Teachers' Retirement System of the State of Kentucky

The 77th Comprehensive Annual Financial Report

A Component Unit of the Commonwealth of Kentucky
Fiscal Years Ended June 30, 2017 and 2016

Teachers' Retirement System
of the State of Kentucky
479 Versailles Road
Frankfort, Kentucky 40601-3800

GARY L. HARBIN, CPA
Executive Secretary

This report was prepared by the Teachers' Retirement System staff.

TABLE OF CONTENTS

~ INTRODUCTORY SECTION ~

Chair's Letter 2
Letter of Transmittal 3
Board of Trustees 9
Administrative Staff and Professional Consultants 10
Organizational Chart 11
GFOA Certificate of Achievement 12
PPCC Achievement Award 13

~ FINANCIAL SECTION ~

Independent Auditor's Report 16
Management's Discussion & Analysis 18
Basic Financial Statements
- Statement of Fiduciary Net Position 22
- Statement of Changes in Fiduciary Net Position 24
- Combining Statement of Fiduciary Net Position - Other Funds 26
- Combining Statement of Changes in Fiduciary Net Position - Other Funds 27
- Notes to Financial Statements 29

Required Supplemental Information
- Schedule of Changes in the Net Pension Liability 59
- Schedule of Net Pension Liability 60
- Schedule of Employer Contributions 60
- Schedule of Changes in the Net OPEB Liability – Medical Insurance Plan 62
- Schedule of Net OPEB Liability – Medical Insurance Plan 63
- Schedule of Employer Contributions – Medical Insurance Plan 63
- Schedule of Investment Returns – Health Insurance Trust 64
- Schedule of Changes in the Net OPEB Liability – Life Insurance Plan 64
- Schedule of Net OPEB Liability – Life Insurance Plan 65
- Schedule of Employer Contributions – Life Insurance Plan 65
- Schedule of Investment Returns – Life Insurance Trust 66

Additional Supporting Schedules
- Schedule of Administrative Expenses 67
- Schedule of Professional Services and Contracts 67
- Schedule of Contracted Investment Management Expenses 68

~ INVESTMENT SECTION ~

Report on Investment Activity 74
Consultant Letter 75
Retirement Annuity Trust Fund
- Investment Policy Summary and Objectives 76
- Risk Controls 76
- Asset Allocation 76
- Distribution of Investments 78
- Strategic Weightings by Asset Class 79
- Portfolio Returns 79
- Fixed Income Investments 81
- Equity Investments 82
- Real Estate Investments 85

Alternative Assets 86
Portfolios Fair Values 89
Investment Summary 90
Contracted Investment Management Expenses 90
Ten Largest Stock Holdings 92
Top Ten Fixed Income Holdings 92
Transaction Commissions 93
Proxy Voting and Corporate Behavior 95
Security Lending 95
Kentucky Investments 95
Professional Service Providers 96

Health Insurance Trust Fund
Investment Policy and Objectives 97
Risk Controls 97
Asset Allocation 98
Distribution of Investments 98
Portfolio Returns 99
Portfolios Fair Values 100
Investment Summary 100
Contracted Investment Management Expenses 101
Schedule of Contracted and Administrative Investment Expenses 101
Professional Service Providers 102

~ ACTUARIAL SECTIONS ~

Actuarial Annual Valuation
Actuary's Certification Letter 104
Summary of Principal Results 106
Membership Data 108
Assets 109
Comments on Valuation 109
Contributions Payable Under the System 109
Comments on Level of Funding 111
Analysis of Financial Experience 113
Accounting Information 113
Valuation Balance Sheet 115
Solvency Test 116
Development of Actuarial Value of Assets 116
Summary of Receipts and Disbursements 117
Outline of Actuarial Assumptions and Methods 118
Actuarial Cost Method 120
Summary of Main System Provisions as Interpreted for Valuation Purposes 120
Table of Distribution of Active Members 123
Table of Active Member Valuation Data 124
Table of Number of Retired Members, Beneficiaries and their Benefits by Age 124
Table of Retirees, Beneficiaries, and Survivors
Added to and Removed from Rolls 125
Board Funding Policy 126
Sensitivity Analysis 127

Actuarial Medical and Life Insurance Valuation
Actuary's Certification Letter 132
Summary of Principal Results 134
Membership Data 136
Assets 137
Comments on Valuation 137
Derivation of Experience Gains and Losses 138
Contributions Payable Under the Plans 139
Comments on Level of Funding 140
Accounting Information 140
Schedule of Funding Progress 141
Schedule of Employer Contributions 142
Results of Valuation 145
Solvency Test 145
Development of the Actuarial Value of Assets 146
Summary of Receipts and Disbursements 148
Statement of Actuarial Assumptions and Methods 149
Summary of Main Plan Provisions as Interpreted for Valuation Purposes 154
Table of Distribution of Active Members 158
Table of Total Active Member Valuation Data 159
Table of Eligible Deferred Vested Members 159
All Retirees and Spouses Receiving Health Benefits 160
Table of Retirees, Beneficiaries, and Survivors
Added to and Removed from Rolls 160
Sensitivity Analysis – Medical Insurance Fund 161
Sensitivity Analysis – Life Insurance Fund 164

~ STATISTICAL SECTION ~

Defined Benefit Plan
Additions by Source 169
Deductions by Type 169
Changes in Plan Net Position 169
Medical Insurance Plan
Additions by Source 170
Deductions by Type 170
Changes in Plan Net Position 170
Life Insurance Plan
Additions by Source 171
Deductions by Type 171
Changes in Plan Net Position 171
Distribution of Active Contributing Members 171
Principal Participating Employers 172
TRS Schedule of Participating Employers 172
Geographical Distribution of Retirement and Medical Payments Worldwide 174
Geographical Distribution of Retirement and Medical Payments Statewide 175
Growth in Annuitants 176
Schedule of Annuitants by Type of Benefit 176
Schedule of Annuitants by Option Selected 176
Defined Benefit Plan Average Benefit Payments for the Past Ten Years 177
Medical Insurance Plan Average Insurance Premium
Supplements for the Last Five Years 178
Summary of Retiree Sick Leave Payments 179
Funding of Additional Payments 179

Teachers' Retirement System
of the State of Kentucky

2017

Introductory Section

Chair's Letter

Teachers' Retirement System
of the State of Kentucky

TRS KENTUCKY

December 18, 2017

Dear Members:

On behalf of the Board of Trustees and staff, I am pleased to present this Comprehensive Annual Financial Report of the Teachers' Retirement System of the State of Kentucky for the year ending June 30, 2017, the 77th year of operation of the system. The accompanying reports from the independent auditor and the consulting actuary substantiate the financial integrity and the actuarial soundness of the system.

TRS closed the 2016-2017 fiscal year with $19.8 billion net assets. The active membership totaled 72,130 and the retired membership was 52,966 with an annual annuity and medical insurance benefits of $2.1 billion.

The Board of Trustees is totally committed to managing the retirement system funds in a prudent, professional manner. Every effort will be made to ensure that the system continues to operate in a fiscally sound manner. Present and future members of the system deserve to be able to avail themselves of the best possible retirement as authorized by statute.

We appreciate the support and cooperation extended by the governor and the legislature. This cooperation allows the system to not only meet current challenges but to also make timely provisions for the future.

The Board of Trustees pledges to continue to administer the affairs of the Teachers' Retirement System in the most competent and efficient manner possible.

Sincerely,

Ron Sanders
Chair
Board of Trustees

Letter of Transmittal

Teachers' Retirement System
of the State of Kentucky

December 18, 2017

Honorable Matthew G. Bevin, Governor
Commonwealth of Kentucky
Capitol Building
Frankfort, Kentucky

Dear Governor Bevin:

It is my pleasure to submit the 77th Comprehensive Annual Financial Report of the Teachers' Retirement System of the State of Kentucky (TRS), a component unit of the Commonwealth of Kentucky, for the fiscal year ended June 30, 2017. Allow me to begin again this transmittal letter with an expression of my thanks for your work and the work of the General Assembly in approving a biennial budget for the commonwealth that provides $973 million in additional funding for TRS. The first year of that funding resulted in TRS receiving 99 percent of the actuarially determined employer contribution (ADEC) for the period - a dramatic increase over prior budgets that already is being invested to fulfill the promise made by the state to teachers. The importance of the consistent full funding of the retirement plan for Kentucky's teachers cannot be overstated.

TRS produced this annual report, which is required by state law and contains the annual audit and actuarial valuation of the retirement system, that provides you, the General Assembly and the public with information necessary to better understand TRS, which is the largest financial institution in the commonwealth. Contained within are numerous examples of how Kentucky teachers' future well-being is being provided for at a low cost with a great economic benefit for those educators and the state's businesses that receive many of the retirement dollars spent by the 89 percent of retirees who live in Kentucky.

This report conforms with the principles of governmental accounting and generally accepted accounting principles. Responsibility for both the accuracy of the data and the completeness and fairness of the presentation, including all disclosures, rests with TRS management. To the best of management's knowledge and belief, the enclosed data is accurate in all material aspects and reported in a manner designed to present fairly the financial position and results of operations of TRS for the year ended June 30, 2017. Discussion and analysis of net assets and related additions and deductions are presented in Management's Discussion and Analysis in the Financial Section of this report.

Management is responsible for maintaining a system of internal controls to establish reasonable assurance that assets are safeguarded, transactions are executed accurately and financial statements are presented fairly. Limits are inherent in all systems of internal control based on the recognition that the costs of such systems should be related to the benefits to be derived. Management believes the system's controls provide this appropriate balance. The system of internal controls includes policies and procedures and an internal audit department that reports to the Board of Trustees.

Profile of TRS

TRS began operations on July 1, 1940, as a cost-sharing, multiple-employer defined benefit plan. The primary purpose of the plan is to provide retirement annuity plan coverage for local school districts and other public educational agencies in the state. TRS is a blended component unit of the Commonwealth of Kentucky. The plan is described in the Notes to Financial Statements in the Financial Section of this report. Also, the Summary of Main System Provisions as Interpreted for Valuation Purposes in the Actuarial Section, is useful in understanding benefit and contribution provisions. The number of TRS active and retired members is contained in the preceding board chair's letter.

An annual operating budget is prepared for the administration of the retirement system and approved by the Board of Trustees. Biennial budget requests also are submitted to the General Assembly for adoption. TRS's investment earnings pay for the agency's administrative expenses, which are among the lowest of its peers.

During fiscal year 2017, the enactment of Senate Bill 2 (2017 RS) expanded the Board of Trustees from its longstanding makeup of nine members to 11; the additional two members are appointed by the governor with the requirement that both appointees have financial experience.

Major Initiatives

The system continually seeks better to serve its membership as the highest levels of professionalism, integrity, performance and teamwork are required at all levels of the organization. TRS is an organization that "does it right." As such, during the past year, TRS has continued work on several major initiatives concerning funding and cost containment for retiree health care, the investment program and information technology.

Implementation of the "Shared Responsibility" Solution for Funding Retiree Health Care and Careful Management of Medical Insurance Costs

Kentucky continues to be a national leader in prefunding retiree health care benefits as a result of the shared responsibility solution enacted in 2010 through the collective efforts of the Board of Trustees, the education community and elected officials. The plan immediately eliminated $3.1 billion in actuarial liability from the retired teacher health care plan. Combined with other cost control measures, more than $5 billion in actuarial accrued liability has been eliminated from the TRS Medical Insurance Fund. In only seven years, the medical insurance fund has reached 26.7 percent funding compared to pay-as-you-go status before the law took effect. With the six-year phase-in period having ended in 2016, the medical plan saw a one-year funding ratio increase in 2017 of 4.8 percentage points. This remarkable improvement confirms that the medical insurance fund is on schedule to be funded fully in 23 years. The shared responsibility solution is truly a significant accomplishment for the retirement security of current and future retired teachers.

TRS is efficient, effective and always working to improve the retirement security of Kentucky's teachers. The latest such initiative is the addition of a new personalized medicine pilot project under TRS's Medicare Eligible Health Plan. Personalized medicine uses DNA testing to help a patient's doctor make more effective treatment decisions for better health outcomes. This pilot, which has been months in development and began in fall 2017, is focused on making sure that a retiree's medications are safe and will be beneficial. Without this testing, medicines may be prescribed that won't work with a retiree's individual physiology (as shown through DNA testing) and that, in some cases, may be fatal. Coriell Life Sciences, which has been providing clinical research services for more than 64 years, is TRS's partner in the pilot. Besides the health benefit to retirees, the pilot is expected to provide significant cost savings to the plan by reducing adverse drug reactions and the trial-and-error period that some patients see.

The Board of Trustees regularly reviews the health care plan to contain costs and maintain a meaningful benefit for retired teachers. The move to Medicare Advantage, now in the 11th year, continues to be stable and financially feasible for our members and the TRS medical plan. The cost of coverage for 2018 is a reduction from the 2017 cost.

Some recent cost-saving initiatives include moving the TRS-sponsored Medicare Part D Employer Group Waiver drug plan from fully insured to a self-funded plan to achieve the greatest federal subsidies. Additionally, TRS is part of the Know Your Rx Coalition, which it joined in 2012. Through the coalition, TRS saves money leveraging greater prescription purchasing power, obtaining deeper drug discounts and increasing the rate at which prescriptions are filled with generic drugs from 73 percent to 88 percent. Additionally, coalition pharmacists work with retired teachers and their physicians to maximize prescription dollars both for the retiree and the medical plan.

Implementation of Senate Bill 2

In June 2017, the board adopted an investment procurement policy, which built upon and centralized existing TRS investing procurement practices, to comply with the provisions of SB 2. TRS was the first of the state’s retirement systems to have its policy certified by the secretary of the Finance and Administration Cabinet. Implementation of the other provisions of SB 2 continues.

Investment Program

For the fiscal year ended June 30, 2017, the market value of TRS's investment program increased a net 15.0 percent for retirement and

14.4 percent for the medical insurance trust pushing total plan assets to a record of $19.9 billion. While a one-year period is not determinative for a long-term investor such as TRS, it should be noted that the gross return of 15.37 percent was among the top 8 percent of public plans with more than $1 billion under management. During the last 10 years, TRS's investment returns rank in the top 9 percent of those plans. Moreover, during the last 30 years, TRS investment returns of 8.18 percent have met the long-term assumed rate of return of 7.5 percent.

A multiyear program of diversifying the portfolio continued in line with TRS's focus on fundamental value and risk control. These ongoing efforts are a continuation of a disciplined investment process and long-term focus on retirement security. This focus has generated exceptionally stable returns through the system's history, and we have every confidence that it will do so in the future. TRS's investment program continues to be recognized as a leader in the public pension community for governance structure, trustee education and cost effectiveness.

TRS regularly obtains independent reviews and always is seeking to improve its investment program and continue the tradition of adhering to best governance practices that lead to sound investment returns. For example, with the additional funding provided in the 2016-18 biennial budget, TRS conducted an asset liability modeling study and reviewed actuarial assumptions. The studies confirmed TRS's approach and the importance of the consistent full funding of the ADEC.

Information Technology

The Pathway information technology system continues to be a success, allowing members to access account information online - available anytime from anywhere. The member self-service portal in Pathway, its mobile device application and the TRS website continued to be updated. A site index was added to the website. Staff currently is working with the Kentucky Department for Libraries and Archives to update TRS's records retention schedule consistent with Pathway's data and document storage capabilities.

Communications

To reach members more easily, TRS continued using Facebook and Twitter accounts to communicate information about the system on a more timely basis. In less than two years, the Facebook account has received almost 2,100 likes, and posts often reach more than 1,000 users - led by 33,239 users who saw a post on the system's investment performance for fiscal year 2017.

Also, TRS revamped and added informational seminar offerings for members. The new TRS On The Road takes place on Saturdays three times per year in different parts of the state. Additionally, under the direction of the Member Services division, webinars of popular seminars are being offered and videos of popular informational seminars began being posted to the TRS website. The Insurance division expanded the offerings of its Turning 65 presentation for retirees about to enroll in the Medicare Eligible Health Plan.

Internal and External Reviews

TRS responds to legislative and administration inquiries and mandates throughout the year. In connection with possible pension reform, TRS received - and responded to - numerous requests from legislators, the executive branch, constituent groups and others to provide accurate information about the experience of the system.

Economic Condition

The economic condition of the system is based primarily on investment earnings. The Investment Section of this report contains asset allocations, strategic target ranges for investments, discussion of the current year market environment and historical performance schedules, among others.

As of June 30, 2017, the retirement system's total funds reached $19.8 billion in market value. The retirement system's investment performance has been strong in recent years relative to its peers. As of June 30, 2017, TRS achieved one-year gross returns of 15.37 percent with top 8 percent investment performance. The fiscal year was characterized by increasing global economic growth. This favorable environment produced strong returns for domestic and international equities, the system's two largest asset classes.

TRS has beaten the independent investment consultant's public fund index in the one-, three-, five- and 10-year periods, achieving top 9 percent performance over the 10-year period. This record validates policy changes adopted by the board and implemented by the Investment Committee over the last several years. TRS's commitment to best practices, stringent risk controls and fundamental value philosophy in investing helps ensure long-term retirement security for Kentucky's teachers.

According to KRS 161.430, the TRS Board of Trustees is responsible for investing the assets of the system. The Board of Trustees delegates investment authority to the Investment Committee. The Investment Committee works closely with experienced investment counselors and the system's professional staff in evaluating and selecting investment allocations.

The investment objectives of the Board of Trustees are to ensure that funds shall be invested solely in the interest of its members and their beneficiaries and that investment income shall be used for the exclusive purpose of providing benefits to the members and their beneficiaries, while making payment of reasonable expenses in administering the plan and its trust funds. The investment program shall also provide a reasonable rate of total return with major emphasis being placed upon the protection of the invested assets.

The investment portfolio experienced an increase in value during the 2016-2017 fiscal year as the market value went from $17,405,060,831 to $19,433,790,384. The increase in value of the portfolio was the result of favorable market conditions, additional funding provided by the governor and General Assembly for the pension fund. Interest income, dividends and employer and employee contributions also provided significant income to the portfolio.

Net investment income totaled $2,572,143,912 for 2016-2017 compared to negative $249,661,104 for 2015-2016. The major contributing factor of the increase in return from the system's investment portfolio resulted from the net appreciation in fair value of investments of $2,254,023,748 at June 30, 2017 compared to net depreciation of $598,818,560 at June 30, 2016.

As mentioned earlier, it should be noted that TRS annuities bolster the Commonwealth of Kentucky's economy, as 89 percent of retired teachers reside within the state. TRS paid more than $2 billion in total benefits (retirement, medical, etc.) during the fiscal year.

Funding

The first benefits from the additional funding in the 2016-18 state budget (2016 RS HB 303) were seen as TRS received 99 percent of the ADEC in the biennium's initial year.

Based on recommendations of the Board of Trustees, the General Assembly establishes, by statute, the contribution levels that are to be made by members and employers to fund the liabilities of the system. Each year, an independent actuary performs a valuation to determine whether the current levels of contribution will be sufficient to cover the cost of benefits earned by members.

Since fiscal year 2008, the state has not paid the full recommended annual employer contribution necessary to prefund the benefit requirements of members of the retirement system as determined by the actuary. Over this period, because of not making the additional appropriation beyond salary-based contributions, the actuary says the state's annual additionally required employer contributions have grown significantly from $60.5 million (fiscal year 2009) to $538.3 million (fiscal year 2020). The following schedule details the growth of the additional annual employer contributions payable by the state:

Fiscal Year	Cumulative Increase as a % of Payroll	Cumulative Increase in Annual Retirement Appropriations Payable by the State
2009	1.88%	$ 60,499,800
2010	2.46	82,331,200
2011	3.59	121,457,000
2012	5.81	208,649,000
2013	7.27	260,980,000
2014	8.02	299,420,000
2015	10.42	386,400,000
2016	12.97	487,400,000
2017	13.80	520,372,000
2018	13.49	512,883,000
2019	14.61	553,597,000
2020	14.10	538,253,000

(Source: TRS Report of the Actuary on the Annual Valuation Prepared as of June 30, 2017).

The board always has acted as required by state law and recommended annual employer contributions payable by the state that would ensure that the state meets the contractual obligations to members.

The latest actuarial valuation was for the period ending June 30, 2017. This report reflects the system's actuarial value of assets totaling $18.5 billion and actuarially determined liabilities totaling $32.8 billion. The funded ratio of actuarial assets to liabilities is 56.4 percent, which is an increase from the previous year and is due primarily to market appreciation of investments and smoothing of investment returns. The actuary reports: "In our opinion, the system has not been funded on an actuarially sound basis since the full actuarially determined contributions were not made by the employer. However, an additional appropriation of $498.5 million was made during fiscal year 2017 and an additional appropriation of $474.7 million is expected to be made during fiscal year 2018. If contributions by the employer to the system in subsequent fiscal years are less than those required, the assets are expected to become insufficient to pay promised benefits. Assuming that contributions to the system are made by the employer from year to year in the future at rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the assets to provide the benefits called for under the System may be safely anticipated."

Annual required employer contributions for the defined benefit plan are provided in the Schedule of Employer Contributions in the Required Supplemental Information of the Financial Section of this report. Based on the 2017 valuation report, the actuary recommends a cumulative increase in employer contributions of 14.10 percent of pay for the 2019-2020 fiscal year as detailed in the Contribution Rates tables in the Summary of Principal Results in the Actuarial Section of this report.

TRS Medical Insurance Plan

The shared responsibility solution for funding retiree health care, which went into effect on July 1, 2010, provides a method of prefunding retiree health care over the next 23 years. In only seven years, the medical insurance fund has reached 26.7 percent funding compared to pay-as-you-go status before the law took effect (with the most recent year being a gain of 4.8 percentage points). The results confirm that the medical insurance fund is on schedule to be funded fully in 23 years and that the 2010 solution is working. The shared responsibility solution for funding retiree health care will help ensure the retirement security of the state's teachers. An actuarial valuation of the Medical Insurance Plan for the fiscal year ended June 30, 2017, indicated that the fund has an unfunded liability of $2.71 billion. Annual required employer contributions for the Medical Insurance Fund are provided in the Schedule of Employer Contributions in the Required Supplemental Information of the Financial Section.

The actuary's opinion is: "… if the contributions to the Medical Insurance Fund (MIF) continue at the current statutorily required levels, the funded ratio of the Retiree Medical Plan will continue to increase, and the ability of the MIF to fund the benefits called for under the Retiree Medical Plan will improve."

Additionally, the system believes continued steps must be taken to realize true cost containment through legislation on both the state and national levels and TRS will continue taking advantage of those measures.

Professional Services

Professional consultants are appointed by the Board of Trustees to perform services that are essential to the effective and efficient operation of TRS. Certifications from the board's external auditor and independent actuary are enclosed in this report. The system's consultants, which are appointed by the board, are listed in the Additional Supporting Schedules of the Financial Section and in the Investment Section's Professional Service Providers table and Health Insurance Trust Professional Service Providers table.

National Recognition

The System was honored by two national professional organizations in regard to the administration of the retirement program.

GFOA Certificate of Achievement

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Teachers' Retirement System of the State of Kentucky for its Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2016. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

To be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents conform to program standards. Such CAFRs must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for one year. TRS has received the Certificate of Achievement for the last 29 consecutive years (fiscal years ended 1988-2016). TRS believes the current report continues to conform to the Certificate of Achievement program requirements, and is being submitted to GFOA.

PPCC Achievement Award

The Public Pension Coordinating Council (PPCC) awarded a Certificate of Achievement to the Teachers' Retirement System of the State of Kentucky for 2017 for implementing and maintaining high professional standards in administering the affairs of the system. The award is based on compliance with principles judged to underlie exemplary retirement system achievements in the areas of benefits, actuarial valuation, financial reporting, investments and disclosure. Those principles widely are acknowledged to be marks of excellence in the public pension industry.

The PPCC is a coalition of three national associations that represent public retirement systems and administrators. Combined, these associations serve retirement systems that provide pension coverage for most of the nation's 16 million employees of state and local government. The associations that form the PPCC are the National Association of State Retirement Administrators; the National Council on Teacher Retirement; and the National Conference on Public Employee Retirement Systems.

NCTR Executive Committee

I am past-president of the National Council on Teacher Retirement (NCTR). NCTR is a national, nonprofit organization with a mission to promote effective governance and benefits administration in state and local public pension systems in order that adequate and secure retirement benefits are provided to educators and other plan participants. NCTR membership includes 69 state, territorial, local and university pension systems with combined assets in excess of $2 trillion, serving more than 18 million active and retired teachers, non-teaching personnel and other public employees.

Public Sector HealthCare Roundtable

Additionally, I serve on the Board of Directors and as president of the Public Sector HealthCare Roundtable. The roundtable is a national coalition of public sector health care purchasers that was formed to ensure that the interests of the public sector are represented properly during the formulation, debate and implementation of federal health care policies. Membership in the roundtable is open to any statewide, regional or local governmental unit that provides health care coverage for public employees and retirees.

Acknowledgements

The preparation of this report reflects the combined efforts of the TRS staff, under the leadership of the Board of Trustees. The report is intended to provide complete and reliable information that serves as a basis for making management decisions and for determining compliance with legal provisions. It also is used to determine responsible stewardship of the assets contributed by TRS members and their employers.

This report is located at the TRS web address https://trs.ky.gov/financial-reports-information/#CAFR and is made available to all system employer members, whose cooperation continues to contribute significantly to TRS's success, and who form the vital link between TRS and its active members.

TRS management and staff are committed to the continued operation of an actuarially sound and efficient retirement system. Again, thanks to you and the General Assembly for the additional budget funding that is ensuring retirement security for teachers. Your support is an essential part of this commitment, and we look forward to working with you.

Respectfully submitted,

Gary L. Harbin, CPA
Executive Secretary

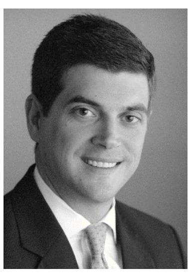
BOARD OF TRUSTEES

Ron Sanders
Chair
Lay Trustee
Hodgenville

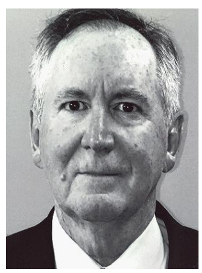
Alison Wright
Vice Chair
Active Teacher Trustee
Georgetown

Mary Adams
Active Teacher Trustee
Brodhead

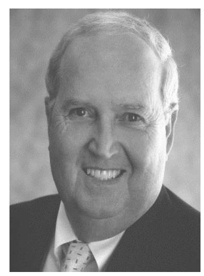
Allison Ball
Ex Officio Trustee
State Treasurer



John Boardman
Appointed
Trustee
Lexington



Frank Collecchia
Appointed
Trustee
Louisville



Hollis Gritton
Lay Trustee
Union

Brenda McGown
Retired Teacher Trustee
Bowling Green

Stephen Pruitt, Ph.D.
Ex Officio Trustee
Commissioner,
Dept. of Education

Laura Schneider
Active Teacher Trustee
Walton

Josh Underwood
Active Teacher Trustee
Tollesboro

Teachers' Retirement System
of the State of Kentucky
479 Versailles Road
Frankfort, Kentucky 40601-3800

ADMINISTRATIVE STAFF

GARY L. HARBIN, CPA
Executive Secretary

ROBERT B. BARNES, JD
General Counsel and
Deputy Executive Secretary
Operations

J. ERIC WAMPLER, JD
Deputy Executive Secretary
Finance & Administration

TOM SIDEREWICZ, CFA
Chief Investment Officer

PROFESSIONAL CONSULTANTS

ACTUARY

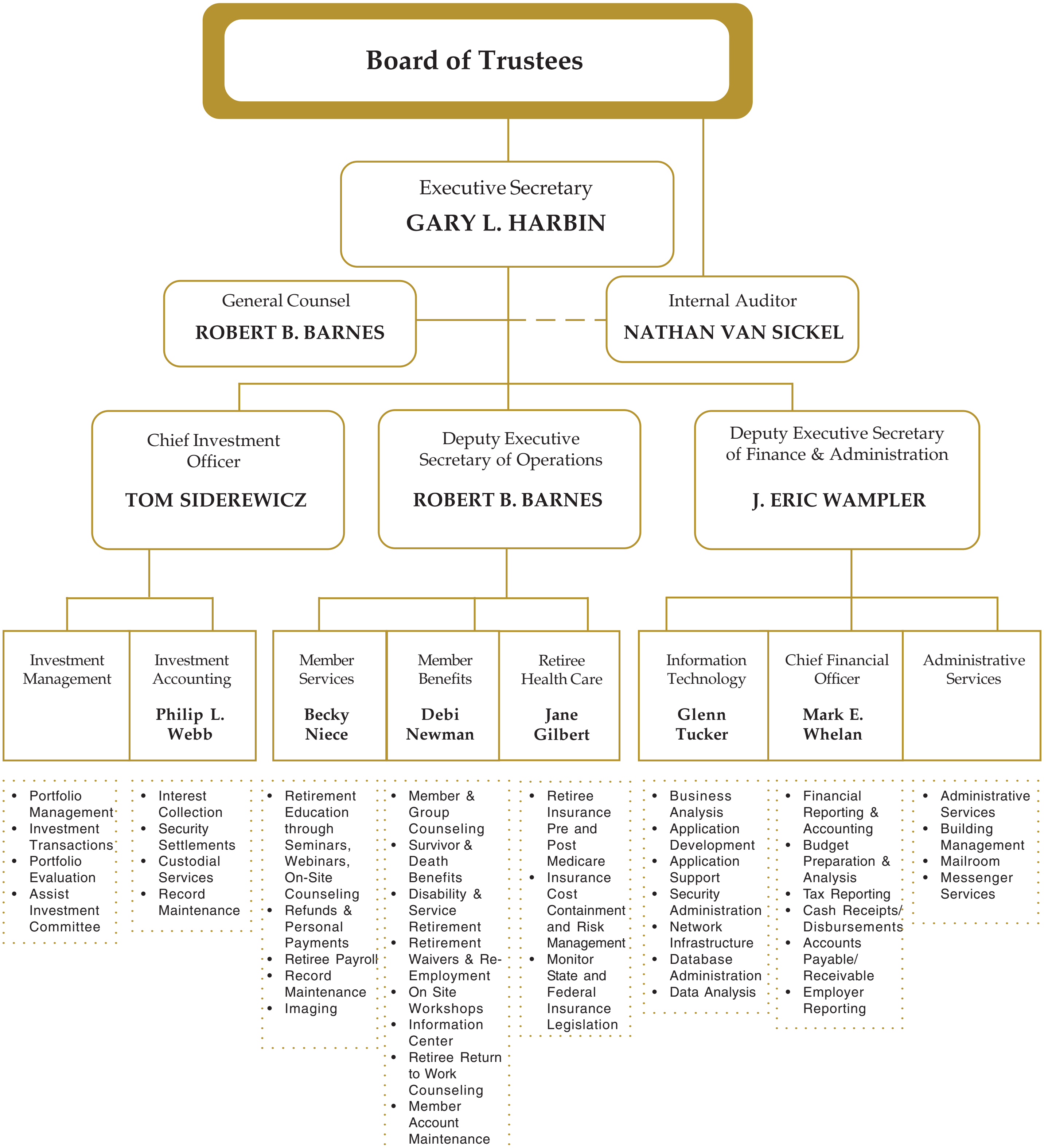
Cavanaugh Macdonald Consulting, LLC
3550 Busbee Parkway, Suite 250
Kennesaw, GA 30144

AUDITOR

Mountjoy Chilton Medley LLP
462 South Fourth Street
2600 Meidinger Tower
Louisville, Kentucky 40202

See the Schedules of Contracted Investment Management Expenses, Transaction Commissions and Professional Service Providers in the Investment Section for a list of investment fees and external asset managers.

Teachers' Retirement System
Organizational Chart



GOVERNMENT FINANCE OFFICERS ASSOCIATION (GFOA)

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Teachers' Retirement System of the State of Kentucky

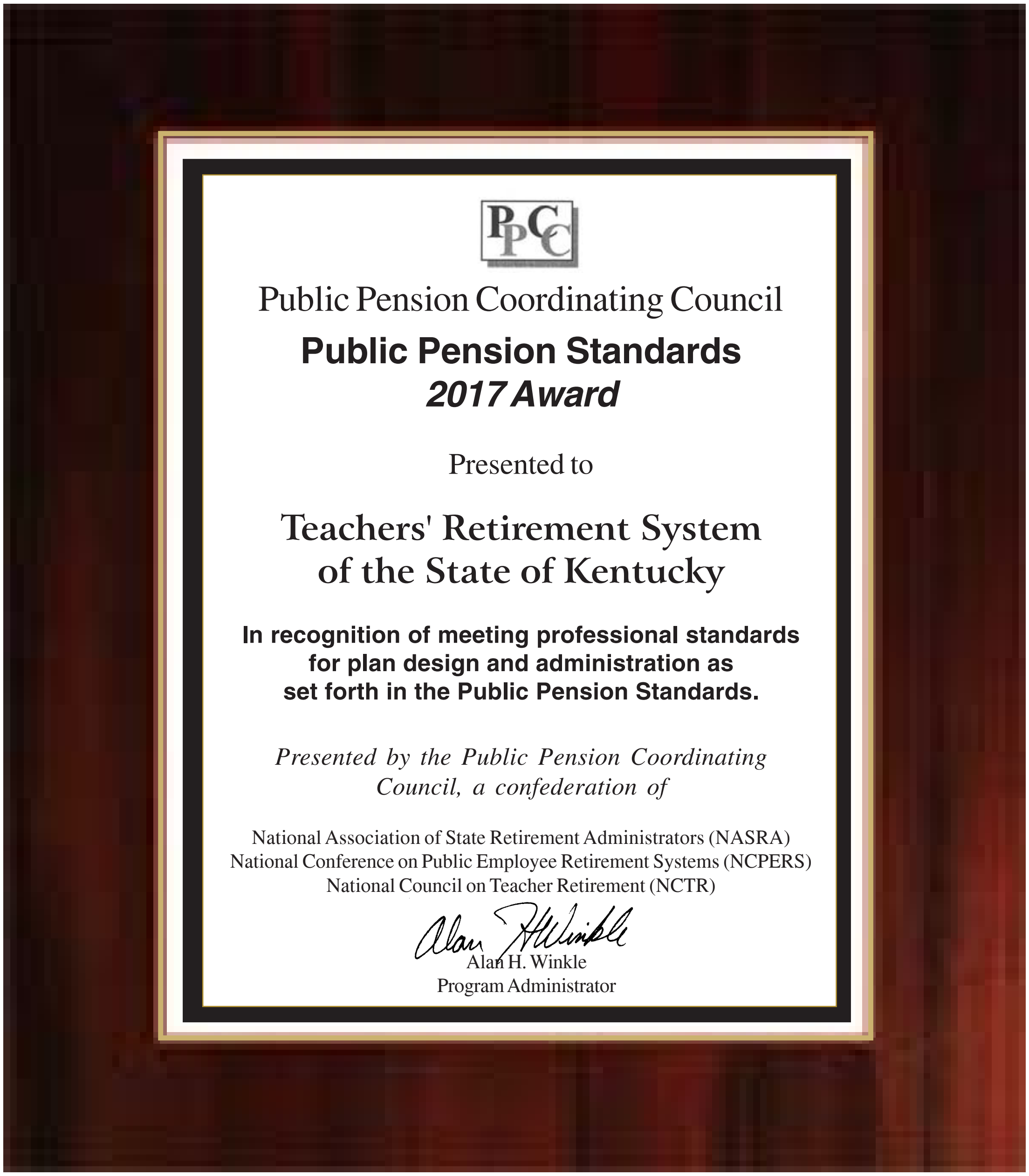
For its Comprehensive Annual Financial Report for the Fiscal Year Ended

June 30, 2016

Executive Director/CEO

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Teachers' Retirement System of the State of Kentucky. The TRS has received the Certificate of Achievement for the last 29 consecutive years (fiscal years ended 1988-2016).

PUBLIC PENSION COORDINATING COUNCIL
PUBLIC PENSION STANDARDS



The Public Pension Coordinating Council awarded a Certificate of Achievement to the Teachers' Retirement System of the State of Kentucky for 2017 for implementing and maintaining high professional standards in administering the affairs of the System. The award is based on compliance with principles judged to underlie exemplary retirement system achievements in the areas of benefits, actuarial valuation, financial reporting, investments and disclosure and are acknowledged widely to be marks of excellence for retirement systems. It represents the highest standards of excellence in the public pension industry.

This page was intentionally left blank.

Teachers' Retirement System of the State of Kentucky

2017

Financial Section

CPAs & ADVISORS

Independent Auditor's Report

Board of Trustees
Teachers' Retirement System of the State of Kentucky
Frankfort, Kentucky

Report on the Financial Statements

We have audited the accompanying statements of fiduciary net position of the Teachers' Retirement System of the State of Kentucky as of June 30, 2017 and 2016, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements which collectively comprise the component unit financial statements of the Teachers' Retirement System of the State of Kentucky as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion of the effectiveness of the entity's internal control. Accordingly we do not express such an opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall financial statement presentation.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Teachers' Retirement System of the State of Kentucky, a component unit of the Commonwealth of Kentucky, at June 30, 2017 and 2016 and the respective changes in its fiduciary net position for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Kentucky
Indiana
Ohio

Mountjoy Chilton Medley LLP
P 502.749.1900 | F 502.749.1930
2600 Meidinger Tower | 462 South Fourth Street | Louisville, KY 40202
www.mcmcpa.com | 888.587.1719
An Independent Member of Baker Tilly International

Independent Auditor's Report (continued) Page 2

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 18 through 21 and the Schedule of Changes in Net Pension Liability (page 59), Schedule of Net Pension Liability (page 60), Schedule of Employer Contributions (page 60) Schedule of Investment Returns (page 61), Medical Insurance Plan Schedule of Changes in Net OPEB Liability (page 62), Medical Insurance Plan Schedule of Net OPEB Liability (page 63), Medical Insurance Plan Schedule of Employer Contributions (page 63), Schedule of Investment Returns (page 64), Life Insurance Plan Schedule of Changes in Net OPEB Liability (page 64), Life Insurance Plan Schedule of Net OPEB Liability (page 65), Life Insurance Plan Schedule of Employer Contributions (page 65), and Schedule of Investment Returns (page 66) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the Kentucky Teachers' Retirement System's basic financial statements. The additional supporting schedules (pages 67 through 69) are presented for purposes of additional analysis and are not a required part of the basic financial statements. The Schedule of Administrative Expenses, Schedule of Professional Services and Contracts, and Schedule of Contracted Investment Management Expenses are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of Administrative Expenses, Schedule of Professional Services and Contracts, and Schedule of Contracted Investment Management Expenses are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial and statistical sections have not been subjected to auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with Government Auditing Standards, we have also issued our report dated November 14, 2017, on our consideration of the Teachers' Retirement System of the State of Kentucky's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with Government Auditing Standards in considering the Teachers' Retirement System of the State of Kentucky's internal control over financial reporting and compliance.

/s/ Mountjoy Chilton Medley LLP

Louisville, Kentucky
November 14, 2017

TEACHERS' RETIREMENT SYSTEM OF THE STATE OF KENTUCKY
MANAGEMENT'S DISCUSSION AND ANALYSIS

This discussion and analysis of the Teachers' Retirement System of the State of Kentucky (TRS, System, or Plan) financial performance provides an overview of the defined benefit and medical insurance plans' financial year ended June 30, 2017. Please read it in conjunction with the respective financial statements, which begin on page 22.

USING THIS FINANCIAL REPORT

Because of the long-term nature of the defined benefit retirement annuity plan, and the medical and life insurance plans, financial statements alone cannot provide sufficient information to properly reflect the ongoing perspective of the System. The Statement of Fiduciary Net Position and Statement of Changes in Fiduciary Net Position (on pages 22-25) provide information about the activities of the defined benefit retirement annuity plan, medical insurance plan, life insurance plan and the tax-sheltered annuity plan as a whole. The Teachers' Retirement System of the State of Kentucky is the fiduciary of funds held in trust for its members.

The Required Supplementary Information includes historical trend information about the funded status of the defined benefit retirement annuity plan, the medical insurance plan and life insurance plan presented as required by accounting standards. The Schedules of Employer Contributions present historical trend information about the required contributions of employers and the contributions made by employers in relation to the requirement. These schedules provide information that contributes to understanding the changes over time in the funded status of the plans. Separate reports prepared by the actuary using board adopted funding methodology provide a long-term, ongoing plan perspective and the progress made in accumulating sufficient assets to pay benefits and insurance premiums when due.

KENTUCKY TEACHERS' RETIREMENT SYSTEM AS A WHOLE

In the fiscal year ended June 30, 2017, the System's combined fiduciary net position increased by $2,116.3 million - from $17,638.5 million in 2016 to $19,754.8 million in 2017. In 2015, the combined net position totaled $18,766.8 million. The following summaries focus on the fiduciary net position and changes in fiduciary net position of the System's defined benefit retirement annuity plan, medical insurance plan, and life insurance plan.

Summary of Fiduciary Net Position

(In millions of dollars)

Categories	Defined Benefit Plan			Medical Insurance Plan			Life Insurance Plan		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
Cash & Investments	$ 18,649.0	$ 16,707.7	$ 17,930.0	$ 922.6	$ 681.4	$ 609.7	$ 86.6	$ 90.1	$ 88.6
Receivables	135.0	119.5	295.5	44.6	58.3	29.1	1.2	1.2	1.1
Capital Assets	18.1	17.0	14.9						
Total Assets	18,802.1	16,844.2	18,240.4	967.2	739.7	638.8	87.8	91.3	89.7
Total Liabilities	(94.4)	(31.4)	(191.3)	(8.8)	(5.9)	(11.8)		(0.4)	
Net Position	$ 18,707.7	$ 16,812.8	$ 18,049.1	$ 958.4	$ 733.8	$ 627.0	$ 87.8	$ 90.9	$ 89.7

*TOTALS	2017	2016**	2015**
Cash & Investments	$ 19,658.2	$ 17,479.2	$ 18,628.3
Receivables	180.8	179.0	325.7
Capital Assets	18.1	17.0	14.9
Total Assets	19,857.1	17,675.2	18,968.9
Total Liabilities	(103.2)	(37.7)	(203.1)
Net Position	$ 19,753.9	$ 17,637.5	$ 18,765.8

* *Other Funds consisting of the 403(b) Tax Shelter Plan, the Excess Benefit Fund and the Losey Scholarship fund had a combined fiduciary net position of $1.0 million for years ended 2017, 2016 and 2015.*

** *Reflects revised amounts reported for both 2016 and 2015 as described in Note 2*

Management's Discussion and Analysis (continued)

The fiduciary net position of the defined benefit retirement annuity plan increased by 11.3 percent ($18,707.7 million compared to $16,812.8 million) and in 2015, the fiduciary net position of the defined benefit plan totaled $18,049.1 million. The increase is primarily due to additional employer contributions from the state and improvements in market conditions which resulted in a net investment income increase of $2.7 billion more than 2016. The 2016 amount was $1.1 billion less than 2015. The defined benefit retirement annuity plan assets are restricted to providing monthly retirement allowances to members and their beneficiaries.

