Index to the Notes to the Financial Statements

June 30, 2018

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Basis of Presentation

The accompanying financial statements have been prepared in conformance with accounting principles generally accepted in the United States of America as prescribed by the Governmental Accounting Standards Board (GASB) and the Financial Accounting Standards Board (FASB).

B. Reporting Entity

For financial reporting purposes, the Commonwealth of Virginia's (the Commonwealth's) reporting entity consists of (1) the primary government, (2) component unit organizations for which the primary government is financially accountable or for which the resources of the component unit primarily benefit the primary government (blended component units), and (3) other component unit organizations for which the nature and significance of their relationship with the primary government is such that exclusion would cause the reporting entity's financial statements to be misleading, and they are financially accountable to the primary government (discrete component units). The funds of all agencies, boards, commissions, foundations, and authorities that have been identified as part of the primary government or a component unit have been included. GASB standards require the inclusion of numerous organizations that raise and hold funds for the direct benefit of the primary government.

Section 2100 of the GASB *Codification of Governmental Accounting and Financial Reporting Standards* (GASB Codification) describes the criteria for determining which organizations, functions, and activities should be considered part of the Commonwealth for financial reporting purposes. The basic criteria include appointing a voting majority of an organization's governing body, and the Commonwealth's ability to impose its will on that organization or the potential for the organization to provide specific financial benefits to, or impose specific financial burdens on, the Commonwealth. Additionally, in instances where the voting majority is not appointed, the above benefit/burden criteria apply. If the organization's assets are also held for, or can be accessed by, the Commonwealth, the organization is considered part of the reporting entity.

(1) Primary Government – A primary government consists of all the organizations that make up its legal entity. All funds, organizations, institutions, agencies, and departments are, for financial reporting purposes, part of the primary government.

(2) Blended Component Units – Though legally separate entities, these component units are, in substance, part of the primary government's operations. The blended component units serve or benefit the primary government almost exclusively. Financial information from these units is combined with that of the primary government. The Commonwealth's blended component units are:

Virginia Public Building Authority (nonmajor governmental fund) – The Authority was created as a body politic and corporate and is fiscally independent. A government instrumentality, the Authority finances the acquisition and construction of buildings for the use of the Commonwealth and other approved purposes. The Governor appoints the 7-member board, and the primary government is able to impose its will on the Authority. The Auditor of Public Accounts audits the Authority, and a separate report is issued from the Department of the Treasury, Post Office Box 1879, Richmond, Virginia 23218-1879.

Hampton Roads Transportation Accountability Commission (nonmajor governmental fund) – The Commission is a political subdivision of the Commonwealth of Virginia, created by the Hampton Roads Transportation Accountability Commission Act. The Commission has a 23-member board comprised primarily of representatives from participating localities in Planning District 23. Its primary function is determining how the Hampton Roads Transportation Fund regional sales and use tax and fuel tax monies will be invested in new construction projects to provide the greatest impact on reducing congestion for the greatest number of citizens residing within Planning District 23. Based on the projects that the Commission is presently funding, all capital assets constructed by the Commission are reported as Commonwealth assets by the Virginia Department of Transportation (VDOT) (part of primary government). Accordingly, while the Commonwealth is not obligated to pay the Commission's debt, it would be misleading to exclude the Commission from the Commonwealth's financial statements. The administrative offices of the Commission are located at 723 Woodlake Drive, Chesapeake, VA 23320. The Commission is audited by PB Mares LLP.

Virginia Alcoholic Beverage Control Authority (nonmajor enterprise fund) – The Authority was created as an independent political subdivision of the Commonwealth, exclusive of the legislative, executive, or judicial branches of state government. A government instrumentality, the Authority controls the possession, sale, transportation, distribution, and delivery of alcoholic beverages in the Commonwealth. The Governor appoints the 5-member board, and the primary government is able to impose its will on the Authority. Additionally, the Commonwealth receives all net profits. The administrative offices of the Authority are located at 2901 Hermitage Road, Richmond, VA 23220. The Auditor of Public Accounts audits the Authority and a separate report is issued.

(3) Discrete Component Units – Discretely presented component units are reported in a separate column in the government-wide financial statements to emphasize that they are legally separate from the primary government. They are financially accountable to the primary government, or have relationships with the primary government such that exclusion would cause the reporting entity's financial statements to be misleading. These discrete component units serve or benefit those outside of the primary government.

GASB statements generally require any organization that raises and holds economic resources for the direct benefit of the reporting entity to be reported as a component unit, even if the reporting entity is not financially accountable for the organization. The entities are included in the Commonwealth's reporting entity as nonprofit charitable organizations and exist solely to support the Commonwealth's higher education institutions and certain state agencies. The higher education institution nonprofit organizations are included in the applicable higher education institution's column in the accompanying financial statements. In all instances where separate disclosure of these nonprofit organizations is required in the accompanying footnotes, the entities' totals are aggregated and disclosed as "foundations."

The criteria for reporting certain component units as major component units focuses on the nature and significance of the component unit's relationship to the primary government versus other component units.

Discretely presented component units are:

Virginia Housing Development Authority (major) – The Authority was created as a political subdivision and instrumentality of the Commonwealth and is granted both politic and corporate powers by the *Code of Virginia*. The Governor appoints a majority of the Authority's board members and the remaining board members are ex-officio. The Commonwealth may make grants to the Authority including, but not limited to, reserve funds, which is a potential financial benefit/burden to the primary government. The Commonwealth is not legally obligated by the debt of the Authority. The Authority was created in the public interest to provide investment in and stimulate construction of low to moderate income housing which benefits the citizens of the Commonwealth. The administrative offices of the Authority are located at 601 South Belvidere Street, Richmond, Virginia 23220. KPMG, LLP audits the Authority, and a separate report is issued.

Virginia Public School Authority (major) – The Authority was created as a public body corporate, and an agency and instrumentality of the Commonwealth to finance capital projects of city and county school boards. The Governor appoints the board members, who serve at his pleasure. Therefore, the primary government is able to impose its will on the Authority. The Auditor of Public Accounts audits the Authority, and a separate report is issued from the Department of the Treasury, Post Office Box 1879, Richmond, Virginia 23218-1879.

Virginia Resources Authority (major) – The Authority was created as a public body corporate and a political subdivision of the Commonwealth to provide financing of infrastructure projects for water supply, wastewater, storm water, solid waste treatment, airports, public safety, brownfields remediation and redevelopment, and recycling. The Governor appoints the 11-member board and the Executive Director of the Authority. The primary government is able to impose its will on the Authority, and there is a financial benefit/burden to the primary government. The Commonwealth does not guarantee any bonds issued by the Authority. The administrative offices of the Authority are located at 1111 East Main Street, Suite 1920, Richmond, Virginia 23219. Clifton Larson Allen, LLP audits the Authority, and a separate report is issued.

Virginia College Building Authority (major) – The Authority was created as a public body corporate, a political subdivision, and an agency and instrumentality of the Commonwealth. The Governor appoints a majority of the board and members serve at his pleasure. Therefore, the primary government is able to impose its will on the Authority. The Authority finances certain capital projects and equipment purchases of state-supported colleges and universities. The Auditor of Public Accounts audits the Authority, and a separate report is issued from the Department of the Treasury, Post Office Box 1879, Richmond, Virginia 23218-1879.

Only the activity of the Authority that relates to the financing of capital projects and equipment purchases by state-supported colleges and universities is included in the accompanying financial statements. The state-supported colleges and universities reported revenue from the Authority of $361.9 million as Program Revenue Capital Grants and Contributions for the 21st Century Program and $75.2 million as Program Revenue Operating Grants and Contributions for equipment. The Authority reported Operating Appropriations from Primary Government of approximately $389.1 million. In addition, the Authority reported approximately $31.5 million in payments from the state-supported colleges and universities for 21st Century and Equipment Program debt service costs and approximately $11.5 million in interest on Build America Bonds.

The Authority assists private institutions of higher education in the financing and refinancing of a broad range of facilities. The Authority is authorized to issue obligations and lend the proceeds to private institutions; however, such financings or refinancings are not obligations of the primary government nor the Authority, but are payable solely from the revenues pledged by the respective private institution. This indebtedness, totaling $700.3 million, is not included in the accompanying financial statements.

Higher Education Institutions (nonmajor) – The Commonwealth's higher education institutions are granted broad corporate powers by state statutes. The Governor appoints the members of each institution's board of trustees. In addition to the annual appropriations to support the institutions' operations, the Commonwealth provides funding for, and construction of, major academic plant facilities for the institutions. Institutions reported Operating Appropriations from Primary Government of approximately $1.9 billion. Institutions reverted approximately $94.7 million in General Fund appropriations that were restored from bond proceeds as required by Chapter 836, 2017 Acts of Assembly. Therefore, there is a financial benefit/burden to the primary government. The higher education institutions are: the University of Virginia, including the University of Virginia Medical Center and the University of Virginia's College at Wise; Virginia Polytechnic Institute and State University; Virginia Commonwealth University, including the Virginia Commonwealth University Health System Authority; the College of William & Mary, including Richard Bland College and the Virginia Institute of Marine Science; Virginia Military Institute; Virginia State University; Norfolk State University; University of Mary Washington; James Madison University; Radford University; Old Dominion University; George Mason University; Virginia Community College System; Christopher Newport University; and Longwood University. The Southwest Virginia Higher Education Center, Roanoke Higher Education Authority, Institute for Advanced Learning and Research, Southern Virginia Higher Education Center, and New College Institute are also included as higher education institutions. The colleges and universities are funded through state appropriations, tuition, federal grants, and private donations and grants. As previously noted, certain foundations are considered component units of the higher education institutions, and are included in the accompanying financial statements as well as the higher education institutions' separately issued financial statements. The Auditor of Public Accounts (APA) does not audit the Roanoke Higher Education Authority, the Institute for Advanced Learning and Research, and the component units of the higher education institutions, including foundations, but relies on the reports issued by other auditors to render her opinion.

The APA audits the colleges and universities, and individual reports are issued under separate cover. Complete financial statements for each institution may be obtained from their respective administrative offices. The addresses for these institutions may be obtained from the Department of Accounts, 101 North 14th Street, Richmond, Virginia 23219-3638.

Innovation and Entrepreneurship Investment Authority (nonmajor) – The Authority is granted corporate powers by the *Code of Virginia*. The Authority serves to facilitate the marketing, organization, and development of scientific research and technology by the state's institutions of higher education and private industry in the Commonwealth. In addition, the Authority serves to promote the economic development of the Commonwealth by attracting and retaining high technology jobs and businesses in Virginia. The Governor and General Assembly appoint the 17-member board, and there is a financial benefit/burden to the primary government. The Authority's combined financial statements include the accounts of the Center for Innovative Technology (CIT) and subsidiaries after elimination of all significant intercompany balances and transactions. CIT is a non-stock, not-for-profit corporation, which acts as the operating arm of the Authority. The address for the administrative offices of the Authority is CIT Building, Suite 600, 2214 Rock Hill Road, Herndon, Virginia 20170-4228. The Auditor of Public Accounts audits the Authority, and a separate report is issued.

Virginia Economic Development Partnership (nonmajor) – The Partnership was created as a body corporate and operates to encourage, stimulate, and support the development and expansion of both domestic and international commerce in the Commonwealth. The Governor appoints the 17-member board, and there is a financial benefit/burden to the primary government. The administrative offices are located at 901 East Cary Street, Suite 900, Richmond, Virginia 23219. The Auditor of Public Accounts audits the Partnership, and a separate report is issued.

Virginia Outdoors Foundation (nonmajor) – The Foundation was created as a body politic and is administratively assigned to the Department of Conservation and Recreation (part of primary government) and charged with promoting preservation through the acceptance of donated conservation easements and raising funds for the purchase of preservation land. The Governor appoints the 7-member board of trustees, and the primary government can impose its will on the Foundation. The administrative offices of the Foundation are located at 39 Garrett Street, Suite 200, Warrenton, VA 20186. Hicok, Brown & Company CPAs; Juan J. Garcia, CPA audits the Foundation, and a separate report is issued.

Virginia Port Authority (nonmajor) – The Authority was established as a corporate body and operates to serve the citizens and promote commerce through the harbors and ports of Virginia. The Governor appoints a majority of the 14-member board, and the primary government is able to impose its will on the Authority. There is also a financial benefit/burden to the primary government. The administrative offices of the Authority are located at 701 Town Center Drive, Suite 900, Newport News, Virginia 23606. PBMares, LLP, audits the Authority, and a separate report is issued.

Virginia Tourism Authority (nonmajor) – The Authority was created as a public body corporate and as a political subdivision of the Commonwealth. The Authority encourages, stimulates, and promotes tourism and film production industries of the Commonwealth. The Governor appoints all of the board members, and there is a financial benefit/burden to the primary government. The administrative offices are located at 901 East Cary Street, Suite 900, Richmond, Virginia 23219. The Auditor of Public Accounts audits the Authority, and a separate report is issued.

Virginia Foundation for Healthy Youth (nonmajor) – The Foundation was created as a body corporate and as a political subdivision of the Commonwealth. The Foundation was established to determine the appropriate recipients of monies in the Virginia Tobacco Settlement Fund and to distribute monies in this fund for such efforts as restricting the use of tobacco products by minors and the enforcement of laws restricting the distribution of tobacco products to minors. The Governor appoints the majority of the board, and there is a financial benefit/burden to the primary government. The administrative offices are located at 701 East Franklin Street, Suite 500, Richmond, Virginia 23219. The Auditor of Public Accounts audits the Foundation, and a separate report is issued.

Tobacco Region Revitalization Commission (nonmajor) – The Commission was created as a body corporate and as a political subdivision of the Commonwealth. The Commission was established to determine the appropriate recipients of the monies in the Tobacco Indemnification and Community Revitalization Fund. This fund is to provide payments to tobacco farmers as compensation for the adverse economic effects resulting from loss of investment in specialized tobacco equipment and barns, as well as lost tobacco production opportunities. It also provides monies to revitalize tobacco dependent communities. The Governor appoints the majority of the board, and there is a financial benefit/burden to the primary government. The administrative offices are located at 701 East Franklin Street, Suite 501, Richmond, Virginia 23219. The Auditor of Public Accounts audits the Commission, and a separate report is issued.

Hampton Roads Sanitation District Commission (nonmajor) – The Commission was established as a political subdivision of the Commonwealth and a government instrumentality. The Commission, which is the governing board of the district, was granted corporate powers by the *Code of Virginia*. The Governor appoints the Commission members, who serve at his pleasure. Therefore, the primary government is able to impose its will on the Commission. The Commonwealth is not obligated by the debt of the Commission. The Commission was established to benefit the inhabitants of the district and operates a sewage system for 18 localities in the Chesapeake Bay area. The address for the administrative offices of the Commission is 1434 Air Rail Avenue, Virginia Beach, Virginia 23455. KPMG, LLP, audits the Commission, and a separate report is issued.

Virginia Biotechnology Research Partnership Authority (nonmajor) – The Authority is a legally separate, political subdivision of the Commonwealth created by the General Assembly to assist in the development of a biotechnology research park. The Governor appoints the board members of the Authority, and there is a potential financial benefit/burden to the primary government. The administrative offices of the Authority are located at 800 East Leigh Street, Richmond, Virginia 23219. The Auditor of Public Accounts audits the Authority, and a separate report is issued.

The Authority issued Series 2002 and Series 2013 revenue bonds for specific customers. The Series 2002 revenue bonds were for a facility built specifically for the United Network for Organ Sharing. The Series 2013 revenue bonds were to assist the Institute for Transfusion Medicine (ITxM). The bonds are secured by a letter of credit and are payable solely from the payments made by the borrower under the loan agreement. None of these bonds constitutes a debt or pledge of the Authority or the Commonwealth. Accordingly, the bonds are not reported as liabilities in the accompanying financial statements.

Virginia Small Business Financing Authority (nonmajor) – Section 2.2-2280 of the *Code of Virginia* established the Authority as a public body corporate and a political subdivision of the Commonwealth. The Governor appoints the 11-member board, and the primary government is able to impose its will on the Authority. The Authority was created to assist small businesses in the Commonwealth in obtaining financing for new businesses or the expansion of existing businesses. The Authority can provide financial assistance to small businesses by providing loans, guarantees, insurance, and other assistance, thereby encouraging the investment of private capital in small businesses in the Commonwealth. The Authority can loan money to local governments as defined by the *Code of Virginia* for economic development purposes. The Authority also guarantees loans made to small businesses by banks. The administrative offices of the Authority are located at 101 North 14th Street, 11th Floor, Richmond, Virginia 23218-0446. The Auditor of Public Accounts audits the Authority, and a separate report is issued.

The Authority has issued Industrial Development Revenue Bonds to provide financial assistance to private sector entities for the acquisition and construction of industrial and commercial facilities deemed to be in the public interest. The bonds are secured by the property financed and are payable solely from payments received on the underlying mortgage loans. Upon repayment of the bonds, ownership of the acquired facilities transfers to the private sector entity served by the bond issuance. Neither the Authority nor the Commonwealth is obligated in any manner for repayment of the bonds. Accordingly, the bonds are not reported as liabilities on the accompanying financial statements.

Virginia School for the Deaf and Blind Foundation (nonmajor) – The Foundation operates as a nonprofit educational and fundraising organization solely in connection with, and exclusively for the benefit of, the Virginia School for the Deaf and Blind (part of primary government). The Foundation uses a December 31 calendar year-end. The administrative offices are located at Post Office Box 2070, Staunton, Virginia 24403.

Science Museum of Virginia Foundation (nonmajor) – The Foundation is a non-stock, nonprofit corporation established to implement and fund programs, projects, and operations that are authorized and approved by the trustees of the Science Museum of Virginia (part of primary government). There is a financial benefit/burden relationship to the primary government, and the economic resources of the Foundation are entirely for the direct benefit of the Commonwealth and its citizens. The administrative offices of the Foundation are located at 2500 West Broad Street, Richmond, Virginia, 23220. Keiter, CPAs, audits the Foundation, and a separate report is issued.

Virginia Commercial Space Flight Authority (nonmajor) – The Authority is a legally separate political subdivision of the Commonwealth created by the General Assembly to facilitate and coordinate scientific and technological research and development and to promote the industrial and economic development of the Commonwealth. The Governor appoints the 9-member board, and there is a potential financial benefit/burden to the primary government. The Commonwealth approved the conversion of a $5.0 million interest-free note to repair Pad 0A into a grant in March 2015. During the fiscal year 2018, the Authority received $20.0 million appropriated by the Commonwealth for the construction of Mid-Atlantic Regional Spaceport Facilities. The Commonwealth plans to transfer $15.8 million to the Authority annually through fiscal year 2024. The administrative offices of the Authority are located at 4111 Monarch Way, Suite 303, Norfolk, Virginia 23508. Dixon Hughes Goodman, LLP, audits the Authority, and a separate report is issued.

Danville Science Center, Inc. (nonmajor) – The Center is a nonprofit corporation formed for the purpose of implementing and funding those programs, projects and operations which are authorized and approved by the trustees of the Science Museum of Virginia (part of primary government). There is a financial benefit/burden to the primary government, and the economic resources of the Center are entirely for the direct benefit of the Commonwealth and its citizens. The administrative offices of the Center are located at 677 Craghead Street, Danville, Virginia 24541. Kania & Associates, LLP, audits the Center, and a separate report is issued.

Virginia Museum of Fine Arts Foundation (nonmajor) – The Foundation operates as a nonprofit corporation under the laws of Virginia to fund exhibitions, programs, and capital asset expansion to ensure that the Virginia Museum of Fine Arts (part of primary government) has the space and resources for art to help improve the quality of life for many. There is a financial benefit/burden to the primary government, and the economic resources of the Foundation are entirely for the direct benefit of the Commonwealth and its citizens. The administrative offices of the Foundation are located at 200 North Boulevard, Richmond, Virginia 23220. Dixon Hughes Goodman, LLP, audits the Foundation, and a separate report is issued.

A. L. Philpott Manufacturing Extension Partnership (nonmajor) – The Partnership has the mission to foster economic growth by enhancing the competitiveness of Virginia's manufacturers. The Partnership provides manufacturing firms with fee-based technology consulting services, access to business modernization resources, and support for interfirm collaboration. Further, the Partnership provides direct assistance to increase sales, decrease costs, and improve quality, productivity, and competitiveness. The Partnership has a 23-member board of trustees currently serving. The board consists of the presidents of two public four-year institutions of higher education; three community college presidents; one president of a private four-year institution of higher education; the director of Virginia's Center for Innovative Technology; Virginia's Secretary of Commerce and Trade; and 15 citizen members, representing manufacturing industries, appointed by the Governor. There is also a financial benefit/burden to the primary government. The administrative office is located at 32 Bridge Street South, Suite 200B, Martinsville, VA 24112-6216. The Auditor of Public Accounts audits the Partnership, and a separate report is issued.

Fort Monroe Authority (nonmajor) – The Authority is a legally separate, political subdivision of the Commonwealth created by the General Assembly to assist in formulating a reuse plan for Fort Monroe. The Governor appoints a majority of the 14-member board, and there is a potential financial benefit/burden to the primary government. The administrative offices of the Authority are located at 20 Ingalls Road, Fort Monroe, Virginia 23651. Brown Edwards audits the Authority, and a separate report is issued.

Assistive Technology Loan Fund Authority (nonmajor) – The Authority was created as a political subdivision and public body corporate by the *Code of Virginia*. The Governor appoints the board of directors as directed by the *Code* and the primary government is able to impose its will on the Authority. The Authority manages a fund to provide loans to individuals to acquire assistive technology, other equipment, or other authorized purposes designed to help disabled individuals become more independent. The administrative offices are located at 1602 Rolling Hills Drive, Suite 107, Richmond, Virginia 23229. The Auditor of Public Accounts audits the Authority, and a separate report is issued.

Virginia Land Conservation Foundation (nonmajor) – The Foundation was created as a body politic and corporate to serve the Department of Conservation and Recreation (DCR) (part of primary government) by acquiring interests in preservation land and providing grants to other entities to acquire interests in preservation land. The Governor appoints the 19-member board, and the primary government can impose its will on the Foundation. The administrative offices of the Foundation are located at 600 East Main Street, 24th Floor, Richmond, VA 23219. The Auditor of Public Accounts audits the Foundation as part of DCR and discloses its existence in that report.

Virginia Arts Foundation (nonmajor) – The Foundation was created as a body politic and corporate to serve the Virginia Commission for the Arts (part of primary government) by promoting the arts in the Commonwealth. The Governor appoints the board of trustees for the Virginia Commission for the Arts, which also serves as the board for the Virginia Arts Foundation. The Director of the Virginia Commission for the Arts serves as the board chairman. In addition, the primary government can impose its will on the Foundation. The administrative offices of the Foundation are located at 600 E. Main Street, Suite 330, Richmond, VA 23219. The Auditor of Public Accounts audits the Foundation as part of the Virginia Commission for the Arts.

Library of Virginia Foundation (nonmajor) – The Foundation was created as a private, nonprofit 501(c)(3) corporation supporting the Library of Virginia (part of primary government). The Foundation was established upon receipt of a major bequest. The articles of incorporation stipulate that the Foundation shall at all times be operated solely in connection with, and exclusively for the benefit of, the Library of Virginia. The Foundation is governed by a separate board of directors, and promotes and supports the Library of Virginia in all activities. The administrative offices of the Foundation are located at 800 East Broad Street, Richmond, Virginia 23219. Sharon Hart, CPA, audits the Foundation, and a separate report is issued.

Virginia Health Workforce Development Authority (nonmajor) – The Authority is a legally separate public body corporate and a political subdivision of the Commonwealth created by the General Assembly. The Authority facilitates the development of a statewide health professions pipeline. The Governor appoints a majority of the board members, and the primary government is able to impose its will on the Authority. The administrative offices of the Authority are located at 3831 Westerre Parkway, Suite 2, Henrico, VA 23233. The Auditor of Public

Accounts audits the Authority, and a separate report is issued.

(4) Related Organizations – Organizations for which the primary government appoints a majority of the board, but is not financially accountable, are related organizations. Related organizations are:

Tobacco Settlement Financing Corporation – The Corporation was created by the Tobacco Settlement Financing Corporation Act, Chapters 482 and 488 of the Acts of the General Assembly during the 2002 General Assembly Session. The Corporation is a public body corporate entity and an independent instrumentality of the Commonwealth, managed by a 6-member board, including the State Treasurer. The Corporation purchased all of the future tobacco settlement revenue allocated to the Tobacco Region Revitalization Commission (nonmajor component unit). Neither the Commonwealth's nor the Virginia Foundation for Healthy Youth's (nonmajor component unit) tobacco revenue was securitized. The administrative offices of the Corporation are located at 101 North 14th Street, 3rd Floor, Post Office Box 1879, Richmond, Virginia 23218-1879. Clifton Larson Allen, LLP audits the Corporation, and a separate report is issued.

Virginia Recreational Facilities Authority – The Authority was created as a political subdivision and instrumentality of the Commonwealth and given separate corporate powers by the *Code of Virginia*. The Governor appoints 13-members of the board of directors to serve alongside two members of the Senate and four members of the House of Delegates. The Authority operates educational programs, tourism, and commerce in the Roanoke Valley. The address for the administrative offices of the Authority is 5204 Bernard Drive SW, Post Office Box 29800, Roanoke, Virginia 24018. Robinson, Farmer, Cox Associates audits the Authority and a separate report is issued.

Jamestown-Yorktown Educational Trust – The Trust was created as a nonprofit corporation by the *Code of Virginia* to assist the Jamestown-Yorktown Foundation (Foundation). The Trust board consists of six members selected from the Foundation's board of trustees. Several Commonwealth officials serve as ex-officio members of the Foundation's board, and the Governor appoints 12 members. The Trust operates the Jamestown Settlement and Yorktown Victory Centers' gift shops and café. The address for the administrative offices of the Trust is Post Office Box 3605, Williamsburg, Virginia 23187. Keiter Certified Public Accountants audits the Trust, and a separate report is issued.

Virginia Birth-Related Neurological Injury Compensation Program – The Program was created to provide a no-fault alternative for birth-related neurological injuries. The Governor appoints the 9-member board. The administrative offices of the Program are located at 7501 Boulders View Drive, Suite 210, Richmond, Virginia 23225. KPMG, LLP, audits the Program, and a separate report is issued.

Chesapeake Bay Bridge and Tunnel Commission – The Commission was created to establish policy and administer operations of the Chesapeake Bay Bridge Tunnel District. Any of the 11 members of the Commission appointed or reappointed on or after July 1, 1998, shall be appointed by the Governor, subject to confirmation by each house of the General Assembly. The administrative offices of the Commission are located at 32386 Lankford Highway, Cape Charles, Virginia 23310. KPMG, LLP, audits the Commission, and a separate report is issued.

C. Government-wide and Fund Financial Statements

The government-wide financial statements, the Statement of Net Position and the Statement of Activities, report information on all nonfiduciary activities of the primary government and component units. For the most part, the effect of interfund activity has been removed from these statements. Governmental activities, which are normally supported by taxes and intergovernmental revenues, are reported separately from business-type activities, which rely to a significant extent on fees and charges for support. Also, the primary government activity is reported separately from the legally separate component units for which the Commonwealth is financially accountable.

The Statement of Activities demonstrates the degree to which direct expenses of a specific function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable with a specific function, segment, or component unit. In addition, to the extent that indirect costs are allocated to the various functions, the program expenses will include both direct and indirect costs. Program revenues include charges to customers who purchase, use, or directly benefit from goods or services provided by a given function, segment, or component unit, as well as investment income generated by operations. Program revenues also include grants, contributions, and investment income that are restricted to meeting the operational or capital requirements of a particular function, segment, or component unit. Taxes and other items properly excluded from program revenues are reported as general revenues.

Fund equity is restricted when constraints are placed on them that are imposed by external parties or constitutional provisions. When both restricted and unrestricted resources are available for use, the Commonwealth's policy is to use the restricted resources first. Some component units may follow a different policy. When committed, assigned, and unassigned resources are available for use, the Commonwealth's policy is to use the committed resources first, assigned resources next, and unassigned resources last.

Separate financial statements are provided for governmental funds, proprietary funds, fiduciary funds, and component units. However, fiduciary funds are not included in the government-wide statements. Major governmental funds, enterprise funds, and component units are reported in separate columns in the fund financial statements, with nonmajor funds being aggregated into a single column.

D. Measurement Focus, Basis of Accounting, and Financial Statement Presentation

Government-wide Financial Statements – The government-wide financial statements are reported using the economic resources measurement focus and the full accrual basis of accounting. Revenues are recorded when earned and expenses are recognized when a liability is incurred, regardless of the timing of related cash flows. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met.

Governmental Fund Financial Statements – The governmental fund financial statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as soon as they are both measurable and available. Revenues are considered to be available when they are collectible within the current period or soon enough thereafter to pay liabilities of the current period. For this purpose, the primary government considers revenues to be available if they are collected within 60 days of the end of the current fiscal year (or one year for Medicaid). Significant revenues subject to accrual include federal grants and income and sales taxes. Income tax revenues for tax underpayments are only recognized to the extent of the primary government's estimated refunds for tax overpayments received. Revenues that the primary government earns by incurring obligations are recognized in the same period as when the obligations are recognized.

Expenditures generally are recorded when a liability is incurred, as under full accrual accounting. However, expenditures related to debt service, compensated absences, and claims and judgments are recorded only when the payment is due.

The primary government reports the following major governmental funds:

General Fund – Accounts for the transactions related to resources received and used for those services traditionally provided by a state government, and which are not accounted for in any other fund. These services include general government, legislative and judicial activities, public safety, health and behavioral health programs, resources and economic development, licensing and regulation, and primary and secondary education.

Commonwealth Transportation Special Revenue Fund – Accounts for the revenues and expenditures associated with highway operations, maintenance, construction, and other transportation related activities. Funding for these programs is received from highway user taxes, fees, and funds received from the federal government.

Federal Trust Special Revenue Fund – Accounts for all federal dollars received by the Commonwealth except those received by the Commonwealth Transportation Fund, the Unemployment Compensation Fund, certain Medicaid reimbursements recorded in the General Fund, the Grant Anticipation Revenue Notes and Build America Bond Subsidies reported in the Debt Service Fund, and component units.

Literary Fund Special Revenue Fund – Accounts for revenues from fines, forfeitures, and proceeds from unclaimed property used primarily to support public education in the Commonwealth. This fund provides low interest loans to school divisions for construction, renovations, and expansion of school buildings.

Proprietary Funds, Fiduciary Funds, and Component Units Financial Statements – The financial statements of the proprietary funds, fiduciary funds, and component units are reported using the economic resources measurement focus and the full accrual basis of accounting. As with the government-wide statements, revenues are recorded when earned and expenses are recognized when a liability is incurred, regardless of the timing of related cash flows. Grants and similar items are recognized as revenue as soon as all eligibility requirements imposed by the provider have been met. Agency funds have no measurement focus since they only report assets and liabilities.

Proprietary funds distinguish operating revenues and expenses from nonoperating items. Operating revenues and expenses generally result from providing services and producing and delivering goods in connection with a proprietary fund's principal ongoing operations. Revenues and expenses not meeting this definition are reported as nonoperating.

Foundations' (component units) financial statements are prepared using the economic resources measurement focus and the full accrual basis of accounting. The financial statements are prepared under FASB rather than GASB standards. In some instances, activities of the foundations (component units) are reported separately within the footnotes because of the different reporting standards. Also, some foundations (component units) have a

December 31st or March 31st year-end rather than a fiscal year-end. Foundations (component units) with different year-ends are included in these financial statements for the year ending December 31, 2017, or March 31, 2018. Significant intrafund activity/balances between each higher education institution and their foundations have been eliminated.

The following amounts could not be eliminated due to the differing year-ends:

- University of Virginia (nonmajor component unit):
  - institution assets of $284,876
  - institution revenue of $9.3 million
  - foundation assets of $1.3 million
  - foundation liabilities of $652,950
  - foundation expenses of $8.5 million

- Old Dominion University (nonmajor component unit):
  - institution liabilities of $53.2 million
  - foundation assets of $44.9 million

The primary government reports the following major enterprise funds:

Virginia Lottery Fund – Accounts for all receipts and expenses of the Virginia Lottery.

Virginia College Savings Plan Fund – Administers the Prepaid529 Program.

Unemployment Compensation Fund – Accounts for receipts from employers and expenses incurred to provide benefits to eligible unemployed workers.

Additionally, the primary government reports the following fund types:

Governmental Fund Types:

Special Revenue Funds – Account for transactions related to resources received and used for restricted, committed, or specific purposes.

Debt Service Funds – Account for transactions related to resources retained and used for the payment of interest and principal on long-term obligations. Additionally, this fund includes the activity of the Hampton Roads Transportation Accountability Commission (blended component unit).

Capital Project Funds – Account for transactions related to resources received and used for the acquisition, construction, or improvement of capital facilities not reported in the other governmental or proprietary funds with the exception of certain VPBA disbursements. The primary resource for these funds is the proceeds of bond issues and energy performance contracts. Principal uses are for construction and improvement of state office buildings, correctional and behavioral health facilities, and parks. Additionally, this fund includes the activity of the Hampton Roads Transportation Accountability Commission (blended component unit) for construction projects related to new or existing highways, bridges or tunnels in the localities comprising Planning District 23.

Permanent Funds – Account for transactions of the Commonwealth Health Research Fund and the Behavioral Health Endowment Funds whose principal must remain intact and whose income is used to benefit the Commonwealth's citizens and behavioral health patients.

Proprietary Fund Types:

Enterprise Funds – Account for transactions related to resources received and used for financing self-supporting activities of the primary government that offer products and services on a user-charge basis to external users.

Internal Service Funds – Account for transactions related to the financing and sale of goods or services provided by the agencies of the primary government to other agencies and institutions of the Commonwealth. Activities include the provision of information technology, manufacturing activities, insurance programs, fleet services, facilities and property management, engineering and payroll services.

Fiduciary Fund Types:

Private Purpose Trust Funds – Account for transactions of all other trust arrangements in which the principal and income benefit individuals, private organizations, or other governments. These trusts include those for the Commonwealth-sponsored educational savings plan and other purposes.

Pension and Other Employee Benefit Trust Funds – Account for transactions of the Commonwealth administered retirement systems and other employment benefits.

Investment Trust Funds – Account for the external portion of the Local Government Investment Pool (LGIP) and the LGIP Extended Maturity that is sponsored by the Commonwealth.

Agency Funds – Account for amounts held in trust by the primary government for others. Agency funds include those funds established to account for the collection of taxes and fees for distribution to localities and other states, employee benefits, deposits of insurance carriers, child support collections and other miscellaneous accounts.

E. Budgetary Process

Budgetary amounts shown in the Required Supplementary Information and Combining and Individual Fund Statements and Schedules sections represent the total of the original budgeted amounts and all supplemental appropriations. The Commonwealth's budget is prepared principally on a cash basis and represents appropriations as authorized by the General Assembly. Unexpended appropriations at the end of the fiscal year generally lapse. However, they may be reappropriated for expenditure in the following fiscal year. The Governor, as required by the *Code of Virginia*, submits a budget composed of all proposed expenditures for the Commonwealth, and of estimated revenues and borrowing for a biennium, to the General Assembly. Budgets are adopted for the General and Special Revenue Funds, except for the Literary (major special revenue) and Unclaimed Property (nonmajor special revenue) Funds. Formal budgetary integration is not employed for the Capital Projects (nonmajor governmental), Debt Service (nonmajor governmental), Permanent (nonmajor governmental), Literary (major special revenue) and Unclaimed Property (nonmajor special revenue) Funds because effective budgetary control is alternatively achieved through the General Fund and the remaining special revenue funds.

The budget is prepared on a biennial basis; however, the budgets of the General and Special Revenue Funds contain separate appropriations for each year within the biennial budget, as approved by the General Assembly and signed into law by the Governor. For management control purposes, the budget is controlled at the program level. The Governor may transfer an appropriation within a state agency or from one state agency to another, provided that total fund appropriations, as contained within the budget, are not exceeded. Increases in General Fund appropriations must be approved by the General Assembly.

Appropriations for programs funded from Special Revenue Funds may allow expenditures in excess of the original appropriations to the extent that revenues of the funds exceed original budget estimates and such additional expenditures are approved by the Governor through supplemental appropriations.

F. Cash, Cash Equivalents, Investments, and Derivatives

Cash

In order to maximize the Commonwealth's earning potential, the majority of the primary government's cash balances are pooled together in the general account for investment purposes. The amounts required for operations are liquidated as needed. Since all amounts not required for operations are held in investment securities, it is possible that the cash balances could be negative due to timing differences in liquidating the investments.

As of June 30, 2018, the General Fund had a negative cash balance of $5.3 billion. In order to properly reflect the general account position, this negative cash balance has been eliminated in the accompanying statements and offset against the primary government's cash equivalents and investments (see Note 7).

Cash Equivalents

Cash equivalents are investments with an original maturity of 90 days or less.

Investments

Investments are principally comprised of monies held by component units, Pension and Other Employee Benefit Trust Funds, and monies held by the State Treasurer in both the general account and other fiduciary accounts.

The primary government's policy for managing interest rate risk, with the exception of the Virginia College Savings Plan (Virginia529) and the Virginia Retirement System (the System), uses the segmented time distribution method.

Virginia529, for its investment portfolio reported as Prepaid529 (major enterprise fund) and Invest529 (private purpose trust fund), and the System, for its investment portfolio reported as Pension and Other Employee Benefit Trust Funds, manage the interest rate risk using the effective duration methodology. To be consistent with management practices for each portfolio, the Commonwealth has elected to disclose the interest rate risk exposures, using the segmented time distribution for the primary government (excluding Prepaid529, Invest529, and pension and other employee benefit trust funds) and the effective duration method for Prepaid529, Invest529, and the Pension and Other Employee Benefit Trust Funds. The Commonwealth discloses the component unit's interest rate risk using the segmented time distribution method (see Note 7).

Governmental and proprietary funds, both primary government and component units, report investments in money market and in the Commonwealth sponsored investment pools at amortized cost which approximates fair value. All other investments, including investments in the Commonwealth sponsored Extended Maturity portfolio, are reported at fair value, in accordance with GASB Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*, as amended by GASB Statement No. 72, *Fair Value Measurement and Application.* GASB Statement No. 72 provides guidance for determining fair value measurements using the level of fair value hierarchy and valuation techniques (see Note 7).

Investments administered by the System are reported at fair value, except for certain cash equivalents and other short-term, highly liquid investments are reported at amortized cost. The cost of investments sold is the average cost of the aggregate holding of the specific investment sold. Investments in affiliated organizations are accounted for on the equity method of accounting and the System's share of their earnings (losses) for the period is included in investment income using the equity method.

Derivatives

Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates, or financial indexes (see Note 15).

G. Assets Held Pending Distribution

Assets held pending distribution include various assets that have been placed in safekeeping until final disposition has been determined.

H. Receivables

Receivables in the governmental funds consist primarily of the accrual of taxes, as well as receivables of the primary government's Medicaid program. Additionally, receivables include amounts to be received for debt service payments related to certain bonds. Receivables in the proprietary funds consist primarily of tuition contribution receivables and unemployment compensation. Receivables of fiduciary funds are primarily the accrual of security transactions in the Pension and Other Employee Benefit Trust Funds. Receivables of the component units consist primarily of mortgage receivables, loans receivable, local school bonds receivable, patient receivables, and student receivables. Receivables are recorded net of allowances for doubtful accounts (see Note 8).

I. Contributions Receivable, Net

Contributions Receivable reported by the foundations (component units) represents pledges or unconditional promises to give that have been discounted (see Note 9).

J. Internal Balances

Interfund receivables and payables have been eliminated from the Statement of Net Position, except for the residual amounts due between governmental and business-type activities (see Note 10).

K. Inventory

Inventories consist of materials and supplies and are reported as expenditures when consumed. These assets are classified as nonspendable fund balance. Inventories exceeding $1.0 million of the General and the Special Revenue Funds are maintained at cost using the first-in, first-out (FIFO) methodology, except for the following:

- Department of Health (VDH)
- Department of State Police (VSP)
- Virginia Department of Transportation (VDOT)

VDH inventories are recorded in the General (major), Federal Trust (major special revenue), and Health and Social Services (nonmajor special revenue) Funds using the FIFO methodology and are maintained at either cost or current market cost. VSP inventories are recorded in the General (major) and Other (nonmajor special revenue) Funds using the average cost methodology and are maintained at cost. VDOT inventories are recorded in the Commonwealth Transportation Fund (major special revenue) using the FIFO and average cost methodologies and are maintained at either cost or average cost.

In addition to inventories maintained as stated above, the following agencies reported donated inventory balances on hand as of June 30, 2018:

- Department of Behavioral Health and Developmental Services (DBHDS)
- Department of Corrections (VADOC)
- Department of Health (VDH)
- Department of Juvenile Justice (DJJ)

Inventories maintained by the Virginia Lottery (major enterprise fund) and the Virginia Industries for the Blind (nonmajor enterprise fund) are stated at cost using the average cost methodology.

Inventories maintained by the Virginia Museum of Fine Arts (nonmajor enterprise fund), the Science Museum of Virginia (nonmajor enterprise fund), and the Consolidated Laboratory (nonmajor enterprise fund) are stated at cost using FIFO.

Inventories maintained by the Alcoholic Beverage Control (nonmajor enterprise fund) are stated at average cost using the weighted average method.

Inventories maintained by Correctional Enterprises (internal service fund) are stated at the lower of cost or market using FIFO. Inventories maintained by the internal service funds except for Correctional Enterprises are stated at cost using FIFO.

Institutions of higher education (nonmajor component units) use several methods for inventory valuations, including cost using FIFO, the lower of cost or market using FIFO, or weighted average methods. Inventories maintained by the Virginia Port Authority (nonmajor component unit), the Hampton Roads Sanitation District Commission (nonmajor component unit), and the Danville Science Center (nonmajor component unit) are reported using the moving average unit cost methodology. Inventories at the gift shop run by the Library of Virginia Foundation (nonmajor component unit) are stated at lower of cost or market using the average cost methodology.

L. Prepaid Items

Prepaid assets for rent, insurance, and similar items are recognized when purchased and expensed when used.

M. Loans Receivable/Payable

Loans Receivable/Payable represents working capital advances between the primary government and component units (see Note 10).

N. Other Assets

Other Assets include those balances of a miscellaneous nature that are not specifically classified elsewhere. Additionally, it includes the Virginia Sickness and Disability Program Net Other Postemployment Benefit Plan Asset applicable to the proprietary and private purpose funds (see Note 11).

O. Capital Assets

Capital assets of governmental funds are recorded as expenditures at the time of purchase and capitalized in the governmental activities column of the Government-wide Statement of Net Position. Capital assets of the other funds and component units are capitalized in the fund in which they are utilized. All depreciable capital assets are depreciated on the straight-line basis over their useful lives (see Note 13).

Capital assets are stated at historical cost or, in some instances, estimated historical cost. Assets received pursuant to service concession arrangements and donated capital assets from entities external to the reporting entity are stated at acquisition value when they are placed in service or at the time of donation, respectively. Asset transfers or donations from within the reporting entity are recorded at the carrying value of the transferring entity as required by GASB Statement No. 48, *Sales and Pledges of Receivables and Future Revenues and Intra-Entity Transfers of Assets and Future Revenues*. The primary government capitalizes all equipment that has a cost or value greater than $50,000 and expected useful life of greater than two years. The primary government capitalizes all land, water rights/easements, buildings, infrastructure, and software that have a cost or value greater than $100,000 and an expected useful life of greater than two years. Selected agencies, business-type entities, and component units utilize a capitalization limit lower or higher than the primary government's established thresholds for various reasons. Accordingly, reported capital assets may include some items that cost less than those thresholds. Infrastructure, including highways, bridges, and rights-of-way, is capitalized using the historical approach and includes any assets acquired prior to fiscal year 1980.

The primary government's capitalization policy regarding works of art/historical treasures is that capitalization is encouraged, but not required, for works of art/historical treasures that meet the following conditions:

- The collection is held for public exhibition, education, or research in furtherance of public service, rather than financial gain;
- The collection is protected, kept unencumbered, cared for and preserved; and,
- The collection is subject to an organizational policy that requires the proceeds from sales of collection items to be used to acquire other items for the collection.

The primary government capitalizes construction-in-progress when project expenditures, including construction of intangible assets, exceed $100,000. Interest incurred during construction is not capitalized in governmental funds. Interest incurred during the construction of proprietary fund assets is included in the capitalized value of the asset. The total interest cost incurred during the fiscal year was $2.6 million. None of the interest cost incurred this fiscal year was capitalized.

Expenditures are classified as construction-in-progress if:

(1) They extend the asset life, improve productivity, or improve the quality of service; and,

(2) They fall into the planning, acquisition, construction, improvement, renovation, repair, replacement, relocation, or demolition phase of the asset life.

The estimated lives of capital assets are as follows:

	Years
Buildings	10–75
Equipment	2–50
Infrastructure	5–50
Software	5–35

Selected agencies, business-type entities, and component units may utilize estimated lives and policies that differ from the above for various reasons.

P. Deferred Outflows of Resources

Deferred outflows of resources are a consumption of assets by the government that is applicable to a future reporting period. Deferred outflows have a natural debit balance and, therefore increase net position similar to assets (see Notes 14, 15, 16, and 18).

Q. Accounts Payable

Accounts payable represent amounts, including salaries and wages, owed for goods and services received prior to year-end. In accordance with GASB Statement No. 33, *Accounting and Financial Reporting for Nonexchange Transactions*, accounts payable also includes payments for nonexchange transactions that met eligibility requirements prior to fiscal year-end (see Note 25).

R. Unearned Revenue

Unearned revenue represents monies received or revenues accrued but not earned as of June 30, 2018. The majority of unearned revenue is reported by higher education institutions (nonmajor component units), where it is primarily composed of revenue for student tuition accrued in advance of the semester and advance payments on grants and contracts.

In the special revenue funds, unearned revenue is composed primarily of prepaid toll revenue, contributions from localities and private sectors for highway construction projects, multi-year vehicle registrations recorded in the Commonwealth Transportation Fund (major), and multi-year motor vehicle safety inspections, emission inspections, mining permits, and hunting, fishing, and trapping licenses recorded in the Other and Health and Social Services Funds (nonmajor).

In the enterprise funds, a majority of unearned revenue represents online ticket monies received by the Virginia Lottery (major) for which corresponding drawings have not been held and test kits and certifications from Consolidated Labs (nonmajor) which are paid for prior to shipping and certification being performed.

Unearned revenue in the internal service funds primarily represents unearned premiums in the Risk Management Fund; advanced customer receipts in the Virginia Information Technologies Agency Fund; and prepaid rent and work orders in the Property Management Fund.

Unearned revenues in the other component units consist primarily of fees related to various activities.

S. Unearned Taxes

Unearned taxes represent income taxes related to the period January through June 2018. This amount is the estimate to be refunded (overpayments by taxpayers) reduced by the estimate to be received (underpayments from taxpayers) that will be finalized when income tax returns are filed in subsequent years. Individual income tax estimated overpayments total $911.2 million and estimated underpayments total $925.7 million. When underpayments exceed overpayments, revenue on the fund statements is only recognized to the extent of estimated overpayments. Since underpayments exceed overpayments for the individual income taxes, the unearned tax amount is zero for the fiscal year.

Corporate income tax estimated overpayments total $40.4 million and estimated underpayments total $60.9 million. When underpayments exceed overpayments, revenue on the fund statements is only recognized to the extent of estimated overpayments. Since underpayments exceed overpayments for the corporate income taxes, the unearned tax amount is zero for the fiscal year.

T. Obligations Under Securities Lending Program

In accordance with GASB Statement No. 28, *Accounting and Financial Reporting for Securities Lending Transactions*, liabilities resulting from these transactions have been recorded as obligations under securities lending transactions.

U. Due to Claimants, Participants, Escrows and Providers

Due to claimants, participants, escrows and providers represent monies that the Commonwealth is holding on behalf of third parties as of June 30, 2018. In governmental funds, the majority of the amount represents estimated unclaimed and escheat property that the Commonwealth is holding until claimed by the rightful owner.

In the enterprise funds, the amounts represent payments due to benefit claimants and employers for tax overpayments in the Unemployment Compensation Fund (major) and to participants of the Prepaid529 Program in the Virginia College Savings Plan (major).

In the private purpose trust funds, the amounts represent payments due to participants in the Invest529 Program offered by the Virginia College Savings Plan.

In the agency funds, these amounts represent funds used for employee benefits and child support enforcement, as well as accounts of inmates, residents, and patients of the Commonwealth's correctional, juvenile, veterans, and behavioral health facilities.

V. Other Liabilities

Other liabilities represent amounts owed for various governmental and proprietary activities. Some of these amounts will be paid shortly after fiscal year-end (see Note 26).

W. Claims Payable

Claims payable, reported in the proprietary funds of the primary government, represent both health and liability insurance claims payable as of June 30, 2018. This includes both actual claims submitted, as well as actuarially determined claims incurred but not reported. Claims relating to the primary government's liability insurance programs are reported in the Risk Management – internal service fund and the Risk Management – nonmajor enterprise fund. Also, health insurance claims are reported in the Health Care – internal service fund, the Local Choice Health Care – nonmajor enterprise fund and Line of Duty – internal service fund and nonmajor enterprise fund. (see Notes 24.A. and 24.B.). Claims payable reported by the Virginia Commonwealth University Health System Authority (a blended component unit of the Virginia Commonwealth University – nonmajor component unit) represents estimated malpractice, workers' compensation, and medical claims payable amounts.

X. Long-term Liabilities

In the government-wide financial statements, long-term debt and other long-term obligations are reported as liabilities in the applicable governmental activities or business-type activities column. The governmental fund statements reflect the portion of long-term liabilities that will be paid from expendable resources that represent payments to employees for separations that occurred prior to June 30. The proprietary fund statements and discrete component unit statements reflect total long-term liabilities and distinguish between those portions payable within one year and those payable in future years (see Note 27).

Bond premiums and discounts are amortized over the life of the bond. Bonds payable are reported net of the applicable bond premium or discount. Bond issuance costs, excluding prepaid insurance, are expensed.

Expenditures for principal and interest payments for governmental fund general obligation bonds and revenue bonds are recognized in the Debt Service Fund (nonmajor) when due. In the fund statements, governmental fund types recognize bond premiums and discounts, as well as bond issuance costs, during the current period. The face amount of debt issued is reported as other financing sources. Premiums received on debt issuances are reported as other financing sources while discounts on debt issuance are reported as other financing uses. Issuance costs, whether or not withheld from the actual debt proceeds received, are reported as debt service expenditures (see Note 27).

