,694 |
| Employer's Proportionate Share of the Net LODA OPEB Liability (Asset) as a Percentage of its Covered-Employee Payroll | 22.00% |
| Plan Fiduciary Net Position as a Percentage of the Total LODA OPEB Liability | 1.30% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | |
| * The amounts presented have a measurement date of the previous fiscal year end. | |

| Schedule of Employer Contributions Line of Duty Act Program (LODA) For the Year Ended June 30, 2018 | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------|----------------------------------------------------------------------|
| Date | Contractually Required Contribution | Contributions in Relation to Contractually Required Contribution | Contribution Deficiency (Excess) | Covered- Employee Payroll | Contributions as a % of Covered- Employee Payroll |
| 2018 | \$23,262 | \$23,262 | \$0 | \$3,014,955 | 0.77% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | | | | | |

***Notes to Required Supplementary Information
For the Year Ended June 30, 2018***

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

For General State Employees:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 25% |

SPORS Employees:

| | |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table - RP- 2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

For VaLORS Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

Employees in the Largest Ten Locality Employers with Public Safety Employees:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table - RP-2014 projected to 2020 |
| Retirement Rates | Lowered retirement rates at older ages |
| Withdrawal Rates | Adjusted termination rates to better fit experience at each age and service year |
| Disability Rates | Increased disability rates |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 70% |

Employees in the Non- Largest Ten Locality Employers with Public Safety Employees:

| | |
|-------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Updated to a more current mortality table - RP-2014 projected to 2020 |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each age and service year |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 60% to 45% |

Required Supplementary Information (RSI)
Cost-Sharing Employer Plans – Disability Insurance Program (VSDP)
For the Fiscal Year Ended June 30, 2018

| Schedule of Employer's Share of Net OPEB Liability (Asset) Disability Insurance Program (VSDP) For the Year Ended June 30, 2018* | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| | 2018 |
| Employer's Proportion of the Net VSDP OPEB Liability (Asset) | (2.98)% |
| Employer's Proportionate Share of the Net VSDP OPEB Liability (Asset) | \$(6,127,000) |
| Employer's Covered Payroll | \$116,138,459 |
| Employer's Proportionate Share of the Net VSDP OPEB Liability (Asset) as a Percentage of its Covered Payroll | (5.28)% |
| Plan Fiduciary Net Position as a Percentage of the Total VSDP OPEB Liability | 186.63% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | |
| * The amounts presented have a measurement date of the previous fiscal year end. | |

| Schedule of Employer Contributions Disability Insurance Program (VSDP) For the Year Ended June 30, 2018 | | | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------|-----------------------------------------|-----------------------------------|------------------------------------------------|
| | Contributions in Relation to | | | | |
| Date | Contractually Required Contribution | Contractually Required Contribution | Contribution Deficiency (Excess) | Employer's Covered Payroll | Contributions as a % of Covered Payroll |
| 2018 | \$772,464 | \$772,464 | \$0 | \$117,039,982 | 0.66% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | | | | | |

***Notes to Required Supplementary Information
For the Year Ended June 30, 2018***

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

General State Employees:

| | |
|-------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Update to a more current mortality table – RP-2014 projected to 2020 |
| Retirement Rates | Lowered rates at older ages and changed final retirement from 70 to 75 |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 14% to 25% |

SPORS Employees:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Update to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Increased rate from 60% to 85% |

VaLORS Employees:

| | |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Mortality Rates (Pre-retirement, post-retirement healthy, and disabled) | Update to a more current mortality table – RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience |
| Retirement Rates | Increased age 50 rates and lowered rates at older ages |
| Withdrawal Rates | Adjusted rates to better fit experience at each year age and service through 9 years of service |
| Disability Rates | Adjusted rates to better match experience |
| Salary Scale | No change |
| Line of Duty Disability | Decreased rate from 50% to 35% |

Required Supplementary Information (RSI)
Commonwealth of Virginia State Health Plans
Program for Pre-Medicare Retirees
For the Fiscal Year Ended June 30, 2018

| Schedule of Employer's Share of OPEB Liability Pre-Medicare Retiree Healthcare For the Year Ended June 30, 2018* | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| | 2018 |
| Employer's proportion of the collective total OPEB Liability | 3.89% |
| Employer's proportionate share of the collective total OPEB Liability | \$50,512,033 |
| Employer's covered-employee payroll | \$304,037,694 |
| Employer's proportionate share of the collective total OPEB liability as a percentage of its covered-employee payroll | 16.6% |
| <i>Schedule is intended to show information for 10 years. Since 2018 is the first year for this presentation, only one year of data is available. However, additional years will be included as they become available.</i> | |
| * The amounts presented have a measurement date of the previous fiscal year end. | |

Notes to Required Supplementary Information
For the Year Ended June 30, 2018

There are no assets accumulated in a trust to pay related benefits.