The fiduciary net position of the medical insurance plan increased by 30.6 percent ($958.4 million compared to $733.8 million) primarily due to contributions from members and employers exceeding insurance expenses due to legislation passed in 2010. This compares to 2015 where fiduciary net position of the medical insurance fund totaled $627 million. Plan assets are restricted to providing hospital and medical insurance benefits to members and their spouses.

Summary of Changes in Fiduciary Net Position

(In millions of dollars)

Categories	Defined Benefit Plan			Medical Insurance Plan			Life Insurance Plan		
	2017	2016	2015	2017	2016	2015	2017	2016	2015
ADDITIONS									
Member Contributions	$ 313.6	$ 313.0	$ 308.2	$ 128.8	$ 128.1	$ 100.6	$	$	$
Employer Contributions	1,060.7	565.5	559.6	180.3	178.6	145.3	1.0	1.0	1.0
Net Investment Income/(Loss)	2,475.8	(245.2)	862.2	95.5	(9.3)	7.4	1.0	4.8	2.0
TOTAL ADDITIONS	3,850.1	633.3	1,730.0	404.6	297.4	253.3	2.0	5.8	3.0
DEDUCTIONS									
Benefit Payments	1,918.6	1,833.2	1,741.5				5.2	4.6	4.1
Refunds	26.3	27.8	23.1						
Administrative Expense	10.3	8.6	8.9	1.5	1.7	1.6			
Insurance Expenses				178.5	188.9	160.7			
TOTAL DEDUCTIONS	1,955.2	1,869.6	1,773.5	180.0	190.6	162.3	5.2	4.6	4.1
Increase/(Decrease) in Net Position	$ 1,894.9	$ (1,236.3)	$ (43.5)	$ 224.6	$ 106.8	$ 91.0	$ (3.2)	$ 1.2	$ (1.1)

*TOTALS

	2017	2016**	2015**
ADDITIONS			
Member Contributions	$ 442.4	$ 441.1	$ 408.8
Employer Contributions	1,242.0	745.1	705.9
Net Investment Income/(Loss)	2,572.3	(249.7)	871.6
Other Income			
TOTAL ADDITIONS	4,256.7	936.5	1,986.3
DEDUCTIONS			
Benefit Payments	1,923.8	1,837.8	1,745.6
Refunds	26.3	27.8	23.1
Administrative Expense	11.8	10.3	10.5
Insurance Expenses	178.5	188.9	160.7
TOTAL DEDUCTIONS	2,140.4	2,064.8	1,939.9
Increase/(Decrease) in Net Position	$ 2,116.3	$ (1,128.3)	$ 46.4

* *Other Funds consisting of the 403(b) Tax Shelter Plan, the Excess Benefit Fund and the Losey Scholarship fund had a combined change in fiduciary net position of $1.0 million for years ended 2017, 2016 and 2015.*

** *Reflects revised amounts reported for both 2016 and 2015 as described in Note 2.*

DEFINED BENEFIT RETIREMENT ANNUITY PLAN ACTIVITIES

Retirement contributions are calculated by applying a percentage factor to salary and are paid monthly by each member. Members may also pay contributions to repurchase previously refunded service credit or to purchase various types of elective service credit.

Management's Discussion and Analysis (continued) . . .

In 2017, Employer contributions totaled $1,060.7 million, a net increase of $495.2 million from the prior fiscal year. The increase was due to additional employer contributions paid by the state. In 2016, Employer contributions increased $5.9 million compared to the prior fiscal year.

In 2017, the defined benefit plan experienced an increase in net investment income compared to the previous year ($2,475.8 million compared to negative $245.2 million). For 2015, net investment income totaled $862.2 million. The increase in net investment income is mainly due to favorable market conditions for the year ended June 30, 2017 compared to 2016. Total deductions in 2017 increased $85.6 million. The increase was caused principally by an increase of $86.0 million in defined benefit payments. Members who were drawing benefits as of June 2016 received an increase of one and one-half percent to their retirement allowances in July 2016. Also, there was an increase of 1,403 members and beneficiaries on the retired payroll as of June 30, 2017.

OTHER POSTEMPLOYMENT BENEFIT ACTIVITIES

During the 2017 fiscal year, the medical insurance plan member contributions increased $0.7 million and employer contributions increased $1.7 million from fiscal year 2016. The member, employer and state contributions increased primarily due to the implementation of the Shared Responsibility Plan beginning July 1, 2010 which includes increased contributions from active and retired members, employers and the state.

Net investment income for the medical insurance plan increased $104.8 million from negative $9.3 million in 2016 to $95.5 million in 2017. In 2015, net investment income totaled $7.4 million.

The life insurance plan has an actuarial valuation conducted independently from the defined benefit plan. Total life insurance benefits paid for 2017, 2016 and 2015 were $5.2, $4.6 and $4.1 million respectively.

FUNDING

For the 2016-2018 biennium, the State budgeted $973 million of additional employer contributions for the unfunded liability of the System. The latest actuarial valuation was for the period ending June 30, 2017. This report reflects the System's actuarial value of assets totaling $18.5 billion and actuarial determined liabilities totaling $32.8 billion. The funded ratio of actuarial assets to liabilities is 56.4%. The additional funding provided in the budget resulted in 99% of the Actuarially Determined Employer Contribution being made for fiscal year 2017. Assuming that contributions to the System are made by the State from year to year in the future as recommended by the actuary, the System should have sufficient assets to provide the benefits defined by law.

The actuarial funding of the medical insurance and life insurance plans is provided in the Schedule of Funding Progress presented in the Required Supplementary Information. The asset value, stated in the Schedule of Funding Progress, is determined by the System's independent actuary. The actuarial accrued liability is calculated using the entry age cost method. Although the medical insurance plan continues to have a large unfunded actuarial liability, the current obligations are being met by current funding. Effective July 1, 2010 the Shared Responsibility Plan for funding retiree health benefits requires members, retirees, participating employers and the state to make contributions for pre-funding retiree medical benefits. Annual required contributions of the medical insurance plan are provided in the Schedule of Employer Contributions presented in the Required Supplementary Information.

HISTORICAL TRENDS

Accounting standards require that the Statement of Fiduciary Net Position present asset values at fair value and include only benefits and refunds due to plan members and beneficiaries and accrued investment and administrative expenses as of the reporting date. Detailed information regarding the funded status, including the key actuarial assumptions, target allocations and the sensitivity of the discount rate can be found in Note 4 of the financial statements for the defined benefit plan, Note 8 for the medical health plan, and Note 9 for the life insurance plan. The blended discount rate mandated by accounting standards result in a lower funding level when compared to the actuarially determined funded levels reported in past years. The Schedule of Employer Contributions is provided in the Required Supplementary Information.

Management's Discussion and Analysis (continued) . . .

The System's independent consulting actuaries are members of the American Academy of Actuaries and experienced in performing valuations for public retirement systems. As mandated by state law, the valuations of the retirement annuity and health care plans are prepared in accordance with principles of practice prescribed by the Actuarial Standards Board consistent with accepted actuarial procedures. Actuarial assumptions used in the valuations are internally consistent and reasonable based on the actual experience of the plans. An actuarial audit was completed in 2015, which confirmed the accuracy of actuarial procedures and the reasonableness of assumptions. A five-year experience study was completed in 2016, which also confirmed the reasonableness of assumptions based upon the actual experience of the plans. The actuarial assumptions reflected in the results may be reasonably relied upon. However, projections using other assumptions may produce significantly different results.

The Finance and Administration Cabinet commissioned a study of the state's retirement systems, including the Teachers' Retirement System. The resulting report from this study was issued in August 2017 and is the basis for ongoing discussions that may lead to legislative change to the System.

This financial report is designed to provide citizens, participating employers, plan members, and other users with an overview of the Kentucky Teachers' Retirement System's fiscal practices and responsibility. If you have questions or need additional information, please contact Mark Whelan, Chief Financial Officer, Teachers' Retirement System at 479 Versailles Road, Frankfort, Kentucky 40601.

STATEMENT OF FIDUCIARY NET POSITION
As of June 30, 2017

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
ASSETS					
Cash	$ 137,274,752	$ 87,841,753	$ 187,657	$ 23,852	$ 225,328,014
Prepaid Expenses	100,838				100,838
Receivables					
Contributions	28,779,827	18,456,779	105,264		47,341,870
Due From Other Trust Funds	1,567,472				1,567,472
State of Kentucky	13,640,427	5,580,025	32,617		19,253,069
Investment Income	40,623,372	1,685,597	1,036,228	2,693	43,347,890
Investment Sales Receivable	49,973,750	915,100			50,888,850
Other Receivables	438,303	17,958,624			18,396,927
Total Receivables	135,023,151	44,596,125	1,174,109	2,693	180,796,078
Investments at Fair Value (See Note 5)					
Short-Term Investments	521,348,977	46,008,715	4,150,029	398,093	571,905,814
Bonds and Mortgages	2,871,403,201	70,283,077	82,293,300	258,962	3,024,238,540
Equities	11,589,656,638	473,274,401		280,104	12,063,211,143
Alternative Investments	1,062,855,562	42,340,364			1,105,195,926
Real Estate	1,046,760,134	42,701,494			1,089,461,628
Additional Categories	1,419,607,158	160,170,175			1,579,777,333
Total Investments	18,511,631,670	834,778,226	86,443,329	937,159	19,433,790,384
Capital Assets, at cost net of accumulated depreciation of $8,019,203 (See Note 2)	18,046,639				18,046,639
Total Assets	18,802,077,050	967,216,104	87,805,095	963,704	19,858,061,953
LIABILITIES					
Accounts Payable	2,201,644	10,300			2,211,944
Due to Other Trust Funds		1,538,574	27,690	1,208	1,567,472
Revenues Collected in Advance		3,437,483			3,437,483
Investment Purchases Payable	92,176,381	3,840,074			96,016,455
Total Liabilities	94,378,025	8,826,431	27,690	1,208	103,233,354
Net Position - Restricted for Pension and Other Post-Employment Benefits	$ 18,707,699,025	$ 958,389,673	$ 87,777,405	$ 962,496	$ 19,754,828,599

The "Combining Statement of Fiduciary Net Position - Other Funds" is presented on page 26.
The accompanying notes are an integral part of these financial statements.

STATEMENT OF FIDUCIARY NET POSITION
As of June 30, 2016

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
ASSETS					
Cash	$ 15,156,496	$ 59,843,503	$	$ 481	$ 75,000,480
Prepaid Expenses	89,235				89,235
Receivables					
Contributions	34,664,070	21,525,458	95,285		56,284,813
Due From Other Trust Funds	3,719,997				3,719,997
State of Kentucky	22,766,523	1,359,808	54,392		24,180,723
Investment Income	39,619,872	1,333,953	1,090,402	2,417	42,046,644
Investment Sales Receivable	18,182,733	633,642			18,816,375
Other Receivables	559,913	33,481,047			34,040,960
Total Receivables	119,513,108	58,333,908	1,240,079	2,417	179,089,512
Investments at Fair Value (See Note 5)					
Short-Term Investments	507,724,996	18,186,502	913,077	410,590	527,235,165
Bonds and Mortgages	2,734,474,510	62,555,400	89,200,103	290,132	2,886,520,145
Equities	10,267,066,002	354,369,798		242,351	10,621,678,151
Alternative Investments	932,813,350	23,931,317			956,744,667
Real Estate	940,860,202	25,433,241			966,293,443
Additional Categories	1,309,513,418	137,075,842			1,446,589,260
Total Investments, at fair value	16,692,452,478	621,552,100	90,113,180	943,073	17,405,060,831
Capital Assets, at cost net of accumulated depreciation of $6,022,382 (See Note 2)	16,973,670				16,973,670
Total Assets	16,844,184,987	739,729,511	91,353,259	945,971	17,676,213,728
LIABILITIES					
Accounts Payable	1,917,838	19,811	325,494		2,263,143
Due to Other Trust Funds	1,935,385	1,747,115	36,837	660	3,719,997
Revenues Collected in Advance		2,047,051			2,047,051
Investment Purchases Payable	27,499,881	2,134,567			29,634,448
Total Liabilities	31,353,104	5,948,544	362,331	660	37,664,639
Net Position - Restricted for Pension and Other Postemployment Benefits	$ 16,812,831,883	$ 733,780,967	$ 90,990,928	$ 945,311	$ 17,638,549,089

The "Combining Statement of Fiduciary Net Position - Other Funds" is presented on page 26.
The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
For the Fiscal Year Ended June 30, 2017

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
ADDITIONS					
Contributions					
State of Kentucky	$ 981,417,089	$ 75,496,731	$ 881,703	$	$ 1,057,795,523
Other Employers	79,302,904	104,879,255	167,980	220,001	184,570,140
Members	313,625,434	128,819,243			442,444,677
Total Contributions	1,374,345,427	309,195,229	1,049,683	220,001	1,684,810,340
Investment Income/(Loss)					
Net Appreciation/(Depreciation) in Fair Value of Investments	2,167,046,581	89,058,380	(2,087,797)	6,584	2,254,023,748
Interest	153,207,310	5,777,776	3,011,187	10,920	162,007,193
Dividends	180,297,227	3,787,309		5,468	184,090,004
Rental Income, Net	30,477,797				30,477,797
Securities Lending, Gross Earnings	3,656,565		3,692	231	3,660,488
Gross Investment Income/(Loss)	2,534,685,480	98,623,465	927,082	23,203	2,634,259,230
Less: Investment Expense	(57,836,050)	(3,170,868)	(10,478)	(114)	(61,017,510)
Less: Securities Lending Expense	(1,096,632)		(1,107)	(69)	(1,097,808)
Net Investment Income/(Loss)	2,475,752,798	95,452,597	915,497	23,020	2,572,143,912
Total Additions	3,850,098,225	404,647,826	1,965,180	243,021	4,256,954,252
DEDUCTIONS					
Benefits	1,918,612,128		5,151,013	224,628	1,923,987,769
Refunds of Contributions	26,305,240				26,305,240
Insurance Expenses		178,500,546			178,500,546
Administrative Expense	10,313,715	1,538,574	27,690	1,208	11,881,187
Total Deductions	1,955,231,083	180,039,120	5,178,703	225,836	2,140,674,742
Net Increase/(Decrease)	1,894,867,142	224,608,706	(3,213,523)	17,185	2,116,279,510
Net Position - Restricted for Pension and Other Postemployment Benefits					
Beginning of Year	16,812,831,883	733,780,967	90,990,928	945,311	17,638,549,089
End of Year	$ 18,707,699,025	$ 958,389,673	$ 87,777,405	$ 962,496	$ 19,754,828,599

The "Combining Statement of Changes in Fiduciary Net Position - Other Funds" is presented on page 27.
The accompanying notes are an integral part of these financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
For the Fiscal Year Ended June 30, 2016

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
ADDITIONS					
Contributions					
State of Kentucky	$ 484,986,954	$ 74,367,250	$ 872,990	$	$ 560,227,194
Other Employers	80,467,636	104,271,120	164,779		184,903,535
Members	313,044,226	128,068,781			441,113,007
Total Contributions	878,498,816	306,707,151	1,037,769		1,186,243,736
Investment Income/(Loss)					
Net Appreciation/(Depreciation) in Fair Value of Investments	(584,310,367)	(16,291,780	1,742,044	41,543	(598,818,560)
Interest	162,339,804	8,029,465	3,095,887	10,013	173,475,169
Dividends	194,570,308	1,207,958		5,187	195,783,453
Rental Income, Net	28,039,967				28,039,967
Securities Lending, Gross Earnings	2,767,119		3,550	404	2,771,073
Gross Investment Income/(Loss)	(196,593,169)	(7,054,357)	4,841,481	57,147	(198,748,898)
Less: Investment Expense	(47,791,624)	(2,278,133)	(11,080)	(116)	(50,080,953)
Less: Securities Lending Expense	(830,067)		(1,065)	(121)	(831,253)
Net Investment Income/(Loss)	(245,214,860)	(9,332,490)	4,829,336	56,910	(249,661,104)
Total Additions	633,283,956	297,374,661	5,867,105	56,910	936,582,632
DEDUCTIONS					
Benefits	1,833,198,630		4,595,489	94,665	1,837,888,784
Refunds of Contributions	27,747,742				27,747,742
Insurance Expenses		188,869,994			188,869,994
Administrative Expense	8,636,438	1,686,070	27,195	560	10,350,263
Total Deductions	1,869,582,810	190,556,064	4,622,684	95,225	2,064,856,783
Net Increase/(Decrease)	(1,236,298,854)	106,818,597	1,244,421	(38,315)	(1,128,274,151)
Net Position - Restricted for Pension and Other Postemployment Benefits					
Beginning of Year	18,049,130,737	626,962,370	89,746,507	983,626	18,766,823,240
End of Year	$ 16,812,831,883	$ 733,780,967	$ 90,990,928	$ 945,311	$ 17,638,549,089

The "Combining Statement of Changes in Fiduciary Net Position - Other Funds" is presented on page 28.
The accompanying notes are an integral part of these financial statements.

Combining Statement of Fiduciary Net Position - Other Funds
As of June 30, 2017

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
Assets				
Cash	$	$ 23,852	$	$ 23,852
Receivables				
Investment Income	233		2,460	2,693
Investments at Fair Value				
Short Term Investments	343,750		54,343	398,093
Bonds and Mortgages			258,962	258,962
Equities			280,104	280,104
Total Investments	343,750		593,409	937,159
Total Assets	393,983	23,852	595,869	963,704
Liabilities				
Due to Other Trust Funds	56	1,055	97	1,208
Total Liabilities	56	1,055	97	1,208
Net Position - Restricted for Pension and Other Postemployment Benefits	$ 343,927	$ 22,797	$ 595,772	$ 962,496

Combining Statement of Fiduciary Net Position - Other Funds
As of June 30, 2016

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
Assets				
Cash	$	$ 481	$	$ 481
Receivables				
Investment Income	111		2,306	2,417
Investments at Fair Value				
Short Term Investments	352,773		57,817	410,590
Bonds and Mortgages			290,132	290,132
Equities			242,351	242,351
Total Investments	352,773		590,300	943,073
Total Assets	352,884	481	592,606	945,971
Liabilities				
Accounts Payable	110	389	161	660
Due to Other Trust Funds				
Total Liabilities	110	389	161	660
Net Position - Restricted for Pension and Other Postemployment Benefits	$ 352,774	$ 92	$ 592,445	$ 945,311

The accompanying notes are an integral part of these financial statements.

Combining Statement of Changes in Fiduciary Net Position - Other Funds
For the Fiscal Year Ended June 30, 2017

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
Additions				
Other Employers	$	$ 220,001	$	$ 220,001
Investment Income				
Net Appreciation in				
Fair Value of Investments			6,584	6,584
Interest	1,638		9,282	10,920
Dividends			5,468	5,468
Securities Lending, Gross			231	231
Gross Investment Income	1,638		21,565	23,203
Less Investment Expense	(42)		(72)	(114)
Less Securities Lending Expense			(69)	(69)
Net Investment Income	1,596		21,424	23,020
Total Additions	1,596	220,001	21,424	243,021
Deductions				
Benefits	10,387	196,241	18,000	224,628
Administrative Expense	56	1,055	97	1,208
Total Deductions	10,443	197,296	18,097	225,836
Net Increase/(Decrease)	(8,847)	22,705	3,327	17,185
Net Position - Restricted for Pension and Other Postemployment Benefits				
Beginning of Year	352,774	92	592,445	945,311
End of Year	$ 343,927	$ 22,797	$ 595,772	$ 962,496

The accompanying notes are an integral part of these financial statements.

Combining Statement of Changes in Fiduciary Net Position - Other Funds
For the Fiscal Year Ended June 30, 2016

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
Additions				
Investment Income				
Net Appreciation in				
Fair Value of Investments	$	$	$ 41,543	$ 41,543
Interest	863		9,150	10,013
Dividends			5,187	5,187
Securities Lending, Gross			404	404
Gross Investment Income	863		56,284	57,147
Less Investment Expense	(43)		(73)	(116)
Less Securities Lending Expense			(121)	(121)
Net Investment Income	820		56,090	56,910
Total Additions	820		56,090	56,910
Deductions				
Benefits	11,858	65,807	17,000	94,665
Administrative Expense	71	389	100	560
Total Deductions	11,929	66,196	17,100	95,225
Net Increase/(Decrease)	(11,109)	(66,196)	38,990	(38,315)
Net Position - Restricted for Pension and Other Postemployment Benefits				
Beginning of Year	363,883	66,288	553,455	983,626
End of Year	$ 352,774	$ 92	$ 592,445	$ 945,311

The accompanying notes are an integral part of these financial statements.

NOTES TO FINANCIAL STATEMENTS

Note 1: Description of Retirement Annuity Plan

A. REPORTING ENTITY

The Teachers' Retirement System of the State of Kentucky (TRS) was created by the 1938 General Assembly and is governed by Chapter 161 Section 220 through Chapter 161 Section 990 of the Kentucky Revised Statutes (KRS). TRS is a blended component unit of the Commonwealth of Kentucky and therefore is included in the Commonwealth's financial statements. TRS is a cost-sharing multiple-employer defined benefit plan with a special funding situation established to provide retirement annuity plan coverage for local school districts and other public educational agencies in the Commonwealth.

KRS 161.250 provides that the general administration and management of TRS, and the responsibility for its proper operation, is vested in a board of trustees. The board of trustees consists of the chief state school officer, the State Treasurer, two trustees appointed by the Governor and seven elected trustees. Four of the elected trustees are active teachers, two are not members of the teaching profession, and one is an annuitant of the System.

B. PARTICIPANTS

As of June 30, 2017 a total of 207 employers participated in the plan. Employers are comprised of local school districts, Department of Education Agencies, universities, the Kentucky Community and Technical College System, and other educational organizations. The State under the Governmental Accounting Standards Board (GASB) No. 67 is recognized as a non-employer contributing entity providing the employer matching contributions for members employed by the local school districts and regional educational cooperatives.

According to KRS 161.220 " . . . any regular or special teacher, or professional occupying a position requiring certification or graduation from a four (4) year college or university . . . " is eligible to participate in the System. The following illustrates the classifications of members:

	2017	2016
Active contributing members:		
Vested	48,211	48,292
Non-vested	23,919	23,556
Inactive members, vested	8,624	9,240
Retirees and beneficiaries currently receiving benefits	52,966	51,563
Total members, retirees, and beneficiaries	**133,720**	**132,651**

C. BENEFIT PROVISIONS

For Members Before July 1, 2008:

Members become vested when they complete five (5) years of credited service. To qualify for monthly retirement benefits, payable for life, members must either:

1.) Attain age fifty-five (55) and complete five (5) years of Kentucky service, or

2.) Complete twenty-seven (27) years of Kentucky service.

Non-university members receive monthly payments equal to two percent (2%) (service prior to July 1, 1983) and two and one-half percent (2.5%) (service after July 1, 1983) of their final average salaries for each year of credited service. Non-university members who became members on or after July 1, 2002 will receive monthly benefits equal to two percent (2%) of their final average salary for each year of service if, upon retirement, their total service is less than ten (10) years. New members after July 1, 2002 who retire with ten (10) or more years of total service will receive monthly benefits equal to two and one-half percent (2.5%) of their final average salary for each year of service, including the first ten (10) years. In addition, non-university members who retire July 1, 2004 and later with more than thirty (30) years of service will have their multiplier increased for all years over thirty (30) from two and one-half

Note 1: Description of Retirement Annuity Plan continued . . .

percent (2.5%) to three percent (3%) to be used in their benefit calculation.

University employees receive monthly benefits equal to two percent (2%) of their final average salary for each year of credited service.

The final average salary is the member's five (5) highest annual salaries except members at least age fifty-five (55) with twenty-seven (27) or more years of service may use their three (3) highest annual salaries. For all members, the annual allowance is reduced by 5% per year from the earlier of age 60 or the date the member would have completed 27 years of service. The minimum annual service allowance for all members is $440 multiplied by credited service.

For Members On or After July 1, 2008:

Members become vested when they complete five (5) years of credited service. To qualify for monthly retirement benefits, payable for life, members must either:

1.) Attain age sixty (60) and complete five (5) years of Kentucky service, or

2.) Complete twenty-seven (27) years of Kentucky service, or

3.) Attain age fifty-five (55) and complete ten (10) years of Kentucky service.

The annual retirement allowance for non-university members is equal to: (a) one and seven tenths percent (1.7%) of final average salary for each year of credited service if their service is 10 years or less; (b) two percent (2.0%) of final average salary for each year of credited service if their service is greater than 10 years but no more than 20 years; (c) two and three tenths percent (2.3%) of final average salary for each year of credited service if their service is greater than 20 years but no more than 26 years; (d) two and one half percent (2.5%) of final average salary for each year of credited service if their service is greater than 26 years but no more than 30 years; (e) three percent (3.0%) of final average salary for years of credited service greater than 30 years.

The annual retirement allowance for university members is equal to: (a) one and one-half percent (1.5%) of final average salary for each year of credited service if their service is 10 years or less; (b) one and seven tenths percent (1.7%) of final average salary for each year of credited service if their service is greater than 10 years but no more than 20 years; (c) one and eighty five hundredths percent (1.85%) of final average salary for each year of credited service if their service is greater than 20 years but less than 27years; (d) two percent (2.0%) of final average salary for each year of credited service if their service is greater than or equal to 27 years.

The final average salary is the member's five (5) highest annual salaries except members at least age fifty-five (55) with twenty-seven (27) or more years of service may use their three (3) highest annual salaries. For all members, the annual allowance is reduced by 6% per year from the earlier of age 60 or the date the member would have completed 27 years of service.

Other Benefits:

TRS provides post-employment medical benefits to retirees as fully described in Note 8. The Retirement System also provides disability benefits for vested members at the rate of sixty percent (60%) of the final average salary. A life insurance benefit, payable upon the death of a member, is $2,000 for active contributing members and $5,000 for retired or disabled members.

Cost of living increases are one and one-half percent (1.5%) annually. Additional ad hoc increases and any other benefit amendments must be authorized by the General Assembly.

Note 2: Summary of Significant Accounting Policies

A. BASIS OF ACCOUNTING

The financial statements are prepared on the accrual basis of accounting. Member contributions and employer matching contributions are recognized in the fiscal year due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan.

B. CASH

TRS has seven cash accounts. At June 30, 2017, the retirement annuity cash account totaled $105,013,741, the control cash account totaled $32,163,714 and the administrative expense fund cash account was $97,297 for a total of $137,274,752 as carrying value of cash in the defined benefit plan. The medical insurance trust cash account totaled $80,806,325, the medical insurance 401(h) cash account totaled $6,921,861 and the medical insurance claims cash account totaled $113,567 for a total of $87,841,753 as carrying value of cash in the medical insurance plan. The life insurance plan cash account totaled $187,657. The excess benefit fund cash account contained $23,852. Therefore, the carrying value of cash was $225,328,014 and the bank balance was $222,173,747 and funds controlled by the Commonwealth of Kentucky of $5,245,371. The variance is primarily due to outstanding checks and items not processed by the bank as of June 30, 2017.

C. CAPITAL ASSETS

Property and equipment are carried at cost, less accumulated depreciation. All costs of property and equipment $5,000 (actual dollars) or greater are capitalized. Expenditures for maintenance and repairs are charged to operations as incurred. Depreciation is calculated using the straight-line method, with estimated lives ranging from five to forty years in the following major classes: office furniture and equipment, five years; other equipment, five years; computer software, ten years; TRS office buildings, forty years. The Pathway System replaced TRS's legacy computer system and is TRS's primary line of business information technology system. The Pathway System was capitalized and is being amortized or depreciated over ten years. As of June 30, 2016, the project to build and implement the Pathway System was substantially complete.

D. INVESTMENTS

Plan investments are reported at fair value. Fair value is the amount that a plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller. Short-term securities are carried at cost, which approximates fair value. Fixed income and common and preferred stocks are generally valued based on published market prices and quotations from national security exchanges and securities pricing services. Real estate is primarily valued based on appraisals performed by independent appraisers. Alternative investments such as private equity, timberland, and other additional categories, such as opportunistic credit, high yield bonds, and direct lending are valued using the most recent general partner statement of fair value based on independent appraisals, updated for any subsequent partnership interests' cash flows.

Purchase and sales of debt securities, equity securities, and short-term investments are recorded on the trade date. Real estate equity transactions are recorded on the settlement date. Upon sale of investments, the difference between sales proceeds and cost is reflected in the statement of changes in fiduciary net position. Investment expenses consist of investment manager and consultant fees along with fees for custodial services.

E. COMPENSATED ABSENCES

Expenses for accumulated vacation days and compensatory time earned by TRS's employees are recorded when earned. Upon termination or retirement, employees of TRS are paid for accumulated vacation time limited to sixty (60) days and accumulated compensatory time limited to two hundred-forty (240) hours. As of June 30, 2017 and 2016 accrued compensated absences were included in the accounts payable on the balance sheet amounting to $1,272,405 and $1,166,764, respectively.

F. RISK MANAGEMENT

Destruction of assets, theft, employee injuries and court challenges to administrative policy are among the various risks to which TRS is exposed. In order to cover such risks TRS carries appropriate insurance policies such as fire and tornado, employee bonds, fiduciary liability, worker's compensation and equipment insurance.

Note 2: Summary of Significant Accounting Policies continued . . .

G. OTHER RECEIVABLES

TRS allows qualified purchases of service credit to be made by installment payments not to exceed a five (5) year period. Revenue is recognized in the initial year of the installment contract agreement. The June 30, 2017 and 2016 installment contract receivables were $438,303 and $559,913, respectively.

H. USE OF ESTIMATES

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates. The most significant estimates impacting the financial statements relate to the actuarial assumptions.

I. INCOME TAXES

The defined benefit plan is organized as a tax-exempt retirement plan under the Internal Revenue Code. The tax sheltered annuity plan is no longer continued and will be fully terminated when all lifetime annuities have expired. The System's management believes that it has operated the plans within the constraints imposed by federal tax law.

J. RECENT PRONOUNCEMENTS

GASB Statement No. 74 which was adopted during the year ended June 30, 2017, addresses accounting and financial reporting requirements for postemployment benefits other than pensions (OPEB). The requirements for GASB No. 74 requires changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes include an actuarial calculation of total and net OPEB liability. It also includes comprehensive footnote disclosures regarding the OPEB liability, the sensitivity of the OPEB liability to the discount rate, and increased investment activity disclosures. The implementation of GASB No. 74 did not significantly impact the accounting for accounts receivable and investment balances. The total OPEB liability, determined in accordance with GASB No. 74 is presented in Note 8 for the Medical Insurance Plan, Note 9 for the Life Insurance Plan and in the Required Supplementary Information.

GASB Statement No. 75 replaces GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefit Plans Other Than Pensions and is effective for fiscal years beginning after June 15, 2017. TRS will issue a report in the Summer of 2018 that will help employers implement GASB No. 75 for their June 30, 2018 financial statements.

K. RECLASSIFICATIONS

Due to the implementation of GASB Statement No. 74, certain 2016 amounts have been reclassified in conformity with the 2017 presentation regarding amounts paid by retirees for medical insurance premiums and amounts received from Medicare and formulary rebates on the Statement of Changes in Fiduciary Net Position. Previously these payments were reported as additions to net assets and have been reclassified to be reported as a reduction to insurance expenses on the Statement of Changes in Fiduciary Net Position. The reclassification had no effect on total net position.

In order to comply with GASB Statement No. 28, amounts TRS has received as collateral from securities lending transactions have been removed from the balance sheet because the System does not have the ability to pledge or sell the securities unless the borrower defaults. Previously these amounts were recorded as an asset and a corresponding liability. The reclassification had no effect on total net position.

Note 3: Contributions and Funds of the System

A. CONTRIBUTIONS

Contribution rates are established by Kentucky Revised Statutes. Non-university members are required to contribute 12.855 percent of their salaries to the System effective July 1, 2015; university members are required to contribute 10.40 percent of their salaries effective July 1, 2015. KRS 161.565 allows each university to reduce the contribution of its members by 2.215 percent; therefore, university members contribute 8.185 percent of their salary to TRS. For members employed by local school districts, the State, as a non-employer contributing entity, contributes 13.105 percent of salary for those who joined before July 1, 2008 and 14.105 percent for those who joined thereafter.

Other participating employers are required to contribute the percentage contributed by members plus an additional 3.25 percent of members' gross salaries.

The member and employer contributions consist of retirement annuity contributions and other post-employment benefit contributions to the medical and life insurance plans. The member post-employment medical contribution is 3.75 percent of salary. The employer post-employment medical contribution is .75 percent of member salaries. Also, employers (other than the state) contribute 3.0 percent of members' salaries and the state contributes the net cost of health insurance premiums for new retirees after June 30, 2010 in the non-Medicare eligible group. If a member leaves covered employment before accumulating five (5) years of credited service, accumulated member contributions to the retirement annuity plan plus interest are refunded upon the member's request.

B. FUNDS OF THE SYSTEM

Teacher Savings Fund

This fund was established by KRS 161.420(2) as the Teacher Savings Fund and consists of contributions paid by university and non-university members. The fund also includes interest authorized by the Board of Trustees from the Guarantee Fund. The accumulated contributions of members that are returned upon withdrawal or paid to the estate or designated beneficiary in the event of death are paid from this fund. Upon retirement, the member's contributions and the matching state contributions are transferred from this fund to Allowance Reserve Fund, the fund from which retirement benefits are paid.

State Accumulation Fund

This fund was established by KRS 161.420(3) as the State Accumulation Fund and receives state appropriations to the System. The state matches an amount equal to members' contributions. State appropriations during the year are based on estimates of members' salaries. At year-end when actual salaries are known, the required state matching is also realized by producing either a receivable from or a payable to the State of Kentucky.

Allowance Reserve Fund

This fund was established by KRS 161.420(4) as the Allowance Reserve Fund, the source for retirement, disability, and survivor benefits paid to members of TRS. These benefits are paid from the retired members' contributions until they are exhausted, at which time state matching contributions are used to pay the benefits. After an individual member's contributions and the state matching contributions have been exhausted, retirement benefits are paid from monies transferred from the Guarantee Fund.

Guarantee Fund

This fund was established by KRS 161.420(6) as the Guarantee Fund, to collect income from investments, state matching contributions of members withdrawn from the System, and state matching contributions for cost of living adjustments (COLAs). In addition, it receives money for which disposition is not otherwise provided. This fund provides interest to the other funds, benefits in excess of both members' and state matching contributions, monies for administrative expenses of TRS, and deficiencies not covered by the other funds.

Administrative Expense

This fund was established by KRS 161.420(1) as the Expense Fund. Investment income transferred to this fund from the Guarantee Fund is used to pay the administrative expenses of TRS. Administrative expenses are allocated among the funds based on benefits paid.

Note 4: Net Pension Liability of Employers

A. NET PENSION LIABILITY OF EMPLOYERS

The net pension liability (i.e., the System's liability determined in accordance with GASB No. 67 less the fiduciary net position) as of June 30, 2017 and June 30, 2016 is shown below.

Net Pension Liability of Employers
(In thousands of dollars)

Fiscal Year Ending June 30	Total Pension Liability A	Plan Fiduciary Net Position B	Employers Net Pension Liability (A-B)	Plan Fiduciary Net Position as a % of Total Pension Liability (B/A)	Covered Payroll C	Net Pension Liability as a % of Covered Payroll [A-B/C]
2017	$ 46,966,822	$ 18,707,699	$ 28,259,123	39.8 %	$ 3,415,432	827.40 %
2016	47,736,901	16,812,832	30,924,069	35.2	3,390,539	912.07

B. SUMMARY OF ACTUARIAL ASSUMPTIONS

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below.

Valuation Date	6/30/2016
Actuarial cost method	Entry Age
<u>Actuarial Assumptions:</u>	
Investment rate of return	7.50%, net of pension plan investment expense, including inflation.
Projected salary increases	3.50 - 7.30%, including inflation
Inflation rate	3.00%
Municipal Bond Index Rate	3.56%
Single Equivalent Interest Rate	4.49%

Mortality rates were based on the RP-2000 Combined Mortality Table for Males or Females, as appropriate, with adjustments for mortality improvements based on a projection of Scale BB to 2025, set forward two years for males and one year for females. The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period July 1, 2010 - June 30, 2015 adopted by the Board on September 19, 2016.

C. TARGET ALLOCATIONS

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan 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 allocation and best estimates of arithmetic real rates of return for each major asset class, as provided by TRS's investment consultant, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
U.S. Equity	42.0 %	4.4 %
International Equity	20.0	5.3
Fixed Income	16.0	1.5
Additional Categories*	9.0	3.6
Real Estate	5.0	4.4
Alternatives	6.0	6.7
Cash	2.0	0.8
Total	100.0 %	

** Includes Hedge Funds, High Yield and Non-U.S. Developed Bonds.*

Note 4: Net Pension Liability of Employers continued ...

D. DISCOUNT RATE

The discount rate used to measure the total pension liability was 4.49%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and the Employer contributions will be made at statutorily required rates, and the additional amount appropriated for fiscal year 2018. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members until the 2038 plan year. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments through 2037 and a municipal bond index rate of 3.56% was applied to all periods of projected benefit payments after 2037. The Single Equivalent Interest Rate (SEIR) that discounts the entire projected benefit stream to the same amount as the sum of the present values of the two separate benefit payments streams was used to determine the total pension liability.

The following tables present the net pension liability of the System for 2017 and 2016. The 2017 net pension liability of the System is calculated using the discount rate of 4.49%, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (3.49%) or 1-percentage-point higher (5.49%) than the current rate:

2017

(in thousands)	1% Decrease (3.49%)	Current Discount Rate (4.49%)	1% Increase (5.49%)
System's net pension liability	$ 35,029,551	$ 28,259,123	$ 22,702,413

2016

(in thousands)	1% Decrease (3.20%)	Current Discount Rate (4.20%)	1% Increase (5.20%)
System's net pension liability	$ 37,937,230	$ 30,924,069	$ 25,168,197

June 30, 2016 is the actuarial valuation date upon which the TPL is based. An expected TPL is determined as of June 30, 2017 using standard roll forward techniques for the TPL based on the assumptions from the June 30, 2015 experience study using a discount rate of 4.49%, which was based on a municipal bond index rate as of that date equal to 3.56%. An expected TPL was also determined based on the assumptions prior to the June 30, 2015 experience study using the prior year discount rate of 4.20%, which was based on a municipal bond index rate of 3.01%. The roll forward calculation adds the annual normal cost (also called the service cost), subtracts the actual benefit payments and refunds for the plan year and then applies the assumed interest rate (SEIR) for the year. The difference between the two roll-forward amounts as of June 30, 2017 is the gain or loss due to changes in assumptions and other inputs.

In addition, we have determined an expected TPL as of June 30, 2017 based on the TPL roll-forward in the June 30, 2016 GASB 67 report. The difference between this amount and the roll-forward of the actual TPL using last year's assumptions is reflected as an experience gain or loss for the year. These procedures are shown in the following table:

TPL Roll-Forward *(In thousands of dollars)*	Expected	Actual Before Assumption Change	Actual After Assumption Change
(a) Interest Rate	4.20%	4.20%	4.49%
(b) TPL as of June 30, 2016	$ 47,736,901	$ 47,928,332	$ 45,781,405
(c) Entry Age Normal Cost for the Year July 1, 2016 - June 30, 2017	1,332,587	1,332,587	1,118,412
(d) Actual Benefit Payments (including refunds) For the year July 1, 2016 - June 30, 2017	1,944,917	1,944,917	1,944,917
(e) TPL as of June 30, 2017 (b) x (1 + (a)) + (c) - (d) x (1 + 0.5 x (a))	49,088,678	49,288,149	46,966,822
(f) Difference between Expected and Actual Experience (Gain)/Loss		199,471	
(g) Difference due to change in Assumptions and Other Inputs (Gain)/Loss			(2,321,327)

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements)

A. LEGAL PROVISIONS FOR INVESTMENTS

The following disclosures are meant to help the users of TRS' financial statements assess the risks TRS takes in investing member funds. The Board of Trustees and the Investment Committee are guided by asset allocation parameters that the Board approves through its powers as defined in KRS 161.430.

TRS administers a retirement annuity trust fund and a health insurance trust fund in accordance with state and federal law. TRS provides service and disability retirement benefits, death and survivor benefits, health insurance benefits, and life insurance benefits for Kentucky public education employees and their beneficiaries. The trust funds managed by TRS shall be referred to collectively as the "System" unless the context requires a specific reference to a particular fund.

The asset allocation parameters for the retirement annuity trust fund are set forth in Title 102, Chapter 1:175, Section 2 and Section 3 of the Kentucky Administrative Regulations as follows:

- There shall be no limit on the amount of investments owned by the retirement annuity trust fund if the investments are guaranteed by the United States government.
- Not more than thirty-five percent (35%) of the assets of the retirement annuity trust fund at fair value shall be invested in corporate debt obligations.
- Not more than ten percent (10%) of the assets of the retirement annuity trust fund at fair value shall be invested in foreign debt.
- Not more than sixty-five percent (65%) of the assets of the retirement annuity trust fund at fair value shall be invested in common stocks or preferred stocks.
- Not more than twenty-five percent (25%) of the assets of the retirement annuity trust fund at fair value shall be invested in a stock portfolio designed to replicate a general stock index.
- Not more than thirty percent (30%) of the assets of the retirement annuity trust fund at fair value shall be invested in the stocks of companies domiciled outside of the United States; any amounts so invested shall be included in the sixty-five percent (65%) limitation for total stocks.
- Not more than ten percent (10%) of the assets of the retirement annuity trust fund at fair value shall be invested in real estate. This would include real estate equity, real estate lease agreements, and shares in real estate investment trusts.
- Not more than ten percent (10%) of the assets of the retirement annuity trust fund at fair value shall be invested in alternative investments. This category may include private equity, venture capital, timberland, and infrastructure investments.
- Not more than fifteen percent (15%) of the assets of the retirement annuity trust fund at fair value shall be invested in any additional category or categories of investments. The Board of Trustees shall approve by resolution such additional category or categories of investments.