Y. Deferred Inflows of Resources

Deferred inflows of resources are an acquisition of assets by the government that is applicable to a future reporting period. Deferred inflows have a natural credit balance and, therefore decrease net position similar to liabilities (see Notes 14, 15, 16, 18, and 37).

Z. Nonspendable Fund Balances

Nonspendable fund balances indicate that portion of fund balance that cannot be spent because it is either not in spendable form or is legally or contractually required to be maintained intact.

AA. Restricted Fund Balances

Restricted fund balances are amounts that have constraints placed on the use of resources that are either (a) externally imposed by creditors (such as through debt covenants), grantors, contributors, or laws or regulations of other governments, or (b) imposed by law through constitutional provisions or enabling legislation.

BB. Committed Fund Balances

Committed fund balance includes amounts that must be spent for specific purposes that have been legislatively mandated by the Governor and General Assembly. Further action by the Governor and the General Assembly would be required to modify these commitments.

CC. Assigned Fund Balances

Assigned fund balances are amounts that are constrained by the government's intent to be used for specific purposes, but are neither restricted nor committed. Assignments are identified by Commonwealth management pursuant to the delegation of authority granted by the General Assembly and Governor specified in the Appropriation Act.

DD. Unassigned Fund Balances

Unassigned fund balance is the amount of fund balance that has not been assigned to other funds and has not been restricted, committed or assigned to specific purposes within the General Fund. The General Fund is the only fund that could potentially report a positive unassigned fund balance amount. Additionally, accrued liabilities exceed accrued assets on the modified accrual basis for the Unclaimed Property Fund (nonmajor special revenue) by $97.7 million. As there are no assigned balances in the fund to offset the negative fund balance restricted for specific purposes, the amount is reported as Unassigned Fund Balance.

EE. Cash Management Improvement Act

Included in Amounts Due to Other Governments is the Commonwealth's Cash Management Improvement Act (CMIA) interest liability to the federal government, which is calculated in accordance with the interest calculation and exchange provisions of the Federal Cash Management Improvement Act of 1990. The Commonwealth's interest liability is subject to review and final confirmation by the Bureau of the Fiscal Service (BFS) of the U.S. Treasury. If required, the payment is to be made on March 31 of the following year. Payment will be made from a sum sufficient appropriation authorized for this purpose by the Appropriation Act. The CMIA interest rate of exchange is based by law on the average of the bond equivalent rates of 13-week Treasury Bills auctioned during the annual reporting period as calculated by BFS.

FF. Investment Income

In accordance with GASB Statement No. 31, *Accounting and Financial Reporting for Certain Investments and for External Investment Pools*, all investment income reported in the accompanying financial statements include changes in the fair value of investments and the amount reported may be negative. Additionally, the Commonwealth's policy is to record all unrealized gains or losses for the State Treasurer's Portfolio in the General Fund.

GG. Intrafund Eliminations

Eliminations have been incorporated into the report to eliminate intrafund transactions within the related fund type. These eliminations prevent overstatement of financial activity.

HH. Interfund Activity

Generally, the effect of interfund activity has been eliminated from the government-wide statements. Exceptions to this rule are 1) activities between funds reported as governmental activities and funds reported as business-type activities, and 2) activities between funds that are reported in different functional categories in either the governmental or business-type activities column. Elimination of these activities would distort the direct costs and program revenues for the functions.

In the fund financial statements, transfers represent the movement of resources between funds. For example, transfers are recorded when a fund receives revenue and subsequently disburses the resources to another fund for expenditure.

2. RESTATEMENT OF BEGINNING BALANCES

The government-wide beginning balance restatements resulted from the following:

Government-wide Activities

Governmental Activities

- The Commonwealth implemented GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, effective for the fiscal year ended June 30, 2018. This implementation resulted in restatements for other postemployment benefits totaling $719.4 million.

- Capital Asset balances were restated by $40.9 million primarily due to errors resulting in the overstatement of prior year balances by the Virginia Department of Transportation (VDOT).

- The Commonwealth Transportation Fund (major special revenue) has been restated by $90.0 million resulting from VDOT previously understating both receivables and payables of $10.0 million and $100.0 million, respectively.

- The Debt Service Fund (nonmajor) has been restated by $77.5 million to include a loan receivable related to selected debt service payments previously omitted by VDOT.

- The Capital Projects Fund (nonmajor) has been restated by $518.4 million to include the Hampton Roads Transportation Accountability Commission (Commission) as a blended component unit of the Commonwealth. While the Commission is legally separate from the Commonwealth, all existing capital assets are recorded as governmental assets. Additionally, debt was issued during fiscal year 2018 by the Commission that will be used for transportation assets that either are, or will be, recorded as governmental assets based on the Commission's current project schedule. Accordingly, it would be misleading to exclude the Commission from the Commonwealth's reporting entity.

Business-type Activities

- As a result of the implementation of GASB Statement No. 75 discussed previously, Virginia Lottery (major), Virginia College Savings Plan (major), and numerous nonmajor enterprise funds have restated beginning balances by $2.5 million, $682,170, and $15.8 million, respectively.

Fund Statements

- The Commonwealth Transportation Fund (major special revenue) has been restated by $88.4 million as previously stated.

- The Debt Service Fund (nonmajor governmental) has been restated by $6.4 million as previously discussed.

- The Capital Projects Fund (nonmajor governmental) has been restated by $518.3 million as previously stated.

- As a result of the implementation of GASB Statement No. 75 discussed previously, the following funds have been restated:

  - Virginia Lottery (major), Virginia College Savings Plan (major), and numerous nonmajor enterprise funds have restated beginning balances by $2.5 million, $682,170, and $15.8 million, respectively.

  - Internal Service funds have been restated by $6.9 million.

  - The Private Purpose Trust Funds have been restated by $3,000.

- The Investment Trust Funds have been restated by $171.4 million for the Hampton Roads Transportation Accountability Commission previously discussed.

Component Units

The government-wide and fund statements were restated for the following.

- As a result of the implementation of GASB Statement No. 75 discussed previously, the Virginia Resources Authority (major) and numerous nonmajor component units have been restated by $120,774 and $308.7 million, respectively.

- The Commonwealth implemented GASB Statement No. 81, *Irrevocable Split-Interest Agreements*, effective for the fiscal year ended June 30, 2018. This implementation resulted in the University of Virginia (nonmajor) restating beginning balance by $35.5 million.

- The University of Virginia (nonmajor) has also restated the beginning balance by $21.5 million to recognize revenue that was unearned in prior years.

Beginning Balance Restatement

(Dollars in Thousands)

	Balance as of June 30, 2017	GASBS No. 75 Other Postemployment Benefits	GASBS No. 81 Irrevocable Split-Interest Agreements	Correction of Prior Year Errors	Balance June 30, 2017, as restated
Government-wide Activities:					
Primary Government:					
Governmental Activities	$ 21,148,750	$ (719,352)	$ -	$ 464,973	$ 20,894,371
Business-type Activities	1,938,415	(18,983)	-	-	1,919,432
Total Primary Government	$ 23,087,165	$ (738,335)	$ -	$ 464,973	$ 22,813,803
Component Units	$ 26,407,311	$ (308,811)	$ (35,499)	$ 21,485	$ 26,084,486
Fund Statements:					
Governmental Funds					
Major Governmental Funds:					
General	$ 498,431	$ -	$ -	$ -	$ 498,431
Special Revenue Funds:					
Commonwealth Transportation	1,987,080	-	-	(88,412)	1,898,668
Federal Trust	144,785	-	-	-	144,785
Literary	3,763	-	-	-	3,763
Nonmajor Governmental Funds	956,389	-	-	524,704	1,481,093
Total Governmental Funds	$ 3,590,448	$ -	$ -	$ 436,292	$ 4,026,740
Proprietary Funds					
Major Enterprise Funds:					
Virginia Lottery	$ (31,376)	$ (2,545)	$ -	$ -	$ (33,921)
Virginia College Savings Plan	784,526	(682)	-	-	783,844
Unemployment Compensation	1,208,248	-	-	-	1,208,248
Nonmajor Enterprise Funds	(23,957)	(15,756)	-	-	(39,713)
Total Enterprise Funds	$ 1,937,441	$ (18,983)	$ -	$ -	$ 1,918,458
Internal Service	$ (548,487)	$ (6,856)	$ -	$ -	$ (555,343)
Fiduciary Funds					
Private Purpose Trust Funds	$ 3,966,272	$ (3)	$ -	$ -	$ 3,966,269
Pension and Other Employee Benefit Trust Funds	$ 75,106,116	$ -	$ -	$ -	$ 75,106,116
Investment Trust Funds	$ 3,799,159	$ -	$ -	$ (171,420)	$ 3,627,739
Component Units:					
Virginia Housing Development Authority	$ 3,151,267	$ -	$ -	$ -	$ 3,151,267
Virginia Public School Authority	(14,915)	-	-	-	(14,915)
Virginia Resources Authority	1,567,444	(121)	-	-	1,567,323
Virginia College Building Authority	(3,925,412)	-	-	-	(3,925,412)
Nonmajor Component Units	25,628,927	(308,690)	(35,499)	21,485	25,306,223
Total Component Units	$ 26,407,311	$ (308,811)	$ (35,499)	$ 21,485	$ 26,084,486

3. NET POSITION/FUND BALANCE CLASSIFICATIONS

Fund Balance

GASB Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions,* improved the reporting of fund balance so that classifications are more easily understood and can be applied consistently between information reported in the government-wide financial statements and the governmental fund financial statements. The governmental fund balance classifications defined in GASB Statement No. 54 are: Nonspendable, Restricted, Committed, Assigned, and Unassigned.

Nonspendable fund balance includes inventories, prepaid items, and the principal of a permanent fund. These funds are not available for expenditure in the current or following period.

Restricted fund balance includes amounts that have constraints placed on the use of resources by the Constitution of Virginia or a party external to the Commonwealth.

Committed fund balance includes amounts that must be spent for specific purposes that have been legislatively mandated by the Governor and General Assembly.

Assigned fund balance represents amounts that the Commonwealth has identified for planned purposes but for which the intended use is not legislatively mandated. The assignments are identified by Commonwealth management pursuant to the delegation of authority granted by the General Assembly and Governor specified in the Appropriation Act. The following schedule includes committed and assigned amounts that share the same purpose and title. The distinction between these classifications results from whether there is a statutory restriction on certain amounts contained within the fund.

Unassigned fund balance for the General Fund (major) is the residual classification. The General Fund is the only fund that could potentially report a positive unassigned fund balance amount. Additionally, a negative amount indicates that restricted and committed amounts exceed the available modified accrual basis fund balance. Unassigned fund balance for the Unclaimed Property Fund (nonmajor special revenue) indicates that the amount restricted for specific purposes exceeds the modified accrual basis fund balance available for these specific purposes.

The governmental fund balance classifications and amounts as of June 30, 2018, are shown in the following table.

Governmental Fund Balance Classifications

(Dollars in Thousands)

	General Fund	Commonwealth Transportation	Federal Trust	Literary	Nonmajor Governmental	Total
Nonspendable						
Inventory	$ 30,183	$ 90,739	$ 23,813	$ -	$ 6,582	$ 151,317
Prepaid Items	75,163	14,524	2,633	-	20,496	112,816
Permanent Funds	-	-	-	-	37,921	37,921
Total Nonspendable	105,346	105,263	26,446	-	64,999	302,054
Restricted						
Agriculture and Forestry	-	-	-	-	8,249	8,249
Capital Projects/Construction/Capital Acquisition	-	-	-	-	1,292,381	1,292,381
Contract and Debt Administration	-	-	-	-	857	857
Debt Service	-	-	-	-	41,824	41,824
Economic and Technological Development	-	-	-	-	41	41
Educational and Training Programs	-	-	-	-	3,960	3,960
Environmental Quality and Natural Resource Preservation	-	-	-	-	22,572	22,572
Gifts and Grants	-	10	81,087	-	2,412	83,509
Government Operations:						
Administrative Services	-	-	-	-	2,935	2,935
Health and Public Safety	-	-	-	-	76,014	76,014
Literary Fund	-	-	-	1,035	-	1,035
Lottery Proceeds Fund	17,715	-	-	-	-	17,715
Revenue Stabilization Fund	546,216	-	-	-	-	546,216
Transportation Activities	-	481,890	-	-	-	481,890
Virginia Water Supply Assistance Grant Fund	2,972	-	-	-	-	2,972
Total Restricted	566,903	481,900	81,087	1,035	1,451,245	2,582,170
Committed						
Agriculture and Forestry	18	-	-	-	20,928	20,946
Amount Required for Mandatory Reappropriation	76,959	-	-	-	-	76,959
Amount Required for Reappropriation of 2018 Unexpended Balances for Capital Outlay and Restoration Projects	7,274	-	-	-	-	7,274
Capital Projects/Construction/Capital Acquisition	1,812	-	-	-	677	2,489
Central Capital Planning Fund	2,773	-	-	-	-	2,773
Commonwealth's Development Opportunity Fund	27,383	-	-	-	-	27,383
Communications Sales and Use Tax	3,341	-	-	-	-	3,341
Contract and Debt Administration	-	10,521	-	-	667	11,188
Economic and Technological Development	72,048	-	-	-	49,848	121,896
Educational and Training Programs	1,038	1,348	-	-	7,973	10,359
Environmental Quality and Natural Resource Preservation	8,171	-	-	-	111,393	119,564
Government Operations:						
Administrative Services	58	-	-	-	81,207	81,265
Legislative Services	-	-	-	-	201	201
Health and Public Safety	23,321	3,740	-	-	236,130	263,191
Local Government Fiscal Distress	500	-	-	-	-	500
Natural Disaster Sum Sufficient	17,070	-	-	-	-	17,070
Nonrecurring Expenditures	836	-	-	-	-	836
Regulatory Oversight	-	-	-	-	139,435	139,435
Revenue Reserve Fund	390,831	-	-	-	-	390,831
Transportation Activities	-	1,724,506	-	-	1,506	1,726,012
Transportation Trust Fund	1,671	-	-	-	-	1,671
Virginia Health Care Fund	31,468	-	-	-	-	31,468
Virginia Water Quality Improvement Fund	19,246	-	-	-	-	19,246
Virginia Water Quality Improvement Fund - Part A	55,259	-	-	-	-	55,259
Virginia Water Quality Improvement Fund - Part B	18,499	-	-	-	-	18,499
Total Committed	759,576	1,740,115	-	-	649,965	3,149,656
Assigned						
Agriculture and Forestry	-	-	-	-	2	2
Economic and Technological Development	-	-	-	-	1,796	1,796
Educational and Training Programs	-	-	-	-	8,057	8,057
Environmental Quality and Natural Resource Preservation	-	-	-	-	7,083	7,083
Government Operations:						
Administrative Services	-	-	-	-	477	477
Health and Public Safety	-	-	-	-	14,485	14,485
Regulatory Oversight	-	-	-	-	2	2
Total Assigned	-	-	-	-	31,902	31,902
Unassigned	(588,371)	-	-	-	(97,670)	(686,041)
Total Fund Balance	$ 843,454	$ 2,327,278	$ 107,533	$ 1,035	$ 2,100,441	$ 5,379,741

4. DEFICIT FUND BALANCES/NET POSITION

The Unclaimed Property (nonmajor special revenue fund) ended the year with a deficit net position balance of $96.1 million. This deficit was a result of the accrued liabilities estimated to be paid to claimants exceeding the assets remaining in the fund as of June 30.

The Virginia Lottery (major enterprise fund), Alcoholic Beverage Control (nonmajor enterprise fund), the Department of General Services' Consolidated Laboratory Services Fund (nonmajor enterprise fund), the Virginia Museum of Fine Arts Gift Shop (nonmajor enterprise fund), the Enterprise Application Fund (internal service fund), the Personnel Management Information System Fund (internal service fund), and the Payroll Service Bureau (internal service fund) ended the year with deficit net positions of $34.0 million, $96.0 million, $4.6 million, $371,646, $2.9 million, $846,662, and $1.8 million, respectively. This was solely attributable to the net pension liability resulting from GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27,* and the other postemployment benefits (OPEB) obligation resulting from GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.*

The Risk Management Fund (nonmajor enterprise fund) ended the year with a deficit net position balance of $13.1 million. The deficit was a result of previous increases in claims liability for constitutional officers' programs exceeding premiums collected. Further, there are noncurrent liabilities related to net pension liabilities and other postemployment benefit obligations.

The Department of Environmental Quality's Title V Air Pollution Permit Fund (nonmajor enterprise fund) ended the year with a deficit net position balance of $12.0 million. The deficit was a result of decreasing revenues for Title V permits. Further, there are noncurrent liabilities related to net pension liabilities and other postemployment benefit obligations.

The Virginia Information Technologies Agency (internal service fund) ended the year with a deficit net position balance of $71.2 million. The deficit was a result of accumulated deficits from prior years, additional expenses for the transition from Northrup Grumman to multiple suppliers, and noncurrent liabilities related to net pension liabilities and other postemployment benefit obligations.

The Property Management Fund (internal service fund) ended the year with a deficit net position balance of $20.3 million. This deficit was the result of the purchase of a leasehold interest in a state-owned building in fiscal year 2006. Also, the Property Management Fund incurred additional capital lease liabilities due to transfers of leases from other state agencies in fiscal year 2009. Additionally, in fiscal year 2012, the Property Management Fund entered into three energy leases where the asset is reported in the governmental fund and the liability is recorded in the internal service fund. In fiscal year 2018, the Property Management Fund entered into a new energy performance contract where the asset is reported in the governmental fund and the liability is recorded in the internal service fund. Further, there are noncurrent liabilities related to net pension liabilities and other postemployment benefit obligations.

The Risk Management Fund (internal service fund) ended the year with a deficit net position balance of $627.2 million. The deficit was the result of the Worker's Compensation Program having estimated claims payable exceeding the available equity in the fund. Claims are paid on a pay-as-you-go basis. To the extent that claims exceed current resources, they will ultimately become a liability of the fund from which the claim originated. Further, there are noncurrent liabilities related to net pension liabilities and other postemployment benefit obligations.

The Virginia Public School Authority (VPSA) (major component unit) ended the year with a deficit net position balance of $10.1 million. This deficit is the result of VPSA immediately passing along savings to localities from debt refunding that will be realized from future debt service payments subsequent to June 30.

The Virginia College Building Authority (major component unit) ended the year with a deficit net position balance of $4.1 billion. This deficit occurs because the Authority issued bonds for the 21st Century College and Equipment programs subject to future appropriations from the General Fund of the Commonwealth without any other security. These future appropriations are not included as assets of the Authority.

The Southern Virginia Higher Education Center (nonmajor component unit) ended the year with a deficit net position balance of $985,055. This was solely attributable to the net pension liability resulting from GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27,* and the other postemployment benefits (OPEB) obligation resulting from GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.*

The Virginia Economic Development Partnership (nonmajor component unit) ended the year with a deficit net position balance of $9.0 million. This deficit occurs because the partnership's Statement of Net Position reflects $15.2 million in non-current liabilities related to compensated absences, net pension liabilities, and other postemployment benefit obligation. The Partnership is funded mainly by state appropriations, which show current funding only.

The Virginia Tourism Authority (nonmajor component unit) ended the year with a deficit net position balance of $2.1 million. This deficit occurs because the Authority's Statement of Net Position reflects $8.8 million in non-current liabilities related to compensated absences, pension liabilities, and other postemployment benefit obligation.

5. REVENUE STABILIZATION FUND

In accordance with Article X, Section 8 of the *Constitution of Virginia*, the amount estimated as required for deposit to the Revenue Stabilization Fund must be appropriated for that purpose by the General Assembly. During fiscal year 2018, in accordance with the provisions of Article X, Section 8 of the *Constitution of Virginia* and Section 2.2-1830 of the *Code of Virginia,* a withdrawal of $272.5 million was made from the fund.

Under the provisions of Article X, Section 8 of the *Constitution of Virginia*, a deposit of $262.9 million is required during fiscal year 2020 based on fiscal year 2018 revenue collections.

Section 2.2-1829(b) of the *Code of Virginia* requires an additional deposit into the Fund when specific criteria have been met. No such deposit is required since the specified criteria were not met for fiscal year 2018.

The Revenue Stabilization Fund has principal and interest on deposit of $283.3 million restricted as a part of the General Fund balance. Pursuant to the constitutional amendment of Article X, Section 8, effective January 1, 2011, the amount on deposit cannot exceed 15.0 percent of the Commonwealth's average annual tax revenues derived from taxes on income and retail sales for the preceding three fiscal years. As of June 30, 2018, the Constitutional maximum is $2.7 billion.

6. REVENUE RESERVE FUND

Section 2.2-1831.2 of the *Code of Virginia* established the Revenue Reserve Fund. As of June 30, 2018, the fund has principal and interest on deposit of $156.4 million committed as a part of the General Fund balance.

This fund was established to mitigate certain anticipated revenue shortfalls when appropriations based on previous revenue forecasts exceed expected revenues in subsequent forecasts. Pursuant to Chapter 1, 2018 Acts of Assembly Special Session 1 Enactment Clause 7, the Department of Planning and Budget has identified a deposit of $234.4 million to be made during fiscal year 2019. This amount represents the fiscal year 2018 revenue collections in excess of the official estimate reduced by the fiscal year 2020 mandatory deposit to the Revenue Stabilization Fund and statutory deposit to the Water Quality Fund for excess revenues. This amount is also reported as a part of committed fund balance in the General Fund.

Pursuant to Section 2.2-1831.3 of the *Code of Virginia*, the amount on deposit cannot exceed 1.0 percent of the total general fund revenues for the prior fiscal year. Additionally, the total amount in the Revenue Reserve Fund cannot exceed 2.0 percent of the total general fund revenues for the prior fiscal year. As of June 30, 2018, no maximum amount has been calculated.

7. CASH, CASH EQUIVALENTS, AND INVESTMENTS

As of June 30, 2018, the carrying amount of cash for the primary government (including pension and other employee benefit trust funds) was $4.8 billion and the bank balance was $397.3 million. The carrying amount of cash for component units was $2.2 billion and the bank balance was $1.2 billion. Cash equivalents are investments with an original maturity of 90 days or less. Cash and cash equivalents for foundations (component units) totaled $427.7 million as of year-end. A portion of this amount and some balances during the year exceeded Federal Deposit Insurance Corporation (FDIC) insurance coverage. Foundation investments are disclosed in the Interest Rate Risk section of this note. Note 7 includes investment derivatives for the primary government and excludes derivatives for the component units. For additional information concerning derivative instruments, see Note 15.

For purposes of this note, primary government includes governmental, business-type activities, and fiduciary funds. The deposits of the primary government and the component units, excluding foundations (component units), are secured in accordance with the provisions of the Virginia Security for Public Deposits Act, Section 2.2-4400 of the *Code of Virginia*. The act requires any public depository that receives or holds public deposits to pledge collateral to the Treasury Board to cover public deposits in excess of Federal deposit insurance. The required collateral percentage is determined by the Treasury Board and ranges from 50.0 percent to 100.0 percent for financial institutions choosing the pooled method of collateralization, and from 105.0 percent to 130.0 percent for financial institutions choosing the dedicated method of collateralization. As stated in Note 1.FF, unrealized gains or losses for the State Treasurer's Portfolio are recorded in the General Fund. Public Depositors are required to secure their deposits pursuant to several applicable provisions of the law.

The Local Government Investment Pool Act, Section 2.2-4600 of the *Code of Virginia*, created the Local Government Investment Pool (Pool) program for the benefit of public entities of the Commonwealth. The Treasury Board of Virginia is granted administration of the Local Government Investment Pool (LGIP) and Local Government Investment Pool – Extended Maturity (LGIP EM) on behalf of the participating public entities of the Commonwealth. Both LGIP and LGIP EM offer two professionally managed investment portfolios in accordance with the Investment of Public Funds Act. The LGIP portfolio is a diversified portfolio structured to provide public entities an investment alternative that seeks to minimize the risk of principal loss while offering daily liquidity, a stable Net Asset Value (NAV), and a competitive rate of return. The LGIP is not registered with the Securities Exchange Commission (SEC) as an investment company. The LGIP EM portfolio is a diversified portfolio with fluctuating NAV structured to provide an investment alternative to public entities who wish to invest monies not needed for daily liquidity. The fair value of the Commonwealth's position in the Pool is the same as the value of the Pool shares for all except for the LGIP EM whose shares fluctuate with changes in the market value of the portfolio.

Certain deposits are held by trustees in accordance with the Trust Subsidiary Act, Section 6.2-1057 of the *Code of Virginia*. The act requires that cash held by trustees while awaiting investment or distribution is not to be used by an affiliate bank of the trustee in the conduct of its business unless the affiliate bank delivers securities to the trust department as collateral that is at least equal to the fair value of the trust funds held on deposit in excess of amounts insured by the FDIC.

The Commonwealth is authorized, in accordance with the guidelines set forth in Section 2.2-4500 et seq. of the *Code of Virginia*, to invest public funds in the following:

- U.S. Treasury and agency securities
- Corporate debt securities
- Asset–backed securities
- Mortgage–backed securities
- Municipal securities
- AAA rated obligations of foreign governments
- Bankers' acceptances and bank notes
- Negotiable certificates of deposit
- Repurchase agreements
- Money market funds

Permitted investments include agency mortgage-backed securities, corporate or private label mortgage-backed securities, and asset-backed securities which by definition usually expose the investor to prepayment risk. Prepayment risk, or the prepayment option granted the borrower, can create uncertainty concerning cash flows, can affect the price of the security causing negative convexity, and can expose the investor to reinvestment risk. Similarly, many agency and corporate securities are callable after some predetermined date at a predetermined price. The call options in regular agency debentures and some corporate securities can be open ended and may significantly impact cash flows, security pricing, and reinvestment risks of these securities.

As of June 30, 2018, the State Treasurer held no security that was in default as to principal or interest and had no securities that were out of compliance with guidelines.

Public funds held by the Commonwealth, public officers, municipal corporations, political subdivisions, and any other public body of the Commonwealth shall be held in trust for the citizens of the Commonwealth. Any investment of such funds shall be made solely in the interest of the citizens of the Commonwealth and with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims.

Certain investments held in trust by the State Treasurer in accordance with bond indentures and resolutions may have more restrictive investment policies. Investment policies of component units are established by the entity's governing boards.

The information presented for the external investment pools was obtained from audited financial statements.

Copies of the LGIP and LGIP EM report may be obtained from the Department of the Treasury website at www.trs.virginia.gov. Participation in this pool is voluntary.

The Board of Trustees of the Virginia Retirement System (the System) (part of primary government) has full power to invest and reinvest the trust funds in accordance with Section 51.1–124.30 of the *Code of Virginia*, as amended. This section requires the Board to discharge its duties solely in the interests of members, retirees, and beneficiaries. It also requires the Board to invest the assets with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims. The Board must also diversify such investments so as to minimize the risk of large losses, unless under the circumstances, it is clearly prudent not to do so. The System does not have investment policies that place specific restrictions on investments related to custodial risk, interest rate risk, credit risk, or foreign currency risk. The System's investment portfolio is intended to be managed through diversification and prudent judgment, rather than through specific policy restrictions.

Custodial Credit Risk

Custodial credit risk is the risk that, in the event of the failure of the counterparty, the Commonwealth may not be able to recover the value of its investment or collateral securities that are in the possession of an outside party.

Policies related to custodial credit risk pertaining to the Commonwealth's securities lending program are found in the securities lending section of this note.

As of June 30, 2018, the primary government (excluding pension and other employee benefit trust funds) had $1.2 million in cash balances that were uninsured and uncollateralized, and $11.5 million in cash balances that were uninsured and collateralized with securities held by the pledging financial institution. The primary government (excluding pension and other employee benefit trust funds) had no cash equivalents and investments that were exposed to custodial risk.

As of June 30, 2018, investment securities for the System (excluding cash equivalents and repurchase agreements held as securities lending collateral) were registered and held in the name of the System for the benefit of the System's trust funds and were not exposed to custodial credit risk. It is the standard practice and policy of the System, through the relevant provisions in its contracts and agreements with third parties, to minimize all known custodial credit risks.

As of June 30, 2018, component units had $84.2 million in cash balances that were uninsured and uncollateralized, and $11.3 million in cash balances that were uninsured and collateralized with securities held by the pledging financial institution. In addition, the component units held $1.1 million in cash equivalents and investments that were exposed to custodial risk.

Interest Rate Risk

Interest rate risk is the risk that changes in interest rates of debt investments will adversely affect the fair value of an investment. As discussed in Note 1.F., the Commonwealth has elected to disclose the risk for its debt investments using the segmented time distribution method for the primary government (excluding the Virginia College Savings Plan's Prepaid529 and Invest529 programs, and pension and other employee benefit trust funds) and component units, and the effective duration method for Virginia College Savings Plan (Prepaid529 and Invest529 programs) and the System (pension and other employee benefit trust funds).

The State Treasurer's guidelines limit the following maximum durations for any single security of the following investment types:

Security Type	Maximum Duration
Corporate Security	15 years
Asset-Backed Securities	5 years
Sovereign Government Obligations (excluding U.S.)	5 years
Negotiable Certificates of Deposit and Negotiable Bank Notes	5 years

The State Treasurer's guidelines further describe target durations for the overall general account portfolio of 1.7 years.

The Virginia College Savings Plan (Virginia529) manages the risk for fixed income investment securities held in Prepaid529 and Invest529 programs using the effective duration methodology. Virginia529's Statements of Investment Policy and Guidelines do not limit investment maturities as a mean of managing its exposure to fair value losses arising from increasing interest rates. Although not an explicit requirement, duration of fixed income portfolios, if applicable, is expected to be within 20.0 percent of each portfolio's designated benchmark.

The System also manages the risk within its portfolio using the effective duration methodology. It is widely used in the management of fixed income portfolios in that it quantifies, to a much greater degree, the risk of interest rate changes. The methodology takes into account optionality on bonds and scales the risk of price changes on bonds depending on the degree of change in rates and the slope of the yield curve. All of the System's fixed-income portfolios are managed in accordance with the System's investment guidelines, most of which are specific as to the degree of interest rate risk that can be taken.

As of June 30, 2018, the System's investments included $2.0 billion, primarily in corporate bonds and notes, U.S. Treasury and agency securities, supranational and non-U.S. Government bonds and notes, municipal securities, and collateralized mortgage obligations, which are highly sensitive to interest rate fluctuations in that they are subject to early repayment in a period of declining interest rates and/or because they have an option adjusted duration of greater than ten years. The resulting reduction in expected total cash flows affects the fair value of these securities.

As of June 30, 2018, the Commonwealth's investments subject to interest rate risk had the following maturities and weighted average effective durations.

Primary Government Investments

(Excluding Virginia College Savings Plan and Pension and Other Employee Benefit Trust Funds)

(Dollars in Thousands)

Investment Type	June 30, 2018	Investment Maturities (in years) Less Than 1	1-5	6-10	More Than 10
Debt Securities					
U. S. Treasury and Agency Securities	$ 838,401	$ 271,014	$ 392,944	$ 111,892	$ 62,551
Corporate Bonds and Notes	489,890	68,291	267,074	103,656	50,869
Supranational and Non-U.S. Government Bonds and Notes	149,804	149,804	-	-	-
Commercial Paper	3,526,312	3,526,312	-	-	-
Negotiable Certificates of Deposit	4,171,013	4,171,013	-	-	-
Repurchase Agreements	1,559,312	1,559,312	-	-	-
Municipal Securities	17,338	1,057	5,649	-	10,632
Asset-Backed Securities	168,378	-	85,965	22,953	59,460
Agency Mortgage-Backed Securities	227,800	1,312	54,072	18,151	154,265
Agency Unsecured Bonds and Notes	2,219,202	1,253,145	960,319	3,377	2,361
Mutual and Money Market Funds (Includes SNAP)	1,246,475	1,246,475	-	-	-
Fixed Income and Commingled Funds	6,926	-	6,926	-	-
Investments held by broker-dealers under securities loans					
U. S. Government and Agency Securities	202	-	-	202	-
Corporate Bonds and Notes	1,285	-	396	889	-
Total	$ 14,622,338	$ 12,247,735	$ 1,773,345	$ 261,120	$ 340,138

Primary Government - Virginia College Savings Plan Investments

(Dollars in Thousands)

Investment Type	Prepaid529 (Major Enterprise Fund) June 30, 2018	Prepaid529 (Major Enterprise Fund) Weighted Avg. Effective Duration (in years)	Invest529 (Private Purpose Trust Fund) June 30, 2018	Invest529 (Private Purpose Trust Fund) Weighted Avg. Effective Duration (in years)
Debt Securities				
U. S. Treasury and Agency Securities	$ 408	7.3	$ -	-
Corporate Bonds and Notes	482,372	1.4	112,968	2.7
Asset Backed Securities	63,101	1.3	5,634	0.1
Agency Mortgage Backed Securities	31,713	4.1	-	-
Mutual and Money Market Funds	141,622	3.1	269,297	5.1
Guaranteed Investment Contracts	134,488	3.3	989,143	3.5
Fixed Income and Commingled Funds*	475,463	5.0	765,643	6.4
Other*	113,352	3.0	-	-
Total	$ 1,442,519	3.1	$ 2,142,685	4.7

*Effective duration is calculated using a methodology that takes into account the duration impact of equity warrants and rate-sensitive instruments.

Primary Government - Virginia Retirement System Investments

(Pension and Other Employee Benefit Trust Funds)

(Dollars in Thousands)

Investment Type	June 30, 2018	Weighted Avg. Effective Duration (in years)
Debt Securities		
U. S. Treasury and Agency Securities	$ 3,941,422	6.1
Corporate Bonds and Notes	9,955,756	3.1
Collateralized Mortgage Obligations	225,136	2.5
Commercial Mortgages	333,072	4.3
Supranational and Non-U.S. Government Bonds and Notes	2,112,151	5.5
Mutual and Money Market Funds	165,340	5.9
Commercial Paper	2,057,534	0.2
Negotiable Certificates of Deposit	1,079,512	0.2
Repurchase Agreements	66,394	< 0.1
Municipal Securities	128,429	6.8
Asset Backed Securities	683,742	1.8
Agencies	3,800,874	4.5
Fixed Income and Commingled Funds	1,362,992	5.5
Fixed Income Derivatives	856	2.3
Time Deposits	119,790	< 0.1
Debt Securities - No Effective Duration		
Corporate Bonds and Notes	98,279	N/A
Collateralized Mortgage Obligations	3,042	N/A
Commercial Mortgages	1,950	N/A
Mutual and Money Market Funds	14,630	N/A
Commercial Paper	69,000	N/A
Asset Backed Securities	3,200	N/A
Fixed Income Derivatives	1,808	N/A
Total	$ 26,224,909	3.3

Component Unit Investments

(Dollars in Thousands)

Investment Type	June 30, 2018	Investment Maturities (in years) Less Than 1	1-5	6-10	More Than 10
Debt Securities					
U. S. Treasury and Agency Securities	$ 814,305	$ 161,400	$ 322,625	$ 145,657	$ 184,623
Supranational and Non-U.S. Government Bonds and Notes	9,215	-	9,215	-	-
Corporate Bonds and Notes	568,264	232,121	312,647	19,189	4,307
Commercial Paper	294,397	294,397	-	-	-
Negotiable Certificates of Deposit	58,235	42,344	15,891	-	-
Repurchase Agreements	394,357	394,357	-	-	-
Municipal Securities	203,602	9,283	79,348	82,289	32,682
Asset-Backed Securities	264,918	24,661	220,943	3,080	16,234
Agency Unsecured Bonds and Notes	443,973	392,790	51,183	-	-
Agency Mortgage-Backed Securities	733,457	12,023	55,179	17,503	648,752
Mutual and Money Market Funds (Includes SNAP)	541,417	536,675	1,435	3,307	-
Guaranteed Investment Contracts	38,482	2,356	15,812	14,523	5,791
Fixed Income and Commingled Funds	113,825	7,241	63,096	-	43,488
Other	104,891	104,826	65	-	-
Total	$ 4,583,338	$ 2,214,474	$ 1,147,439	$ 285,548	$ 935,877

Foundation Investments

(Dollars in Thousands)

Investment Type	Fair Value
U.S. Treasury and Agency Securities	$ 973,384
Common & Preferred Stocks	1,005,817
Corporate Bonds and Notes	305,089
Negotiable Certificates of Deposit	13,038
Municipal Securities	2,110
Repurchase Agreements	102,430
Asset Backed Securities	9,034
Agency Mortgage Backed	12,786
Mutual and Money Market Funds	704,868
Bankers' Acceptance	90,509
Real Estate	474,226
Index Funds	237,764
Hedge Funds	2,327,579
Partnerships	2,090,098
Venture Capital	1,172,646
Other	5,110,355
Total	$ 14,631,733

Note: Foundations represent FASB reporting entities defined in Note 1.B. A portion of these amounts is reported at cost rather than fair value because fair value was not available or readily determinable.

Credit Risk

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The State Treasurer places emphasis on securities of high credit quality and marketability. At the time of purchase, the following limitations are in place:

- Bankers acceptances: P-1, Moody's Investors Service (Moody's) and A-1, Standard & Poor's (S&P)
- Negotiable CDs and bank notes:
  - o maturities of one year or less: P-1, Moody's and A-1, S&P
  - o maturities over one year: Aa, Moody's and AA, S&P
- Commercial paper: P-1, Moody's and A-1, S&P
- Corporate Notes and Bonds: A3/A- or equivalent by two nationally recognized rating agencies, one of which must be Moody's or S&P. However, each external investment manager may invest up to 10.0 percent of their portfolio in Baa2/BBB rated bonds which, at a minimum, must be rated Baa2/BBB by two nationally recognized rating agencies, one of which must be either Moody's or S&P.
- Municipal Bonds: A3/A- or equivalent by two nationally recognized rating agencies, one of which must be Moody's or S&P
- Asset-backed securities: AAA by two nationally recognized rating agencies, one of which must be Moody's or S&P
- Dollar denominated obligations of sovereign governments: Aaa, Moody's and AAA, S&P
- Commercial Mortgage-Backed Securities (CMBS) and Collateralized Mortgage Obligations (CMOs): AAA by two nationally recognized rating agencies, one of which must be Moody's or S&P

The System's policy for credit risk is based on the concept of a risk budget rather than specific limitations related to the rating of an individual security. The System's risk budget is allocated among the different investment strategies.

Credit risk for derivative instruments held by the Commonwealth results from counterparty risk assumed by the Commonwealth. This is essentially the risk that the borrower will be unable to meet its obligation. Information regarding the Commonwealth's credit risk related to derivatives is found in Note 15.

Policies related to credit risk pertaining to the Commonwealth's securities lending program are found in the Securities Lending section of this note.

The following tables present the credit ratings for the investments of the primary government (excluding pension and other employee benefit trust funds), the System (pension and other employee benefit trust funds), and component units as of June 30, 2018. The ratings presented are using Moody's, S&P, and Fitch rating scales. They are displayed from short-term to long-term.

Primary Government (Excluding Pension and Other Employee Benefit Trust Funds)

(Dollars in Thousands)

Investment Type (1)	P-1 / A-1 / F1	Percent of Portfolio	P-2 / A-2	Percent of Portfolio	Aaa / AAA	Percent of Portfolio	Aa / AA
Agency Mortgage Backed Securities	$ -	0.0%	$ -	0.0%	$ 605	0.0%	$ 246,234
Agency Unsecured Bonds and Notes	421,087	2.5%	-	0.0%	9,886	0.1%	1,788,145
Asset Backed Securities	-	0.0%	-	0.0%	178,875	1.0%	16,515
Commercial Paper	3,526,312	20.4%	-	0.0%	-	0.0%	-
Corporate Bonds and Notes	-	0.0%	-	0.0%	14,574	0.1%	80,096
Fixed Income and Commingled Funds	-	0.0%	-	0.0%	-	0.0%	-
Guaranteed Investment Contracts	-	0.0%	-	0.0%	-	0.0%	-
Investments held by broker-dealers under securities loans (Corporate Bonds and Notes)	-	0.0%	-	0.0%	-	0.0%	343
Investments held by broker-dealers under securities loans (U.S. Government and Agency Securities)	-	0.0%	-	0.0%	202	0.0%	-
Municipal Securities	667	0.0%	-	0.0%	568	0.0%	8,506
Mutual and Money Market Funds (Includes SNAP)	-	0.0%	-	0.0%	1,336,066	7.7%	-
Negotiable Certificates of Deposit	4,075,108	23.6%	83,057	0.5%	-	0.0%	12,848
Other Debt Securities	-	0.0%	-	0.0%	-	0.0%	-
Repurchase Agreements	210,000	1.2%	207,500	1.2%	200,000	1.2%	690,004
Supranational and Non-U.S. Government Bonds and Notes	-	0.0%	-	0.0%	149,804	0.9%	-
Total	$ 8,233,174	47.7%	$ 290,557	1.7%	$ 1,890,580	11.0%	$ 2,842,691

Primary Government – Virginia Retirement System (Pension and Other Employee Benefit Trust Funds)

(Dollars in Thousands)

Investment Type (1)	P-1 / A-1 / F1	Percent of Portfolio	P-2 / A-2 / F2	Percent of Portfolio	Aaa / AAA	Percent of Portfolio	Aa / AA
Corporate Bonds and Notes	$ 366,984	1.6%	$ -	0.0%	$ 61,466	0.3%	$ 1,120,954
Collateralized Mortgage Obligations	-	0.0%	-	0.0%	7,570	0.0%	94,389
Commercial Mortgages	-	0.0%	-	0.0%	283,134	1.3%	2,882
Supranational and Non-U.S. Government Bonds and Notes	-	0.0%	-	0.0%	136,419	0.6%	71,992
Mutual and Money Market Funds	-	0.0%	-	0.0%	-	0.0%	-
Commercial Paper	1,355,942	6.1%	659,244	3.0%	-	0.0%	-
Negotiable Certificates of Deposit	144,511	0.6%	-	0.0%	-	0.0%	57,798
Repurchase Agreements	-	0.0%	-	0.0%	-	0.0%	-
Municipal Securities	-	0.0%	-	0.0%	10,649	0.0%	117,780
Asset Backed Securities	-	0.0%	-	0.0%	350,883	1.6%	22,988
Agencies	-	0.0%	-	0.0%	16,394	0.1%	1,804,569
Fixed Income and Commingled Funds	-	0.0%	-	0.0%	-	0.0%	1,722
Fixed Income Derivatives	-	0.0%	-	0.0%	-	0.0%	-
Time Deposits	13,790	0.1%	-	0.0%	-	0.0%	-
Total	$ 1,881,227	8.4%	$ 659,244	3.0%	$ 866,515	3.9%	$ 3,295,074

Component Units

(Dollars in Thousands)

Investment Type (1)	P-1 / A-1 / F1	Percent of Portfolio	Aaa / AAA	Percent of Portfolio	Aa / AA	Percent of Portfolio	A
Agency Mortgage Backed Securities	$ -	0.0%	$ 639,048	17.1%	$ 51,552	1.4%	$ -
Agency Unsecured Bonds and Notes	-	0.0%	406,483	10.9%	26,918	0.7%	-
Asset Backed Securities	-	0.0%	236,594	6.3%	13,647	0.4%	1,511
Commercial Paper	205,440	5.5%	20,921	0.6%	-	0.0%	-
Corporate Bonds and Notes	1,894	0.1%	22,822	0.6%	144,738	3.9%	321,581
Fixed Income and Commingled Funds	-	0.0%	-	0.0%	6,583	0.2%	-
Municipal Securities	8,821	0.2%	34,833	0.9%	106,204	2.8%	50,274
Mutual and Money Market Funds (Includes SNAP)	7,218	0.2%	438,880	11.8%	-	0.0%	-
Negotiable Certificates of Deposit	6,870	0.2%	-	0.0%	14,749	0.4%	-
Other Debt Securities	-	0.0%	23,120	0.6%	24	0.0%	66
Repurchase Agreements	-	0.0%	-	0.0%	-	0.0%	-
Supranational and Non-U.S. Government Bonds and Notes	-	0.0%	9,215	0.3%	-	0.0%	-
Total	$ 230,243	6.2%	$ 1,831,916	49.1%	$ 364,415	9.8%	$ 373,432

(1) Excludes investments of $948.8 million for primary government (excluding pension and other employee benefit trust funds), $3.9 billion for the System (pension and other employee benefit trust funds), and $852.8 million for component units because obligations of the U. S. Government or obligations explicitly guaranteed by the U. S. Government are not considered to have credit risk.

Amount by Credit Rating - Moody's / S&P / Fitch

Percent of Portfolio	A	Percent of Portfolio	Baa / BBB	Percent of Portfolio	Less Than Investment Grade	Percent of Portfolio	Unrated	Percent of Portfolio	Grand Total
1.4%	$ -	0.0%	$ 1,020	0.0%	$ -	0.0%	$ 11,654	0.1%	$ 259,513
10.3%	-	0.0%	-	0.0%	14	0.0%	70	0.0%	2,219,202
0.1%	19,772	0.1%	8,437	0.1%	6,263	0.0%	7,251	0.1%	237,113
0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	3,526,312
0.5%	264,266	1.5%	155,504	0.9%	534,142	3.1%	36,648	0.2%	1,085,230
0.0%	-	0.0%	-	0.0%	-	0.0%	1,248,032	7.2%	1,248,032
0.0%	-	0.0%	-	0.0%	-	0.0%	1,123,631	6.5%	1,123,631
0.0%	942	0.0%	-	0.0%	-	0.0%	-	0.0%	1,285
0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	202
0.1%	4,816	0.0%	-	0.0%	-	0.0%	2,781	0.0%	17,338
0.0%	-	0.0%	-	0.0%	-	0.0%	321,328	1.9%	1,657,394
0.1%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	4,171,013
0.0%	27,819	0.2%	24,324	0.1%	4,700	0.0%	56,509	0.3%	113,352
4.0%	-	0.0%	-	0.0%	-	0.0%	141,808	0.8%	1,449,312
0.0%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	149,804
16.5%	$ 317,615	1.8%	$ 189,285	1.1%	$ 545,119	3.1%	$ 2,949,712	17.1%	$ 17,258,733

Amount by Credit Rating - Moody's / S&P / Fitch

Percent of Portfolio	A	Percent of Portfolio	Baa / BBB	Percent of Portfolio	Less Than Investment Grade	Percent of Portfolio	Unrated	Percent of Portfolio	Grand Total
5.0%	$ 3,039,107	13.6%	$ 2,306,589	10.3%	$ 1,549,401	7.0%	$ 1,609,534	7.2%	$ 10,054,035
0.4%	2,047	0.0%	-	0.0%	66,847	0.3%	57,325	0.3%	228,178
0.0%	-	0.0%	11,231	0.1%	32,224	0.1%	5,551	0.0%	335,022
0.3%	232,777	1.1%	525,182	2.3%	1,082,499	4.9%	63,282	0.3%	2,112,151
0.0%	-	0.0%	-	0.0%	70,191	0.3%	109,779	0.5%	179,970
0.0%	109,752	0.5%	-	0.0%	-	0.0%	1,596	0.0%	2,126,534
0.3%	30,000	0.1%	-	0.0%	-	0.0%	847,203	3.8%	1,079,512
0.0%	-	0.0%	-	0.0%	-	0.0%	66,394	0.3%	66,394
0.6%	-	0.0%	-	0.0%	-	0.0%	-	0.0%	128,429
0.1%	90,676	0.4%	16,929	0.1%	180,588	0.8%	24,878	0.1%	686,942
8.1%	-	0.0%	-	0.0%	-	0.0%	1,979,911	8.9%	3,800,874
0.0%	-	0.0%	-	0.0%	1,061	0.0%	1,360,209	6.1%	1,362,992
0.0%	-	0.0%	-	0.0%	-	0.0%	2,664	0.0%	2,664
0.0%	-	0.0%	-	0.0%	-	0.0%	106,000	0.5%	119,790
14.8%	$ 3,504,359	15.7%	$ 2,859,931	12.8%	$ 2,982,811	13.4%	$ 6,234,326	28.0%	$ 22,283,487

Amount by Credit Rating - Moody's / S&P / Fitch

Percent of Portfolio	Baa / BBB	Percent of Portfolio	Less Than Investment Grade	Percent of Portfolio	Unrated	Percent of Portfolio	Grand Total
0.0%	$ -	0.0%	$ -	0.0%	$ 42,857	1.1%	$ 733,457
0.0%	-	0.0%	-	0.0%	10,572	0.3%	443,973
0.0%	193	0.0%	3,005	0.1%	9,968	0.3%	264,918
0.0%	-	0.0%	-	0.0%	68,036	1.8%	294,397
8.6%	51,732	1.4%	278	0.0%	25,219	0.7%	568,264
0.0%	-	0.0%	-	0.0%	107,242	2.9%	113,825
1.4%	1,130	0.0%	2,260	0.0%	80	0.0%	203,602
0.0%	-	0.0%	-	0.0%	95,319	2.5%	541,417
0.0%	-	0.0%	-	0.0%	36,616	1.0%	58,235
0.0%	-	0.0%	-	0.0%	81,681	2.2%	104,891
0.0%	360,000	9.7%	-	0.0%	34,357	0.9%	394,357
0.0%	-	0.0%	-	0.0%	-	0.0%	9,215
10.0%	$ 413,055	11.1%	$ 5,543	0.1%	$ 511,947	13.7%	$ 3,730,551

Concentration of Credit Risk

Concentration of credit risk is related to the risk of loss that may be attributed to the magnitude of a government's investment in a single issuer. The State Treasury and the System have individual investment policies limiting the amounts that may be invested in any single issuer.

It is the State Treasurer's policy that each portfolio will be diversified with no more than 4.0 percent of the value of the fund invested in the securities of any single issuer. This limitation shall not apply to the U.S. Government, or agency thereof, or U.S. Government sponsored corporation securities and fully insured and/or collateralized certificates of deposit. Certain portfolios are limited to amounts less than 4.0 percent of the value of the fund invested in the securities of any single issuer. As of June 30, 2018, more than 4.0 percent of the Commonwealth's governmental fund investments were in the Federal Home Loan Bank and Federal Home Loan Mortgage Corporation, totaling $873.5 million and $445.9 million, respectively. Since these securities are exempted from the State Treasury investment policies, all investments are compliant with investment policies.

The System's investment guidelines for each specific portfolio also limit investments in any corporate entity to no more than 5.0 percent of the market value of the account for both the internally and externally managed portfolios. The System has no investments in any commercial or industrial organization whose fair value equals 5.0 percent or more of the System's fiduciary net position.