Changes of benefit terms – There have been no changes to the benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following assumptions were updated since the July 1, 2016 valuation based on the results of a Virginia Retirement System actuarial experience study performed for the period of July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

- Mortality rates – updated to a more current mortality table – RP-2014 projected to 2020
- Retirement rates – lowered rates at older ages and changed final retirement from 70 to 75
- Withdrawal rates – adjusted rates to better fit experience at each year age and service through 9 years of service

The discount rate was increased from 2.85% to 3.58% based on the Bond Buyers GO 20 Municipal Bond Index and spousal coverage was reduced from 70% to 50% based on a blend of recent spousal coverage election rates and the prior year assumption. Based on the 2017 census, new retirees since 1/1/2015 have chosen to cover their spouses approximately 20% of the time. However, active employees cover their spouses at a rate close to 53%.

INDEPENDENT AUDITOR'S REPORT



Martha S. Mavredes, CPA
Auditor of Public Accounts

Commonwealth of Virginia

Auditor of Public Accounts

P.O. Box 1295
Richmond, Virginia 23218

March 29, 2019

The Honorable Ralph S. Northam
Governor of Virginia

The Honorable Thomas K. Norment, Jr.
Chairman, Joint Legislative Audit
and Review Commission

Board of Visitors
George Mason University

INDEPENDENT AUDITOR'S REPORT

Report on Financial Statements

We have audited the accompanying financial statements of the business-type activities and aggregate discretely presented component units of George Mason University, a component unit of the Commonwealth of Virginia, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We did not audit the financial statements of the aggregate discretely presented component units of the University, which are discussed in Note 1 and Note 19. Those financial statements were audited by other auditors whose reports thereon have been furnished to us, and our opinion, insofar as it relates to the amounts included for the component units of the University, is based on the reports of the other auditors.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The financial statements of the component units of the University that were audited by other auditors upon whose reports we are relying were audited in accordance with auditing standards generally accepted in the United States of America, but not in accordance with Government Auditing Standards.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall financial statement presentation.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a reasonable basis for our audit opinions.

Opinion

In our opinion, based on our audit and the reports of other auditors, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities and aggregate discretely presented component units of the University as of June 30, 2018, and the respective changes in financial position and cash flows, where applicable, thereof for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

Change in Accounting Principle

As discussed in Note 1.T. of the accompanying financial statements, the University implemented Governmental Accounting Standards Board Statement No. 75, related to accounting and financial reporting for postemployment benefits other than pensions. Our opinion is not modified with respect to this matter.

Correction of 2017 Financial Statements

As discussed in Note 19.J. of the accompanying financial statements, the fiscal year 2017 financial statements have been restated to correct a misstatement related to the recognition of a component unit. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the following be presented to supplement the basic financial statements: Management's Discussion and Analysis on pages 1 through 12; the Schedule of Employer's Share of Net Pension Liability, the Schedule of Employer Contributions, and the Notes to the Required Supplementary Information on pages 102 through 105; the Schedule of Employer's Share of Net OPEB Liability, the Schedule of Employer Contributions, and the Notes to the Required Supplementary Information for the Health Insurance Credit, Group Life Insurance, Disability Insurance, and Line of Duty programs on pages 106 through 117; and the Schedule of Employer's Share of Total OPEB Liability and the Notes to the Required Supplementary Information for the Pre-Medicare Retiree Healthcare program on page 118. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of the financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Reporting Required by Government Auditing Standards

In accordance with Government Auditing Standards, we have also issued our report dated March 29, 2019, on our consideration of George Mason University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts and

grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the University's internal control over financial reporting and compliance.

A handwritten signature in dark ink, reading "Nathan S. Mansueti". The signature is fluid and cursive, with the first name "Nathan" being more prominent.

AUDITOR OF PUBLIC ACCOUNTS

ZLB/clj

UNIVERSITY OFFICIALS

GEORGE MASON UNIVERSITY

Fairfax, Virginia

As of June 30, 2018

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