The asset allocation parameters for the health insurance trust fund are set forth in Title 102, Chapter 1:178, Section 2 of the Kentucky Administrative Regulations as follows:

- In order to preserve the assets of the health insurance trust fund and produce the required rate of return while minimizing risk, assets shall be prudently diversified among various classes of investments.
- In determining asset allocation policy, the investment committee and the board shall be mindful of the health insurance trust fund's liquidity and its capability of meeting both short and long-term obligations.

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

B. CASH AND CASH EQUIVALENTS

For cash deposits and cash equivalents, custodial credit risk is the risk that, in the event of a bank failure, the System's deposits may not be returned to the System. The System's total cash balance held at J.P. Morgan Chase Bank in noninterest-bearing accounts on June 30, 2017 was $222,173,747. In addition to these funds, an amount of $5,245,371 represents funds transferred to and controlled by the Commonwealth of Kentucky.

On November 9, 2010, the FDIC issued a Final Rule implementing Section 343 of the Dodd-Frank Wall Street Reform and Consumer Protection Act that provides for unlimited insurance coverage of noninterest-bearing transaction accounts. Beginning January 1, 2013, all cash balances at J.P. Morgan Chase Bank were insured up to $250,000 and the remaining balances fully collateralized with securities held by the Federal Reserve Bank of New York in the name of the Commonwealth of Kentucky-Teachers' Retirement.

Deposits are exposed to custodial credit risk if they are not covered by depository insurance and the deposits are:

a. uncollateralized,
b. collateralized with securities held by the pledging financial institution, or
c. collateralized with securities held by the pledging financial institution's trust department or agent but not in the depositor-government's name.

As of June 30, 2017, the System's cash balance in the amount of $222,173,747 was not exposed to custodial credit risk since this amount was fully insured by the FDIC limit of $250,000 and the remaining balances collateralized with securities valued at $221,955,776.

C. INVESTMENTS

All of the System's assets are invested in short-term and long-term debt (bonds and mortgages) securities, equity (stock) securities, real estate, alternative investments, and additional categories as permitted by regulation. These assets are reported at fair value.

Investments are governed by the Board of Trustees' policies while the Board of Trustees and the Investment Committee shall execute their fiduciary responsibilities in accordance with the "prudent person rule", as identified in KRS 161.430 (2)(b). The prudent person rule establishes a standard for all fiduciaries, to act as a prudent person would be expected to act, with the "care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims".

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

The following chart represents the fair values of the investments of the Teachers' Retirement System of the State of Kentucky for June 30, 2017 and 2016.

Schedule of Investments
Retirement Annuity Trust

	Fair Value June 30, 2017	Fair Value June 30, 2016
Money Market Fund	$ $525,897,099	$ 508,661,966
STIFF (BNYM)		386,697
Total Cash Equivalents	**525,897,099**	**509,048,663**
U.S. Government	1,001,683,231	797,819,019
Agency Bonds	48,416,092	55,607,806
Mortgage Backed Securities	78,747,979	90,812,117
Asset Backed Securities	52,576,134	62,625,012
Commercial Mtg Backed Securities	40,167,581	61,720,221
Collateralized Mtg Obligations	27,820,939	27,572,453
Municipal Bonds	384,589,168	405,755,392
Corporate Bonds	1,319,954,339	1,322,052,725
Total Fixed Income	**2,953,955,463**	**2,823,964,745**
International Equity	4,460,064,917	3,681,811,400
U.S. Equity	7,129,871,825	6,585,496,953
Total Equities	**11,589,936,742**	**10,267,308,353**
Real Estate Equity	1,046,760,134	940,860,202
Total Real Estate Equity	**1,046,760,134**	**940,860,202**
Private Equity	854,635,619	731,560,317
Timberland	208,219,943	201,253,033
Total Alternative Investments	**1,062,855,562**	**932,813,350**
Opportunistic Credit	539,082,990	512,173,863
Corporate Bonds	491,088,604	411,948,487
Corporate Loans	389,435,564	385,391,068
Total Additional Categories	**1,419,607,158**	**1,309,513,418**
TOTAL INVESTMENTS*	**$ 18,599,012,158**	**$ 16,783,508,731**

**This schedule includes the Life Insurance Plan, 403(b) Tax Shelter Plan, and Losey Scholarship fund.*

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

Schedule of Investments
Health Insurance Trust

	Fair Value June 30, 2017	Fair Value June 30, 2016
Money Market Fund	$ 46,008,715	$ 18,186,502
Total Cash Equivalents	**46,008,715**	**18,186,502**
Agency Bonds		6,380,550
U.S. Government	20,457,755	
Corporate Bonds	49,825,322	56,174,850
Total Fixed Income	**70,283,077**	**62,555,400**
Global Equities	442,726,237	354,369,798
U.S. Equity	30,548,164	
Total Equities	**473,274,401**	**354,369,798**
Real Estate Equity	42,701,494	25,433,241
Total Real Estate Equity	**42,701,494**	**25,433,241**
Private Equity	42,340,364	23,931,317
Total Alternative Investments	**42,340,364**	**23,931,317**
Opportunistic Credit	49,620,098	45,955,526
Corporate Bonds	81,742,713	64,192,800
Corporate Loans	28,807,364	26,927,516
Total Additional Categories	**160,170,175**	**137,075,842**
TOTAL INVESTMENTS	**$ 834,778,226**	**$ 621,552,100**

Custodial Credit Risk

Custodial Credit Risk for an investment is the risk that, in the event of the failure of counterparty, the System will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the System, and are held by either:

a. the counterparty or
b. the counterparty's trust department or agent, but not in the System's name.

The cash reserve of the System is primarily maintained in high quality short term investments through the Dreyfus Institutional Cash Advantage Fund. This fund invests in a diversified portfolio of high quality, short-term debt securities and the Fund is rated AAA by S&P, Moody's, and Fitch, Inc. The Fund's portfolio is structured within the confines of Rule 2a-7 under the Investment Company Act of 1940, as amended. Commercial paper, U.S. Treasury and agency obligations, certificates of deposit, bankers' acceptances, repurchase agreements, time deposits, etc. are all permissible investments within this Fund.

Whenever repurchase agreements are ordered by TRS under the terms of Master Repurchase Agreements with various brokers, the terms are dictated by TRS. The repurchase agreements and their supporting collateral are held by the custodial agent's correspondent bank in an account identified by the custodian's name and TRS' nominee name. This account is unique to TRS. The Master Repurchase Agreements require that the supporting collateral have a fair value of at least 102 percent of the value of the repurchase agreements.

As of June 30, 2017, cash collateral reinvestment securities acquired through securities lending for the retirement annuity trust fund by TRS's custodian, who is also the lending agent/counterparty, amounted to $1,404,968,291 related to $1,371,172,509 securities lent consistent with the lending agreement with the custodian. (Please refer to a following section entitled Securities Lending.)

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

Interest Rate Risk

Interest rate risk on investments is the possibility that changes in interest rates will reduce the fair value of the System's investments. In general, the longer the period until an investment matures, the greater the risk of a negative impact on fair value resulting from changes in interest rates.

As of June 30, 2017 and 2016, the retirement annuity trust and health insurance trusts had the following investment fair values and weighted average maturities:

2017 Retirement Annuity Trust

Investment Type	Fixed Income	Additional Categories	Average Maturity (years)
U.S. Government	$ 1,001,683,231	$	8.69
Agency	48,416,092		7.42
MBS	78,747,979		14.63
CMO	27,820,939		13.00
ABS	52,576,134		13.46
CMBS	40,167,581		20.58
Muni	384,589,168		11.92
Corporate Bonds	1,319,954,339	491,088,604	8.14
Corporate Loans*		381,101,026	4.53
TOTAL	**$ 2,953,955,463**	**$ 872,189,630**	**8.67**

** Does not include 8,335,538 in cash held directly at Barings European Loan Fd.*

2016 Retirement Annuity Trust

Investment Type	Fixed Income	Additional Categories	Average Maturity (years)
U.S. Government	$ 797,819,019	$	8.34
Agency	55,607,806		8.61
MBS	90,812,117		12.24
CMO	27,572,453		12.67
ABS	62,625,012		14.31
CMBS	61,720,221		20.55
Muni	405,755,392		12.47
Corporate Bonds	1,322,052,725	411,948,488	7.83
Corporate Loans*	-	380,989,944	4.56
TOTAL	**$ 2,823,964,745**	**$ 792,938,432**	**8.61**

** Does not include 4,401,123 in cash held directly at Babson Capital Management.*

Health Insurance Trust

Investment Type	2017 Fixed Income	2017 Additional Categories	2017 Average Maturity (years)	2016 Fixed Income	2016 Additional Categories	2016 Average Maturity (years)
U.S. Government	$ 20,457,755	$	8.44	$ 6,380,550	$	11.53
Corporate Bonds	49,825,322	81,742,713	5.99	56,174,849	64,192,800	4.49
Corporate Loans		28,807,364	5.37		26,927,516	5.04
TOTAL	**$ 70,283,077**	**$ 110,550,077**	**6.17**	**$ 62,555,399**	**$ 91,120,316**	**4.88**

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

In addition to the above securities, the System held short-term cash investments in the Dreyfus Institutional Cash Advantage Fund and STIF, held at the Bank of New York Mellon, with a total fair value of $571,905,814 and had a weighted average maturity of twenty-two (22) days. Average maturity is used as a measure of a security's exposure to interest rate risk due to fluctuations in market interest rates. Mortgage-backed securities and collateralized mortgage obligations are typically amortizing investments with an average life and interest rate risk significantly less than suggested by the legal maturity. Mortgage-backed securities, which are generally pre-payable, and other callable bonds are subject to adverse changes in average life in response to market interest rate changes. The schedule above reflects only the legal maturity of all such bonds.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. This risk is managed by using the effective duration or option adjusted methodology to quantify the risk of interest rate changes. This methodology takes into account optionality on bonds and scales the risk of price changes on bonds depending upon the degree of changes in rates and the slope of the yield curve. The control of interest rate risk is not set forth in a particular policy; however, the System manages interest rate risk in practice by establishing appropriate benchmarks for its various portfolios.

Mortgage-backed securities are securities representing pass-through interests in the cash flows from pools of mortgage loans on single-family or multi-family residential properties. All of the mortgage-backed securities owned by the System were securitized and are guaranteed by Fannie Mae, Freddie Mac, or GNMA. The average life of a mortgage-backed security depends upon the level of prepayments experienced in the underlying pool of loans. Market interest rates are a primary determinant of prepayment levels. Lower than anticipated market rates generally lead to higher than anticipated prepayments and a shorter average life; higher than anticipated market rates generally lead to lower than anticipated prepayments and a longer average life. The retirement annuity trust held $78.7 million in mortgage-backed securities as of June 30, 2017, compared to $90.8 million as of June 30, 2016.

Collateralized mortgage obligations are bonds that are collateralized by whole loan mortgages, mortgage pass-through securities or stripped mortgage-backed securities. Income is derived from payments and prepayments of principal and interest generated from collateral mortgages. Cash flows are distributed to different investment classes in accordance with a collateralized mortgage obligations established payment order. The retirement annuity trust held $27.8 million in collateralized mortgage obligations as of June 30, 2017, compared to $27.6 million as of June 30, 2016.

Asset-backed securities are bonds or notes backed by loan paper or accounts receivables originated by banks, credit card companies, or other credit providers, and are considered to be moderately sensitive to changes in interest rates. The originator of the loan or accounts receivable paper sells it to a specially created trust, which repackages it as securities. Asset-backed securities have been structured as pass-throughs and as structures with multiple bond classes. The retirement annuity trust held $52.6 million as of June 30, 2017, compared to $62.6 million as of June 30, 2016.

Commercial mortgage-backed securities are securities representing interests in the cash flows from pools of mortgage loans on commercial properties. The interests in a securitized pool of loans are generally divided into various tranches based upon planned payment order and level of seniority. The System's commercial mortgage-backed securities investments consist of highly rated relatively senior tranches. The average maturity of the System's commercial mortgage-backed securities holdings in the schedule above reflects the legal maturity of those holdings. Most of the tranches held are earlier in the planned payment order than the legal maturity suggests. The retirement annuity trust held $40.2 million in commercial mortgage-backed securities investments as of June 30, 2017, compared to $61.7 million as of June 30, 2016.

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

Credit Risk

Credit risk is the risk that an issuer or counterparty to an investment will not fulfill its obligations. The following schedules list the System's fixed income investment fair values (net of cash equivalents) according to credit ratings as of June 30, 2017 and 2016:

2017 Retirement Annuity Trust

Rating	Bonds & Mortgages	Additional Categories	Total	%
U.S. Government	$ 1,001,683,231	$	$ 1,001,683,231	26.18%
AAA	219,844,883		219,844,883	5.74%
AA	603,818,809		603,818,809	15.78%
A	539,635,824	1,131,449	540,767,273	14.13%
BBB	545,712,370	37,033,244	582,745,614	15.23%
BB	24,210,493	329,217,429	353,427,922	9.24%
B	4,048,200	329,149,508	333,197,708	8.71%
CCC		22,858,417	22,858,417	0.60%
CC				0.00%
D	1,045,762	46,000	1,091,762	0.03%
Not Rated	13,955,891	152,753,583	166,709,474	4.36%
TOTAL	**$ 2,953,955,463**	**$ 872,189,630**	**$ 3,826,145,093**	**100.00%**

2016 Retirement Annuity Trust

Rating	Bonds & Mortgages	Additional Categories	Total	%
U.S. Government	$ 797,819,019	$	$ 797,819,019	22.06%
AAA	246,954,820		246,954,820	6.83%
AA	640,674,139		640,674,139	17.71%
A	517,571,569		517,571,569	14.31%
BBB	574,578,935	47,754,834	622,333,769	17.21%
BB	21,968,709	287,254,645	309,223,354	8.55%
B	13,654,700	267,438,487	281,093,187	7.77%
CCC	3,151,610	17,517,637	20,669,247	0.57%
CC		1,271,750	1,271,750	0.04%
D		836,481	836,481	0.02%
Not Rated	7,591,244	170,864,598	178,455,842	4.93%
TOTAL	**$ 2,823,964,745**	**$ 792,938,432**	**$ 3,616,903,177**	**100.00%**

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

2017 Health Insurance Trust

Investment Type	Bonds & Mortgages	Additional Categories	Total	%
U.S. Government	$ 20,457,755	$	$ 20,457,755	11.31%
AAA	6,427,010		6,427,010	3.55%
AA	11,828,664		11,828,664	6.55%
A	21,162,730		21,162,730	11.70%
BBB	9,938,418	5,546,635	15,485,053	8.56%
BB	468,500	52,006,671	52,475,171	29.02%
B		47,612,272	47,612,272	26.33%
CCC		3,693,471	3,693,471	2.04%
D				0.00%
Not Rated		1,691,028	1,691,028	0.94%
TOTAL	**$ 70,283,077**	**$ 110,550,077**	**$ 180,833,154**	**100.00%**

2016 Health Insurance Trust

Investment Type	Bonds & Mortgages	Additional Categories	Total	%
U.S. Government	$ 6,380,550	$	$ 6,380,550	4.15%
AAA	5,042,219		5,042,219	3.28%
AA	11,085,052		11,085,052	7.21%
A	26,633,606		26,633,606	17.33%
BBB	13,413,972	7,489,048	20,903,020	13.60%
BB		42,642,309	42,642,309	27.75%
B		34,663,206	34,663,206	22.56%
CCC		2,537,454	2,537,454	1.65%
D		194,842	194,842	0.13%
Not Rated		3,593,457	3,593,457	2.34%
TOTAL	**$ 62,555,399**	**$ 91,120,316**	**$ 153,675,715**	**100.00%**

Total fair value of the retirement annuity trust's fixed income portfolio was $3,826,145,093 on June 30, 2017. The health insurance trust's fixed income portfolio was valued at $180,833,154 on June 30, 2017. The rating system used in the above charts is the Standard and Poor's rating system. For securities where a Standard and Poor's rating is not provided, another nationally recognized system is used and translated to the Standard and Poor's rating system.

In addition to the above categories, the retirement annuity trust held $545,368,716 in short term investments through the Dreyfus Institutional Cash Advantage Fund. The health insurance trust held $26,537,097 in the Dreyfus Institutional Cash Advantage Fund. The credit risk associated with this Fund is minimal as the securities held are required to maintain the highest possible short-term credit ratings by Moody's and Standard & Poor's. In addition, investments in US Government and Agency securities are also highly rated securities since they are backed by the US Government. Notation is made that the ratings of securities is subject to change due to circumstances and thereby may have a lower rating than when first purchased.

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

The retirement annuity trust fund's policy on credit rating is set forth in 102 KAR 1:175 and reads as follows:

"A fixed income investment shall be rated at the time of purchase as investment grade by at least one (1) of the major rating services. A private placement debt investment shall be subject to the same credit qualifications as each fixed income investment. The fixed income investment portfolio as a whole shall maintain an average rating of investment grade by at least one (1) of the major rating services."

Concentration of Credit Risk

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. Losses from credit risk are heightened if a significant portion of resources are invested with a single issuer. Per Administrative Regulation 102 KAR 1:175, the retirement annuity trust fund is subject to the following policies regarding single issuers of fixed income and equity securities:

"Unless the issuer is the United States Government or a government sponsored enterprise (GSE), the amount invested in the securities of a single issuer shall not equal more than five (5) percent of the assets of the System."

"The System's position in a single stock shall not exceed two and one-half (2.5) percent of the System's assets. The System's position in a single stock shall not exceed five (5) percent of the outstanding stock for that company unless the investment is part of a venture capital program."

TRS has not invested greater than five percent (5%) of the retirement annuity trust fund's assets at fair value in any single issuer and is in compliance with investment policy.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. As of June 30, 2017, the System's exposure to foreign currency risk consisted of $4,752,209,518 and $248,950,831 in the retirement annuity trust and health insurance trust funds respectively.

The following tables represent the fair values of investments that are subject to foreign currency as a result of cash contributions to each portfolio manager as of June 30, 2017 and 2016:

2017 Retirement Annuity Trust

Commingled Funds	
Babson Capital European Loan Fd	$ 83,529,164
Baillie Gifford Intrntl EAFE	826,304,923
Baring All Country World ex US	576,106,295
Black Rock ACWI EX-US IMI	712,902,870
UBS All Country World ex US	704,979,730
Alternative Funds	
Carlyle Europe Partners IV, L.P.	19,731,527
KKR & Co European Fund III	33,809,458
KKR & Co European Fund IV	26,265,452
Oaktree European Principal III	22,839,529
ADRs (Equities)	658,341,208
Cross-Listed Equities	688,122,140
Bonds (Fixed Income)	206,555,302
Additional Categories (Fixed Income)	83,459,203
Additional Categories (Opportunistic)	109,262,717
Total	**$ 4,752,209,518**

2016 Retirement Annuity Trust

Commingled Funds	
Babson Capital European Loan Fd	$ 83,723,731
Baillie Gifford Intrntl EAFE	734,894,403
Baring All Country World ex US	496,968,194
Black Rock ACWI EX-US IMI	600,737,023
UBS All Country World ex US	576,221,719
Alternative Funds	
Carlyle Europe Partners IV, L.P.	17,509,391
KKR & Co European Fund III	49,515,576
KKR & Co European Fund IV	16,088,979
Oaktree European Principal III	24,409,242
ADRs (Equities)	458,137,096
Cross-Listed Equities	718,502,718
Bonds (Fixed Income)	247,293,462
Additional Categories (Fixed Income)	83,423,983
Additional Categories (Opportunistic)	119,390,254
Total	**$ 4,226,815,771**

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

2017 Health Insurance Trust

Commingled Funds	
Medical Ins. Black Rock Fund B	$ 206,320,676
Alternative Funds	
Medical Ins. Carlyle Europe IV	3,946,307
Medical Ins. KKR European IV	5,253,090
Bonds (Fixed Income)	4,503,370
ADRs (Equities)	3,658,163
Additional Categories (Fixed Income)	15,306,108
Additional Categories (Opportunistic)	9,963,117
Total	**$ 248,950,831**

2016 Health Insurance Trust

Commingled Funds	
Medical Ins. Black Rock Fund B	$ 173,166,422
Alternative Funds	
Medical Ins. Carlyle Europe IV	3,501,879
Medical Ins. KKR European IV	3,217,797
Bonds (Fixed Income)	7,090,460
Additional Categories (Fixed Income)	12,602,739
Additional Categories (Opportunistic)	11,305,351
Total	**$ 210,884,648**

The following tables reflect the various foreign currencies associated with the System's investments in the funds outlined previously:

2017 Retirement Annuity Trust

Currency	Fair Value
Australian Dollar	$ 116,620,840
Bermudian Dollar	66,974,641
Brazilian Real	36,631,654
British Pound Sterling	651,726,435
Canadian Dollar	297,523,837
Cayman Islands Dollar	54,684,123
Chilean Peso	14,187,093
Chinese Yuan	72,872,379
Colombian Peso	6,717,571
Czech Koruna	266,000
Danish Krone	77,878,375
Egyptian Pound	320,624
Euro	1,665,892,188
Hong Kong Dollar	231,547,001
Hungarian Forint	483,670
Indian Rupee	71,413,664
Indonesian Rupiah	8,323,019
Israeli New Shekel	18,361,613
Japanese Yen	627,530,830
Korean Won	77,277,317
Liberian Dollar	2,086,293
Malaysian Ringgit	14,649,584
Mexican Peso	70,822,257
Netherlands Antillean Guilder	24,156,367
New Zealand Dollar	1,600,934
Norwegian Krone	26,977,335
Omani Rial	1,045,762
Pakastani Rupee	426,623
Panamanian Balboa	35,045,435
Peruvian Nuevo Sol	19,274
Philippine Peso	3,568,672
Polish Zloty	3,811,229
Qatari Rial	1,127,736
Russian Ruble	4,174,638
Singapore Dollar	29,311,066
South African Rand	33,764,272
Swedish Krona	147,404,707
Swiss Franc	165,092,155
Taiwan Dollar	62,467,815
Thai Baht	4,953,021
Turkish Lira	4,346,512
UAE Dirham	10,010,413
Various	8,114,544
TOTAL	**$ 4,752,209,518**

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

2016 Retirement Annuity Trust

Currency	Fair Value	Currency	Fair Value
Argentine Peso	$ 7,929,600	Liberian Dollar	2,717,693
Australian Dollar	117,642,969	Malaysian Ringgit	$8,375,874
Bermudian Dollar	51,636,166	Mexican Peso	60,042,605
Brazilian Real	29,642,858	Netherlands Antillean Guilder	31,869,794
British Pound Sterling	542,857,180	New Zealand Dollar	1,468,579
Bulgarian Lev	325,816	Norwegian Krone	19,279,653
Canadian Dollar	305,265,009	Panamanian Balboa	29,110,068
Cayman Islands Dollar	82,711,544	Peruvian Nuevo Sol	71,390
Chilean Peso	5,099,683	Philippine Peso	3,795,486
Chinese Yuan	149,888,039	Polish Zloty	5,239,446
Colombian Peso	6,919,734	Qatari Rial	1,148,933
Czech Crown	275,888	Russian Ruble	43,832,381
Danish Krone	69,964,944	Singapore Dollar	14,630,090
Egyptian Pound	340,728	South African Rand	35,391,881
Euro	1,431,414,303	Swedish Krona	109,926,460
Hong Kong Dollar	148,792,516	Swiss Franc	143,631,290
Hungarian Forint	349,215	Taiwan Dollar	73,906,720
Indian Rupee	53,386,927	Thai Baht	6,106,618
Indonesian Rupiah	7,086,814	Turkish Lira	7,940,689
Israeli New Shekel	50,530,727	UAE Dirham	17,657,398
Japanese Yen	504,456,061	Various	4,318,599
Korean Won	39,837,403		
		TOTAL	**$ 4,226,815,771**

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

2017 Health Insurance Trust

Currency	Fair Value
Australian Dollar	$ 12,204,361
Bermudian Dollar	1,006,412
Brazilian Real	3,139,989
British Pound Sterling	28,771,704
Canadian Dollar	20,587,815
Cayman Islands Dollar	117,062
Chilean Peso	526,286
Chinese Yuan	497,440
Colombian Peso	209,996
Czech Koruna	82,136
Danish Krone	2,465,213
Egyptian Pound	107,526
Euro	74,200,106
Hong Kong Dollar	14,669,785
Hungarian Forint	149,091
Indian Rupee	4,713,176
Indonesian Rupiah	1,222,441
Israeli New Shekel	564,024
Japanese Yen	36,155,429
Korean Won	7,793,916
Malaysian Ringgit	1,235,840
Mexican Peso	1,800,372
New Zealand Dollar	486,228
Norwegian Krone	453,325
Pakastani Rupee	1,168,560
Panamanian Balboa	121,971
Peruvian Nuevo Sol	592,818
Philippine Peso	5,171
Polish Zloty	584,439
Qatari Rial	647,019
Russian Ruble	331,098
Singapore Dollar	885,415
South African Rand	2,024,219
Swedish Krona	3,339,571
Swiss Franc	4,739,818
Taiwan Dollar	12,797,324
Thai Baht	6,542,493
Turkish Lira	1,173,463
UAE Dirham	517,208
Various	320,571
TOTAL	**$ 248,950,831**

2016 Health Insurance Trust

Currency	Fair Value
Australian Dollar	$ 10,520,315
Bermudian Dollar	1,766,016
Brazilian Real	2,477,384
British Pound Sterling	25,478,499
Canadian Dollar	18,803,103
Cayman Islands Dollar	2,812,299
Chilean Peso	447,558
Chinese Yuan	141,703
Colombian Peso	168,485
Czech Crown	59,152
Danish Krone	2,228,544
Egyptian Pound	85,907
Euro	62,852,767
Hong Kong Dollar	10,982,771
Hungarian Forint	92,975
Indian Rupee	3,416,016
Indonesian Rupiah	995,857
Israeli New Shekel	925,797
Japanese Yen	28,521,314
Korean Won	5,712,246
Liberian Dollar	223,243
Malaysian Ringgit	1,121,622
Mexican Peso	1,486,499
New Zealand Dollar	397,301
Norwegian Krone	866,284
Panamanian Balboa	168,383
Peruvian Nuevo Sol	19,342
Philippine Peso	564,995
Polish Zloty	401,767
Qatari Rial	309,925
Russian Ruble	826,876
Singapore Dollar	2,447,734
South African Rand	2,596,781
Swedish Krona	3,650,524
Swiss Franc	10,815,063
Taiwan Dollar	4,749,926
Thai Baht	921,116
Turkish Lira	498,876
UAE Dirham	326,765
Various	2,918
TOTAL	**$ 210,884,648**

The majority of foreign investments are held in commingled funds managed by Babson Capital Management, UBS Global Asset Management, Baillie Gifford, Baring Asset Management, and Black Rock. In addition to the commingled funds investing in foreign securities, the retirement annuity trust fund held $658,341,208 associated with foreign interests in American Depositary Receipt investments. These American Depositary Receipts are securities that are issued by a U.S. bank in place of the foreign stock shares held in trust by that bank, thereby facilitating the trading of foreign shares in U.S. markets. American Depositary Receipts are denominated in U.S. currency. Also, the cross listed equities, in the amount of $688,122,140, represent securities domiciled in foreign countries, but are listed and traded on U.S. exchanges. Other foreign securities and investments consisted of debt securities and alternative investment

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

opportunities. Foreign holdings, including investment receivables/payables, that were not readably identifiable to a specific country were listed in the "various" category pertaining to currency type.

The retirement annuity trust fund's policy regarding foreign equities is that not more than thirty percent (30%) of the assets of the retirement annuity trust fund at fair value shall be invested in the stocks of companies domiciled outside of the United States. Any amounts so invested shall be included in the sixty-five percent (65%) limitation for total stocks per 102 KAR 1:175 Section 2(e).

Fair Value Measurement

A retiree pension defined benefit plan holds significant amounts of investments that are measured at fair value on a recurring basis. In Fiscal Year 2016, TRS adopted GASB Statement No. 72 ("GASB 72"), Fair Value Measurement and Application. The Governmental Accounting Standards Board issued GASB 72 to address accounting and financial reporting issues related to fair value measurements.

TRS categorizes its fair value measurements within the fair value hierarchy established by GAAP. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date. Level 2 inputs are inputs - other than quoted prices included within Level 1 - that are observable for an asset or liability, either directly or indirectly. Level 3 inputs are unobservable inputs for an asset or liability. The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs. The following tables depict the following recurring fair value measurements as of June 30, 2017.

Retirement Annuity Trust

Investments	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Fair Value
Cash Equivalents	$ 525,897,099	$	$	$ 525,897,099
Fixed Income				
ABS		47,346,318	5,229,816	52,576,134
Agency		48,416,092		48,416,092
CMBS		40,167,581		40,167,581
CMO		27,820,939		27,820,939
Corporate Bonds	4,109,212	1,314,766,807	1,078,320	1,319,954,339
MBS		76,896,293	1,851,686	78,747,979
Muni		379,365,052	5,224,116	384,589,168
US Government	992,472,191	9,211,040		1,001,683,231
Total Fixed Income	996,581,403	1,943,990,122	13,383,938	2,953,955,463
Equities				
International	1,326,738,184	3,133,326,733		4,460,064,917
US Equity	6,888,437,450	241,434,211	164	7,129,871,825
Total Equity	8,215,175,634	3,374,760,944	164	11,589,936,742
Real Estate Equity			1,046,760,134	1,046,760,134
Alternative Investments				
Private Equity			854,635,619	854,635,619
Timberland			208,219,943	208,219,943
Total Alternative Investments			1,062,855,562	1,062,855,562
Additional Categories				
Corporate Bonds	19,262	491,069,342		491,088,604
Corporate Loans		388,091	389,047,473	389,435,564
Opportunistic Credit			539,082,990	539,082,990
Total Additional Categories	19,262	491,457,433	928,130,463	1,419,607,158
TOTAL INVESTMENTS	**$ 9,737,673,398**	**$ 5,810,208,499**	**$ 3,051,130,261**	**$ 18,599,012,158**

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

Health Insurance Trust

Investments	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Fair Value
Cash Equivalents	$ 46,008,715	$	$	$ 46,008,715
Fixed Income				
Corporate Bonds		49,825,322		49,825,322
US Government	19,464,425	993,330		20,457,755
Total Fixed Income	19,464,425	50,818,652		70,283,077
Equities				
Global		442,726,237		442,726,237
US Equity	30,548,164			30,548,164
Total Equity	30,548,164	442,726,237		473,274,401
Real Estate Equity			42,701,494	42,701,494
Alternative Investments				
Private Equity			42,340,364	42,340,364
Total Alternative Investments			42,340,364	42,340,364
Additional Categories				
Corporate Bonds	5,253	81,586,060	151,400	81,742,713
Corporate Loans		182,662	28,624,72	28,807,364
Opportunistic Credit			49,620,098	49,620,098
Total Additional Categories	5,253	81,768,722	78,396,200	160,170,175
Total Investments	**$ 96,026,557**	**$ 575,313,611**	**$ 163,438,058**	**$ 834,778,226**

Cash Equivalents

Cash equivalents are short-term, highly liquid investments that are readily convertible to known amounts of cash and so near their maturity that they present insignificant risk of changes in value because of changes in interest rates. Cash equivalents can be valued with inputs from quoted prices (unadjusted) for identical assets or liabilities in active markets that a government can access at the measurement date and therefore are classified as Level 1 assets.

Equity and Fixed Income Securities

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using a matrix pricing technique that values securities based on their relationship to benchmark quoted prices. Debt and equity securities classified in Level 3 are securities whose stated market price is unobservable by the market place and are instead priced by the issuers or industry groups for these securities.

Real Estate

Real Estate falls into the level 3 classification of the fair value hierarchy. Much of our real estate is comprised of owned properties leased to various commercial enterprises. The fair value measurement for real estate is determined by professional appraisals recurring every five years. Real Estate also includes some Limited Partnerships that are valued the same as Alternative Investments

Alternative Investments

Alternative Investments are comprised of Private Equity and Timberland investments classified as Level 3 assets. Private equity funds invest in equity and debt securities issued by private and publicly-held companies in connection with leveraged buyouts, recapitalizations and expansion opportunities. These investments do not allow redemptions. Alternatively, we receive distributions as the underlying assets of the fund liquidate. These are investments for which exchange quotations are not readily available. Therefore, private equity investments are valued at an estimated fair

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

value determined in good faith by the General Partner ("GP"). A GP is an owner of a partnership that has unlimited liability and is a managing partner that is active in the day to day business of a Limited Partnership. These investments are initially valued at cost with subsequent adjustments that reflect third party transactions, financial operating results and other factors deemed relevant by the GP.

The GP values each investment by applying generally accepted valuations methods including the market approach and the income approach. The determination of fair value using these methodologies takes into consideration a range of factors, including but not limited to, the price at which the investment was acquired, the nature of the investment, local market conditions, trading values on public exchanges for comparable securities, current and projected operating performance and financing transactions subsequent to the acquisition of the investment. Because of the subjective nature of estimated fair value of the private investments, such values may differ significantly from the values that would have been used had a ready market existed for these investments.

Timberland investments are managed investments regarding the acquiring, growing and disposing of timber on timberlands owned by the System. Fair value determinations for Level 3 measurements of investments are the responsibility of the Advisor, The Molpus Woodlands Group, LLC. The Advisor contracts with outside appraisers to generate fair value estimates on an annual basis. The outside appraisers utilized the cost, sales comparison and income capitalization approaches to estimate the fair value of the timber and timberlands. The Advisor challenges the reasonableness of the assumptions used and reviews the methodology to ensure the estimated fair value complies with accounting standards generally accepted in the United States of America.

Additional Categories

Investments in this category do not fit the regular parameters for the retirement annuity trust fund set forth in Title 102, Chapter 1:175 of the Kentucky Administrative Regulations. Rather, they fall into the allowable 15% of assets of the retirement annuity trust fund invested in any additional category or categories of investments approved by the Board of Trustees. Debt securities in this category classified as Level 1 are valued using prices quoted in active markets for those securities. Debt securities in the Additional Categories classified as Level 2 are valued using a matrix pricing technique that values securities based on their relationship to benchmark quoted prices. Opportunistic credits classified as Level 3 in the fair value hierarchy are valued using consensus pricing classified as Level 3 in the fair value hierarchy are valued using consensus pricing.

D. SECURITIES LENDING

Section 161.430 of the Kentucky Revised Statutes empowers the Board of Trustees with complete fiduciary responsibility for the funds of the System. The System operates a securities lending program in which it temporarily lends securities to qualified agents in exchange for a net fee and high quality collateral. U.S. Government and agency securities, selected domestic bonds, and domestic and international stocks are the types of securities that are lent. The System's custodian, The Bank of New York Mellon, acts as lending agent in exchanging securities for collateral. The collateral has a value of not less than 102% of the fair value of the lent securities plus any accrued, unpaid distributions. The collateral may consist of cash, marketable U.S. Government securities, and select marketable U.S. Government agency securities approved by the System.

Securities lending transactions are accounted for in accordance with GASB Statement No. 28 Accounting and Financial Reporting for Securities Lending Transactions, which established standards of accounting and financial reporting for securities lending transactions. During the fiscal year ended June 30, 2017, only the retirement annuity trust fund had securities lending transactions. The following section details the net income earned in the retirement annuity trust fund from securities lending for the fiscal year ended June 30, 2017 and 2016:

Item	2017 Earnings	2016 Earnings
Gross Earnings (Interest and Fees)	$ 5,799,152	$ 687,380
Gross Borrower Rebates	(2,138,664)	2,083,693
Bank Fees	(1,097,808)	(831,253)
Net Earnings	**$ 2,562,680**	**$ 1,939,820**

Note 5: Deposits With Financial Institutions and Investments (Including Repurchase Agreements) continued . . .

Cash collateral is invested in short-term obligations fully guaranteed by the United States Government or select Government agencies and Government Repurchase Agreements with qualified agents. The System cannot pledge or sell collateral securities received unless the borrower defaults. The lending agent (Bank of New York Mellon) also indemnifies the System from any financial loss associated with a borrower's default and collateral inadequacy. As per GASB 28, securities lending transaction collateralized by letters of credit or by securities that the governmental entity does not have the ability to pledge or sell unless the borrower defaults are not reported as assets and liabilities on the Statement of Fiduciary Net Position.

As of June 30, 2017, the loan average days to maturity in the retirement annuity trust fund was one (1) day and the weighted average investment maturity of cash collateral investments was one (1) day. At fiscal year end, the retirement annuity trust fund had no credit risk exposure to borrowers, since the amounts the retirement annuity trust fund owes the borrowers exceeds the amounts the borrowers owe the retirement annuity trust fund and there were no losses resulting during the period.

Security lending programs can entail interest rate risk and credit risk. The System minimizes interest rate risk by limiting the term of cash collateral investments to several days.

The credit risk is controlled by investing cash collateral in securities with qualities similar to the credit worthiness of lent securities.

The following table presents the fair values of the underlying securities, and the value of the collateral pledged at June 30, 2017 and 2016:

Type of Securities Lent	Fair Value	Cash Collateral Received	Non-Cash Collateral Value Received	Total Collateral Received 2017	Total Collateral Received 2016
Fixed Income	$ 309,194,938	$ 37,740,812	$ 282,265,094	$ 320,005,906	$ 135,742,272
Equities	1,061,977,571	926,925,925	158,036,460	1,084,962,385	305,638,558
TOTAL	**$ 1,371,172,509**	**$ 964,666,737**	**$ 440,301,554**	**$ 1,404,968,291**	**$ 441,380,830**

E. ANNUAL MONEY-WEIGHTED RATE OF RETURN

A money-weighted rate of return is an expression of investment performance that is net of the plan's investment expenses (net the plan's administrative expenses). The following tables reflect the money-weighted rate of return for both the retirement annuity trust fund and the health insurance trust fund:

Annual Rate of Return Net of Investment Expense

	2017	2016
Retirement Annuity Trust	15.00 %	-1.32 %
Health Insurance Trust	14.37 %	-2.20 %

Note 6: Retirement Plan for Employees of the Retirement System

Full-time employees of TRS participate in either TRS or Kentucky Employees Retirement System (KERS). Both plans are multiple-employer cost sharing defined benefit retirement annuity plans. All TRS employees in positions requiring a four-year degree are covered under TRS. The contribution rates and required employer matching are the same as state agency employers in the System. These rates, the plan description and funding policy are fully disclosed in the notes to the financial statements.

The System's annual required contributions for TRS employee members for the fiscal years 2017, 2016 and 2015 were $893,635, $820,077 and $767,958, respectively. TRS contributed one hundred percent of the required contribution each year.

All other TRS employees are covered under KERS in the Non-Hazardous Employees' Pension Plan. The plan provides for retirement, disability, and death benefits to plan members. Retirement benefits may be extended to beneficiaries of plan members under certain circumstances. Per KRS 61.565(3), contribution rates shall be determined by the Board on the basis of an annual actuarial valuation. Rates may be amended by the Board as needed. TRS's administrative budget and employer contribution rates are subject to the approval of the Kentucky General Assembly. Employee contribution rates are set by the statute and may be changed only by the Kentucky General Assembly.

Members of KERS who joined prior to July 1, 2008, are required to contribute five percent of their annual creditable compensation and members who joined on or after July 1, 2008 contribute an additional one percent. As the employer, TRS is required to contribute the annual actuarially determined rate of the creditable compensation (or the rate approved by legislators). The approved rate for the fiscal years 2017, 2016 and 2015 were 48.59 percent, 38.77 percent and 38.77 percent and TRS's annual required contributions to KERS were $675,300, $547,105 and $552,133, respectively. TRS contributed one hundred percent of the required contributions for each year.

KERS issues a publicly available financial report that may be obtained by writing Kentucky Retirement System, 1260 Louisville Road, Frankfort, Kentucky 40601-6124.

Note 7: Other Funds

A. 403(B) TAX-SHELTERED ANNUITY PLAN

Plan Description

TRS has, in prior years, administered a salary deferral program as permitted by section 403(b) of the Internal Revenue Code. Under this program members were able to voluntarily defer a portion of their compensation within the limits established by the applicable laws and regulations. However, the System's Board of Trustees determined that the cost of providing the necessary services to assure the System of continuing compliance with these laws and regulations was not economically feasible due to the limited participation in the program by TRS's members. The Board decided, therefore, to discontinue offering the program as of April 30, 1997. Members who were not receiving annuities from their account as of April 30, 1997, were able to transfer their respective accounts directly into other tax-sheltered plans on a tax-free basis. As of June 30, 2017, the eight members who are receiving annuities will continue to receive distributions according to the terms of their respective elections.

B. SUMMARY OF SIGNIFICANT POLICIES

Basis of Accounting

The Tax-sheltered Annuity Plan financial statements are prepared using an accrual basis of accounting. Contributions are no longer being accepted into the plan; therefore, there are no receivables to be recognized.

Method Used to Value Investments

The short-term investments are reported at cost, which approximates fair value.

C. SUPPLEMENTAL BENEFIT FUND

The Supplemental Retirement Benefit Fund is a qualified governmental excess benefit arrangement as described in Section 415 of the Internal Revenue Code. In accordance with KRS 161.611 and KRS 161.420(8), TRS is authorized to provide a supplemental retirement benefit fund for the sole purpose of enabling the employer to apply the same formula for determining benefits payable to all members of the System employed by the employer, whose benefits under the System are limited by Section 415 of the Internal Revenue Code of 1986, as amended from time to time. Funding of benefits payable under this fund are provided by the state, as employer, and are segregated from funds that are maintained by TRS for payment of the regular benefits provided by the System.

Note 7: Other Funds continued . . .