Foreign Currency Risk

Primary Government

Foreign currency risk is the risk that changes in exchange rates will adversely impact the fair value of an investment. All primary government investments exposed to foreign currency risk were part of the System, the Virginia College Savings Plan's (Virginia529) Prepaid529 program (major enterprise fund), and the Unclaimed Property portfolios as of June 30, 2018. There is no investment policy related to foreign currency risk for the Unclaimed Property portfolio. Virginia529 has direct exposure to foreign currency risk through investments managed by Advent Capital Management, LLC, which uses currency forward contracts to hedge risks associated with currency fluctuations pursuant to a formal exception to Virginia529's investment policy.

The System's foreign currency risk exposures, or exchange rate risk, primarily exist in the international and global equity investment holdings. Exposure to foreign currency risk is highlighted in the following tables.

Component Units

All nonmajor component unit investments exposed to foreign currency risk were part of the College of William and Mary, James Madison University, and the Virginia Economic Development Partnership as of June 30, 2018. None of these entities have investment policies related to foreign currency risk.

Foreign Currency Exposures by Asset Class - Primary Government
(Excluding Pension and Other Employee Benefit Trust Funds)
(Dollars in Thousands)

Currency	Cash & Cash Equivalents	Equity	Private Equity	Corporate Bonds	Total
Euro Currency Unit	$ 434	$ 79	$ -	$ 20,053	$ 20,566
Japanese Yen	6	-	-	10,925	10,931
Hong Kong Dollar	1	4	-	7,408	7,413
Swiss Franc	-	31	-	5,448	5,479
U. S. Dollar	-	1,410	3,728	-	5,138
Chinese Yuan Renminbi	-	-	-	2,106	2,106
British Pound Sterling	449	33	-	706	1,188
Canadian Dollar	1	153	-	-	154
Malaysian Ringgit	-	7	-	-	7
Singapore Dollar	5	-	-	-	5
Total	$ 896	$ 1,717	$ 3,728	$ 46,646	$ 52,987

Foreign Currency Exposures by Asset Class
Primary Government - Virginia Retirement System
(Pension and Other Employee Benefit Trust Funds)
(Dollars in Thousands)

Currency	Cash and Short-term Investments	Equity	Fixed Income	Private Equity	Real Assets	International Funds	Forward Contracts	Total
U.S. Dollar	$ -	$ -	$ -	$ -	$ -	$ 1,817,893	$ -	$ 1,817,893
Euro Currency Unit	62,068	2,099,833	25,370	721,896	279,686	-	(1,756,078)	1,432,775
Japanese Yen	(10,402)	2,082,082	-	-	2,302	236,099	(1,138,268)	1,171,813
Hong Kong Dollar	9,429	1,020,197	-	-	2,461	-	(194,132)	837,955
Pound Sterling	53,884	1,247,406	1,005	-	108,897	-	(600,072)	811,120
Canadian Dollar	(51,817)	885,255	-	-	47,455	-	(245,654)	635,239
Australian Dollar	10,003	561,177	-	-	5,529	-	45,442	622,151
South Korean Won	3,080	436,275	-	-	-	-	(3,532)	435,823
Swiss Franc	21,051	553,007	1,142	-	-	-	(266,376)	308,824
Indian Rupee	5,303	230,177	4,869	-	-	-	(6,875)	233,474
New Taiwan Dollar	409	223,841	-	-	-	-	(5,327)	218,923
South African Rand	1,543	163,400	67,655	-	197	-	(21,565)	211,230
Brazil Real	1,262	154,253	85,021	-	2,901	-	(40,692)	202,745
Thailand Baht	289	93,893	21,521	-	-	-	22,563	138,266
Turkish Lira	263	83,422	17,106	-	-	-	28,798	129,589
Indonesian Rupiah	1,321	42,780	63,973	-	-	-	1,160	109,234
Mexican Peso	1,292	37,280	29,049	-	1,827	-	39,772	109,220
New Zealand Dollar	220	19,909	-	-	1,328	-	87,155	108,612
Polish Zloty	617	28,744	50,817	-	1,390	-	13,760	95,328
Malaysian Ringgit	1,698	48,930	38,146	-	-	-	(6,418)	82,356
Russian Ruble (New)	68	18,239	46,762	-	-	-	13,948	79,017
Czech Koruna	182	1,736	1,158	-	-	-	55,509	58,585
Colombian Peso	952	3,147	39,140	-	-	-	8,583	51,822
Danish Krone	1,779	116,916	-	-	2,595	-	(70,595)	50,695
Hungarian Forint	628	9,750	38,060	-	-	-	(12,191)	36,247
Chilean Peso	565	16,061	9,560	-	-	-	6,205	32,391
Egyptian Pound	16,455	5,978	-	-	-	-	8,427	30,860
Peruvian Nuevo Sol	44	103	31,886	-	-	-	(3,454)	28,579
Nigerian Naira	14,350	-	-	-	-	-	6,426	20,776
Israeli Shekel	115	36,825	25	-	1,838	-	(25,156)	13,647
Kazakhstan Tenge	-	-	7,217	-	-	-	2,578	9,795
Sri Lanka Rupee	-	-	5,987	-	-	-	-	5,987
UAE Dirham	113	5,996	-	-	-	-	(220)	5,889
Argentine Peso	2,373	-	5,424	-	-	-	(2,582)	5,215
Uruguayan Peso	-	-	3,968	-	-	-	-	3,968
Philippines Peso	148	8,256	-	-	-	-	(4,761)	3,643
Qatari Riyal	210	3,305	-	-	-	-	-	3,515
Dominican Republic Peso	-	-	3,032	-	-	-	-	3,032
Ghanaian Cedi	-	-	2,226	-	-	-	-	2,226
Moroccan Dirham	1	-	-	-	-	-	-	1
Romanian Leu	-	-	9,189	-	-	-	(9,682)	(493)
Saudi Arabian Riyal	-	-	-	-	-	-	(1,373)	(1,373)
Omani Rial	-	-	-	-	-	-	(1,384)	(1,384)
Chinese R Yuan HK	-	-	-	-	-	-	(14,282)	(14,282)
Chinese Yuan Renminbi	5	5,172	-	-	-	-	(46,367)	(41,190)
Singapore Dollar	2,111	176,908	-	-	-	-	(255,722)	(76,703)
Swedish Krona	921	202,068	-	-	1,432	-	(284,526)	(80,105)
Norwegian Krone	1,136	133,912	-	-	1,467	-	(222,619)	(86,104)
Total	$ 153,669	$ 10,756,233	$ 609,308	$ 721,896	$ 461,305	$ 2,053,992	$ (4,899,577)	$ 9,856,826

Foreign Currency Exposures by Asset Class - Component Units
(Dollars in Thousands)

Currency	Cash & Cash Equivalents	Total
British Pound Sterling	$ 1,123	$ 1,123
Euro Currency Unit	2,927	2,927
Chinese RMB	6	6
Total	$ 4,056	$ 4,056

Fair Value Measurements

Primary Government

GASB Statement No. 72, *Fair Value Measurement and Application*, requires disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. The fair value hierarchy is based on the valuation inputs used to measure the fair value of assets.

- Level 1 inputs are quoted prices in active markets for identical assets;
- Level 2 inputs are significant other observable inputs and may include quoted prices for similar assets in active markets, quoted prices for identical or similar assets in inactive markets, or model-driven valuations;
- Level 3 inputs are derived using valuation techniques that have significant unobservable inputs.

Investments that do not have a readily determinable fair value are excluded from the fair value hierarchy and instead are valued by using the net asset value (NAV) per share (or its equivalent). In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant in the valuation.

The following tables summarize recurring fair value measurements for the cash equivalents and investments reported by the primary government (excluding pension and other employee benefit trust funds) and the System (pension and other employee benefit trust funds) as of June 30, 2018.

Fair Value Measurements - Primary Government
(Excluding Pension and Other Employee Benefit Trust Funds)
(Dollars in Thousands)

	Fair Value	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fair Value Measured Using Fair Value Hierarchy				
Debt Securities (1)				
U. S. Treasury and Agency Securities	$ 753,870	$ 706,630	$ 47,240	$ -
Corporate Bonds and Notes	1,085,231	49,309	1,035,922	-
Supranational and Non-U.S. Government Bonds and Notes	149,804	-	149,804	-
Commercial Paper	1,877,416	59,842	1,817,574	-
Negotiable Certificates of Deposit	2,209,293	10,033	2,199,260	-
Municipal Securities	17,338	3,029	14,309	-
Asset Backed Securities	237,112	259	236,853	-
Agency Mortgage Backed Securities	259,512	42,149	217,363	-
Agency Unsecured Bonds and Notes	1,563,079	48,952	1,514,127	-
Mutual and Money Market Funds (Includes SNAP)	301,747	301,747	-	-
Fixed Income and Commingled Funds	772,569	772,569	-	-
Investments held by broker-dealers under securities loans				
U. S. Government and Agency Securities	202	202	-	-
Corporate Bonds and Notes	1,285	1,285	-	-
Other Debt Securities	113,352	-	113,352	-
Total Debt Securities	9,341,810	1,996,006	7,345,804	-
Equity Securities (2)				
Common and Preferred Stocks	573,699	568,299	5,399	1
Foreign Currencies	307	307	-	-
Equity Index and Pooled Funds	97,603	97,603	-	-
Index Funds	1,778,698	1,778,698	-	-
Real Estate	8,547	977	-	7,570
International and Emerging Markets Funds	844,809	844,809	-	-
Other Equity Securities	51,767	51,767	-	-
Total Equity Securities	3,355,430	3,342,460	5,399	7,571
Total by Fair Value Level	$ 12,697,240	$ 5,338,466	$ 7,351,203	$ 7,571
Total Fair Value Established Using the Net Asset Value (NAV) (3)	1,001,435			
Total Fair Value	$ 13,698,675			

(1) Debt securities are classified as follows:

- Level 1 - valued using unadjusted quoted prices in active markets for those securities.
- Level 2 - valued using a matrix pricing model and observable prices using dealer quotes for similar securities traded in active markets.

(2) Equity securities are classified as follows:

- Level 1 - valued using unadjusted quoted prices in active markets for those securities.
- Level 2 - valued using dealer quotes for similar securities traded in active markets.
- Level 3 - valued using independent appraisals.

(3) Investments reported at fair value established using the NAV were all part of the Virginia College Savings Plan's (Virginia529) Prepaid529 and Invest529 programs. The following tables (dollars in thousands) summarizes Prepaid529 and Invest529's investments measured at the NAV and related disclosures as of June 30, 2018. Additional information is available in the Virginia529 individually published financial statements, which may be obtained at www.virginia529.com.

Description of Prepaid529 Investments Measured at the NAV:

Investments Measured at NAV	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Hedge Funds				
Blackstone - Hedge Fund of Funds	$ 134,547	$ -	Semi-Annual	95 Days
Aurora - Hedge Fund of Funds	183	-	Quarterly	95 Days
Equity Real Estate				
UBS Realty Investors	63,594	-	Quarterly	60 Days
Private Debt & Private Equity Funds of Funds				
Golub Capital	10,500	24,500		
Private Advisors	37,154	14,693		
Adams Street Partners	116,165	88,148		
LGT Capital Partners	2,055	8,340		
Neuberger Berman	15,195	15,000		
Aether Investment Partners	23,571	12,949		
Common fund	18,132	3,790		
Horseley Bridge Partners	-	20,000		
Common Trust Funds & Other				
Wellington Management	178,882	-	Monthly	10 Days
State Street Global Advisors	137,323	-	Daily	2 Days
Ferox Capital	76,512	-	Daily	2 Days
Black Rock	82,747	-	Daily	3 Days
Total Investments Measured at the NAV	$ 896,560			

- **Hedge Funds** – This investment type includes two hedge funds. The Aurora Offshore Fund Ltd. II and Blackstone Partners Offshore Fund are diversified, multi-strategy hedge funds of funds. Underlying investment strategies include a range of asset classes and the funds are not restricted from participating in any market, strategy or investment. The Aurora Offshore Fund Ltd. II is liquidating and accordingly no redemptions may currently be initiated by investors. The remainder of this investment is expected to be returned in fiscal year 2019. The fair value of investments in this type has been determined using the NAV per share of the investments.

- **Equity Real Estate** – This investment type includes one limited partnership. The UBS Trumbull Property Fund's investment strategy is to invest primarily through direct equity-owned real estate assets. The fund also has flexibility to invest in joint venture and debt investments. Investments are generally acquired on an all-cash basis, however debt may be used where UBS determines leverage is prudent and is expected to enhance total return without undue risk. The fair values of investments in this type have been determined using the NAV per share of Virginia529's ownership of the partnership.

- **Private Debt and Private Equity Funds of Funds** – This investment type includes private equity funds of funds managed by seven managers and one private debt fund. These investments cannot be redeemed from the fund. Capital is generally expected to be called during the initial 4 to 5 years and is expected to be returned through liquidations of underlying fund investments during the 3rd through 15th years. Secondaries funds of funds may have an accelerated capital call and return of capital profile. Virginia529 invests in multiple funds with three of its private equity investment managers and is also diversified by vintage year with respect to these investments. The fair values of investments in this type have been determined using the March 31, 2018 NAV of Virginia529's ownership of the partnership, adjusted for cash flows (capital calls) through June 30, 2018.

- **Common Trust Funds & Other** – This investment type includes three common trust funds. The fair value of investments in this type have been determined using the NAV per share of the investments.

Description of Invest529 Investments Measured at the NAV:

Investments Measured at NAV	Fair Value	Unfunded Commitments	Redemption Frequency (if Currently Eligible)	Redemption Notice Period
Equity Real Estate				
UBS Realty Investors	$ 66,080	$ -	Quarterly	60 Days
Blackstone Property Partners	38,795	-	Quarterly	90 Days
Total Investments Measured at the NAV	$ 104,875			

Continued on next page

- **Equity Real Estate** – This investment type includes two limited partnerships. The UBS Trumbull Property Fund's investment strategy is to invest primarily through direct equity-owned real estate assets. The fund also has flexibility to invest in joint venture and debt investments. Investments are generally acquired on an all-cash basis, however debt may be used where UBS determines leverage is prudent and is expected to enhance total return without undue risk. Blackstone Property Partners is an open ended commingled fund seeking core plus real estate investments in the U.S. and Canada. The fair values of investments in this type have been determined using the NAV per share of Virginia529's ownership of the partnership.

Fair Value Measurements
Primary Government - Virginia Retirement System
(Pension and Other Employee Benefit Trust Funds)
(Dollars in Thousands)

	Fair Value	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fair Value Measured Using Fair Value Hierarchy				
Debt Securities (1)				
U. S. Treasury and Agency Securities	$ 3,730,671	$ 3,081,452	$ 649,219	$ -
Corporate Bonds and Notes	6,995,552	-	6,995,552	-
Collateralized Mortgage Obligations	228,178	-	228,178	-
Commercial Mortgages	335,022	-	335,022	-
Supranational and Non-U.S. Government Bonds and Notes	2,096,385	-	2,096,385	-
Mutual and Money Market Funds	165,340	165,340	-	-
Negotiable Certificates of Deposit	95,574	-	95,574	-
Municipal Securities	128,429	-	128,429	-
Asset Backed Securities	686,942	-	686,942	-
Agencies	3,704,692	-	3,704,692	-
Fixed Income and Commingled Funds	20,850	-	-	20,850
Fixed Income Derivatives	2,664	(99)	2,763	-
Total Debt Securities	18,190,299	3,246,693	14,922,756	20,850
Equity Securities (2)				
Common and Preferred Stocks	24,477,607	24,392,830	83,305	1,472
Equity Index and Pooled Funds	1,469,928	-	-	1,469,928
Real Assets	2,487,817	-	-	2,487,817
Equity Futures and Swaps	(25,342)	(25,336)	(6)	-
Private Equity	910,041	-	-	910,041
Total Equity Securities	29,320,051	24,367,494	83,299	4,869,258
Total by Fair Value Level	47,510,350	$ 27,614,187	$ 15,006,055	$ 4,890,108
Total Fair Value Established Using the Net Asset Value (NAV) (3)	29,480,767			
Total Fair Value	$ 76,991,117			

(1) Debt securities are classified as follows:

- Level 1 - valued using unadjusted quoted prices in active markets for those securities.
- Level 2 - valued using a proprietary matrix pricing technique. This pricing technique defines a primary source and secondary sources to be used if the primary pricing source does not provide a value. Typically, these securities are valued using bid evaluations. The valuation techniques may include market participants' assumptions, quoted prices for similar assets, benchmark yield curves, market corroborated inputs, and other data inputs.
- Level 3 - valued using proprietary information.

(2) Equity securities are classified as follows:

- Level 1 - valued using unadjusted quoted prices in active markets for those securities.
- Level 2 - valued using quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; or model-driven valuations in which all significant inputs are observable.
- Level 3 - valued using proprietary information. When observable inputs are not available, this results in using one or more valuation techniques, such as the market approach and/or the income approach, for which sufficient and reliable data is available. Within this level, the use of the market approach generally consists of using comparable market transactions or other data, while the use of the income approach generally consists of the net present value of estimated future cash flows.

(3) The following table (dollars in thousands) summarizes the System's investments measured at the NAV per share (or its equivalent) and related disclosures as of June 30, 2018. It excludes $344,777 (dollars in thousands) related to Defined Contribution Plan investments for which the System has limited administrative and investment responsibility. Additional information is available in the System's separately issued financial statements, which may be obtained at www.varetire.org.

Description of Investments Measured at the NAV:

	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Hedge funds				
Equity long/short funds	$ 3,963,193	$ -	Monthly, quarterly, semi-annually, annually	30-90 days
Equity long only funds	684,696	49,200	Annually	90 days
Credit funds	910,027	-	Annually	45-90 days
Multi-strategy funds	1,628,405	-	Monthly, semi-annually	30-90 days
Total hedge funds	7,186,321	49,200		
Credit strategies funds				
Bank loan and direct lending funds	2,078,984	1,399,943		
Distressed debt funds	418,269	298,357		
Mezzanine debt funds	410,979	446,490		
Multi-strategy funds	720,251	1,360,522		
Opportunistic funds	1,262,249	191,578		
Total credit strategies funds	4,890,732	3,696,890		
Private equity funds				
Buyout funds	3,761,346	2,136,286		
Energy funds	702,232	356,477		
Growth funds	741,544	361,424		
International buyout funds	508,764	271,049		
Special situations funds	854,269	840,765		
Subordinated debt funds	52,410	55,783		
Turnaround funds	428,041	210,111		
Venture capital funds	69,918	11,019		
Total private equity funds	7,118,524	4,242,914		
Equity international commingled funds	1,701,323			
Fixed income mutual and commingled funds	1,339,359			
Real estate and real asset funds				
Infrastructure funds	1,169,840	310,684		
Natural resources funds	595,604	100,070		
Private investment real estate funds	4,789,972	760,887		
Private real estate investment trusts	198,888	-		
Total real estate and real asset funds	6,754,304	1,171,641		
U. S. Equity commingled funds	145,427			
Total investments measured at the NAV	$ 29,135,990	$ 9,160,645		

- **Equity Long/Short Hedge Funds** – This type included investments in ten hedge funds as of June 30, 2018, which invest in global long and short equity positions. Management of each hedge fund has the ability to invest from value to growth strategies, from small to large capitalization stocks and may vary net exposure considerably. The fair values of the investments in this type have been determined using the NAV per share of the investments. Investments representing approximately 57.0 percent of the value of the investments in this type of fund cannot be redeemed because the investments include restrictions that do not allow redemption in the first 12 to 60 months after acquisition. The restriction period for the remaining investments ranged from 1 to 11 months as of June 30, 2018.

- **Equity Long-Only Hedge Funds** – This type included an investment in one hedge fund as of June 30, 2018, which invests in global long-only equity positions. This hedge fund is generally fully invested and only very occasionally may take short positions for hedging purposes. The fair value of the investment in this type has been determined using the NAV per share of the investments. Investments representing approximately 83.0 percent of the value of the investments in this type of fund cannot be redeemed because the investments include restrictions that do not allow redemption in the first 12 to 60 months after acquisition. The remaining restriction period for these investments was less than 12 months as of June 30, 2018.

- **Credit Hedge Funds** – This type included investments in two hedge funds as of June 30, 2018, which invest in event-driven, distressed and special situation credit opportunities. The fair values of the investments in this type have been determined using the NAV per share of the investments. Investments representing approximately 36.0 percent of the value of the investments in this type of fund cannot be redeemed because the investments include restrictions that do not allow redemptions in the first 12 to 24 months after acquisition. The remaining restriction period for these investments was less than 12 months as of June 30, 2018.

- **Multi-Strategy Hedge Funds** – This type included investments in five hedge funds as of June 30, 2018, which invest in multiple asset classes, combining exposure to balance risks. Such exposure can include traditional and alternative investments. The fair values of the investments in this type have been determined using the NAV per share of the investments. Investments representing approximately 42.0 percent of the value of the investments in this type of fund cannot be redeemed because the investments include restrictions that do not allow redemption in the first 60 months after acquisition. The remaining restriction period for these investments was 1 to 12 months as of June 30, 2018.

Continued on next page

- **Credit Strategies Funds** – This type consists of many fund categories, including bank loan and direct lending funds, distressed debt funds, mezzanine debt funds, multi-strategy funds, and opportunistic funds. The fair values of the investments in these funds have been determined using the NAV per share of the investments. The nature of the investments in this type is that distributions are received through the liquidation of the underlying assets in the fund. If these investments were held, it is expected that the underlying assets in the fund would be liquidated over 3 to 5 years.
- **Private Equity Funds** – This type consists of many fund categories including Venture Capital, Buyout, Subordinated Debt, Growth Capital, Turnaround, Energy and Special Situations. The fair values of the investments in these funds have been determined using the NAV per share of the investments. The nature of the investments involves receiving distributions through liquidation of the underlying fund assets. It is expected that hold periods for the underlying fund assets will range from 3 to 8 years.
- **Equity International Commingled Funds** – This type includes investments in ten institutional investment funds as of June 30, 2018, which invest in international equities. These funds employ a variety of investment strategies in global developed and emerging markets. The fair values of the investments in these funds have been determined using the NAV per share of the investments. Redemptions can be made from these funds, given the appropriate notice, any regular trading day on the NYSE.
- **Fixed Income Mutual and Commingled Funds** – This type consists of nine institutional investment funds that invest in U.S. and multi-national fixed income markets. The fair values of the investments in these funds have been determined using the NAV per share of the investments.
- **Real Assets** – This type includes investments in many fund categories including Private Investment Real Estate, Real Estate Investment Trusts, Infrastructure and Natural Resources. The fair values of the investments in these funds have been determined using the NAV per share of the investments. The nature of the investments in this type is that distributions are received through the liquidation of the underlying assets in the fund. If these investments were held, it is expected that the underlying assets of the funds would be liquidated over 1 to 14 years.

Component Units

The following table summarizes fair value measurements for the cash equivalents and investments reported by the component units as of June 30, 2018. The table excludes cash equivalents and investments measured at fair value by the foundations that follow FASB standards.

Fair Value Measurements - Component Units
(Dollars in Thousands)

	Fair Value	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fair Value Measured Using Fair Value Hierarchy				
Debt Securities (1)				
U. S. Treasury and Agency Securities	$ 756,848	$ 288,850	$ 467,998	$ -
Corporate Bonds and Notes	568,264	14,338	553,926	-
Supranational and Non-U.S. Government Bonds and Notes	9,215	-	9,215	-
Commercial Paper	59,168	-	59,168	-
Negotiable Certificates of Deposit	54,210	-	54,210	-
Repurchase Agreements	34,357	-	34,357	-
Municipal Securities	203,602	280	203,322	-
Asset-Backed Securities	264,918	-	264,918	-
Agency Mortgage-Backed Securities	733,457	407	733,050	-
Agency Unsecured Bonds and Notes	190,073	-	190,073	-
Mutual and Money Market Funds	100,778	88,769	12,009	-
Fixed Income and Commingled Funds	35,329	35,329	-	-
Other	61,581	61,490	91	-
Total Debt Securities	3,071,800	489,463	2,582,337	-
Equity Securities (2)				
Common and Preferred Stocks	49,139	49,139	-	-
Equity Index and Pooled Funds	234,953	234,953	-	-
Index Funds	9,694	9,694	-	-
Real Estate	2,193	2,160	-	33
Other	29,014	27,990	1,013	11
Total Equity Securities	324,993	323,936	1,013	44
Total by Fair Value Level	3,396,793	$ 813,399	$ 2,583,350	$ 44
Fair Value Established Using the Net Asset Value (NAV) (3)				
Fixed Income and Commingled Funds	78,496			
Other Debt Securities	20,189			
Equity Index and Pooled Funds	109,751			
Index Funds	6,393			
Real Estate	20,834			
Other Equity Securities	956,003			
Total Fair Value Established Using the NAV	1,191,666			
Total Fair Value	$ 4,588,459			

(1) Debt securities are classified as follows:

- Level 1 - valued using unadjusted quoted prices in active markets for those securities.
- Level 2 - valued based on quoted prices for similar securities in active markets or quoted prices for identical or similar securities in markets that are not active.

(2) Equity securities are classified as follows:

- Level 1 - valued using unadjusted quoted prices in active markets for those securities.
- Level 2 - valued using significant other observable inputs.
- Level 3 - valued using unobservable inputs and may include assumptions of management.

(3) The following nonmajor component units reported investments at fair value established using the NAV: Old Dominion University, Virginia Commonwealth University (VCU), Virginia Commonwealth University Health System Authority (blended component unit of VCU), College of William and Mary, Virginia Military Institute, Virginia State University, Virginia Biotechnology Research Partnership Authority, Virginia Outdoors Foundation, and Virginia Polytechnic Institute and State University. Additional information is available in the separately issued financial statements.

Securities Lending

The State Treasury's securities lending program is managed by Deutsche Bank AG, New York (Deutsche Bank), under a contract dated March 28, 2014. The enabling legislation for the securities lending program is Section 2.2-4506 of the *Code of Virginia*. No violations of legal or contractual provisions were noted during the year. The general account participated in a securities lending program for 5 months of the fiscal year.

In February 2018, the Department of the Treasury reinstated participation in the securities lending program for both the Commonwealth's General Account and for the Lottery account. Current market conditions have increased the demand for Treasury's lendable assets and widening margins on reinvesting cash collateral have resulted in increased earnings for the program.

All securities lending loans are on an open-ended or one-day basis and may be terminated by the State Treasury with a 24-hour notice or are term loans with the right of substitution. While all securities may be recalled on a daily basis, securities are often on loan for much longer periods. Generally cash reinvestments security maturities do not match the maturities of loans. Per the contract with Deutsche Bank, all cash collateral reinvestment securities attributable to loans made on the Commonwealth's behalf shall be maintained by Deutsche Bank, and the State Treasury cannot pledge or sell such collateral absent a default.

The State Treasury's contract with Deutsche Bank provides for loss indemnification against insolvency default with respect to lending transactions and in the case of reverse transactions (Repurchase Agreements) as defined in the applicable Agency Securities Lending and Repurchase Agreement. In March, 2018 Deutsche Bank announced it put in place a custom insurance solution written by a (AA-rated by S&P) specialty casualty insurer that backstops Deutsche Bank's indemnification obligation. Additionally, Deutsche Bank AG is liable for any losses experienced from reinvestment of cash collateral in investments not authorized by the provisions of the investment guidelines for the Commonwealth of Virginia agreed upon by both parties and made a part of the Agency Securities Lending and Repurchase Agreement. There were no realized losses resulting from default during this reporting period.

When securities are loaned, the collateral received is at least 100.0 percent of fair value of the securities loaned and must be maintained at 100.0 percent or greater. There are no stated restrictions on the amount of securities that may be loaned, but the basic composition of the general account portfolio effectively restricts the maximum percentage of the portfolio that may be loaned. Between February, 2018 and June 30, 2018, approximately 7.1 percent of the general account securities were on loan.

During the past year, a combination of U.S. Treasury, agency, agency mortgage and corporate securities have been loaned, with the majority of the loaned securities being U.S. Treasury and agency securities. As of June 30, 2018, all collateral received was in the form of cash.

Securities loaned for the State Treasurer's cash collateral reinvestment pool, which consisted of 91.3 percent general account funds and 8.7 percent Virginia Lottery funds as of June 30, 2018, had a carrying value of $532.0 million and a fair value of $548.0 million. The fair value of the collateral received was $559.0 million providing for coverage of 101.9 percent. At year-end, the State Treasury's securities lending program had no credit risk exposure to borrowers because the amounts it owed the borrowers exceeded the amounts the borrowers owed Treasury's securities lending program. All securities are marked to market daily. The carrying value of the cash collateral reinvestment pool received was $559.0 million and the cost of the investments purchased with the cash collateral was $559.0 million. As of June 30, 2018, the State Treasurer's cash collateral reinvestment pool had an unrealized gain of $412,000, and is recorded in the General Fund as stated in Note 1.FF. This amount is included in the total State Treasurer's Portfolio discussed earlier in this note.

Cash collateral reinvestment guidelines were amended effective April 16, 2014. Approved investment instruments include Indemnified Repurchase Agreements marked to market daily and preapproved Government Money Market Funds. Term repurchase agreements are limited to 93 days. As of June 30, 2018, 100.0 percent of cash collateral reinvestments were in indemnified repurchase agreements.

As of June 30, 2018, the cash collateral reinvestment portfolio had a weighted average maturity to reset date of one day. Using the expected maturity date, the weighted average maturity was twenty-nine days and using the final maturity date, which assumes no pay downs on any asset-backed or mortgage-backed securities, the weighted average maturity was twenty-nine days.

As of June 30, 2018 the cash collateral reinvestment portfolio was in compliance with the State Treasury's current cash collateral reinvestment guidelines. During the fiscal year, Treasury received a reserve distribution for a security that was out of compliance and sold on May 27, 2010 due to security ratings downgrades and the adoption of more restrictive reinvestment guidelines in 2014.

Under authorization of the Board, the System lends its fixed income and equity securities to various broker-dealers on a temporary basis. This program is administered through an agreement with the System's custodial agent bank. All security loan agreements are collateralized by cash, securities, or an irrevocable letter of credit issued by a major bank, and have a fair value equal to at least 102.0 percent of the fair value for domestic securities and 105.0 percent for international securities. Securities received as collateral cannot be pledged or sold by the System unless the borrower defaults. Contracts require the lending agents to indemnify the System if the borrowers fail to return the securities lent and related distributions and if the collateral is inadequate to replace the securities lent. All securities loans can be terminated on demand by either the System or the borrowers. The majority of loans are open loans, meaning the rebate is set daily. This results in a maturity of one or two days on average, although securities are often on loan for longer periods. The maturity of loans generally does not match the maturity of collateral investments, which averages 18 days. At year-end, the System had no credit risk exposure to borrowers because the amounts it owes the borrowers exceeded the amounts the borrowers owe the System. All securities are marked to market daily and carried at fair value. The fair value of securities on loan as of June 30, 2018, was $8.2 billion. The June 30, 2018, balance was composed of U.S. Government and agency securities of $2.6 billion, corporate and other bonds of $1.1 billion, common and preferred stocks of $4.5 billion and supranational and non-U.S. government bonds of $68.2 million. The value of collateral (cash and non-cash) as of June 30, 2018, was $8.8 billion.

As of June 30, 2018, the invested cash collateral had a cost of $4.5 billion and was composed of time deposits of $13.8 million, floating rate notes of $3.0 billion, and repurchase agreements of $1.5 billion.

8. RECEIVABLES

The following schedule (dollars in thousands) details the accounts, loans, local school bonds, interest, taxes, prepaid tuition contributions, security transactions, and other receivables presented in the major funds, aggregated nonmajor funds by type, internal service funds, fiduciary funds, major component units, and aggregated nonmajor component units, as of June 30, 2018.

	Accounts Receivable	Loans / Mortgage Receivable	Local School Bonds Receivable	Interest Receivable	Taxes Receivable
Primary Government:					
General	$ 1,216,525	$ 231	$ -	$ 409,387	$ 1,933,458
Major Special Revenue Funds:					
Commonwealth Transportation (1)	131,200	183,337	-	-	213,065
Federal Trust	1,100,107	1,231	-	-	-
Literary	286,260	96,554	-	43,796	-
Nonmajor Governmental Funds (1)	146,955	3,833	-	17,107	7,110
Major Enterprise Funds:					
Virginia Lottery	69,084	-	-	-	-
Virginia College Savings Plan	11,911	-	-	7,053	-
Unemployment Compensation	99,862	-	-	-	-
Nonmajor Enterprise Funds	54,363	-	-	-	-
Internal Service Funds	23,058	-	-	-	-
Private Purpose Trust Funds	328	-	-	4,411	-
Pension and Other Employee Benefit Trust Funds (2)	250,487	-	-	257,942	-
Investment Trust Fund	-	-	-	5,125	-
Agency Funds	626	-	-	-	116,509
Total Primary Government (3)	$ 3,390,766	$ 285,186	$ -	$ 744,821	$ 2,270,142
Discrete Component Units:					
Virginia Housing Development Authority (4)	$ -	$ 5,694,418	$ -	$ 27,081	$ -
Virginia Public School Authority (5)	-	-	3,371,725	61,480	-
Virginia Resources Authority	-	4,403,174	-	29,601	-
Virginia College Building Authority	-	-	-	22,439	-
Nonmajor Component Units (6)	1,886,922	158,846	-	6,978	7,001
Total Component Units	$ 1,886,922	$ 10,256,438	$ 3,371,725	$ 147,579	$ 7,001

Note (1): The loans receivable in the Commonwealth Transportation Fund includes $154.9 million from the Virginia Infrastructure Bank as discussed in Note 21.D. In the nonmajor governmental funds, it represents the amounts to be received for current debt service requirements. The amount to be received for long-term debt service requirements of $70.1 million is included in the government-wide statements but excluded from the above amounts.

Note (2): In the Pension and Other Employee Benefit Trust Funds, Interest Receivable of $257,942 (dollars in thousands) also includes dividends receivable. Additionally, Other Receivables of $108,583 (dollars in thousands) are made up of $98,596 (dollars in thousands) in pending investment transactions, which includes $5,678 (dollars in thousands) in futures margins receivable, $89,886 (dollars in thousands) in futures contracts receivable, and $3,032 (dollars in thousands) in securities lending; and $9,987 (dollars in thousands) in other receivables related to benefit plans.

Note (3): Fiduciary net receivables in the amount of $1,876,466 (dollars in thousands) are not included in the Government-wide Statement of Net Position.

Note (4): The Virginia Housing Development Authority (major component unit) reports $5,563,348 (dollars in thousands) as Restricted Loans Receivable, $24,539 (dollars in thousands) as Restricted Interest Receivable, and $67,389 as Restricted Other Receivables.

Note (5): The Virginia Public School Authority (major component unit) reports $3,371,725 (dollars in thousands) as Local School Bonds Receivable. This amount will be used to repay the Authority's bonds.

Note (6): Other Receivables of the nonmajor component units are primarily comprised of pledges receivable of $21,094 (dollars in thousands) reported by the University of Virginia; sponsors accounts receivable of $31,388 (dollars in thousands) reported by Virginia Commonwealth University; premium receivables of $119,022 (dollars in thousands) and third-party settlements and non-patient receivables of $50,300 (dollars in thousands) reported by Virginia Commonwealth University Health System Authority (blended component unit of Virginia Commonwealth University), and $55,377 (dollars in thousands) reported by foundations of the higher education institutions representing FASB reporting entities defined in Note 1.B.; and $19,024 (dollars in thousands) reported by the Virginia Biotechnology Research Partnership Authority.

Prepaid Tuition Contributions Receivable	Security Transactions	Other Receivables	Allowance for Doubtful Accounts	Net Accounts Receivable	Amounts to be Collected Greater than One Year
$ -	$ -	$ -	$ (1,592,718)	$ 1,966,883	$ 461,660
-	-	-	(36,857)	490,745	190,820
-	-	-	(4,103)	1,097,235	11,474
-	-	-	(294,827)	131,783	83,546
-	-	165	(90,793)	84,377	1,122
-	-	-	-	69,084	-
194,223	-	14,975	-	228,162	146,568
-	-	-	(13,582)	86,280	-
-	-	48	(1,569)	52,842	-
-	-	-	(698)	22,360	-
-	-	832	-	5,571	-
-	1,185,602	108,583	-	1,802,614	-
-	-	-	-	5,125	-
-	-	-	(53,979)	63,156	9,572
$ 194,223	$ 1,185,602	$ 124,603	$ (2,089,126)	$ 6,106,217	$ 904,762
$ -	$ -	$ 18,803	$ -	$ 5,740,302	$ 5,373,751
-	-	-	-	3,433,205	-
-	-	1,244	(539)	4,433,480	4,147,165
-	-	-	-	22,439	-
-	-	377,592	(891,939)	1,545,400	227,230
$ -	$ -	$ 397,639	$ (892,478)	$ 15,174,826	$ 9,748,146

9. CONTRIBUTIONS RECEIVABLE, NET

The following schedule details the contributions receivable for foundations[1] included with the nonmajor component units, as of June 30, 2018. The major component units reported no contributions receivable for fiscal year 2018.

(Dollars in Thousands)

	Due in Less Than One Year	Due Between One and Five Years	Due in More Than Five Years	Subtotal	Present Value Discount (2)	Allowance for Doubtful Accounts	Contributions Receivable, Net
Discrete Component Units:							
Nonmajor Component Units	$ 166,621	$ 252,162	$ 68,711	$ 487,494	$ (33,561)	$ (23,697)	$ 430,236
Total Component Units	$ 166,621	$ 252,162	$ 68,711	$ 487,494	$ (33,561)	$ (23,697)	$ 430,236

Note (1): Foundations represent FASB reporting entities defined in Note 1.B.
Note (2): The discount rate used to determine present value ranges from 0.1 percent to 7.0 percent.

10. INTERFUND AND INTER-ENTITY ASSETS / LIABILITIES

Due from/to Other Funds

Due from Other Funds are amounts to be received from one fund by another fund for goods sold or services rendered. Due to Other Funds are amounts owed by one fund to another fund for goods purchased or services obtained.

The following line items are included in the category "Due from Other Funds":

- Due from Other Funds
- Due from Internal Parties (Governmental Funds and Business-type Activities)
- Due from External Parties (Fiduciary Funds)

The following line items are included in the category "Due to Other Funds":

- Due to Other Funds
- Due to Internal Parties (Governmental Funds and Business-type Activities)
- Due to External Parties (Fiduciary Funds)

The following schedule shows the Due from/to Other Funds as of June 30, 2018.

Schedule of Due from/to Other Funds

June 30, 2018

(Dollars in Thousands)

Due From	Amount	Due To	Amount
Primary Government		**Primary Government**	
General Fund	$ 25,254	Major Special Revenue Funds:	
		Federal Trust	$ 678
		Major Enterprise Funds:	
		Virginia Lottery	9,563
		Nonmajor Enterprise Funds	13,837
		Internal Service Funds	1,176
Major Special Revenue Funds:			
Commonwealth Transportation	26,841	Nonmajor Governmental Funds	26,841
Federal Trust	50	General Fund	16
		Major Enterprise Funds:	
		Unemployment Compensation	34
Literary	7,010	Major Enterprise Funds:	
		Virginia Lottery	7,010
Nonmajor Governmental Funds	31,503	Major Special Revenue Funds:	
		Commonwealth Transportation	28,192
		Federal Trust	2,475
		Major Enterprise Funds:	
		Unemployment Compensation	117
		Nonmajor Enterprise Funds	692
		Internal Service Funds	27
Major Enterprise Funds:			
Unemployment Compensation	949	General Fund	640
		Major Special Revenue Funds:	
		Commonwealth Transportation	34
		Federal Trust	218
		Nonmajor Governmental Funds	33
		Nonmajor Enterprise Funds	21
		Internal Service Funds	3
Nonmajor Enterprise Funds	776	General Fund	169
		Major Special Revenue Funds:	
		Commonwealth Transportation	351
		Federal Trust	99
		Nonmajor Governmental Funds	141
		Nonmajor Enterprise Funds	16
Internal Service Funds	58,286	General Fund	32,739
		Major Special Revenue Funds:	
		Commonwealth Transportation	9,939
		Federal Trust	7,315
		Nonmajor Governmental Funds	5,007
		Major Enterprise Funds:	
		Virginia Lottery	197
		Virginia College Savings Plan	104
		Nonmajor Enterprise Funds	2,361
		Internal Service Funds	624
Pension and Other Employee Benefit Trust Funds	3,904	Private Purpose Trust Funds	1
		Pension and Other Employee Benefit Trust	3,903
Total Primary Government	$ 154,573	Total Primary Government	$ 154,573

Schedule of Due from/to Internal/External Parties
June 30, 2018

(Dollars in Thousands)

Due From	Amount	Due To	Amount
Primary Government		**Primary Government**	
General Fund	$ 16	Investment Trust Fund	$ 16
Major Special Revenue Funds:			
Federal Trust	21,076	Pension and Other Employee Benefit Trust	21,076
Nonmajor Governmental Funds	39,479	Agency Funds	163
		Pension and Other Employee Benefit Trust Funds	39,316
Internal Service Funds	232	Pension and Other Employee Benefit Trust Funds	232
Pension and Other Employee Benefit Trust Funds	31,964	General Fund	19,730
		Major Special Revenue Funds:	
		Commonwealth Transportation	5,398
		Federal Trust	2,649
		Nonmajor Governmental Funds	2,752
		Major Enterprise Funds:	
		Virginia Lottery	189
		Virginia College Savings Plan	79
		Nonmajor Enterprise Funds	712
		Internal Service Funds	455
Agency	16,732	General Fund	12,390
		Major Special Revenue Funds:	
		Commonwealth Transportation	4,342
Total Primary Government	$ 109,499	Total Primary Government	$ 109,499

Interfund Receivables/Payables

Interfund Receivables/Payables are loans made by one fund to another.

The following schedule shows the Interfund Receivables/Payables for the primary government as of June 30, 2018. There were no Interfund Receivables/Payables for the component units as of June 30, 2018.

Interfund Receivables/Payables
June 30, 2018

(Dollars in Thousands)

Receivable From:	Amount	Payable To:	Amount
Primary Government		**Primary Government**	
Nonmajor Governmental Funds	$ 214,426	General Fund	$ 6,892
		Major Special Revenue Funds:	
		Commonwealth Transportation	3,400
		Federal Trust	27,480
		Nonmajor Enterprise Funds	40,535
		Internal Service Funds	136,119
Total Primary Government	$ 214,426	Total Primary Government	$ 214,426

Due from/to Primary Government and Component Units

Included in this category is activity between the Commonwealth and its component units, as well as activity between component units.

A due from primary government amount that is due from the Federal Trust Fund (major special revenue) to the Virginia College Building Authority (major component unit) of $3.6 million is for interest on Build America Bonds (BABs).

A $10.2 million due from primary government amount that is due from the General Fund (major governmental) to the higher education institutions (nonmajor component units) is for payments awaiting disbursements of $262,399 in the fund financial statements and for appropriations available for capital projects and other programs of $9.9 million in the government-wide financial statements.

An $81,659 due from primary government amount represents an amount due from a nonmajor governmental fund related to the Department of the Treasury's reimbursement programs to George Mason University and the Virginia Community College System (nonmajor component units).

A due from primary government amount that is due from the Virginia Public Building Authority (capital projects fund) to the Virginia Port Authority (nonmajor component unit) of $17.8 million represents bond revenue to be used for capital projects.

A $31.2 million due from component units in the Health Care Fund (internal service fund) represents amounts due from the nonmajor component units.

An $840,961 due from component units represents monies owed for administrative and project expenses from the Science Museum of Virginia Foundation (nonmajor component unit) to a nonmajor governmental fund. The entire nonmajor governmental amount is reported in the government-wide financial statements.

The $101.2 million due from component units amount represents amounts due from the Virginia College Building Authority (major component unit) for the Department of the Treasury's reimbursement programs to higher education institutions (nonmajor component units). There is a due to component units of $3.1 million from a foundation of Old Dominion University (nonmajor component unit) to the Virginia Commercial Space Flight Authority (nonmajor component unit).

Due from/to Component Units and Fiduciary Funds

A $37.0 million due from component units in the Pension and Other Employee Benefit Trust Funds (fiduciary funds) represents amounts due from nonmajor component units.

Loans Receivable/Payable Between Primary Government and Component Units

The College of William and Mary (nonmajor component unit) and Norfolk State University (nonmajor component unit) loans of $3.7 million and $2.6 million, respectively, were used to fund a capital project until bonds were issued. George Mason University (nonmajor component unit) and the Virginia Community College System (nonmajor component unit) loans of $12.5 million and $4.0 million, respectively, were used to primarily advance fund federally-funded programs. These amounts are due to a nonmajor governmental fund.

The $196.3 million in loans receivable from primary government represents loans from the Virginia Public School Authority (VPSA) (major component unit) to the Literary Special Revenue Fund (major governmental fund). The VPSA makes grants to local school divisions to finance the purchase of educational technology and security equipment. The VPSA makes these grants using the proceeds of notes issued for that purpose, which will be repaid from appropriations to be made by the Virginia General Assembly from the Literary Special Revenue Fund (major governmental fund).

11. OTHER ASSETS

The following table summarizes Other Assets as of June 30, 2018.

(Dollars in Thousands)

	Cash and Travel Advances	Net OPEB Asset (1)	Other Assets	Total Other Assets
Primary Government:				
General	$ 1,225	$ -	$ 180	$ 1,405
Major Special Revenue Funds:				
Commonwealth Transportation	282	-	-	282
Federal Trust	1,582	-	-	1,582
Nonmajor Governmental Funds	592	-	19	611
Major Enterprise Funds:				
Virginia Lottery	1	943	-	944
Virginia College Savings Plan	-	393	-	393
Nonmajor Enterprise Funds	209	3,195	-	3,404
Internal Service Funds (2)	-	2,219	14,224	16,443
Private Purpose	-	3	-	3
Agency Funds (3)	-	-	23	23
Total Primary Government	$ 3,891	$ 6,753	$ 14,446	$ 25,090
Discrete Component Units:				
Virginia Housing Development Authority (4)	$ -	$ -	$ 39,871	$ 39,871
Nonmajor Component Units (5)	639	-	46,855	47,494
Total Component Units	$ 639	$ -	$ 86,726	$ 87,365

Note (1): Other noncurrent assets in the proprietary and fiduciary funds represent the Virginia Sickness and Disability Program Net OPEB Asset applicable to the respective fund. The proprietary fund amounts are reclassified to Other Restricted Assets in the Government-wide Statement of Net Position. The Private Purpose amount is not included in the Government-wide Statement of Net Position.

Note (2): Of the $14,224 (dollars in thousands) shown above, $13,448 (dollars in thousands) and $775,398 represent Virginia Information Technologies Agency and Virginia Correctional Enterprises, respectively, amounts due from various governmental funds that will not be received within 60 days. These amounts are reclassified to an internal balance on the Government-wide Statement of Net Position.

Note (3): Other Assets of the Agency Funds represent prepaid expenses and advances to third party agents. The $22,614 shown above is not included in the Government-wide Statement of Net Position.

Note (4): Other Assets of the Virginia Housing Development Authority are predominately comprised of mortgage servicing rights of $34.6 million.

Note (5): Other Assets of the nonmajor component units are primarily comprised of miscellaneous items spread among the higher education institutions and related foundations.

12. RESTRICTED ASSETS

Restricted assets represent monies or other resources that must be used for specific legal or contractual requirements. The Commonwealth Transportation Fund (major special revenue), Debt Service Fund (nonmajor governmental), and Capital Project Fund (nonmajor governmental) reported $1.8 billion in restricted cash, cash equivalents, and investments primarily related to bond agreements. The governmental and business-type activities funds reported other restricted assets of $122.5 million and $4.5 million, respectively, for the Virginia Sickness and Disability Program Net OPEB Asset. See Note 11, Other Assets, for more information related to the Enterprise and Internal Service Funds.

The Virginia Housing Development Authority, the Virginia Public School Authority, and the Virginia College Building Authority (all major component units) reported restricted assets totaling $1.5 billion, $214.0 million, and $367.4 million, respectively. These major component units' assets are restricted for debt service under a bond indenture or other agreement, or for construction and equipment.

The Virginia Resources Authority (major component unit) reported restricted assets of $778.5 million. Of this amount, $770.7 million is restricted for loans to local governments, bond indentures, or federal and state regulations for various revolving funds, and $7.8 million is restricted for the Operating Reserve Fund for the Virginia Pooled Financing Program.

The Virginia Port Authority (nonmajor component unit) reported restricted assets of $134.5 million primarily for debt service under bond agreements, construction and other project funds.

The Tobacco Region Revitalization Commission (nonmajor component unit) reported restricted assets of $189.6 million to be used for financial aid to tobacco growers and to foster community economic growth. This includes Other Restricted Assets of $47,000 for the Virginia Sickness and Disability Program Net OPEB asset.

The Hampton Roads Sanitation District Commission (nonmajor component unit) reported restricted assets of $95.1 million to be used for debt service.

The Virginia Small Business Financing Authority (nonmajor component unit) reported restricted assets of $41.4 million for gifts and grants. This includes Other Restricted Assets of $24,828 for the Virginia Sickness and Disability Program Net OPEB asset.

The higher education institutions (nonmajor component units) reported restricted assets totaling approximately $6.1 billion primarily for endowment and other contractual obligations. Included in this amount is approximately $5.4 billion of foundations' restricted assets. This includes Other Restricted Assets of $77.4 million for the Virginia Sickness and Disability Program Net OPEB asset. The Virginia Commonwealth University Health System Authority (Authority) (a blended component unit of Virginia Commonwealth University–nonmajor component unit) includes $18.6 million for a beneficial trust and $4.1 million for an equity interest in a foundation as Other Restricted Assets. These Authority assets are classified as Level 3 of the fair value hierarchy. For additional information, see the Authority's separately issued financial statements.

The two museum foundations, the Virginia Museum of Fine Arts Foundation (nonmajor component unit) and the Science Museum of Virginia Foundation (nonmajor component unit) had restricted assets of $252.3 million and $20.3 million, respectively, primarily for donor-imposed restricted endowments.

The remaining $7.8 million is spread among the following nonmajor component units: the Virginia Outdoors Foundation, the Danville Science Center, the Fort Monroe Authority, the Virginia Arts Foundation, the Virginia Biotechnology Research Partnership Authority, the Virginia Economic Development Partnership, the Virginia Tourism Authority, the Virginia Foundation for Healthy Youth, and the Library of Virginia Foundation. Included in this amount is approximately $777,000 for the Virginia Sickness and Disability Program Net OPEB asset.

13. CAPITAL ASSETS

The following schedule presents the changes in the Capital Assets as of June 30, 2018 (dollars in thousands).

Schedule of Changes in Capital Assets

Governmental Activities

(Dollars in Thousands)

	Balance July 1 as restated (1)	Increases	Decreases	Balance June 30
Nondepreciable Capital Assets:				
Land	$ 3,229,969	$ 197,193	$ (75,391)	$ 3,351,771
Water Rights and/or Easements	85,080	10,888	-	95,968
Infrastructure	1,308,220	-	-	1,308,220
Construction-in-Progress	4,195,566	1,862,170	(1,847,767)	4,209,969
Total Nondepreciable Capital Assets	8,818,835	2,070,251	(1,923,158)	8,965,928
Depreciable Capital Assets:				
Buildings (2)	4,139,894	124,275	(41,955)	4,222,214
Equipment	1,277,721	81,587	(31,189)	1,328,119
Infrastructure	30,434,987	1,854,353	(369,249)	31,920,091
Software	705,843	37,466	(3,658)	739,651
Total Capital Assets being Depreciated	36,558,445	2,097,681	(446,051)	38,210,075
Less Accumulated Depreciation for:				
Buildings	1,562,319	98,311	(36,662)	1,623,968
Equipment	749,623	70,918	(22,174)	798,367
Infrastructure	10,180,661	1,026,490	(157,826)	11,049,325
Software	333,969	51,865	(3,358)	382,476
Total Accumulated Depreciation	12,826,572	1,247,584	(220,020)	13,854,136
Total Depreciable Capital Assets, Net	23,731,873	850,097	(226,031)	24,355,939
Total Capital Assets, Net	$ 32,550,708	$ 2,920,348	$ (2,149,189)	$ 33,321,867

Note (1): Beginning balances have been restated by $40.9 million as discussed in Note 2.

Note (2): Includes temporarily impaired assets with a carrying value of $14.2 million.

Depreciation Expense Charged to Functions of the Primary Government

June 30, 2018

(Dollars in Thousands)

Governmental Activities:	
General Government	$ 29,112
Education	5,993
Transportation	1,080,495
Resources and Economic Development	22,042
Individual and Family Services	35,120
Administration of Justice	48,607
Capital Assets held by the Internal Service Funds are charged to various functions	26,215
Total	$ 1,247,584

Schedule of Changes in Capital Assets
Business-type Activities

(Dollars in Thousands)

	Balance July 1	Increases	Decreases	Balance June 30
Nondepreciable Capital Assets:				
Land	$ 1,874	$ -	$ -	$ 1,874
Construction-in-Progress	882	1,552	(973)	1,461
Total Nondepreciable Capital Assets	2,756	1,552	(973)	3,335
Depreciable Capital Assets:				
Buildings	31,526	76	(8,801)	22,801
Equipment	69,784	4,814	(12,038)	62,560
Software	12,776	370	-	13,146
Total Capital Assets being Depreciated	114,086	5,260	(20,839)	98,507
Less Accumulated Depreciation for:				
Buildings	13,936	608	(1,654)	12,890
Equipment	53,350	4,264	(11,522)	46,092
Software	6,768	2,297	-	9,065
Total Accumulated Depreciation	74,054	7,169	(13,176)	68,047
Total Depreciable Capital Assets, Net	40,032	(1,909)	(7,663)	30,460
Total Capital Assets, Net	$ 42,788	$ (357)	$ (8,636)	$ 33,795

Schedule of Changes in Capital Assets
Component Units

(Dollars in Thousands)

	Balance July 1 (1)	Increases	Decreases	Subtotal June 30	Foundations (2)	Total June 30
Nondepreciable Capital Assets:						
Land	$ 636,049	$ 21,414	$ (516)	$ 656,947	$ 331,794	$ 988,741
Construction-in-Progress	1,562,075	1,539,949	(1,495,087)	1,606,937	61,350	1,668,287
Inexhaustible Works of Art/Historical Treasures	81,416	117	(7)	81,526	19,821	101,347
Livestock	643	2,950	(253)	3,340	1,562	4,902
Total Nondepreciable Capital Assets	2,280,183	1,564,430	(1,495,863)	2,348,750	414,527	2,763,277
Depreciable Capital Assets:						
Buildings	16,803,275	920,715	(88,485)	17,635,505	1,308,581	18,944,086
Infrastructure	3,707,956	196,227	(3,230)	3,900,953	11,599	3,912,552
Equipment	3,674,607	325,746	(149,541)	3,850,812	172,418	4,023,230
Improvements Other Than Buildings	550,968	31,728	(6,422)	576,274	78,909	655,183
Depreciable Works of Art	-	-	-	-	168	168
Library Books	745,457	12,773	(9,601)	748,629	-	748,629
Software	2,615,469	76,034	(387)	2,691,116	-	2,691,116
Other Intangible Assets	2,000	-	-	2,000	-	2,000
Total Capital Assets being Depreciated	28,099,732	1,563,223	(257,666)	29,405,289	1,571,675	30,976,964
Less Accumulated Depreciation for:						
Buildings	5,562,754	479,128	(64,504)	5,977,378	372,146	6,349,524
Infrastructure	1,692,094	104,434	(795)	1,795,733	3,822	1,799,555
Equipment	2,536,674	271,103	(138,195)	2,669,582	120,136	2,789,718
Improvements Other Than Buildings	342,397	22,580	(3,333)	361,644	56,414	418,058
Library Books	634,497	31,566	(9,651)	656,412	-	656,412
Software	423,419	68,181	(810)	490,790	-	490,790
Other Intangible Assets	1,733	133	-	1,866	-	1,866
Total Accumulated Depreciation	11,193,568	977,125	(217,288)	11,953,405	552,518	12,505,923
Total Depreciable Capital Assets, Net	16,906,164	586,098	(40,378)	17,451,884	1,019,157	18,471,041
Total Capital Assets, Net	$ 19,186,347	$ 2,150,528	$ (1,536,241)	$ 19,800,634	$ 1,433,684	$ 21,234,318

Note (1): Beginning balances have been restated to remove library books purchased through subscription agreements by the Virginia Commonwealth University (nonmajor).

Note (2): Foundations represent FASB reporting entities defined in Note 1.B. Since foundations follow FASB rather than GASB reporting requirements, no amounts are reported in the software and other intangible assets categories for foundations.

14. DEFERRED OUTFLOWS AND DEFERRED INFLOWS OF RESOURCES

GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities*, requires certain items to be classified as either deferred outflows or deferred inflows of resources. Additionally, deferred outflows or deferred inflows of resources are also required by other GASB statements. While all deferred outflows or deferred inflows of resources applicable to the Commonwealth are listed below, see Notes 15, 16, 18, and 37 for additional information regarding these items.

Deferred Outflows

Deferred outflows of resources are a consumption of assets by the government that is applicable to a future reporting period.

Deferred Inflows

Deferred inflows of resources are an acquisition of assets by the government that is applicable to a future reporting period.

The following tables summarize deferred outflows and deferred inflows of resources as of June 30, 2018.

Government-wide Statements

(Dollars in Thousands)	Primary Government			
	Governmental Activities	Business-type Activities	Total	Total Component Units
Deferred Outflows of Resources				
Loss on Refunding of Debt	$ 160,184	$ -	$ 160,184	$ 418,183
Government Acquisition-Goodwill	-	-	-	16,654
Pension Related	569,609	17,459	587,068	357,556
Other Postemployment Benefit Related	114,039	3,612	117,651	113,607
Total Deferred Outflows of Resources	$ 843,832	$ 21,071	$ 864,903	$ 906,000
Deferred Inflows of Resources				
Effective Hedges in a Gain Position	$ -	$ -	$ -	$ 16,502
Service Concession Arrangements	3,555,224	-	3,555,224	65,493
Gain on Refunding of Debt	27	-	27	44,883
Pension Related	507,180	11,745	518,925	257,393
Other Postemployment Benefit Related	286,655	8,877	295,532	203,411
Irrevocable Split-Interest Agreements Related	-	-	-	14,736
Total Deferred Inflows of Resources	$ 4,349,086	$ 20,622	$ 4,369,708	$ 602,418

Fund Statements

(Dollars in Thousands)	Primary Government - Governmental Funds					
	General	Commonwealth Transportation	Federal Trust	Literary	Nonmajor Governmental Funds	Total Governmental Funds
Deferred Outflows of Resources						
Total Deferred Outflows of Resources	$ -	$ -	$ -	$ -	$ -	$ -
Deferred Inflows of Resources						
Service Concession Arrangements	$ -	$ 571,201	$ -	$ -	$ -	$ 571,201
Revenues Considered Unavailable	1,060,528	65,324	92,963	23,103	40,830	1,282,748
Total Deferred Inflows of Resources	$ 1,060,528	$ 636,525	$ 92,963	$ 23,103	$ 40,830	$ 1,853,949

(Continued on next page)

(Dollars in Thousands)	Business-type Activities					
	Enterprise Funds					
	Virginia Lottery	Virginia College Savings Plan	Nonmajor	Total Business-type Activities	Internal Service Funds	Private Purpose Trust Funds
Deferred Outflows of Resources						
Pension Related	$ 3,292	$ 1,612	$ 12,555	$ 17,459	$ 9,017	$ 9
Other Postemployment Benefit Related	560	277	2,775	3,612	1,674	1
Total Deferred Outflows of Resources	$ 3,852	$ 1,889	$ 15,330	$ 21,071	$ 10,691	$ 10
Deferred Inflows of Resources						
Pension Related	$ 2,118	$ 767	$ 8,860	$ 11,745	$ 7,895	$ 7
Other Postemployment Benefit Related	1,487	525	6,865	8,877	3,589	3
Total Deferred Inflows of Resources	$ 3,605	$ 1,292	$ 15,725	$ 20,622	$ 11,484	$ 10

(Dollars in Thousands)	Component Units					
	Virginia Housing Development Authority	Virginia Public School Authority	Virginia Resources Authority	Virginia College Building Authority	Nonmajor Component Units	Total Component Units
Deferred Outflows of Resources						
Loss on Refunding of Debt	$ -	$ 120,594	$ 72,938	$ 34,045	$ 190,606	$ 418,183
Government Acquisition-Goodwill	-	-	-	-	16,654	16,654
Pension Related	-	-	97	-	357,459	357,556
Other Postemployment Benefit Related	2,574	-	7	-	111,026	113,607
Total Deferred Outflows of Resources	$ 2,574	$ 120,594	$ 73,042	$ 34,045	$ 675,745	$ 906,000
Deferred Inflows of Resources						
Effective Hedges in a Gain Position	$ -	$ -	$ -	$ -	$ 16,502	$ 16,502
Service Concession Arrangements	-	-	-	-	65,493	65,493
Gain on Refunding of Debt	-	-	34,831	-	10,052	44,883
Pension Related	-	-	139	-	257,254	257,393
Other Postemployment Benefit Related	1,937	-	12	-	201,462	203,411
Irrevocable Split-Interest Agreements Related	-	-	-	-	14,736	14,736
Total Deferred Inflows of Resources	$ 1,937	$ -	$ 34,982	$ -	$ 565,499	$ 602,418

15. DERIVATIVES

GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments,* requires additional reporting and disclosures for derivative instruments.

Primary Government

Derivative instruments are financial contracts whose values depend on the values of one or more underlying assets, reference rates or financial indexes. They include futures, forwards, options and swap contracts. Some traditional securities, such as structured notes, can have derivative-like characteristics. In this case, the return may be linked to one or more indexes and asset-backed securities, such as collateralized mortgage obligations (CMOs), which are sensitive to changes in interest rates and pre-payments. Futures, forwards, options and swaps generally are not recorded on the financial statements, whereas structured notes and asset-backed investments generally are recorded.

Virginia College Savings Plan (Virginia529)

GASB Statement No. 53 defines stable value investment vehicles as synthetic guaranteed investment contracts. Stable value funds are invested in a high quality, diversified, intermediate term, fixed income portfolio that is protected against interest rate volatility by wrap or investment contracts from banks and insurance companies that guarantee the payment of benefits at book value (cost plus accrued interest), which enables the entire investment to be carried at its book value. The Virginia529 utilizes stable value investments in both the Prepaid529 Program (major enterprise fund) and Invest529 Program (Private Purpose Trust Fund). Virginia529's stable value investments meet the definition of fully benefit-responsive synthetic guaranteed investment contracts and are reported at contract value. As of June 30, 2018, Virginia529 had the following stable value investments outstanding (dollars in thousands) in the respective programs as shown in the table below.

Stable Value Investments

Fund	Wrap Provider	Notional Amount	Effective Date	Maturity Date	Credit Rate	June 30, 2018 Fair Value	June 30, 2017 Fair Value
Enterprise	American General Life	$ 26,961	2/21/2014	Open ended	2.0%	$ 134,489	$ 128,276
	Nationwide Life Insurance	25,625	4/19/2018	Open ended	2.3%		
	RGA	27,181	6/22/2016	Open ended	2.4%		
	State Street Bank	27,063	5/1/2002	Open ended	2.8%		
	Voya Retirement and Annuity	27,659	12/3/2002	Open ended	2.8%		
Private Purpose	American General Life	$ 175,672	1/16/2014	Open ended	2.2%	$ 989,144	$ 874,622
	Nationwide Life Insurance	103,178	1/29/2018	Open ended	2.3%		
	Prudential Retirement Insurance & Annuity	179,351	1/30/2014	Open ended	2.4%		
	RGA	177,099	8/28/2015	Open ended	2.3%		
	State Street Bank	179,001	5/1/2002	Open ended	2.3%		
	Voya Retirement And Annuity	174,843	10/5/2012	Open ended	2.6%		

The following table (dollars in thousands) contains information relating to fair value, changes in fair value, and notional value for U.S. Treasury Futures Contracts.

Investment Derivatives - U.S. Treasury Futures Contracts

	Changes in Fair Value		Fair Value at June 30, 2018		
Fund	Classification	Amount	Classification	Amount	Notional Amount
Enterprise	Revenue	$ 488	Investment	$ 408	$ 26,778

Pursuant to its investment management agreement, Advent Capital Management, LLC (Advent) may invest in derivatives for hedging purposes or for efficient portfolio management. Synthetic positions are not allowed and the use of derivatives should not be considered as an alpha generator. Advent primarily uses forward foreign exchange contracts to hedge the value of investments denominated in non-U.S. dollar currencies. Credit risk of exchange traded currency contracts lies with the clearinghouse of the exchange at which the contracts are traded, while credit risk of currency contracts traded over the counter lies with the counterparty. Counterparty risk exposure is generally equal to the unrealized gain on in-the-money contracts. The following table (dollars in thousands) contains a breakdown of these forward contracts by currency.

Prepaid529 Currency Forwards

Currency	Cost	Foreign Exchange Purchases	Foreign Exchange Sales	Market Value
British Pound Sterling	$ (1,224)	$ 1,323	$ (2,514)	$ (1,191)
Euro	(24,258)	5,538	(29,550)	(24,012)
Hong Kong Dollar	(7,559)	-	(7,555)	(7,555)
Japanese Yen	(10,914)	1,205	(12,151)	(10,946)
Sw iss Franc	(3,490)	2,014	(5,511)	(3,497)
U.S. Dollar	47,445	57,566	(10,121)	47,445
Total	$ -	$ 67,646	$ (67,402)	$ 244

Additional information is available in the Virginia529 separately issued financial statements, which may be obtained at www.virginia529.com.

Virginia Retirement System

All derivatives held by the Virginia Retirement System (the System) are considered investments. The fair value of all derivative financial instruments is reported on a net basis on the Statement of Fiduciary Net Position. The derivative instruments are either subject to an enforceable master netting arrangement or similar agreement. The master netting arrangements allow the System to net applicable liabilities or payment obligations to counterparties to the derivative contracts against amounts owed to the System by the counterparties.

The System holds investments in swaps, options and futures and enters into forward foreign currency exchange contracts. Futures, currency forwards and options contracts provide the System with the opportunity to build passive benchmark positions, manage portfolio duration in relation to various benchmarks, adjust portfolio yield curve exposure and gain market exposure to various indexes in a more efficient way and at lower transaction costs. Derivatives that are exchange-traded are not subject to credit risk, but all over-the-counter derivatives, such as swaps and currency forwards, do expose the System to counterparty credit risk. Counterparty credit risk for the System's investments in derivatives instruments is summarized in the table on page 130. Market risks arise from adverse changes in market prices, interest rates and foreign exchange rates. The System's level of exposure to interest rate risk through derivative instruments and the System's investments in derivative instruments as of June 30, 2018, are summarized in the tables below (dollars in thousands).

Derivative Instruments Summary

Investment	Net Appreciation/ (Depreciation) in Fair Value for the Fiscal Year Ended June 30, 2018		Fair Value June 30, 2018	
Derivatives (by Type)	Amount	Classification	Amount	Notional (Dollars)
Commodity Futures Short	$ 66	Debt Securities	$ 66	$ (5,201)
Credit Default Sw aps Bought	1,237	Debt Securities	1,347	26,129
Credit Default Sw aps Written	(1,357)	Debt Securities	(2,223)	125,216
Fixed Income Futures Long	2,143	Debt Securities	2,871	2,793,558
Fixed Income Futures Short	(2,342)	Debt Securities	(3,036)	(572,771)
Foreign Currency Futures Short	(51)	Equity Securities	-	-
Foreign Currency Options Bought	(326)	Equity Securities	-	-
Foreign Currency Options Written	(140)	Equity Securities	(193)	(4,700)
FX Forw ards	43,726	Investment Sales/Purchases	24,384	4,961,713
Index Futures Long	(23,231)	Equity Securities	(25,522)	1,147,192
Index Futures Short	186	Equity Securities	186	(37,282)
Pay Fixed Interest Rate Sw aps	2,169	Debt Securities	2,144	406,819
Receive Fixed Interest Rate Sw aps	(4,822)	Debt Securities	(3,662)	380,125
Sw aptions Written	(4)	Equity Securities	(4)	(25,300)
Total Return Bond Index Sw aps	(355)	Debt Securities	(355)	85,000
Total Return Equity Index Sw aps	(1,435)	Equity Securities	1,014	331,323
Total	**$ 15,464**		**$ (2,983)**	

Derivative Instruments Subject to Interest Rate Risk

		Investment Maturities (in years)			
Investment Type	Fair Value June 30, 2018	Under 1	1-5	6-10	Greater than 10
Credit Default Sw aps Bought	$ 1,347	$ -	$ 1,347	$ -	$ -
Credit Default Sw aps Written	(2,223)	207	(2,430)	-	-
Pay Fixed Interest Rate Sw aps	2,144	(41)	1,560	561	64
Receive Fixed Interest Rate Sw aps	(3,662)	49	(1,080)	(1,897)	(734)
Total Return Bond Index Sw aps	(355)	(355)	-	-	-
Total Return Equity Index Sw aps	1,020	1,020	-	-	-
Total	$ (1,729)	$ 880	$ (603)	$ (1,336)	$ (670)

Futures Contracts

Futures contracts are contracts to deliver or receive securities at a specified future date and at a specified price or yield. Futures contracts are traded on organized exchanges (exchange-traded) and require an initial margin (collateral) in the form of cash or marketable securities. The net change in the futures contract value is settled daily, in cash, with the exchanges. The net gains or losses resulting from the daily settlements are included in the Statement of Changes in Fiduciary Net Position. Holders of futures contracts look to the exchange for performance under the contract and not to the entity holding the offsetting futures position. Accordingly, the amount at risk posed by nonperformance of counterparties to futures contracts is minimal. Information on the System's investments in fixed income, foreign currency, and equity index futures as of June 30, 2018, is shown in the Summary table above (dollars in thousands).

Currency Forwards

Currency forwards represent foreign exchange contracts and are used by the System to effect settlements and to protect the base currency ($U.S.) value of portfolio assets denominated in foreign currencies against fluctuations in the exchange rates of those currencies. A forward foreign currency exchange contract is a commitment to purchase or sell a foreign currency at a future date at a negotiated price. The credit risk of currency contracts that are exchange-traded lies with the clearinghouse of the exchange where the contracts are traded. The credit risk of currency contracts traded over the counter lies with the counterparty, and exposure usually is equal to the unrealized profit on in-the-money contracts. The market risk in foreign currency contracts is related to adverse movements in currency exchange rates. The gain or loss arising from the difference between the original contracts and the closing of such contracts is included in the net realized gains or losses on foreign currency-related transactions in the Statement of Changes in Fiduciary Net Position. Information on the System's currency forward contracts as of June 30, 2018, is shown below and in the Summary table on the previous page.

Currency Forwards
as of June 30

(Dollars in Thousands)

Currency	Cost	Pending Foreign Exchange Purchases	Pending Foreign Exchange Sales	Fair Value 2018	Fair Value 2017
Argentina Peso	$ (3,792)	$ 12,891	$ (14,471)	$ (1,580)	$ 17,266
Australian Dollar	58,570	496,520	(447,313)	49,207	(430,192)
Brazil Real	(45,733)	32,189	(76,429)	(44,240)	11,075
British Pound Sterling	(615,634)	496,973	(1,110,214)	(613,241)	(668,106)
Canadian Dollar	(232,624)	382,439	(622,207)	(239,768)	(406,373)
Chilean Peso	6,594	24,875	(18,670)	6,205	10,231
Chinese Yuan Renminbi	(47,475)	22,641	(69,008)	(46,367)	(27,930)
Chinese Yuan Renminbi HK	(14,360)	-	(14,282)	(14,282)	-
Colombian Peso	9,585	23,464	(14,013)	9,451	16,850
Czech Koruna	54,635	54,518	(636)	53,882	77,499
Danish Krone	(71,444)	46,331	(117,549)	(71,218)	(76,162)
Egyptian Pound	8,507	16,392	(7,965)	8,427	-
Euro Currency Unit	(1,839,349)	411,921	(2,228,669)	(1,816,748)	(1,610,420)
Hong Kong Dollar	(181,404)	4,492	(185,938)	(181,446)	(176,325)
Hungarian Forint	(13,061)	8,047	(20,239)	(12,192)	(57,807)
Indian Rupee	(6,056)	2,085	(8,096)	(6,011)	114,256
Indonesian Rupiah	3,421	11,290	(7,775)	3,515	66,146
Israeli Shekel	(25,443)	11,372	(36,761)	(25,389)	(32,378)
Japanese Yen	(1,152,541)	234,795	(1,385,756)	(1,150,961)	(804,122)
Kazakhstan Tenge	2,618	2,578	-	2,578	-
Malaysian Ringgit	(795)	900	(1,687)	(787)	4,337
Mexican Peso	40,736	45,672	(4,712)	40,960	119,485
New Taiwan Dollar	(2,147)	6,611	(8,739)	(2,128)	(25,013)
New Zealand Dollar	89,077	142,932	(56,899)	86,033	(81,318)
Nigerian Naira	6,099	7,802	(1,375)	6,427	-
Norwegian Krone	(225,073)	182,923	(405,384)	(222,461)	(148,076)
Omani Rial	(1,357)	1,672	(3,056)	(1,384)	-
Peruvian Sol	(3,445)	1,049	(4,503)	(3,454)	(28,050)
Philippines Peso	(8,262)	189	(8,388)	(8,199)	(13,496)
Polish Zloty	7,838	20,517	(13,357)	7,160	75,044
Romanian Leu	(10,302)	12,183	(21,864)	(9,681)	(2,740)
Russian Ruble (New)	12,951	28,222	(15,334)	12,888	3,263
Saudi Arabia Riyal	(1,346)	3,216	(4,589)	(1,373)	-
Singapore Dollar	(258,171)	166,847	(420,195)	(253,348)	(106,695)
South African Rand	(21,011)	12,737	(34,104)	(21,367)	(16,904)
South Korean Won	(5,260)	-	(5,234)	(5,234)	(62,697)
Swedish Krona	(295,402)	177,401	(466,645)	(289,244)	(134,270)
Swiss Franc	(265,672)	59,115	(325,371)	(266,256)	(383,100)
Thailand Baht	24,500	25,403	(1,813)	23,590	10,391
Turkish Lira	29,677	41,195	(11,122)	30,073	92,042
U. S. Dollar	4,992,352	8,205,463	(3,213,111)	4,992,352	4,655,497
Total Forwards Subject to Foreign Currency Risk				$ 24,389	$ (18,792)

Options Contracts

Options may be either exchange-traded or negotiated directly between two counterparties over the counter. Options grant the holder the right, but not the obligation, to purchase (call) or sell (put) a financial instrument at a specified price and within a specified period of time from the writer of the option.

As a purchaser of options, the System typically pays a premium at the outset. This premium is reflected as an asset on the financial statements. The System then retains the right, but not the obligation, to exercise the options and purchase the underlying financial instrument. Should the option not be exercised, it expires worthless, and the premium is recorded as a loss.

A writer of options assumes the obligation to deliver or receive the underlying financial instrument on exercise of the option. Certain option contracts may involve cash settlements based on specified indexes such as stock indexes. As a writer of options, the System receives a premium at the outset. This premium is reflected as a liability on the financial statements, and the System bears the risk of an unfavorable change in the price of the financial instrument underlying the option. Information on the System's investments in foreign currency options as of June 30, 2018, is shown in the Summary table on page 125.

Swap Agreements

Swaps are negotiated contracts between two counterparties for the exchange of payments at certain intervals over a predetermined timeframe. The payments are based on a notional principal amount and calculated using either fixed or floating interest rates or total returns from certain instruments or indexes. Swaps are used to manage risk and enhance returns. To reduce the risk of counterparty nonperformance, the System generally requires collateral on any material gains from these transactions. During fiscal year 2018, the System had activity in credit default, interest rate and total return swaps. Gains and losses on swaps are determined based on fair values and are recorded in the Statement of Changes in Fiduciary Net Position. Information on the System's swap balances as of June 30, 2018, is shown in the Summary table on page 125, and the terms, fair values and notional values of the System's investments in swap agreements that are highly sensitive to interest rate changes are disclosed in the following tables (dollars in thousands).

Derivatives Instruments Highly Sensitive to Interest Rate Changes

Investment Type	Reference Rate	Fair Value June 30, 2018	Notional Amount
Interest Rate Swaps	Receive Fixed 1.81%, Pay Variable Israel 3-month TELBOR	$ (68)	$ 5,136
Interest Rate Swaps	Receive Variable Israel 3-month TELBOR, Pay Fixed 0.26%	16	26,909
Interest Rate Swaps	Receive Fixed 5.84%, Pay Variable 28-day MTIIE	(106)	1,750
Interest Rate Swaps	Receive Variable 28-day MTIIE, Pay Fixed 6.71%	96	900
Interest Rate Swaps	Receive Variable 3-month JIBAR, Pay Fixed 9.50%	(69)	868
Interest Rate Swaps	Receive Fixed 6.080%, Pay Variable 28-day MTIIE	(214)	1,928
Interest Rate Swaps	Receive Variable 3-month JIBAR, Pay Fixed 8.50%	(8)	452
Interest Rate Swaps	Receive Variable 3-month JIBAR, Pay Fixed 7.50%	(8)	2,714
Interest Rate Swaps	Receive Variable 3-month JIBAR, Pay Fixed 8.25%	-	29
Interest Rate Swaps	Receive Fixed 1.50%, Pay Variable 3-month LIBOR	(842)	7,300
Interest Rate Swaps	Receive Fixed 1.75%, Pay Variable 3-month LIBOR	(625)	2,500
Interest Rate Swaps	Receive Fixed 8.28%, Pay Variable 28-day MTIIE	1	1,262
Interest Rate Swaps	Receive Variable 28-day MTIIE, Pay Fixed 7.15%	127	24,838
Interest Rate Swaps	Receive Fixed 8.31%, Pay Variable 28-day MTIIE	14	3,373
Interest Rate Swaps	Receive Fixed 7.79%, Pay Variable 28-day MTIIE	(8)	1,816
Interest Rate Swaps	Receive Fixed 8.32%, Pay Variable 28-day MTIIE	44	3,215
Interest Rate Swaps	Receive Fixed 7.47%, Pay Variable 28-day MTIIE	(1)	81
Interest Rate Swaps	Receive Fixed 10.30%, Pay Variable Brazil 1-day CDI	(54)	1,663
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.50%	-	10
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.75%	64	1,380
Interest Rate Swaps	Receive Fixed 9.76%, Pay Variable Brazil 1-day CDI	(108)	2,079
Interest Rate Swaps	Receive Fixed 9.3%, Pay Variable Brazil 1-day CDI	48	4,419
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 9.64%	73	4,211
Interest Rate Swaps	Receive Fixed 2.25%, Pay Variable 3-month LIBOR	(277)	10,230
Interest Rate Swaps	Receive Fixed 2.00%, Pay Variable 3-month LIBOR	90	8,800
Interest Rate Swaps	Receive Fixed 7.37%, Pay Variable 28-day MTIIE	(121)	2,941
Interest Rate Swaps	Receive Fixed 7.32%, Pay Variable 28-day MTIIE	(55)	1,231
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 9.98%	(61)	4,055
Interest Rate Swaps	Receive Variable 28-day MTIIE, Pay Fixed 6.87%	141	5,815
Interest Rate Swaps	Receive Fixed 2.25%, Pay Variable Poland 6-month WIBOR	14	2,885
Interest Rate Swaps	Receive Fixed 7.75%, Pay Variable 3-month JIBAR	(182)	4,969
Interest Rate Swaps	Receive Fixed 10.33%, Pay Variable Brazil 1-day CDI	(201)	6,368
Interest Rate Swaps	Receive Fixed 10.46%, Pay Variable Brazil 1-day CDI	(46)	1,118
Interest Rate Swaps	Receive Fixed 2.00%, Pay Variable 3-month LIBOR	(191)	4,580
Interest Rate Swaps	Receive Fixed 2.50%, Pay Variable 3-month LIBOR	(168)	1,700
Interest Rate Swaps	Receive Fixed 7.83%, Pay Variable 28-day MTIIE	(3)	1,531
Interest Rate Swaps	Receive Fixed 8.86%, Pay Variable Brazil 1-day CDI	(86)	12,564
Interest Rate Swaps	Receive Fixed 8.01%, Pay Variable 28-day MTIIE	25	4,670
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 6.54%	1	3,457
Interest Rate Swaps	Receive Fixed 1.50%, Pay Variable Czech Krona 6-month PRIBOR	(26)	18,401
Interest Rate Swaps	Receive Fixed 2.00%, Pay Variable Czech Krona 6-month PRIBOR	18	3,994
Interest Rate Swaps	Receive Fixed 2.25%, Pay Variable Poland 6-month WIBOR	(218)	36,859
Interest Rate Swaps	Receive Fixed 3.25%, Pay Variable Poland 6-month WIBOR	77	2,698
Interest Rate Swaps	Receive Variable 28-day MTIIE, Pay Fixed 7.65%	29	3,200
Interest Rate Swaps	Receive Variable 3-month JIBAR, Pay Fixed 7.25%	-	15
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 8.14%	305	14,373
Interest Rate Swaps	Receive Fixed 2.50%, Pay Variable Poland 6-month WIBOR	1	6,223
Interest Rate Swaps	Receive Variable 6-month EURIBOR, Pay Fixed 1.5%	(11)	2,102
Interest Rate Swaps	Receive Fixed 3.00%, Pay Variable Poland 6-month WIBOR	1	187
Interest Rate Swaps	Receive Variable 6-month Hungary BUBOR, Pay Fixed 1.25%	430	9,818
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 7.06%	131	8,343
Interest Rate Swaps	Receive Fixed 7.88%, Pay Variable Brazil 1-day CDI	(446)	16,921
Interest Rate Swaps	Receive Fixed 9.97%, Pay Variable Brazil 1-day CDI	578	41,197
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 9.35%	(114)	49,280
Interest Rate Swaps	Receive Variable Czech Krona 6-month PRIBOR, Pay Fixed 2.0%	3	1,248
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 11.03%	(14)	1,248
Interest Rate Swaps	Receive Fixed 2.5%, Pay Variable Poland 6-month WIBOR	(29)	9,028
Interest Rate Swaps	Receive Fixed 2.25%, Pay Variable 6-month Hungary BUBOR	23	6,493
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 7.99%	(161)	31,437
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 8.69%	154	15,206
Interest Rate Swaps	Receive Fixed 7.64%, Pay Variable 28-day MTIIE	(90)	11,711
Interest Rate Swaps	Receive Fixed 8.70%, Pay Variable Brazil 1-day CDI	(54)	5,354
Interest Rate Swaps	Receive Fixed 7.53%, Pay Variable 28-day MTIIE	(45)	3,233
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 9.51%	(16)	2,917
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 09%	-	4,937
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 98%	-	4,870
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 10.27%	(70)	3,585
Interest Rate Swaps	Receive Fixed 9.48%, Pay Variable Brazil 1-day CDI	15	3,296
Interest Rate Swaps	Receive Fixed 9.5%, Pay Variable Brazil 1-day CDI	9	1,683
Interest Rate Swaps	Receive Fixed 9.10%, Pay Variable Brazil 1-day CDI	(32)	15,192

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Derivatives Instruments Highly Sensitive to Interest Rate Changes

(Continued from previous page)

Investment Type	Reference Rate	Fair Value June 30, 2018	Notional Amount
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 8.34%	229	13,195
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 8.34%	-	6,075
Interest Rate Swaps	Receive Fixed 9.32%, Pay Variable Brazil 1-day CDI	4	1,856
Interest Rate Swaps	Receive Fixed 9.35%, Pay Variable Brazil 1-day CDI	5	1,730
Interest Rate Swaps	Receive Fixed 9.34%, Pay Variable Brazil 1-day CDI	5	1,860
Interest Rate Swaps	Receive Fixed 9.20%, Pay Variable Brazil 1-day CDI	(3)	10,483
Interest Rate Swaps	Receive Fixed 2.78%, Pay Variable 6-month Thai Baht fixing rate	22	759
Interest Rate Swaps	Receive Fixed 12.23%, Pay Variable Brazil 1-day CDI	(35)	624
Interest Rate Swaps	Receive Fixed 2.10%, Pay Variable 6-month Thai Baht fixing rate	10	1,751
Interest Rate Swaps	Receive Variable 28-day MTIIE, Pay Fixed 5.25%	(19)	560
Interest Rate Swaps	Receive Fixed 3.41%, Pay Variable 6-month Thai Baht fixing rate	6	151
Interest Rate Swaps	Receive Fixed 3.41%, Pay Variable 6-month Thai Baht fixing rate	6	151
Interest Rate Swaps	Receive Fixed 5.29%, Pay Variable 1-day Colombia IBR	13	1,372
Interest Rate Swaps	Receive Fixed 6.12%, Pay Variable 1-day Colombia IBR	15	810
Interest Rate Swaps	Receive Fixed 5.00%, Pay Variable 28-day MTIIE	(39)	972
Interest Rate Swaps	Receive Fixed 2.58%, Pay Variable 6-month Thai Baht fixing rate	6	344
Interest Rate Swaps	Receive Fixed 5.32%, Pay Variable 1-day Colombia IBR	2	204
Interest Rate Swaps	Receive Fixed 2.02%, Pay Variable 6-month Thai Baht fixing rate	5	573
Interest Rate Swaps	Receive Fixed 2.58%, Pay Variable 6-month Thai Baht fixing rate	7	459
Interest Rate Swaps	Receive Fixed 2.20%, Pay Variable 6-month Thai Baht fixing rate	4	353
Interest Rate Swaps	Receive Fixed 1.93%, Pay Variable 6-month Thai Baht fixing rate	6	1,176
Interest Rate Swaps	Receive Variable Israel 3-month TELBOR, Pay Fixed 0.26%	17	33,629
Interest Rate Swaps	Receive Fixed 1.81%, Pay Variable Israel 3-month TELBOR	(30)	2,322
Interest Rate Swaps	Receive Variable 1-day Colombia IBR, Pay Fixed 4.65%	(3)	3,341
Interest Rate Swaps	Receive Fixed 4.95%, Pay Variable 1-day Colombia IBR	(2)	2,276
Interest Rate Swaps	Receive Fixed 4.81%, Pay Variable 1-day Colombia IBR	(149)	25,795
Interest Rate Swaps	Receive Variable 1-day Colombia IBR, Pay Fixed 4.89%	92	20,769
Interest Rate Swaps	Receive Variable Brazil 1-day CDI, Pay Fixed 10.25%	-	3,497
Interest Rate Swaps	Receive Fixed 3.54%, Pay Variable Chilean Peso 6-month CLICP	(29)	4,715
Interest Rate Swaps	Receive Variable Malaysian Ringgit 3-month KLIBOR, Pay Fixed 3.77%	9	3,169
Interest Rate Swaps	Receive Variable Malaysian Ringgit 3-month KLIBOR, Pay Fixed 3.74%	4	990
Interest Rate Swaps	Receive Variable Malaysian Ringgit 3-month KLIBOR, Pay Fixed 3.76%	6	1,733
Interest Rate Swaps	Receive Variable Chilean Peso 6-month CLICP, Pay Fixed 3.57%	2	229
Interest Rate Swaps	Receive Fixed 3.54%, Pay Variable Chilean Peso 6-month CLICP	(15)	1,524
Interest Rate Swaps	Receive Variable Israel 3-month TELBOR, Pay Fixed 0.22%	50	34,640
Interest Rate Swaps	Receive Fixed 1.72%, Pay Variable Israel 3-month TELBOR	(157)	7,075
Interest Rate Swaps	Receive Fixed 4.96%, Pay Variable 1-day Colombia IBR	(22)	20,770
Interest Rate Swaps	Receive Variable 1-day Colombia IBR, Pay Fixed 4.64%	124	9,227
Interest Rate Swaps	Receive Variable 1-day Colombia IBR, Pay Fixed 4.65%	147	14,148
Interest Rate Swaps	Receive Fixed 5.31%, Pay Variable 1-day Colombia IBR	(9)	1,020
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 12.7%	(567)	4,208
Interest Rate Swaps	Receive Fixed 6.2%, Pay Variable 1-day Colombia IBR	6	241
Interest Rate Swaps	Receive Fixed 2.505%, Pay Variable 6-month Thai Baht fixing rate	6	486
Interest Rate Swaps	Receive Fixed 2.04%, Pay Variable 6-month Thai Baht fixing rate	19	2,264
Interest Rate Swaps	Receive Fixed 2.20%, Pay Variable 6-month Thai Baht fixing rate	1	54
Interest Rate Swaps	Receive Fixed 2.55%, Pay Variable 6-month Thai Baht fixing rate	6	936
Interest Rate Swaps	Receive Fixed 1.99%, Pay Variable 6-month Thai Baht fixing rate	(1)	220
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.00%	501	12,220
Interest Rate Swaps	Receive Variable 3-month LIBOR, Pay Fixed 2.25%	636	10,750
Interest Rate Swaps	Receive Variable 6-month EURIBOR, Pay Fixed 0.50%	(31)	3,386
Interest Rate Swaps	Receive Variable 6-month EURIBOR, Pay Fixed 1.25%	(86)	2,685
Interest Rate Swaps	Receive Fixed 0.5%, Pay Variable 6-month EURIBOR	13	2,218
Interest Rate Swaps	Receive Variable 28-day MTIIE, Pay Fixed 5.25%	(5)	153
Subtotal Interest Rate Swaps		(1,518)	786,944

Continued on next page

Derivatives Instruments Highly Sensitive to Interest Rate Changes
(Continued from previous page)

Investment Type	Reference Rate	Fair Value June 30, 2018	Notional Amount
Total Return Bond Index Swaps	Receive Variable IBOXHY Index/ Pay Variable 3-month LIBOR	(355)	35,000
Total Return Bond Index Swaps	Receive Variable Barclays Capital US Aggregate Index/ Pay Variable 1-month LIBOR + 16 bps	-	50,000
Total Return Equity Index Swaps	Receive Variable Canadian Dollar 3-month Bankers' Acceptances rate/ Pay Variable BCMSIMCB Index	54	8,033
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR + 10 bps/ Pay Variable BNPBDCON Index	81	1,899
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR + 25 bps/ Pay Variable BNPBMACH Index	71	1,230
Total Return Equity Index Swaps	Receive Variable AMZX Index/ Pay Variable 3-month LIBOR + 49 bps	(15)	1,500
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR - 3 bps/ Pay Variable BNPMSLX Index	127	3,019
Total Return Equity Index Swaps	Receive Variable BNPBLDEF Index/ Pay Variable 3-month LIBOR + 35 bps	77	4,992
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR + 25 bps/ Pay Variable BNPBSCYC Index	163	4,989
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR + 14 bps/ Pay Variable M2US0BK Index	309	12,008
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR - 19 bps/ Pay Variable BNPBMHK1 Index	112	2,108
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR - 16 bps/ Pay Variable BNPBMSLX Index	(17)	1,659
Total Return Equity Index Swaps	Receive Variable MSCI ACWI IMI Index/ Pay Variable 3-month LIBOR + 34 bps	-	3
Total Return Equity Index Swaps	Receive Variable MSCI ACWI IMI Index/ Pay Variable 3-month LIBOR + 34 bps	(5)	200,080
Total Return Equity Index Swaps	Receive Variable MIMUJPNN Index/ Pay Variable 3-month LIBOR + 8 bps	-	17,000
Total Return Equity Index Swaps	Receive Variable MIMUUKGN Index/ Pay Variable 3-month LIBOR + 10 bps	-	12,160
Total Return Equity Index Swaps	Receive Variable MIMUUSAG Index/ Pay Variable 3-month LIBOR + 10 bps	(5)	34,691
Total Return Equity Index Swaps	Receive Variable NDUEEGF Index/ Pay Variable 3-month LIBOR + 6 bps	-	23,360
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR + 25 bps/ Pay Variable BCMSELE2 Index	10	743
Total Return Equity Index Swaps	Receive Variable 3-month LIBOR + 13 bps/ Pay Variable GSCBMSMS Index	52	1,849
Subtotal Return Swaps		659	416,323
TOTAL SWAPS		$ (859)	$ 1,203,267

Derivative Instruments Subject to Counterparty Credit Risk

Counterparty	Percentage of Net	Moody's Ratings	S & P Ratings	Fitch Ratings
UBS AG/Stamford CT	40.5%	--	AA-	--
Morgan Stanley Capital Services LLC	31.8%	--	A+	--
Goldman Sachs International	11.9%	A1	A+	A
BNP Paribas Securities Corp	6.4%	--	A	--
JPMorgan Chase Bank NA	2.9%	Aa3	A+	AA
LCH Ltd	2.5%	--	A+	--
HSBC Bank USA NA/New York NY	1.5%	Aa2	AA-	AA-
Credit Suisse AG	0.7%	A1	A	A
BNP Paribas SA/London	0.6%	--	A	--
Goldman Sachs Bank USA/New York NY	0.6%	A1	A+	A+
Citigroup Global Markets Ltd	0.5%	A2	A+	A
Barclays Capital, Inc.	0.1%	--	A	--
Total	100.0%			

Derivative instruments are classified in Level 1 and Level 2 in the fair value hierarchy. Derivative instruments classified as Level 1 of the Fair Value Hierarchy are valued using price quoted in active markets for those securities. The derivative instruments in Level 1 consist of futures contracts on commodities, U.S. Treasury bond and notes, non-U.S. government bonds, and U.S. and non-U.S. equity indexes. Derivative instruments classified as Level 2 of the fair value hierarchy are valued using a number of modeling approaches that take into account observable market levels, benchmark rates, and foreign exchange rates.

Additional information is available in the System's separately issued financial statements, which may be obtained from www.varetire.org.

Component Units

Investment Derivative Instruments

The Virginia Housing Development Authority (major component unit) enters into forward sales contracts for the delivery of GNMA and FNMA securities in order to lock in the sales price for the securitization of certain single-family mortgage loans. The contracts offset changes in interest rates between the time of the loan reservations and the securitization of such loans into GNMA and FNMA securities. These contracts are considered investment derivative instruments, such that their change in fair value is reported as investment derivative gains or losses in the accompanying financial statements. Fair values of the forwards are based on observable market prices for similar instruments traded on the secondary mortgage loan markets. The Authority's portfolio of investment derivatives is classified as Level 2 in the fair value hierarchy. The outstanding forward contracts, summarized by counterparty rating as of June 30, 2018, were as follows:

Counterparty Rating	Par	Concentration	Notional Amount	Market Value	Fair Value Asset (Liability)
A-1+/AA+	$ 195,000,000	51.2%	$ 197,885,156	$ 198,615,000	$ (729,844)
A-1/A+	120,500,000	31.6%	123,101,601	123,509,453	(407,852)
A-1/A+	39,500,000	10.4%	40,593,008	40,662,422	(69,414)
Baa2/BBB	26,000,000	6.8%	26,137,305	26,287,656	(150,351)
	$ 381,000,000	100.0%	$ 387,717,070	$ 389,074,531	$ (1,357,461)

Investment Derivative Instruments – Ineffective Hedges

During fiscal year 2015, the University of Virginia (UVA) (nonmajor) refunded the Series 2003A bonds and the commercial paper associated with the fixed-payer interest rate swaps which terminated hedge accounting. The fixed-payer interest rate swaps were no longer effective hedges. As of June 30, 2018, the negative fair value of the swaps of $25.2 million is included in other liabilities and the change in fair value of positive $5.9 million was reported as investment earnings in the accompanying financial statements. During fiscal year 2015, UVA established two fixed-receiver interest rate swaps with a total notional amount of $128.0 million to provide a hedge against fixed interest rates on Series 2015B bonds. These swaps were reevaluated as of June 30, 2016, and determined to no longer be effective hedges. As of June 30, 2018, the negative fair value of the fixed-receiver interest rate swaps of $2.7 million is included in other liabilities and the change in fair value of negative $2.2 million is included in investment earnings in the accompanying financial statements. The derivative instruments are classified as Level 2 of the fair value hierarchy. Additional information regarding the institution's derivative instruments is available at www.virginia.edu.

Hedging Derivative Instruments

As of June 30, 2018, the Virginia Commonwealth University (VCU) (nonmajor) had two fixed-payer interest rate swaps with a notional amount of $51.8 million, which declines to $4.8 million at the termination date of November 1, 2030. The swaps are used as cash flow hedges by VCU in order to provide a hedge against changes in interest rates on variable rate Series 2012A and 2012B bonds. The Series 2012A and 2012B bonds refunded prior Series 2006A and 2006B bonds that resulted in the termination of the prior hedging relationship between the interest rate swaps and the 2006A and 2006B bonds. At the time of the refunding in November 2012, the accumulated change in fair value of the interest rate swaps was negative $14.1 million and was included in the calculation of the deferred loss on refunding. There was also a reestablishment of hedge accounting on the new debt. As of June 30, 2018, the negative fair value of VCU's swaps of $5.1 million is included in other liabilities and the cumulative change in fair value of VCU's swaps since reestablishing hedge accounting of $9.0 million is included in deferred inflows of resources in the accompanying financial statements. The derivative instruments are classified as Level 2 of the fair value hierarchy.

As of June 30, 2018 the Medical College of Virginia Hospitals (MCVH), which is a division of the Virginia Commonwealth University Health System Authority (a blended component unit of VCU), had two interest rate swap agreements with a notional amount of $116.9 million and another interest rate swap agreement with a notional amount of $63.2 million. The swaps are used as cash flow hedges by MCVH in order to provide a hedge against changes in interest rates on variable rate Series 2013A and 2013B bonds. The Series 2013A and 2013B bonds refunded prior Series 2005 and 2008 bonds that resulted in the termination of the prior hedging relationship between the interest rate swaps and the Series 2005 and 2008 bonds. At the time of the refunding in June 2013, the accumulated change in fair value of the interest rate swaps was negative $42.1 million and was included in the calculation of the deferred loss on refunding. There was also a reestablishment of hedge accounting on the new debt. As of June 30, 2018, the negative fair value of MCVH's swaps of $34.6 million is included in other liabilities and the cumulative change in fair value of MCVH's swaps of $7.5 million is included in deferred inflows of resources in the accompanying financial statements. The derivative instruments are classified as Level 2 of the fair value hierarchy.

The following schedule shows debt service requirements of VCU and MCVH bonds payable hedged debt of $231.9

million and net receipts/payments on associated derivative instruments. These amounts assume that current variable and reference rates on the hedging instruments will remain the same for their terms. As these rates vary, net receipt/payments on the hedging instruments will vary. Additional information is available in the separately issued financial statements of the higher education institution.

Maturity	Principal	Interest	Derivative Instruments, Net	Total
2019	$ 6,085,000	$ 4,884,078	$ 3,968,554	$ 14,937,632
2020	6,385,000	4,736,762	3,860,149	14,981,911
2021	6,615,000	4,583,898	3,746,397	14,945,295
2022	6,915,000	4,424,427	3,628,518	14,967,945
2023	7,180,000	4,258,613	3,505,250	14,943,863
2024-2028	57,640,000	17,707,716	15,151,051	90,498,767
2029-2033	68,180,000	10,102,358	9,755,927	88,038,285
2034-2038	72,875,000	2,910,580	3,895,823	79,681,403
Total	$ 231,875,000	$ 53,608,432	$ 47,511,669	$ 332,995,101

Various foundations of higher education institutions have derivative instruments. The foundations follow FASB rather than GASB reporting requirements. Disclosures for the foundations' derivatives can be found in the separately issued financial statements of the foundations.

16. RETIREMENT AND PENSION SYSTEMS

A separately issued financial report that includes financial statements and required supplemental information for each of the individual plans discussed below is publicly available. Copies may be obtained from the Virginia Retirement System website at www.varetire.org.

A. Administration

The Virginia Retirement System (the System) is an independent agency of the Commonwealth that administers pension plans, other employee benefit plans, and other funds for Commonwealth employees, teachers, political subdivision employees, and other qualifying employees. The Board of Trustees is responsible for the general administration and operation of the plans. The Board consists of five members appointed by the Governor and four members appointed by the Joint Rules Committee, all subject to confirmation by the General Assembly. The Board of Trustees appoints a director to serve as the chief administrative officer of the System and a chief investment officer to direct, manage, and administer the investment of the System's funds. The Board of Trustees has appointed BNY Mellon as the custodian of designated assets of the System.

The System administers four pension trust funds: the Virginia Retirement System (VRS); State Police Officers' Retirement System (SPORS); Virginia Law Officers' Retirement System (VaLORS); and the Judicial Retirement System (JRS). In addition to the pension plans, the System administers five Other Employee Benefit Plans: Group Life Insurance Fund; Retiree Health Insurance Credit Fund; the Virginia Sickness and Disability Program (VSDP); the Line of Duty Act Trust Fund; and the Virginia Local Disability Program (VLDP).