D. JUNITA LOSEY SCHOLARSHIP BEQUEST

Junita Losey, a retired teacher, designated TRS as a residuary beneficiary of her estate and expressed a desire that TRS establish a scholarship program for Kentucky students studying to be teachers. Ms. Losey died in 1997 and thereafter her estate provided a scholarship bequest to TRS. The scholarship bequest has at all times been segregated from funds that are maintained by TRS for payment of the regular benefits provided by the System. The Scholarship Committee of the System's Board of Trustees meets each December to consider scholarship standards and administration of the scholarship bequest.

Note 8: Other Post-Employment Benefits - Medical Insurance Plan

A. PLAN DESCRIPTION

In addition to the retirement annuity plan described in Note 1, Kentucky Revised Statute 161.675 requires TRS to provide access to postemployment healthcare benefits for eligible members and dependents. The TRS medical plan (MIF) is funded by employer and member contributions. Changes made to the medical plan may be made by the TRS Board of Trustees, the Kentucky Department of Employee Insurance and the General Assembly.

The TRS medical plan is funded by employee contributions to an account established pursuant to 26 U.S.C. sec. 401(h). Additional funding is derived from the Kentucky Teachers' Retirement System insurance trust fund that went into effect on July 1, 2010. The insurance trust fund provides a trust separate from the account established pursuant to 26 U.S.C. sec. 401(h). The insurance trust fund includes employer and retired member contributions required under KRS 161.550 and KRS 161.675(4)(b).

To be eligible for medical benefits, the member must have retired either for service or disability. The TRS medical plan offers coverage to members under the age of 65 through the Kentucky Employees Health Plan (KEHP) administered by the Kentucky Department of Employee Insurance. TRS retired members are given a supplement to be used for payment of their health insurance premium. The amount of the member's supplement is based on a contribution supplement table approved by the TRS Board of Trustees. The retired member pays premiums in excess of the monthly supplement. The amount of insurance premiums paid by retirees for fiscal years 2017 and 2016 were $57,941,968 and $56,296,433, respectively. The Commonwealth of Kentucky bears risk for excess claims expenses that exceed the premium equivalents charged for the Kentucky Employees Health Plan. Once retired members and eligible spouses attain age 65 and are Medicare eligible, coverage is obtained through the TRS Medicare Eligible Health Plan.

At June 30, 2017, TRS insurance covered 39,497 retirees and 7,189 dependents. There are 207 participating employers and 72,130 active members contributing to the medical plan.

B. NET OPEB LIABILITY OF EMPLOYERS

The net OPEB liability (i.e., the System's liability determined in accordance with GASB No. 74 less the fiduciary net position) for the medical insurance plan as of June 30, 2017 is shown below.

Net OPEB Liability of Employers
(In thousands of dollars)

Fiscal Year Ending June 30	Total OPEB Liability (TOL) A	Plan Fiduciary Net Position B	Employers Net OPEB Liability (NOL) (A-B)	Plan Fiduciary Net Position (FNP) as a % of Total OPEB Liability (B/A)	Covered Payroll C	Net OPEB Liability as a % of Covered Payroll [A-B/C]
2017	$ 4,524,172	$ 958,390	$ 3,565,782	21.2 %	$ 3,415,432	104.40 %

Note 8: Other Post-Employment Benefits - Medical Insurance Plan continued . . .

C. SUMMARY OF ACTUARIAL ASSUMPTIONS

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below.

Valuation Date	6/30/2016
Actuarial Assumptions:	
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent of Payroll
Amortization Period	30 years, open
Asset Valuation Method	Five-year smoothed value
Investment Rate of Return	8.00%, net of OPEB plan investment expense, including inflation.
Projected Salary Increases	3.50 - 7.20%, including wage inflation
Inflation Rate	3.00%
Real Wage Growth	0.50%
Wage Inflation	3.50%
Municipal Bond Index Rate	3.56%
Discount Rate	8.00%
Single Equivalent Interest Rate	8.00%, net of OPEB plan investment expense, including price inflation

Mortality rates were based on the RP-2000 Combined Mortality Table projected to 2025 with projection scale BB, and set forward two years for males and one year for females is used for the period after service retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table set forward two years for males and seven years for females is used for the period after disability retirement. The demographic actuarial assumptions for retirement, disability incidence, withdrawal, rates of plan participation, and rates of plan election used in the June 30, 2016 valuation were based on the results of the most recent actuarial experience studies for the System, which covered the five-year period ending June 30, 2015. The remaining actuarial assumptions used in the June 30, 2017 valuation of the MIF were based on a review of recent plan experience done concurrently with the June 30, 2016 valuation.

D. TARGET ALLOCATIONS

The long-term expected rate of return on OPEB investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan 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 allocation and best estimates of arithmetic real rates of return for each major asset class, as provided by TRS's investment consultant, are summarized in the following table:

Asset Class	**Target Allocation**	**30-Year Expected Geometric Real Rate of Return**
Global Equity	60.0%	5.1%
Fixed Income	9.0%	1.2%
Real Estate	4.5%	4.0%
Private Equity	5.5%	6.6%
High Yield	10.0%	4.3%
Other Additional Categories*	10.0%	3.3%
Cash	1.0%	0.5%
Total	**100.0%**	

** Modeled as 50% High Yield and 50% Bank Loans*

Note 8: Other Post-Employment Benefits - Medical Insurance Plan continued . . .

E. DISCOUNT RATE

The discount rate used to measure the TOL as of the Measurement Date was 8.00%. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 74. The projection's basis was an actuarial valuation performed as of June 30, 2016. In addition to the actuarial methods and assumptions of the June 30, 2016 actuarial valuation, the following actuarial methods and assumptions were used in the projection of cash flows:

- Total payroll for the initial projection year consists of the payroll of the active membership present on the Valuation Date. In subsequent projection years, total payroll was assumed to increase annually at a rate of 3.50%.
- For the retiree health care costs of those beneficiaries under age 65, the KEHP implicit rate subsidies were assumed to be paid in all years by the employer directly to plan members as the benefits come due.
- As administrative expenses were assumed to be paid in all years by the employer as they come due, they were not considered.
- Cash flows occur mid-year.
- Future contributions to the MIF were based upon the contribution rates defined in statute and the projected payroll of active employees. Per KRS 161.540(1)(c).3 and 161.550(5), when the MIF achieves a sufficient prefunded status, as determined by the retirement system's actuary, the following MIF statutory contributions are to be decreased, suspended, or eliminated:
    - Employee contributions
    - School District/University Contributions
    - State Contributions for KEHP premium subsidies payable to retirees who retire after June 30, 2010

  To reflect these adjustments, open group projections were used and assumed an equal, pro rata reduction to the current statutory amounts in the years if/when the MIF is projected to achieve a Funded Ratio of 100% or more. Here, the current statutory amounts are adjusted to achieve total contributions equal to the Actuarially Determined Contribution (ADC), as determined by the prior year's valuation and in accordance with the MIF's funding policy (Schedule E). As the specific methodology to be used for the adjustments has yet to be determined, there may be differences between the projected results and future experience. This may also include any changes to retiree contributions for KEHP coverage pursuant to KRS 161.675(4)(b).
- In developing the adjustments to the statutory contributions in future years, the following was assumed:
    - Liabilities and cash flows are net of expected retiree contributions and any implicit subsidies attributable to coverage while participating in KEHP.
    - A 0% active member growth rate was assumed for the purposes of developing estimates for new entrants (membership dates beyond June 30, 2016).

Based on these assumptions, the MIF's FNP was not projected to be depleted.

The FNP projections are based upon the MIF's financial status on the Valuation Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing basis, reflecting the impact of future members. Therefore, the results of these tests do not necessarily indicate whether or not the MIF will actually run out of money, the financial condition of the MIF, or the MIF's ability to make benefit payments in future years.

These paragraphs require disclosure of the sensitivity of the NOL to changes in the health care cost trend rates for the MIF and the discount rate for the MIF. The following exhibit presents the NOL of the MIF, calculated using the health care cost trend rates, as well as what the MIF's NOL would be if it were calculated using a health care cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate. Similarly, the exhibit presents the NOL of the MIF, calculated using the Single Equivalent Interest Rate, as well as what the MIF's NOL would be if it were calculated using a Discount Rate that is 1-percentage-point lower or 1-percentage-point higher than the current Single Equivalent Interest Rate:

System's Net OPEB Liability
(In thousands of dollars)

	Health Care Cost Trends		
Discount Rate	**1% Decrease**	**Current**	**1% Increase**
1% Increase (8.50%)	$	$ 3,077,710	$
Current (7.50%)	2,986,442	3,565,977	4,281,487
1% Decrease (6.50%)		4,152,539	

Note 8: Other Post-Employment Benefits - Medical Insurance Plan continued . . .

The TOL of the MIF is based upon an actuarial valuation performed as of the Valuation Date, June 30, 2016. An expected TOL is determined as of June 30, 2017 using standard roll-forward techniques. The roll-forward calculation begins with the TOL, as of June 30, 2016, subtracts the actual benefit payments (net of retiree contributions, if applicable) for the year, applies interest at the discount rate for the year, and then adds the annual normal cost (also called the Service Cost). If applicable, actuarial gains and losses arising from the difference between estimates and actual experience (excluding amounts related to benefit changes and changes in assumptions or other inputs) are reconciled to the TOL as of the Measurement Date. Last, any changes of assumptions or other inputs are reflected. The procedure used to determine the TOL of the MIF, as of June 30, 2017, is shown in the following table:

TOL Roll-Forward
(In thousands of dollars)

(a)	TOL as of June 30, 2016*	$ 4,264,131
(b)	Actual Benefit Payments and Refunds for the Year July 1, 2016 - June 30, 2017	(178,500)
(c)	Interest on TOL = [(a) x (0.080)] + [(b) x (0.0400]	333,990
(d)	Service Cost for the Year July 1, 2016 - June 30, 2017 at the End of the Year	95,625
(e)	Changes of Benefit Terms	8,926
(f)	Difference between Expected and Actual Experience at the End of the Year	
(g)	Changes of Assumptions or Other Inputs	
(h)	TOL Rolled Forward to June 30, 2017 = (a) + (b) + (c) + (d) + (e) + (f) + (g)	**$ 4,524,172**

** The TOL used in the roll-forward as of June 30, 2016 is calculated using the discount rate as of the Prior Measurement Date.*

Note 9: Other Post-Employment Benefits - Life Insurance Plan

A. PLAN DESCRIPTON

TRS administers the Life Insurance Plan as provided by KRS 161.655 to provide life insurance benefits to retired and active members. This benefit is financed by actuarially determined contributions from the 207 participating employers. The benefit is $5,000 for members who are retired for service or disability, and $2,000 for active contributing members.

B. NET OPEB LIABILITY OF EMPLOYERS

The net OPEB liability (i.e., the System's liability determined in accordance with GASB No. 74 less the fiduciary net position) for the life insurance fund as of June 30, 2017 is shown below.

Net OPEB Liability of Employers
(In thousands of dollars)

Fiscal Year Ending June 30	Total OPEB Liability (TOL) A	Plan Fiduciary Net Position B	Employers Net OPEB Liability (NOL) (A-B)	Plan Fiduciary Net Position (FNP) as a % of Total OPEB Liability (B/A)	Covered Payroll C	Net OPEB Liability as a % of Covered Payroll [A-B/C]
2017	$ 109,736	$ 87,777	$ 21,959	80.0 %	$ 3,415,432	0.64 %

Note 9: Other Post-Employment Benefits - Life Insurance Plan continued . . .

C. SUMMARY OF ACTUARIAL ASSUMPTIONS

A summary of the actuarial assumptions as of the latest actuarial valuation is shown below.

Valuation Date	6/30/2016
Actuarial Assumptions:	
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent of Payroll
Amortization Period	30 years, open
Asset Valuation Method	Market Value
Investment Rate of Return	7.50%, net of OPEB plan investment expense, including inflation.
Projected Salary Increases	4.00 - 8.10%, including wage inflation
Inflation Rate	3.50%
Real Wage Growth	0.50%
Wage Inflation	4.00%
Municipal Bond Index Rate	3.56%
Discount Rate	7.50%
Single Equivalent Interest Rate	7.50%, net of OPEB plan investment expense, including price inflation

Mortality rates were based on the RP-2000 Combined Mortality Table projected to 2025 with projection scale BB, and set forward two years for males and one year for females is used for the period after service retirement and for dependent beneficiaries. The RP-2000 Disabled Mortality Table set forward two years for males and seven years for females is used for the period after disability retirement. The demographic actuarial assumptions for retirement, disability incidence, withdrawal, rates of plan participation, and rates of plan election used in the June 30, 2016 valuation were based on the results of the most recent actuarial experience studies for the System, which covered the five-year period ending June 30, 2015.

D. TARGET ALLOCATIONS

The long-term expected rate of return on OPEB investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan 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 allocation and best estimates of arithmetic real rates of return for each major asset class, as provided by TRS's investment consultant, are summarized in the following table:

Asset Class	**Target Allocation**	**30-Year Expected Geometric Real Rate of Return**
U.S. Large Cap Equity	38.4%	4.3%
U.S. Small Cap Equity	2.6%	4.8%
Developed Int'l Equity	15.8%	5.2%
Emerging Markets Equity	4.2%	5.4%
Fixed Income - Inv. Grade	16.0%	1.2%
Real Estate	6.0%	4.0%
Private Equity	7.0%	6.6%
High Yield	2.0%	4.3%
Other Additional Categories**	7.0%	3.3%
Cash	2.0%	0.5%
Total	**100.0%**	

* *As the LIF investment policy is to change, the above table reflects the pension allocation and returns that achieve the targeted 7.50% long-term rate of return.*

** *Modeled as 50% High Yield and 50% Bank Loans*

Note 9: Other Post-Employment Benefits - Life Insurance Plan continued . . .

E. DISCOUNT RATE

The discount rate used to measure the TOL as of the Measurement Date was 7.50%. The projection of cash flows used to determine the discount rate was performed in accordance with GASB 74. The projection's basis was an actuarial valuation performed as of June 30, 2016. In addition to the actuarial methods and assumptions of the June 30, 2016 actuarial valuation, the following actuarial methods and assumptions were used in the projection of the LIF's cash flows:

- Total payroll for the initial projection year consists of the payroll of the active membership present on the Valuation Date. In subsequent projection years, total payroll was assumed to increase annually at a rate of 3.50%.
- The employer will contribute the Actuarially Determined Contribution (ADC) in accordance with the LIF's funding policy (Schedule E) determined by a valuation performed on a date two years prior to the beginning of the fiscal year in which the ADC applies.
- As administrative expenses were assumed to be paid in all years by the employer as they come due, they were not considered.
- Active employees do not explicitly contribute to the plan.
- Cash flows occur mid-year.

Based on these assumptions, the LIF's FNP was not projected to be depleted.

The FNP projections are based upon the LIF's financial status on the Valuation Date, the indicated set of methods and assumptions, and the requirements of GASB 74. As such, the FNP projections are not reflective of the cash flows and asset accumulations that would occur on an ongoing basis, reflecting the impact of future members. Therefore, the results of these tests do not necessarily indicate whether or not the LIF will actually run out of money, the financial condition of the LIF, or the LIF's ability to make benefit payments in future years.

These paragraphs require disclosure of the sensitivity of the NOL to changes the discount rate for the LIF. The schedule below presents the NOL of the LIF, calculated using the Single Equivalent Interest Rate, as well as what the LIF's NOL would be if it were calculated using a Discount Rate that is 1-percentage-point lower or 1-percentage-point higher than the current Single Equivalent Interest Rate:

System's Net OPEB Liability
(In thousands of dollars)

1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
$ 36,497	$ 21,959	$ 10,055

The TOL of the LIF is based upon an actuarial valuation performed as of the Valuation Date, June 30, 2016. An expected TOL is determined as of June 30, 2017 using standard roll-forward techniques. The roll-forward calculation begins with the TOL, as of June 30, 2016, subtracts the actual benefit payments (net of retiree contributions, if applicable) for the year, applies interest at the discount rate for the year, and then adds the annual normal cost (also called the Service Cost). If applicable, actuarial gains and losses arising from the difference between estimates and actual experience (excluding amounts related to benefit changes and changes in assumptions or other inputs) are reconciled to the TOL as of the Measurement Date. Last, any changes of assumptions or other inputs are reflected. The procedure used to determine the TOL of the LIF, as of June 30, 2017, is shown in the following table:

Note 9: Other Post-Employment Benefits - Life Insurance Plan continued . . .

TOL Roll-Forward
(In thousands of dollars)

(a)	TOL as of June 30, 2016*	$ 106,059
(b)	Actual Benefit Payments and Refunds for the Year July 1, 2016 - June 30, 2017	(5,151)
(c)	Interest on TOL = [(a) x (0.075)] + [(b) x (0.0375)]	7,761
(d)	Service Cost for the Year July 1, 2016 - June 30, 2017 at the End of the Year	1,067
(e)	Changes of Benefit Terms	
(f)	Difference between Expected and Actual Experience at the End of the Year	
(g)	Changes of Assumptions or Other Inputs	
(h)	TOL Rolled Forward to June 30, 2017 = (a) + (b) + (c) + (d) + (e) + (f) + (g)	**$ 109,736**

** The TOL used in the roll-forward as of June 30, 2016 is calculated using the discount rate as of the Prior Measurement Date.*

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Net Pension Liability
(In thousands of dollars)

	2017	2016	2015	2014
Total pension liability				
Service Cost	$ 1,332,587	$ 1,120,893	$ 1,015,080	$ 1,002,338
Interest	1,964,107	2,027,457	2,029,372	1,956,610
Difference between expected and actual experience	199,471	(58,035)		
Changes of assumptions	(2,321,327)	4,030,834	1,511,960	(353,043)
Benefit payments	(1,918,612)	(1,833,199)	(1,741,456)	(1,654,376)
Refunds of contributions	(26,305)	(27,748)	(23,033)	(25,462)
Net change in total pension liability	(770,079)	5,260,202	2,791,923	926,067
Total pension liability - beginning	47,736,901	42,476,699	39,684,776	38,758,709
Total pension liability - ending (a)	$ 46,966,822	$ 47,736,901	$ 42,476,699	$ 39,684,776
Plan Net Position				
Contributions - State of Kentucky	$ 981,417	$ 484,987	$ 480,073	$ 483,330
Contributions - Other Employers	79,303	80,468	79,506	79,996
Contributions - Members	313,625	313,044	308,160	304,982
Net investment income	2,475,753	(245,215)	862,179	2,803,249
Benefit payments	(1,918,612)	(1,833,199)	(1,741,456)	(1,654,376)
Administrative expense	(10,314)	(8,636)	(8,869)	(7,956)
Refunds of contributions	(26,305)	(27,748)	(23,033)	(25,462)
Net change in plan net position	1,894,867	(1,236,299)	(43,440)	1,983,763
Plan net position - beginning	16,812,832	18,049,131	18,092,571	16,108,808
Plan net position - ending (b)	18,707,699	16,812,832	18,049,131	18,092,571
Net pension liability - ending (a) - (b)	**$ 28,259,123**	**$ 30,924,069**	**$ 24,427,568**	**$ 21,592,205**

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Required Supplementary Information continued . . .

NOTE 1
Schedule of Changes in the Net Pension Liability

The total pension liability contained in this schedule was provided by TRS's actuary, Cavanaugh Macdonald Consulting, LLC. The net pension liability is measured as the total pension liability less the amount of the fiduciary net position of the System.

Changes of Benefit Terms. None

Changes of assumptions. In the 2016 valuation, rates of withdrawal, retirement, disability, mortality and rates of salary increase were adjusted to more closely reflect actual experience. In the 2016 valuation and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables projected to 2025 with projection scale BB, set forward two year for males and one year for females rather than the RP-2000 Mortality Tables projected to 2020 with projection scale AA, which was used prior to 2016.

In the 2011 valuation, rates of withdrawal, retirement, disability and mortality were adjusted to more closely reflect actual experience. In the 2011 valuation and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables projected to 2020 with projection scale AA, set back one year for females rather than the 1994 Group Annuity Mortality Tables which was used prior to 2016. For the 2011 valuation through the 2013 valuation, an interest smoothing methodology was used to calculate liabilities for purposes of determining the actuarially determined contributions.

Schedule of Net Pension Liability
(In thousands of dollars)

	2017	2016	2015	2014
Total pension liability	$ 46,966,822	$ 47,736,901	$ 42,476,699	$ 39,684,776
Plan net position	18,707,699	16,812,832	18,049,131	18,092,571
Net pension liability	$ 28,259,123	$ 30,924,069	$ 24,427,568	$ 21,592,205
Ratio of plan net position to total pension liability	39.83 %	35.22 %	42.49 %	45.59%
Covered-employee payroll	$ 3,415,432	$ 3,390,539	$ 3,455,008	$ 3,317,422
Net pension liability as a percentage of covered-employee payroll	827.40 %	912.07 %	707.02 %	650.87%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Schedule of Employer Contributions
(In thousands of dollars)

Fiscal Year Ended June 30	Covered Payroll	Actual Employer Contributions	Actuarially Determined Employer Contributions	Annual Contribution Excess (Deficiency)	Actual Contributions as a Percentage of Covered Payroll
2017	$ 3,415,432	$ 1,060,720	$ 1,076,617	$ (15,897)	31.06 %
2016	3,390,539	565,455	999,270	(433,815)	16.68
2015	3,455,008	559,579	913,654	(354,075)	16.20
2014 *	3,317,422	563,326	823,446	(260,120)	16.98
2013	3,310,710	568,233	802,985	(234,752)	17.16
2012	3,310,176	557,340	757,822	(200,482)	16.84
2011	3,283,749	1,037,936	678,741	359,195	31.61
2010	3,321,614	479,805	633,938	(154,133)	14.44
2009	3,253,077	442,550	600,283	(157,733)	13.60
2008	3,190,332	466,248	563,789	(97,541)	14.61

** Revised from previous year to reflect actual covered-employee payroll.*

See accompanying independent auditor's report.

Required Supplementary Information continued . . .

NOTE 2
Schedule of Employer Contributions

The required employer contributions and percent of those contributions actually made are presented in the schedule.

NOTE 3
Actuarial Methods and Assumptions

The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, three years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in the most recent year of the schedule:

Actuarial cost method	Entry age
Amortization period	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	5-year smoothed market
Inflation	3.50 percent
Salary increase	4.00 to 8.20 percent, including inflation
Ultimate Investment rate of return	7.50 percent, net of pension plan investment expense, including inflation

Schedule of Investment Returns

	2017	2016	2015	2014
Annual money weighted rate of return, net of investment expense	15.00%	-1.32%	4.96%	17.95%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See accompanying independent auditor's report.

Required Supplementary Information continued . . .

Medical Insurance Plan
Schedule of Changes in the Net OPEB Liability
(In thousands of dollars)

	2017
Total OPEB liability	
Service Cost	$ 95,625
Interest	333,990
Changes of benefit terms	8,926
Difference between expected and actual experience	
Changes of assumptions	
Benefit payments	(178,500)
Net change in OPEB liability	260,041
Total OPEB liability - beginning	4,264,131
Total OPEB liability - ending (a)	$ 4,524,172
Plan Net Position	
Contributions - State of Kentucky	$ 75,497
Contributions - Other Employers	104,879
Contributions - Active Members	128,819
Net investment income	95,453
Benefit payments	(178,500)
Administrative expense	(1,539)
Other	
Net change in plan net position	224,609
Plan net position - beginning	733,781
Plan net position - ending (b)	958,390
Net OPEB liability - ending (a) - (b)	**$ 3,565,782**

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

NOTE 1
Schedule of Changes in the Net OPEB Liability

The net OPEB liability contained in this schedule was provided by TRS's actuary, Cavanaugh Macdonald Consulting, LLC. The net OPEB liability is measured as the total OPEB liability less the amount of the fiduciary net position of the System.

Changes of Benefit Terms. With the passage of House Bill 471, the eligibility for non-single subsidies (NSS) for the KEHP-participating members who retired prior to July 1, 2010 is restored, but the State will only finance, via its KEHP "shared responsibility" contributions, the costs of the NSS related to those KEHP-participating members who retired on or after July 1, 2010.

Changes of assumptions. None

See accompanying independent auditor's report.

Required Supplementary Information continued . . .

Medical Insurance Plan
Schedule of Net OPEB Liability
(In thousands of dollars)

Fiscal Year Ending June 30	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability	Plan Fiduciary Net Position as a % of Total OPEB Liability	Covered Payroll	Net OPEB Liability as a % of Covered Payroll
2017	$ 4,524,172	$ 958,390	$ 3,565,782	21.18 %	$ 3,415,432	104.40 %

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Medical Insurance Plan – Schedule of Employer Contributions

Valuation Year June 30	Actuarially Determined Employer Contribution	Contributions in Relation to the Actuarially Determined Contribution	Annual Contribution Deficiency/ (Excess)	Covered Payroll	Actual Contributions as a Percentage of Covered Payroll
2017	$ 102,854	$ 180,376	$ (77,522)	$ 3,415,432	5.28%
2016	97,983	221,967	(123,984)	3,390,539	6.55
2015	106,606	168,084	(61,478)	3,455,008	4.86
2014	159,583	162,568	(2,985)	3,317,422	4.90
2013	186,726	166,611	20,115	3,310,710	5.03
2012	470,217	177,748	292,469	3,310,176	5.37
2011	477,723	188,735	288,988	3,283,749	5.75
2010	457,054	173,380	283,674	3,321,614	5.22
2009	467,313	178,092	289,221	3,253,077	5.47
2008	395,282	160,866	234,416	3,190,322	5.04

NOTE 2
Schedule of Employer Contributions

The required employer contributions and percent of those contributions actually made are presented in the schedule.

NOTE 3
Actuarial Methods and Assumptions

The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, three years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in the most recent year of the schedule:

Actuarial cost method	Entry age normal
Amortization method	Level percentage of payroll
Amortization period	30 years, open
Asset valuation method	5-year smoothed value
Inflation	3.00 percent
Real wage growth	0.50 percent
Wage inflation	3.50 percent
Salary increase	3.50 to 7.20 percent, including wage inflation
Discount rate	8.00 percent

See accompanying independent auditor's report.

Required Supplementary Information continued . . .

MIF health care cost trends	
Under age 65	7.75 percent FYE 2017, decreasing to an ultimate rate of 5.00 percent by FYE 2023
Ages 65 and older	5.75 percent FYE 2017, decreasing to an ultimate rate of 5.00 percent by FYE 2020
Medicare part B premiums	1.02 percent FYE 2017 with an ultimate rate of 5.00 percent by FYE 2029
MIF under age 65 claims	The current premium charged by KEHP is used as the base cost and is projected forward using only the health care trend

Schedule of Investment Returns
Health Insurance Trust

	2017	2016	2015	2014
Annual money weighted rate of return, net of investment expense	14.37 %	-2.20 %	1.38 %	15.38 %

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Life Insurance Plan
Schedule of Changes in the Net OPEB Liability
(In thousands of dollars)

	2017
Total OPEB liability	
Service Cost	$ 1,067
Interest	7,761
Changes of benefit terms	
Difference between expected and actual experience	
Changes of assumptions	
Benefit payments	(5,151)
Net change in OPEB liability	3,677
Total OPEB liability - beginning	106,059
Total OPEB liability - ending (a)	$ 109,736
Plan Net Position	
Contributions - State of Kentucky	$ 882
Contributions - Other Employers	168
Contributions - Active Members	
Net investment income	915
Benefit payments	(5,151)
Administrative expense	(28)
Other	
Net change in plan net position	(3,214)
Plan net position - beginning	90,991
Plan net position - ending (b)	87,777
Net OPEB liability - ending (a) - (b)	$ 21,959

See accompanying independent auditor's report.

Required Supplementary Information continued . . .

NOTE 1
Schedule of Changes in the Net OPEB Liability

The net OPEB liability contained in this schedule was provided by TRS's actuary, Cavanaugh Macdonald Consulting, LLC. The net OPEB liability is measured as the total OPEB liability less the amount of the fiduciary net position of the System.

Changes of Benefit Terms. None

Changes of assumptions. None

Life Insurance Plan
Schedule of Net OPEB Liability
(In thousands of dollars)

Fiscal Year Ending June 30	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability	Plan Fiduciary Net Position as a % of Total OPEB Liability	Covered Payroll	Net OPEB Liability as a % of Covered Payroll
2017	$ 109,736	$ 87,777	$ 21,959	79.99 %	$ 3,415,432	0.64%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

Life Insurance Plan – Schedule of Employer Contributions

Valuation Year June 30	Actuarially Determined Employer Contribution	Contributions in Relation to the Actuarially Determined Contribution	Annual Contribution Deficiency/(Excess)	Covered Payroll	Actual Contributions as a % of Covered Payroll
2017	$ 1,065	$ 1,050	$ 15	$ 3,415,432	0.03 %
2016	1,058	1,038	20	3,390,539	0.03
2015	1,050	1,020	30	3,455,008	0.03
2014	1,045	1,006	39	3,317,422	0.03
2013	1,740	1,680	60	3,310,710	0.05
2012	1,733	1,685	48	3,310,176	0.05
2011	1,726	1,669	57	3,283,749	0.05
2010	1,993	1,967	26	3,321,614	0.06
2009	1,498	5,455	(3,957)	3,253,077	0.17
2008	1,914	5,411	(3,497)	3,190,322	0.17

NOTE 2
Schedule of Employer Contributions

The required employer contributions and percent of those contributions actually made are presented in the schedule.

See accompanying independent auditor's report.

Required Supplementary Information continued . . .

NOTE 3
Actuarial Methods and Assumptions

The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, three years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in the most recent year of the schedule:

Actuarial cost method	Entry age normal
Amortization method	Level percentage of payroll
Amortization period	30 years, open
Asset valuation method	Market value
Inflation	3.50 percent
Real wage growth	0.50 percent
Wage inflation	4.00 percent
Salary increase	4.00 to 8.10 percent, including wage inflation
Discount rate	7.50 percent

Schedule of Investment Returns
Life Insurance Trust

	2017
Annual money weighted rate of return, net of investment expense	1.02 %

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

See accompanying independent auditor's report.

ADDITIONAL SUPPORTING SCHEDULES

Schedule of Administrative Expenses
For the Year Ended June 30, 2017 and 2016

Expense	2017	2016
Salaries	$ 7,291,328	$ 5,808,287
Other Personnel Costs	735,748	696,933
Professional Services and Contracts	395,216	647,708
Utilities	100,641	93,633
Rentals	23,607	20,991
Maintenance	56,520	93,521
Postage & Related Services	300,813	442,610
Printing	188,135	199,837
Insurance	175,768	183,329
Miscellaneous Services	159,272	164,405
Telecommunications	20,958	22,126
Computer Services	145,252	151,789
Supplies	63,097	51,059
Depreciation	1,996,821	1,535,843
Travel	40,734	45,221
Dues & Subscriptions	65,361	63,752
Miscellaneous Commodities	11,095	12,724
Furniture, Fixtures, & Equipment not Capitalized	110,821	85,604
Compensated Absences		30,891
Total Administrative Expenses	**$ 11,881,187**	**$ 10,350,263**

Schedule of Professional Services and Contracts
For the Year Ended June 30, 2017 and 2016

Professional	Nature of Service	2017	2016
Cavanaugh Macdonald Consulting	Actuarial Services	$ 157,089	$ 284,189
Segal Consulting	Actuarial Services		89,017
Auditor of Public Accounts	Auditing Services		32,200
Mountjoy Chilton Medley	Auditing Services	89,214	45,000
International Claim Specialist	Investigative Services	1,512	2,176
Ice Miller	Attorney Services	24,233	46,798
Reinhart, Boerner VanDeuren	Attorney Services		6,125
Stoll, Keenon, and Ogden	Attorney Services	3,168	21,672
Attorney General	Attorney Services		531
Peritus	Communications	120,000	120,000
Total Professional Services and Contracts		**$ 395,216**	**$ 647,708**

See accompanying independent auditor's report.

Additional Supporting Schedules continued . . .

Schedule of Contracted Investment Management Expenses
Year Ended June 30, 2017

	Pension	Medical	Total
Equity Managers			
Baillie Gifford	$ 3,114,384	$	$ 3,114,384
Baring Asset Management, Inc.	2,473,839		2,473,839
Black Rock	336,647	217,848	554,495
Fort Washington Focused Equity	425,662	57,734	483,396
GE Asset Management	786,682		786,682
Todd Asset Management LLC	1,325,541		1,325,541
UBS Global Asset Management	5,980,296		5,980,296
Wellington Management Company	3,168,837		3,168,837
Total Equity Managers	17,611,888	275,582	17,887,470
Fixed Income Managers			
Fort Washington Investment Broad Market	160,777		160,777
Galliard Capital Management	222,920		222,920
Total Fixed Income Managers	383,697		383,697
Real Estate	8,812,597	731,349	9,543,946
Additional Categories	9,454,366	849,061	10,303,427
Alternative Investments	17,428,907	1,162,667	18,591,574
Custodian			
The Bank of New York Mellon	481,653	53,386	535,039
Consultant			
Hewitt Ennis Knupp, Inc.	413,850		413,850
Bevis Longstreth	51,660		51,660
George Philip	33,965		33,965
Total Consultants	499,475		499,475
Legal & Research			
Reinhart, Boerner Van Deuren	5,936		5,936
Ice Miller	51,266		51,266
Total Legal & Research	57,202		57,202
Other			
Administrative and Operational (includes Personnel)	3,116,857	98,822	3,215,679
Total Contracted Investment Management Expenses	**$ 57,846,642**	**$ 3,170,867**	**$ 61,017,509**

See accompanying independent auditor's report.

Additional Supporting Schedules continued . . .

Schedule of Contracted Investment Management Expenses
Year Ended June 30, 2016

	Pension	Medical	Total
Equity Managers			
Baillie Gifford	$ 2,800,298	$	$ 2,800,298
Baring Asset Management, Inc.	2,419,271		2,419,271
Black Rock	265,816	191,346	457,162
GE Asset Management	800,000		800,000
Todd Asset Management LLC	1,295,310		1,295,310
UBS Global Asset Management	2,980,341		2,980,341
Wellington Management Company	2,917,720		2,917,720
Total Equity Managers	13,478,756	191,346	13,670,102
Fixed Income Managers			
Fort Washington Investment Advisors	150,088		150,088
Galliard Capital Management	229,226		229,226
Total Fixed Income Managers	379,314		379,314
Real Estate	7,010,123	503,596	7,513,719
Additional Categories	8,701,619	683,241	9,384,860
Alternative Investments	14,469,348	794,844	15,264,192
Custodian			
The Bank of New York Mellon	380,233	30,275	410,508
Consultant			
Hewitt Ennis Knupp, Inc.	358,850		358,850
Bevis Longstreth	50,137		50,137
George Philip	38,962		38,962
Total Consultants	447,949		447,949
Legal & Research			
Reinhart, Boerner Van Deuren	5,560		5,560
Ice Miller	84,697		84,697
Total Legal & Research	90,257		90,257
Other			
Administrative and Operational (includes Personnel)	2,845,221	74,831	2,920,052
Total Contracted Investment Management Expenses	**$ 47,802,820**	**$ 2,278,133**	**$ 50,080,953**

See accompanying independent auditor's report.

CPAs & ADVISORS

REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

Independent Auditor's Report

To the Board of Trustees
Teachers' Retirement System of the State of Kentucky
Frankfort, KY

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Teachers' Retirement System of the State of Kentucky, which comprise the statement of fiduciary net position as of June 30, 2017, and the related statement of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise the Teachers' Retirement System of the State of Kentucky's basic financial statements, and have issued our report thereon dated November 14, 2017.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered the Teachers' Retirement System of the State of Kentucky's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Teachers' Retirement System of the State of Kentucky's internal control. Accordingly, we do not express an opinion on the effectiveness of the Teachers' Retirement System of the State of Kentucky's internal control.

A *deficiency* in internal control exists when the design or operation of a control does not allow management or employees in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Kentucky
Indiana
Ohio

Mountjoy Chilton Medley LLP
P 502.749.1900 I F 502.749.1930
2600 Meidinger Tower I 462 South Fourth Street I Louisville, KY 40202
www.mcmcpa.com I 888.587.1719
An Independent Member of Baker Tilly International

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Teachers' Retirement System of the State of Kentucky's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Teachers' Retirement System of the State of Kentucky's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Teachers' Retirement System of the State of Kentucky's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

/s/ Mountjoy Chilton Medley LLP

Louisville, KY
November 14, 2017

This page was intentionally left blank.

Teachers' Retirement System
of the State of Kentucky

2017

Investment Section

REPORT ON INVESTMENT ACTIVITY

This report is prepared by the Investment staff of the Teachers' Retirement System of Kentucky.

Mr. Tom Siderewicz, CFA
Chief Investment Officer

Mr. Philip L. Webb
Director of Investment Accounting

INVESTMENT COMMITTEE

Mr. Ronald L. Sanders
Chair

Mr. Arthur Green
Vice-Chair

Mr. Hollis Gritton
Member

Dr. Jay Morgan
Member

Ms. Alison Wright
Member

Mr. Bevis Longstreth
Investment Advisor to TRS Kentucky Investment Committee

Mr. George Philip
Investment Advisor to TRS Kentucky Investment Committee

EXECUTIVE INVESTMENT STAFF

Mr. Gary L. Harbin, CPA
Executive Secretary

Mr. Tom Siderewicz, CFA
Chief Investment Officer

December 1, 2017

To the members of the Board of Trustees and participants of the Teachers' Retirement System of Kentucky:

The Teacher Retirement System of Kentucky (TRS) investment program produced a total return of 15.37% for the twelve-month period ended June 30, 2017, more than double the actuarial assumed rate of return of 7.5%. This return exceeded that of the Policy Benchmark by 1.3 percentage points and ranked near the top of a universe of public pension funds with assets in excess of $1 billion (8th percentile ranking). Impressively, TRS also outperformed the Policy Benchmark and ranked within or near the top-decile of the public pension fund universe for the three-, five-, and ten-year periods. Each of the asset classes, with the exception of the additional categories group, contributed to relative performance during the fiscal year. On an absolute basis, the equity portfolio fueled results with a return slightly below 22%, while the fixed income allocation was a slight drag on performance as this was one of the lowest returning asset classes during the fiscal year.

Notable manager contributions were Todd and UBS Large Cap U.S. equity and Baillie Gifford International equity portfolios, all of which outperformed their respective benchmarks by wide margins. This is in contrast to FY 2016 where most active equity managers struggled to outperform. This is a testament to maintaining long-term strategy and not overemphasizing short-term performance in monitoring.

Over the past fiscal year, equity markets performed strongly driven by strong economic and corporate fundamentals. The top performing regions were Europe (excluding the United Kingdom) and emerging markets. In the bond market, the 10-year U.S. Treasury yield ended the fiscal year at 2.31%, 82 basis points higher than the beginning of the fiscal year.

TRS's efforts to diversify away from traditional fixed income proved particularly beneficial during FY 2017 as rising interest rates led to a slightly negative return for the U.S. Government/Credit Index whereas the additional categories asset class, which is generally comprised of alternative fixed income, private credit and below investment grade bonds, produced an absolute return in excess of 10% for the fiscal year. The active management efforts with the fixed income asset class also proved fruitful as the in-house managed portfolios added value overall as did each of the externally managed portfolios. Overall, the fixed income portfolio outperformed the benchmark by 50 basis points for the fiscal year.

TRS's initiatives to diversify the real estate allocation also benefitted performance as the value added and opportunistic portfolios produced double digit gains as the returns on core and triple net lease real estate moderated during the fiscal year. In addition to real estate, TRS has diversified its alternatives portfolio across different private equity and infrastructure strategies over the past 10 years, resulting in a fiscal year return of 11.7% on a time-weighted basis.

We would like to thank the Board of Trustees, Investment Committee, and Investment Staff for their confidence. We appreciate the opportunity to assist the retirement system in meeting its investment goals.

Respectfully,

Patrick J. Kelly

Patrick J. Kelly, CFA, CAIA
Partner

Aon Hewitt | Retirement and Investment
200 E. Randolph Street, Suite 1500 | Chicago, IL 60601
t +1.312.381.1200 | f +1.312.381.1366 | aonhewitt.com
Investment advice and consulting services provided by Aon Hewitt Investment Consulting, Inc., an Aon Company

RETIREMENT ANNUITY TRUST FUND

INVESTMENT POLICY SUMMARY

The TRS Board of Trustees has a statutory obligation to invest the members' assets in a manner consistent with the fiduciary standards set forth in the "prudent person rule." Consistent with these fiduciary standards, the board has recognized certain principles that guide investment-related decisions. First, the board will preserve the long-term corpus of the fund. Second, the board will seek to maximize total investment return within prudent risk parameters. Third, the board will act in the exclusive interest of the members and beneficiaries of the System. This broad summary is a reference point for management of retirement assets and outlines the investment philosophy and practice of TRS.

INVESTMENT OBJECTIVES

TRS invests the members' funds in several diverse classes of assets, including equities, bonds and real estate. This diversification helps us earn the highest possible long-term rate of return within appropriate risk levels. In turn this enables us to pay guaranteed benefits to members and their beneficiaries at the lowest possible cost to participating employers and the taxpayers that fund them. Generally, the retirement system's liabilities will not be paid for as many as 30-40 years. Therefore, as a long-term investor, TRS holdings can withstand some short-term volatility. The retirement annuity trust fund's long-term investment objective is to achieve an annualized rate of return of 7.5%.

RISK CONTROLS

The TRS investment program faces various risks; however, the primary risk to TRS is that the assets will not support liabilities over long periods of time. In order to control this risk and any other risks, the board has taken the following steps on an ongoing basis:

- Actuarial valuations are performed each year to evaluate the funding objectives of the retirement system. In addition, every ten years an external audit of the actuary is conducted to ensure that the assumptions made and calculation methods used are resulting in properly computed liabilities of the System.
- Asset/liability studies are conducted approximately every five years. These studies ensure that the portfolio design is structured to meet the liabilities of the retirement system.
- The TRS Investment Committee adopts, and regularly reviews, detailed investment strategies for implementation of the investment policy.

ASSET ALLOCATION

Operating within relevant regulatory limitations, the System's investment consultant, on an annual basis, presents to the Investment Committee for approval target percentages and ranges for the System's various asset classes. Annually approved asset allocation parameters serve to balance the retirement system's liquidity requirements, volatility tolerance, and return requirements to meet both short-term and long-term obligations. The System's assets are diversified across a variety of asset classes, investment management styles, and individual securities in order to reduce volatility and enhance the potential of the investment portfolio to achieve the retirement system's long-term goals.