B. Summary of Significant Accounting Policies (Virginia Retirement System)

Basis of Accounting

The financial statements of the pension and other employee benefit trust funds are prepared using the flow of economic resources measurement focus and the accrual basis of accounting consistent with the plans. Employee and employer contributions are recognized when due, pursuant to formal commitments, as well as statutory or contractual requirements. Investment income is recognized as earned by the plans. Benefits and refunds are recognized when due and payable in accordance with the terms of the plans.

Method Used to Value Investments

Investments are reported at fair value as determined by the System's master custodian, BNY Mellon, from its Global Pricing System. This pricing system assigns a price source, based on asset type and the vendor pricing products to which the master custodian subscribes, for every security held immediately following its acquisition. Prices supplied by these sources are monitored on a daily basis by the master custodian.

When a pricing source is unable to provide a price, quotes are sought from major investment brokers and market-making dealers; or internal calculations are applied if feasible. As a last resort, the master custodian will contact investment managers for a price. The master custodian prices commingled funds, partnerships, and real estate assets from statements received from the funds, partnerships, or investment managers.

The pricing sources utilized by the master custodian provide daily prices for equity securities, corporate, government and mortgage-backed fixed income securities, private placement securities, futures and options on futures, open-ended funds, and foreign exchange rates. Depending on the vendor, collateralized mortgage obligations (CMOs), adjustable rate mortgages (ARMs) and asset-backed securities are priced daily, weekly or twice a month and at month-end. Municipal fixed income securities and options on Treasury/Government National Mortgage Association securities are priced at month-end.

The System's investment guidelines for each specific portfolio limits investments in any corporate entity to no more than 5.0 percent of the market value of the account for both the internally and externally managed portfolios. There is no concentration of investments in any one organization that represents 5.0 percent or more of plan net position available for benefits.

C. Plan Description

The Virginia Retirement System (VRS) is a qualified governmental retirement plan that administers three retirement benefit structures: Plan 1, Plan 2, and Hybrid Plan, for state employees, public school board employees, employees of participating political subdivisions, and other qualifying employees. VRS is a combination of mixed-agent and cost-sharing, multiple-employer retirement plans. Each plan's accumulated assets may legally be used to pay all the plan benefits provided to any of the plan's members, retirees, and beneficiaries. Contributions for fiscal year 2018 were $3.3 billion with a reserve balance available for benefits of $74.1 billion. As of June 30, 2018, the VRS had 835 contributing employers.

The Commonwealth also administers the following single-employer retirement plans and benefit structures:

- State Police Officers' Retirement System (SPORS) – Plan 1 and Plan 2
- Virginia Law Officers' Retirement System (VaLORS) – Plan 1 and Plan 2
- Judicial Retirement System (JRS) – Plan 1, Plan 2, and Hybrid Plan

All full-time, salaried permanent employees of VRS participating employers are automatically covered under VRS, SPORS, VaLORS or JRS with the following exceptions: (1) certain full-time faculty and administrative staff of public colleges and universities; and (2) eligible classified employees of the two state teaching hospitals. These employees have the option to elect not to participate in the Virginia Retirement System. Benefit provisions and all other requirements are established by Title 51.1 of the *Code of Virginia*.

Benefits vest for all plans after five years of service credit. Vested VRS members in the VRS Plan 1 are eligible for an unreduced retirement benefit at age 65 with at least five years of service credit or age 50 with at least 30 years of service credit as elected by the employer. Vested VRS members in the VRS Plan 2 and the Hybrid Plan are eligible for unreduced retirement benefits at normal social security retirement age with at least five years of service credit or when age and service credit equal 90. Vested SPORS and VaLORS members in both the VRS Plan 1 and the VRS Plan 2 are eligible for an unreduced benefit at age 60 with at least five years of hazardous duty service credit or age 50 with at least 25 years of total service credit.

Annual retirement benefits are payable monthly for life in an amount equal to 1.7 percent of eligible members' average final compensation (AFC) for each year of service credit. Under the VRS Plan 2, the multiplier for general employees was reduced to 1.65 percent beginning January 1, 2013. Under the Hybrid Plan, the multiplier for the defined benefit component is 1.0 percent. AFC is the average of the member's 36 consecutive months of highest creditable compensation for members under the VRS Plan 1. Under the VRS Plan 2 and the Hybrid Plan, a member's AFC is the average of the member's 60 consecutive months of highest creditable compensation. The benefit for members of SPORS is calculated using a 1.85 percent multiplier. Members of SPORS also are eligible for a hazardous duty supplement, paid monthly, until they reach full Social Security retirement age.

Members of VaLORS hired before July 1, 2001, were allowed to make a one-time election to increase the multiplier from 1.7 to 2.0 percent instead of receiving a monthly hazardous duty supplement. VaLORS members who elected to retain the 1.7 percent multiplier are eligible for the supplement until age 65. Members of VaLORS hired after June 20, 2001, have their benefit computed using the 2.0 percent multiplier and are not eligible for the supplement.

Members of JRS receive weighted years of service credit for each year of actual service under JRS. VRS, SPORS, VaLORS, and JRS also provide death and disability benefits.

A cost-of-living allowance (COLA), based on changes in the Consumer Price Index and limited to 5.0 percent per year for VRS Plan 1 and 3.0 percent for VRS Plan 2 and Hybrid Plan, is granted on July 1 of the second calendar year after retirement and is effective each July 1 thereafter. Beginning January 2013, a member who retires with less than 20 years of service must receive an allowance for one full calendar year after reaching unreduced retirement age to be eligible for a COLA. Members within five years of eligibility for an unreduced benefit as of January 1, 2013 were grandfathered.

Benefits for all vested members are actuarially reduced if they retire before becoming eligible for an unreduced retirement benefit, provided they meet age requirements for a reduced retirement benefit.

As required by Title 51.1 of the *Code of Virginia*, members contribute 5.0 percent of their annual compensation to the retirement plans. If a member leaves covered employment, the accumulated contributions plus earned interest may be refunded to the member. Each participating employer is required by state statute to contribute the remaining amounts necessary to fund the retirement plans using the entry age normal actuarial cost method adopted by the Board of Trustees. Contributions for fiscal year 2018 were $42.1 million, $32.6 million, and $91.3 million, and reserved balances available for benefits were $836.7 million, $544.2 million, and $1.4 billion, for SPORS, JRS, and VaLORS, respectively. State statute may be amended only by the General Assembly. To the extent that the employer's long-term obligation to provide pension benefits (total pension liability) is larger than the value of the assets available in the plan to pay these benefits (fiduciary net position), there is a net pension liability which is reported in the accompanying financial statements as a component of Long-term Liabilities Due in More than One Year.

Further information about the benefits provided in these retirement plans and their different benefit structures can be found in the Virginia Retirement System's Comprehensive Annual Financial Report.

The following table provides participant information.

	VRS	SPORS	VaLORS	JRS	2018 Total
Retirees and Beneficiaries Receiving Benefits	56,980	1,336	4,702	512	63,530
Terminated Employees Entitled to Benefits but not Receiving Them	11,654	129	762	-	12,545
Total	68,634	1,465	5,464	512	76,075
Active Members:					
Vested	53,743	1,591	5,001	332	60,667
Non-Vested	23,594	296	3,741	85	27,716
Total	77,337	1,887	8,742	417	88,383

D. Funding Policy

The funding policy of the retirement plans provides for periodic employer contributions at actuarially determined rates, which will remain relatively level over time as a percentage of payroll and will accumulate sufficient assets to meet the cost of all basic benefits when due. Contribution rates are developed using the entry age normal cost method for both normal cost and amortization of the unfunded actuarial accrued liability. Gains and losses are reflected in the unfunded actuarial accrued liability that is being amortized as a level percentage of payroll within 30 years or less.

The System's actuary, Cavanaugh MacDonald Consulting, LLC, computed the amount of contributions to be provided by state agency employers, state police and other Virginia law employers. The contribution rates for fiscal year 2018 were based on the actuary's valuation as of June 30, 2015. Employer contributions by the Commonwealth to VRS, SPORS, VaLORS, and JRS were 13.5 percent, 28.5 percent, 21.1 percent, and 42.0 percent, respectively.

In addition to determining contribution requirements, the actuarial computations present an estimate of the discounted present value of the prospective accrued liability contributions that employers will have to pay in the future so that such contributions, together with the assets on hand, the normal contributions to be made in the future by employers and members and the income earned by investing funds, will be sufficient to provide all benefits to be paid to present members in the future as well as the annuitants and their designated beneficiaries.

E. Changes in Net Pension Liability

The total pension liability was determined based on the actuarial valuation as of June 30, 2016, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017. The following tables (dollars in thousands) show the Commonwealth's total pension liability, plan fiduciary net position, and net pension liability in total and individually for the VRS, SPORS, JRS, and VaLORS for the current and prior year.

Primary Government

	Totals (1)		
	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2017	$ 16,249,940	$ 11,376,579	$ 4,873,361
Changes for the year			
Service cost	289,669	-	289,669
Interest	1,106,916	-	1,106,916
Differences between actual and expected experience	(69,058)	-	(69,058)
Assumption changes	(68,267)	-	(68,267)
Contributions - employer	-	424,183	(424,183)
Contributions - member	-	136,794	(136,794)
Net investment income	-	1,366,097	(1,366,097)
Benefit payments, including refunds	(883,689)	(885,733)	2,044
Administrative expense	-	(9,373)	9,373
Other changes	-	(1,414)	1,414
Net changes	375,571	1,030,554	(654,983)
Balances at June 30, 2018	$ 16,625,511	$ 12,407,133	$ 4,218,378

	VRS			SPORS		
	Increase (Decrease)			Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2017	$ 12,708,223	$ 9,060,058	$ 3,648,165	$ 1,086,958	$ 730,688	$ 356,270
Changes for the year						
Service cost	205,224	-	205,224	18,880	-	18,880
Interest	866,283	-	866,283	74,042	-	74,042
Differences between actual and expected experience	(47,657)	-	(47,657)	(5,327)	-	(5,327)
Assumption changes	42,662	-	42,662	(68,707)	-	(68,707)
Contributions - employer	-	296,790	(296,790)	-	31,888	(31,888)
Contributions - member	-	111,633	(111,633)	-	5,701	(5,701)
Net investment income	-	1,088,556	(1,088,556)	-	87,265	(87,265)
Benefit payments, including refunds	(683,414)	(688,556)	5,142	(58,444)	(58,444)	-
Administrative expense	-	(6,437)	6,437	-	(926)	926
Other changes	-	(966)	966	-	(99)	99
Net changes	383,098	801,020	(417,922)	(39,556)	65,385	(104,941)
Balances at June 30, 2018	$ 13,091,321	$ 9,861,078	$ 3,230,243	$ 1,047,402	$ 796,073	$ 251,329

	JRS			VaLORS		
	Increase (Decrease)			Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2017	$ 621,605	$ 467,389	$ 154,216	$ 1,833,154	$ 1,118,426	$ 714,728
Changes for the year						
Service cost	22,144	-	22,144	43,377	-	43,377
Interest	42,081	-	42,081	124,510	-	124,510
Differences between actual and expected experience	(14,774)	-	(14,774)	(1,339)	-	(1,339)
Assumption changes	16,114	-	16,114	(58,331)	-	(58,331)
Contributions - employer	-	27,612	(27,612)	-	67,854	(67,854)
Contributions - member	-	3,272	(3,272)	-	16,176	(16,176)
Net investment income	-	56,029	(56,029)	-	134,241	(134,241)
Benefit payments, including refunds	(40,895)	(40,895)	-	(100,936)	(97,838)	(3,098)
Administrative expense	-	(594)	594	-	(1,416)	1,416
Other changes	-	(64)	64	-	(285)	285
Net changes	24,670	45,360	(20,690)	7,281	118,732	(111,451)
Balances at June 30, 2018	$ 646,275	$ 512,749	$ 133,526	$ 1,840,435	$ 1,237,158	$ 603,277

(1) This table includes Total Pension Liability, Plan Fiduciary Net Position and Net Pension Liability of $78,295, $74,964 and $3,331, respectively, for the Hampton Roads Transportation Accountability Commission (Commission) (nonmajor governmental fund) which are not related to the VRS State Plan. The beginning balances have been restated for the inclusion of the Commission as discussed in Note 2.

Component Units

	Totals		
	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2017	$ 10,402,834	$ 7,400,804	$ 3,002,030
Changes for the year			
Service cost	168,823	-	168,823
Interest	707,479	-	707,479
Differences between actual and expected experience	(38,436)	-	(38,436)
Assumption changes	29,177	-	29,177
Contributions - employer	-	244,596	(244,596)
Contributions - member	-	91,180	(91,180)
Net investment income	-	887,053	(887,053)
Benefit payments, including refunds	(582,037)	(579,993)	(2,044)
Administrative expense	-	(5,299)	5,299
Other changes	-	(802)	802
Net changes	285,006	636,735	(351,729)
Balances at June 30, 2018	$ 10,687,840	$ 8,037,539	$ 2,650,301

	VRS			VaLORS		
	Increase (Decrease)			Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at June 30, 2017	$ 10,250,370	$ 7,307,784	$ 2,942,586	$ 152,464	$ 93,020	$ 59,444
Changes for the year						
Service cost	165,011	-	165,011	3,812	-	3,812
Interest	696,536	-	696,536	10,943	-	10,943
Differences between actual and expected experience	(38,318)	-	(38,318)	(118)	-	(118)
Assumption changes	34,303	-	34,303	(5,126)	-	(5,126)
Contributions - employer	-	238,634	(238,634)	-	5,962	(5,962)
Contributions - member	-	89,758	(89,758)	-	1,422	(1,422)
Net investment income	-	875,255	(875,255)	-	11,798	(11,798)
Benefit payments, including refunds	(581,811)	(576,669)	(5,142)	(226)	(3,324)	3,098
Administrative expense	-	(5,175)	5,175	-	(124)	124
Other changes	-	(777)	777	-	(25)	25
Net changes	275,721	621,026	(345,305)	9,285	15,709	(6,424)
Balances at June 30, 2018	$ 10,526,091	$ 7,928,810	$ 2,597,281	$ 161,749	$ 108,729	$ 53,020

The amounts in the previous tables include governmental, business-type, and component unit activity for the Commonwealth's VRS State Plan and the fiduciary net pension liability of $67,324. Additionally, the primary government totals table includes non-VRS State Plan amounts for the Hampton Roads Transportation Accountability Commission (nonmajor governmental fund). All component unit tables exclude the non-VRS State Plan net pension liability of $38.4 million for all component units.

The 2016 actuarial valuations were prepared using the entry age normal cost method. The actuarial assumptions included (a) 7.0 percent investment rate of return, per year compounded annually; (b) projected salary increases ranging from 3.5 percent to 6.0 percent, including a 2.5 percent inflation component and (c) COLA of 2.5 percent for Plan 1 and 2.3 percent for Plan 2. The projection of benefits for financial reporting purposes does not explicitly incorporate the potential effects of legal or contractual funding limitations.

For more detailed actuarial information, refer to the Virginia Retirement System's financial statements, including mortality rates shown in the "Actuarial Assumptions and Methods – Pension Plans" schedule.

F. Changes to and Sensitivity of Discount Rate

The discount rate used to measure the total pension liability was 7.0 percent. The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be based on the actuarially determined rates based on the Board's funding policy, which certifies the required rates under Title 51.1 of the *Code of Virginia*. Beginning on July 1, 2018, all agencies are assumed to contribute 100.0 percent of the actuarially determined contribution rates. Based on those assumptions, the fiduciary net position was projected to be available to make all of the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of the projected benefit payments to determine the total pension liability. In accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans – an amendment of GASB Statement No. 25,* regarding the disclosure of the sensitivity of the net pension liability to changes in the discount rate, the table below presents the employers' net pension liability for each of the plans calculated using the discount rate of 7.0 percent, as well as what the employers' net pension liability would be if it were calculated using a discount rate that is 1.0 percent lower (6.0 percent) or 1.0 percent higher (8.0 percent) than the current rate. The following table (dollars in thousands) shows the Commonwealth's changes in the discount rate.

Primary Government

VRS			SPORS		
Net Pension Liability			Net Pension Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)	1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 4,771,507	$ 3,230,243	$ 1,935,915	$ 376,219	$ 251,329	$ 146,086

JRS			VaLORS		
Net Pension Liability			Net Pension Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)	1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 192,949	$ 133,526	$ 81,927	$ 841,612	$ 603,277	$ 406,233

Component Units

VRS			VaLORS		
Net Pension Liability			Net Pension Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)	1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 3,836,536	$ 2,597,281	$ 1,556,574	$ 73,966	$ 53,020	$ 35,702

The long-term expected rate of return on the System's investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of 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 allocations are based on the Strategic Asset Allocation Implementation Schedule and Allowable Ranges document, which was approved by the VRS Board of Trustees on June 7, 2016. Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation 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	40.0%	4.5%	1.8%
Fixed Income	15.0%	0.7%	0.1%
Credit Strategies	15.0%	4.0%	0.6%
Real Estate	15.0%	5.8%	0.9%
Private Equity	15.0%	9.5%	1.4%
Total	100.0%		4.8%
Inflation			2.5%
Expected arithmetic nominal return			7.3%

The allocation in the previous table provides a one-year expected return of 7.3 percent. 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 pension 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 percent, including expected inflation of 2.5 percent.

G. Pension Related Deferred Outflows and Deferred Inflows

GASB Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27,* requires certain pension related items to be reported as either deferred outflows or deferred inflows of resources. The following tables (dollars in thousands) summarize these amounts as of June 30, 2018, in total and by individual plan.

Primary Government (1)

	Totals (2)	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 8,618	$ 133,144
Changes of assumptions	43,285	97,676
Net difference between projected and actual earnings on plan investments	-	172,478
Changes in proportion and difference between employer contributions and proportionate share of contributions	105,110	115,634
Employer contributions subsequent to the Measurement Date	430,064	-
Total	$ 587,077	$ 518,932

	VRS		SPORS	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 6,851	$ 97,806	$ -	$ 15,615
Changes of assumptions	31,378	-	-	58,468
Net difference between projected and actual earnings on plan investments	-	137,999	-	10,690
Changes in proportion and difference between employer contributions and proportionate share of contributions	85,776	93,497	-	-
Employer contributions subsequent to the Measurement Date	299,833	-	35,391	-
Total	$ 423,838	$ 329,302	$ 35,391	$ 84,773

	JRS		VaLORS	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 18,208	$ 1,767	$ 1,515
Changes of assumptions	11,907	-	-	39,204
Net difference between projected and actual earnings on plan investments	-	7,089	-	16,698
Changes in proportion and difference between employer contributions and proportionate share of contributions	-	-	19,334	22,137
Employer contributions subsequent to the Measurement Date	28,118	-	66,648	-
Total	$ 40,025	$ 25,297	$ 87,749	$ 79,554

Component Units (1) (3)

	Totals	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 5,667	$ 78,778
Changes of assumptions	25,226	3,447
Net difference between projected and actual earnings on plan investments	-	112,409
Changes in proportion and difference between employer contributions and proportionate share of contributions	56,741	46,217
Employer contributions subsequent to the Measurement Date	249,752	-
Total	$ 337,386	$ 240,851

	VRS		VaLORS	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 5,513	$ 78,644	$ 154	$ 134
Changes of assumptions	25,226	-	-	3,447
Net difference between projected and actual earnings on plan investments	-	110,942	-	1,467
Changes in proportion and difference between employer contributions and proportionate share of contributions	53,052	45,331	3,689	886
Employer contributions subsequent to the Measurement Date	243,666	-	6,086	-
Total	$ 327,457	$ 234,917	$ 9,929	$ 5,934

(1) During fiscal year 2018, the Commonwealth recognized pension expense for the primary government and component units of $281,651 (dollars in thousands) and $198,834 (dollars in thousands), respectively.

(2) This table includes deferred outflows of resources and deferred inflows of resources of $74,066 and $6,301, respectively, for the Hampton Roads Transportation Accountability Commission (nonmajor governmental), not related to the VRS State Plan.

(3) The component unit amounts exclude deferred outflows of resources and deferred inflows of resources of $20,170 (dollars in thousands) and $16,542 (dollars in thousands), respectively, not related to the VRS State Plan.

Deferred Amounts to be Recognized in Fiscal Years Following Reporting Date

The following tables (dollars in thousands) provide the net estimated amount of the deferred inflows and deferred outflows of resources that will be recognized in the Commonwealth's pension expense for each of the next five fiscal years. These amounts exclude employer contributions made subsequent to the measurement date as those contributions will reduce the fiscal year 2019 net pension liability.

Primary Government

	VRS	SPORS	JRS	VaLORS
2019	$ (129,137)	$ (21,337)	$ (9,934)	$ (31,036)
2020	18,692	(10,335)	940	(14,647)
2021	1,571	(13,773)	341	(868)
2022	(96,423)	(20,459)	(4,737)	(11,902)
2023	-	(11,033)	-	-
Thereafter	-	(7,836)	-	-

Component Units

	VRS	VaLORS
2019	$ (95,061)	$ (1,110)
2020	13,760	(524)
2021	1,156	(31)
2022	(70,981)	(426)
2023	-	-

H. Defined Contribution Plan for Political Appointees

Officers appointed by the Governor, officers elected by popular vote or the General Assembly, and executive branch chief deputies and confidential assistants may participate in the deferred contribution plan for Political Appointees, rather than the VRS. This optional retirement plan is authorized by the *Code of Virginia* and offered through the ICMA-RC. This is a defined contribution plan where the retirement benefits are based upon the Commonwealth's 12.3 percent and the employee's (5.0 percent) contributions, plus interest and dividends. The Commonwealth pays the required employee contributions. During the year ended June 30, 2018, the total contributions to this plan were $1.3 million. As of June 30, 2018, the amount to be paid to participants upon retirement is $15.2 million. Additionally, no assets are accumulated for this plan in a GASB-compliant trust.

The summary of significant accounting policies for the plan is in accordance with those discussed in Note 16.B.

I. Defined Contribution Plan for Public School Superintendents

The Public School Superintendent Plan is a defined contribution pension plan that provides optional postemployment benefits for school superintendents. This plan is authorized by the *Code of Virginia*. The Board of Trustees of the System manages the investments of the fund as custodian. School boards may elect to offer this plan as an option to the standard VRS plan that is available for school board members. Contributions are provided by the school board for credit to the member. As of June 30, 2018, there were two participants in this plan. There were no contributions to the plan for fiscal year 2018.

J. Virginia Supplemental Retirement Plan

The Public School Teacher Supplemental Retirement Plan is a defined contribution pension plan established by the Department of Education to provide an optional postemployment benefit plan for turnaround specialists in the public school system. This plan is utilized as an incentive to attract highly skilled teachers for participating public schools pursuant to Title 51.1-617 of the *Code of Virginia*. The Board of Trustees of the System manages the investments of the fund as custodian. School boards may elect to offer this plan as an option to the standard VRS plan that is available for school board members. Contributions are provided by the school boards for credit to the members. As of June 30, 2018, there were two participants in this plan. There were no contributions to the plan for fiscal year 2018.

K. Higher Education (Nonmajor Component Units)

The Commonwealth's colleges and universities participate in the retirement plans administered by VRS. In addition, full-time faculty and certain administrative staff of the Commonwealth's colleges and universities may participate in optional retirement plans as authorized by Section 51.1-126 of the *Code of Virginia* rather than the VRS retirement plans. These optional retirement plans are defined contribution plans offered through the Teachers Insurance and Annuity Association (TIAA), Fidelity Investments, and DCP. There are two defined contribution plans. Plan 1 is for employees hired prior to July 1, 2010, and retirement benefits received are based upon the employer's 10.4 percent contributions, plus net investment gains. Plan 2 is for employees hired on or after July 1, 2010, and retirement benefits received are based upon the employer's contribution, not to exceed 8.9 percent, and the employee's 5.0 percent contribution, plus net investment gains. For Plan 2, the employer contributions for fiscal year 2018 were 8.5 percent except for the University of Virginia (nonmajor) which were 8.9 percent. Vesting is full and immediate for both employer and employee contributions, except UVA employees hired after July 1, 2014 are fully vested in the UVA contributions after two years of continuous employment. For fiscal year 2018, total pension expense recognized was $158.2 million and contributions were calculated using the base salary amount of $1.7 billion. As of June 30, 2018, the Commonwealth's colleges and universities had accrued $11.0 million in employer liabilities related to these plans.

University of Virginia Medical Center (part of the University of Virginia – nonmajor) employees hired after July 1, 1999, cannot participate in Plan 1 or Plan 2 noted above but have the option of participating in the Medical Center's Optional Retirement Plan. For information regarding this plan, see the institution's separately issued financial statements.

Certain employees of Virginia Commonwealth University (nonmajor) are participating in The Select Plan, which is a 401(a) defined contribution plan. Participation is limited to executives by invitation. For information regarding this plan, see the University's website at www.vcu.edu.

Prior to July 1, 1997, certain employees of the Virginia Commonwealth University Health System Authority (Authority) (a blended component unit of Virginia Commonwealth University – nonmajor) were eligible to participate in the VRS defined benefit pension plan. Effective July 1, 1997, the Authority established the Virginia Commonwealth University Health System Authority Defined Contribution Plan (VCUHS 401(a) Plan) and the Virginia Commonwealth University Health System Authority Health Care Providers Defined Contribution Plan (HCP Plan). The Authority and component units, MCV Associated Physicians (MCVAP), VCU Community Memorial Hospital (CMH), and the Children's Hospital (Children's), participate in the VCUHS 401(a) as well as sponsor the VCUHS Savings Plan (VCUHS 457(b) Plan). Healthcare providers hired between July 1, 1993 and July 1, 1997, are eligible to participate in the HCP Plan. MCVAP also sponsors the MCVAP 401(a) Retirement Plan. VA Premier (a component of the Authority) adopted a 401(k) Plan. For information regarding these plans, see the Authority's separately issued financial statements.

The Center for Innovative Technology (CIT) is a blended component unit of the Innovation and Entrepreneurship Investment Authority (nonmajor). The CIT has a defined contribution retirement plan covering substantially all employees. Under the plan, CIT makes contributions fixed at a percentage of each employee's compensation to pay premiums for individual retirement annuity contracts written by the Teachers Insurance and Annuity Association (TIAA) and the College Retirement Equities Fund (CREF). For information regarding this plan, see the Authority's separately issued financial statements.

L. Other Component Units

Note 1.B. outlines the component units included in the Commonwealth's reporting entity. The Virginia Public Building Authority (blended - primary government), the Virginia Public School Authority (major), the Virginia College Building Authority (major), and the Virginia School for the Deaf and Blind Foundation (nonmajor) have no employees. Virginia Resources Authority (major) and the following nonmajor component units participate in the retirement plans administered by VRS: the Virginia Economic Development Partnership, the Virginia Small Business Financing Authority, the Hampton Roads Sanitation District Commission, the Virginia Biotechnology Research Partnership Authority, the Virginia Tourism Authority, the Tobacco Region Revitalization Commission, the Virginia Foundation for Healthy Youth, and the Fort Monroe Authority.

The Virginia Housing Development Authority (major) has two defined contribution plans and incurs employment retirement savings expense under these plans equal to between 8.0 and 11.0 percent of full-time employees' compensation. For additional information regarding these plans, see the Authority's website at www.vhda.com.

The Virginia Outdoors Foundation (nonmajor) maintains a 401(k) contribution plan and provides an employer contribution to all eligible employees of 2.0 percent of their salary. Employees can contribute to the plan up to the IRS limit and the Foundation will match up to an additional 2.0 percent for a maximum of 4.0 percent of an employees' contribution. For information regarding this plan, see the Foundation's website at www.virginiaoutdoorsfoundation.org.

The Virginia Commercial Space Flight Authority (nonmajor) maintains a 401(a) contribution plan and provides an employer contribution to all eligible employees of 11.0 percent of their base salary. For information regarding this plan, see the Authority's separately issued financial statements.

The Virginia Port Authority (VPA) (nonmajor) maintains two defined benefit plans for its employees. Employees of record on July 1, 1997, had the option of continuing to maintain their benefit status as a State employee, and their benefits maintained under the VRS, or elect to be covered under a newly created pension plan (the VPA Defined Benefit Plan). The VPA Defined Benefit Plan covers all employees hired between July 1, 1997 and February 1, 2014. Employees hired after February 1, 2014, are eligible for a defined contribution plan only. On January 1, 2015, the plan was amended to add certain employees who transferred from (VIT), referred to as "Legacy VIT Participants, to the VPA. The Virginia International Terminals (VIT) (a blended component unit of VPA – nonmajor) has a Virginia International Terminals, LLC Pension Plan that is a single employer, noncontributory defined benefit pension plan administered by VIT. A stand-alone financial report is issued by VITPP and is available upon request from VPA's administrative offices. For information regarding these plans, see the Authority's website at www.portofvirginia.com.

Employees of the Virginia Museum of Fine Arts Foundation (nonmajor) who are age 21 or older are eligible to participate in the Employee's Savings Plan, a 401(k) defined contribution profit sharing plan. Also, the Foundation entered into a supplemental retirement agreement to pay a key employee of the Museum upon retirement the difference between the amount accrued under the VRS retirement plan, based on salary, and the amount based on the supplemental salary. For additional information regarding these plans, see the Foundation's separately issued financial statements.

The Science Museum of Virginia Foundation (nonmajor) has a 403(b) defined contribution pension plan through the TIAA-CREF Retirement Plan for employees meeting age and service requirements. For additional information regarding this plan, see the Foundation's separately issued financial statements.

17. OTHER EMPLOYMENT BENEFITS

In addition to the pension plans, the Commonwealth participates in two other employment benefit plans, Group Life Insurance and the Virginia Sickness and Disability Program, which are administered by the Virginia Retirement System (the System). The System administers a third other employment benefit plan, the Volunteer Firefighters' and Rescue Squad Workers' Fund, in which the Commonwealth does not participate, but may provide funding. The significant accounting policies for all three plans are the same as those described in Note 16 for pension plans. A separately issued financial report that includes financial statements for the Group Life Insurance and Virginia Sickness and Disability Program is publicly available. Copies may be obtained from the Virginia Retirement System website at www.varetire.org.

Group Life Insurance

The Group Life Insurance Plan was established for Commonwealth employees, teachers, employees of political subdivisions participating in the VRS, state police officers, other state law enforcement and correctional officers, judges, and other qualifying employees. The program provides life insurance for natural death coverage equal to a member's annual compensation rounded to the next highest $1,000 and then doubled. Accidental death coverage is double the natural death benefit. The program also provides coverage for accidental dismemberment and accidental blindness, a safety belt benefit, a repatriation benefit, a felonious assault benefit and an accelerated death benefit for terminal conditions. Approximately 361,282 members participate in the program as of June 30, 2018.

Participating employers and their covered employees are required by Title 51.1 of the *Code of Virginia* to contribute to the cost of group life insurance benefits. Employers may assume the employees' contributions.

An optional Group Life Insurance Fund was established for members covered under the group life program as a supplement to that plan. Members may purchase optional life insurance coverage for themselves, their spouses and/or their dependent children. The optional program provides natural death coverage equal to one, two, three or four times the member's annual compensation rounded to the next highest $1,000, up to a maximum of $750,000. Spouse coverage is available for up to one-half of the member's optional insurance amount. Minor children who are at least 15 days old can be insured for $10,000, $20,000 or $30,000, depending on the option chosen by the member. An additional accidental death and dismemberment benefit is payable for death or bodily injuries. Approximately 69,730 members were covered under this program as of June 30, 2018.

Optional group life insurance coverage ends for members when they retire or terminate their employment, or when their basic coverage ends. Optional life insurance amounts begin to reduce by 25.0 percent based on the retiree's age, beginning with the retiree's normal retirement age under his or her plan ending at age 80. Retirees may elect to continue coverage within 31 days of retirement. Spouse coverage terminates should a couple divorce or when the member leaves employment. Children's coverage ends with the termination of the member's coverage or when the child marries or turns 21 years of age (25 years of age for full-time college students).

Employers of members who elect optional life insurance coverage deduct the premiums from the members' paychecks, as required by Title 51.1 of the *Code of Virginia*. Premiums are based on the member's age and determined by the Board of Trustees. Because optional life insurance is an insured product, the carrier bills each employer directly, and the employer makes the contribution payments to the carrier. Any differences and adjustments are settled between the employer and the carrier.

Virginia Sickness and Disability Program

The System administers the Virginia Sickness and Disability Program (VSDP) to provide income protection in the event of a disability for eligible state employees hired on or after January 1, 1999. State agencies are required by Title 51.1 of the *Code of Virginia* to contribute to the cost of providing long-term disability benefits and administering the program.

VSDP benefits include sick, family and personal leave and short-term and long-term disability benefits. After a seven-calendar day waiting period following the first day of disability, eligible employees receive short-term disability benefits from 60.0 percent to 100.0 percent of their compensation. After 125 work days of short-term disability, eligible employees receive long-term disability benefits equal to 60.0 percent of their compensation. If the employee's condition becomes catastrophic, income replacement increases to 80.0 percent until the condition is no longer catastrophic. Long-term disability benefits continue until employees return to work, retire or reach age 65 (age 60 for state police officers and other state law enforcement and correctional officers) or die.

Full-time permanent salaried state employees, including state police officers and other Virginia law and correctional officers, are automatically enrolled in the VSDP. Part-time permanent salaried state employees who work at least 20 hours a week and accrue leave also are automatically enrolled. Teaching, administrative and research faculty of Virginia public colleges and universities who elect VRS as their retirement plan must make an irrevocable election to participate in either the VSDP or the institution's disability program. If there is no institution program, the faculty member is covered under VSDP.

Eligible state employees and state police officers employed before January 1, 1999, had the option to elect to participate in the VSDP or remain under the Commonwealth's existing sick leave program and retain their eligibility for disability retirement benefits under VRS and SPORS. (Members of VaLORS have been automatically enrolled in the VSDP since October 1, 1999, when VaLORS was created.) Eligible employees enrolled in the VSDP are not eligible for disability retirement benefits under VRS, SPORS, or VaLORS. Employees hired or rehired on or after July 1, 2009, must satisfy eligibility periods before becoming eligible for non-work related short-term disability coverage and certain income replacement levels. Approximately 78,183 members were covered under the program as of June 30, 2018.

Volunteer Firefighters' and Rescue Squad Workers' Fund

Volunteer firefighters and rescue squad workers may participate in an optional employment benefit plan. This optional plan is authorized by the *Code of Virginia*. The Board of Trustees of the System manages the investments of the fund as custodian. Members of the plan contribute $30 per quarter. The Commonwealth will contribute an amount determined by the Board and appropriated by the General Assembly, if such funds are appropriated, for a period not to exceed 20 years. For fiscal year 2018, there was $50,000 appropriated for administration of the program. As of June 30, 2018, there were 1,780 workers participating in the fund.

18. OTHER POSTEMPLOYMENT BENEFITS (OPEB)

The Governmental Accounting Standards Board (GASB) issued Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, as amended by GASB Statement No. 85, *Omnibus 2017*, which requires additional reporting and disclosures for other postemployment benefit plans (OPEB plans). These statements became effective for Virginia Retirement System (System-administered) and Department of Human Resource Management administered (DHRM-administered) OPEB plans beginning with the fiscal year ended June 30, 2018.

A. Virginia Retirement System (System-administered) OPEB Plans

1) Administration and Significant Accounting Policies

The System-administered defined benefit OPEB plans mentioned below have a trust that meets the requirements in GASB Statement No. 75. In addition, the net OPEB liability for these plans have a measurement date of June 30, 2017. As previously mentioned, a separately issued financial report that includes financial statements, notes and required supplementary information for each of the System-administered plans discussed below is publicly available. Copies may be obtained from the Virginia Retirement System website at www.varetire.org.

The administration and significant accounting policies for the System-administered OPEB plans are the same as those described in Note 16 for pension plans.

2) Plan Descriptions

Retiree Health Insurance Credit Program

The Retiree Health Insurance Credit Program is composed of a single-employer plan for state employees; a cost-sharing multiple-employer plan for teachers; three cost-sharing, multiple-employer plans for constitutional officers, social services employees and registrars; and an agent, multiple-employer plan for political subdivisions electing coverage. This note and the required supplementary information in this report is for the single-employer plan for state employees and also includes the state-funded noncontributing employer portion for constitutional officers, registrars, and their employees, as well as local social service employees.

The Retiree Health Insurance Credit (RHIC) for state employees provides benefits for retired state employees, state police officers, other state law enforcement, correctional officers, and judges who have at least 15 years of service credit under the retirement plans. Members of JRS receive weighted years of service credit for each year of actual service under JRS. VRS, SPORS, VaLORS, and JRS also provide death and disability benefits. The program provides a credit reimbursement of $4 per month per year of service credit against the monthly health insurance premiums of eligible retirees. There is no cap on the credit. Certain eligible employees who retire on disability or go on long-term disability under the Virginia Sickness and Disability Program are eligible for a credit not to exceed $120.

The following is the approximate number of employees covered by the RHIC plan for state employees on the measurement date of June 30, 2017:

	RHIC for State Employees
Inactive employees currently receiving benefit payments	44,658
Inactive employees entitled to but not yet receiving benefit payments	1,696
Active employees	107,840
Total	154,194

The health insurance credit plan for general registrars, constitutional officers, and their employees as well as local social service employees (RHIC Non-State) provides $1.50 per month per year of service with a maximum monthly credit of $45. The Commonwealth funds this credit. Benefit provisions and eligibility requirements are established by Title 51.1 of the *Code of Virginia*. The amount required to fund all credits is financed by the employers based on contribution rates determined by the System's actuary.

Virginia Sickness and Disability Program

The Virginia Sickness and Disability Program (VSDP) is a single-employer plan. It is also known as the Disability Insurance Trust Fund. The Commonwealth provides OPEB disability insurance benefits, in accordance with state statutes, to eligible retired and terminated employees. Eligible employees include 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 and full-time and part-time, salaried state employees covered under VRS, SPORS, and VaLORS. State agencies are required by Title 51.1 of the *Code of Virginia* to contribute to the cost of providing long-term disability benefits and administering the program. The following is the approximate number of employees covered by this plan on the measurement date of June 30, 2017:

	VSDP
Inactive employees currently receiving benefit payments	4,520
Inactive employees entitled to but not yet receiving benefit payments	-
Active employees	75,410
Total	79,930

Group Life Insurance Program

The Group Life Insurance Program (GLI) is a cost-sharing, multiple employer plan. Members whose employers participate in the Group Life Insurance Program are covered automatically under the Basic Group Life Insurance Program upon employment. This program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program, including certain employers that do not participate in VRS for retirement. At retirement or termination, accidental death benefits cease and natural death coverage reduces at a rate equal to 25.0 percent on January 1 of the first full calendar year following retirement or termination and on January 1 of each year thereafter, until it reaches 25.0 percent of its original value. These group life insurance benefit provisions and requirements are established by Title 51.1 of the *Code of Virginia*. Participating employers and covered employees are required to contribute to the cost of group life insurance benefits. Employers may assume employees' contributions. A portion of the premium contributions collected during members' active careers is placed in an advance premium deposit reserve. This reserve is to fund the claims for eligible retired and deferred members.

Line of Duty Act Program

The Line of Duty Act Program (LODA) is a cost-sharing, multiple employer plan. It provides death and health insurance reimbursement 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. Benefit provisions and eligibility requirements are established by Title 9.1 of the *Code of Virginia*. The System is responsible for managing the assets of the program. Participating employers made contributions to the program beginning in fiscal year 2012. The employer contribution rate was determined by the System's actuary using the anticipated costs and the number of covered individuals associated with all participating employers. Additionally, during fiscal year 2018, the Department of Human Resource Management administered the benefits and payment of claims under this program. The System manages the death benefit payments.

3) Funding

The contribution requirements are governed by the *Code of Virginia*, but may be impacted as a result of funding provided to state agencies by the Virginia General Assembly. Employer contributions by the Commonwealth for the RHIC, and VSDP were 1.2 percent, and 0.7 percent, respectively, of covered employee compensation. In addition, the contributions by the Commonwealth for the RHIC: Non-State for general registrars, constitutional officers, and their employees, and local social service employees were approximately 0.4 percent.

The total contribution rate for the GLI was 1.3 percent allocated into an employee and an employer component using a 60/40 split. The employee component was 0.8 percent and the employer component was 0.5 percent. Each employer's contractually required employer contribution rate for the year ended June 30, 2018, was 0.5 percent of covered employee compensation. Each employer's contractually required employer contribution rate for the LODA for the year ended June 30, 2018, was $567.0 per covered full-time-equivalent employee.

All rates were based on an actuarially determined rate from an actuarial valuation as of June 30, 2015. For RHIC and GLI, the actuarially determined rate was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. For VSDP, 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. For the LODA, the rate represents a pay-as-you-go funding rate and not the full actuarial cost of 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.

Employer contributions by the Commonwealth to the RHIC, VSDP, GLI, LODA, and the RHIC Nonstate plans were $79.8 million, $26.2 million, $30.3 million, $6.4 million, and $3.5 million, respectively, for the year ended June 30, 2018.

4) Changes in Net OPEB Liability and Proportionate Share of Net OPEB Liability

The total OPEB liability for each plan was determined based on the actuarial valuation as of June 30, 2016, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017. The following tables (dollars in thousands) show the Commonwealth's total OPEB liability, plan fiduciary net position, and net OPEB liability (asset) for the RHIC and VSDP for the current and prior year, and the Commonwealth's proportionate share of the net OPEB liability for GLI, LODA, and RHIC Non-State plans. Since the VSDP has a net OPEB asset rather than a net OPEB liability, the net OPEB asset amount is not included in the total balance amount. The Commonwealth's Proportion for the GLI, LODA, and RHIC Non-State plans represents the percentage of the Commonwealth's share of Net OPEB Liability amount compared to the Net OPEB Liability amount for all employers of $1.5 billion, $262.8 million and $39.0 million, respectively.

Primary Government

	RHIC			VSDP		
	Increase (Decrease)			Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (1) (a) - (b)
Balances at June 30, 2017	$ 415,435	$ 28,891	$ 386,544	$ 149,053	$ 252,350	$ (103,297)
Changes for the year						
Service cost	8,089	-	8,089	17,254	-	17,254
Interest	28,031	-	28,031	9,783	-	9,783
Benefit changes	-	-	-	-	-	-
Differences between actual and expected experience	-	-	-	-	-	-
Assumption changes	(5,144)	-	(5,144)	(10,835)	-	(10,835)
Contributions - employer	-	31,572	(31,572)	-	14,931	(14,931)
Contributions - member	-	-	-	-	-	-
Net investment income	-	3,241	(3,241)	-	29,828	(29,828)
Benefit payments	(29,973)	(29,973)	-	(18,598)	(18,598)	-
Third-party administrator charges	-	-	-	-	(4,332)	4,332
Administrative expense	-	(55)	55	-	(444)	444
Other changes	-	(230)	230	-	(33)	33
Net changes	1,003	4,555	(3,552)	(2,396)	21,352	(23,748)
Balances at June 30, 2018	$ 416,438	$ 33,446	$ 382,992	$ 146,657	$ 273,702	$ (127,045)

	Other Plans	
	Commonwealth's Proportion	Proportionate Share of Net OPEB Liability
Group Life Insurance	14.8%	$ 222,442
Line of Duty Act	58.0%	152,466
Retiree Health Insurance Credit: Non-State	100.0%	38,977
Balance at June 30, 2018		$ 413,885
Total balance at June 30, 2018: (excludes VSDP net OPEB asset) (1) (2)		$ 796,877

Component Units

	RHIC			VSDP		
	Increase (Decrease)			Increase (Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (Asset) (1) (a) - (b)
Balances at June 30, 2017	$ 572,206	$ 39,794	$ 532,412	$ 91,833	$ 155,476	$ (63,643)
Changes for the year						
Service cost	11,142	-	11,142	10,630	-	10,630
Interest	38,610	-	38,610	6,027	-	6,027
Benefit changes	-	-	-	-	-	-
Differences between actual and expected experience	-	-	-	-	-	-
Assumption changes	(7,085)	-	(7,085)	(6,676)	-	(6,676)
Contributions - employer	-	43,486	(43,486)	-	9,199	(9,199)
Contributions - member	-	-	-	-	-	-
Net investment income	-	4,465	(4,465)	-	18,378	(18,378)
Benefit payments	(41,283)	(41,283)	-	(11,458)	(11,458)	-
Third-party administrator charges	-	-	-	-	(2,669)	2,669
Administrative expense	-	(76)	76	-	(273)	273
Other changes	-	(316)	316	-	(21)	21
Net changes	1,384	6,276	(4,892)	(1,477)	13,156	(14,633)
Balances at June 30, 2018	$ 573,590	$ 46,070	$ 527,520	$ 90,356	$ 168,632	$ (78,276)

	Other Plans	
	Commonwealth's Proportion	Proportionate Share of Net OPEB Liability
Group Life Insurance	15.5%	$ 233,945
Line of Duty Act	2.9%	7,598
Balance at June 30, 2018		$ 241,543
Total balance at June 30, 2018: (excludes VSDP net OPEB asset) (1) (3)		$ 769,063

(1) The VSDP net OPEB asset is included in Other Restricted Assets in the accompanying government-wide financial statements.
(2) The primary government's aggregate OPEB liability is $1,557,428 (dollars in thousands) as of June 30, 2018. This includes amounts for both the VRS-administered and DHRM-administered plans.
(3) The component unit's aggregate OPEB liability is $1,423,233 (dollars in thousands) as of June 30, 2018. This includes amounts for both the VRS-administered and DHRM-administered plans as well as other OPEB plans.

The amounts in the previous tables include governmental, business-type, and component unit activity for the Commonwealth's VRS OPEB plans. The table excludes other net OPEB liability amounts of $14.7 million for all other component units and includes the fiduciary net OPEB liability of $11,897.

The net OPEB liabilities were based on an actuarial valuation as of June 30, 2016, using the entry age normal actuarial cost method. The actuarial assumptions included the following: (a) investment rate of return, net of OPEB plan investment expenses, including inflation: 7.0 percent for RHIC, VSDP, and GLI, and 3.6 percent for LODA; and (b) projected salary increases, including a 2.5 percent inflation component, ranging from 3.5 percent to 5.4 percent for VRS state, JRS, SPORS, and VaLORS employees.

For more detailed actuarial information, refer to the Virginia Retirement System's financial statements, including the "Actuarial Assumptions and Methods – Other Post-Employment Benefit Plan Funds" section.

5) Changes to and Sensitivity of Discount Rate

The discount rate used to measure the total OPEB liability was 7.0 percent for the prefunded plans. These include the Group Life Insurance Program, the Retiree Health Insurance Credit Program, and the Disability Insurance Program.

The projection of cash flows used to determine the discount rate assumed that contributions from participating employers will be based on the actuarially determined rates based on the Board's funding policy, which certifies the required rates under Title 51.1 of the *Code of Virginia*. Based on those assumptions, the fiduciary net position was projected to be available to make all of the projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of the projected benefit payments to determine the total OPEB liability. In accordance with GASB Statement No. 75 regarding the disclosure of the sensitivity of the net OPEB liability to changes in the discount rate, the table below presents the employers' net OPEB liability for each of the plans calculated using the discount rate of 7.0 percent, as well as what the employers' net OPEB liability would be if it were calculated using a discount rate that is 1.0 percent lower (6.0 percent) or 1.0 percent higher (8.0 percent) than the current rate. The Line of Duty Act Program is funded on a pay-as-you-go basis. As a result, the liabilities are valued using a discount rate of 3.6 percent, which approximates the risk-free rate of return. The following table (dollars in thousands) shows the Commonwealth's changes in the discount rate and the healthcare trend rate.

Primary Government

Changes in Discount Rate

RHIC

Net OPEB Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 423,493	$ 382,992	$ 348,166

VSDP

Net OPEB Liability (Asset) (1)		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ (120,921)	$ (127,045)	$ (137,666)

GLI

Proportionate Share of Net OPEB Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 287,706	$ 222,442	$ 169,535

LODA

Proportionate Share of Net OPEB Liability		
1.0% Decrease (2.6%)	Current Discount Rate (3.6%)	1.0% Increase (4.6%)
$ 172,885	$ 152,466	$ 135,388

Changes in Discount Rate

RHIC: Non-State

Proportionate Share of Net OPEB Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 43,394	$ 38,977	$ 35,210

Changes in Healthcare Cost Trend Rates

LODA

Proportionate Share of Net OPEB Liability		
1.0% Decrease (6.8% decreasing to 4.0%)	Healthcare Cost Trend Rates (7.8% decreasing to 5.0%)	1.0% Decrease (8.8% decreasing to 6.0%)
$ 129,369	$ 152,466	$ 181,093

Component Units

Changes in Discount Rate

RHIC

Net OPEB Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 583,305	$ 527,520	$ 479,552

VSDP

Net OPEB Liability (Asset) (1)		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ (74,501)	$ (78,276)	$ (84,818)

GLI

Proportionate Share of Net OPEB Liability		
1.0% Decrease (6.0%)	Current Discount Rate (7.0%)	1.0% Increase (8.0%)
$ 302,584	$ 233,945	$ 178,303

LODA

Proportionate Share of Net OPEB Liability		
1% Decrease (2.6%)	Current Discount Rate (3.6%)	1.0% Increase (4.6%)
$ 8,616	$ 7,598	$ 6,747

Changes in Healthcare Cost Trend Rates

LODA

Proportionate Share of Net OPEB Liability		
1.0% Decrease (6.8% decreasing to 4.0%)	Healthcare Cost Trend Rates (7.8% decreasing to 5.0%)	1.0% Increase (8.8% decreasing to 6.0%)
$ 6,447	$ 7,598	$ 9,025

(1) The VSDP net OPEB asset is included in Other Restricted Assets in the accompanying government-wide financial statements.

The long-term expected rate of return on the System's investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of 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 allocations are based on the Strategic Asset Allocation Implementation Schedule and Allowable Ranges document, which was approved by the VRS Board of Trustees on June 7, 2016. Best estimates of arithmetic real rates of return for each major asset class included in the System's target asset allocation 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	40.0%	4.5%	1.8%
Fixed Income	15.0%	0.7%	0.1%
Credit Stratgies	15.0%	4.0%	0.6%
Real Assets	15.0%	5.8%	0.9%
Private Equity	15.0%	9.5%	1.4%
Total	100.0%		4.8%
Inflation			2.5%
Expected arithmetic nominal return			7.3%

The allocation in the previous table provides a one-year expected return of 7.3 percent. 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 pension 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 6.8 percent, including expected inflation of 2.5 percent.

The long-term expected rate of return on the LODA OPEB Program's investments was set at 3.6 percent for this valuation. Since LODA is funded on a current-disbursement basis, it is not able to use the VRS Pooled Investments 7.0 percent assumption. Instead, the assumed annual rate of return of 3.6 percent 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.

6) OPEB Related Deferred Outflows and Deferred Inflows

GASB Statement No. 75 requires certain OPEB related items to be reported as either deferred outflows or deferred inflows of resources. The following tables (dollars in thousands) summarize these amounts as of June 30, 2018, in total and by individual plan.

Primary Government (3)

	Totals (1)	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 35,519
Changes of assumptions	-	202,938
Net difference between projected and actual earnings on plan investments	-	19,614
Changes in proportion and difference between employer contributions and proportionate share of contributions	23,690	37,464
Employer contributions subsequent to the Measurement Date	73,793	-
Amounts associated with transactions subsequent to the Measurement Date	20,169	-
Total	$ 117,652	$ 295,535

	RHIC		VSDP	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ -	$ -	$ -
Changes of assumptions	-	4,331	-	9,529
Net difference between projected and actual earnings on plan investments	-	925	-	9,966
Changes in proportion and difference between employer contributions and proportionate share of contributions	3,182	9,627	1,628	1,635
Employer contributions subsequent to the Measurement Date	33,421	-	16,273	-
Total	$ 36,603	$ 14,883	$ 17,901	$ 21,130

	GLI		LODA	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 4,929	$ -	$ -
Changes of assumptions	-	11,460	-	15,743
Net difference between projected and actual earnings on plan investments	-	8,364	-	265
Changes in proportion and difference between employer contributions and proportionate share of contributions	2,156	6,473	4,899	2,694
Employer contributions subsequent to the Measurement Date	14,479	-	6,105	-
Total	$ 16,635	$ 31,226	$ 11,004	$ 18,702

	RHIC: Non-State	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ -
Changes of assumptions	-	637
Net difference between projected and actual earnings on plan investments	-	94
Changes in proportion and difference between employer contributions and proportionate share of contributions	564	564
Employer contributions subsequent to the Measurement Date	3,515	-
Total	$ 4,079	$ 1,295

Component Units (2) (3)

	Totals (1)	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 26,842
Changes of assumptions	-	138,769
Net difference between projected and actual earnings on plan investments	-	16,262
Changes in proportion and difference between employer contributions and proportionate share of contributions	23,344	12,477
Employer contributions subsequent to the Measurement Date	72,456	-
Amounts associated with transactions subsequent to the Measurement Date	14,277	-
Total	$ 110,077	$ 194,350

	RHIC		VSDP	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ -	$ -	$ -
Changes of assumptions	-	5,929	-	5,870
Net difference between projected and actual earnings on plan investments	-	1,306	-	6,144
Changes in proportion and difference between employer contributions and proportionate share of contributions	10,849	4,404	893	886
Employer contributions subsequent to the Measurement Date	46,381	-	9,946	-
Total	$ 57,230	$ 11,639	$ 10,839	$ 12,900

	GLI		LODA	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 5,189	$ -	$ -
Changes of assumptions	-	12,051	-	787
Net difference between projected and actual earnings on plan investments	-	8,803	-	9
Changes in proportion and difference between employer contributions and proportionate share of contributions	1,718	2,527	333	319
Employer contributions subsequent to the Measurement Date	15,870	-	259	-
Total	$ 17,588	$ 28,570	$ 592	$ 1,115

(1) These tables aggregate the deferred inflows of resources and deferred outflows of resources for both the VRS-administered and DHRM-administered plans.

(2) The component unit amounts in the accompanying financial statements include deferred outflows of resources and deferred inflows of resources of $2,592 (dollars in thousands) and $2,657 (dollars in thousands), respectively, for other OPEB plans.

(3) Additionally, during fiscal year 2018, the Commonwealth recognized OPEB expense for the primary government and component units of $61,538 (dollars in thousands) and $56,791 (dollars in thousands), respectively, for the VRS-administered OPEB plans.

Deferred Amounts to be Recognized in Fiscal Years Following Reporting Date

The following tables (dollars in thousands) provide the net estimated amount of the deferred inflows and deferred outflows of resources that will be recognized in the Commonwealth's OPEB expense for each of the next five fiscal years and thereafter. These amounts exclude employer contributions made subsequent to the measurement date as those contributions will reduce the fiscal year 2019 net OPEB liability (asset).

Primary Government

	RHIC	VSDP	GLI	LODA
2019	$ (2,367)	$ (3,800)	$ (5,988)	$ (1,732)
2020	(2,367)	(3,800)	(5,988)	(1,732)
2021	(2,367)	(3,800)	(5,988)	(1,732)
2022	(2,366)	(3,801)	(5,988)	(1,733)
2023	(1,844)	(1,307)	(3,530)	(1,677)
Thereafter	(390)	(2,994)	(1,588)	(5,197)

	RHIC: Non-State
2019	$ (137)
2020	(137)
2021	(137)
2022	(135)
2023	(111)
Thereafter	(74)

Component Units

	RHIC	VSDP	GLI	LODA
2019	$ (160)	$ (2,339)	$ (5,531)	$ (98)
2020	(160)	(2,339)	(5,531)	(98)
2021	(160)	(2,339)	(5,531)	(98)
2022	(160)	(2,340)	(5,531)	(98)
2023	(125)	(805)	(3,261)	(95)
Thereafter	(25)	(1,845)	(1,467)	(295)

B. Department of Human Resource Management (DHRM-administered) OPEB Plan

1) Administration

The DHRM-administered defined benefit OPEB plan mentioned below does not have a trust that meets the requirements of GASB Statement No. 75. In addition, the total OPEB liability for this plan has a measurement date of June 30, 2017. A separately issued financial report for this DHRM-administered OPEB plan is not available.

2) Plan Description

The Commonwealth provides a Pre-Medicare Retiree Healthcare (PMRH) plan established by Title 2.2 of the *Code of Virginia* for retirees who are not yet eligible to participate in Medicare. For a retiree to participate in the PMRH 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.

This fund is reported as part of the Commonwealth's Health Care 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

3) Funding

The employer 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 employer effectively subsidizes the costs of the participating retirees' healthcare through payment of the employer's portion of the premiums for active employees.

4) Changes in Total OPEB Liability

The PMRH total OPEB liability of $1.3 billion as of June 30, 2018, was measured as of June 30, 2017, and was determined by an actuarial valuation as of June 30, 2017. The following tables (dollars in thousands) show the Commonwealth's total OPEB liability for the current and prior year:

Primary Government

	PMRH Increase (Decrease)
	Total OPEB Liability
Balances at June 30, 2017	$ 917,016
Changes for the year	
Service cost	68,289
Interest cost	27,723
Changes of benefit terms	-
Differences between expected and actual experience	(36,224)
Changes of assumptions	(190,932)
Benefit payments	(25,321)
Net change	(156,465)
Balances at June 30, 2018	$ 760,551

Component Units

	PMRH Increase (Decrease)
	Total OPEB Liability
Balances at June 30, 2017	$ 649,106
Changes for the year	
Service cost	48,338
Interest	19,623
Changes of benefit terms	-
Differences between expected and actual experience	(25,641)
Changes of assumptions	(135,150)
Benefit payments	(17,923)
Net change	(110,753)
Balances at June 30, 2018	$ 538,353

The amounts in the previous tables include governmental, business-type, and component unit activity for the DHRM-administered OPEB plan. The table excludes the non-DHRM OPEB plans' total OPEB liability of $101.1 million for all other component units and includes the fiduciary OPEB liability of $9,080.

The PMRH total 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 8.6 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.

Actuarial Assumptions and Methods
Valuation Date of June 30, 2017

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	3.6%
Projected Salary Increases	4.0%
Medical Trend Under 65	Medical & Rx: 8.6% to 5.0% Dental: 4.0% 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 w ith Scale BB to 2020; males setback 1 year, 85.0% of rates; females setback 1 year
Post-Retirement	RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected w ith Scale BB to 2020; males set forw ard 1 year; females setback 1 year w ith 1.5% increase compounded from ages 70 to 85
Post-Disablement:	RP-2014 Disabled Mortality Rates projected w ith Scale BB to 2020; males 115.0% of rates; females 130.0% 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. The inflation rate used was 2.3 percent per year and there were no ad hoc postemployment benefit changes used to measure the total OPEB liability.

Changes of Assumptions

The following assumptions were updated since the June 30, 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 2.9 percent to 3.6 percent based on the Bond Buyers GO 20 Municipal Bond Index. Spousal coverage was reduced from 70.0 percent to 50.0 percent based on a blend of recent spousal coverage election rates and the prior year assumption. Based on the 2017 census, new retirees since January 1, 2015 have chosen to cover their spouses approximately 20.0 percent of the time. However, active employees cover their spouses at a rate close to 53.0 percent.

5) Changes to and Sensitivity of Discount Rate

The following table (dollars in thousands) shows the Commonwealth's changes in discount rate and the healthcare cost trend rates.

Primary Government

Changes in Discount Rate

PMRH		
Total OPEB Liability		
1.0% Decrease (2.6%)	Current Discount Rate (3.6%)	1.0% Increase (4.6%)
$ 814,724	$ 760,551	$ 708,648

Changes in Healthcare Cost Trend Rates

PMRH		
Total OPEB Liability		
1.0% Decrease (7.6% decreasing to 4.0%)	Healthcare Cost Trend Rates (8.6% decreasing to 5.0%)	1.0% Increase (9.6% decreasing to 6.0%)
$ 676,698	$ 760,551	$ 858,853

Component Units

Changes in Discount Rate

PMRH		
Total OPEB Liability		
1.0% Decrease (2.6%)	Current Discount Rate (3.6%)	1.0% Increase (4.6%)
$ 576,699	$ 538,353	$ 501,613

Changes in Healthcare Cost Trend Rates

PMRH		
Total OPEB Liability		
1.0% Decrease (7.6% decreasing to 4.0%)	Healthcare Cost Trend Rates (8.6% decreasing to 5.0%)	1.0% Increase (9.6% decreasing to 6.0%)
$ 478,998	$ 538,353	$ 607,936

6) OPEB Related Deferred Outflows and Deferred Inflows

The following tables (dollars in thousands) summarize the OPEB related items reported as deferred outflows or deferred inflows of resources:

Primary Government (2)

	PMRH	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 30,590
Changes of assumptions	-	161,238
Changes in proportion	11,261	16,471
Amounts associated with transactions subsequent to the Measurement Date	20,169	-
Total	$ 31,430	$ 208,299

Component Units (1) (2)

	PMRH	
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 21,653
Changes of assumptions	-	114,132
Changes in proportion	9,551	4,341
Amounts associated with transactions subsequent to the Measurement Date	14,277	-
Total	$ 23,828	$ 140,126

(1) The component unit amounts exclude deferred outflows of resources and deferred inflows of resources of $938,173 and $6.4 million, respectively, for other OPEB plans.

(2) Additionally, during fiscal year 2018, the Commonwealth recognized OPEB expense for the primary government and component units of $59,725 (dollars in thousands) and $43,915 (dollars in thousands), respectively, for the DHRM-administered OPEB plan.

Deferred Amounts to be Recognized in Fiscal Years Following Reporting Date

The following tables (dollars in thousands) provide the net estimated amount of the deferred inflows and deferred outflows of resources that will be recognized in the Commonwealth's OPEB expense for each of the next five fiscal years and thereafter. These amounts exclude amounts associated with transactions subsequent to the measurement date as those will reduce the fiscal year 2019 total OPEB liability.

Primary Government

		PMRH
2019	$	(36,287)
2020		(36,287)
2021		(36,287)
2022		(36,287)
2023		(36,287)
Thereafter		(15,603)

Component Units

		PMRH
2019	$	(24,047)
2020		(24,047)
2021		(24,047)
2022		(24,047)
2023		(24,047)
Thereafter		(10,340)

7) Other OPEB Plans

Higher Education

The University of Virginia (nonmajor component unit) has a Retiree Health Plan that covers employees who retire before becoming eligible for Medicare. In addition, an Optional Retirement Life Insurance Plan is offered to University faculty and Medical Center employees who participate in the Optional Retirement Plans. For these OPEB plans, the University reported a total OPEB liability of $101.1 million, deferred outflows of resources of $938,173, and deferred inflows of resources of $6.4 million as of June 30, 2018. Additional information on these plans can be found at the University's website at www.virginia.edu.

Other Component Units

The Virginia Housing Development Authority (major component unit) offers a medical, dental, and vision benefit plan, and reports deferred outflows of resources of $2,574 and deferred inflows of resources of $1,937 as of June 30, 2018.

The Virginia Resource Authority (major component unit) offers an optional Retirement Life Insurance Plan for those employees who choose to participate. The Authority reports a total OPEB liability of $110,000, deferred outflows of resources of $6,774, and deferred inflows of resources of $12,000 as of June 30, 2018.

The Virginia Port Authority (nonmajor component unit) offers medical and dental benefits for retirees. The Authority reports a total OPEB liability of $1.3 million and deferred inflows of resources of $655 as of June 30, 2018.

Hampton Roads Sanitation District (nonmajor component unit) offers a health and dental benefit plan for those employees who choose to participate. The District reports a total OPEB liability of $13,173 and deferred inflows of resources of $692 as of June 30, 2018.

The Virginia Biotechnology Research Partnership Authority (nonmajor component unit) offers an Optional Retirement Life Insurance Plan for those employees who choose to participate. The Authority reports a total OPEB liability of $43,000, deferred outflows of resources of $5,912, and deferred inflows of resources of $5,000 as of June 30, 2018.

19. DEFERRED COMPENSATION PLANS

The Commonwealth offers its employees a deferred compensation plan created in accordance with Internal Revenue Code Section 457(b). The Virginia Retirement System (the System) administers the deferred compensation plan, pursuant to the Government Employees Deferred Compensation Plan Act, Section 51.1 of the *Code of Virginia*. The System contracts with private corporations or institutions subject to the standards set forth in the Code to provide investment products as well as any other goods and services related to the administration of the deferred compensation plan. The Department of Accounts is responsible for the accounting, reconciliation, payment to the plan through payroll deductions, and timely transfer of withheld funds to the trustee designated by the System for investment. The plan provides a number of investment options and is designed so that each participant retains investment control of his/her individual account. The plan, available to all state employees, permits them to defer a portion of their salary until future years. The deferred compensation is held in trust for the exclusive benefit of plan participants and their beneficiaries and is not available to employees until termination, retirement, death, unforeseeable emergency, or an in-service distribution at age 70½ or later. Since the System has no fiduciary relationship with plan participants, plan assets as of June 30, 2018, of $2.7 billion are not included in the accompanying financial statements.

In addition, the Commonwealth provides a cash match under Internal Revenue Code Section 401(a) for employees participating in the deferred compensation plan. The match amount for an employee was established at 50.0 percent of the voluntary contributions to the deferred compensation plan. During the current fiscal year, the maximum match was $20 per pay period or $40 per month. The fair value of assets in the cash match savings plan as of June 30, 2018, was $456.6 million, which is also excluded from the accompanying financial statements.

Most employees of the Commonwealth's colleges and universities may participate in the Commonwealth's deferred compensation plan in accordance with Internal Revenue Code Section 457(b) and/or the institution's deferred compensation plan in accordance with Internal Revenue Code Section 403(b). Under either plan, the institution's cash match under the Internal Revenue Code Section 401(a) during fiscal year 2018 was a maximum match up to $20 per pay period or $40 per month. This employer match is for either plan but not both plans. Employer contributions under these plans were approximately $13.4 million for fiscal year 2018.

The deferred compensation plan for the University of Virginia Medical Center (part of the University of Virginia – nonmajor component unit) employees hired on or after September 30, 2002, allows employee contributions up to 4.0 percent of their salary and the employer match is 50.0 percent of the 4.0 percent deferral not to exceed 2.0 percent of the employees' salary. Employer contributions under this plan were approximately $4.3 million for fiscal year 2018. The University of Virginia provides executive deferred compensation retirement benefits for certain officers and executives of the University and the University Medical Center. The University makes contributions on behalf of each participant each plan year as determined by the Board of Visitors. The University contributed $1.9 million to these accounts for fiscal year 2018.

The Virginia Housing Development Authority (major component unit) and the Virginia Resources Authority (major component unit) have deferred compensation plans available to all employees created in accordance with Internal Revenue Section 457(b). The plan permits participants to defer a portion of their salary or wages until future years. The deferred compensation is not available to employees until termination, retirement, or death. The assets of the plan are in an irrevocable trust with an external trustee and, accordingly, no assets or liabilities are reflected in the accompanying financial statements.

The Virginia Port Authority (VPA) (nonmajor component unit) offers three deferred compensation plans and two matching savings plans under Internal Revenue Code Sections 457 and 401(a), respectively. For additional information, please see the Authority's website at www.portofvirginia.com.

The Assistive Technology Loan Fund Authority (nonmajor component unit) employees contribute an amount of their choosing into Deferred Compensation Plans administered by the Virginia Retirement System and into a qualified 403(b) plan.

20. STATE NON-ARBITRAGE POOL

The Commonwealth sponsors the Virginia State Non-Arbitrage Program (SNAP) for use by the Commonwealth and local governments to invest bond proceeds. The Treasury Board is responsible for the oversight of SNAP, procuring the following services: investment management, program administration, arbitrage rebate and calculation, and custodial and depository services. The Commonwealth does not have fiduciary responsibility for SNAP.

The SNAP fund is a local government investment pool. PFM Asset Management LLC serves as the investment adviser of the SNAP fund. The SNAP individual investment portfolios are the responsibility of the SNAP investment manager and the governments investing proceeds in the portfolios. These investments are held solely in the SNAP participants' names. Since the Commonwealth has no fiduciary relationship with local governmental entities participating in the plan, these assets of $2.7 billion are not included in the financial statements.

21. COMMITMENTS

A. Construction Projects

Primary Government

Highway Projects

As of June 30, 2018, the Department of Transportation had contractual commitments of approximately $3.2 billion for construction of various highway projects. Funding for these expenditures is expected to be provided as follows: (1) Federal funds – approximately 31.3 percent or $999.0 million, (2) State funds – approximately 47.7 percent or $1.5 billion, and (3) Proceeds from Bonds – approximately 21.0 percent or $673.0 million.

Mass Transit Projects

As of June 30, 2018, the Department of Rail and Public Transportation had contractual commitments of approximately $317.8 million for various public transportation, rail preservation, and rail enhancement projects. Funding of the future expenditures is expected to be as follows: 1) State funds – approximately 93.0 percent or $295.6 million, and 2) Federal funds – approximately 7.0 percent or $22.2 million.

Wastewater Treatment Projects

As of June 30, 2018, the Department of Environmental Quality was committed to grant contracts with localities to reimburse a portion of construction costs for nutrient reduction facilities at wastewater treatment plants totaling $10.7 million provided by bond proceeds and the Water Quality Improvement Fund.

Other Construction Projects

As of June 30, 2018, the Department of General Services had construction commitments of approximately $22.9 million.

As of June 30, 2018, the Department of Behavioral Health and Developmental Services had construction contractual commitments of approximately $22.5 million.

As of June 30, 2018, the Department of Forensic Science had contractual commitments of approximately $6.6 million and non-contractual commitments of $5.6 million for construction projects.

As of June 30, 2018, the Department of Corrections had construction commitments of approximately $12.0 million.

As of June 30, 2018, the Department of Veterans Services had construction commitments of approximately $13.6 million.

Component Units

Port Projects

As of June 30, 2018, the Virginia Port Authority (nonmajor) was committed to construction contracts totaling $315.2 million.

Wallops Island Project

As of June 30, 2018, the Virginia Commercial Space Flight Authority (nonmajor) was committed to construction programs totaling $20.3 million, approximately $5.3 million of which will be reimbursable under separate private and federal contract agreements and approximately $11.5 million of which will be reimbursable under the $20.0 million appropriation for additional MARS facilities from the Commonwealth.

Treatment Plant

As of June 30, 2018, the Hampton Roads Sanitation District Commission (nonmajor) was committed to construction contracts totaling $106.2 million.

Higher Education Institutions

Colleges and universities (nonmajor) had contractual commitments as of June 30, 2018, of approximately $1.6 billion. Higher education foundations' commitments total approximately $93.9 million. These are primarily for construction contracts.

B. Operating Leases

The Commonwealth has entered into numerous agreements to lease land, buildings, and equipment. Most of the operating leases contain the provision that the Commonwealth may renew the operating leases at the expiration date of the lease on a month-to-month basis. In most cases, management expects that in the normal course of business, leases will be renewed or replaced by other leases of a similar nature. Rental expense for the primary government under these operating leases for the year ended June 30, 2018, was $73.7 million for governmental activities (including internal service funds) and $27.5 million for business-type activities. Rental expense for the discrete component units (excluding foundations) for the year ended June 30, 2018, was $100.4 million. The Commonwealth has, as of June 30, 2018, the following minimum rental payments due under the above leases (dollars in thousands):

	Primary Government		
	Governmental Activities	Business-type Activities	Component Units (1)
2019	$ 69,496	$ 26,792	$ 67,553
2020	59,567	23,590	52,519
2021	48,707	19,787	41,652
2022	50,076	15,275	33,761
2023	33,403	10,442	27,965
2024-2028	73,839	20,012	57,881
2029-2033	4,462	-	5,322
2034-2038	942	-	1,475
2039-2043	25	-	900
2044-2048	25	-	900
2049-2053	10	-	900
2054-2058	-	-	450
Total	$ 340,552	$ 115,898	$ 291,278

Note (1): The above amounts exclude operating lease obligations of foundations.

	Foundations (2)
2019	$ 8,379
2020	7,607
2021	6,551
2022	5,532
2023	5,083
Thereafter	60,808
Total	$ 93,960

Note (2): Foundations represent FASB reporting entities defined in Note 1.B. Rental expense for the year ended June 30, 2018, was approximately $7.2 million.

Lease agreements are for various terms and contain nonappropriation clauses indicating that continuation of the lease is subject to funding by the General Assembly.

C. Investment Commitments – Virginia Retirement System

The Virginia Retirement System extends investment commitments in the normal course of business, which, as of June 30, 2018, amounted to $13.6 billion.

D. Virginia Transportation Infrastructure Bank

Section 33.2-1500 of the *Code of Virginia* states the Virginia Transportation Infrastructure Bank is intended to help alleviate a critical financing need for present and future highways within the Commonwealth. This includes toll facilities; mass transit; freight, passenger, and commuter rail; and port, airport and other transportation facilities. $154.9 million represents loans to the City of Chesapeake for the Dominion Boulevard Project and Loudoun County for the Pacific Boulevard Project that is included in Loans Receivable in the accompanying statements. The Chesapeake Bay Bridge and Tunnel District for the Parallel Thimble Shoal Tunnel, the City of Alexandria for the Potomac Yard Metrorail Station, and 95 Express Lanes LLC for the 395 Express Lanes Northern Extension loans have been approved, but no disbursements were made as of June 30, 2018. All loans are coordinated through the Virginia Resources Authority (major component unit).

E. Tobacco Grants

The Tobacco Region Revitalization Commission (nonmajor component unit) had $107.2 million in grant award commitments not reflected in the accompanying financial statements since eligibility requirements were not met as of June 30, 2018, in accordance with GASB Statement No. 33.

F. Other Commitments

Primary Government

As of June 30, 2018, the Department of Behavioral Health and Developmental Services had contractual commitments of approximately $52.5 million.

As of June 30, 2018, the Department of Corrections had contractual commitments of approximately $207.8 million and non-contractual commitments of approximately $470.8 million for detention services and medical care.

As of June 30, 2018, the Virginia Department of Health had commitments of approximately $24.9 million to localities, trauma centers, grants to rescue squads, and water supply assistance grants.

As of June 30, 2018, the Department of Motor Vehicles had contractual commitments of approximately $47.3 million for security technology services.

As of June 30, 2018, the Virginia Department of Transportation had contractual commitments of approximately $1.3 billion for individual contracts awarded with a contract value of $1.0 million or more for operational services, facilities, tolling services and other non-highway construction type contracts.

As of June 30, 2018, the Virginia Employment Commission had contractual commitments of approximately $8.6 million for information systems modernization projects.

As of June 30, 2018, the Department of Environmental Quality had commitments of approximately $4.7 million for reimbursement claims for cleanup of leaking underground storage tanks.

As of June 30, 2018, the Department of Military Affairs had commitments of approximately $5.2 million for environmental service contracts.

As of June 30, 2018, the Enterprise Applications (internal service fund) had $12.0 million in contractually obligated commitments for the Human Capital Management replacement project.

The Virginia College Savings Plan (major enterprise fund) administers the Prepaid529 Program. As of June 30, 2018, the Program had $187.7 million in private equity commitments.

The Virginia Wireless E-911 (nonmajor enterprise fund) had $7.8 million in outstanding grants awarded but not yet disbursed to localities as of June 30, 2018, since all of the eligibility criteria have not been met in accordance with GASB Statement No. 33.

Component Units

The Virginia Housing Development Authority (major) had $676.7 million in commitments to fund new loans not reflected in the accompanying financial statements since eligibility requirements were not met as of June 30, 2018, in accordance with GASB Statement No. 33.

The Virginia Small Business Financing Authority (nonmajor) had $6.6 million in loan commitments to banks and borrowers not reflected in the accompanying financial statements since eligibility requirements were not met as of June 30, 2018, in accordance with GASB Statement No. 33.

22. ACCRUED LIABILITY FOR COMPENSATED ABSENCES

Employees accrue annual leave at a rate of four to nine hours semimonthly, depending on their length of service. The maximum leave accumulation is dependent upon years of service, but in no case may it exceed 432 hours at the end of the leave year. The maximum compensation for annual leave balances is also dependent upon years of service, but in no case may an employee be compensated for more than 336 hours upon separation.

All employees hired after January 1, 1999, are required to enroll in the Virginia Sickness and Disability Program (VSDP) (see Note 17). Under the VSDP, employees receive a specified number of sick and personal leave hours, depending on their length of service, and any balances at the end of the leave year revert. Individuals employed at January 1, 1999, had the option of converting to the VSDP or remaining in the traditional sick leave plan. If converting, the employee's sick leave balance could be used to purchase retirement credits or be converted to disability credits. If an employee opted to remain in the traditional sick leave program, sick leave accrues at a rate of five hours semimonthly. Employees who leave state service after a minimum of five years employment receive the lesser of 25.0 percent of the value of their disability credits or accumulated sick leave at their current earnings rate or $5,000. All employees leaving state service are paid for accrued annual leave up to the maximum leave year limit at their current earnings rate.

In conformance with Section C60 of the GASB Codification, the monetary value of accumulated vacation, compensatory, overtime, recognition, and sick leave payable upon termination is included in the accompanying financial statements and is reported as Compensated Absences. In the government-wide statements, proprietary fund statements, and discrete component unit fund statements, compensated absence amounts are segregated into two components – the amount due within one year and the amount due in more than one year. Compensated absences due within one year consist of an estimate of the amount that will be used by active employees for paid time off and/or paid upon termination, plus the actual amount paid after June 30 for employees terminating on or before June 30. In the governmental fund statements, amounts to be paid from expendable resources are recognized as fund liabilities in the applicable governmental fund types as long-term liabilities and represent payments to employees for separations that occurred on or before June 30. Amounts not payable from expendable resources are reflected in the governmental activities column in the Government-wide Statement of Net Position (see Note 27). All amounts related to the fiduciary funds are recognized in those funds.

The liability as of June 30, 2018, was computed using salary rates effective at that date, and represents vacation, compensatory, overtime, recognition, and sick leave earned, or disability credits held by employees, up to the allowable ceilings.

23. POLLUTION REMEDIATION OBLIGATIONS

The Commonwealth has pollution remediation obligations of $7.0 million, of which $1.9 million is due within one year. With the exception of the Department of Environmental Quality (DEQ), agencies estimated future obligations based on professional consultant estimates and/or historical project expenses of similar projects; however, there is the potential for change in estimates due to price increases or reductions, technology, or applicable laws and regulations. Remediations for DEQ are not estimates but contractual obligations between the Commonwealth and the U.S. Environmental Protection Agency (EPA), and any change due to a reconciliation of incurred costs requires mutual consent and contract amendment.

The estimated Commonwealth pollution remediation liability relates to the anticipated cost of hazardous waste removal, cleanup relating to leakage of underground storage tanks, soil and groundwater contaminations, dump site cleanups, asbestos, lead contamination, mold remediation and remediation relating to superfund state contracts.

Agencies involved in remediation include:

- Department of Conservation and Recreation (DCR)
- Department of Corrections (DOC)
- Department of Emergency Management (VDEM)
- Department of Environmental Quality (DEQ)
- Department of Juvenile Justice (DJJ)
- Department of Transportation (VDOT)

A Facility Lead Agreement was signed between the EPA and VDOT to resolve an issue concerning the storage of lab wastewater in an outdoor lined surface impoundment that operated between 1979 and 1983 for which contamination is present in soil and groundwater. DOC was fined by the EPA in September/October 2003. DOC proposed to conduct a Supplemental Environmental Project (SEP) which included the formation of the Pollution Prevention Section of the Environmental Services Unit, disclosure of all environmental deficiencies to both the EPA and DEQ and corrections of those deficiencies.

The following pollution remediation outlays could not reasonably be estimated as of June 30, 2018:

- VDEM relating to cleanup of an emergency fuel storage facility
- DJJ relating to petroleum storage tank removal
- VDOT relating to groundwater contamination

24. INSURANCE

A. Self-Insurance

The Commonwealth maintains three types of self-insurance plans. The first type of self-insurance is a health care plan administered by the Department of Human Resource Management for Commonwealth employees. The plan is accounted for in the Health Care Internal Service Fund. Interfund premiums are accounted for as internal activity receipts from other funds. As of June 30, 2018, $116.2 million is reported as the estimated claims payable for this fund, which is undiscounted as nearly all healthcare claims are current in nature. The estimated liability is based upon actual claims that have been submitted as well as actuarially determined claims incurred but not reported as described in Note 1.W. Changes in the balances of claims liabilities (dollars in thousands) during the current and prior fiscal years are as follows:

	Balance July 1,	Current Year Claims and Changes in Estimates	Claim Payments	Balance June 30, (1)
2017-2018	$ 112,029	$ 1,322,571	$ (1,318,428)	$ 116,172
2016-2017	$ 123,385	$ 1,290,205	$ (1,301,561)	$ 112,029

(1) The entire ending balance shown above is due within one year.

The second type of plan, Risk Management, is administered by the Department of the Treasury, Division of Risk Management and the Department of Human Resource Management, Worker's Compensation Program. These plans are accounted for in the Risk Management Internal Service Fund. The Department of the Treasury administers risk management programs providing property, general (tort) liability, medical malpractice, automobile and surety bond exposures for the Commonwealth of Virginia as provided in Sections 2.2-1834 through 1838 and Section 2.2-1840 of the *Code of Virginia*. Established subject to the approval of the Governor, risk management plans provide state agencies with protection through purchased insurance, self-insurance or a combination thereof. Interfund premiums for the fund are accounted for as internal activity receipts from other funds. The claims payable is an estimated liability based upon actual claims that have been submitted as well as actuarially determined claims incurred but not reported. As of June 30, 2018, $793.4 million is reported as the estimated claims payable for the risk management plan. This amount is discounted to present value at a rate of 1.9 percent. Undiscounted claims payable as of June 30, 2018, is $1.0 billion. The estimated losses are based upon actual claims that have been submitted, as well as claims incurred but not reported. Changes in the balances of claims liabilities (dollars in thousands) during the current and prior fiscal years are as follows:

	Balance July 1,	Current Year Claims and Changes in Estimates	Claim Payments	Balance June 30, (1)
2017-2018	$ 797,637	$ 72,097	$ (76,375)	$ 793,359
2016-2017	$ 835,283	$ 42,447	$ (80,093)	$ 797,637

(1) Of the balance shown above, $76.8 million is due within one year.

For workers' compensation, the Commonwealth assumes the full risk of claims filed. For tort and automobile, liability is assumed at a maximum of $2.0 million per occurrence. Medical malpractice is assumed at the maximum per occurrence recovery limited stated in Section 8.01-581.15 of the *Code of Virginia*. Risk Management purchases commercial insurance to protect state-owned property with deductibles as stated in the insurance policies.

The third type of plan, Line of Duty, is administered by the Department of Human Resource Management for Line of Duty recipients. Effective July 1, 2017, per the amended Line of Duty Act Section 9.1-401 of the *Code of Virginia*, the Department of Human Resource Management became responsible for administration of the premium-free health benefits provided to eligible Line of Duty recipients. The plan is accounted for in the Line of Duty Internal Service Fund. All eligible employees, former employees, and eligible family members will be covered under one program, the Line of Duty Health Benefit Plans. As of June 30, 2018, $484,858 is reported as the claims payable for the fund, which is undiscounted as nearly all healthcare claims are current in nature. Changes in the balances of claims liabilities (dollars in thousands) during the current and prior fiscal years are as follows:

	Balance July 1,	Current Year Claims and Changes in Estimates	Claim Payments	Balance June 30, (1)
2017-2018	$ -	$ 3,729	$ (3,244)	$ 485
2016-2017	$ -	$ -	$ -	$ -

(1) The entire ending balance shown above is due within one year.

The Commonwealth has not had any insurance settlements exceed the coverage during the past three years.

As of June 30, 2018, the Virginia Commonwealth University Health System Authority (Authority) (a blended component unit of the Virginia Commonwealth University – nonmajor component unit) reports the following claims payable amounts: estimated workers' compensation claims of $12.8 million and estimated losses on malpractice claims of $3.5 million. MCV Associated Physicians (component unit of the Authority) reports claims payable of $21.1 million for estimated losses on malpractice claims. Virginia Premier Health Plan (component unit of the Authority) reports claims payable of $168.0 million for estimated medical claims payable. Additional information on claims payable can be found in the Authority's separately issued financial statements.

Virginia International Terminals, LLC (VIT) (a blended component unit of the Virginia Port Authority – nonmajor) is partially self-insured for certain workers' compensation claims. The Authority maintains insurance coverage of $5.0 million per claim, but is obligated to pay the first $1.0 million of any individual's claims per incident. The Authority bears some self-insurance risk for claims cost in excess of employee premiums/contributions received. Pursuant to a joint arrangement with the Virginia Port Authority, (VPA) (nonmajor) the entity carries stop loss insurance to mitigate exposure to significant claims. The stop loss policy is on a calendar year basis, with renewals effective each January 1. During the calendar year 2017, the individual claim cost limit (deductible) under the policy for the Authority was $125,000. The aggregate deductible for VIT and VPA combined claims in excess of the $125,000 individual limit was $9.5 million for calendar year 2018 and $7.9 million for calendar year 2017.

B. Public Entity Risk Pools

The Commonwealth administers three types of public entity risk pools for the benefit of local governmental units: healthcare, risk management, and line of duty insurance. The Local Choice Health Care plan was established to make comprehensive healthcare insurance available to localities and political subdivisions at affordable rates and with stable premiums. During the fiscal year, there were 446 local government units participating in the pool. This includes 66 school districts, 41 counties, 134 cities/towns, and 205 other subdivisions. This program is accounted for in the Local Choice Health Care Enterprise Fund (nonmajor).

The Department of Human Resource Management, under Section 2.2-1204 of the *Code of Virginia*, has the authority to design, set rates, and administer the Local Choice Health Care fund. The pool's standard contract period is one year. However, a member group may withdraw on the last day of any month with three month's written notice. Contributions are based on the current necessary contribution and the amortization of experience adjustments in the pool. As of June 30, 2018, $40.6 million is reported as the actuarially determined estimated claims payable for this fund based on claims incurred but not reported.

The actuarial liability is determined for the membership pool in total and then adjusted for each locality based on individual historic and demographic data. If the pool's assets were to be exhausted, the program participants would share the responsibility for any liabilities or deficits.

The Department of the Treasury, Division of Risk Management administers the VARisk and VARisk2 risk management programs for political subdivisions, constitutional officers and others in accordance with Section 2.2-1839 of the *Code of Virginia*. These pools were established to provide an economical, low-cost alternative to the commercial insurance market for the Commonwealth's political subdivisions. These risk programs are accounted for in the Risk Management Enterprise Fund (nonmajor). The pool is established subject to approval by the Governor. It may be insurance, self-insurance, or any combination thereof, and must provide protection and legal defense against liability. Participation is voluntary and open to those identified in Section 2.2-1839 of the *Code of Virginia*. As of June 30, 2018, there were 451 units of local government in the pool, including 18 towns and 25 counties. The remaining 408 units include a large variety of boards, commissions, authorities, and special districts.

The VARisk program is comprised of constitutional officers and regional jails, and participation is not mandated by the *Code of Virginia*. However, the Compensation Board (part of the primary government) requires participation by all constitutional officers.

The VARisk2 program is comprised of local governments and has a minimum membership period of one year. However, a member group can cancel membership and withdraw from the plan on their coverage anniversary date or at the end of the fiscal year with 30 days' notice.

No excess insurance or reinsurance is provided. The risk assumed by the VARisk and VARisk2 pool for liability is $1.0 million per occurrence, with the exception of sheriffs and their deputies, which is $1.5 million per occurrence.

As of June 30, 2018, $32.0 million and $4.1 million is reported as estimated claims payable for the VARisk and the VARisk2 programs, respectively. These figures are actuarially determined for the funds in total and are reported at gross. They are based on the estimated ultimate cost of settling the claims, including the effects of inflation and other societal and economic factors. They do not reflect possible reimbursements for insurance recoveries.

Effective July 1, 2017, per the amended Line of Duty Act Section 9.1-401 of the *Code of Virginia*, the Virginia Department of Human Resource Management (DHRM) became responsible for administration of the premium-free health benefits provided to eligible LODA recipients. All eligible employees, former employees, and eligible family members will be covered under one program, the LODA Health Benefits Plans. Participating or non-participating refers to whether the employer participates in the Line of Duty Death and Health Benefits Trust Fund, administered by VRS. All state agencies are participating employers, but localities can be either participating or non-participating. As of June 30, 2018, $2.2 million is reported as the actuarially determined estimated claims payable for the nonparticipating localities reported in this fund based on claims incurred but not reported.

The following schedule (dollars in thousands) shows the changes in claims liabilities for the past two fiscal years.

	Local Choice Health Care		Risk Management		Line of Duty	
	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017	June 30, 2018	June 30, 2017
Unpaid Claims and Claim Adjustment Expenses at Beginning of Fiscal Year	$ 38,046	$ 36,313	$ 37,568	$ 36,063	$ -	$ -
Incurred Claims and Claim Adjustment Expenses:						
Provision for Insured Events of the Current Fiscal Year	424,357	419,602	14,210	9,771	16,987	-
Changes in Provision for Insured Events of Prior Fiscal Years	-	-	(6,885)	(1,399)	-	-
Total Incurred Claims and Adjustment Expenses	424,357	419,602	7,325	8,372	16,987	-
Payments:						
Claims and Claim Adjustment Expenses Attributable to Insured Events of the Current Fiscal Year	421,802	417,869	1,979	836	14,779	-
Claims and Claim Adjustment Expenses Attributable to Insured Events of the Prior Fiscal Year	-	-	7,281	6,541	-	-
Total Payments	421,802	417,869	9,260	7,377	14,779	-
Change in Provision for Discounts	-	-	523	510	-	-
Total Unpaid Claims and Claim Adjustment Expenses at End of the Fiscal Year (Discounted) (1) (2) (3) (4)	$ 40,601	$ 38,046	$ 36,156	$ 37,568	$ 2,208	$ -
Total Unpaid Claims and Claim Adjustment Expenses at End of the Fiscal Year (Undiscounted)	$ 40,601	$ 38,046	$ 37,855	$ 39,348	$ 2,208	$ -

Note (1): The entire balance for Local Choice Health Care, $40,601 (dollars in thousands) is due within one year.

Note (2): Of the balance shown above for Risk Management, $9,857 (dollars in thousands) is due within one year.

Note (3): The entire balance for Line of Duty, $2,208 (dollars in thousands) is due within one year.

Note (4): The interest rate used for discounting is 1.9 percent.

25. ACCOUNTS PAYABLE

The following table (dollars in thousands) summarizes Accounts Payable as of June 30, 2018.

	Vendor	Salary / Wage	Retainage	Other	Foundations (1)	Total
Primary Government:						
General	$ 216,429	$ 109,702	$ 70	$ -	$ -	$ 326,201
Major Special Revenue Funds:						
Commonwealth Transportation	443,279	36,501	2,657	-	-	482,437
Federal Trust	60,054	17,621	1,042	-	-	78,717
Literary	10	-	-	-	-	10
Nonmajor Governmental Funds	30,621	17,838	3,907	260	-	52,626
Major Enterprise Funds:						
Virginia Lottery (2)	9,530	1,827	-	724	-	12,081
Virginia College Savings Plan	2,041	640	-	-	-	2,681
Unemployment Compensation	71	-	-	-	-	71
Nonmajor Enterprise Funds	80,527	7,333	-	-	-	87,860
Internal Service Funds	102,487	3,194	2,186	-	-	107,867
Private Purpose Trust Funds	-	4	-	335	-	339
Pension and Other Employee Benefit Trust Funds (3)	6,287	2,466	-	37,503	-	46,256
Agency Funds	2,973	-	-	6,001	-	8,974
Total Primary Government (4)	$ 954,309	$ 197,126	$ 9,862	$ 44,823	$ -	$ 1,206,120
Discrete Component Units:						
Virginia Housing Development Authority	$ 1,277	$ 4,831	$ -	$ 12,725	$ -	$ 18,833
Virginia Public School Authority	14	-	-	-	-	14
Virginia Resources Authority	75	3	-	-	-	78
Virginia College Building Authority	77	-	-	-	-	77
Nonmajor Component Units	582,634	454,968	41,712	7,560	115,043	1,201,917
Total Component Units	$ 584,077	$ 459,802	$ 41,712	$ 20,285	$ 115,043	$ 1,220,919

Note (1): Foundations represent FASB reporting entities defined in Note 1.B.

Note (2): Other Accounts Payable for the Virginia Lottery represents surety bonds, player taxes, and player subscription wallets.

Note (3): Other Accounts Payable for the Pension and Other Employee Benefit Trust Fund consists of $20,995 (dollars in thousands) in investment management fees and $16,508 (dollars in thousands) in program benefit liabilities.

Note (4): Fiduciary liabilities of $55,569 (dollars in thousands) are not included in the Government-wide Statement of Net Position. In addition, governmental fund liabilities of $140,945 (dollars in thousands) are included in the Government-wide Statement of Net Position, but excluded from the above amounts.

26. OTHER LIABILITIES

The following tables (dollars in thousands) summarize Other Liabilities as of June 30, 2018.

	Primary Government					
	General	Commonwealth Transportation	Federal Trust	Nonmajor Governmental Funds	Virginia Lottery	Virginia College Savings Plan (1)
Lottery Prizes Payable	$ -	$ -	$ -	$ -	$ 74,067	$ -
Medicaid Payable	549,382	-	610,687	-	-	-
Family Access to Medical Insurance Security Payable	1,856	-	13,612	-	-	-
Tax Refunds Payable	422,106	-	-	-	-	-
Insurance Carrier Surety Deposit	-	-	-	-	-	-
Deposits Pending Distribution	4,122	2,251	-	6,864	-	-
Car Tax Payable	263,025	-	-	-	-	-
Other Liabilities	272	26	7	1,211	-	35,091
Total Other Liabilities	$ 1,240,763	$ 2,277	$ 624,306	$ 8,075	$ 74,067	$ 35,091

	Primary Government				
	Nonmajor Enterprise Funds	Internal Service Funds	Pension and Other Employee Benefit Trust Funds (2)	Agency Funds	Total Primary Government (3)
Lottery Prizes Payable	$ -	$ -	$ -	$ -	$ 74,067
Medicaid Payable	-	-	-	-	1,160,069
Family Access to Medical Insurance Security Payable	-	-	-	-	15,468
Tax Refunds Payable	-	-	-	-	422,106
Insurance Carrier Surety Deposit	-	-	-	444,914	444,914
Deposits Pending Distribution	153	1,046	-	84,827	99,263
Car Tax Refund Payable	-	-	-	-	263,025
Other Liabilities	83	-	64,393	1,834	102,917
Total Other Liabilities	$ 236	$ 1,046	$ 64,393	$ 531,575	$ 2,581,829

Note (1): Other Liabilities of $35,091 (dollars in thousands) reported by the Virginia College Savings Plan represent amounts associated with pending investment trades and program distributions payable

Note (2): Other Liabilities of $64,393 (dollars in thousands) reported in Pension and Other Employee Benefit Trust Funds are made up of $37,167 (dollars in thousands) in other funds managed by the System; $19,197 (dollars in thousands) in pending investment transactions, including $11,544 (dollars in thousands) in net foreign exchange contracts payable, and $7,653 (dollars in thousands) in other investment payables; $4,486 (dollars in thousands) in other payables related to the System benefit plans; $2,476 (dollars in thousands) in foreign taxes payables related to the System benefit plans, and $1,067 (dollars in thousands) in dividends payable related to the System benefit plans.

Note (3): Fiduciary liabilities of $595,968 (dollars in thousands) are not included in the Government-wide Statement of Net Position. Governmental fund liabilities of $75,229 (dollars in thousands) are included in the Government-wide Statement of Net Position, but excluded from the above amounts.

	Component Units					
	Virginia Housing Development Authority	Virginia Public School Authority	Virginia Resources Authority	Virginia College Building Authority	Nonmajor Component Units (4)	Total Component Units
Accrued Interest Payable	$ 30,634	$ 57,035	$ 27,261	$ 92,477	$ 90,368	$ 297,775
Deposits Pending Distribution	-	-	-	-	493,168	493,168
Short-term Debt	445,300	-	-	-	234,916	680,216
Grants Payable	-	-	-	-	1,876	1,876
Other Liabilities	1,357	-	3,747	-	207,204	212,308
Total Other Liabilities	$ 477,291	$ 57,035	$ 31,008	$ 92,477	$ 1,027,532	$ 1,685,343

Note (4): Other Liabilities of nonmajor component units are predominantly comprised of derivative instruments reported by the following: University of Virginia of $27,890 (dollars in thousands), Virginia Commonwealth University of $5,074 (dollars in thousands), Virginia Commonwealth University Health System Authority (blended component unit of VCU) of $34,552 (dollars in thousands), and foundations of higher education institutions of $44,035 (dollars in thousands).

Medicaid Payable

Medicaid Payable represents services rendered but not billed by providers and potential liability resulting from cost reports not settled as of year-end. Providers subject to cost settlement are paid in the interim based on established per diem or diagnosis related group rates for services.

The Department of Medical Assistance Services (DMAS) estimates, based on past experience, the total amount of Medicaid claims that will be paid from the Medicaid program in the future which relate to services provided before year-end. As of June 30, 2018, the estimated liability related to Medicaid claims totaled $1.2 billion. Of this amount, $549.4 million is reflected in the General Fund (major governmental) and $610.7 million in the Federal Trust Special Revenue Fund (major governmental).

Family Access to Medical Insurance Security Payable

DMAS estimates the total amount of claims that will be paid from the Family Access to Medical Insurance Security program in the future which relate to services provided before year-end. As of June 30, 2018, the estimated liability related to claims totaled $15.5 million. Of this amount, $1.9 million is reflected in the General Fund (major governmental) and $13.6 million in the Federal Trust Special Revenue Fund (major governmental).

Tax Refunds Payable

Tax refunds payable represent refunds due on individual tax returns filed for the calendar year ended on or before December 31, 2017, and on business tax returns filed for corporate fiscal years ending on or before June 30, 2018. The individual tax return filing deadline is May 1 of each year for the preceding calendar year. The corporate tax return filing deadline is the 15th day of the fourth month following the close of the corporate fiscal year.

Car Tax Refund Payable

During the year ended June 30, 1998, the General Assembly passed the Personal Property Tax Relief Act. Under the terms of this legislation, the Commonwealth assumed financial responsibility for a portion, ranging from 12.5 percent to 70.0 percent, of the personal property taxes assessed by localities.

During 2004, the General Assembly modified this legislation. Chapter 1 of Special Session 1 (2004) established a $950.0 million limit on the amount the Commonwealth would appropriate for personal property tax relief, beginning in tax year 2006. It further established that each county, city, and town would receive a fixed percentage of the $950.0 million, with payments to begin on or after July 1, 2006 (fiscal year 2007). The accrued liability amount of $263.0 million reflects payments owed to localities as of June 30 and paid in July.

Termination Benefits

During fiscal year 2018, the Commonwealth laid off 312 employees. The affected employees had the option of volunteering for enhanced retirement benefits or severance benefits. The enhanced retirement benefits option was elected by 135 employees, and the remaining 177 employees elected severance benefits. The severance benefits include salary payments based on years of service and insurance premium payments for health and life insurance. All severance benefits were initiated during fiscal year 2018 and will end no later than June 30, 2019. The benefit cost expended and the outstanding liability as of June 30, 2018 for governmental funds, are $2.5 million and $2.2 million, respectively. Since the severance benefits last for a maximum of 12 months, discounting of future cash flows is unnecessary. Additionally, the estimated payments are calculated using the Department of Human Resources' Termination Benefits Calculator and actual costs.

Short-term Debt

Short-term debt results from borrowings from anticipation notes, lines of credit, and similar loans with parties external to the primary government. The primary government's policy is to disclose activity related to short-term borrowings occurring during the fiscal year. For fiscal year 2018, the primary government's agencies did not participate in short-term borrowings with external parties.

Various higher education institutions and foundations (nonmajor component units) have short-term debt totaling $228.9 million primarily to provide bridge financing for capital projects, property acquisition, and operations. The Virginia Housing Development Authority (major component unit) and the Virginia Museum of Fine Arts Foundation (nonmajor component unit) have borrowings from lines of credit in the amount of $445.3 million and $860,000, respectively. Additionally, Fort Monroe Authority (nonmajor component unit) has short-term debt of $226,453 and the Library of Virginia Foundation (nonmajor component unit) has a $23,000 note with a related party.

The balance of Other Liabilities is spread among various other funds.

27. LONG-TERM LIABILITIES

Commonwealth bonds are issued pursuant to Section 9 of Article X of the Constitution of Virginia. Section 9(a) bonds have been issued to redeem previous debt obligations. Section 9(b) bonds have been authorized by the citizens of Virginia through bond referenda to finance capital projects. These bonds are retired through the use of state appropriations. Section 9(c) bonds are issued to finance capital projects which, when completed, will generate revenue to repay the debt. Section 9(a), 9(b), and 9(c) bonds are tax-supported general obligation bonds and are backed by the full faith and credit of the Commonwealth. No other long-term debt obligations are backed by the full faith and credit of the Commonwealth.