Asset allocation decisions for pension plans are highly dependent on the unique characteristics of a particular plan. Factors such as liability requirements, the level of funding, and statutory investment restrictions are important considerations within the context of the asset allocation decision making process. Consequently, asset allocations may differ markedly between various pension plans due to their unique circumstances.

The information below shows the System's asset allocation by fair value as of June 30, 2017, and June 30, 2016, as well as the target and strategic range for each asset class for fiscal year 2017.

Retirement Annuity Trust

	June 30,2017*	%	June 30,2016 **	%
Cash Equivalents***	$ 366,129,983	2.0	$ 294,405,676	1.7
Fixed Income	3,020,457,273	16.2	2,878,918,409	17.1
Domestic Equities	7,682,590,280	41.3	7,210,451,881	42.9
International Equities	4,003,953,513	21.5	3,220,445,062	19.2
Real Estate	1,046,760,134	5.6	940,860,202	5.6
Private Equity	854,635,619	4.6	731,560,317	4.4
Timberland	208,219,943	1.1	201,253,033	1.2
Additional Categories	1,435,143,550	7.7	1,319,326,624	7.9
TOTALS	**$ 18,617,890,295**	**100.0**	**$ 16,797,221,204**	**100.0**

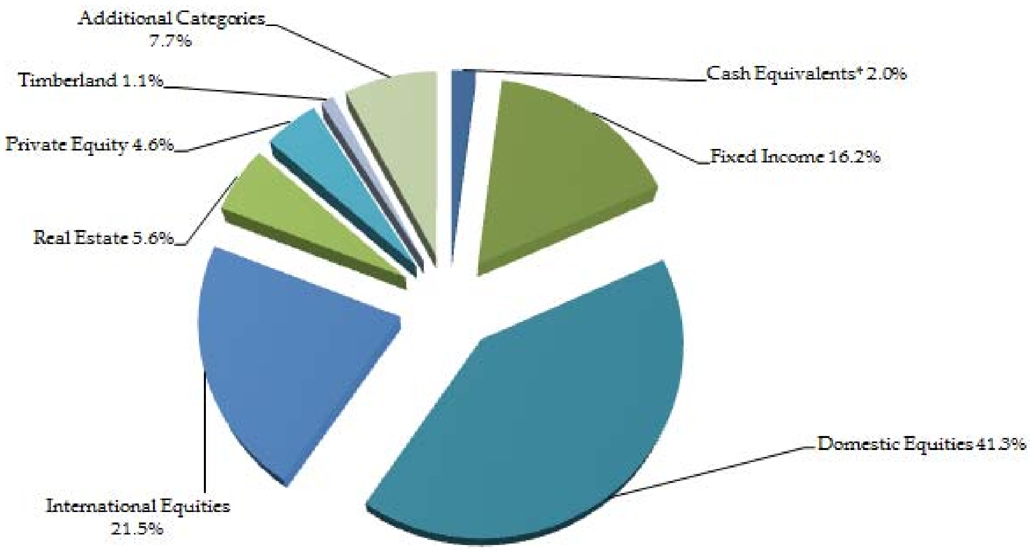
* *Includes Life Insurance Trust values of $86,443,328, Tax Shelter Annuity value of $343,792, and 401(h) value of 19,471,617.*

** *Includes Life Insurance Trust values of $90,113,180, Tax Shelter Annuity value of $352,815, and 401(h) value of 14,302,842.*

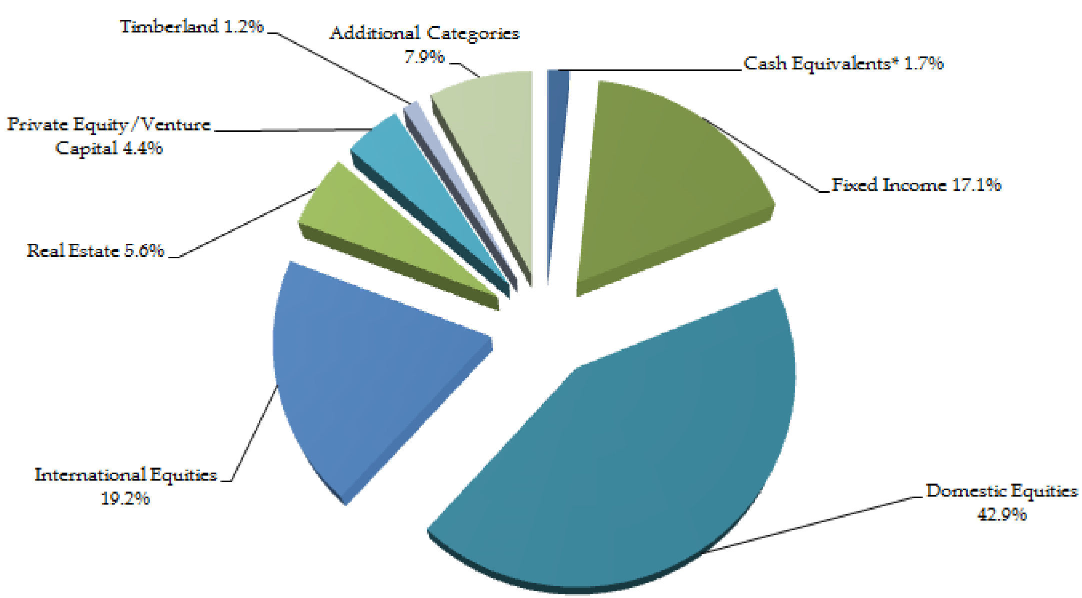
*** *Reflects only cash balances not allocated to other asset classes. Uninvested cash balances allocated to various asset classes are represented in the respective asset classes.*

Distribution of Investments
Retirement Annuity Trust**
Fair Values

June 30, 2017



June 30, 2016



* Reflects only cash balances not allocated to other asset classes. Uninvested cash balances allocated to various asset classes are represented in the respective asset classes.

** Includes Life Insurance Trust values.

Strategic Weightings by Asset Class

Asset Class	Regulatory Limits (Mkt Value)	Strategic Range (Mkt)	Target (Mkt)	6/30/2017 (Mkt)**
Cash		1 - 3%	2.0%	**2.0%**
Fixed Income		12 - 19	15.0	**16.2**
Government/Agency/Other	Unlimited			9.1
Corporate	35%			7.1
Equity	65%	57 - 65	61.0	**62.8**
Domestic All Cap				1.3
Domestic Large Cap		32 - 40	36.0	34.0
Domestic Mid Cap		1 - 5	3.0	3.7
Domestic Small Cap		1 - 3	2.0	2.3
International***	30%	17 - 23	20.0	21.5
Real Estate	10%	4 - 8	6.0	**5.6**
Alternative Investments*	10%	4 - 10	7.0	**5.7**
Additional Categories	15%	6 - 12	9.0	**7.7**
TOTAL			**100.0%**	**100.0%**

* Includes private equity, venture capital, timberland, and infrastructure investments.

** Starting with 7/2008, Cash is only the unallocated cash balance. Manager cash balances will be included with the asset type of the managers investments.

*** As of 6/30/17, 20.1% of Total International Equities were invested in Emerging Markets.

PORTFOLIO RETURNS

For the fiscal year, the retirement annuity trust fund's portfolio generated a total return of 15.37%, surpassing the policy benchmark return of 14.04%. Domestic equities returned 21.93% versus 21.17% for the Standard & Poor's 1500 Index, while international equities returned 23.32% versus 21.0% for the MSCI All Country World (Ex-US) Index. Fixed income investments outperformed, returning 0.12% versus -0.41% for the Barclays Government/Credit Index. Less traditional asset classes such as real estate, private equity, timberland, and alternative credit are beginning to contribute meaningfully to total return as those programs are expanded.

The table below details historical performance for the retirement annuity trust fund and its component asset classes for the period ended June 30, 2017. The retirement annuity trust fund's returns were generated by the Segal Marco Adivisors performance reporting system using a time-weighted rate of return calculation based upon market values.

Portfolio Returns continued ...

Schedule of Investment Returns - Retirement Annuity Trust - Gross

		Market Value	Last Qtr	FYTD	1 Yr	3 Yr*	5 Yr*	10 Yr*	20 Yr*
TOTAL PLAN	$	18,617,890,295	3.57	15.37	15.37	6.27	10.09	6.29	6.67
Policy Benchmark**			*3.21*	*14.04*	*14.04*	*6.16*	*9.69*		
Total Equity	$	11,686,543,794	4.56	21.93	21.93	7.12	13.14	6.14	7.02
Domestic Equity	$	7,682,590,281	3.19	21.17	21.17	9.04	14.97	7.45	7.64
S&P 1500 Index			*2.96*	*18.09*	*18.09*	*9.51*	*14.68*	*7.34*	
All-Cap Equities	$	232,768,027	2.43						
Russell 3000			*3.02*						
Large-Cap Equities	$	6,336,231,065	3.16	21.27	21.27	9.05	14.82	7.31	
S&P 500 Index			*3.09*	*17.90*	*17.90*	*9.61*	*14.63*	*7.18*	
Mid-Cap Equities	$	679,277,573	4.03	20.89	20.89	8.99	15.94	7.88	
S&P 400 Index			*1.97*	*18.57*	*18.57*	*8.53*	*14.92*	*8.56*	
Small-Cap Equities	$	434,313,616	2.67	22.98	22.98	9.53	15.99	8.62	
S&P 600 Index			*1.71*	*22.47*	*22.47*	*9.32*	*15.47*	*8.44*	
International Equity***	$	4,003,953,513	7.46	23.32	23.32	2.57	8.74	2.44	
MSCI AC World Ex US			*5.99*	*21.00*	*21.00*	*1.27*	*7.70*	*1.59*	
Fixed Income	$	3,020,457,273	1.56	0.12	0.12	3.01	2.90	5.46	5.86
Barclay's Govt./Credit Index			*1.69*	*-0.41*	*-0.41*	*2.62*	*2.29*	*4.57*	*5.33*
Real Estate									
Inhouse Triple Net Lease	$	392,640,022	1.96	8.93	8.93	8.75	8.22	8.28	8.78
CPI plus 2%			*0.51*	*3.68*	*3.68*	*2.96*	*3.33*	*3.67*	*4.12*
Core Real Estate:	$	358,090,905	1.54	7.93	7.93	12.08	11.93		
NCREIF ODCE (VW)			*1.70*	*7.87*	*7.87*	*11.34*	*11.79*		
Non-Core Real Estate:	$	296,029,206	3.48	11.21	11.21	16.87	18.26		
NCREIF Property Index			*1.75*	*6.97*	*6.97*	*10.17*	*10.49*		
Alternative Investments									
Private Equity	$	854,635,619	4.75	11.70	11.70	9.40	11.00	7.11	
Mature Private Equity	$	356,671,963	4.10	6.73	6.73	*7.05*	*8.55*		
S&P 500 plus 3%			*3.85*	*21.43*	*21.43*	*12.90*	*18.07*		
Private Equity < 5 Years	$	497,963,656	5.09	15.98	15.98	11.08			
Timberland:	$	208,219,943	1.31	5.99	5.99	7.73	5.85		
NCREIF Timberland Index			*0.70*	*3.35*	*3.35*	*5.54*	*7.16*		
Additional Categories	$	1,435,143,550	1.25	10.13	10.13	3.07	6.75		
B of A Merrill Lynch High Yield Master II			*2.14*	*12.75*	*12.75*	*4.48*	*6.92*		
Cash (Unallocated)	$	366,129,983	0.20	0.55	0.55	0.30	0.22	0.66	2.38
90 Day T-Bill			*0.20*	*0.44*	*0.44*	*0.20*	*0.15*	*0.55*	*2.04*

Total Plan Gross Return for 30-year period* 8.18

* *Returns are annualized for periods longer than one year.*

** *Prior to July 1, 2008, TRS did not benchmark overall fund performance. Effective July 1, 2008, the Board of Trustees approved a Policy Index that represents the returns of appropriate benchmarks for the various asset classes weighted by the mid-point of the strategic range for the current fiscal year.*

*** *As of 6/30/17, 20.1% of Total International Equities were invested in Ermerging Markets.*

Schedule of Investment Returns - Retirement Annuity Trust

2017	Annual Rate of Return Net of Investment Expense	15.00%
2016	Annual Rate of Return Net of Investment Expense	-1.32%
2015	Annual Rate of Return Net of Investment Expense	4.96%
2014	Annual Rate of Return Net of Investment Expense	17.95%

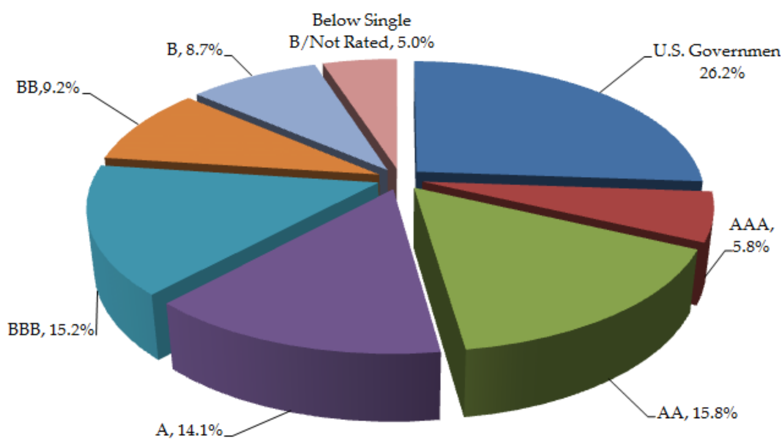
FIXED INCOME INVESTMENTS

As of June 30, 2017, the retirement annuity trust fund had approximately $3.0 billion, 16.2% of total assets, in the fixed income category of investments. The retirement annuity trust fund's fixed income investments maintained the average investment grade rating required by administrative regulation as of June 30, 2017.

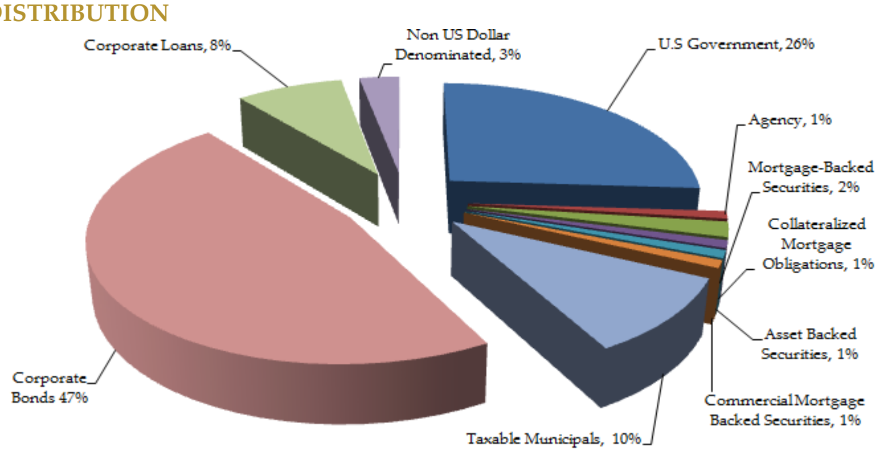
In addition, the retirement annuity trust fund had $1.4 Billion, 7.7% of total assets, in other debt related investments under a regulatory provision which allows for up to 15% of assets in "additional categories of investments" approved by the Board of Trustees. Investments under this authorization included two high yield bond portfolios and two syndicated bank loan portfolios. Also under this provision are several alternative credit portfolios including a multi - strategy opportunistic credit portfolio as well as distressed debt and specialty lending funds.

The credit quality distribution for the retirement annuity trust fund is illustrated below. This chart includes the fixed income category of investments as well as the high yield bonds, international fixed income, and the syndicated bank loan portfolios included in "additional categories of investments". Also illustrated below is the distribution of fixed income assets by sector, again including the high yield bonds, international fixed income, and the syndicated bank loan portfolios held under "additional categories of investments".

FIXED INCOME QUALITY DISTRIBUTION



FIXED INCOME SECTOR DISTRIBUTION



FIXED INCOME MARKET OVERVIEW

The retirement annuity trust fund's investment grade fixed income portfolios returned .12% for the fiscal year ending June 30, 2017. This compares favorably to the trust fund's fixed income benchmark, the Bloomberg Barclays U.S. Government / Credit Index, which returned -.41%. The outperformance was driven by the system's overweighting in corporate bonds which provided higher coupon interest than government bonds of similar duration.

The Federal Reserve (Fed) targets an overall annual inflation rate of 2%, a pace it views as appropriate for economic growth and price stability. Current inflation, as measured by the year-over-year Consumer Price Index (CPI) and Producer Price Index (PPI), were mixed with CPI lower and PPI higher during the last quarter of fiscal year 2017. The CPI was up only +1.9% year-over-year. The PPI has increased 2.4% over the past year. The CPI numbers were driven lower partly due to falling telecom prices and some declines in medical care. For overall CPI, oil prices bottomed in February of 2016, so the jump in overall CPI due to energy faded in February of 2017 and has since declined. The Fed's preferred measure is the price index for Personal Consumption Expenditures (PCE). This measure has moved lower and is now well below the Fed's target, with an overall year-over-year increase of 1.4%. The Federal Funds rate is now at 1.00% to 1.25%. The yield curve flattened significantly in FY 2017, with shorter maturities rising in yield due to the rate hikes while long rates were held down by lower inflation expectations. In summary, inflation has recently declined, and it is important to monitor and see if the data moves higher and closer to target for future Federal Funds rate increases.

The United States has now gone eleven straight years without 3 percent growth in real Gross Domestic Product (GDP), a record. The recession ended in June 2009. In the eight calendar years since then, real annual GDP growth has never exceeded the 2.6% it hit in 2015. Retail sales and consumer spending data were moderate, but disappointing given the strong employment and consumer confidence data. Consumer confidence moved much higher over the year and has reached the highest level since 2000. Housing has been a slight positive source of growth, but it has not been particularly strong since before the recession. Housing prices are up +5.7% over the past year as measured by the S&P/ Case-Shiller Home Price Index, the highest year-over-year gain in 2 ½ years. Measures of manufacturing activity were mixed, with strength in aircraft manufacturing, but no significant signs of overall strength.

Global risk assets (non-US treasuries) rallied during fiscal year 2017, driven largely by continued positive expectations for US fiscal policy, as well as continued improvements in global economic growth and inflation. Gains across most risk assets occurred despite persistent political divisiveness in the US, heightened geopolitical risks (most notably in North Korea), and a range of other international issues. However, the market is becoming more accustomed to expectations of a low growth/ low inflation environment as realized volatility in the treasury market has gradually fallen in 2017.

Investment grade corporates tightened by 10 basis points during the last quarter of fiscal year 2017 to +111 basis points over U.S. Treasuries of same duration, and are trading tighter than long-term averages. Spreads for Investment Grade Corporates ended fiscal year 2016 +162. Utilities and industrials performed slightly better than financials while longer duration corporates had higher returns than shorter duration corporates. In mortgages, Commercial Mortgage Backed Securities (CMBS) outperformed mortgage pass-throughs and ABS. Better global economic growth, rising equity prices and the continued search for yield all led investors to buy higher yielding fixed income for fiscal year 2017.

With U.S. Treasury rates and risk premiums on corporate bonds both still relatively near the low end of their historical range, investment grade fixed income is an asset class with moderately unfavorable risk / reward characteristics and below average upside potential. The retirement system continues to adjust the structure of its fixed income portfolio to control risk and maintain required liquidity. Specifically, the retirement system continues to increase exposure to nontraditional debt-related investments, reduce exposure to investment grade fixed income, and limit our interest rate risk by being slightly short benchmark durations.

EQUITY INVESTMENTS

As of June 30, 2017, the retirement annuity trust fund's public equity investments had a market value of $11.7 billion, representing 62.8% of total assets. The Pension Plan's U.S. equity portfolio returned 21.2% for the fiscal year and outperformed its policy benchmark by 3%. Positive equity returns over the fiscal year explains the year over year increase in market value. The retirement annuity trust fund divides its public equity into two broad categories: domestic and international.

The domestic portfolio had a market value of $7.7 billion as of June 30, representing 41.3% of total assets. The benchmark for the domestic portfolio is the S&P 1500. The S&P 1500 is made up of three well known component indices based upon market capitalization: the S&P 500 large cap, S&P 400 mid cap, and the S&P 600 small cap. The retirement annuity trust fund's domestic equity holdings are comprised of twelve portfolios. Three of the portfolios are internal passively managed index portfolios benchmarked to the S&P 400, 500, and 600. The other nine portfolios are managed externally by five different asset managers, with each portfolio representing a specific strategy and measured against an appropriate benchmark. The collective array of portfolios provides diversification by capitalization, manager, style, and strategy.

The market value of the international equity holdings as of June 30, 2017 was $4.0 billion, representing 21.5% of total assets. The Pension Plan's international equity portfolio returned 23.3% for the fiscal year and outperformed its policy benchmark (MSCI All Country World ex-U.S. Index) by 2.3% points. The benchmark for international equities is the Morgan Stanley Capital International All Country World Index ex US (MSCI ACWI ex US), which represents the markets of 22 developed countries and 23 emerging market countries. Six external asset managers manage the retirement annuity trust fund's international equities, one of which is a passively managed international index fund.

EQUITY INVESTMENTS OVERVIEW

US equity markets finished the first quarter of the fiscal year with positive returns across all market capitalizations and styles. US economic data released during the quarter continued to indicate moderate economic expansion but many remained cautious with continued evidence of slack in labor markets. Investors experienced low levels of volatility in what would be a recurring theme for fiscal year 2017. There was a notable reversal in sector performance as defensive, income-oriented stocks posted negative returns while more economically sensitive sectors outperformed. More specifically, sectors like Financials, Industrials, and Materials outperformed while Utilities and Telecommunication Services declined the most. Consumer Staples and Real Estate stocks also declined while Consumer Discretionary, Energy, and Health Care stocks lagged slightly. Growth moderately outperformed value for the quarter and small-caps in general performed with micro-caps having the greatest outperformance.

US equity markets started the second fiscal quarter with a slight decline, fueled largely by uncertainty surrounding the presidential election. While many initially feared a stock market correction, results swiftly shifted post-election and all major US equity indices finished the first half of the fiscal year in positive territory. Post-election, equity markets were characterized by increased risk appetite driven by expectations that the Trump administration could enact fiscal change. Financial stocks led the market higher, rising more than 20% during the quarter. Infrastructure based sectors like Industrials, Energy, and Materials also outperformed the broader index. Health Care, Real Estate, and Consumer Staples declined in value during the quarter while Utilities and Information Technology also underperformed. Small-cap indices substantially outperformed large-cap counterparts and value stocks outperformed growth stocks

Developed international markets saw strong, positive returns in the first quarter on both an absolute basis and relative to the broad U.S. equity market. In the UK, the Bank of England ("BOE") announced preemptive measures to counteract potential negative effects of the Brexit vote, while the rest of Europe took a more measured response to Brexit. Country returns were largely positive with only a few in the red. During the first quarter the style trend reversed, with value outperforming growth stocks and small-cap outperforming large-caps. Emerging markets continued their rally and outperformed all other equity regions. OPEC agreed to limit output, providing short-term support for emerging market countries heavily tied to the price of oil. In contrast to developed markets, small-cap stocks in emerging markets could not keep pace with the rally in larger stocks and growth outperformed value for the quarter.

Developed international markets ended the second quarter slightly negative. In Europe, the European Central Bank announced a moderation in the pace of asset purchases but also extended the duration of the purchase program. By country, there were few bright spots, with only a few European countries posting positive returns in the fourth quarter. Cyclical sectors, such as Financials and Energy, provided positive contributions for the quarter. There was an inflection point for value stocks during the quarter, producing strong, absolute returns. Growth stocks continued to lag and remained in negative territory for the year and small-cap stocks underperformed large-cap stocks. Emerging Markets underperformed developed markets by a significant margin. Poor performance in emerging markets during the quarter stemmed from fears that stimulus programs in the US could lead to higher bond yields and a stronger dollar, which could draw significant capital to the currency. Emerging market small-cap stocks underperformed large- cap stocks, and value stocks outperformed growth stocks for the quarter.

The second half of the fiscal year began with US equity markets in positive territory and the stock market, again, reached a new high as the Russell 3000 Index increased 5.7%. This was largely a result of expectations for improved corporate earnings driven by continued improvements in US fundamentals and continued muted volatility. For the time being, businesses and consumers were optimistic about the U.S. economy's prospects, but so-called soft data (sentiment) did not appear to translate into accelerated growth as reflected in hard (quantifiable) data. The post-election rally paused in March when the House Republicans could not agree on a replacement for Obamacare. Performance was driven primarily by Technology and Health Care stocks while Consumer Discretionary, Utilities, and Materials also outperformed the broader index. Energy stocks declined the most during the quarter, driven by a decline in global oil prices. Telecommunication Services, Financials, Real Estate, and Industrials also lagged the index. Investors preferred growth stocks at the expense of value and despite a general slowdown across market caps and styles, markets favored large cap, growth-oriented names, as well as momentum and quality factors.

Domestic equity markets continued to rally during the second half of the fiscal year, albeit at a slower rate, but still reaching record highs across major indices. Low volatility and expectations of strong profit growth continued to be the key drivers of the market. Consumer and business confidence remained high despite stalled healthcare legislation that delayed passage of a tax bill. Expectations for fiscal stimulus were again supportive given the positive tone from the Federal Open Market Committee ("FOMC") regarding near-term economic growth and inflation expectations. The Unemployment rate fell to cycle low of 4.2% but this was against a backdrop of a very low labor participation rate. In some ways, US equity performance for the second half of fiscal 2017 represented a reversal of the trend experienced during the second half of fiscal 2016 as low volatility sectors and securities viewed as "bond proxies" performed well. In contrast, this period proved to be more favorable to high momentum, high growth areas of the market. Facebook, Amazon, Netflix and Google (FANG) stocks continued their outperformance which at year-end accounted for a larger percent of the S&P than all energy stocks combined. The sector that led the market higher was Health Care while Information Technology, Industrials, and Financials increased more than the broader index. Equities provided positive returns across all market caps and styles, but with significant dispersion across sectors and market factors. Large-cap stocks continued to outpace small-cap stocks, with the exception of micro-caps.

International equity growth stocks outperformed value in both developed and emerging markets for the third quarter. Underpinning the positive international equity performance was the expectation, supported by improving economic fundamentals, that the global economy was on more stable footing than previously believed. This was especially true in the UK, where recent economic data showed a steady expansion in the face of potentially leaving the EU Common Market. From a regional standpoint, emerging markets outperformed developed markets with India, Korea, and Mexico all posting mid-teen returns while commodity sensitive economies such as Canada and Norway lagged notably. Similarly, sector leadership rotated from Energy to Technology, Healthcare, and Consumer Discretionary largely for the same reason as US equities.

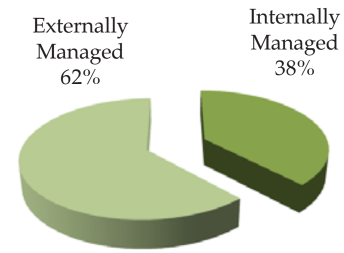
During the fourth quarter, International equity markets continued to react positively to signs of strengthening economic growth across both developed and emerging markets, driving equities higher. Supportive developments include reduced political uncertainty and positive indicators of GDP and earnings growth. This, coupled with more reasonable valuations in comparison to the US, supported the ACWI ex US Index's quarterly outperformance versus the Russell 3000 for the end of the fiscal year. Geopolitical risks (including North Korea, French elections, and US fiscal policy) temporarily drove higher volatility. From a country perspective, political developments drove a generally risk-on repricing of assets. As would be expected during periods of growth leadership, Healthcare and Technology led performance from a sector standpoint, with Materials, Energy, and Telecom lagging. As in the US, international growth equity broadly outperformed value. Developed small-cap equities outperformed large-cap equities, while emerging markets equities narrowly edged out developed markets equities.

In summary, the US equity markets hit record highs in each quarter as the US continued its recovery from the Great Recession with the lowest real GDP growth of the post war period. The continued expansion in global fundamentals provided a steady backdrop for equity markets in general. Global monetary policy was still accommodative but less so than in prior years. Inflation remained near the low end of the Fed's stated goals driven by low commodities and wages. Fiscal year 2017 was a period of heighted geopolitical risks but volatility remained extremely low. Global equity valuations ended the year more attractive than domestic equities but that divergence was somewhat diminished after global fundamentals and valuations improved.

REAL ESTATE

The retirement annuity trust fund's real estate investments had a market value of $1.05 billion as of June 30, 2017, representing 5.6% of total assets. The retirement annuity trust fund's investments in real estate are intended to provide attractive long-term returns, generate reliable cash flow, and provide diversification, thereby reducing the volatility of the overall investment portfolio.

Real Estate Investments
$1.05 Billion Fair Value
As of June 30, 2017



The retirement annuity trust fund's real estate exposure is currently provided through thirteen portfolios. The fund maintains an internally managed portfolio of directly owned properties under long-term lease agreements with high credit quality tenants. TRS Kentucky is also invested in a commingled real estate fund (PRISA Fund), which is managed by Prudential Real Estate Investors. This fund is a core real estate equity fund which invests primarily in existing income-producing properties with strong cash flows and the potential for capital appreciation. The fund is diversified across several property types including office, retail, industrial, apartment, self-storage and hotel.

Additionally, the retirement annuity trust fund is invested in Carlyle Property Investors, a core-plus commingled fund and ten real estate limited partnerships: Carlyle Realty Partners VI, Carlyle Realty Partners VII, Blackstone Real Estate Partners VII, Blackstone Real Estate Partners VIII, Rockwood Capital Real Estate Fund IX, Rockwood Capital Real Estate Fund X, TA Realty Associates Fund X, TA Realty Associates Fund XI, AG Net Lease Realty Fund III, and Landmark Real Estate Partners VII. Going forward, investment staff will continue to opportunistically add to the annuity trust fund's real estate investments.

REAL ESTATE OVERVIEW

As the economic recovery continues, market consensus is that we are deeper into the real estate cycle. That said, in a slow-growth environment with continuing low interest rates, the market has presented attractive investment in various real estate sectors and markets through the fiscal year ended June 30, 2017.

Evaluating general business conditions, as we are 7-8 years into a recovery, we constantly evaluate the general possibility of a recession at this stage. If one occurs, however, it is likely that a recession would not be real estate-led, as was the case in the Global Financial Crisis, for two main reasons. First, real estate lending activity and the amount of outstanding commercial debt remain relatively restrained when compared to prior cycles; there is no large sign of over-heating in the debt markets. Further, construction activity remains generally muted when compared to prior recoveries.

As a result, from the perspective of operating fundamentals, the markets present a reliable underpinning. In this cycle, multifamily (apartment) fundamentals have shown among the most robust reliable demand characteristics of any sector. That said, the multifamily sector has seen the most corresponding new construction. Even so, net absorption has kept up with new construction activity in most markets. Nationally, it appears that the growth of new deliveries is decelerating. With continued growth among expected renters, it appears that vacancy rates will drop again toward their prior lows of 2H 2016.

In other sectors, operating fundamentals remained generally steady. The commercial retail sector, however, saw vacancies increase as e-commerce and fundamental changes took hold. We expect commercial retail to continue to be a headwind for real estate. As businesses become increasingly reliant on online sales growth, their brick and mortar stores become costly and less efficient. All leading to an oversupply of retail space and lower valuations.

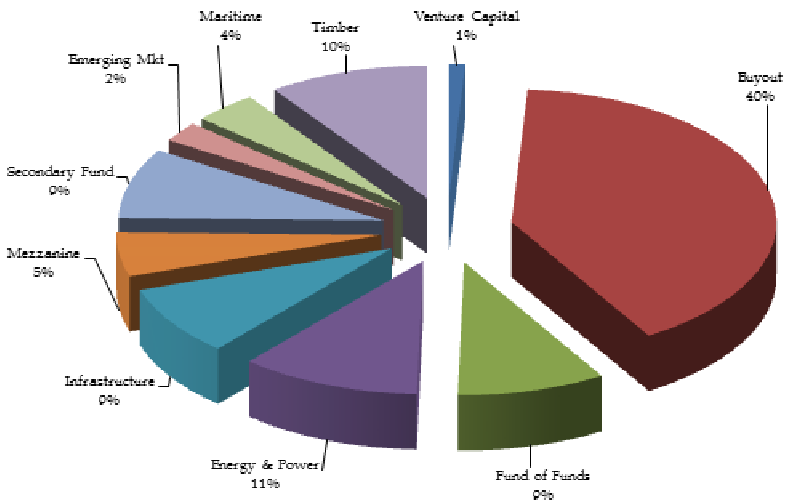
In the capital markets, lending remained relatively disciplined, especially compared to prior recoveries. In particular, construction lending activity remained very much in check. Returns among core managers continued to decrease over the fiscal year. The core index showed quarterly returns of over 2.0% in the first half of the fiscal year; in the second half, we show that rent growth had decelerated, dropping to a level of approximately 1.70% in the 4th quarter of the fiscal year.

In summary, due to current operating fundamentals and low lending rate, core real estate investments continued to drive equity real estate returns. However, opportunistic and non-core real estate investments began leading the sector in the 4th quarter and have been a solid contributor throughout the year. As we find opportunities, we will continue to invest in the real estate sector to enhance returns and serve as a diversifier to our other holdings.

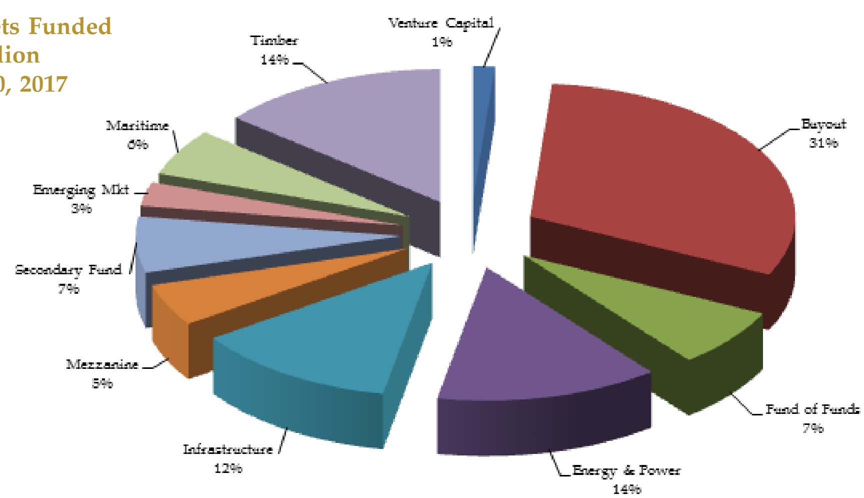
ALTERNATIVE ASSETS

As of June 30, 2017, the retirement annuity trust fund had committed $2.045 billion to alternative investments and had funded $1.186 billion of those commitments. The percentage of the retirement annuity trust fund's portfolio invested in alternative assets was 5.7%. The retirement annuity trust fund's current alternative asset portfolio consists of private equity investments and timberland.

Alternative Assets Committed
$2.045 Billion
as of June 30, 2017



Alternative Assets Funded
$1.186 Billion
as of June 30, 2017



PRIVATE EQUITY

The retirement annuity trust fund has exposure to venture, buyout, infrastructure, energy, mezzanine and several other private equity sectors via participation in limited partnerships as well as investments in funds of funds. The retirement annuity trust fund has a relatively young private equity investment program, which it intends to continue to grow with a disciplined plan of commitments each year. The retirement annuity trust fund looks to diversify its private equity portfolio by manager, country, strategy, and vintage year. Vintage year diversification is achieved by building out the portfolio with disciplined levels of commitments over time. A commitment to any given partnership shall not exceed 20% of the partnership's total commitments.

The Board and staff understand that private equity investments (along with many other forms of alternative assets) are illiquid and have a long-term holding period. When added to a portfolio with other publicly traded assets, this asset class can help to diversify and reduce risk for the retirement annuity trust fund's overall portfolio while enhancing returns. Private equity returns for the first several years of a partnership's life are routinely negative due to the J-curve effect. Positive returns are typically realized only several years into a partnership's existence, during the harvesting period.

PRIVATE EQUITY MARKET OVERVIEW

Private equity markets are positively affected by strong public equity markets. When public markets are strong more private equity portfolio companies are sold. The past fiscal year has seen an active IPO market as the public markets grind higher. However, as result of the strong public equity markets the entry price for private equity portfolio companies has risen forcing many managers to pay higher multiples for underlying portfolio companies or to put their dry powder to work at a much slower pace that in the past.

The past fiscal year was a period of elevated interest in the private equity market as investors continue to increase their commitment amounts but pare down their fund relationships to only the most high-quality managers. The past fiscal year has also seen large buyout funds returning to the marketplace. We have begun to see more opportunity in the large cap buyout space while continuing to see opportunity in the middle market space and in other niche areas such as infrastructure and distressed credit. Additionally, the European markets continue to present investment opportunities in the private equity space.

TIMBERLAND

In addition to private equity, the retirement annuity trust fund has invested in timberland in the alternative asset class. As of June 30, 2017 the retirement annuity trust fund owns approximately 73,000 acres of timberland outright, has a 7.15% interest in a commingled fund that holds approximately 98,000 acres of timberland and is a member of a joint venture that purchased an interest in approximately 124,000 acres of timberland located across seven southern states. Timberland is, by nature, a long term investment as our anticipated time horizon in this asset category is generally a minimum of ten to fifteen years. Timberland provides valuable diversification, current income, and a hedge against inflation. Due to the low correlation of returns with other asset classes, timberland investments should lower the overall volatility of the retirement annuity trust fund's portfolio. Timberland should earn real returns comparable to traditional equity investments with volatility between equities and fixed income over the long-term.

The retirement annuity trust fund diversifies its timberland investments by geography, species of trees, and maturity of timber stands. Investment returns from timberland are primarily driven from net cash flow generated from the sale of trees (referred to as stumpage sales) and capital appreciation from the biological growth of the trees. Both of these return factors depend to some degree upon the direction of forest commodity prices (paper goods and lumber products). There can also be gains from the timely sale of timberland from the conversion of timberland into higher and better uses, such as vacation property sales.

TIMBERLAND MARKET OVERVIEW

U.S. timber markets have been weak across most timber-growing regions throughout the fiscal year, with the only exception being the Pacific Northwest. An oversupply of timber has allowed wood-using mills to maintain sizeable inventories, pushing timber prices lower through the first part of the fiscal year. While widespread, this oversupply issue has been more problematic in the U.S. South than other U.S. timber growing regions.

After hitting an 8-month low in May of 2017, U.S. housing starts for June 2017, jumped approximately 8 percent from the previous month. It was the strongest construction activity in four months and approximately 7 percent higher than June of 2016. The price of lumber soared through the first half of 2017, reflecting a 17 percent year-over-year increase. This positive jump was due primarily to a reduced level of Canadian lumber exports to the U.S., driven lower by the British Columbia wildfires and tariff uncertainty relating the Softwood Lumber Agreement.

Significant demand growth is expected for timber products. Many forest product manufacturers have announced or completed capital investments relating to new mills, expansions, and improvements. An increasing demand, both domestic and foreign, for softwood logs and lumber is anticipated to drain the oversupply of logs within the next several years. Historically, lumber prices and timber stumpage prices have been closely correlated, as such, the lagging timber markets are expected to regain lost ground on the increasing lumber prices as the oversupply of timber diminishes.

Retirement Annuity Trust
Portfolios Fair Values *
June 30, 2017

INTERNALLY MANAGED	
Cash Equivalents	
Cash Collections Fund (Unallocated)	$ 366,129,983
Fixed Income	
Intermediate Bond Fund	704,741,921
Long Term Bond Fund	549,720,953
Broad Market Bond Fund	548,178,766
Internal Bond Fund	173,967,739
Life Insurance Trust	86,443,328
Tax Shelter Fund	343,792
Equity	
S & P 500 Stock Index Fund (Large Cap)	2,295,781,492
S & P 400 Stock Index Fund (Mid Cap)	347,038,280
S & P 600 Stock Index Fund (Small Cap)	251,837,025
Real Estate	
Internally Managed Fund	392,640,022
Subtotal	**$ 5,716,823,301**
EXTERNALLY MANAGED	
Fixed Income	
Galliard Capital Management	504,330,367
Ft. Washington Broad Market	452,730,406
Domestic Equity	
Todd Asset Management (Large Cap Core)	1,111,030,934
UBS (Large Cap Value)	953,513,471
Wellington (Large Cap Core)	672,382,208
GE Asset Management (Large Cap Growth)	628,650,762
Todd Asset Management Opportunity Fund	433,437,988
Wellington (Mid Cap Core)	332,239,292
UBS (130/30)	241,434,211
Ft. Washington Focused Equity (All Cap Core)	232,768,027
Wellington (Small Cap Core)	182,476,591
International Equity	
Baillie Gifford EAFE Alpha	977,419,949
UBS All Country World ex US	799,681,143
Todd Asset Management International	778,615,779
Blackrock All Country World ex US IMI	734,761,148
Baring All Country World ex US	621,464,493
Todd Asset Management International Intrinsic Value	92,011,001
Real Estate	
Prudential PRISA Fund	312,737,352
Carlyle Property Advisors	45,353,554
Rockwood Capital Real Estate Fund IX	43,752,117
Blackstone Partners VII, LP	43,041,226
The Realty Associates Fund X	41,781,817
AG Net Lease Realty Fund III, LP	36,464,149
Carlyle Realty Partners VII, LP	33,693,430
Landmark Real Estate Partners, VII	24,842,936
Blackstone Partners VIII, LP	22,708,607
The Realty Associates Fund XI	19,914,072
Carlyle Realty Partners VI, LP	18,309,058
Rockwood Capital Real Estate Fund X	11,521,794
Alternative Investments	
IFM Global Infrastructure LP	116,075,860
Molpus Woodlands Group Lake Superior Timberlands LLC	111,822,137

Externally Managed continued ...

Molpus Seven States LLC	63,114,118
Hellman & Friedman Fund VII	58,145,419
Public Pension Capital LLC	45,763,588
Alinda Infrastructure Fund II	40,559,460
APAX VIII, LP	36,885,163
KKR & Co European Fund III	33,809,458
Actis Global Fund IV	33,783,888
Hancock Bluegrass LLC - Oregon	33,283,688
NGP Natural Resources XI, LP	29,531,128
J. P. Morgan Maritime Fund	28,958,495
Riverstone/Carlyle E & P Fund IV	26,902,427
KKR & Co European Fund IV	26,265,452
Ft. Washington Fund VI	25,815,503
Carlyle Global Financial Services Partners II	24,829,478
NGP Natural Resources X, LP	23,185,643
Oaktree European Principal Fund III	22,839,529
Riverstone E & P Fund VI	20,608,230
Carlyle Europe Partners IV, LP	19,731,527
Audax Private Equity Fund IV, LP	19,652,144
Ft. Washington Fund VIII	19,511,120
Stepstone Pioneer Capital Fund III, LP	19,258,745
J. P. Morgan Maritime Fund II	16,863,863
Gavea Investments Fund V, LP	16,285,430
Riverstone E & P Fund V	15,854,256
Oaktree Mezzanine Fund IV	14,951,354
Chrysalis Venture Fund III	14,691,809
Audax Mezzanine Fund III	12,369,189
Lexington Capital Partners Fund VII	11,690,390
KKR & Co Fund 2006	11,127,779
Landmark Equity Partners Fund XIV, LP	10,850,416
Landmark Equity Partners Fund XV, LP	10,792,308
Ft. Washington Fund V	9,208,619
Lexington Capital Partners Fund VIII	8,587,280
Audax Private Equity Fund V, LP	8,229,847
Oaktree Mezzanine Fund III	6,367,478
Ft. Washington Fund IX-K	3,839,985
Ft. Washington Fund IX	3,418,374
Audax Mezzanine Fund IV	2,840,438
Hellman & Friedman Fund VIII	2,834,423
CapitalSouth Partners Fund III	891,604
APAX IX, LP	828,520
Additional Categories	
Ft. Washington High Yield Bond Fund	330,130,219
Marathon TRS/Credit Fund LP	323,865,814
Shenkman Capital Management	175,979,332
Columbia High Yield Fund	163,719,768
Golub Capital Pearls 11, LLC	123,061,241
Baarings European Loan Fund (Babson)	103,170,000
Marathon European Credit Opp Fund II	60,730,585
Oaktree Opportunities IX, LP	44,345,399
Marathon European Credit Opp Fund III	34,061,480
Highbridge Principal Strategies III	29,828,126
Avenue Special Situations Fund VI	20,914,355
Oaktree Opportunities X, LP	9,847,616
Oaktree European Dislocation Fund, LP	7,532,944
Oaktree European Capital Solutions Fund	6,937,708
AG Select Partners Advantage Fund	1,018,963
Subtotal	**$ 12,901,066,994**
TOTAL ASSETS	**$ 18,617,890,295******

* *Detailed information concerning the market values of all TRS investments is available upon request.*

** *Includes Life Insurance Trust values of $86,443,328, Tax Shelter Annuity value of $343,792, and 401(h) value of $19,471,617. This does not include the J. Losey Scholarship Fund.*

Investment Summary
Fair Value – Retirement Annuity Trust
June 30, 2017

Type of Investment	Fair Value 06/30/16	Acquisitions	Appreciation (Depreciation)	Sales Redemptions, Maturities & Paydowns	Fair Value 06/30/17*
Cash Equivalents	$ 523,293,619	$ 3,735,654,179	$	$ 3,713,633,496	$ 545,314,302
Fixed Income	2,823,674,612	2,967,443,502	(90,404,509)	2,747,017,104	2,953,696,501
Real Estate	940,860,202	158,240,822	37,946,168	90,287,058	1,046,760,134
Alternative	932,813,350	265,295,943	87,017,966	222,271,697	1,062,855,562
Equities	10,267,066,002	3,382,373,692	2,054,391,373	4,114,174,429	11,589,656,638
Additional Categories	1,309,513,418	539,702,681	76,007,789	505,616,730	1,419,607,158
TOTAL	**$ 16,797,221,203**	**$ 11,048,710,819**	**$ 2,164,958,787**	**$ 11,393,000,514**	**$ 18,617,890,295**

* *Includes Life Insurance Trust values of $86,443,328, Tax Shelter Annuity value of $343,792, and 401(h) value of $19,471,617. This does not include the J. Losey Scholarship Fund.*

Retirement Annuity Trust
Contracted Investment Management Expenses
Fiscal Year 2016-17
(In thousands of dollars)

Investment Counselor Fees	Assets Under Management	Expense	Basis Points (1)
Equity Manager(s)	$ 8,791,888	$ 17,612	20.0
Fixed Income Manager(s)	957,060	384	4.0
Real Estate	654,120	8,813	134.7
Additional Categories	1,435,144	9,454	65.9
Alternative Investments (2)	1,062,856	17,429	164.0
TOTAL	**$ 12,901,068**	**$ 53,692**	**41.6**
Administrative and Operation Expenses			
Custodian Fees	$ 18,618,484	$ 482	0.3
Consultant Fees		499	0.3
Legal & Research		57	0.0
Other Administrative and Operational		3,117	1.7
TOTAL	**$ 18,618,484**	**$ 4,155**	**2.2**
GRAND TOTAL		**$ 57,847**	**31.1**

(1) – One basis point is one hundredth of one percent or the equivalent of .0001.
(2) – Private equity fees are either withheld from the Fund operations or paid by direct disbursement, depending on contract terms.

Schedule of Contracted and Administrative Investment Expenses
Retirement Annuity Trust
June 30, 2017

INVESTMENT COUNSELOR FEES

EQUITY MANAGERS	
Baillie Gifford	3,114,384
Baring Asset Management, Inc.	2,473,839
Fort Washington Focused Equity	425,662
GE Asset Management	786,682
Todd Asset Management LLC	1,325,541
UBS Global Asset Management	5,980,296
Wellington Management Company	3,168,837
Blackrock	336,647
Total Equity Managers	**$ 17,611,888**
FIXED INCOME MANAGERS	
Fort Washington Investment Broad Market	160,777
Galliard Capital Management	222,920
Total Fixed Income Managers	**$ 383,697**
REAL ESTATE	
Prudential PRISA	2,380,988
Angelo Gordon Net Lease Fund III	598,738
Blackstone Partners Fund VII, L.P.	496,154
Blackstone Partners Fund VIII, L.P.	750,000
Carlyle Realty Partners Fund VI, L.P.	273,328
Carlyle Realty Partners Fund VII, L.P.	698,083
Carlyle Property Investors	84,124
Landmark Real Estate Fund VII	500,000
Landmark Real Estate Fund VIII	273,098
Rockwood Capital Real Estate Fund IX, L.P.	856,250
Rockwood Capital Real Estate Fund X, L.P.	298,052
TA Realty Associates Fund X, L.P.	992,424
TA Realty Associates Fund XI, L.P.	611,358
Total Real Estate Managers	**$ 8,812,597**
ADDITIONAL CATEGORIES	
Angelo Gordon Select Partners Advantage Fund	12,613
Avenue Capital Special Situations Fund VI, L.P.	178,981
Barings European Loan Fund	402,478
Columbia High Yield Fund	597,234
Fort Washington Investments High Yield	650,178
Golub Capital - Pearls 11, LLC	1,052,994
Highbridge Principle Strategies Fund III, L.P.	716,902
Marathon Credit Fund	2,552,521
Marathon European Credit Fund II	740,629
Marathon European Credit Fund III	433,519
Oaktree European Capital Solutions Fund, L.P.	(4,460)
Oaktree European Dislocation Fund, L.P.	228,174
Oaktree Opportunities Fund IX, L.P.	786,258
Oaktree Opportunities Fund X, L.P.	399,831
Shenkman Capital	706,514
Total Additional Category Managers	**$ 9,454,366**
ALTERNATIVE INVESTMENTS	
Actis Global Fund IV, L.P.	994,000
Alinda Infrastructure Fund II, L.P.	607,098
APAX Fund VIII, L.P.	435,385
APAX Fund IX, L.P.	794,486
Audax Mezzanine Fund III, L.P.	125,504
Audax Mezzanine Fund IV, L.P.	443,335
Audax Private Equity Fund IV, L.P.	
Audax Private Equity Fund V, L.P.	100,037
Capital South Fund III, L.P.	93,487
Carlyle Europe Partners IV, L.P.	634,085
ALTERNATIVE INVESTMENTS continued ...	
Carlyle Global Financial Services Fund II, L.P.	609,560
Chrysalis Fund III, L.P.	238,628
Fort Washington Fund V, L.P.	72,312
Fort Washington Fund VI, L.P.	180,064
Fort Washington Fund VIII, L.P.	126,000
Fort Washington Fund IX, L.P.	38,608
Fort Washington Fund IX-K, L.P.	38,588
Gavea V	600,000
Hancock Bluegrass LLC Oregon	242,332
Hellman and Friedman Fund VII, L.P.	241,322
Hellman and Friedman Fund VIII, L.P.	566,765
IFM Global	1,066,848
JP Morgan Maritime Fund , L.P.	540,562
JP Morgan Maritime Fund II, L.P.	230,959
KKR Fund 2006, L.P.	(22,227)
KKR European Fund III, L.P.	30,418
KKR European Fund IV, L.P.	304,564
KKR Americas Fund XII, L.P.	326,388
Landmark Equity Partners Fund XIV, L.P.	300,000
Landmark Equity Partners Fund XV, L.P.	300,000
Lexington Capital Partners Fund VII, L.P.	154,246
Lexington Capital Partners Fund VIII, L.P.	319,487
Molpus Lake Superior Michigan	864,015
Molpus Lake Superior Hiwassee	70,606
Molpus Seven States	591,339
NGP Natural Resources Fund X, L.P.	478,796
NGP Natural Resources Fund XI, L.P.	660,075
Oaktree European Principal Fund III, L.P.	308,573
Oaktree Mezzanine Fund III, L.P.	94,328
Oaktree Mezzanine Fund IV, L.P.	182,021
Stepstone Partners Fund III, L.P.	175,816
Public Pension Capital	1,432,854
Riverstone/Carlyle Energy and Power Fund IV, L.P.	171,319
Riverstone/Carlyle Energy and Power Fund V, L.P.	164,306
Riverstone Energy and Power Fund VI, L.P.	1,502,018
Total Alternative Managers	**$ 17,428,907**

ADMINISTRATIVE & OPERATIONAL EXPENSES

CUSTODIAN	
The Bank of New York Mellon	481,653
Total Custodian Fees	**$ 481,653**
CONSULTANT	
Aon Hewitt	413,850
Bevis Longstreth	51,660
George Philip	33,965
Total Consultant Fees	**$ 499,475**
LEGAL & RESEARCH	
Reinhart Boerner Van Deuren	5,936
Ice Miller	51,266
Total Legal & Research	**$ 57,202**
OTHER	
Other Administrative and Operational (includes Personnel, Subscription services, etc.)	3,116,857
Total Other	**$ 3,116,857**
TOTAL INVESTMENT EXPENSES	**$ 57,846,642**

Ten Largest Stock Holdings Ranked [1] [2]
by Fair Value
June 30, 2017

Rank	Description	Fair Value	Percentage of Equities
1	Apple Inc	181,213,021	1.55
2	Amazon.com Inc	121,056,144	1.04
3	Facebook Inc	113,267,612	0.97
4	JP Morgan Chase & Co	111,105,383	0.95
5	Microsoft Corp	92,586,914	0.79
6	UnitedHealth Group Inc	86,350,836	0.74
7	Allergan PLC	84,855,426	0.73
8	Alphabet Inc/CL C	77,283,852	0.66
9	Alphabet Inc/CL A	71,857,756	0.61
10	Bank of America Corp	69,889,130	0.60

Top Ten Fixed Income Holdings [2]
by Fair Value
June 30, 2017

Rank	Description	Maturity	Coupon	Par Value	Fair Value	Percent of Fixed Income
1	U S Treasury-CPI Inflation	1/15/2027	0.375	81,311,215	79,858,915	2.64
2	U S Treasury Note	6/30/2019	1.625	45,000,000	45,200,385	1.50
3	U S Treasury Note	5/15/2026	1.625	45,000,000	42,662,115	1.41
4	U S Treasury Note	5/15/2020	1.500	40,000,000	39,954,680	1.32
5	U S Treasury Bond	8/15/2023	6.250	31,900,000	39,699,295	1.31
6	U S Treasury Note	5/15/2024	2.500	31,000,000	31,761,670	1.05
7	U S Treasury Note	2/15/2025	2.000	32,000,000	31,561,248	1.05
8	U S Treasury Bond	2/15/2047	3.000	29,750,000	30,688,970	1.02
9	U S Treasury Bond	8/15/2029	6.125	22,000,000	30,651,324	1.01
10	U S Treasury Note	11/30/2019	1.500	30,000,000	30,028,140	0.99

(1) Includes only actively managed separate accounts.

(2) Detailed information concerning these values along with book values and cost of all TRS investments is available upon request.

Transaction Commissions Fiscal Year 2016-17

COMPANIES	SHARES TRADED	COMMISSIONS	COMMISSION PER SHARE	% OF TOTAL
Abel Noser	4,872,893.00	46,279.83	0.009	2.78 %
Allen & Co	1,500.00			0.00
Apex Clearing	2,192.00	76.72	0.035	0.00
Avondale Partners, LLC	10,027.00	350.95	0.035	0.02
Barclays	363,505.00	9,841.81	0.027	0.59
Blair, William & Co	50,454.00	1,652.51	0.033	0.10
BMO Capital Markets	104,249.00	3,901.83	0.037	0.23
BNY ConvergEX Group	27,719.00	1,065.49	0.038	0.06
BTIG	158,424.00	6,143.68	0.039	0.37
Burke & Quick Partners LLC	11,540.00	403.93	0.035	0.02
Canaccord Genuity, Inc.	32,070.00	1,122.48	0.035	0.07
Cantor Fitzgerald & Co	57,247.00	1,470.81	0.026	0.09
CIBC Worldmarket	39,782.00	1,507.51	0.038	0.09
Citigroup Global	201,757.00	4,148.50	0.021	0.25
ConvergEx - Algos	17,901,753.00	89,508.85	0.005	5.38
ConvergEx - FS	4,409,964.00	44,099.64	0.010	2.65
ConvergEx - Transitions	11,625,956.00	58,129.80	0.005	3.50
ConvergEx ADR Conversions	11,574,906.00	160,890.62	0.014	9.68
Cornerstone	338,950.00	11,754.50	0.035	0.71
Cowen & Co	267,756.00	10,489.39	0.039	0.63
Credit Suisse Sec. LLC	1,512,829.00	35,134.99	0.023	2.11
Cuttone & Co Inc	22,785.00	455.70	0.020	0.03
D A Davidson & Co	9,527.00	333.45	0.035	0.02
Deutsche Bank	251,622.00	5,287.53	0.021	0.32
Evercore Group LLC	11,187.00	344.04	0.031	0.02
Fidelity Capital Markets	6,231.00	218.09	0.035	0.01
First Kentucky Securities Corp	132,737.00	1,644.00	0.012	0.10
Freidman Billings	112,106.00	4,433.29	0.040	0.27
Goldman Sachs	790,169.00	25,579.05	0.032	1.54
Guggenheim Capital Markets	17,657.00	607.24	0.034	0.04
HSBC	600.00	25.20	0.042	0.00
Instinet	325,721.00	3,431.57	0.011	0.21
Investment Tech Grp Transition	29,266,195.00	220,835.43	0.008	13.28
Investment Technology Grp	25,624,350.00	237,643.02	0.009	14.29
ISI Algos	3,123,665.00	31,236.65	0.010	1.88
ISI Group	1,014,727.00	25,076.47	0.025	1.51
J.J.B. Hilliard, W.L. Lyons	606,548.00	18,196.44	0.030	1.09
Janney Montgomery Scott Inc	26,107.00	938.44	0.036	0.06
Jefferies & Co.	380,284.00	11,700.06	0.031	0.70
JMP Securities	4,288.00	80.08	0.019	0.00
Jones & Associates	163,501.00	6,789.56	0.042	0.41
JP Morgan & Chase	612,570.00	9,231.50	0.015	0.56
Keefe Bruyette & Woods	30,964.00	1,153.76	0.037	0.07
Keybanc Capital	52,625.00	1,869.14	0.036	0.11
Knight Equity Markets	8,206.00	287.22	0.035	0.02
Leerink Swann & Co.	64,845.00	1,886.84	0.029	0.11
Liquidnet Inc	8,577,848.00	85,630.08	0.010	5.15
Liquidnet Inc - Transition	5,136,768.00	36,979.34	0.007	2.22
Loop Capital Markets, LLC	1,500.00	67.50	0.045	0.00
Luminex Trading	20,826.00	52.07	0.003	0.00
MacQuarie Securities Inc	22,795.00	822.96	0.036	0.05
Merrill Lynch	3,133,004.00	83,737.00	0.027	5.04
Merrill Lynch ADR Conversions	68,600.00	2,058.00	0.030	0.12
Merrill Lynch, Pierce, Fenner	26,369.00	793.42	0.030	0.05
Miller Tabak & Co. LLC	4,687.00	164.05	0.035	0.01
Mizuho Securities, USA	31,764.00	1,207.33	0.038	0.07
MKM Partners	59,544.00	2,110.24	0.035	0.13

Transaction Commissions continued . . .

COMPANIES	SHARES TRADED	COMMISSIONS	COMMISSION PER SHARE	% OF TOTAL
Morgan Stanley	916,712.00	15,783.25	0.017	0.95
Morgan Stanley Smith Barney-Louisville	140,000.00	4,200.00	0.030	0.25
Morgan Stanley Smith Barney-NKY	515,496.00	15,464.88	0.030	0.93
Needham	9,498.00	285.84	0.030	0.02
Pershing LLC	191,287.00	4,816.71	0.025	0.29
Pickering Energy Partners Inc.	8,531.00	298.59	0.035	0.02
Piper Jaffray	70,669.00	2,486.03	0.035	0.15
Pulse Trading	47,286.00	472.86	0.010	0.03
R W Baird	159,196.00	5,231.29	0.033	0.31
Raymond James & Assoc	2,899,933.00	88,050.83	0.030	5.30
RBC Capital Markets	372,916.00	9,098.96	0.024	0.55
Rosenblatt Securities LLC	1,592.00	71.64	0.045	0.00
Sandler O'Neill	27,300.00	955.49	0.035	0.06
Sanford C Bernstein	340,922.00	4,936.61	0.014	0.30
Scotia Capital, USA	37,480.00	1,311.81	0.035	0.08
Seaport	6,746.00	247.58	0.037	0.01
Sidoti & Company LLC	15,065.00	527.29	0.035	0.03
State Street Global	4,567.00	165.85	0.036	0.01
Stephens Inc.	36,499.00	1,419.34	0.039	0.09
Stifel, Nicolaus & Co	604,536.00	19,426.11	0.032	1.17
Suntrust Robinson	62,949.00	2,247.24	0.036	0.14
Susquehanna Brokerage	32,665.00	1,157.52	0.035	0.07
Telsey Advisory Group LLC	6,343.00	222.02	0.035	0.01
Tradebook	16,819,981.00	84,100.17	0.005	5.06
UBS/Paine Webber Securities	393,973.00	11,855.13	0.030	0.71
UBS/Paine Webber-Louisville	899,782.00	26,993.46	0.030	1.62
Wall Street Access	194,069.00	1,531.46	0.008	0.09
Wedbush Morgan Securities	19,974.00	702.44	0.035	0.04
Weeden & Co	1,405,926.00	43,266.66	0.031	2.60
Wells Fargo Securities, LLC	135,329.00	4,558.98	0.034	0.27
Wunderlich Securities Inc	400.00			0.00
TOTALS	**159,686,017.00**	**$ 1,662,765.64**	**0.010**	**100.00%**

The acquisition of initial public offerings (IPOs)represented a portion of small capitalization stock purchases. IPOs usually have a high commission rate; however, the security issuers and not the investors pay the commissions. In 2016-17, the retirement annuity trust fund bought small capitalization IPOs that generated $157,730 in commissions. Although these commissions were not paid by the retirement system, they resulted from the retirement annuity trust fund's investment activities and are included in the total commissions of $1,662,766. Typical stock transactions occur at lower commission rates than IPO transactions, frequently $.03 per share or less. Investment companies usually provide investment research for brokerage clients.

PROXY VOTING AND CORPORATE BEHAVIOR

The System regularly votes proxy statements associated with its equity ownership. The positions assumed by the System are intended to represent the financial interests of the membership. The Board of Trustees has adopted a policy that directs the staff not to subjugate the financial concerns of the System to social or political protests. At the same time, the System expects the companies in which it acquires stock to be solid corporate citizens that abide by federal, state, and local laws. The Board has adopted the following position on corporate behavior:

The Board's stated fiduciary duty is to obtain the highest return for the Fund commensurate with acceptable levels of risk. This implies that non-financial considerations cannot take precedence to pure risk/return considerations in the evaluation of investment decisions. However, action taken by the Fund as a shareowner can be instrumental in encouraging action as a responsible corporate citizen by the companies in which the Fund has invested.

The Board expects the managements of the companies whose equity securities are held in the Fund's portfolio to conduct themselves with propriety and with a view toward social considerations. A level of performance above minimum adherence to the law is generally expected. If any improper practices come into being, the Board expects corporate management to move decisively to eliminate them and effect adequate controls to prevent recurrence.

On the other hand, the Board does not intend to supplant the duties which are the responsibility of federal or state regulatory agencies, such as the Equal Employment Opportunity Commission, the Environmental Protection Agency, the Occupational Safety and Health Agency, the Nuclear Regulatory Commission, the Securities and Exchange Commission, and others which are covered by the laws of the United States Government or the State of Kentucky.

Should satisfaction of the Board's criteria by any company not be adequate, the Board will consider what action to take, which may include, but not be limited to, correspondence with the company, meetings with company officials, sponsoring of shareholder resolutions or, as a last resort, liquidation of the System's holdings in the company, if the sale is consistent with sound investment policy.

SECURITY LENDING

The System operates a security lending program in which it temporarily lends securities to qualified agents in exchange for a net fee and high quality collateral. U.S. Government and agency securities and select stocks and bonds are the types of securities loaned. The System's custodian, The Bank of New York Mellon, acts as lending agent in exchanging securities for collateral. The collateral, at the time of the loan, has a value of not less than 102% of the market value of the lent securities plus any accrued, unpaid distributions. The collateral consists of cash, marketable U.S. Government securities, and selected marketable U.S. Government agency securities approved by the System.

Cash collateral is invested in short term obligations fully guaranteed by the United States Government or select Government agencies and Government Repurchase Agreements with qualified agents. The System cannot pledge or sell collateral securities unless the borrower defaults. The lending agent also indemnifies the System from any financial loss associated with a borrower's default and collateral inadequacy. The weighted average maturity of cash collateral investments is typically two days. The System has no credit risk exposure to borrowers, since the amounts the System owes borrowers exceeds the amounts the borrowers owe the System.

Security lending programs can entail considerable interest rate risk and credit risk. The System has structured its program to minimize these two main categories of risk. The interest rate risk is managed, as mentioned above, by limiting the term of cash collateral investments to several days. The credit risk is controlled by investing cash collateral in securities with qualities similar to the creditworthiness of lent securities.

KENTUCKY INVESTMENTS

The System is always cognizant of its significant role in the Commonwealth's economy. Over $2 billion in benefits are distributed to members and annuitants living in Kentucky annually. Approximately $300 million of the retirement annuity trust fund's investments directly impact the Commonwealth. These investments include: commercial real estate; bonds issued by public agencies of the Commonwealth and those of local municipalities; pools of single-family mortgages in Kentucky; financing for multi-family housing, and; investments in companies which have an impact on the Commonwealth's economy but receive earnings from global operations. Fiduciary duty requires that investments be made solely for the benefit of the System's members and annuitants. Investments which benefit the Commonwealth's economy are made only when fully consistent with this fiduciary duty.

Professional Service Providers

Investment Consultant
Aon Hewitt

Investment Custodian
The Bank of New York Mellon

Fixed Income Managers
Galliard Capital Management
Ft. Washington Investment Advisors

Domestic Equity Managers
Todd Asset Management LLC
UBS Global Asset Management
Wellington Management Company
GE Asset Management
Ft. Washington Investment Advisors

International Equity Managers
Todd Asset Management LLC
UBS Global Asset Management
Baring Asset Management, Inc.
Baillie Gifford
BlackRock Institutional Trust Company

Real Estate Managers
Prudential Real Estate Investors
Carlyle Realty Partners
Blackstone Real Estate Partners
Rockwood Capital Real Estate
TA Associates Realty
Angelo Gordon & Co.
Landmark Real Estate Partners

Alternative Investment Managers
Molpus Woodlands Group
Hancock Natural Resources Group
Kohlberg Kravis Roberts & Co.
Chrysalis Ventures
Ft. Washington Private Equity Investors
Alinda Capital Partners, LLC
Riverstone Holdings, LLC
CapitalSouth Partners
Landmark Partners
Lexington Partners
Oaktree Capital Management
Stepstone Pioneer Capital
Audax Group
J.P. Morgan Asset Management
Hellman & Friedman Capital Partners
Natural Gas Partners
Apax Partners
Actis LLP
Carlyle Global Partners
Public Pension Capital
IFM Investors
Gavea Investimentos

Additional Categories Investment Managers
Avenue Capital Group
Marathon Asset Management
Ft. Washington Investment Advisors
Oaktree Capital Management
Shenkman Capital Management, Inc
Highbridge Principal Strategies, LLC
Angelo Gordon & Co.
Golub Capital
Barings Asset Management, Inc.
Columbia Threadneedle Investments

Attorney
Ice Miller LLP
Reinhert, Boerner, Van Deuren

HEALTH INSURANCE TRUST FUND

INVESTMENT POLICY SUMMARY

The statute that created the health insurance trust fund on July 1, 2010, KRS 161.677, obliges the Board to "manage the assets of the fund in the same general manner in which it administers the retirement funds, except that the asset allocation may differ and separate accounting and financial reporting shall be maintained for the trust fund." KRS 161.430, which governs the investment of funds for the retirement funds, requires that members' assets be managed in a manner consistent with fiduciary standards set forth in the "prudent person rule." Subject to this statute, administrative regulation 102 KAR 1:178 establishes investment policies for the health insurance trust fund. This regulation requires the Board and Investment Committee to prudently diversify assets and to consider the fund's "liquidity and its capability of meeting both short and long-term obligations" in setting asset allocation policy.

Due to an imbalance of required distributions over contributions early in the fund's existence, liquidity needs have dominated investment policy. This will evolve as contribution rate increases provided in statute improve cash flow in future years. As near-term liquidity needs recede in importance, the focus will increasingly be on establishing an investment policy which achieves the required rate of return and matches the health insurance liability.

INVESTMENT OBJECTIVES

The definitive objective of the health insurance trust fund is to provide for beneficiaries' health insurance benefit obligations, both short and long-term. In support of this objective, investment policy will be designed, on an ongoing basis, to: (1) meet all liquidity needs, (2) achieve the actuarially assumed 8.0% rate of return over the long-term, and (3) do so within appropriate risk levels.

RISK CONTROLS

Any investment program faces various risks; as with the retirement funds, the primary risk is that the assets will not support liabilities over the long-term. Risk control measures for the health insurance trust fund mirror those of the retirement annuity trust fund, but are customized to reflect the fund's unique liability. Primary risk control measures include the following steps:

- Actuarial valuations are performed each year to evaluate the funding objectives of the health insurance trust fund. Every ten years an external audit of the actuary is conducted to ensure that the assumptions made and calculation methods used are resulting in properly computed liabilities of the fund.
- Asset/liability studies are conducted approximately every five years. These studies ensure that the portfolio design is structured to meet the liabilities of the fund.
- In accordance with administrative regulation 102 KAR 1:178, which governs investment policies for the fund, the TRS Investment Committee adopts and regularly reviews an asset allocation policy designed to meet the fund's needs.

ASSET ALLOCATION

As of June 30, 2017, the health insurance trust fund had approximately $815.3 million in total assets. This included $73.2 million in investment grade bonds. This trust fund also had $83.5 million in high yield bonds, $474.4 million in public equity investments, $42.3 million in private equity investments, $30 million in bank loan investments, and $49.6 million in alternative credit funds, and $42.7 million in real estate funds.

Asset allocation will be adjusted annually by the Investment Committee to reflect changing liquidity needs and actuarial funding status. Due to upcoming contribution rate increases enacted in statute, liquidity needs are expected to decline in coming years while funding status improves. The information below shows the health insurance trust fund's asset allocation by market value as of June 30, 2017 and June 30, 2016.

Health Insurance Trust

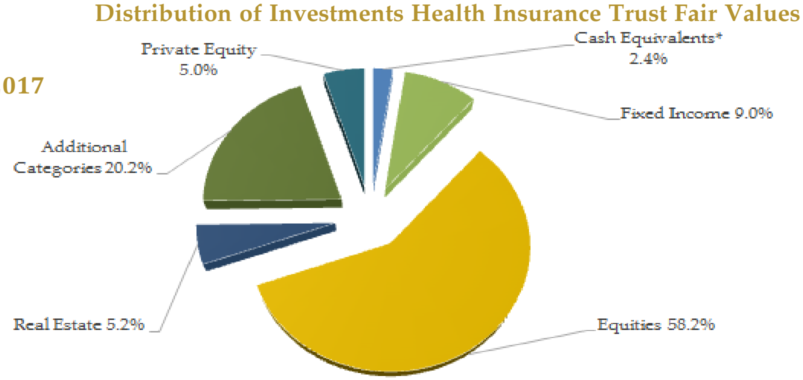
	June 30,2017**	%	June 30,2016	%
Cash Equivalents*	$ 19,312,440	2.4	$ 1,426,565	0.2
Fixed Income	73,252,237	9.0	63,053,784	10.4
Global Equities	474,453,790	58.2	354,369,798	58.4
Real Estate	42,701,494	5.2	25,433,241	4.1
Additional Categories	163,246,284	20.2	139,034,552	22.9
Private Equity	42,340,364	5.0	23,931,317	4.0
TOTALS	**$ 815,306,609**	**100.0**	**$ 607,249,257**	**100.0**

* *Reflects only cash balances not allocated to other asset classes. Uninvested cash balances allocated to various asset classes are represented in the respective asset classes.*

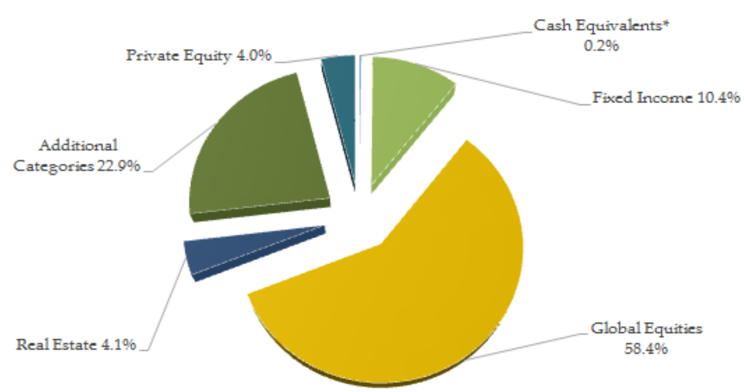
** *Does not include 401(h) value of $19,471,617.*

Distribution of Investments Health Insurance Trust Fair Values

June 30, 2017



June 30, 2016



* *Reflects only cash balances not allocated to other asset classes. Uninvested cash balances allocated to various asset classes are represented in the respective asset classes.*

HEALTH INSURANCE TRUST
PORTFOLIO RETURNS

For the fiscal year 2017, the health insurance trust fund's portfolio returned 14.88% versus a policy index of 15.00%. The fund's global equities returned 19.38% versus 19.01% for the MSCI All Country World IMI Index. A high-quality bond fund returned -.3% versus -.41% for the Barclays Government/Credit Index. This was the second year of managing the bond fund against this index. In the previous years it was managed against 90-day T-bills. We are working to extend duration but given the historically low interest rates we are being very selective at our extension points. The additional categories returned 12.0% versus 12.75% for its benchmark (Bank of America Merrill Lynch High Yield Master II).

Prior to July 1, 2015 TRS did not benchmark overall fund performance. Effective July 1, 2015 the Board of Trustees approved a Policy Index which represents the returns of appropriate benchmarks for the various asset classes weighted by the mid-point of the strategic range for the current fiscal year. Returns were generated by the Segal Marco Advisors performance reporting system using a time-weighted rate of return calculation based upon market values.

		Market Value	Last Qtr	FYTD	1 Yr	3 Yr*	5 Yr*	10 Yr	20 Yr
TOTAL PLAN	$	815,306,609	3.18	14.88	14.88	4.62	7.80		
*Policy Benchmark***			*3.37*	*15.00*	*15.00*				
Total Equity	$	474,453,789	4.16	18.87	18.87	5.19	11.13		
All Cap Equities	$	31,727,552	2.42						
Russell 3000			*3.02*						
Global Equities	$	442,726,237	4.30	19.38	19.38	5.34	11.22		
MSCI AC World IMI (Net)			*4.25*	*19.01*	*19.01*	*4.87*	*10.74*		
Fixed Income	$	73,252,237	0.99	-0.30	-0.30	2.01	1.39		
Barclays Government Credit			*1.69*	*-0.41*	*-0.41*	*2.62*	*2.29*		
Core Real Estate	$	20,164,331	1.69	7.70	7.70				
NCREIF ODCE (VW)			*1.70*	*7.87*	*7.87*				
Non-Core Real Estate	$	22,537,164	3.15	11.91	11.91				
NCREIF Property Index			*1.75*	*6.97*	*6.97*				
Private Equity	$	42,340,364	3.92	20.90	20.90	14.89	16.54		
Mature Private Equity	$	4,165,331	4.57	14.19	14.19	13.67	12.74		
S&P 500 plus 3%			*3.85*	*21.43*	*21.43*	*12.90*	*18.07*		
Private Equity < 5 Years	$	38,175,033	4.07	21.08	21.08	14.95			
Additional Categories:	$	163,246,284	1.67	12.00	12.00	3.27	5.81		
B of A Merrill Lynch High Yield Master II			*2.14*	*12.75*	*12.75*	*4.48*	*6.92*		
Cash (Unallocated)	$	19,312,440	0.20	0.50	0.50	0.28	0.21		
90 Day T-Bill			*0.20*	*0.44*	*0.44*	*0.20*	*0.15*		

* *Returns are annualized for periods longer than one year.*

** *Prior to July 1, 2015, TRS did not benchmark overall fund performance. Effective July 1, 2015, the Board of Trustees approved a Policy Index which represents the returns of appropriate benchmarks for the various asset classes weighted by the mid-point of the strategic range for the current fiscal year.*

SCHEDULE OF INVESTMENT RETURNS - HEALTH INSURANCE TRUST

2017	Annual Rate of Return Net of Investment Expense	14.37%
2016	Annual Rate of Return Net of Investment Expense	-2.20%
2015	Annual Rate of Return Net of Investment Expense	1.38%
2014	Annual Rate of Return Net of Investment Expense	15.38%

HEALTH INSURANCE TRUST
PORTFOLIOS
FAIR VALUES *
June 30, 2017

INTERNALLY MANAGED

Cash Equivalents		
Cash Collections Fund (Unallocated)	$	19,312,440
Fixed Income		
Internal Bond Fund		73,252,237
Subtotal	**$**	**92,564,677**

EXTERNALLY MANAGED

Global Equities		
BlackRock Fund B		442,726,237
Ft. Washington Focused Equity		31,727,552
Alternative Investments		
NGP Natural Resources XI		5,906,232
Ft. Washington Fund VIII		5,574,607
KKR European Fund IV		5,253,090
Ft. Washington Fund VII		4,165,331
Riverstone E & P Fund VI		4,121,649
Carlyle Europe Fund IV		3,946,307
Actis Global Fund IV		3,378,889
Ft. Washington PE Opp III		3,212,860
Audax PE Fund V		2,743,283
Landmark Equity XV		1,798,715
Ft. Washington Fund IX-K		1,097,139
Ft. Washington Fund IX		976,558
Apax IX		165,704
Additional Categories		
Columbia High Yield Fund		43,942,569
Ft. Washington High Yield Bond Fund		39,613,988
Marathon/TRS Credit Fund		36,674,167
Shenkman Capital Management		30,069,629
Marathon European Credit Opp Fund III		4,541,531
Marathon European Credit Opp Fund II		4,048,706
Highbridge Principal Strategies III		2,982,813
Oaktree European Capital Solutions		1,372,881
Real Estate		
Prudential PRISA Fund		11,093,620
Carlyle Property Investors		9,070,711
Carlyle Realty VII		6,738,686
Landmark Real Estate VII		4,968,586
Blackstone Realty Fund VIII		4,541,719
TA Realty Fund XI		3,982,814
Rockwood Real Estate X		2,305,359
Subtotal	**$**	**722,741,932**
TOTAL ASSETS	**$**	**815,306,609**

** Detailed information concerning the market values of all TRS investments is available upon request.*

Investment Summary
Fair Value – Health Insurance Trust
June 30, 2017

Type of Investment	Fair Value 6/30/16	Acquisitions	Appreciation (Depreciation)	Sales Redemptions, Maturities & Paydowns	Fair Value 6/30/17*
Cash Equivalents	$ 3,883,661	$ 245,782,777	$	$ 223,129,340	$ 26,537,098
Fixed Income	62,555,399	23,275,237	(1,526,759)	14,020,800	70,283,077
Real Estate	25,433,241	20,197,646	2,906,132	5,835,525	42,701,494
Equities	354,369,798	88,052,253	69,851,382	38,999,031	473,274,401
Alternative	23,931,316	17,458,295	7,351,346	6,400,595	42,340,364
Additional Categories	137,075,842	119,762,687	10,476,279	107,144,634	160,170,175
TOTAL	**$ 607,249,257**	**$ 514,528,895**	**$ 89,058,380**	**$ 395,529,925**	**$ 815,306,609**

* *Does not include 401(h) value of $19,471,617.*

Health Insurance Trust Fund
Contracted Investment
Management Expenses
Fiscal Year 2016-17
(In thousands of dollars)

Investment Counselor Fees	Assets Under Management	Expense	Basis Points [1]
Equity Manager(s)	$ 474,454	$ 276	5.8
Real Estate [2]	42,701	731	171.2
Additional Categories	163,246	849	52.0
Alternative Investments [2] [3]	42,340	1,163	274.7
TOTAL	**$ 722,741**	**$ 3,019**	**41.8**
Other Investment Services			
Custodian Fees	$ 815,307	$ 53	0.7
Consultant Fees			0.0
Legal & Research			0.0
Other Administrative and Operational		99	1.2
TOTAL	**$ 815,307**	**$ 152**	**1.9**
GRAND TOTAL		**$ 3,171**	**38.9**

1 - One basis point is one hundredth of one percent or the equivalent of .0001.
2 - Accrual of fees payable as of June 30, 2017.
3 - Private equity fees are either withheld from the Fund operations or paid by direct disbursement, depending on contract terms.

Schedule of Contracted and Administrative Investment Expenses
Health Insurance Trust Fund
June 30, 2017

INVESTMENT COUNSELOR FEES

EQUITY MANAGERS		
BlackRock		217,848
Fort Washington Focused Equity		57,734
Total Equity Managers	**$**	**275,582**
REAL ESTATE		
Blackstone VIII		150,000
Carlyle VII		139,616
Carlyle Property Investors		16,826
Landmark VII		100,000
Landmark VIII		54,620
Rockwood Capital X		63,610
TA Realty XI		122,272
Prudential		84,405
Total Real Estate	**$**	**731,349**
ADDITIONAL CATEGORIES		
Highbridge Principal Strategies Find III,L.P.		71,693
Columbia High Yield Fund		159,447
Fort Washington Investments High Yield		76,041
Marathon Credit Fund		320,432
Marathon European Credit Fund II		49,375
Marathon European Credit Fund III		57,803
Oaktree European Capital Solutions		(9,044)
Shenkman Capital		123,314
Total Additional Category Managers	**$**	**849,061**
ALTERNATIVE INVESTMENTS		
Actis Global Fund IV, L.P.		99,000
APAX Fund IX, L.P.		158,897
Audax Private Equity Fund V		33,346
ALTERNATIVE INVESTMENTS continued ...		
Carlyle Europe IV, L.P.		133,508
Fort Washington Private Equity III, L.P.		37,500
Fort Washington Fund VII, L.P.		33,749
Fort Washington Fund VIII, L.P.		36,000
Fort Washington Fund IX, L.P.		11,034
Fort Washington Fund IX-K, L.P.		11,025
KKR European IV, L.P.		60,911
KKR Americas XII, L.P.		65,278
Landmark Fund XV ,L.P.		50,000
NGP Natural Resources XI, L.P.		132,015
Riverstone Energy and Power Fund VI, L.P.		300,404
Total Alternative Managers	**$**	**1,162,667**

ADMINISTRATIVE AND OPERATIONAL EXPENSES

CUSTODIAN		
The Bank of New York Mellon		53,386
Total Custodian	**$**	**53,386**
OTHER		
Other Administrative and Operational (includes Personnel, Subscription services, etc…)		98,822
Total Other	**$**	**98,822**
TOTAL INVESTMENT EXPENSES	**$**	**3,170,867**

HEALTH INSURANCE TRUST PROFESSIONAL SERVICE PROVIDERS

Investment Consultant
AON Hewitt

Investment Custodian
The Bank of New York Mellon

Additional Categories Managers
Ft. Washington Investment Advisors
Shenkman Capital Management, Inc.
Highbridge Principal Strategies, LLC
Marathon Asset Management
Oaktree Capital Management
Columbia Threadneedle Investments

Real Estate
Carlyle Realty Partners
Landmark Real Estate Partners
Blackstone Real Estate Partners
TA Associates Realty
Prudential Real Estate Investors
Rockwood Capital Real Estate

Alternative Investment Managers
Ft. Washington Private Equity Investors
Actis LLP
Landmark Partners
Kohlberg Kravis Roberts & Co.
Natural Gas Partners
Carlyle Global Partners
Audax Group
Riverstone Holdings, LLC
Apax Partners

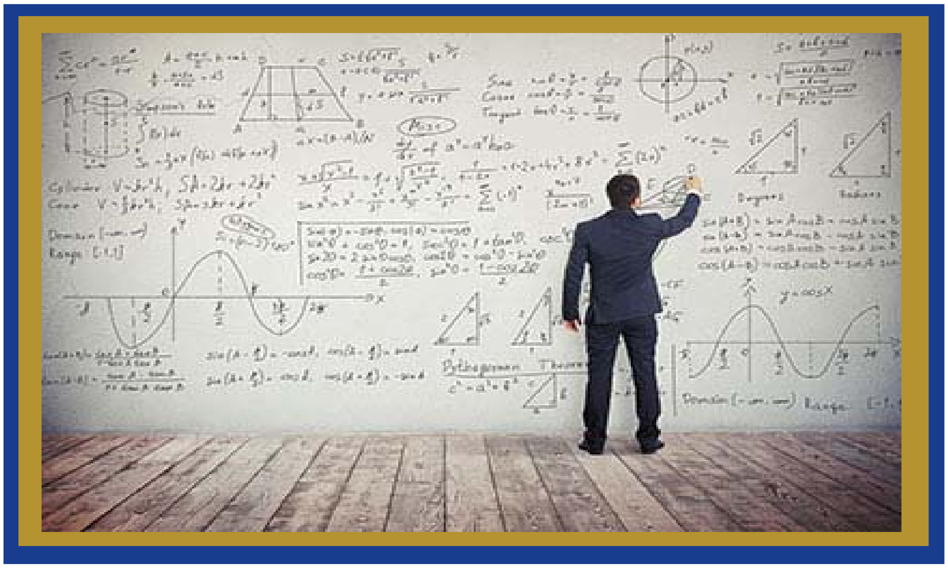
Equity Manager
BlackRock Institutional Trust Company
Ft. Washington Investment Advisors

Attorney
Ice Miller LLP

Teachers' Retirement System

of the State of Kentucky

2017



Actuarial Section

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

November 14, 2017

Board of Trustees
Teachers' Retirement System of the
State of Kentucky
479 Versailles Road
Frankfort, KY 40601-3800

Members of the Board:

Section 161.400 of the law governing the operation of the Teachers' Retirement System of the State of Kentucky provides that the actuary shall make an actuarial valuation of the system. We have submitted the results of the annual actuarial valuation prepared as of June 30, 2017. While not verifying the data at source, the actuary performed tests for consistency and reasonability. The combined member and state contribution rates as a percentage of payroll for the fiscal year ending June 30, 2020 required to support the total benefits of the system are as follows:

Group	Combined Member and State Contribution Requirement
University members hired before July 1, 2008	35.55%
University members hired on or after July 1, 2008	36.55%
Non-University members hired before July 1, 2008	38.51%
Non-University members hired on or after July 1, 2008	39.51%

These rates represent a decrease since the previous valuation in the total Pension actuarially determined employer contribution rates (ADEC) of 0.35% of payroll for the fiscal year ending June 30, 2020.