Section 9(d) bonds are revenue bonds that are not backed by the full faith and credit of the Commonwealth. These bonds are not general obligation bonds and are not deemed to constitute a legal liability of the Commonwealth. However, this debt may be supported by state appropriations in whole or in part, such as certain debt of the Virginia Port Authority (nonmajor component unit) and the Commonwealth Transportation Board (primary government). Other 9(d) revenue bonds are payable from general revenues of the component units, or from revenues of specific revenue-producing capital projects, such as the teaching hospitals, dormitories, student centers, and dining halls at the various colleges and universities (nonmajor component units).

Certain 9(d) bonds are considered, along with 9(a), 9(b), and 9(c) bonds, to be tax-supported debt of the Commonwealth. Tax-supported debt includes all bonds and short-term debt for which debt service payments are made or are ultimately pledged to be made from tax revenues (net of sinking fund requirements).

Other 9(d) revenue bonds are considered debt not supported by taxes. For this debt, the Commonwealth has no direct or indirect pledge of tax revenues. In certain limited cases, the Commonwealth has made a moral obligation pledge. A government's moral obligation pledge provides a deficiency make-up for bondholders in the event pledged revenues prove to be insufficient. If a revenue deficiency exists, monies held in a debt service reserve fund are used to pay bondholders. The issuer then requests that the legislative body provide an appropriation to replenish the reserve fund before subsequent debt service is due. The legislative body may, but is not legally required to, replenish the reserve fund.

The following schedule presents the total long-term liabilities of the Commonwealth, and the portion of these amounts which are due within one year, as reported on the Government-wide Statement of Net Position.

Total Long-term Liabilities
June 30, 2018

(Dollars in Thousands)	Balance At June 30	Amount Due Within One Year
Primary Government:		
Governmental Activities:(1)		
General Obligation Bonds: (2)		
9(b) Public Facilities (3)	$ 457,764	$ 48,090
9(c) Parking Facilities (3)	9,850	985
9(c) Transportation Facilities (3)	8,914	2,560
Total General Obligation Bonds	476,528	51,635
Nongeneral Obligation Bonds - 9(d):		
Transportation Debt (3) (4)	4,028,729	206,910
Virginia Public Building Authority (3)	2,663,808	157,140
Hampton Roads Transportation Accountability Commission (3) (5)	582,425	-
Total Nongeneral Obligation Bonds	7,274,962	364,050
Other Long-term Obligations:		
Net Pension Liability (6)	4,082,682	-
Net OPEB Liability (7)	775,186	-
Total OPEB Liability (7)	735,108	25,203
Compensated Absences	307,329	162,261
Capital Lease Obligations	36,742	5,983
Pollution Remediation Obligations	6,963	1,918
Installment Purchase Obligations	103,655	12,695
Economic Development Authority Obligations (3)	30,783	6,470
Other Liabilities	30,948	5,277
Total Other Long-term Obligations	6,109,396	219,807
Total Governmental Activities (3)	13,860,886	635,492
Business-type Activities: (1) (5)		
Other Long-term Obligations:		
Net Pension Liability	135,629	-
Net OPEB Liability	21,680	-
Total OPEB Liability	25,434	-
Compensated Absences	10,546	7,726
Tuition Benefits Payable	2,135,222	281,415
Lottery Prizes Payable	116,484	10,550
Total Other Long-term Obligations	2,444,995	299,691
Total Business-type Activities	2,444,995	299,691
Total Primary Government	16,305,881	935,183

Continued on next page

Total Long-term Liabilities
June 30, 2018

(Dollars in Thousands)	Balance At June 30	Amount Due Within One Year
Component Units:		
General Obligation Bonds: (2)		
Higher Education Fund - 9(c) Bonds (3)	836,874	52,010
Nongeneral Obligation Bonds:		
Higher Education Institutions - 9(d) (3) (5)	2,817,992	23,713
Virginia College Building Authority (3)	4,305,134	273,705
Virginia Port Authority (3) (8)	535,433	15,070
Virginia Housing Development Authority (3) (5)	3,301,380	131,093
Virginia Resources Authority (3) (9)	3,630,130	182,142
Virginia Public School Authority (3) (5)	3,641,402	248,275
Hampton Roads Sanitation District Commission (3) (5)	891,442	77,108
Virginia Biotechnology Research Partnership Authority (3)	18,561	3,990
Foundations (5) (10)	991,603	43,975
Total Nongeneral Obligation Bonds	20,133,077	999,071
Other Long-term Obligations:		
Net Pension Liability (11)	2,688,728	-
Net OPEB Liability (12)	783,799	-
Total OPEB Liability (13)	639,434	-
Compensated Absences	323,953	247,152
Capital Lease Obligations (14)	2,295,765	2,691
Notes Payable (5)	1,948,362	181,533
Installment Purchase Obligations	63,050	8,124
Trust and Annuity Obligations (5) (15)	62,979	-
Other Liabilities (5)	307,305	42,317
Total Other Long-term Obligations (Excluding Foundations)	9,113,375	481,817
Other Long-term Obligations (Foundations): (5) (10)		
Compensated Absences	15,873	12,497
Capital Lease Obligations	357	125
Notes Payable	293,663	16,196
Trust and Annuity Obligations (15)	71,995	1,756
Other Liabilities	313,019	18,096
Total Other Long-term Obligations - Foundations	694,907	48,670
Total Other Long-term Obligations	9,808,282	530,487
Total Component Units	30,778,233	1,581,568
Total Long-term Liabilities	$ 47,084,114	$ 2,516,751

1. Pursuant to GASB Statement No. 34, governmental activities include internal service funds. Business-type activities are considered enterprise funds.
2. Total general obligation debt of the Commonwealth is $1.3 billion.
3. Amounts are net of any unamortized discounts and premiums.
4. This debt includes $1.2 billion that is not supported by taxes.
5. This debt is not supported by taxes.
6. This does not include net pension liabilities from fiduciary funds of $67,324. It includes $3,331 from the Hampton Roads Transportation Accountability Commission that does not relate to the Virginia Retirement System's State Plan and is not supported by taxes.
7. This does not include Net OPEB obligations of $11,897 or Total OPEB obligations of $9,080 from fiduciary funds.
8. This debt includes $292.0 million for bonds that is not supported by taxes.
9. This debt is not supported by taxes; however, $927.8 million is considered moral obligation debt.
10. Foundations represent FASB reporting entities defined in Note 1.B.
11. This includes net pension liabilities that do not relate to the Virginia Retirement System's State Plan from the Hampton Roads Sanitation District Commission and the Virginia Port Authority of $22.1 million and $16.3 million, respectively. This debt is not supported by taxes.
12. This includes OPEB obligations that do not relate to the Virginia Retirement System's State Plan from the Hampton Roads Sanitation District, Virginia Port Authority, Virginia Resources Authority, Roanoke Higher Education Authority, and Virginia Biotechnology Research Partnership Authority of $13.2 million, $1.3 million, $110,000, $79,349, and $43,000, respectively. This debt is not supported by taxes.
13. This includes OPEB obligations that do not relate to the Department of Human Resource Management from the University of Virginia of $101.1 million. This debt is not supported by taxes.
14. This includes $5.9 million that is supported by taxes.
15. These generally represent split-interest agreements that represent donor contributed assets with the requirement that an annual distribution be made to the donor or specified beneficiary. The annual distributions are usually for a fixed dollar amount or a fixed percentage of the trust's fair market value. The present value of these commitments is reported as Trust and Annuity Obligations.

Primary Government

Transportation Facilities Debt

Transportation Facilities Bonds include $8.9 million of Section 9(c) general obligation bonds and $4.0 billion of Transportation Facilities Section 9(d) debt. The Section 9(d) debt includes $2.8 billion of Section 9(d) revenue bonds and $1.2 billion of Grant Anticipation Revenue Notes (GARVEES) in addition to the outstanding Section 9(d) revenue bonds. Section 9(c) principal and interest requirements for the current year totaled $3.0 million. Section 9(d) principal and interest requirements for the current year totaled $351.4 million. The Section 9(c) Transportation Facilities Bonds were issued to fund the construction and improvement of the George P. Coleman Bridge. The Section 9(d) Transportation Facilities Bonds were issued to fund the construction of State Route 28, U.S. Route 58, the Northern Virginia Transportation District Program, the Oak Grove Connector (Chesapeake), and costs of certain transportation projects in the Commonwealth. The GARVEES were issued to finance various Federal Aid Transportation projects throughout the Commonwealth. The interest rates for these bonds range from 1.0 percent to 6.0 percent and the issuance dates range from October 10, 2002 to June 14, 2018.

On July 12, 2017, the Commonwealth Transportation Board issued $260.7 million of Commonwealth of Virginia Transportation Capital Projects Revenue Bonds, Series 2017. Series 2017 will be maturing in annual installments on May 15 in the years 2018 to 2042 and interest is payable on May 15 and November 15 at rates varying from 3.0 to 5.0 percent. The net proceeds of the Series 2017 bonds will be used to pay for the costs of certain transportation projects in the Commonwealth and certain costs related to the issuance of the 2017 bonds.

On December 7, 2017 the Commonwealth Transportation Board issued $483.0 million of Commonwealth of Virginia Federal Transportation Grant Anticipation Revenue and Refunding Bonds, Series 2017. Series 2017 Revenue and Refunding Bonds will be maturing in semi-annual installments on March 15 and September 15 in the years 2018 to 2032 and interest is payable annually on the same dates at rates varying from 2.0 to 5.0 percent. The 2017 Series bonds were issued to partially advance refund Series 2012A, 2012B, and 2013A, to pay for the costs of certain eligible transportation projects in the Commonwealth, and to pay for costs related to the issuance of the Series 2017 new money.

On December 14, 2017, the Commonwealth Transportation Board issued $629.2 million of Commonwealth of Virginia Transportation Capital Projects Revenue Refunding Bonds, Series 2017A. Series 2017A Refunding Revenue Bonds will be maturing in annual installments on May 15 in the years 2022 to 2036 and interest is payable annually on the same dates at rates varying from 4.0 to 5.0 percent. The 2017A Series bonds were issued to partially advance refund outstanding Series 2011 and Series 2012.

On June 14, 2018, the Commonwealth Transportation Board issued $145.5 million of Commonwealth of Virginia Transportation Capital Projects Revenue Bonds, Series 2018. Series 2018 will be maturing in annual installments on May 15 in the years 2019 to 2043 and interest is payable on May 15 and November 15 at rates varying from 3.0 to 5.0 percent. The net proceeds of the Series 2018 bonds will be used to pay for the costs of certain transportation projects in the Commonwealth and certain costs related to the issuance of the 2018 bonds.

The following schedules detail the annual funding requirements necessary to amortize Transportation Facilities 9(c) bonds and 9(d) debt. Pursuant to the American Recovery and Reinvestment Act, the Commonwealth expects to receive an interest subsidy to reimburse interest payments of $77.5 million for Build America Bonds (BABs) issued. The BABs are applicable to Commonwealth of Virginia Transportation Series 2010A Capital Project Revenue Bonds and Series 2009A Northern Virginia Transportation District Revenue Bonds. Additionally, the Commonwealth will receive the amounts required to pay the debt service on outstanding Series 2002 and Series 2012 bonds from the Route 28 Transportation Improvement District annually.

9(c) TRANSPORTATION FACILITIES BONDS
Debt Service Requirements to Maturity

Maturity	*Principal*	*Interest*	*Total*
2019	$ 2,560,000	$ 403,000	$ 2,963,000
2020	2,685,000	275,000	2,960,000
2021	2,815,000	140,750	2,955,750
Add:			
Unamortized Premium	854,107	-	854,107
Total	$ 8,914,107	$ 818,750	$ 9,732,857

9(d) TRANSPORTATION FACILITIES DEBT
Debt Service Requirements to Maturity

Maturity	*Principal*	*Interest*	*Total*
2019	$ 206,910,483	$ 162,828,427	$ 369,738,910
2020	191,543,337	153,323,846	344,867,183
2021	194,820,956	144,052,371	338,873,327
2022	187,955,226	134,608,689	322,563,915
2023	195,840,351	125,499,351	321,339,702
2024-2028	1,007,704,917	481,301,096	1,489,006,013
2029-2033	841,860,000	253,896,763	1,095,756,763
2034-2038	558,275,000	85,639,335	643,914,335
2039-2043	166,380,000	14,329,075	180,709,075
Less:			
Unamortized Discount	(81,186)	-	(81,186)
Add:			
Accretion on Capital Appreciation Bonds	31,001,626	-	31,001,626
Unamortized Premium	446,517,798	-	446,517,798
Total	$ 4,028,728,508	$ 1,555,478,953	$ 5,584,207,461

Fairfax Economic Development Authority Obligations

In fiscal year 2006, the Fairfax County Economic Development Authority (EDA) issued Section 9(d) revenue bonds to pay for the Commonwealth's (VDOT) costs of the planning, design and construction of a transportation infrastructure and related public safety operations complex to be developed on the contiguous sites in the county commonly referred to as “Camp 30” for the joint use of VDOT and the county. In fiscal year 2014, Fairfax County EDA issued a series of revenue refunding bonds, which refunded Series 2006 revenue bonds. The Commonwealth's obligation is set out in a payment agreement between Fairfax County EDA and the Commonwealth of Virginia, Department of Transportation, in which the Commonwealth agrees to make payments equal to the debt service from amounts appropriated by the General Assembly. The interest rates for these bonds range from 1.0 percent to 5.0 percent and the issue date was March 26, 2014. The principal and interest requirements for the current year totaled $7.8 million. The following schedule details the annual funding requirements necessary to repay these bonds.

FAIRFAX COUNTY ECONOMIC DEVELOPMENT AUTHORITY
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 6,470,000	$ 1,355,750	$ 7,825,750
2020	6,795,000	1,032,250	7,827,250
2021	7,135,000	692,500	7,827,500
2022	6,715,000	335,750	7,050,750
Add:			
Unamortized Premium	3,668,357	-	3,668,357
Total	$ 30,783,357	$ 3,416,250	$ 34,199,607

Public Facilities Bonds

Section 9(b) general obligation bonds consist of Public Facilities Bonds, Series 2009A, Series 2009D Refunding, Series 2009E, Series 2012A Refunding, Series 2013B Refunding, Series 2015B Refunding, and Series 2016B Refunding. Bonds were issued to fund construction projects for higher educational institutions, behavioral health, and/or park facilities. The Series 2009D bonds were issued to advance refund outstanding Series 2004A, Series 2005A, and Series 2006B bonds. The Series 2012A bonds were issued to advance refund outstanding Series 2002, Series 2003A, Series 2004A, and Series 2005A bonds. The Series 2013B bonds were issued to advance refund outstanding Series 2005A, Series 2006B, Series 2007A, and Series 2007B. The Series 2015B bonds were issued to advance refund certain maturities of outstanding Series 2007B, Series 2008A, and Series 2008B bonds. The Series 2016B bonds were issued to advance refund certain maturities of outstanding Series 2009A bonds. Principal and interest requirements for the current year totaled $70.1 million. The interest rates for all bonds range from 2.0 percent to 5.0 percent and the issuance dates range from June 24, 2009, to November 10, 2016. The following schedule details the annual funding requirements necessary to repay these bonds. Pursuant to the American Recovery and Reinvestment Act, the Commonwealth expects to receive an interest subsidy to reimburse interest payments of $2.5 million for Build America Bonds (BABs) issued. The BABs are applicable to Series 2009E Public Facilities Revenue Bonds.

9(b) PUBLIC FACILITIES BONDS
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 48,090,000	$ 18,848,098	$ 66,938,098
2020	48,140,000	16,562,795	64,702,795
2021	48,140,000	14,270,895	62,410,895
2022	48,260,000	11,885,225	60,145,225
2023	48,200,000	9,610,635	57,810,635
2024-2028	156,640,000	19,313,240	175,953,240
2029-2033	6,390,000	272,225	6,662,225
Add:			
Unamortized Premium	53,904,387	-	53,904,387
Total	$ 457,764,387	$ 90,763,113	$ 548,527,500

Parking Facilities Bonds

Section 9(c) general obligation bonds consist of Parking Facilities Bonds, Series 2009B and 2009D Refunding, 2012A Refunding, and Series 2016B Refunding. The Series 2009B bonds were issued to fund the construction of a 1,000 vehicle parking structure at 7th and Franklin Streets. The Series 2009D Refunding bonds were issued to advance refund outstanding Series 2004A bonds. The Series 2012A Refunding bonds were issued to advance refund outstanding Series 2002 Refunding and Series 2004A bonds. The Series 2016B Refunding bonds were issued to advance refund certain maturities of outstanding Series 2009B bonds. The interest rate for these bonds range from 2.0 percent to 5.0 percent, and the issuance dates range from October 21, 2009, to November 10, 2016. Current year principal and interest requirements totaled $1.4 million. The following schedule details the annual funding requirements necessary to repay these bonds.

9(c) PARKING FACILITIES BONDS
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 985,000	$ 392,560	$ 1,377,560
2020	785,000	343,310	1,128,310
2021	825,000	304,060	1,129,060
2022	865,000	262,810	1,127,810
2023	906,257	223,652	1,129,909
2024-2028	3,422,789	522,889	3,945,678
2029-2033	675,000	27,000	702,000
Add:			
Unamortized Premium	1,385,718	-	1,385,718
Total	$ 9,849,764	$ 2,076,281	$ 11,926,045

Virginia Public Building Authority

Virginia Public Building Authority Section 9(d) bonds consist of 2005D, 2008B, 2009A, 2009B, 2009C, 2009D Refunding, 2010A, 2010B-1, 2010B-2, 2010B-3 Refunding, 2011A, 2011B, 2012A Refunding, 2013A, 2013B Refunding, 2014A, 2014B, 2014C Refunding, 2015A, 2015B Refunding, 2016A, 2016B Refunding, 2016C (AMT), 2016D (Taxable), 2017A Refunding, 2018A, and 2018B (Taxable). All bonds were issued for the purpose of constructing, improving, furnishing, maintaining, and acquiring public buildings for the use of the Commonwealth and also to reimburse localities, regional jail authorities or other combination of localities under the Regional Jail Financing Program. The Series 2009D bonds were issued to advance refund outstanding series 2001A and 2002A Revenue bonds. The Series 2010B-3 bonds were issued to advance refund outstanding series 2002A and 2004B Revenue bonds. The Series 2012A bonds were issued to advance refund outstanding series 2004B and 2005C Revenue bonds. The Series 2013B bonds were issued to advance refund 2006A and 2006B revenue bonds. The Series 2014C bonds were issued to advance refund outstanding Series 2004A Refunding, 2004B, 2004C Refunding, and 2004D Refunding bonds, and certain maturities of the 2005C, 2006A, 2006B, and 2007A bonds. The Series 2015B bonds were issued to advance refund outstanding series 2005A Refunding, 2005B Refunding, and 2006A bonds and certain maturities of the series 2008B bonds. The Series 2016B bonds were issued to advance refund certain maturities of the series 2009B and 2011A bonds. The Series 2017A bonds were issued to advance refund certain maturities of the 2011A, 2013A, and 2014A bonds. The interest rates range from 0.9 percent to 5.9 percent and the issuance dates range from December 7, 2005, to May 8, 2018. The Series 2005D bonds are demand bonds with variable rates which are reset weekly by the remarketing agent. The 2005D bonds are subject to optional redemption. The principal balance outstanding on June 30, 2018 of $50.0 million is scheduled to be paid based on mandatory sinking fund requirements and included in the following schedule. Additional information on these demand bonds may be obtained from the audited financial statements on the Department of the Treasury website at www.trs.virginia.gov.

Current year principal and interest requirements for all VPBA bonds totaled $275.2 million. The following schedule details the annual funding requirements necessary to repay these bonds. Pursuant to the American Recovery and Reinvestment Act, the Commonwealth expects to receive an interest subsidy to reimburse interest payments of $56.4 million for Build America Bonds (BABs) issued. The BABs are applicable to Series 2010 Revenue Bonds.

9(d) VIRGINIA PUBLIC BUILDING AUTHORITY BONDS
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 157,140,000	$ 103,575,064	$ 260,715,064
2020	164,670,000	98,012,042	262,682,042
2021	158,795,000	90,345,388	249,140,388
2022	157,345,000	82,788,711	240,133,711
2023	161,420,000	75,172,275	236,592,275
2024-2028	820,020,000	260,254,524	1,080,274,524
2029-2033	546,265,000	97,156,126	643,421,126
2034-2038	239,560,000	19,149,739	258,709,739
2039-2043	12,785,000	197,220	12,982,220
Add:			
Unamortized Premium	245,808,123	-	245,808,123
Total	$ 2,663,808,123	$ 826,651,089	$ 3,490,459,212

Hampton Roads Transportation Accountability Commission

Hampton Roads Transportation Accountability Commission Section 9(d) bonds consists of Senior Lien Revenue Bonds, Series 2018A. The bonds were issued to pay for the costs of planning, design, and construction of transportation infrastructure in the localities comprising Planning District 23. The interest rates for this bond series ranges from 5.0 percent to 5.5 percent and the issue date was February 14, 2018.

Current year interest requirements totaled $9.8 million.

9(d) HAMPTON ROADS TRANSPORTATION ACCOUNTABILITY COMMISSION BONDS
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ -	$ 9,838,912	$ 9,838,912
2020	-	25,854,075	25,854,075
2021	-	25,854,075	25,854,075
2022	-	25,854,075	25,854,075
2023	-	25,854,075	25,854,075
2024-2028	14,965,000	128,546,625	143,511,625
2029-2033	30,365,000	122,640,625	153,005,625
2034-2038	38,760,000	114,250,625	153,010,625
2039-2043	49,460,000	103,542,875	153,002,875
2044-2048	63,125,000	89,877,875	153,002,875
2049-2053	132,510,000	67,496,625	200,006,625
2054-2058	170,815,000	29,189,325	200,004,325
Add:			
Unamortized Premium	82,424,692	-	82,424,692
Total	$ 582,424,692	$ 768,799,787	$ 1,351,224,479

Component Units

Higher Education Institution Bonds

Higher Education Institution Bonds are comprised of both 9(c) general obligation bonds and 9(d) revenue bonds. Section 9(d) bonds are from several sources as shown on the following schedule (dollars in thousands).

College and university bonds backed by pledge of general revenue or revenue from specific revenue-producing capital projects	$ 2,207,901
College and university debt backed exclusively by pledged revenues of an institution	610,091
Total Higher Education Institution 9(d) debt	$ 2,817,992

The interest rates for these bonds range from 1.3 percent to 6.2 percent and the issuance dates range from April 15, 2009, to June 6, 2018. The Virginia Commonwealth University Series 2012A and 2012B bonds and the Virginia Commonwealth University Health System Authority (a blended component unit of the Virginia Commonwealth University – nonmajor) Series 2013A and 2013B bonds are variable rate bonds and the rates are reset weekly by the remarketing agent.

The following schedules detail the annual funding requirements necessary to amortize Higher Education Institution 9(c) and 9(d) bonds. Pursuant to the American Recovery and Reinvestment Act, the Commonwealth expects to receive an interest subsidy to reimburse interest payments of $276.2 million for Build America Bonds (BABs) issued. The BABs are applicable to General Obligation Series 2010A Bonds, Series 2009F and 2010B 21st Century Virginia College Building Authority Education Facilities Bonds, and the University of Virginia's Series 2009 and 2010 General Revenue Bonds.

9(c) HIGHER EDUCATION INSTITUTION BONDS Debt Service Requirements to Maturity			
Maturity	***Principal***	***Interest***	***Total***
2019	$ 52,010,000	$ 32,384,621	$ 84,394,621
2020	51,785,000	30,051,451	81,836,451
2021	53,880,000	27,775,433	81,655,433
2022	52,180,000	25,377,988	77,557,988
2023	52,778,743	23,013,777	75,792,520
2024-2028	269,117,211	78,856,097	347,973,308
2029-2033	175,760,000	29,045,945	204,805,945
2034-2038	54,465,000	4,799,465	59,264,465
2039-2043	3,515,000	249,100	3,764,100
Add:			
Unamortized Premium	71,383,325	-	71,383,325
Total	$ 836,874,279	$ 251,553,877	$ 1,088,428,156

9(d) HIGHER EDUCATION INSTITUTION BONDS Debt Service Requirements to Maturity			
Maturity	***Principal***	***Interest (1)***	***Total***
2019	$ 23,713,195	$ 116,720,763	$ 140,433,958
2020	26,235,983	117,893,739	144,129,722
2021	26,484,966	116,980,371	143,465,337
2022	132,640,178	113,464,955	246,105,133
2023	26,661,657	109,952,466	136,614,123
2024-2028	190,049,353	527,418,257	717,467,610
2029-2033	178,366,243	497,285,191	675,651,434
2034-2038	312,521,523	460,373,714	772,895,237
2039-2043	731,835,000	315,904,069	1,047,739,069
2044-2048	616,060,000	141,939,362	757,999,362
2049-2053	105,920,000	64,685,000	170,605,000
2054-2058	-	62,685,000	62,685,000
2059-2063	-	62,685,000	62,685,000
2064-2068	-	62,685,000	62,685,000
2069-2073	-	62,685,000	62,685,000
2074-2078	-	62,685,000	62,685,000
2079-2083	-	62,685,000	62,685,000
2084-2088	-	62,685,000	62,685,000
2089-2093	-	62,685,000	62,685,000
2094-2098	-	62,685,000	62,685,000
2099-2103	-	62,685,000	62,685,000
2104-2108	-	62,685,000	62,685,000
2109-2113	-	62,685,000	62,685,000
2114-2118	300,000,000	56,416,500	356,416,500
Add:			
Unamortized Premium	147,503,900	-	147,503,900
Total	$ 2,817,991,998	$ 3,391,254,387	$ 6,209,246,385

Note (1): The future interest requirements exclude any net payments associated with hedging derivative instruments. See Note 15 for more details on hedging derivative instruments.

9(d) VIRGINIA COLLEGE BUILDING AUTHORITY BONDS Debt Service Requirements to Maturity			
Maturity	***Principal***	***Interest***	***Total***
2019	$ 273,705,000	$ 168,410,098	$ 442,115,098
2020	266,335,000	157,056,970	423,391,970
2021	276,905,000	144,831,140	421,736,140
2022	267,310,000	132,307,849	399,617,849
2023	262,245,000	120,228,319	382,473,319
2024-2028	1,195,135,000	435,169,541	1,630,304,541
2029-2033	1,002,020,000	181,368,929	1,183,388,929
2034-2038	351,165,000	26,109,200	377,274,200
Add:			
Unamortized Premium	410,314,233	-	410,314,233
Total	$ 4,305,134,233	$ 1,365,482,046	$ 5,670,616,279

Various higher education institutions' foundations (component units) and a museum foundation (component unit) have bonds outstanding as of year-end. The purpose of a majority of these bonds is for construction, property acquisition, and defeasance of prior debt. The following schedule details the future principal payments.

FOUNDATIONS' BONDS (1) Debt Service Requirements to Maturity	
Maturity	***Principal***
2019	$ 43,974,997
2020	33,304,401
2021	45,031,367
2022	35,413,952
2023	58,599,791
Thereafter	775,278,292
Total	$ 991,602,800

Note (1): Foundations represent FASB reporting entities defined in Note 1.B.

Virginia Port Authority

The Virginia Port Authority (nonmajor) has issued Section 9(d) revenue bonds and notes pursuant to powers provided to its Board of Commissioners by the *Code of Virginia*. The interest rates for these bonds range from 1.3 percent to 5.0 percent, and the issuance dates range from July 27, 2011, to November 17, 2016. The following schedule details the annual funding requirements necessary to amortize these bonds.

9(d) VIRGINIA PORT AUTHORITY DEBT Debt Service Requirements to Maturity			
Maturity	***Principal***	***Interest***	***Total***
2019	$ 15,070,000	$ 21,237,828	$ 36,307,828
2020	15,435,000	20,846,144	36,281,144
2021	15,845,000	20,409,739	36,254,739
2022	16,310,000	19,931,344	36,241,344
2023	16,805,000	19,414,752	36,219,752
2024-2028	92,855,000	87,924,382	180,779,382
2029-2033	105,945,000	67,417,651	173,362,651
2034-2038	95,160,000	44,524,421	139,684,421
2039-2043	91,345,000	21,214,138	112,559,138
2044-2048	48,045,000	3,440,170	51,485,170
Add:			
Unamortized Premium	22,617,753	-	22,617,753
Total	$ 535,432,753	$ 326,360,569	$ 861,793,322

Virginia Housing Development Authority

The Virginia Housing Development Authority (major) issued Section 9(d) revenue bonds. The interest rates for these bonds range from 2.1 percent to 6.8 percent and the issuance dates range from December 17, 2002, to June 5, 2018. The following schedule details the annual funding requirements necessary to amortize these bonds.

9(d) VIRGINIA HOUSING DEVELOPMENT AUTHORITY BONDS
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 131,093,288	$ 124,490,185	$ 255,583,473
2020	119,320,000	120,716,006	240,036,006
2021	106,265,000	117,986,555	224,251,555
2022	114,010,000	115,099,560	229,109,560
2023	93,595,000	111,930,249	205,525,249
2024-2028	444,115,000	513,209,488	957,324,488
2029-2033	478,263,316	427,284,517	905,547,833
2034-2038	589,658,863	321,370,764	911,029,627
2039-2043	886,215,419	170,189,671	1,056,405,090
2044-2048	319,642,101	15,880,230	335,522,331
2049-2053	20,350,000	1,653,385	22,003,385
Less: Unamortized Discount	(1,208,592)	-	(1,208,592)
Add: Unamortized Premium	60,938	-	60,938
Total	$ 3,301,380,333	$ 2,039,810,610	$ 5,341,190,943

Virginia Resources Authority

The Virginia Resources Authority (major) issued Section 9(d) revenue bonds. The interest rates for these bonds range from 0.2 percent to 6.3 percent and the issuance dates range from July 31, 2002, to May 23, 2018. The following schedule details the annual funding requirements necessary to amortize these bonds.

9(d) VIRGINIA RESOURCES AUTHORITY BONDS
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 182,141,743	$ 141,202,669	$ 323,344,412
2020	184,861,531	133,413,930	318,275,461
2021	191,803,621	124,921,012	316,724,633
2022	190,967,050	116,264,767	307,231,817
2023	191,434,860	107,464,901	298,899,761
2024-2028	933,835,157	408,962,527	1,342,797,684
2029-2033	765,090,176	218,875,928	983,966,104
2034-2038	430,383,039	98,889,701	529,272,740
2039-2043	245,040,000	31,477,748	276,517,748
2044-2048	49,600,000	3,359,570	52,959,570
Less: Unaccreted Capital Appreciation Bonds	(27,576,308)	-	(27,576,308)
Add: Unamortized Premium	292,549,585	-	292,549,585
Total	$ 3,630,130,454	$ 1,384,832,753	$ 5,014,963,207

Virginia Public School Authority

The Virginia Public School Authority (major) issued Section 9(d) revenue bonds. The interest rates for these bonds range from 0.0 percent to 5.5 percent, and the issuance dates range from December 11, 2003, to May 24, 2018. The following schedule details the annual funding requirements necessary to amortize these bonds. Pursuant to the American Recovery and Reinvestment Act, the Commonwealth expects to receive an interest subsidy to reimburse interest payments of $145.3 million for Qualified School Construction Bonds (QSCBs) issued. The QSCBs are applicable to Series 2010-1, 2011-1, 2011-2, and 2012-1 Revenue Bonds.

9(d) VIRGINIA PUBLIC SCHOOL AUTHORITY BONDS
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 248,275,000	$ 141,034,111	$ 389,309,111
2020	247,660,000	130,153,513	377,813,513
2021	238,865,000	118,696,917	357,561,917
2022	232,695,000	107,480,914	340,175,914
2023	220,085,000	96,507,159	316,592,159
2024-2028	1,160,201,000	329,762,801	1,489,963,801
2029-2033	729,610,000	121,845,422	851,455,422
2034-2038	305,305,000	30,028,102	335,333,102
2039-2043	38,850,000	4,763,925	43,613,925
2044-2048	13,395,000	1,116,197	14,511,197
Add: Unamortized Premium	206,461,043	-	206,461,043
Total	$ 3,641,402,043	$ 1,081,389,061	$ 4,722,791,104

Hampton Roads Sanitation District Commission

The Hampton Roads Sanitation District Commission (nonmajor) issued bonds under a Master Trust Indenture and a Trust Agreement dated December 1, 1993 and March 1, 2008. The interest cost for these bonds range from 1.2 percent to 5.1 percent. The following schedule details the annual funding requirements necessary to amortize these bonds. The fiscal year 2018 principal amount includes $50.0 million for demand bonds, which are also classified as “due within one year” in the accompanying financial statements.

HAMPTON ROADS SANITATION DISTRICT COMMISSION
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 77,108,000	$ 34,621,000	$ 111,729,000
2020	28,610,000	33,142,000	61,752,000
2021	28,972,000	31,976,000	60,948,000
2022	29,816,000	30,755,000	60,571,000
2023	31,034,000	29,493,000	60,527,000
2024-2028	168,922,000	127,000,000	295,922,000
2029-2033	179,912,000	88,345,000	268,257,000
2034-2038	167,096,000	46,713,000	213,809,000
2039-2043	75,438,000	16,842,000	92,280,000
2044-2048	30,701,000	3,281,000	33,982,000
Add: Unamortized Premium	73,833,000	-	73,833,000
Total	$ 891,442,000	$ 442,168,000	$ 1,333,610,000

Virginia Biotechnology Research Partnership Authority

The Virginia Biotechnology Research Partnership Authority (nonmajor) consists of Series 2009 Commonwealth of Virginia Lease Revenue bonds. Coupon interest rates range from 3.0 percent to 5.0 percent.

VIRGINIA BIOTECHNOLOGY RESEARCH PARTNERSHIP AUTHORITY
Debt Service Requirements to Maturity

Maturity	Principal	Interest	Total
2019	$ 3,990,000	$ 762,500	$ 4,752,500
2020	4,200,000	557,750	4,757,750
2021	4,415,000	342,375	4,757,375
2022	4,640,000	116,000	4,756,000
Add: Unamortized Premium	1,315,935	-	1,315,935
Total	$ 18,560,935	$ 1,778,625	$ 20,339,560

Total principal outstanding as of June 30, 2018, on all component unit bonds amounted to $21.0 billion.

The following schedule summarizes the changes in long-term liabilities:

Schedule of Changes in Long-term Debt and Obligations (1) (2)

(Dollars in Thousands)

	Balance July 1, as restated (3)	Issuances and Other Increases	Retirements and Other Decreases	Subtotal June 30
Primary Government				
Governmental Activities:				
Long-term Debt Bearing the Pledge of the Full Faith and Credit of the Commonwealth:				
General Obligation Bonds - 9(b) and 9(c):				
Public Facilities Bonds	$ 452,855	$ -	$ (48,995)	$ 403,860
Parking Facilities Bonds	9,404	-	(940)	8,464
Transportation Facilities Bonds	10,495	-	(2,435)	8,060
Add: Unamortized Premium	65,457	-	(9,313)	56,144
Total General Obligation Bonds	538,211	-	(61,683)	476,528
Long-term Debt/Obligations Not Bearing the Pledge of the Full Faith and Credit of the Commonwealth:				
Transportation Facilities Bonds	3,206,520	1,518,330	(1,173,560)	3,551,290
Virginia Public Building Authority Bonds	2,432,665	323,330	(337,995)	2,418,000
Hampton Roads Transportation Accountability Commission	-	500,000	-	500,000
Economic Development Authority Obligations	33,280	-	(6,165)	27,115
Add: Unamortized Premium	582,272	366,658	(170,511)	778,419
Accretion on Capital Appreciation Bonds	28,253	2,749	-	31,002
Less: Unamortized Discount	(86)	5	-	(81)
Installment Purchase Obligations	109,721	22,753	(28,819)	103,655
Compensated Absences	300,501	181,587	(174,759)	307,329
Capital Lease Obligations	41,024	639	(4,921)	36,742
Net Pension Liability*	4,721,816	-	(639,134)	4,082,682
Net OPEB Liability*	833,073	-	(57,887)	775,186
Total OPEB Liability*	893,067	-	(157,959)	735,108
Pollution Remediation Obligations	9,437	-	(2,474)	6,963
Other	33,680	-	(2,732)	30,948
Total Long-term Debt/Obligations Not Bearing the Pledge of the Full Faith and Credit of the Commonwealth	13,225,223	2,916,051	(2,756,916)	13,384,358
Total Governmental Activities	13,763,434	2,916,051	(2,818,599)	13,860,886
Business-type Activities:				
Long-term Debt/Obligations Not Bearing the Pledge of the Full Faith and Credit of the Commonwealth:				
Capital Lease Obligations	5,025	-	(5,025)	-
Compensated Absences	10,096	4,292	(3,842)	10,546
Net Pension Liability*	151,486	-	(15,857)	135,629
Net OPEB Liability*	23,525	-	(1,845)	21,680
Total OPEB Liability*	30,110	-	(4,676)	25,434
Lottery Prizes Payable	122,009	205	(5,730)	116,484
Tuition Benefits Payable	2,048,168	266,025	(178,971)	2,135,222
Total Business-type Activities	2,390,419	270,522	(215,946)	2,444,995
Total Primary Government	$ 16,153,853	$ 3,186,573	$ (3,034,545)	$ 16,305,881

*Net decrease is shown.

Foundations (4)	Balance June 30	Due Within One Year
$ -	$ 403,860	$ 48,090
-	8,464	985
-	8,060	2,560
-	56,144	-
-	476,528	51,635
-	3,551,290	206,910
-	2,418,000	157,140
-	500,000	-
-	27,115	6,470
-	778,419	-
-	31,002	-
-	(81)	-
-	103,655	12,695
-	307,329	162,261
-	36,742	5,983
-	4,082,682	-
-	775,186	-
-	735,108	25,203
-	6,963	1,918
-	30,948	5,277
-	13,384,358	583,857
-	13,860,886	635,492
-	-	-
-	10,546	7,726
-	135,629	-
-	21,680	-
-	25,434	-
-	116,484	10,550
-	2,135,222	281,415
-	2,444,995	299,691
$ -	$ 16,305,881	$ 935,183

Continued on next page

Schedule of Changes in Long-term Debt and Obligations (1) (2)
(continued)

(Dollars in Thousands)

	Balance July 1 as restated (3)	Issuances and Other Increases	Retirements and Other Decreases	Subtotal June 30
Component Units				
Long-term Debt Bearing the Pledge of the Full Faith and Credit of the Commonwealth:				
General Obligation Bonds - Higher Education 9(c) (5)	$ 897,018	$ -	$ (60,144)	$ 836,874
Long-term Debt/Obligations Not Bearing the Pledge of the Full Faith and Credit of the Commonwealth:				
Bonds (5)	18,470,256	3,208,380	(2,537,162)	19,141,474
Installment Purchase Obligations	35,818	33,218	(5,986)	63,050
Capital Lease Obligations	2,271,382	32,431	(8,048)	2,295,765
Notes Payable	1,938,288	207,545	(197,471)	1,948,362
Compensated Absences	300,591	334,006	(310,644)	323,953
Net Pension Liability*	3,059,817	-	(371,089)	2,688,728
Net OPEB Liability*	805,798	-	(21,999)	783,799
Total OPEB Liability*	735,550	-	(96,116)	639,434
Trust and Annuity Obligations	50,993	13,435	(1,449)	62,979
Other	288,060	738,323	(719,078)	307,305
Total Component Units	$ 28,853,571	$ 4,567,338	$ (4,329,186)	$ 29,091,723

*Net decrease is shown.

Note (1) Pursuant to GASB Statement No. 34, governmental activities include internal service funds. Business-type activities are considered enterprise funds.

Note (2) Payments on bonded debt that pertain to the Commonwealth's governmental activities are made through the debt service funds. Payments for installment purchases, compensated absences, capital leases, pension, and other obligations that pertain to the Commonwealth's governmental activities are made through the general and all special revenue funds, excluding the Literary Fund (major). Internal service funds predominantly serve the governmental funds. Accordingly, long-term liabilities for these funds are included as part of the total for governmental activities. Enterprise funds, or business-type activities, are self-supporting funds. Accordingly, long-term liabilities are paid from each respective fund.

Note (3) As a result of the implementation of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions,* the OPEB Liability line item reported in prior years has been removed from the above and replaced with the Net OPEB Liability and Total OPEB Liability line items. Accordingly, the beginning balances associated with the OPEB liability have been restated by $911,580 (dollars in thousands), $25,577 (dollars in thousands), and $441,545 (dollars in thousands) for the governmental activities, business-type activities, and component units, respectively. See Note 18 for additional information related to the new line items. Additionally, component unit Installment Purchase Obligations, Trust and Annuity Obligations, and Other Liabilities have been restated by $5,859 (dollars in thousands), $9,027 (dollars in thousands), and $5,859 (dollars in thousands), respectively, for nonmajor component units.

Note (4) Foundations represent FASB reporting entities defined in Note 1.B.

Note (5) Amounts are net of any unamortized discounts and premiums.

Foundations (4)	Balance June 30	Due Within One Year
$ -	$ 836,874	$ 52,010
991,603	20,133,077	999,071
-	63,050	8,124
357	2,296,122	2,816
293,663	2,242,025	197,729
15,873	339,826	259,649
-	2,688,728	-
-	783,799	-
-	639,434	-
71,995	134,974	1,756
313,019	620,324	60,413
$ 1,686,510	$ 30,778,233	$ 1,581,568

Bond and Note Defeasance

GASB Statement No. 7, *Advance Refundings Resulting in Defeasance of Debt*, provides that refunded debt and assets placed in escrow for the payment of related debt service be excluded from the financial statements. As of June 30, 2018, there were $1.5 billion in bonds from the primary government that have been refunded and defeased in-substance from the governmental activities column by placing existing assets and the proceeds of new bonds in irrevocable trusts to provide for all future debt service payments. In addition, there were $2.6 billion in bonds and notes outstanding considered defeased from the component units.

Primary Government

In November 2017, the Commonwealth sold real estate, which had been financed and refinanced in part with tax-exempt bonds issued by the Virginia Public Building Authority (VPBA). Of the sale proceeds, $12.7 million was transferred to VPBA for its use to defease $10.5 million of outstanding Virginia Public Building Authority Revenue and Revenue Refunding Bonds, Series 2010A-2, 2010B-1, 2010B-2, 2011A, 2012A, 2014C, 2015B and 2016B (the “Defeased Bonds”) and to pay transaction costs of $96,512. The remaining amount, $12.6 million, was deposited in an irrevocable trust with an escrow agent to provide for all future debt service and redemption premiums on the Defeased Bonds until the earliest redemption dates. Of the deposit, $5.3 million was initially held as cash by the escrow agent, of which a portion was used to redeem $4.0 million of Series 2010B-2 Bonds in December 2017, and $7.3 million was used to purchase escrow securities consisting of State and Local Government Series Securities Certificates of Indebtedness and Notes. The debt defeasance resulted in an accounting loss of $1.4 million.

In December 2017, VPBA issued $145.3 million of Series 2017A Public Facilities Revenue Refunding Bonds with a true interest cost (TIC) of 2.5 percent to refund $155.2 million of certain outstanding bonds. The bonds that were refunded include Public Facilities Revenue Bonds, Series 2011A, 2013A and 2014A. The net proceeds from the sale of the Refunding Bonds of $172.6 million (after payment of underwriter’s fees and other issuance costs) were deposited in an irrevocable trust with an escrow agent to provide for all future debt service and redemption premiums on the refunded bonds. The debt defeasance resulted in an accounting loss of $2.2 million. It will, however, reduce total debt service payments over the next 15 years by $13.4 million, resulting in an economic gain of $11.3 million discounted at the rate of 2.3 percent.

In December 2017, the Commonwealth Transportation Board of the Commonwealth of Virginia issued $629.2 million in Transportation Capital Project Revenue Refunding Bonds Series 2017A with an interest rate ranging from 4.0 to 5.0 percent and $287.7 million in Federal Transportation Grant Anticipation Revenue Refunding Notes Series 2017 with an interest rate ranging from 2.0 to 5.0 percent. The Capital Projects bonds that were partially refunded include $443.8 million of Series 2011 and $227.1 million of Series 2012. The Federal Transportation Grant Anticipation Revenue and Refunding Notes that were partially refunded with the Series 2017 Note included $130.8 million of Series 2012A, $50.5 million of Series 2012B, and $123.1 million of Series 2013A. The unspent proceeds included $301,163 to refund Series 2012B and $1.5 million in Series 2013A. The net proceeds from the sale of the Refunding Bonds and unspent funds of $1.1 billion (after payment of underwriter’s fees and other issuance costs) were deposited into an irrevocable trust with an escrow agent to provide future debt service payments on the

Refunded Bonds and to pay the costs related to issuance and refunding. As a result, the Refunded Bonds are considered to be defeased and the liability has been removed from the governmental activities column of the Statement of Net Position. The reacquisition price exceeded the net carrying amount of the old debt by $111.0 million. The Capital Projects debt defeasance resulted in an accounting loss of $69.9 million. It will, however, reduce total debt service payments over the next 18 years by $72.6 million, resulting in an economic gain of $56.6 million, discounted at the rate of 2.5 percent. The Federal Transportation Grant Anticipation Revenue debt defeasance resulted in an accounting loss of $41.1 million. It will, however, reduce total debt service payments over the next 11 years by $25.2 million, resulting in an economic gain of $22.2 million, discounted at the rate of 2.2 percent.

Component Units

For fiscal year 2018, the Virginia Public School Authority (VPSA) (major) issued $109.8 million of Series 2017B refunding bonds. The net proceeds have been placed with an escrow agent to provide for all future debt service on the defeased bonds. This debt defeasance resulted in an accounting loss of $11.0 million. Total debt service payments over the next 19 years will be reduced by $7.7 million. Present value savings of $6.4 million reflect the True Interest Cost of each component of the refunding at the discount rate.

In December 2017, the Virginia College Building Authority (VCBA) (major) issued $560.6 million of Series 2017E 21st Century Program refunding bonds. The bonds were issued to refund $4.7 million of its 2008A bonds, $14.5 million of its 2009A bonds, $75.6 million of its 2011A bonds, $116.0 million of its 2012A bonds, $96.7 million of its 2012B bonds, $108.5 million of its 2013A bonds, $57.5 million of its 2014A bonds, and $121.8 million of its 2015A bonds. The net proceeds from the sale of the refunding bonds of $672.9 million were deposited in an irrevocable trust with an escrow agent to provide for all future debt service on the defeased bonds. This defeasance resulted in an accounting loss of $12.2 million. Total debt service payments over the next 15 years will be reduced by $38.1 million resulting in a present value savings of $31.5 million discounted at the rate of 2.3 percent.

In December 2017, Virginia Commonwealth University Health System Authority (blended component unit of Virginia Commonwealth University - major component unit) issued $97.9 million of Series 2017A General Revenue Refunding Bonds to advance refund the 2022 through 2041 maturities of its Series 2011 General Revenue Bonds. For information regarding this refunding, see the Authority's separately issued financial statements.

Arbitrage Rebate

The Tax Reform Act of 1986 requires that governmental entities issuing tax-exempt debt calculate and rebate arbitrage earnings to the Federal government. The U.S. Treasury has issued regulations on calculating the rebate amount and complying with the provisions of the Tax Reform Act of 1986. Governmental issuers must comply with the rebate regulations in order for their bonds to maintain tax-exempt status. The regulations require earnings on investments purchased with bond proceeds in excess of the amount that would have been earned if the proceeds were invested at a rate equal to the bond yield, be subject to rebate to the Federal government. Income earned on excess earnings is also subject to rebate. Rebate liability, if any, must be paid every five years over the life of the bonds. Governmental issuers may at the time of issuance elect to pay a penalty in lieu of rebate. Bonds may be exempt from the rebate requirements if they qualify for certain exceptions under the regulations. If the issuer meets one of the exceptions, the issuer retains any arbitrage earnings. Rebate and penalty payments are calculated and paid as required by law on bond issues that do not qualify for an exception.

Rebate liability on bonds of the VPSA (major component unit) issued under its Pooled Bond Programs is payable from earnings on related bond funds and from local issuers whose local school bonds were purchased by the VPSA. During fiscal year 2018, no rebate payments were owed on VPSA bonds issued under its Pooled Bonds Programs. Rebate liability on notes of the VPSA issued under its School Technology and Security Notes Program is payable from earnings on related note funds and funds of the Commonwealth. During fiscal year 2018, a final arbitrage rebate calculation for VPSA's School Technology and Security Notes, Series I identified a yield reduction payment of $10,538 due to the Federal government in fiscal year 2018. The liability was paid in fiscal year 2018 by the Virginia Department of Education.

Rebatable arbitrage need only be calculated for tax purposes every fifth year that debt is outstanding. Consistent with modified accrual basis of accounting, it is not recognized as a liability in governmental funds until amounts actually become due and payable; however, a liability is recognized in accrual basis government-wide statements as soon as the underlying event has occurred. Accordingly, as of June 30, 2018, the Virginia Resources Authority (major component unit) has recognized a liability of $183,640.

Amounts remitted to the Federal government for rebate liability are generally paid from earnings derived from the issue. However, if all proceeds have been expended and depending on the type of issue, it may be necessary to use project revenues or general or non-general fund appropriations to satisfy any rebate liability. During fiscal year 2018, no rebate payments were owed on the Commonwealth's General Obligation Bonds, Virginia Public Building Authority, Commonwealth Transportation Board, the Virginia College Building Authority 21st Century or Pooled Bond Programs, or the Virginia Port Authority.

Capital Leases

The Commonwealth leases buildings and equipment under various agreements that are accounted for as capital leases. The lease agreements are for various terms and all leases contain nonappropriation clauses indicating that continuation of the lease is subject to funding by the General Assembly.

Gross minimum lease payments, together with the present value of the net minimum lease payments as of June 30, 2018, are shown in the following table (dollars in thousands).

	Governmental Activities	Business-Type Activities	Component Units (1)
2019	$ 8,487	$ -	$ 89,629
2020	8,052	-	94,757
2021	7,877	-	95,392
2022	7,831	-	97,196
2023	2,610	-	99,046
2024-2028	10,380	-	520,572
2029-2033	3,646	-	563,010
2034-2038	2,253	-	586,110
2039-2043	1,846	-	634,574
2044-2048	-	-	686,874
2049-2053	-	-	743,874
2054-2058	-	-	804,305
2059-2063	-	-	870,741
2064-2068	-	-	494,175
Total Gross Minimum Lease Payments	52,982	-	6,380,255
Less: Amount Representing Executory Costs	(5,460)	-	-
Net Minimum Lease Payments	47,522	-	6,380,255
Less: Amount Representing Interest	(10,780)	-	(4,084,490)
Present Value of Net Minimum Lease Payments	$ 36,742	$ -	$ 2,295,765

Note (1): The above amounts exclude capital lease obligations of foundations.