A breakdown of the changes in the components of the ADEC are as follows:

- an increase in the expected state special appropriation from 2.83% to 3.00%, or 0.17% of payroll
- an increase in the amount required for life insurance benefits from 0.04% to 0.05%, or 0.01% of payroll
- a reduction in the additional required increase of 0.51%, from 14.61% to 14.10%

The financing objective of the system is that contribution rates will remain relatively level over time as a percentage of payroll. The promised benefits of the system are included in the actuarially calculated contribution rates which are developed using the entry age normal cost method.

Five-year market related value of plan assets is used for actuarial valuation purposes. Gains and losses are reflected in the total unfunded accrued liability that is being amortized by regular annual contributions as a level percentage of payroll in accordance with the funding policy adopted by the Board, on the assumption that payroll will increase by 3.5% annually. The assumptions recommended by the actuary and adopted by the Board are reasonably related to the experience under the system and to reasonable expectations of anticipated experience under the system.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com
Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE

Board of Trustees
November 14, 2017
Page 2

We have prepared the trend information shown in the Schedule of Funding Progress in the Financial Section of the Annual Report and Schedule A, Schedule B, Schedule C, Solvency Test and Analysis of Financial Experience shown in the Actuarial Section of the Annual Report.

The valuation reflects that a portion of the annual required contributions to the fund from 2005 to 2010 were allocated to the Medical Insurance Fund and are being repaid over time. A pension obligation bond was issued August 26, 2010 and was used to repay the balances of a substantial portion of the loans previously made to the Medical Insurance Fund. No additional contributions were allocated during the 2017 fiscal year.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the assumptions and methods used for funding purposes meet the parameters set by Actuarial Standards of Practice, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the system.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

This actuarial valuation was performed to determine the recommended funding amount for the system. The asset values used to determine unfunded liabilities and funded ratios are not market values but less volatile market related values. A smoothing technique is applied to market values to determine the market related values. The unfunded liability amounts and funded ratios using the market value of assets would be different. The interest rate used for determining liabilities is based on the expected return of assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.

In our opinion, the system has not been funded on an actuarially sound basis since historically the full actuarially determined contributions were not made by the employer. However, an additional appropriation of $498.5 million was made during fiscal year 2017 and an additional appropriation of $474.7 million is expected to be made during fiscal year 2018. If contributions by the employer to the system in subsequent fiscal years are less than those required, the assets are expected to become insufficient to pay promised benefits. Assuming that contributions to the system are made by the employer from year to year in the future at rates recommended on the basis of the successive actuarial valuations, the continued sufficiency of the assets to provide the benefits called for under the system may be safely anticipated.

Respectfully submitted,

Edward J. Koebel

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

Alisa Bennett

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Cathy Turcot

Cathy Turcot
Principal and Managing Director

Report of Actuary on the Valuation
Prepared as of June 30, 2017
Section I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below (dollar amounts in thousands):

Valuation Date	June 30, 2017	June 30, 2016
Number of active members	72,130	71,848
Annual salaries	$ 3,563,584	$ 3,537,226
Number of annuitants and beneficiaries	52,966	51,563
Annual allowances	$ 1,953,464	$ 1,868,875
Assets		
Market value	$ 18,707,699	$ 16,812,832
Actuarial value	18,514,638	17,496,894
Unfunded actuarial accrued liability (UAAL)	$ 14,305,248	$ 14,531,333
Funded Ratio	56.4 %	54.6 %
Amortization period (years)	27.4	28.1

Contribution rates are shown separately for university and non-university members on the following pages.

Contribution Rates for University Members

Valuation Date	June 30, 2017		June 30, 2016	
For Fiscal Year Ending	June 30, 2020		June 30, 2019	
	Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Pension Plan:				
Normal	10.800 %	10.800 %	11.030 %	11.030 %
Accrued liability	24.750	25.750	24.870	25.870
Total	35.550 %	36.550 %	35.900 %	36.900 %
Member	7.625 %	7.625 %	7.625 %	7.625 %
State (ARC)	27.925	28.925	28.275	29.275
Total	35.550 %	36.550 %	35.900 %	36.900 %
Life Insurance Fund:				
State	0.050 %	0.050 %	0.040 %	0.040 %
Medical Insurance Fund:				
Member	2.775 %	2.775 %	2.775 %	2.775 %
State Match	2.775	1.775	2.775	1.775
Total	5.550 %	4.550 %	5.550 %	4.550 %
Total Contributions	41.150 %	41.150 %	41.490 %	41.490 %
Member Statutory	10.400 %	10.400 %	10.400 %	10.400 %
State Statutory	13.650	13.650	13.650	13.650
Required Increase	14.100	14.100	14.610	14.610
State Special	3.000	3.000	2.830	2.830
Total	41.150 %	41.150 %	41.490 %	41.490 %

Contribution Rates for Non-University Members

Valuation Date	**June 30, 2017**		**June 30, 2016**	
For Fiscal Year Ending	June 30, 2020		June 30, 2019	
	Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Pension Plan:				
Normal	14.840 %	14.840 %	14.940 %	14.940 %
Accrued liability	23.670	24.670	23.920	24.920
Total	38.510 %	39.510 %	38.860 %	39.860 %
Member	9.105 %	9.105 %	9.105 %	9.105 %
State (ARC)	29.405	30.405	29.755	30.755
Total	38.510 %	39.510 %	38.860 %	39.860 %
Life Insurance Fund:				
State	0.050 %	0.050 %	0.040 %	0.040 %
Medical Insurance Fund:				
Member	3.750 %	3.750 %	3.750 %	3.750 %
State Match	3.750	2.750	3.750	2.750
Total	7.500 %	6.500 %	7.500 %	6.500 %
Total Contributions	46.060 %	46.060 %	46.400 %	46.400 %
Member Statutory	12.855 %	12.855 %	12.855 %	12.855 %
State Statutory	16.105	16.105	16.105	16.105
Required Increase	14.100	14.100	14.610	14.610
State Special	3.000	3.000	2.830	2.830
Total	46.060 %	46.060 %	46.400 %	46.400 %

2. The valuation includes only the assets and liabilities associated with the pension plan. The valuation of the Medical Insurance Fund and the Active and Retired Life Insurance Benefits will be prepared separately.

3. Comments on the valuation results as of June 30, 2017 are given in Section IV and further discussion of the contribution levels is set out in Sections V and VI.

4. Schedule B shows the development of the actuarial value of assets. The assumed investment rate of return is 7.50%. Schedule D of this report outlines the full set of actuarial assumptions and methods employed in the current valuation. There have been no changes since the previous valuation.

5. The current funding policy is shown in Schedule H of the Report. The funding policy has been revised since the previous valuation, but has not yet been adopted by the Board.

6. Provisions of the system, as summarized in Schedule F, were taken into account in the current valuation. There have been no changes since the previous valuation.

7. The funded ratio shown in the Summary of Principal Results, is the ratio of actuarial value of assets to the actuarial accrued liability. The funded status would be different based on the market value of assets. The funding ratio is an indication of progress in funding the promised benefits. Since the ratio is less than 100%, there is a need for additional contributions toward the payment of the unfunded accrued liability. In addition, this funding ratio does not have any relationship to measuring the sufficiency if the plan had to settle its liabilities.

Section II - MEMBERSHIP DATA

1. Data regarding the membership of the system for use as a basis of the valuation were furnished by the retirement system office. The following table shows the number of active members and their annual salaries as of June 30, 2017 on the basis of which the valuation was prepared.

Group	Number	Annual Salaries ($1,000's)
University hired before 7/1/2008	1,724	$ 127,690
University hired after 7/1/2008	1,493	77,914
Non-University Full Time hired before 7/1/2008	36,025	2,339,663
Non-University Full Time hired after 7/1/2008	20,897	947,285
Non-University Part Time hired before 7/1/2008	2,438	20,770
Non-University Part Time hired after 7/1/2008	9,553	50,262
TOTAL	**72,130**	**$ 3,563,584**

2. The following table shows the number and annual retirement allowances payable to annuitants and beneficiaries on the roll of the retirement system as of the valuation date.

The Number and Annual Retirement Allowances of Annuitants and Beneficiaries on the Roll as of June 30, 2017

Group	Number	Annual Retirement Allowances[1] ($1,000's)
Service Retirements	46,222	$ 1,780,450
Disability Retirements	2,778	82,585
Beneficiaries of Deceased Members	3,966	90,429
TOTAL	**52,966**	**$ 1,953,464**

[1] *Includes cost-of-living adjustments effective through July 1, 2017.*

3. Table 1 of Schedule G shows a distribution by age and years of service of the number and annual salaries of active members included in the valuation, while Table 3 shows the number and annual retirement allowances of annuitants and beneficiaries included in the valuation, distributed by age.

Section III - ASSETS

1. As of June 30, 2017, the market value of Pension Plan assets for valuation purposes held by the system amounted to $18,707,699,025. This value excludes assets in the Medical Insurance Fund, the 403(b) Program Reserve Fund, and the Life Insurance Fund, which are not included in the assets used for Pension Plan valuation purposes. The estimated market investment return for the plan year was 15.02%. Schedule C shows the receipts and disbursements for the year preceding the valuation date and a reconciliation of the asset balances for the Pension Plan.

2. The five-year market related value of Pension Plan assets used for valuation purposes as of June 30, 2017 was $18,514,638,263. The estimated investment return for the plan year ending June 30, 2017 on an actuarial value of assets basis was 9.29%, compared to the assumed investment rate of return for the period of 7.50%. Schedule B shows the development of the actuarial value of assets as of June 30, 2017.

Section IV - COMMENTS ON VALUATION

1. Schedule A of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the system as of June 30, 2017. The valuation was prepared in accordance with the actuarial assumptions and the actuarial cost method, which are described in Schedule D and Schedule E.

2. The valuation balance sheet shows that the system has total prospective liabilities of $16,320,896,707 for benefits expected to be paid on account of the present active members. The liability on account of benefits payable to annuitants and beneficiaries amounts to $20,726,391,156 of which $798,963,061 is for special appropriations remaining to be made toward funding minimum annuities, ad hoc increases and sick leave allowances granted after 1981. The liability for benefits expected to be paid to inactive members and to members entitled to deferred vested benefits is $381,559,301. The total prospective liabilities of the system amounts to $37,428,847,164. Against these liabilities, the system has present assets for valuation purposes of $18,514,638,263. When this amount is deducted from the total liabilities of $37,428,847,164, there remains $18,914,208,901 as the present value contributions to be made in the future.

3. The employer's contributions to the system consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions at the rate of 10.80% of payroll for University and 14.84% of payroll for Non-University are required.

4. Prospective normal employer and employee contributions have a present value of $4,608,960,570. When this amount is subtracted from $18,914,208,901, which is the present value of the total future contributions to be made by the employer, there remains $14,305,248,331 as the amount of future unfunded accrued liability contributions.

5. The unfunded accrued liability decreased by approximately $226 million for the plan year ending June 30, 2017 and the funding ratio increased from 54.6% to 56.4%. See Section VII for a complete breakdown of the experience of the system.

Section V - CONTRIBUTIONS PAYABLE UNDER THE SYSTEM

1. Section 161.540 of the retirement law provides that each university member contribute 10.400% of annual salary to the system and each non-university member contribute 12.855% of annual salary. Of this amount, for each university member, 2.775% is paid to the Medical Insurance Fund for medical benefits and for each non-university member, 3.75% is paid to the Medical Insurance Fund for medical benefits. The remainder, 7.625% for university members and 9.105% for non-university members, is applicable for the retirement benefits taken into account in the valuation.

2. Section 161.550 provides that the state will match a portion of the member contributions and contribute a supplemental 3.25% of members' salaries towards discharging the system's unfunded obligations. Additional contributions are made to the Medical Insurance Fund as required under 161.550(3).

3. Therefore for university members, 10.875% of the salaries of active members who become members before July 1, 2008 and 11.875% of the salaries of active members who become members on or after July 1, 2008 is funded by statute or supplemental funding for the Pension Plan and Life Insurance Fund. For non-university members, 12.355% of the salaries of active members who become members before July 1, 2008 and 13.355% of the salaries of active members who become members on or after July 1, 2008 is funded by statute or supplemental funding for the

Pension Plan and Life Insurance Fund. Of these amounts, 0.05% of payroll will be allocated to the Life Insurance Fund. Based on the results of the valuation, an additional 14.10% of payroll for both university and non-university will be required in order to maintain the amortization of the unfunded liability of the Pension Plan based on the funding policy adopted by the Board. An additional special appropriation of 3.00% of total payroll will be made by the State. Therefore, the total actuarially determined employer contribution rate to the Pension Plan is 27.925% for university members who become members before July 1, 2008 and 28.925% for university members who become members on or after July 1, 2008. The total actuarially determined employer contribution rate to the Pension Plan is 29.405% for non-university members who become members before July 1, 2008 and 30.405% for non-university members who become members on or after July 1, 2008. The total member and employer contribution rates to the Pension Plan are shown on the following table:

Contribution Rates by Source
University

	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Member		
Statutory Total	10.400 %	10.400 %
Statutory Medical Insurance Fund	(2.775)	(2.775)
Contribution to Pension Plan	7.625 %	7.625 %
Employer		
Statutory Matching Total	10.400 %	10.400 %
Statutory Medical Insurance Fund	(2.775)	(1.775)
Supplemental Funding	3.250	3.250
Subtotal	10.875 %	11.875 %
Life Insurance	(0.050) %	(0.050) %
Additional to Comply with Board Funding Policy	14.100	14.100
Special Appropriation	3.000	3.000
Contribution to Pension Plan	27.925 %	28.925 %
Total Contribution to Pension Plan	**35.550 %**	**36.550 %**

Contribution Rates by Source
Non-University

	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Member		
Statutory Total	12.855 %	12.855 %
Statutory Medical Insurance Fund	(3.750)	(3.750)
Contribution to Pension Plan	9.105 %	9.105 %
Employer		
Statutory Matching Total	12.855 %	12.855 %
Statutory Medical Insurance Fund	(3.750)	(2.750)
Supplemental Funding	3.250	3.250
Subtotal	12.355 %	13.355 %
Life Insurance	(0.050) %	(0.050) %
Additional to Comply with Board Funding Policy	14.100	14.100
Special Appropriation	3.000	3.000
Contribution to Pension Plan	29.405 %	30.405 %
Total Contribution to Pension Plan	**38.510 %**	**39.510 %**

4. The valuation indicates that normal contributions at the rate of 10.80% of active university members' salaries and 14.84% of active non-university members' salaries are required. The difference between the total contribution rate and the normal rate remains to be applied toward the liquidation of the unfunded accrued liability. This accrued liability rate is 24.75% for university members hired before July 1, 2008, 25.75% for university members hired on and after July 1, 2008, 23.67% for non-university members hired before July 1, 2008, and 24.67% for non-university members hired on and after July 1, 2008. These rates include special appropriations of 3.00% of payroll to be made by the State. These rates are shown in the following table:

Actuarially Determined Contribution Rates

	Percentage of Active Members' Salaries			
Rate	UNIVERSITY		NON-UNIVERSITY	
	Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Normal	10.80 %	10.80 %	14.84 %	14.84 %
Accrued Liability *	24.75	25.75	23.67	24.67
Total	**35.55 %**	**36.55 %**	**38.51 %**	**39.51 %**

** Includes special appropriations of 3.00% of payroll to be made by the State.*

5. The following table shows the components of the total UAAL and the derivation of the UAAL contribution rate in accordance with the funding policy:

Total UAAL and UAAL Contribution Rate
(In thousands of dollars)

	UAAL	Remaining Amortization Period (years)	Amortization Payment
Legacy	$ 14,744,575	27	$ 889,290
New Incremental 6/30/2015	(351,541)	18	(27,465)
New Incremental 6/30/2016	340,682	19	25,642
New Incremental 6/30/2017	(428,468)	20	(31,151)
Total UAAL	$ 14,305,248		$ 856,316
Blended Amortization Period (years)			27.4

Section VI - COMMENTS ON LEVEL OF FUNDING

1. Our calculations indicate that the contribution rates shown in the previous section will be sufficient to cover the benefits of the system, the annual 1.5% increases in the allowances of retired members and beneficiaries, and the liabilities for minimum annuities, ad hoc increases and sick leave allowances granted after 1981.

2. The valuation indicates that the present statutory contribution rates, supplemental funding and special appropriations, if continued at the current level percentage, along with an additional required contribution of 14.10%, not currently provided in statute, are sufficient to meet the cost of benefits currently accruing and provide for the amortization of the unfunded accrued liability in accordance with the Board funding policy. However, as existing special contributions expire, the statutory contributions or supplemental funding may be required to increase as an equal percentage of payroll.

3. There are no excess assets or contributions available to provide additional benefits, and there is a cumulative increase in the required employer contribution of 14.10% of payroll for the fiscal year ending June 30, 2020, as shown in the following table:

VALUATION DATE	FISCAL YEAR	INCREASE/ (DECREASE)	CUMULATIVE INCREASE	AMOUNT
June 30, 2004	June 30, 2007	0.11%	0.11%	$ 3,174,600
June 30, 2005	June 30, 2008	1.21	1.32	38,965,900
June 30, 2006	June 30, 2009	0.56	1.88	60,499,800
June 30, 2007	June 30, 2010	0.58	2.46	82,331,200
June 30, 2008	June 30, 2011	1.13	3.59	121,457,000
June 30, 2009	June 30, 2012	2.22	5.81	208,649,000
June 30, 2010	June 30, 2013	1.46	7.27	260,980,000
June 30, 2011	June 30, 2014	0.75	8.02	299,420,000
June 30, 2012	June 30, 2015	2.40	10.42	386,400,000
June 30, 2013	June 30, 2016	2.55	12.97	487,400,000
June 30, 2014	June 30, 2017	0.83	13.80	520,372,000
June 30, 2015	June 30, 2018	(0.31)	13.49	512,883,000
June 30, 2016	June 30, 2019	1.12	14.61	553,597,000
June 30, 2017	June 30, 2020	(0.51)	14.10	538,253,000

In addition, as existing special contributions expire, the statutory contributions or supplemental funding may be required to increase as an equal percentage of payroll, in order to amortize the unfunded actuarial accrued liability in accordance with the Board funding policy. Any further benefit improvements must be accompanied by the entire additional contributions necessary to support the benefits.

Section VII - ANALYSIS OF FINANCIAL EXPERIENCE

The following table shows the estimated gain or loss from various factors that resulted in a decrease of $226,084,753 in the unfunded accrued liability from $14,531,333,084 to $14,305,248,331 during the year ending June 30, 2017. The decrease in the unfunded accrued liability was primarily due to gains for the investment return on an actuarial value basis that was greater than expected and salary increases that were less than assumed. In addition to these gains were small demographic gains and losses due to turnover, retirement and mortality.

Analysis of Financial Experience

(In thousands of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.50%) added to previous unfunded accrued liability	$ 1,089,850
Expected accrued liability contribution	(887,467)
Loss due to Contribution Shortfall and Timing	704
Experience:	
Valuation asset growth	(308,146)
Pensioners' mortality	11,181
Turnover and retirements	(11,667)
New entrants	39,218
Salary increases	(159,758)
Amendments	0
Assumption changes	0
Method changes	0
Total	**$** (226,085)

Section VIII - ACCOUNTING INFORMATION

Governmental Accounting Standards Board (GASB) has issued Statements No. 67 and 68 which replace Statement No. 25 and 27. The information required under the new GASB Statements will be issued in separate reports. The following information is provided for informational purposes only.

1. The following is a distribution of the number of employees by type of membership.

Number of Active and Retired Members as of June 30, 2017

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	52,966
Terminated vested employees entitled to benefits but not yet receiving benefits	8,624
Inactive non-vested members	42,798
Active plan members	72,130
Total	**176,518**

2. The schedule of funding progress is shown below.

Schedule of Funding Progress
(In thousands of dollars)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) /c)
6/30/2008	$ 15,321,325	$ 22,460,304	$ 7,138,979	68.2 %	$ 3,190,332	223.8 %
6/30/2009	14,885,981	23,400,426	8,514,445	63.6	3,253,077	261.7
6/30/2010	14,851,330	24,344,316	9,492,986	61.0	3,321,614	285.8
6/30/2011*	14,908,138	25,968,692	11,060,554	57.4	3,451,756	320.4
6/30/2012	14,691,371	26,973,854	12,282,483	54.5	3,479,567	353.0
6/30/2013	14,962,758	28,817,232	13,854,474	51.9	3,480,066	398.1
6/30/2014**	16,174,199	30,184,404	14,010,205	53.6	3,486,327	401.9
6/30/2015	17,219,520	31,149,962	13,930,442	55.3	3,515,113	396.3
6/30/2016**	17,496,894	32,028,227	14,531,333	54.6	3,537,226	410.8
6/30/2017	18,514,638	32,819,887	14,305,248	56.4	3,563,584	401.4

* *Reflects change in assumptions and methods.* ** *Reflects change in assumptions.*

3. The information presented above was determined as part of the actuarial valuation at June 30, 2017. Additional information as of the latest actuarial valuation follows.

Valuation date	06/30/2017
Actuarial cost method	Entry age
Amortization method	Level percent of pay, closed
Remaining amortization period	27.4 years
Asset valuation method	5-year smoothed market

Actuarial Assumptions:

Investment rate of return*
7.50%

Projected salary increases**
3.50 - 7.30%

Cost-of-living adjustments
1.50% Annually

**Includes price inflation at 3.00%*
***Includes wage inflation at 3.50%*

Schedule of Employer Contributions

Fiscal Year Ended June 30	Actuarially Determined Employer Contributions	Actual Employer Contributions	Percentage Contributed
2008	$ 563,789,483	$ 466,274,783	83 %
2009	600,282,735	442,549,935	74
2010	633,938,088	479,805,088	76
2011	678,741,428	1,037,935,993 *	153
2012	757,822,190	557,339,552	74
2013	802,984,644	568,233,446	71
2014	823,446,156	563,326,249	68
2015	913,653,854	559,579,290	61
2016	999,270,174	565,454,590	57
2017	1,076,617,093	1,060,719,993	99

* *Includes Pension Obligation Bond proceeds of $465,384,165.*

SCHEDULE A

Valuation Balance Sheet
Showing the Present and Prospective Assets and Liabilities
As of June 30, 2017
(In thousands of dollars)

Actuarial Liabilities

(1)	Present value of prospective benefits payable on account of present active members		
	- Service retirement benefits	$ 15,308,828	
	- Disability retirement benefits	631,781	
	- Death and survivor benefits	127,145	
	- Refunds of member contributions	253,143	
	Total		$ 16,320,897
(2)	Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits		
	- Service retirement benefits	$ 19,152,047	
	- Disability retirement benefits	802,232	
	- Death and survivor benefits	772,112	
	Total		$ 20,726,391
(3)	Present value of prospective benefits payable on account of inactive members and members entitled to deferred vested benefits		$ 381,559
(4)	TOTAL ACTUARIAL LIABILITIES		$ 37,428,847

Present and Prospective Assets

(5)	Actuarial value of assets		$ 18,514,638
(6)	Present value of total future contributions = (4)-(5)	$ 18,914,209	
(7)	Present value of future member contributions and employer normal contributions		4,608,961
(8)	Prospective unfunded accrued liability contributions = (6)-(7)		14,305,248
(9)	TOTAL PRESENT AND PROSPECTIVE ASSETS		$ 37,428,847

Schedule A continued ...

Solvency Test

(In millions of dollars)

Valuation Date	(1) Active Member Contributions	(2) Retirants And Beneficiaries	(3) Active Members (Employer Financed Portion)	Valuation of Assets	Portion of Accrued Liabilities Covered by Assets (1)	(2)	(3)
6/30/2008	$ 2,899.0	$ 13,585.8	$ 5,975.5	$ 15,321.3	100 %	91 %	0 %
6/30/2009	3,042.3	14,309.9	6,048.2	14,886.0	100	83	0
6/30/2010	3,196.3	15,010.4	6,137.6	14,851.3	100	78	0
6/30/2011	3,325.7	15,557.9	7,085.1	14,908.1	100	74	0
6/30/2012	3,415.2	16,472.2	7,086.4	14,691.4	100	68	0
6/30/2013	3,514.4	17,716.4	7,586.5	14,962.8	100	65	0
6/30/2014	3,629.7	18,676.3	7,878.3	16,174.2	100	67	0
6/30/2015	3,700.6	19,522.5	7,926.8	17,219.5	100	69	0
6/30/2016	3,756.0	20,416.4	7,855.8	17,496.9	100	67	0
6/30/2017	3,849.9	21,108.0	7,862.1	18,514.6	100	69	0

SCHEDULE B

Development of Actuarial Value of Assets as of June 30, 2017

(1)	Actuarial Value of Assets Beginning of Year		$ 17,496,894,437
(2)	Net Position at Market Value at End of Year		18,707,699,025
(3)	Net Position at Market Value at Beginning of Year		16,812,831,883
(4)	Cash Flow		
	a.	Contributions	1,374,345,427
	b.	Benefit Payments	1,944,917,368
	c.	Administrative Expense	10,313,715
	d.	Net: (4)a - (4)b - (4)c	(580,885,656)
(5)	Investment Income		
	a.	Market total: (2) - (3) - (4)d	2,475,752,798
	b.	Assumed Rate	7.50%
	c.	Amount for Immediate Recognition: [(3) x (5)b] + [(4)d x (5)b x 0.5]	1,239,179,179
	d.	Amount for Phased-In Recognition: (5)a - (5)c	1,236,573,619
(6)	Phased-In Recognition of Investment Income		
	a.	Current Year: 0.20 x (5)d	247,314,724
	b.	First Prior Year	(312,346,803)
	c.	Second Prior Year	(92,160,668)
	d.	Third Prior Year	325,163,609
	e.	Fourth Prior Year	191,479,441
	f.	Total Recognized Investment Gain	359,450,303
(7)	Actuarial Value of Assets End of Year: (1) + (4)d + (5)c + (6)f		$ 18,514,638,263
(8)	Difference Between Market & Actuarial Values: (2) - (7)		$ 193,060,762
(9)	Net Investment Rate of Return on Actuarial Value		9.29%

SCHEDULE C

Summary of Receipts & Disbursements*
(Market Value)

	For the Year Ending June 30, 2017	June 30, 2016
Receipts for the Year		
Contributions		
Members	$ 313,625,434	$ 313,044,226
Employers	1,060,719,993	565,454,590
Total	1,374,345,427	878,498,816
Net Investment Income	2,475,752,798	(245,214,860)
Total	3,850,098,225	633,283,956
Disbursements for the Year		
Benefit Payments	1,918,612,128	1,833,198,630
Refunds to Members	26,305,240	27,747,742
Miscellaneous, including expenses	10,313,715	8,636,438
Total	1,955,231,083	1,869,582,810
Excess of Receipts over Disbursements	1,894,867,142	(1,236,298,854)
Reconciliation of Net Position		
Net Position as of the Beginning of the Year	16,812,831,883	18,049,130,737
Excess of Receipts over Disbursements	1,894,867,142	(1,236,298,854)
Net Position as of the End of the Year	$ 18,707,699,025	$ 16,812,831,883
Net Investment Rate of Return on Market Value	15.0%	(1.0)%

* *Excludes assets for Medical Insurance Fund, the 403(b) Program Reserve Fund and the Life Insurance Fund.*

SCHEDULE D
Outline of Actuarial Assumptions and Methods

The assumptions and methods used in the valuation were selected based on the actuarial experience study prepared as of June 30, 2015, submitted to and adopted by the Board on September 19, 2016.

INVESTMENT RATE OF RETURN: 7.50% per annum, compounded annually, including price inflation at 3.00% per annum.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows and include wage inflation at 3.50% per annum:

Age	20	25	30	35	40	45	50	55	60	65
Annual Rate	7.20%	6.40%	5.40%	4.70%	4.20%	3.80%	3.70%	3.50%	3.50%	3.50%

SEPARATIONS FROM SERVICE: Representative values of the assumed annual rates of death, disability, withdrawal, service retirement and early retirement are as follows:

MALES: Annual Rate of . . .

			WITHDRAWAL			RETIREMENT	
			SERVICE				
AGE	DEATH	DISABILITY	0 - 4	5 - 9	10+	Before 27 Years of Service	After 27 Years of Service*
20	0.019 %	0.01%	11.00 %				
25	0.021	0.01	11.00	3.00%			
30	0.025	0.01	11.00	3.00	3.00%		
35	0.043	0.04	12.00	3.50	1.40		
40	0.060	0.09	12.00	4.50	1.40		
45	0.084	0.20	12.00	4.50	1.30		17.0%
50	0.119	0.30	14.00	4.50	1.90		17.0
55	0.202	0.58	15.00	4.50	2.40	5.0%	45.0
60	0.340	0.75	15.00	4.00	2.40	13.0	35.0
62	0.419	0.75	15.00	3.80	2.40	15.0	25.0
65	0.565	0.75	15.00	3.50	2.40	20.0	25.0
70	0.913	0.75	20.00	0.00	0.00	20.0	20.0
75	1.556	0.75	20.00	0.00	0.00	100.0	100.0

**Plus 7.5% in year when first eligible for unreduced retirement with 27 years of service.*

Schedule D continued ...

FEMALES: Annual Rate of . . .

AGE	DEATH	DISABILITY	WITHDRAWAL SERVICE 0 - 4	5 - 9	10+	RETIREMENT Before 27 Years of Service	After 27 Years of Service*
20	0.007 %	0.01 %	9.00 %				
25	0.008	0.01	9.00	4.00 %			
30	0.010	0.03	12.00	4.00	1.65 %		
35	0.018	0.06	12.00	4.00	1.50		
40	0.026	0.12	12.00	4.00	1.30		
45	0.042	0.25	13.00	4.00	1.20		15.0 %
50	0.062	0.44	13.00	5.00	1.50		18.0
55	0.096	0.65	15.00	5.00	2.00	5.5 %	50.0
60	0.157	0.85	15.00	5.00	2.00	14.0	40.0
62	0.197	0.85	15.00	4.60	2.00	14.0	40.0
65	0.287	0.85	15.00	4.00	2.00	22.0	35.0
70	0.495	0.85	15.00	0.00	0.00	20.0	35.0
75	0.831	0.85	15.00	0.00	0.00	100.0	100.0

**Plus 7.5% in year when first eligible for unreduced retirement with 27 years of service.*

DEATHS AFTER RETIREMENT: The RP-2000 Combined Mortality Table projected to 2025 using scale BB (set forward two years for males and one year for females) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table (set forward two years for males and seven years for females) is used for death after disability retirement. There is a margin for future mortality improvement in the tables used by the system. Based on the results of the most recent experience study adopted by the Board on September 19, 2016, the numbers of expected future deaths are 15-19% less than the actual number of deaths that occurred during the study period for healthy retirees and 13-17% less than expected under the selected table for disabled retirees. Representative values of the assumed annual rates of death after service retirement and after disability retirement are shown in this table:

Annual Rate of Death After . . .

AGE	SERVICE RETIREMENT MALE	FEMALE	DISABILITY RETIREMENT MALE	FEMALE
45	0.1609 %	0.1135 %	2.3306 %	1.2482 %
50	0.2474	0.1718	2.9279	1.5650
55	0.4246	0.2658	3.4400	1.7807
60	0.6985	0.4409	3.5881	2.3164
65	1.1300	0.8100	3.8275	3.1687
70	1.8697	1.3739	4.7566	4.4032
75	3.2147	2.2899	6.3153	6.0857
80	5.5160	3.7551	8.3527	8.4679
85	9.5631	6.3873	10.9122	12.7572
90	17.2787	11.2476	17.2787	19.4718
95	27.1263	18.1190	27.1263	24.2074

ASSETS: Five-year market related actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the ultimate assumed valuation rate of return of 7.50%. The amount recognized each year is 20% of the difference between market value and expected actuarial value.

EXPENSE LOAD: None.

PERCENT MARRIED: 100%, with females 3 years younger than males.

LOADS: Unused sick leave: 2% of active liability.

SCHEDULE E

Actuarial Cost Method

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently at 7.50%), of each active member's expected benefit at retirement or death is determined, based on his age, service, sex and compensation. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his terminating with a service, disability or survivor's benefit. Future salary increases and post-retirement cost-of-living adjustments are also anticipated. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries and inactive members to obtain the present value of all expected benefits payable from the system on account of the present group of members and beneficiaries.

2. The employer contributions required to support the benefits of the system are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

3. The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.

4. The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the system.

SCHEDULE F

Summary of Main System Provisions as Interpreted for Valuation Purposes

The Teachers' Retirement System of the State of Kentucky was established on July 1, 1940. The valuation took into account amendments to the system effective through June 30, 2017. The following summary describes the main benefit and contribution provisions of the system as interpreted for the valuation.

1 - DEFINITIONS

"Final average salary" means the average of the five highest annual salaries which the member has received for service in a covered position and on which the member has made contributions or on which the public board, institution or agency has picked up the member contributions. For a member who retires after attaining age 55 with 27 years of service, "final average salary" means the average of the three highest annual salaries.

2 - BENEFITS

Service Retirement Allowance for Members Before 7/1/2008
Condition for Allowance

- Completion of 27 years of service or attainment of age 55 and 5 years of service.

Amount of Allowance

- The annual retirement allowance for non-university members is equal to:
  - (a) 2.0% of final average salary multiplied by service before July 1, 1983, plus
  - (b) 2.5% of final average salary multiplied by service after July 1, 1983.
  - (c) For individuals who become members of the retirement system on or after July 1, 2002 and have less than 10 years of service at retirement, the retirement allowance is 2.0% of final average salary multiplied by service. If, however, they have 10 or more years, they receive a benefit percentage of 2.5% for all years of service up to 30 years.
  - (d) For members retiring on or after July 1, 2004, the retirement allowance formula is 3.0% of final average salary for each year of service credit earned in excess of 30 years.

Schedule F continued ...

The annual retirement allowance for university members is equal to 2.0% of final average salary multiplied by all years of service.

For all members, the annual allowance is reduced by 5% per year from the earlier of age 60 or the date the member would have completed 27 years of service.

The minimum annual service allowance for all members is $440 multiplied by credited service.

Service Retirement Allowance for Members on and after 7/1/2008
Condition for Allowance

- Completion of 27 years of service, attainment of age 60 and 5 years of service or attainment of age 55 and 10 years of service.

Amount of Allowance
The annual retirement allowance for non-university members is equal to:

- 1.7% of final average salary if service is 10 years or less.
- 2.0% of final average salary if service is greater than 10 years and no more than 20 years.
- 2.3% of final average salary if service is greater than 20 years but no more than 26 years.
- 2.5% of final average salary if service is greater than 26 years but no more than 30 years.
- 3.0% of final average salary for years of service greater than 30 years.

The annual retirement allowance for university members is equal to:

- 1.5% of final average salary if service is 10 years or less.
- 1.7% of final average salary if service is greater than 10 years and no more than 20 years.
- 1.85% of final average salary if service is greater than 20 years but less than 27 years.
- 2.0% of final average salary if service is greater than or equal to 27 years.

For all members, the annual allowance is reduced by 6% per year from the earlier of age 60 or the date the member would have completed 27 years of service.

Disability Retirement Allowance
Condition for Allowance

- Totally and permanently incapable of being employed as a teacher and under age 60 but after completing 5 years of service.

Amount of Allowance

- The disability allowance is equal to the greater of the service retirement allowance or 60% of the member's final average salary. The disability allowance is payable over an entitlement period equal to 25% of the service credited to the member at the date of disability or five years, whichever is longer. After the disability entitlement period has expired and if the member remains disabled, he will be retired under service retirement. The service retirement allowance will be computed with service credit given for the period of disability retirement. The allowance will not be less than $6,000 per year. The service retirement allowance will not be reduced for commencement of the allowance before age 60 or the completion of 27 years of service.

Benefits Payable on Separation from Service

- Any member who ceases to be in service is entitled to receive his contributions with allowable interest. A member who has completed 5 years of creditable service and leaves his contributions with the system may be continued in the membership of the system after separation from service, and file application for service retirement after the attainment of age 60.

Life Insurance

- A separate Life Insurance fund has been created as of June 30, 2000 to pay benefits on behalf of deceased TRS active and retired members.

Death Benefits
A surviving spouse of an active member with less than 10 years of service may elect to receive an annual allowance of $2,880 except that if income from other sources exceeds $6,600 per year the annual allowance will be $2,160.

A surviving spouse of an active member with 10 or more years of service may elect to receive an allowance which is the actuarial equivalent of the allowance the deceased member would have received upon retirement. The allowance

Schedule F continued ...

will commence on the date the deceased member would have been eligible for service retirement and will be payable during the life of the spouse.

If the deceased member is survived by unmarried children under age 18 the following schedule of annual allowances applies:

Number of Children	Annual Allowance
1	$ 2,400
2	4,080
3	4,800
4 or more	5,280

The allowances are payable until a child attains age 18, or age 23 if a full-time student.

If the member has no eligible survivor, a refund of his accumulated contributions is payable to his estate.

Options

In lieu of the regular Option 1, a retirement allowance payable in the form of a life annuity with refundable balance, any member before retirement may elect to receive a reduced allowance which is actuarially equivalent to the full allowance, in one of the following forms:

Option 2. A single life annuity payable during the member's lifetime with payments for 10 years certain.

Option 3. At the death of the member his allowance is continued throughout the life of his beneficiary.

Option 3(a). At the death of the beneficiary designated by the member under Option 3, the member's benefit will revert to what would have been paid had he not selected an option.

Option 4. At the death of the member one half of his allowance is continued throughout the life of his beneficiary.

Option 4(a). At the death of the beneficiary designated by the member under Option 4, the member's benefit will revert to what would have been paid had he not selected an option.

Post-Retirement Adjustments

The retirement allowance of each retired member and of each beneficiary shall be increased by 1.50% each July 1.

3- CONTRIBUTIONS

Member Contributions

University members contribute 7.625% of salary to the retirement system. Non-university members contribute 9.105% of salary to the retirement system. Member contributions are picked up by the employer.

SCHEDULE G
Table 1: Age - Service Table
Distribution of Active Members as of June 30, 2017
by Age and Service Groups

Attained Age	Completed Years of Service 0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	>= 35	TOTAL
24 & under	3,124	1							3,125
Total Pay	68,700,220	36,417							68,736,637
Avg. Pay	21,991	36,417							21,996
25 to 29	5,751	1,743	7						7,501
Total Pay	198,454,302	85,098,224	334,900						283,887,426
Avg. Pay	34,508	48,823	47,843						37,847
30 to 34	2,848	4,611	1,634	4					9,097
Total Pay	90,403,505	233,923,522	94,411,429	227,633					418,966,089
Avg. Pay	31,743	50,732	57,779	56,908					46,055
35 to 39	2,295	2,148	4,704	1,350	5				10,502
Total Pay	65,212,518	109,964,711	281,588,809	86,949,175	337,006				544,052,219
Avg. Pay	28,415	51,194	59,862	64,407	67,401				51,805
40 to 44	1,760	1,437	2,082	4,055	1,030	3			10,367
Total Pay	46,610,992	74,259,161	124,959,603	269,604,678	72,709,546	214,424			588,358,404
Avg. Pay	26,484	51,677	60,019	66,487	70,592	71,475			56,753
45 to 49	1,436	1,141	1,563	2,184	3,465	995	1		10,785
Total Pay	36,545,406	58,561,919	92,906,582	141,902,471	242,973,570	73,378,613	87,283		646,355,844
Avg. Pay	25,449	51,325	59,441	64,974	70,122	73,747	87,283		59,931
50 to 54	1,218	666	987	1,260	1,491	1,787	368	2	7,779
Total Pay	25,538,756	33,551,742	59,055,800	81,571,155	103,905,594	133,441,307	27,737,810	137,175	464,939,339
Avg. Pay	20,968	50,378	59,834	64,739	69,689	74,673	75,374	68,588	59,769
55 to 59	1,510	441	637	905	1,009	761	252	30	5,545
Total Pay	22,703,041	19,579,701	37,444,127	57,909,611	71,553,184	59,400,531	22,546,672	2,780,424	293,917,291
Avg. Pay	15,035	44,398	58,782	63,989	70,915	78,056	89,471	92,681	53,006
60 to 64	1,801	339	319	535	513	341	88	48	3,984
Total Pay	22,241,812	13,685,508	19,054,170	35,872,033	37,662,676	26,514,686	8,020,781	4,303,664	167,355,330
Avg. Pay	12,350	40,370	59,731	67,051	73,417	77,756	91,145	89,660	42,007
65 & over	2,176	505	146	186	175	137	68	52	3,445
Total Pay	18,334,805	11,267,510	8,493,619	12,919,583	12,962,784	11,860,877	6,223,797	4,952,788	87,015,763
Avg. Pay	8,426	22,312	58,175	69,460	74,073	86,576	91,526	95,246	25,259
Total	23,919	13,032	12,079	10,478	7,689	4,024	777	132	72,130
Total Pay	594,745,357	639,928,415	718,249,039	686,956,339	542,104,360	304,810,438	64,616,343	12,174,051	3,563,584,342
Avg. Pay	24,865	49,104	59,463	65,562	70,504	75,748	83,161	92,228	49,405

Average Age: 43.5 Average Service: 10.8

Schedule G continued ...