	Foundations (2)
2019	$ 130
2020	122
2021	112
Net Minimum Lease Payments	364
Less: Amount Representing Interest	(7)
Present Value of Net Minimum Lease Payments	$ 357

Note (2): Foundations represent FASB reporting entities defined in Note 1.B.

As of June 30, 2018, assets purchased under capital leases were included in depreciable capital assets as follows (dollars in thousands). The amounts are net of accumulated depreciation where applicable. For a portion of these assets, ownership will pass to the Commonwealth at the end of the lease term.

	Buildings	Equipment	Infrastructure	Total
Governmental Activities:				
Gross Capital Assets	$ 161,767	$ 3,687	$ -	$ 165,454
Less: Accumulated Depreciation	(72,088)	(1,680)	-	(73,768)
Total Governmental Activities	$ 89,679	$ 2,007	$ -	$ 91,686
Business-Type Activities:				
Gross Capital Assets	$ -	$ -	$ -	$ -
Less: Accumulated Depreciation	-	-	-	-
Total Business-Type Activities	$ -	$ -	$ -	$ -
Component Units:				
Gross Capital Assets	$ 2,226,624	$ 121,191	$ 2,116,678	$ 4,464,493
Less: Accumulated Depreciation	(76,098)	(7,937)	(45,083)	(129,118)
Subtotal (excluding Foundations)	2,150,526	113,254	2,071,595	4,335,375
Foundations:				
Gross Capital Assets	-	817	-	817
Less: Accumulated Depreciation	-	(444)	-	(444)
Subtotal Foundations	-	373	-	373
Total Component Units (3)	$ 2,150,526	$ 113,627	$ 2,071,595	$ 4,335,748

Note (3): In addition to the above, land purchased under capital leases by the University of Virginia (nonmajor) is $8,095 (dollars in thousands).

Notes Payable

Notes Payable consist of several items as shown in the following schedule (dollars in thousands):

Primary Government	
Installment Notes	103,655
Total Primary Government	103,655
Component Units	
Virginia Public School Authority	196,305
Nonmajor Component Units	1,752,057
Installment Notes	63,050
Subtotal (excluding Foundations)	2,011,412
Foundations:	
Notes Payable	293,663
Subtotal - Foundations	293,663
Total Component Units	2,305,075
Total Notes Payable	$ 2,408,730

The Virginia Public School Authority (major component unit) notes of $196.3 million are for the School Technology and Security Notes Program. The note proceeds were used to finance technology equipment purchases and to make grants to school divisions for the purchase of security equipment. The notes will be repaid from appropriations to be made by the Virginia General Assembly from the Literary Fund (major special revenue).

An additional amount of $1.7 billion is comprised primarily of higher education institutions' (nonmajor component units) promissory notes with the Virginia College Building Authority (VCBA) (major component unit) to finance the construction of various higher education facilities pursuant to the Pooled Bond Program. Interest rates range from 2.0 percent to 5.6 percent and shall be paid semi-annually and the planned interest payments total

$502.1 million. Additionally, in accordance with the American Recovery and Reinvestment Act, the Commonwealth expects to receive a Build America Bonds (BABs) interest subsidy to reimburse interest payments of $26.3 million. The final principal payment is due in fiscal year 2046.

The following higher education institutions (nonmajor component units) reported notes payables primarily for construction: Virginia Commonwealth University Health System Authority (Authority) (a blended component unit of the Virginia Commonwealth University – nonmajor component unit) $20.0 million, which includes $11.7 million reported by the University Health Services (a component unit of the Authority); Virginia State University $635,968; and Norfolk State University $4,951.

Various foundations (component units) have notes outstanding as of year-end. The purpose of a majority of these notes is for property acquisition, working capital, and construction. Future principal payments as of June 30, 2018, are shown in the following table (dollars in thousands).

Foundations' Notes Payable (Component Units) (1)

Maturity	Principal
2019	$ 16,196
2020	47,922
2021	11,319
2022	12,215
2023	21,276
Thereafter	184,735
Total	$ 293,663

Note (1): Foundations represent FASB reporting entities defined in Note 1.B.

Installment purchase obligations have been entered into by agencies and institutions of the Commonwealth. These agreements, other than those in the component units and certain institutions of higher education, contain nonappropriation clauses indicating that continuation of the installment purchase obligations is subject to funding by the General Assembly. Installment purchase obligations represent $166.7 million of the total outstanding debt of the Commonwealth. Presented in the following tables are repayment schedules for installment purchase obligations as of June 30, 2018.

Installment Purchase Obligations - Governmental Funds
June 30, 2018

Maturity	Principal	Interest	Total
2019	$ 12,695,176	$ 2,152,954	$ 14,848,130
2020	14,331,338	2,239,938	16,571,276
2021	14,355,426	1,881,381	16,236,807
2022	13,676,207	1,522,389	15,198,596
2023	11,594,766	1,176,524	12,771,290
2024-2028	31,434,624	2,560,354	33,994,978
2029-2033	5,528,269	249,685	5,777,954
2034-2038	21,374	598	21,972
2039-2043	17,765	256	18,021
Total	$ 103,654,945	$ 11,784,079	$ 115,439,024

Installment Purchase Obligations - Component Units
June 30, 2018

Maturity	Principal	Interest	Total
2019	$ 8,124,109	$ 1,327,490	$ 9,451,599
2020	10,512,687	1,223,349	11,736,036
2021	10,058,621	1,058,484	11,117,105
2022	5,249,942	897,812	6,147,754
2023	4,324,032	777,478	5,101,510
2024-2028	15,822,624	2,440,563	18,263,187
2029-2033	8,957,714	687,856	9,645,570
Total	$ 63,049,729	$ 8,413,032	$ 71,462,761

The foundations (component units) had no installment purchase obligations as of June 30, 2018.

On May 23, 2016, the Virginia Department of Transportation (VDOT) (primary government) and Chesterfield County (County) signed a memorandum of understanding concerning payment of interest relating to the County's contribution to VDOT for the construction of the Powhite Parkway Extension Project. The parties agreed that the interest to be paid by VDOT on the County's contribution to the construction of the Powhite Parkway Extension is $18.5 million. The interest requirement paid during fiscal year 2018 totaled $1.2 million. The remaining outstanding interest amount of $6.1 million is payable in annual installments on September 1 in the years 2018 to 2022. This interest is applicable to a note payable that VDOT repaid to the County in fiscal year 2014.

Lottery Prizes Payable

Lottery prizes are paid in 20, 25, 26, or 30 installments. The first installment is paid on the day the prize is claimed. The subsequent annual payments are funded with U.S. Treasury STRIPS purchased by the Virginia Lottery. For Life prizes payable represent estimated prizes payable monthly, quarterly or annually for the life of the winner based on life expectancy tables from the Virginia Bureau of Insurance, and funded with a pool of U.S. Treasury STRIPS.

Lottery prizes payable represent the future annual prize payments valued at cost plus accrued interest (current value of securities held to maturity) of the assets funding the payments.

Lottery prizes payable for the fiscal year ended June 30, 2018, are shown in the following table:

	Jackpot	Win For Life	Total
Due within one year	$ 5,651,509	$ 4,898,136	$ 10,549,645
Due in subsequent years	45,333,154	60,601,670	105,934,824
Total (current value)	50,984,663	65,499,806	116,484,469
Add:			
Interest to Maturity	17,752,337	29,881,194	47,633,531
Lottery Prizes Payable at Maturity	$ 68,737,000	$ 95,381,000	$ 164,118,000

Tuition Benefits Payable

The Virginia College Savings Plan administers the Prepaid529 program. Prepaid529 offers contracts at actuarially determined amounts that provide for future tuition and mandatory fee payments at state higher education institutions. The contract provisions also allow the benefits to be used for private or out-of-state institutions at differing amounts.

As of June 30, 2018, tuition benefits payable of $2.1 billion have been recorded for the Prepaid529 program on the statement of net position for the actuarially determined present value of future obligations anticipated for payment of benefits and administrative expenses for the Prepaid529 program. In addition, a receivable in the amount of $194.2 million has been recorded to reflect the actuarially determined present value of future payments anticipated from contract holders.

28. OTHER REVENUE

The following table (dollars in thousands) summarizes Other Revenue for the fiscal year ended June 30, 2018.

	Assessments and Receipts for Support of Special Services	Fines, Forfeitures, Court Fees, Penalties, and Escheats	Receipts from Cities, Counties, and Towns	Private Gifts, Grants, and Contracts	Sales of Property
Primary Government:					
General	$ 5,088	$ 211,128	$ 11,089	$ 542	$ 45,740
Major Special Revenue Funds:					
Commonwealth Transportation	16,929	17,324	261,479	43,395	770
Federal Trust	-	848	-	-	2
Literary	-	50,711	-	-	-
Nonmajor Governmental Funds	127,818	63,060	62,234	6,031	7,073
Major Enterprise Funds:					
Virginia College Savings Plan	-	-	-	-	-
Unemployment Compensation	-	193	-	-	-
Nonmajor Enterprise Funds	-	14,562	-	-	-
Private Purpose Trust Funds	-	-	-	-	-
Pension and Other Employee Benefit Trust Funds	-	-	-	-	-
Total Primary Government	$ 149,835	$ 357,826	$ 334,802	$ 49,968	$ 53,585

	Tobacco Master Settlement	Taxes	Other (1)	Total Other Revenue
Primary Government:				
General	$ 58,267	$ -	$ 323,030	$ 654,884
Major Special Revenue Funds:				
Commonwealth Transportation	-	-	583,976	923,873
Federal Trust	-	-	233,689	234,539
Literary	-	-	3,556	54,267
Nonmajor Governmental Funds	-	-	261,552	527,768
Major Enterprise Funds:				
Virginia College Savings Plan	-	-	27	27
Unemployment Compensation	-	-	-	193
Nonmajor Enterprise Funds	-	4,517	1,788	20,867
Private Purpose Trust Funds	-	-	2	2
Pension and Other Employee Benefit Trust Funds	-	-	3,626	3,626
Total Primary Government	$ 58,267	$ 4,517	$ 1,411,246	$ 2,420,046

Note (1): $263,260 (dollars in thousands), $568,071 (dollars in thousands), and $192,589 (dollars in thousands) are related to prior year expenditures refunded in the current fiscal year for the General Fund, the Commonwealth Transportation Fund, and the Federal Trust Fund, respectively. The total amount recorded for the Literary Fund is related to unclaimed prizes in the Virginia Lottery. $116,265 (dollars in thousands) is related to proceeds from unclaimed property in the Unclaimed Property Fund, $44,571 (dollars in thousands) is related to indirect costs and court collection fees in the Other Special Revenue Fund, and the remaining $66,476 (dollars in thousands) is related to other miscellaneous activities in the nonmajor governmental funds.

29. TAX ABATEMENTS

GASB Statement No. 77, *Tax Abatements*, requires disclosures to be made for tax abatements. These arise from agreements between the Commonwealth and taxpayers and result in reduced tax revenue when the taxpayer promises to provide economic benefits to the Commonwealth. As of June 30, 2018, the Commonwealth participates in the following tax abatements programs in excess of $1.0 million. There are no provisions for recapturing abated taxes since the requirements must be met prior to receiving the abatement.

- The Retail Sales and Use Tax Data Center Exemptions are intended to attract data centers to the Commonwealth pursuant to Title 58.1-609.3(18) of the *Code of Virginia*. Qualifying entities may purchase or lease certain computer equipment, enabling software and other enabling hardware for use in the data center exempt from the retail sales and use tax. Each recipient's retail sales and use taxes are reduced by being able to purchase qualifying items for use in the data center without having to pay the retail sales and use tax on the purchase price. The amount of the abatement for each recipient is determined by multiplying the purchase price of the qualifying computer equipment, enabling software and other enabling hardware purchased by the recipient by the rate of the retail sales and use tax that would be imposed on the purchase if the exemption was not available. The rate of the retail sales and use tax is 6.0 percent in the Northern Virginia and Hampton Roads localities and 5.3 percent in the remainder of the state. The exemption is available for data centers that (i) are located in a Virginia locality; (ii) result in a new capital investment of at least $150.0 million on or after January 1, 2009; and (iii) meet specified employment and salary requirements. On or after July 1, 2009, the data center or tenants must result in the creation of at least 50 new jobs paying at least one and one-half the prevailing average wage in the locality, or 25 new jobs paying at least one and one-half the prevailing average wage in the locality if the data center is located in a locality that has an unemployment rate for the preceding year of at least 150.0 percent of the average statewide unemployment rate or is located in an enterprise zone. Effective July 1, 2012, the exemption was extended to purchases and leases made by tenants of a data center that meets the requirements of the data center exemption.

  In order to qualify for the exemption, the data center operator must enter into a memorandum of understanding with the Virginia Economic Development Partnership Authority (component unit). The exemption is scheduled to sunset June 30, 2035. The amount of abated taxes for fiscal year 2018 is $79.2 million.

- The Motion Picture Production Tax Credit is intended to encourage the filming of motion picture productions in the Commonwealth. Pursuant to Section 58.1-439.12:03 of the *Code of Virginia*, a motion picture production company with qualifying expenses of at least $250,000 may abate its individual income tax or corporate income tax liability by the amount of the Motion Picture Production Tax Credit. The amount of the tax credit is equal to (i) 15.0 percent of the production company's qualifying expenses or (ii) 20.0 percent of such expenses if the production is filmed in an economically distressed area of the Commonwealth. In addition to the credit for the qualifying expenses incurred by a motion picture production company, such company may receive an Additional Virginia Resident Credit and an Additional Virginia Resident First-Time Industry Employee Credit. The Additional Virginia Resident Credit equals (i) 10.0 percent of the total aggregate payroll for Virginia residents employed in connection with the production of a film in Virginia when total production costs in Virginia are at least $250,000, but not more than $1.0 million or (ii) 20.0 percent of the total aggregate payroll of such residents when total production costs in Virginia exceed $1.0 million. The Additional Virginia Resident First-Time Industry Employee Credit is equal to 10.0 percent of the total aggregate payroll for Virginia residents employed for the first time as actors or members of a production crew in connection with the production of a film in Virginia.

  The Motion Picture Production Tax Credit is a refundable tax credit. Therefore, if the amount of credit that a company is allowed to claim exceeds the company's tax liability for the taxable year, the excess amount of credit will be refunded to the company.

  The credit is scheduled to sunset January 1, 2022. The annual cap on the amount of credits granted during a fiscal year is $6.5 million. The credits will be claimed by the taxpayer when filing a return. As a result, the credits claimed in a fiscal year may exceed $6.5 million. The amount of taxes abated for fiscal year 2018 is $6.1 million. Companies must have a memorandum of understanding with the Virginia Film Office (part of primary government) in order to participate in this program.

30. PRIZES AND CLAIMS

The following table summarizes Prizes and Claims Expense for the fiscal year ended June 30, 2018.

(Dollars in Thousands)

	Insurance Claims	Lottery Prize Expense	Total Prizes and Claims
Proprietary Funds:			
Major Enterprise Funds:			
Virginia Lottery	$ -	$ 1,293,568	$ 1,293,568
Unemployment Compensation	323,214	-	323,214
Nonmajor Enterprise Funds	459,493	-	459,493
Total Enterprise Funds	$ 782,707	$ 1,293,568	$ 2,076,275
Internal Service Funds	$ 1,422,178	$ -	$ 1,422,178

31. OTHER EXPENSES

The following table summarizes Other Expenses for the fiscal year ended June 30, 2018.

(Dollars in Thousands)

	Grants and Distributions To Localities	Expendable Equipment/ Improvements	Other (1)	Total Other Expenses
Proprietary Funds:				
Major Enterprise Funds:				
Virginia College Savings Plan	$ -	$ 255	$ 2,084	$ 2,339
Nonmajor Enterprise Funds	86	2,868	794	3,748
Total Enterprise Funds	$ 86	$ 3,123	$ 2,878	$ 6,087
Internal Service Funds	$ 1,879	$ 2,026	$ 6,093	$ 9,998
Pension and Other Employee Benefit Trust Funds (2)	$ -	$ -	$ 10,868	$ 10,868

Note (1): $2,084 (dollars in thousands) can be attributed to the Prepaid529 Program for the SOAR scholarship program and other promotional scholarships. $5,578 (dollars in thousands) can be attributed to expenses related to cyber insurance in the Risk Management internal service fund and $418,497 can be attributed to Affordable Care Act related fees in the Health Care Fund internal service fund.

Note (2): Fiduciary expenses of $10,868 (dollars in thousands) are not included in the Government-wide Statement of Activities.

32. OTHER NON-OPERATING REVENUE/EXPENSES

The following table summarizes Other Non-Operating Revenue/Expenses for the fiscal year ended June 30, 2018.

(Dollars in Thousands)

	Gain/ (Loss) on Sale of Capital Assets	Securities Lending	Interest Expense	Other (1)	Total Other Non-Operating Revenue/ (Expenses)
Proprietary Funds:					
Major Enterprise Funds:					
Virginia Lottery	$ (466)	$ (68)	$ -	$ 265	$ (269)
Virginia College Savings Plan	(2,441)	(2)	(269)	-	(2,712)
Nonmajor Enterprise Funds	-	(90)	-	9,384	9,294
Total Enterprise Funds	$ (2,907)	$ (160)	$ (269)	$ 9,649	$ 6,313
Internal Service Funds	$ 71	$ (270)	$ (2,354)	$ 113	$ (2,440)

Note (1): Other Non-Operating Revenue/Expenses of the nonmajor enterprise funds are primarily comprised of amounts reported by Alcoholic Beverage Control.

33. TRANSFERS

The following table summarizes Transfers In and Transfers Out for the fiscal year ended June 30, 2018 (dollars in thousands).

	Transfers In (Reported In):								
Transfers Out (Reported In):	General	Commonwealth Transportation	Federal Trust	Literary	Nonmajor Governmental Funds	Unemployment Compensation Fund	Nonmajor Enterprise Funds	Internal Service Funds	Total Primary Government
Primary Government									
General	$ -	$ 3,582	$ -	$ -	$ 441,078	$ -	$ -	$ 18	$ 444,678
Major Special Revenue Funds:									
Commonwealth Transportation	29,633	-	6	-	374,188	-	-	388	404,215
Federal Trust	5	13,987	-	-	3,258	167	109	-	17,526
Nonmajor Governmental Funds	40,647	417	916	165,000	12,281	-	-	-	219,261
Major Enterprise Funds:									
Virginia Lottery	606,222	-	-	14,131	-	-	-	-	620,353
Virginia College Savings Plan	646	-	-	-	-	-	-	-	646
Unemployment Compensation	-	-	1,371	-	-	-	-	-	1,371
Nonmajor Enterprise Funds	188,829	-	-	-	15,896	-	-	-	204,725
Internal Service Funds	1,352	-	-	-	136	-	171	-	1,659
Total Primary Government	$ 867,334	$ 17,986	$ 2,293	$ 179,131	$ 846,837	$ 167	$ 280	$ 406	$ 1,914,434

Transfers are used to (1) move revenues from the fund that the *Code of Virginia* or budget requires to collect them to the fund that the *Code of Virginia* or budget requires to expend them; (2) move receipts restricted for debt service from the funds holding the resources to the debt service fund as principal and interest payments become due; and (3) move unrestricted revenues collected in the General Fund to finance various programs accounted for in other funds in accordance with budgetary authorizations.

During the fiscal year, the following significant transfers were made that do not occur on a routine basis or are inconsistent with the activities of the fund making the transfer.

Various nongeneral funds transferred approximately $3.3 million to the General Fund as required by Chapter 1, 2018 Virginia Acts of Assembly Special Session 1.

34. ENDOWMENTS

Donor restricted endowments reside primarily within the higher education institutions. The net appreciation available for expenditure is $1.6 billion as of June 30, 2018. Of this amount, $1.4 million is reported as unrestricted net position and the remainder is reported as restricted net position. The *Code of Virginia* authorizes acceptance of donations. The governing boards of these entities and the donor agreements determine whether net appreciation can be spent and the accepted spending rate. These policies are entity specific and vary with each institution.

35. CASH FLOWS – ADDITIONAL DETAILED INFORMATION

The following table (dollars in thousands) summarizes specific cash flows for the fiscal year ended June 30, 2018.

Cash Flows Resulting from:	Virginia Lottery	Virginia College Savings Plan	Unemployment Compensation	Nonmajor Enterprise Funds	Total Enterprise Funds	Internal Service Funds
Payments for Prizes, Claims, and Loss Control:						
Lottery Prizes	$ (1,318,959)	$ -	$ -	$ -	$ (1,318,959)	$ -
Claims and Loss Control	-	-	(324,886)	(446,730)	(771,616)	(1,398,120)
Total	$ (1,318,959)	$ -	$ (324,886)	$ (446,730)	$ (2,090,575)	$ (1,398,120)
Other Operating Revenue:						
Other Operating Revenue	$ -	$ 27	$ 234	$ 4,323	$ 4,584	$ 58
Total	$ -	$ 27	$ 234	$ 4,323	$ 4,584	$ 58
Other Operating Expense:						
Other Operating Expenses (1)	$ -	$ (2,084)	$ -	$ (2,509)	$ (4,593)	$ (8,179)
Total	$ -	$ (2,084)	$ -	$ (2,509)	$ (4,593)	$ (8,179)
Other Noncapital Financing Receipt Activities:						
Advances/Contributions from the Commonwealth	$ -	$ -	$ -	$ 40,535	$ 40,535	$ 92,731
Receipts from Taxes	-	-	-	243,918	243,918	-
Other Noncapital Financing Receipt Activities	151	-	6	357	514	803
Total	$ 151	$ -	$ 6	$ 284,810	$ 284,967	$ 93,534
Other Noncapital Financing Disbursement Activities:						
Repayments of Advances/Contributions from the Commonwealth	$ -	$ -	$ -	$ (34,054)	$ (34,054)	$ (54,270)
Other Noncapital Financing Disbursement Activities	-	-	-	(106)	(106)	(528)
Total	$ -	$ -	$ -	$ (34,160)	$ (34,160)	$ (54,798)
Other Capital and Related Financing Receipt Activities:						
Other Capital and Related Financing Receipt Activities	$ -	$ -	$ -	$ 335	$ 335	$ 1,785
Total	$ -	$ -	$ -	$ 335	$ 335	$ 1,785
Other Capital and Related Financing Disbursement Activities:						
Other Capital and Related Financing Disbursement Activities	$ (466)	$ -	$ -	$ -	$ (466)	$ (397)
Total	$ (466)	$ -	$ -	$ -	$ (466)	$ (397)

Note (1): $2,084 (dollars in thousands) can be attributed to SOAR scholarship expenses and other scholarships and awards. Also, $5,612 (dollars in thousands) can be attributed to expenses related to cyber insurance in the Risk Management internal service fund and $418,497 can be attributed to Affordable Care Act related fees in the Health Care Fund internal service fund.

36. TOBACCO SETTLEMENT AND SECURITIZATION

On November 23, 1998, 46 states' Attorneys General and the major tobacco companies signed a proposed settlement that reimburses states for smoking-related medical expenses paid through Medicaid and other healthcare programs. At the time of the settlement, it was estimated that the Commonwealth could receive approximately $4.1 billion over the duration of the settlement. The settlement was approved in a Consent Decree in December 1998. On March 29, 1999, the General Assembly enacted a law approving the establishment of the Tobacco Region Revitalization Commission (nonmajor component unit), in compliance with the Consent Decree, to help communities in Virginia hurt by the decline of tobacco.

The Commission was established for the purposes of determining the appropriate recipients of monies in the Tobacco Indemnification and Community Revitalization Fund. The monies are to be used to provide payments to tobacco farmers as compensation for the tobacco equipment and barns and lost tobacco production opportunities associated with a decline in quota. The monies are also to be used to revitalize tobacco dependent communities.

The General Assembly also created the Virginia Foundation for Healthy Youth (Foundation) (nonmajor component unit). The purpose of the Foundation is to determine the appropriate recipients of monies in the Virginia Tobacco Settlement Fund. The Foundation will also be responsible for distributing monies for the purposes provided in the legislation. Disbursements can be made to assist in financing efforts to restrict the use of tobacco products by minors, through educational and awareness programs describing the health effects of tobacco use on minors, and laws restricting the distribution of tobacco products to minors.

Additionally, the General Assembly created two special non-reverting funds. The Tobacco Settlement monies were accounted for in these funds and in the General Fund. Of the Settlement monies, 50.0 percent was deposited into the Tobacco Indemnification and Community Revitalization Fund at the Commission and 10.0 percent continues to be deposited into the Virginia Tobacco Settlement Fund at the Foundation. The remaining 40.0 percent continues to be reported in the General Fund.

Pursuant to Purchase and Sale Agreements executed in 2005 and 2007, the Commonwealth, acting as an agent on behalf of the Commission, sold the Commission's future right, title and interest in the Tobacco Settlement Revenues (TSRs) to the Tobacco Settlement Financing Corporation (Corporation) (related organization).

Consideration paid by the Corporation to the Commission for TSRs consisted of a cash amount deposited into an endowment to fund the long-term spending plan approved by the Commission. Bonds issued by the Corporation to finance the purchase price are asset-backed instruments secured solely by the Corporation's right to receive TSRs. At the time of issuance these revenues were expected to produce sufficient funds to repay the bond obligations issued by the Corporation.

The Commission is a nonmajor component unit of the Commonwealth, and the Corporation is disclosed as a related organization.

37. SERVICE CONCESSION ARRANGEMENTS

GASB Statement No. 60, *Accounting and Financial Reporting for Service Concession Arrangements*, describes the criteria for when an arrangement is classified as a Service Concession Arrangement (SCA). The basic criteria are: the operator of the capital asset owned by the transferor has the right to provide services in exchange for significant consideration; the operator's revenue must come from a third party; the transferor must retain some level of control over the asset; and the transferor must receive significant residual interest at the conclusion of the arrangement.

Primary Government

The Commonwealth of Virginia has five SCAs as of June 30, 2018: Pocahontas 895, the 495 Express Lanes, Elizabeth River – Midtown Tunnel, the 95 Express Lanes, and the I-66 Outside the Beltway. They are all related to highway construction and operation and were established per the Public-Private Transportation Act of 1995, as amended (PPTA). PPTA project goals are to provide highway projects to the public in a timely and cost effective manner with private funding and support.

Pocahontas 895

On June 21, 2006, the Pocahontas Parkway Association (Association – previously reported as a blended component unit of the Virginia Department of Transportation (VDOT), part of primary government) signed an agreement with Transurban (895) LLC (Transurban). Under the terms of the agreement, all assets and rights of the Association under the Comprehensive Agreement with VDOT were transferred to Transurban. In exchange for the existing toll road and other assets, Transurban transferred sufficient funds and securities to pay or defease all outstanding bonds of the Association and pay all other outstanding obligations owed to VDOT. Additionally, Transurban agreed to construct an enhancement to the original toll road, and this enhancement was completed and placed in service in 2011.

During the 99-year agreement term, VDOT will have fee title or good and valid interest in the asset. VDOT retains the right of inspection of the asset and has outlined maximum toll charges and increases in the terms of the agreement. Capital assets of $337.2 million and deferred inflow balances of $500.7 million are included in the government-wide financial statements. No contractual liabilities exist for this arrangement as of June 30.

During fiscal year 2014, the Transurban Board approved the transfer of Pocahontas 895 to the lenders of the asset due to lower revenues than anticipated. On May 15, 2014, DBi Services assumed control of Pocahontas 895. In December 2016, the majority owner of toll rights, Macquarie and other rights owners closed on the sale of 100.0 percent of the tolling rights to Globalvia.

495 Express Lanes

On December 19, 2007, VDOT signed an 80-year public-private partnership agreement with Capital Beltway Express, LLC. The purpose of this agreement is to build new express lanes to provide users with a faster and more reliable travel option. The construction of the express lanes was completed in November 2012.

During the 80-year agreement, VDOT maintains regulatory control and jurisdiction of the express lanes. VDOT will have fee title or good and valid interest in the express lanes. The lanes will remain open for the public as long as the applicable tolls are paid. Capital assets of $853.5 million and deferred inflows of $982.1 million are included in the government-wide financial statements. Liabilities are contingent on specific events occurring pursuant to the agreement.

Elizabeth River – Midtown Tunnel

On December 5, 2011, VDOT signed a 58-year public private partnership agreement with Elizabeth River Crossings OPCO, LLC. The purposes of this agreement are to build and operate a new tunnel that will be adjacent to the existing Midtown Tunnel for crossing the Elizabeth River, provide improvements to the existing Midtown Tunnel and the Downtown Tunnel, and to provide various extensions and improvements of the Martin Luther King Jr. (MLK) Freeway and I-264. As of January 1, 2017 all project components of this agreement have reached substantial completion and are in service.

During the agreement, Elizabeth River Crossings OPCO, LLC will operate and maintain the road. The revenue source for the concessionaire will be toll collections, excluding the MLK Freeway, which will be used for maintenance, operating and return on investment for constructing the project. At the end of the 58-year term, control of and the rights to operate the facilities will revert back to VDOT. Capital assets of $902.9 million and deferred inflow balances of $899.7 million are included in the government-wide financial statements. Liabilities are contingent on specific events occurring pursuant to the agreement. In July 2017, VDOT issued a Department Project Enhancement directive for Elizabeth River Crossings OPCO LLC, to design and build noise barrier walls for the MLK Freeway. VDOT is committed for these costs estimated at $23.1 million. This enhancement was still in the design phase as of June 30, 2018. An additional project enhancement commitment for VDOT is a lighting project on the Downtown Tunnel also still in the design phase and no estimate is available as of June 30, 2018. In addition to these project enhancements, the Federal Highway Administration has also required an annual traffic study over the next seven fiscal years for a total commitment of $875,000 for VDOT.

95 Express Lanes

On July 31, 2012, VDOT signed a 73-year public private partnership agreement with 95 Express Lanes, LLC. This project will create approximately 29 miles of Express Lanes on I-95 in Northern Virginia. The project will also add capacity to the existing HOV Lanes. The construction of the express lanes was completed in December 2014.

During the agreement, 95 Express Lanes LLC will operate and maintain the road. The revenue source for the concessionaire will be toll collections which will be used for maintenance, operating and return on investment for constructing the project. At the end of the 73-year term, control of and the rights to operate the facilities will revert back to VDOT. The lanes will remain open for the public as long as the applicable tolls are paid. Capital assets of $581.9 million and deferred inflows balances of $601.5 million are included in the government-wide financial statements. Liabilities are contingent on specific events occurring pursuant to the agreement.

During fiscal year 2016, the Commonwealth Transportation Board awarded a contract to design and construct a reversible extension of the 95 Express Lanes at the southern terminus in Stafford County. The approximately 2.5-mile extension will carry traffic beyond the location where the 95 Express Lanes currently end. The construction began in fiscal year 2017 and lanes opened to traffic on October 31, 2017. This 2.5-mile extension resulted in an increased value of $25.7 million to the 95 Express Lanes SCA. In addition, plans were announced by VDOT during fiscal year 2016, to extend the 95 Express Lanes north to I-395. This project involves expanding and converting two high occupancy vehicle (HOV) lanes to three express lanes near the Pentagon. Construction on this eight-mile extension began in summer of 2017 with completion scheduled for fall 2019.

VDOT reached commercial close with Transurban on June 8, 2017, and financial close was completed on July 25, 2017, for this project.

On June 8, 2017, an amended and restated Comprehensive Agreement was signed between VDOT and 95 Express Lanes LLC to include the scope of the project work for the I-395 northern extension. The Comprehensive Agreement was updated to include this addition to the project and features payments to the Department for Transit Improvements. In consideration for the rights granted by VDOT to 95 Express Lanes LLC, solely in respect of the 395 Project, 95 Express Lanes LLC will agree to make a payment to VDOT of $15.0 million on the 395 Project service commencement date and escalating annually thereafter at a rate of 2.5 percent per annum as such amounts per payment year are set forth in the Amended and Restated Comprehensive Agreement (ARCA).

In fiscal year 2017, planning was initiated on the additional extension of the Express Lanes from Garrisonville Road to Route 17 in Stafford County, which is about 10 miles. It will have direct connection with both the northbound and southbound Rappahannock River crossing projects and will be analyzing access points and operational improvements with the project. VDOT is currently working with Transurban under an Advanced Development Framework Agreement for the Fredericksburg extension of the I-95 HOV/HOT Lanes. As of June 30, 2018, no final agreements have been signed between Transurban and VDOT for this project.

I-66 Outside the Beltway Express Lanes

On December 8, 2016, a 50-year Public Private Partnership Agreement (the Agreement) between VDOT, the Department of Rail and Public Transportation (DRPT), and private partner, I-66 Express Mobility Partners, was signed.

The $2.2 billion I-66 Outside the Beltway Project with Express Mobility Partners is to build express lanes on I-66 outside the I-495 Capital Beltway. During the 50-year Agreement, VDOT maintains regulatory control and jurisdiction of the express lanes. VDOT will have fee title or good and valid interest in the express lanes. The purpose of this Agreement is to build new express lanes to provide users with a faster and more reliable travel option.

The I-66 Outside the Beltway Project will include 22.5 miles of new express lanes alongside three regular lanes from I-495 to University Boulevard in Gainesville, Virginia. The project will also provide new and improved bus service and transit routes, new and improved park and ride lots, and interchange improvements to enhance safety and reduce congestion.

Express Mobility Partners will be responsible for all costs to design, build, operate and maintain the I-66 Express Lanes, without any upfront public contribution.

Financial close on the project occurred on November 9, 2017. The express lanes will open to traffic in mid-2022. These lanes will remain open for the public as long as the applicable tolls are paid. Liabilities for VDOT from the Agreement are contingent on specific events occurring pursuant to the Agreement.

Express Mobility Partners provided $578.9 million as of June 30, 2018, as an up-front concession payment to the Commonwealth. Pending approval by the Commonwealth Transportation Board, these funds will be used for project oversight by VDOT, contingency risk during construction that is released during the construction period, and projects in the corridor as selected by the Commonwealth Transportation Board. Deferred inflows balance of $571.2 million is included in the fund financial statements.

Additional consideration to be provided by Express Mobility Partners includes several components of the permit fee established in the Agreement. A description of these components and the stipulations around receiving is provided below.

Express Mobility Partners is required to pay VDOT a permit fee that consists of transit funding payments, support for corridor improvements, and revenue sharing as further described below.

The transit funding payment portion of the permit fee that becomes due during the operating period will be payable after debt service and required reserve accounts, and will be subject to the lock-up provisions required in the Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan Agreement, but prior to support for corridor improvements and distributions. If funds are insufficient to make scheduled transit funding payments at the time due, such payments or any unpaid portion thereof will be considered past due and will remain due and payable without interest charges. The net present value of these payments is $768.0 million.

The support for corridor improvements are to be paid as indicated in the Agreement. Amounts to be paid annually are contingent on actual toll revenues. The net present value of the support for corridor improvements is expected to total $350.0 million. At the end of the term of the Agreement, any unpaid balance of these payments is to be forgiven or cancelled.

Express Mobility Partners will make revenue sharing payments in amounts calculated based on actual cumulative net present value of gross revenue at the end of each year of the Agreement. The percentage of gross revenue to be paid by Express Mobility Partners to VDOT increases in accordance with a five-tier revenue sharing scale. Revenue sharing payments do not have to be made if transit funding payments or support for corridor improvements are past due or unpaid.

Additional information on these payments can be found in the Agreement executed between VDOT, DRPT, and Express Mobility Partners.

Component Units

Aramark – Dining Services

During the year ended June 30, 2015, the University of Virginia (nonmajor) entered into an agreement with Aramark Educational Services, LLC (Aramark) for Aramark to provide dining services to the University. In return for use of University facilities, Aramark is required to make certain payments to the University and the University is required to provide certain repair and maintenance services related to the facilities during the term of the agreement. As of June 30, 2018, the University has accrued a $13.0 million receivable, a $11.2 million liability and a $65.5 million deferred inflow of resources related to the service concession arrangement.

38. INFORMATION TECHNOLOGY INFRASTRUCTURE

The Comprehensive Infrastructure Agreement (CIA) is a contract, executed on November 13, 2005, between the Commonwealth of Virginia (Commonwealth) acting through the Virginia Information Technologies Agency (VITA) and Northrop Grumman Systems Corporation (NG). The Commonwealth's primary goal was to significantly improve the Commonwealth's IT infrastructure and the manner in which such infrastructure was operated, supported, and maintained for the following service towers: Cross-Functional Services, Desktop Computing Services, Data Network Services, Voice and Video Telecom Services, Mainframe and Server Services, Help Desk Services, Messaging Services, Security Services, Internal Application Services, and Data Center facilities.

On March 31, 2010, contract revisions to the CIA were completed between the Commonwealth and Northrop Grumman. As a result of the contract changes, the Commonwealth renewed the contract for an additional three years, the parties established the products and services covered in the contractual cap including the baseline quantities to be billed and the prices at which those quantities will be billed, a shortened formula for contract year ten cost of living adjustment, and increased resolution and disentanglement fees. These contract changes were intended to provide improved performance to the VITA customer agencies, provide greater accountability and operational efficiencies for the services provided, and resolve outstanding financial issues. Additional contract revisions to the CIA have been completed between the Commonwealth and Northrop Grumman in the years since 2010.

In 2015, in anticipation of a June 30, 2019, contract expiration, and with recognition of the complexity of the change in such a large shared services environment, VITA engaged a consulting firm to help develop sourcing strategies to better align with current best practices and future customer requirements. After evaluating options and engaging numerous Commonwealth stakeholders, VITA determined that it should start disentangling services from the CIA and transition services to a new, multi-supplier model. The first contract was signed with Tempus Nova for messaging services; most messaging services were transitioned from Northrop Grumman effective April 30, 2018. The Commonwealth also signed a contract with Perspecta for IBM mainframe services; those services were transitioned from Northrop Grumman effective June 3, 2017. On May 18, 2018, the Commonwealth notified Northrop Grumman that all remaining services would be terminated for convenience effective August 17, 2018. At the termination date, the Commonwealth issued a payment for the contractually required resolution fees, totaling approximately $65.4 million. The Commonwealth may also be required to pay exit fees; however, exit fees are subject to the appropriation, allocation and availability of Commonwealth funds.

Payments continued to Northrop Grumman for most infrastructure services in fiscal year 2018, totaling $252.2 million, with other infrastructure services payments going to new providers as noted above. Furthermore, certain services and transition work are now the subject of litigation between NG and VITA in Richmond Circuit Court.

In addition to the two contracts signed above, the Commonwealth has signed a contract with Atos for managed security services; Unisys for server, storage, and data center services; and Verizon for voice and data network services. Additional contract awards for end user computing and managed print services are still pending. The contract terms range from five years to seven years, with additional renewal options on each. The Commonwealth expects to spend an additional $503.4 million over the next two fiscal years, either with NG or new providers.

39. CONTINGENCIES

A. Grants and Contracts

The Commonwealth has received federal grants for specific purposes that are subject to review and audit by the grantor agencies. Claims against these resources are generally conditional upon compliance with the terms and conditions of grant agreements and applicable federal regulations, including the expenditure of resources for allowable purposes. Any disallowance resulting from a federal audit may become a liability of the Commonwealth.

Institutions of higher education (component units) and other state agencies are required to comply with various federal regulations issued by the Office of Management and Budget, if such agencies are recipients of federal grants, contracts, or other sponsored agreements. Failure to comply with certain requirements of these regulations may result in questions concerning the allowability of related direct and indirect charges pursuant to such agreements. It is believed that the ultimate disallowance pertaining to these regulations, if any, will be immaterial to the overall financial condition of the Commonwealth.

The U.S. Department of Health and Human Services (DHHS) Office of the Inspector General conducted a review and indicated that the Commonwealth's Statewide Indirect Cost Allocation Plan rates have allowed over-recoveries and transfers in the internal service funds and portions of selected rebates. The Commonwealth has paid the amount it believes is owed for fiscal years 2009-2014, and appealed a DHHS determination letter indicating that an additional amount is owed for this time period. While the DHHS Departmental Appeals Board upheld the DHHS determination, the Commonwealth is currently continuing the appeal process. In October 2018, the Commonwealth paid an additional $10.3 million in order to cease interest assessment and prevent potential debt-set off actions on future federal drawdowns. The Commonwealth still disputes that this amount is owed and expects to recover this amount from the appeal settlement.

Accordingly, this amount is not included in the accompanying financial statements.

Additionally, the DHHS has received the 2017 and 2016 payback schedules which are based on fiscal year 2016 and 2015 data, respectively. Further, the Commonwealth has computed a payback schedule for 2018 which is based on fiscal year 2017 data. The Commonwealth has computed a liability of $13.6 million representing the amounts owed to the federal government for internal service fund over-recoveries and transfers, as well as the federal share of various rebates received. This amount has been reflected in the accompanying financial statements.

The Virginia Tourism Authority (nonmajor component unit) had unclaimed awards totaling $1.9 million payable to awardees upon submission of proper claims for reimbursement for the Marketing Leverage Program, in addition to, unclaimed awards totaling $192,456 payable to awardees upon submission of proper claims for reimbursement for the World War Tourism Program and Music Festival Program. Additionally, property at the Virginia/Maryland border to be used for the Gateway Welcome Center was donated to the Authority in July 2008. The deed to the property includes a covenant requiring any or all land to revert to the U.S. Government should it become needed for national defense. The net book value of the property as of June 30, 2018 was $815,300.

B. Litigation

The Commonwealth is named as a party in legal proceedings and investigations that occur in the normal course of governmental operations, some involving substantial amounts. It is not possible at the present time to estimate the ultimate outcome or liability, if any, of the Commonwealth in respect to the various proceedings; however, it is believed that any ultimate liability resulting from these suits or investigations will not have a material, adverse effect on the financial condition of the Commonwealth.

C. Subject to Appropriation

Both the primary government and the discretely presented component units enter into agreements and issue debt secured solely by future appropriations from the General Fund of the Commonwealth. The primary government has leases and other agreements of such debt of $2.7 billion. The discretely presented component units have such debt of $4.3 billion.

D. Bailment Inventory

The Virginia Alcoholic Beverage Control Authority (ABC) houses and controls bailment inventory in the warehouse and is therefore responsible for the exercise of reasonable care to preserve the inventory until it is purchased by ABC or returned to the supplier. ABC uses the bailment system for payment of merchandise for resale. ABC initiates payments to the vendors based on shipments from the ABC warehouse to the retail stores, rather than receipt of invoice from the vendor. As of June 30, 2018, the bailment inventory was valued at $43.0 million.

E. Loan Guarantees

The Virginia Small Business Financing Authority (VSBFA) (nonmajor component unit) has a loan guaranty program which provides guarantees up to the lesser of $500,000, or 75.0 percent, of a bank loan for lines of credit and short-term working capital loans for small businesses authorized by Section 2.2-2285 of the *Code of Virginia*. The relationship of the Commonwealth to the issuer or issuers of the obligations are private banks that contact VSBFA to obtain guarantees if they deem it necessary to approve the loan. The VSBFA staff underwrites the request for guarantees, and the Board of Directors makes the credit decision to approve or decline the loan. The Board has given VSBFA staff delegated authority to approve requests up to, and including, $500,000. The Board reviews all loan packages and ratifies all decisions. The length of time for the guarantees is up to five years for lines of credit and seven years for term loans. Upon a default or event of default under the loan documents and payment by VSBFA under the Guaranty Agreement, the borrower and the guarantor(s), jointly and severally, acknowledge and agree that VSBFA may set off, collect and retain any payments or monies due or owing the borrower or any guarantor from the Commonwealth of Virginia, and/or any governmental authority or agency of the Commonwealth. VSBFA submits collections to the Office of the Attorney General, Division of Debt Collection for legal action and collection of debt. As of June 30, 2018, the loan guaranty program has guarantees outstanding of $7.2 million and restricted assets pledged as collateral of $13.6 million.

GASB Statement No. 70, *Accounting and Financial Reporting for Nonexchange Financial Guarantees,* requires that certain information be disclosed regarding selected nonexchange financial guarantees. As of June 30, 2018, the VSBFA recognized a nonexchange financial guarantee liability of $143,287. This is a decrease of $183,615 from the beginning balance of $326,902. There were no required payments made during fiscal year 2018. Additionally, there have been no cumulative amounts paid on these outstanding loan guarantees nor are there any expected recoveries.

F. Regional Wet Weather Management Plan

Hampton Roads Sanitation District (HRSD) (nonmajor component unit) is party to a federal consent decree with the federal and state governments (the Consent Decree), which requires the HRSD to evaluate the wet weather capacity of the regional sewer system, including collection systems owned by 14 of the localities which the HRSD serves in the Hampton Roads area. Based upon that evaluation, the HRSD, in consultation with the localities, is required to develop a regional wet weather management plan (RWWMP) for submittal to the federal and state environmental agencies for their approval.

The HRSD and the localities believe that addressing wet weather capacity issues from a regional perspective will result in the most affordable and cost-effective approach for rate payers throughout the region. Toward that end, the HRSD and the localities entered into a legally binding Memorandum of Agreement in March of 2014 (the MOA). The MOA commits HRSD to (1) develop the RWWMP in consultation with the localities, (2) fund the approved plan through a regional rate imposed on all regional ratepayers, (3) design and construct the necessary improvements, and (4) assume responsibility for wet weather capacity throughout the region in each area once the RWWMP is implemented. In exchange, the localities have agreed to (1) cooperate with the HRSD, (2) facilitate the construction of and accept ownership of any improvements which the HRSD may need to construct in the localities' systems, and (3) maintain the integrity of their systems to industry standards. The Consent Decree and MOA also contemplate that the localities' obligation to maintain the integrity of their sewer systems to industry standards was embodied in a State administrative order. While the HRSD is preparing the RWWMP, the Consent Decree also requires the HRSD to implement approximately $200.0 million in priority capital system upgrade projects over a 10-year period, which is included in the capital improvement and expansion program. The HRSD is on schedule to complete these projects. The HRSD has a major capital improvement and expansion program funded through the issuance of debt and its own resources. As of June 30, 2018, the HRSD has outstanding commitments for contracts in progress of approximately $106.2 million.

40. SUBSEQUENT EVENTS

Primary Government

Debt

On August 14, 2018, the Commonwealth of Virginia issued $106.9 million of General Obligation Bonds, Series 2018A. These bonds will provide funding for authorized 9(c) projects.

On December 5, 2018, the Commonwealth Transportation Board issued $75.8 million of Commonwealth of Virginia Federal Transportation Grant Anticipation Revenue Notes (GARVEEs), Series 2018 to provide for the payment of certain transportation projects.

Component Units

Debt

On July 2, 2018, an election was certified that resulted in the determination of International Longshoremen Association (ILA) Local 970 and Local 1248 as exclusive collective-bargaining representatives of crane technicians, crane mechanics, crane electronic technicians, light equipment mechanics and vehicle maintenance employees who are employed by VIT, a blended component unit of Virginia Port Authority (VPA) (nonmajor).

On July 24, 2018, Virginia Biotechnology Research Partnership Authority (nonmajor) legally formed Lighthouse Labs, Inc.

On July 26, 2018, VPA issued $60.3 million of Commonwealth Port Fund Revenue Refunding Bonds, Series 2018 (Taxable) to refund VPA's Commonwealth Port Fund Revenue Bonds, Series 2011 (Non-AMT).

On August 2, 2018, a local borrower prepaid an outstanding obligation with the Virginia Resources Authority (VRA) (major) in the amount of $35.3 million. It is VRA's intention to defease the related bonds (VPFP Series 2010C) with prepayment proceeds. Additionally, VRA issued revenue bonds in the amount of $28.0 million dated August 6, 2018 through VPFP. Interest rates range from 3.0 percent to 5.0 percent with a final maturity date of November 1, 2038.

On October 2, 2018, the Virginia Housing Development Authority (VHDA) (major) redeemed Rental Housing Bond 2018 Series D (Non-AMT) in the amount of $74.4 million.

On November 1, 2018, VHDA redeemed Commonwealth Mortgage Bonds 2012 Series C in the amount of $67.7 million, and Homeownership Mortgage Bonds 2010 Series A and B in the amount of $6.2 million.

On November 6, 2018, the Virginia Public School Authority (VPSA) (major) issued School Financing Bonds Series 2018B in the amount of $109.1 million. The proceeds will be used to purchase certain general obligation local school bonds to finance capital projects for schools.

On December 4, 2018, VCBA issued $134.5 million in Educational Facilities Revenue Bonds, Series 2018A and $76.7 million in Educational Facilities Revenue Bonds, Series 2018B (Taxable) under the Public Higher Education Financing Program (the Pool Program). The VCBA used the proceeds of the Series 2018A and Series 2018B Bonds to acquire Institutional Notes from participating public institutions of higher education. Each participating institution will use the proceeds of its Institutional Note to finance capital projects approved by the General Assembly.

Other

On July 1, 2018, the University of Virginia Medical Center (part of the University of Virginia – nonmajor component unit) entered into a 50/50 joint venture with Kings Daughters Children's Hospital to establish a limited liability company called Fortify Children's Health. Fortify Children's Health is a statewide pediatric physician network created in order to provide better access to pediatric care throughout the Commonwealth.

Virginia Tech Carillon School of Medicine officially became part of the Virginia Polytechnic Institute and State University (nonmajor) on July 1, 2018. It now functions as a college within the university.

From time-to-time the Virginia Commonwealth University (nonmajor) treasury office will review opportunities to refinance existing debt. During August 2018, the University treasury office provided a compelling analysis to refinance existing debt from a privately placed variable rate bond with a related fixed-payer swap to a true fixed rate refunding bond sold in the public markets. Subject to continued favorable market conditions, the Executive Committee of the School of Business Foundation approved a conceptual plan to refinance the Snead Hall bonds on September 7, 2018 and the Executive Committee of the College of Engineering Foundation Board approved a conceptual plan to refinance the East Hall bonds on September 28, 2018. The University Board of Visitors approved the bond financing in a meeting of the Executive Committee on October 8, 2018. The bonds closed on November 1, 2018. Included in the debt issuance mentioned above, the University issued bonds in the amount of $56.8 million. Proceeds of the bonds, together with other available funds, will be used to finance the acquisition, construction and equipping of one or more research facilities and to refund the University's obligations related to an existing line of credit which was used for the acquisition, construction and equipping of the University's basketball practice facilities.

Radford University (nonmajor) continues the merger of Jefferson College of Health Sciences with Radford University. As announced in January 2018, the merger process is expected to be completed by Fall 2019. Jefferson College of Health Sciences is currently owned and operated by Carilion Clinic, a tax-exempt healthcare organization.