Table 2: Schedule of Active Member Valuation Data
as of June 30, 2017

Valuation Date June 30	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
2017	72,130	$ 3,563,584,342	$ 49,405	0.35%
2016	71,848	3,537,226,348	49,232	1.19
2015	72,246	3,515,113,127	48,655	2.45
2014	73,407	3,486,326,799	47,493	2.12
2013	74,831	3,480,066,406	46,506	1.51
2012	75,951	3,479,567,004	45,813	1.33
2011	76,349	3,451,756,287	45,210	3.97
2010	76,387	3,321,614,223	43,484	1.51
2009	75,937	3,253,076,600	42,839	1.43
2008	75,539	3,190,332,239	42,234	6.67

Table 3: Number of Retired Members, Beneficiaries and their Benefits by Age
as of June 30, 2017

Attained Age	Number of Members	Total Annual Payments	Average Annual Benefits
49 & Under	839	$ 11,271,278	$ 13,434
50 - 54	1,355	53,461,765	39,455
55 - 59	4,100	177,488,529	43,290
60 - 64	8,441	346,499,640	41,050
65 - 69	13,307	516,625,458	38,824
70 - 74	10,572	389,151,744	36,810
75 - 79	6,570	229,669,782	34,957
80 - 84	3,969	127,197,393	32,048
85 - 89	2,373	67,342,576	28,379
90 & Over	1,440	34,755,811	24,136
TOTAL	52,966	$ 1,953,463,976	$ 36,881

Average Current Age: 69.5

Average Age at Retirement for All Retirees and Beneficiaries: 56.0

Schedule G continued ...

Table 4: Schedule of Retirees, Beneficiaries and Survivors Added to and Removed from Rolls

Fiscal Year Ending June 30	ADD TO ROLLS		REMOVED FROM ROLLS		ROLLS AT END OF YEAR		Increase In Annual Allowances	Average Annual Allowances
	Number	Annual Allowances (Millions)	Number	Annual Allowances (Millions)	Number	Annual Allowances (Millions)		
2008	2,183	$ 90.6	950	$ 19.4	40,739	$ 1,206.8	6.3 %	$ 29,623
2009	2,351	96.2	1,040	22.7	42,050	1,280.3	6.1	30,447
2010	2,105	93.7	1,021	21.8	43,134	1,352.2	5.6	31,348
2011	2,133	98.9	848	17.7	44,419	1,433.4	6.0	32,270
2012	2,513	111.2	838	19.4	46,094	1,525.2	6.4	33,089
2013	2,303	105.7	991	22.2	47,406	1,608.7	5.5	33,934
2014	2,146	99.6	976	23.4	48,576	1,684.9	4.7	34,685
2015	2,917	119.1	1,671	36.3	49,822	1,767.6	4.9	35,479
2016	2,753	128.2	1,012	26.9	51,563	1,868.9	5.7	36,244
2017	2,638	119.8	1,235	35.2	52,966	1,953.5	4.5	36,881

Schedule H
Board Funding Policy

Introduction

Pursuant to the provisions of KRS 161.250, the Board of Trustees ("Board") of the Kentucky Teachers' Retirement Systems ("TRS") is vested with the responsibility for the general administration and management of the retirement system. The Board may adopt procedures necessary to conduct the business of the retirement system as needed. The applicable provisions of the Kentucky Revised Statutes ("state law") shall control if any inconsistency exists between state law and this policy.

Background:

State law provides that the retirement benefits promised to members of TRS are "…an inviolable contract of the Commonwealth…." (KRS 161.714.) To satisfy this solemn commitment, the Commonwealth of Kentucky ("state") is required to pay annual retirement appropriations necessary to fund the benefit requirements of members of the retirement system. All employers participating in TRS are responsible for paying the fixed employer contribution rate set forth in state law. However, the state-as plan guarantor-is solely responsible for paying the additional annual retirement appropriations necessary to keep the retirement system actuarially sound and able to satisfy the contract with members to provide promised benefits. (KRS 161.550(6).)

Since fiscal year 2008, the state has not paid the recommended annual retirement appropriations necessary to pre-fund the benefit requirements of members of the retirement system as determined by the actuary. Over this period of time, because of the failure to fund, the state's annual retirement appropriations have grown significantly from $60.5 million (Fiscal Year 2009) to $520 million (Fiscal Year 2017). The following schedule details the growth of the annual retirement appropriations payable by the state:

	Cumulative Increase as a % of Payroll	Cumulative Increase of Annual Retirement Appropriations Payable by the State
2009	1.88 %	$ 60,499,800
2010	2.46	82,331,200
2011	3.59	121,457,000
2012	5.81	208,649,000
2013	7.27	260,980,000
2014	8.02	299,420,000
2015	10.42	386,400,000
2016	12.97	487,400,000
2017	13.80	520,372,000

(Source: TRS Report of the Actuary on the Annual Valuation Prepared as of June 30, 2014).

The board has always taken action as required by state law and recommended annual retirement appropriations payable by the state that would ensure that the state meets the contractual obligations to members. This policy confirms the board's process for recommending annual retirement appropriations payable by the state and the primary actuarial assumptions and methodologies associated with calculating the annual retirement appropriations. Other related actuarial assumptions and methodologies not listed in this policy are reported in annual valuations, the most recent experience study, or resolutions adopted by the board.

1. Annual Retirement Appropriations Payable by the State: In each biennial budget request, the board will recommend annual retirement appropriations payable by the state to meet the benefit requirements of the members of the retirement system. The annual retirement appropriations payable by the state are the sum of the fixed employer contribution rate set by state law and the additional annual retirement appropriations necessary to fund the benefit requirements of members of the retirement system. (KRS 161.550.) The recommended additional annual retirement appropriations payable by the state are calculated by the board's actuary based upon the results of an annual valuation preceding the beginning of each biennium. (KRS 161.400.)

Schedule H continued ...

2. Calculation of Annual Retirement Appropriations Payable by the State: The Board will recommend annual retirement appropriations payable by the state, which-if paid-will meet the benefit requirements of the members of the retirement system consistent with generally accepted actuarial principles. Based upon technical advice from the Board's actuary, the Board hereby adopts the following principles for calculating the recommended annual retirement appropriations payable by the state:

- Use the Entry Age Normal actuarial cost method;
- Use a five-year asset smoothing method;
- Use a 30-year closed period to amortize legacy unfunded liability ("legacy unfunded liability" is that unfunded liability recognized as of the valuation prepared for June 30, 2014);
- Use a 20-year closed period to amortize new sources of unfunded liability ("new sources of unfunded liability" is that unfunded liability consisting of all benefit changes, assumption and method changes, and experience gains and/or losses that have occurred since the previous valuation); and
- Reach a 100 percent minimum funded ratio within the thirty-year closed amortization period.

The Board also recognizes that, from time to time, the state may desire to contribute lump sum payments toward satisfaction of unfunded liability rather than amortization of the debt. Total unfunded liability is published in every annual valuation of the retirement system and TRS will work with the state to develop reasonable and appropriate plans for receipt of lump sum payments toward the satisfaction of unfunded liability.

This policy will be reviewed regularly and amended or revised as necessary.

Schedule I
Sensitivity Analysis
as of June 30, 2017

The valuation results are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing cost. The charts on the following pages provide a simple analysis on how the costs are sensitive to changes to the assumed discount rate, the assumed inflation rate and the rate of payroll growth. The charts show the actuarial accrued liability, the unfunded liability, the funded ratio and the employer contribution rate under the following scenarios:

- The discount rate assumption sensitivity analysis shows the valuation results with the baseline discount rate assumption, and 7.50% together with a decrease in the discount rate to 6.50% and an increase in the discount rate to 8.50%. Under this scenario, the underlying inflation rate assumption is held constant at 3.00% and the payroll growth assumption is held constant at 3.50%.

- The inflation assumption sensitivity analysis shows the valuation results with the baseline underlying inflation rate assumption, 3.00%, together with decreases in the inflation rate to 2.75% and 2.50%. Under this scenario, the decrease in the underlying inflation rate assumption leads to corresponding decreases in the discount rate, the payroll growth assumption and the assumed rates of salary increase for active members.

- The payroll growth assumption sensitivity analysis shows the valuation results with the baseline underlying payroll growth assumption, 3.50%, together with decreases in the payroll growth assumption to 2.00% and 0.00%. Under this scenario, all other assumptions, including the individual member salary scale, are held constant so that the only impact is in the amortization of the unfunded liability, leading to higher employer contribution rates.

Schedule I continued ...

Assumed Discount Rate Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Decrease Discount Rate	Valuation Results	Increase Discount Rate
Actuarial Accrued Liability	$ 36,634,863	$ 32,819,886	$ 29,621,499
Actuarial Value of Assets	18,514,638	18,514,638	18,514,638
Unfunded Liability	$ 18,120,225	$ 14,305,248	$ 11,106,861
Funded Ratio	50.5%	56.4%	62.5%
Employer ADEC - University*	37.325%	28.925%	21.645%
Employer ADEC - Non-University*	38.805%	30.405%	23.125%
Discount Rate	6.50%	7.50%	8.50%
Payroll Growth	3.50%	3.50%	3.50%
Inflation Rate	3.00%	3.00%	3.00%

* *Less 1% for members hired before July 1, 2008.*

Inflation Assumption Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Valuation Results	Decrease Inflation Rate 25 Basis Points	Decrease Inflation Rate 50 Basis Points
Actuarial Accrued Liability	$ 32,819,886	$ 33,592,160	$ 34,397,184
Actuarial Value of Assets	18,514,638	18,514,638	18,514,638
Unfunded Liability	$ 14,305,248	$ 15,077,522	$ 15,882,546
Funded Ratio	56.4%	55.1%	53.8%
Employer ADEC - University*	28.925%	30.945%	33.075%
Employer ADEC - Non-University*	30.405%	32.425%	34.555%
Discount Rate	7.50%	7.25%	7.00%
Payroll Growth	3.50%	3.25%	3.00%
Inflation Rate	3.00%	2.75%	2.50%

* *Less 1% for members hired before July 1, 2008.*

Schedule I continued ...

Payroll Growth Assumption Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Valuation Results	Decrease Payroll Growth to 2%	No Payroll Growth
Actuarial Accrued Liability	$ 32,819,886	$ 32,819,886	$ 32,819,886
Actuarial Value of Assets	18,514,638	18,514,638	18,514,638
Unfunded Liability	$ 14,305,248	$ 14,305,248	$ 14,305,248
Funded Ratio	56.4%	56.4%	56.4%
Employer ADEC - University*	28.925%	33.285%	39.815%
Employer ADEC - Non-University*	30.405%	34.765%	41.295%
Discount Rate	7.50%	7.50%	7.50%
Payroll Growth	3.50%	2.00%	0.00%
Inflation Rate	3.00%	3.00%	3.00%

* *Less 1% for members hired before July 1, 2008.*

This page was intentionally left blank.

Teachers' Retirement System
of the State of Kentucky

2017

Actuarial Section

Report of the Actuary
Annual Valuation
of the Retiree Medical Plan
and the Life Insurance Plan

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

November 10, 2017

Board of Trustees
Teachers' Retirement System of the State of Kentucky
479 Versailles Road
Frankfort, KY 40601-3800

Members of the Board:

This report covers the Retiree Medical Plan funded by the Medical Insurance Fund (MIF) and OPEB liabilities related to the Life Insurance Plan funded by the Life Insurance Fund (LIF). Cavanaugh Macdonald Consulting, LLC (CMC) has submitted the results of the annual actuarial valuation prepared as of June 30, 2017. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The valuation indicates a total annual required contribution of 7.01% of active member payroll for the MIF payable for the fiscal year ending June 30, 2018 is required to support the benefits of the Kentucky Employees' Health Plan (KEHP) and the Medicare Eligible Health Plan (MEHP). Of this amount, 2.775% of payroll is estimated to be paid by University members and 3.750% of payroll is estimated to be paid by all other members, leaving 4.235% and 3.260% respectively, as the remaining annual required contribution. This annual required contribution reflects the actuarial value of assets of the MIF and an 8.00% discount rate for valuing liabilities.

The initial per capita costs of health care and the rates of health care inflation used to project the per capita health care costs have been revised since the previous valuation to reflect recent experience and revised expectations. Additionally, the results of the valuation include a change to the KEHP dependent subsidies offered to retirees who retired prior to July 1, 2010.

The Life Insurance Plan valuation indicates a total annual required contribution of 0.05% of active member payroll payable for the fiscal year ending June 30, 2020 is required to support the benefits of the LIF. This annual required contribution reflects the actuarial value of assets of the LIF and a 7.50% discount rate for valuing liabilities.

The promised benefits of the Retiree Medical and Life Insurance Plans are included in the actuarially calculated contribution rates that are developed using the entry age normal actuarial cost method. Five-year market related value of plan assets is used for actuarial valuation purposes. Gains and losses are reflected in the unfunded accrued liability that is being amortized by regular annual contributions as a level percentage of payroll within a 23-year period for the Retiree Medical Plan and a 27-year period for the Life Insurance Plan, on the assumption that payroll will increase by 3.50% annually. The assumptions recommended by the actuary and adopted by the Board are in aggregate reasonably related to the experience under the Retiree Medical and Life Insurance Plans and to reasonable expectations of anticipated experience under the Retiree Medical and Life Insurance Plans and meet the parameters for the disclosures under GASB 45.

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144
Phone (678) 388-1700 • Fax (678) 388-1730
www.CavMacConsulting.com
Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE

Board of Trustees
November 10, 2017
Page 2

CMC has prepared the trend information shown in the Schedule of Funding Progress in the Financial Section of the Annual Report and Section VII shown in the Actuarial Section of the Annual Report.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries and have experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the Retiree Medical and Life Insurance Plans and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the Plans.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

This actuarial valuation was performed to determine the recommended funding amount for the system. The asset values used to determine unfunded liabilities and funded ratios are not market values, but less volatile market-related values. A smoothing technique is applied to market values to determine the market-related values. The unfunded liability amounts and funded ratios using the market value of assets would be different. The interest rate used for determining liabilities is based on the expected return of assets. Therefore, liability amounts in this report cannot be used to assess a settlement of the obligation.

In our opinion, if the contributions to the Medical Insurance Fund continue at the current statutorily required levels, the funded ratio of the Retiree Medical Plan will continue to increase, and the ability of the MIF to fund the benefits called for under the Retiree Medical Plan will improve.

Respectfully submitted,

Alisa Bennett, FSA, EA, FCA, MAAA
Principal and Consulting Actuary

Edward J. Koebel, EA, FCA, MAAA
Principal and Consulting Actuary

Report of Actuary on the Annual Valuation of the Retiree Medical and Life Insurance Plans
Prepared as of June 30, 2017
Section I - SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below (dollar amounts are in thousands):

Medical Insurance Fund

Valuation Date	June 30, 2017	June 30, 2016
Number of active members	72,130	71,848
Annual salaries	$ 3,563,584	$ 3,537,226
Number of deferred vested members	7,410	8,145
Number of annuitants in medical plans	39,497	38,815
Number of spouses and beneficiaries in medical plans*	7,189	7,181
Total	46,686	45,996
Assets:		
Market value	$ 963,269	$ 733,781
Actuarial value	$ 985,694	$ 795,055
Unfunded actuarial accrued liability	$ 2,706,025	$ 2,839,018
Amortization period (years)	23	30
Discount rate	8.00%	8.00%

* *Spouses of post-65 retirees, as well as surviving spouses of deceased retirees on or after July 1, 2002, pay 100% of the full contribution. The full contribution for non-Medicare-eligible dependents is paid through a combination of payments from beneficiaries and the state.*

Medical Insurance Fund Contribution Rates for University Members

Valuation Date	June 30, 2017		June 30, 2016	
Contribution For Fiscal Year Ending	June 30, 2018		June 30, 2017	
	Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Normal	1.94 %	1.94 %	1.95 %	1.95 %
Accrued liability	5.07	5.07	4.64	4.64
Total	7.01 %	7.01 %	6.59 %	6.59 %
Member	2.775 %	2.775 %	2.775 %	2.775 %
Employer (ARC)	2.775	1.775	2.775	1.775
State (ARC)	1.460	2.460	1.040	2.040
Total	7.010 %	7.010 %	6.590 %	6.590 %

Medical Insurance Fund Contribution Rates for School District Employees (Non-Federal)

Valuation Date	June 30, 2017		June 30, 2016	
Contribution For Fiscal Year Ending	June 30, 2018		June 30, 2017	
	Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Normal	1.94 %	1.94 %	1.95 %	1.95 %
Accrued liability	5.07	5.07	4.64	4.64
Total	7.01 %	7.01 %	6.59 %	6.59 %
Member	3.750 %	3.750 %	3.750 %	3.750 %
Employer (ARC)	3.000	3.000	3.000	3.000
State (ARC)	0.260	0.260	(0.160)	(0.160)
Total	7.010 %	7.010 %	6.590 %	6.590%

Medical Insurance Fund Contribution Rates for Other Employees

Valuation Date	**June 30, 2017**		**June 30, 2016**	
Contribution For Fiscal Year Ending	June 30, 2018		June 30, 2017	
	Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Normal	1.94 %	1.94 %	1.95 %	1.95 %
Accrued liability	5.07	5.07	4.64	4.64
Total	7.01 %	7.01 %	6.59 %	6.59 %
Member	3.750 %	3.750 %	3.750 %	3.750 %
Employer (ARC)	3.750	2.750	3.750	2.750
State (ARC)	(0.490)	0.510	(0.910)	0.090
Total	7.010 %	7.010 %	6.590 %	6.590 %

Life Insurance Fund

(In thousands of dollars)

Valuation Date	**June 30, 2017**	**June 30, 2016**
Number of active members	72,130	71,848
Annual salaries	$ 3,563,584	$ 3,537,226
Number of vested former members	8,525	9,058
Number of retirees in Life Insurance Plan	48,225	47,071
Assets:		
Market value	$ 87,777	$ 90,991
Actuarial value	95,730	97,269
Unfunded actuarial accrued liability*	$ 13,339	$ 8,790
Amortization period (years)	27	30
Discount rate	7.50%	7.50%

Contribution for fiscal year ending	**June 30, 2020**	**June 30, 2019**
Normal	0.03 %	0.03 %
Accrued liability	0.02	0.01
Total	0.05 %	0.04 %

* *Includes liability for death in active service. This amount could be segregated from the OPEB liability and assets could be split for active and post-employment purposes. However, since this could be administratively burdensome and since death in active service liabilities can be considered de minimis, it is acceptable to consider the entire liability an OPEB liability under GASB 43 and 45.*

2. The valuation indicates combined member, employer, and state contributions of 7.01% of active member payroll would be sufficient to support the current benefits of the Retiree Medical Plan and state contributions of 0.05% of active member payroll would be sufficient to support the current benefits of the Life Insurance Plan. Comments on the valuation results as of June 30, 2017 are given in Section IV and further discussion of the contribution levels is set out in Sections VI and VII.

3. Since the previous valuation, the amortization period of the unfunded accrued liability has been changed from a 30-year period to a 23-year period for the Retiree Medical Plan and from a 30-year period to a 27-year period for the Life Insurance Plan.

4. Since the previous valuation, the initial per capita costs of health care and the rates of health care inflation used to project the per capita health care costs have been revised to reflect recent experience.

Report of Actuary on the Annual Valuation of the Retiree Medical and Life Insurance Plans continued ...

5. Since the previous valuation, there has been a change to the KEHP dependent subsidies offered to retirees. The premium subsidy for KEHP-participating members who retired prior to July 1, 2010 has been restored.

Section II - MEMBERSHIP DATA

1. Data regarding the membership of the Retiree Medical and Life Insurance Plans for use as a basis of the valuation were furnished by the system's office. The following tables summarize the membership of the system as of June 30, 2017, upon which the valuation was based. Detailed tabulations of the data are given in Schedule F.

Active Members as of June 30, 2017

Group	Number	Annual Salaries ($1,000's)
University Full Time hired before 7/1/2008	1,724	$ 127,690
University Full Time hired after 7/1/2008	1,493	77,914
Non-University Full Time hired before 7/1/2008	36,025	2,339,663
Non-University Full Time hired after 7/1/2008	20,897	947,285
Non-University Part Time hired before 7/1/2008	2,438	20,770
Non-University Part Time hired after 7/1/2008	9,553	50,262
TOTAL	72,130	$ 3,563,584

2. The following tables show the number of retired members and their beneficiaries receiving health care as of the valuation date as well as average ages.

Retirees Receiving Health Benefits as of June 30, 2017

	Under Age 65	Age 65 and Over	TOTAL
Number	11,094	28,403	39,497
Average Age	60.2	74.0	70.1

Spouses Receiving Health Benefits as of June 30, 2017

	Under Age 65	Age 65 and Over	TOTAL
Number	2,618	4,571	7,189
Average Age	59.0	74.8	69.1

3. The Retiree Medical Plan valuation includes 7,410 deferred vested members eligible for health care at age 60 and the Life Insurance Plan valuation includes 8,525 deferred vested members eligible for retiree life insurance at age 60.

Section III - ASSETS

1. As of June 30, 2017, the market value of MIF assets held by the Retiree Medical Plan amounted to $963,269,031 and the market value of LIF assets held by the Life Insurance Plan amounted to $87,777,405.

2. The five-year market related value of MIF assets used for valuation purposes as of June 30, 2017 was $985,694,300 and the five-year market related value of LIF assets used for valuation purposes as of June 30, 2017 was $95,730,467. Schedule B shows the development of the actuarial value of assets as of June 30, 2017.

3. Schedule C shows the receipts and disbursements for the year preceding the valuation date and a reconciliation of the asset balances for the MIF and the LIF.

Section IV - COMMENTS ON VALUATION

1. Schedule A of this report outlines the results of the actuarial valuation. The valuation was prepared in accordance with the actuarial assumptions and the actuarial cost method, which are described in Schedule D.

2. The valuation shows the Retiree Medical Plan has an actuarial accrued liability of $1,706,563,670 for benefits expected to be paid on account of the present active membership, based on service to the valuation date. The liability on account of deferred vested members amounts to $47,985,652. The liability on account of benefits payable to retirees and covered spouses amounts to $1,937,169,564. The total actuarial accrued liability of the Retiree Medical Plan amounts to $3,691,718,886. Against these liabilities, the Retiree Medical Plan has present assets for valuation purposes of $985,694,300. When this amount is deducted from the actuarial accrued liability of $3,691,718,886, there remains $2,706,024,586 as the unfunded actuarial accrued liability for the Retiree Medical Plan.

3. The normal contribution is equal to the actuarial present value of benefits accruing during the current year. The normal contribution for the Retiree Medical Plan is determined to be $69,127,577, or 1.94% of payroll.

4. The valuation shows that the Life Insurance Plan has an actuarial accrued liability of $17,002,363 for benefits expected to be paid on account of the present active membership, based on service to the valuation date. The liability on account of deferred vested members amounts to $3,416,394. The liability on account of benefits payable to retirees amounts to $88,650,542. The total actuarial accrued liability of the Life Insurance Plan amounts to $109,069,299. This amount includes liability for death in active service. The liability for death in active service could be segregated from the OPEB liability and assets could be split for active and post-employment purposes. As this could be administratively burdensome and, as death in active service liabilities can be considered de minimis, it is viewed to be acceptable to consider the entire liability an OPEB liability under GASB 43 and 45. Against these liabilities, the Life Insurance Plan has present assets for valuation purposes of $95,730,467. When this amount is deducted from the actuarial accrued liability of $109,069,299, there remains $13,338,832 as the unfunded actuarial accrued liability for the life insurance plan.

5. The normal contribution is equal to the actuarial present value of benefits accruing during the current year. The normal contribution for the life insurance plan is determined to be $993,357, or 0.03% of payroll.

Section V - DERIVATION OF EXPERIENCE GAINS AND LOSSES

1. Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2017 is shown below ($1,000's).

	EXPERIENCE GAIN/(LOSS)* OF THE:	MEDICAL INSURANCE FUND	LIFE INSURANCE FUND
(1)	UAAL** as of 6/30/2016	$ 2,839,018	$ 8,790
(2)	Normal cost from last valuation	69,043	993
(3)	Expected employer contributions	233,094	1,474
(4)	Interest accrual: [(1) + (2) - (3)] x interest***	213,997	623
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	2,888,964	8,932
(6)	Change due to benefit provisions	0	0
(7)	Change due to new actuarial assumptions	0	0
(8)	Change due to claims experience	(153,125)	0
(9)	Expected UAAL after changes: (5) + (6) + (7) + (8)	2,735,839	8,932
(10)	Actual UAAL as of 6/30/2017	2,706,025	13,339
(11)	Total gain/(loss): (9) - (10)	29,814	(4,407)
	(a) Contribution and investment gain/(loss)	65,870	(4,566)
	(b) Experience gain/(loss) (11) - (11a)	(36,056)	159
(12)	Accrued liabilities as of 6/30/2016	$ 3,634,073	$ 106,059
(13)	Experience gain/(loss) as percent of actuarial accrued liabilities at start of year (11b) / (12)	(1.0%)	0.1%

* *Rows labeled as a change, rather than a gain/(loss), are expressed as negative if the UAAL is decreased and positive if the UAAL is increased.*

** *Unfunded Actuarial Accrued Liability*

*** *Interest is 8.0% for the Medical Insurance Fund and 7.5% for the Life Insurance Fund.*

Section VI - CONTRIBUTIONS PAYABLE UNDER THE PLANS

1. Sections 161.420 and 161.550 of the Kentucky Revised Statutes provide the amounts employers and the state are required to contribute to the Medical Insurance Fund. These contribution amounts vary by date of membership and employee type.

Employer Percentage of Payroll Contributions Made to Medical Insurance Fund

UNIVERSITY EMPLOYEES		SCHOOL DISTRICT EMPLOYEES (Non-Federal)*		OTHER EMPLOYEES	
Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008	Members hired before 7/1/2008	Members hired on or after 7/1/2008
2.775 %	1.775 %	3.000 %	3.000 %	3.750 %	2.750 %

* *In addition to the amounts contributed by school districts on behalf of non-federal employees, the state contributes 0.75%.*

For the fiscal year ending June 30, 2018, member contributions will be 2.775% for University employees and 3.750% for all other members. Based upon the amortization of the unfunded accrued liability over a 23-year period as a level percentage of payroll, the valuation indicates employer and state contributions of 4.235% of payroll for University employees and 3.260% of payroll for all other members. The state is scheduled to contribute 0.04% of salary to the Life Insurance Fund for the fiscal year ending June 30, 2019. Based upon the amortization of the unfunded accrued liability over a 27-year period as a level percentage of payroll, CMC's valuation indicates a contribution of 0.05% for the fiscal year ending June 30, 2020 is required to support sufficiently the benefits of the Life Insurance Plan.

Required Contribution Rates
For Fiscal Year Ending June 30, 2018
Medical Insurance Fund

Normal	1.94 %
Accrued liability	5.07
Total	7.01 %

	UNIVERSITY EMPLOYEES		SCHOOL DISTRICT EMPLOYEES (Non-Federal)		OTHER EMPLOYEES	
	Members hired prior 7/1/2008	Members hired on or after 7/1/2008	Members hired prior 7/1/2008	Members hired on or after 7/1/2008	Members hired prior 7/1/2008	Members hired on or after 7/1/2008
Member	2.775 %	2.775 %	3.750 %	3.750 %	3.750 %	3.750 %
Employer (ARC)	2.775	1.775	3.000	3.000	3.750	2.750
State (ARC)	1.460	2.460	0.260	0.260	(0.490)	0.510
Total	7.010 %	7.010 %	7.010 %	7.010 %	7.010 %	7.010 %

Required Contribution Rates
Life Insurance Fund
For Fiscal Year Ending June 30, 2020

Normal	0.03 %
Accrued liability	0.02
Total	0.05%
Member	0.00 %
State (ARC)	0.05
Total	0.05 %

2. The valuation indicates that a total normal contribution of 1.94% of payroll is required to meet the cost of benefits currently accruing under the Retiree Medical Plan and 0.03% of payroll is required to meet the cost of benefits currently accruing under the Life Insurance Plan. The difference between the total contribution and the normal contribution remains to be applied toward the liquidation of the unfunded actuarial accrued liability. This accrued liability payment is 5.07% of payroll for the Retiree Medical Plan and 0.02% of payroll for the Life Insurance Plan.

3. The unfunded actuarial accrued liability amounts to $2,706,024,586 for the Retiree Medical Plan and $13,338,832 for the Life Insurance Plan as of the valuation date. An accrued liability contribution of 5.07% of payroll for the Retiree Medical Plan and 0.02% of payroll for the Life Insurance Plan is sufficient to amortize the unfunded actuarial accrued liabilities over a 23-year period for the Retiree Medical Plan and a 27-year period for the Life Insurance Plan, based on the assumption that the payroll will increase by 3.50% annually.

Section VII - COMMENTS ON LEVEL OF FUNDING

1. The system's monthly contribution for retirees who opt into the Retiree Medical Plan is based upon date of hire, date of attaining age 65, and years of service at retirement. Additionally, beneficiary contributions may vary by date of hire, date of attaining age 65, years of service at retirement, plan election, Medicare eligibility, and tobacco use. Beneficiary contributions for dependents are targeted to be 100% of the cost of expected claims for spouses age 65 and older. Historically, this target has been achieved. 100% of the full cost for non-Medicare eligible dependents is paid through a combination of payments from beneficiaries and the state on a current disbursement basis. Current employer and state contributions have been determined to be sufficient to fund the cost of the benefits to be provided. Benefits for university, school district (non-Federal), and other members are identical, although active employee contributions collected from university, school district (non-Federal), and other members differ. A listing of active member Retiree Medical Plan contributions by fiscal year, date of membership, and employer type is provided in Schedule E.

2. This valuation provides the contributions required to fund sufficiently the Retiree Medical Plan and to ensure the future solvency of the Medical Insurance Fund. For University employees, a member contribution of 2.775% of payroll together with employer and state contributions of 4.235% of payroll are required to meet the cost of benefits currently accruing and provide for the amortization of the unfunded actuarial accrued liability over a period of 23 years. For the remaining membership, a member contribution of 3.750% of payroll together with employer and state contributions of 3.260% of payroll is required to meet the cost of benefits currently accruing and provide for the amortization of the unfunded actuarial accrued liability over a period of 23 years.

Section VIII - ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statement 45 set forth certain items of required supplementary information to be disclosed in the financial statements of the Retiree Medical and Life Insurance Plans and the employer.

Number of Active and Retired Members in Medical Plan as of June 30, 2017

GROUP	NUMBER
Retirees currently receiving health benefits	39,497
Spouses of retirees currently receiving health benefits	7,189
Terminated employees entitled to benefits but not yet receiving benefits	7,410
Active plan members	72,130
Total	**126,226**

Number of Active and Retired Members in Life Insurance Plan as of June 30, 2017

GROUP	NUMBER
Retirees	48,225
Terminated employees	8,525
Active plan members	72,130
Total	**128,880**

Schedule of Funding Progress
Medical Insurance Fund
(In thousands of dollars)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
	A	B	(B-A)	(A/B)	C	[(B-A)/C]
6/30/2008	$ 185,883	$ 6,434,522	$ 6,248,639	2.9 %	$ 3,190,332	195.9 %
6/30/2009*	229,103	6,454,733	6,225,630	3.5	3,253,077	191.4
6/30/2010**	241,224	3,206,806	2,965,582	7.5	3,321,614	89.3
6/30/2011***	294,819	3,423,149	3,128,330	8.6	3,451,756	90.6
6/30/2012	338,746	3,594,540	3,255,794	9.4	3,479,567	93.6
6/30/2013	412,185	3,521,073	3,108,888	11.7	3,480,066	89.3
6/30/2014	508,913	3,194,689	2,685,776	15.9	3,486,327	77.0
6/30/2015	637,839	3,525,584	2,887,745	18.1	3,515,113	82.2
6/30/2016****	795,055	3,634,073	2,839,018	21.9	3,537,226	80.3
6/30/2017	985,694	3,691,719	2,706,025	26.7	3,563,584	75.9

* *Reflects change in participation assumptions and plan design.*
** *Reflects change in discount rate to 8%, change in plan design and updating medical trend.*
*** *Reflects change in decrement assumptions and updating medical trend.*
**** *Reflects change in decrement and participation assumptions.*

Schedule of Funding Progress
Life Insurance Fund
(In thousands of dollars)

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liabilities (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
	A	B	(B-A)	(A/B)	C	[(B-A)/C]
6/30/2008	$ 77,658	$ 84,265	$ 6,607	92.2 %	$ 3,190,332	0.21 %
6/30/2009	84,703	90,334	5,631	93.8	3,253,077	0.17
6/30/2010	87,905	92,091	4,186	95.5	3,321,614	0.13
6/30/2011	88,527	88,088	(439)	100.5	3,451,756	(0.01)
6/30/2012	92,241	91,398	(843)	100.9	3,479,567	(0.02)
6/30/2013	94,863	94,325	(538)	100.6	3,480,066	(0.02)
6/30/2014	96,130	97,354	1,224	98.7	3,486,327	0.04
6/30/2015	97,186	98,739	1,553	98.4	3,515,113	0.04
6/30/2016[1]	97,269	106,059	8,790	91.7	3,537,226	0.25
6/30/2017	95,730	109,069	13,339	87.8	3,563,584	0.37

[1] *Reflects change in decrement and participation assumptions.*

2. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2017. Additional information as of the latest actuarial valuation follows.

Valuation Date	Actuarial Cost Method	Amortization Method	Remaining Amortization Period	Asset Valuation Method	Actuarial Assumptions: Investment Rate of Return*	Actuarial Assumptions: Investment Rate of Return*
06/30/2017	Entry age	Level percent of pay, open	23 Years Retiree Medical Plan 27 Years Life Insurance Plan	5-Year Smoothed Market	8.00%-Retiree Medical Plan	7.50%-Retiree Life Insurance Plan

Medical Trend Assumption	Pre-Medicare**	Medicare
Fiscal Year Ending 6/30/2018	7.75 %	5.75 %
Fiscal Year Ending 6/30/2019	7.00 %	5.50 %
Ultimate Trend Rate	5.00 %	5.00 %
Year of Ultimate Trend Rate	2024	2021

** Includes price inflation at 3.00%.*
***Alternate trend rates were used for Medicare Part B premiums and are disclosed in Schedule D.*

Schedule of Employer Contributions
Medical Insurance Fund

Fiscal Year Ending	Annual Required Contribution (ARC)	Actual Employer Contribution	Retiree Drug Subsidy Contribution	TOTAL Contribution	Percentage of ARC Contributed
	(A)	(B)	(C)	(B) + (C)	[(B) + (C)]/(A)
6/30/2008	$ 395,282,164	$ 148,954,644	$ 11,911,565	$ 160,866,209	40.7 %
6/30/2009	467,312,904	164,480,119	13,611,748	178,091,867	38.1
6/30/2010	457,054,117	158,765,496	14,614,285	173,379,781	37.9
6/30/2011	477,723,070	188,453,929	280,585	188,734,514	39.5
6/30/2012	470,217,067	177,450,206	297,639	177,747,845	37.8
6/30/2013	186,725,823	166,611,420	0	166,611,420	89.2
6/30/2014	159,583,400	162,568,395	0	162,568,395	101.9
6/30/2015	106,606,132	168,084,353	0	168,084,353	157.7
6/30/2016	97,982,580	221,966,705	0	221,966,705	226.5
6/30/2017	102,854,017	180,375,986	0	180,375,986	175.4

Schedule of Employer Contributions
Life Insurance Fund

Fiscal Year Ending	Annual Required Contribution (ARC)	Actual Employer Contribution	Percentage of ARC Contributed
	(A)	(B)	(B) / (A)
6/30/2008	$ 1,914,199	$ 5,411,249	282.7 %
6/30/2009	1,498,076	5,455,473	364.2
6/30/2010	1,992,969	1,966,826	98.7
6/30/2011	1,725,878	1,668,822	96.7
6/30/2012	1,732,831	1,684,711	97.2
6/30/2013	1,739,908	1,680,495	96.6
6/30/2014	1,044,959	1,006,091	96.3
6/30/2015	1,050,216	1,019,519	97.1
6/30/2016	1,057,851	1,037,769	98.1
6/30/2017	1,065,122	1,049,683	98.6

3. Following is the calculation of the Annual OPEB Cost (AOC) and the Net OPEB Obligation (NOO) for the fiscal year ending June 30, 2017. As the Retiree Medical and Life Insurance Plans are cost-sharing multiple-employer plans, GASB Statement 45 does not require the participating employers to disclose this information.

Annual OPEB Cost and Net OPEB Obligation for the Medical Insurance Fund for Fiscal Year Ending June 30, 2017

(a) Employer Annual Required Contribution	$ 102,854,017
(b) Interest on Net OPEB Obligation	111,531,286
(c) Adjustment to Annual Required Contribution	80,560,112
(d) Annual OPEB Cost: (a) + (b) - (c)	133,825,191
(e) Employer Contributions for Fiscal Year 2017	180,375,986
(f) Increase (decrease) in Net OPEB Obligation: (d) - (e)	(46,550,795)
(g) Net OPEB Obligation at beginning of Fiscal Year	1,394,141,069
(h) Net OPEB Obligation at end of Fiscal Year: (f) + (g)	$ 1,347,590,274

Trend Information for the Medical Insurance Fund

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation
6/30/2012	$ 480,545,219	37.0 %	$ 1,413,736,073
6/30/2013	222,560,394	74.9	1,469,685,047
6/30/2014	196,836,134	82.6	1,503,952,786
6/30/2015	144,727,465	116.1	1,480,595,898
6/30/2016	135,511,876	163.8	1,394,141,069
6/30/2017	133,825,191	134.8	1,347,590,274

Annual OPEB Cost and Net OPEB Obligation
for the Life Insurance Fund for Fiscal Year Ending June 30, 2017

(a) Employer Annual Required Contribution	$ 1,065,122
(b) Interest on Net OPEB Obligation	(641,293)
(c) Adjustment to Annual Required Contribution	(468,294)
(d) Annual OPEB Cost: (a) + (b) - (c)	892,123
(e) Employer contributions for Fiscal Year 2017	1,049,683
(f) Increase (decrease) in Net OPEB Obligation: (d) - (e)	(157,560)
(g) Net OPEB Obligation at beginning of Fiscal Year	(8,550,579)
(h) Net OPEB Obligation at end of Fiscal Year: (f) + (g)	$ (8,708,139)

Trend Information for the Life Insurance Fund

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation
6/30/2012	$ 1,551,065	108.6 %	$ (7,940,695)
6/30/2013	1,555,031	108.1	(8,066,159)
6/30/2014	857,161	117.4	(8,215,089)
6/30/2015	858,950	118.7	(8,375,658)
6/30/2016	862,848	120.3	(8,550,579)
6/30/2017	892,123	117.7	(8,708,139)

4. On June 2, 2015, GASB Statement No. 74 and GASB Statement No. 75 (GASB 74 and 75) were unanimously adopted by the GASB Board. The disclosure requirements of GASB 74 and 75 will be similar to the disclosure requirements for pension benefits under GASB Statement No. 67 and GASB Statement No. 68. GASB 74 relates to accounting disclosures for plan sponsors and, as such, replaces GASB 43 beginning with fiscal years ending June 30, 2017. GASB 75 relates to accounting disclosures for contributing employers and, as such, replaces GASB 45 beginning with fiscal years ending June 30, 2018. GASB 74 and 75 will require applicable OPEB plan sponsors and contributing employers to disclose the net OPEB liability on the statement of financial position and book an accounting expense based upon the entry age normal actuarial cost method. Beyond the use of a specified actuarial cost method, GASB's new disclosure standards will also require the discount rate used to calculate liabilities to be based upon the yield of 20-year, tax-exempt municipal bonds and the expected rate of return on plan assets, to the extent plan assets are projected to be available for the payment of future benefits. Additionally, GASB 74 and 75 will bring about many other changes in the liability valuation and accounting disclosure processes currently in place which are expected to significantly impact data collection, timing, and effort. As details for the new GASB OPEB disclosure standards emerge, planning and coordination between plan sponsors, contributing employers, actuaries, and auditors is recommended.

SCHEDULE A

Results of the Valuation
June 30, 2017
(In thousands of dollars)

		Medical Insurance Fund	Life Insurance Fund
PAYROLL		$ 3,563,584	$ 3,563,584
ACTUARIAL ACCRUED LIABILITY			
Present value of prospective benefits payable in respect of:			
(a)	Present active members	1,706,564	17,002
(b)	Present terminated vested members	47,986	3,416
(c)	Present retired members and covered spouses	1,937,169	88,651
(d)	Total actuarial accrued liability	3,691,719	109,069
PRESENT ASSETS FOR VALUATION PURPOSES		985,694	95,730
UNFUNDED ACTUARIAL ACCRUED LIABILITY		$ 2,706,025	$ 13,339
CONTRIBUTIONS		Fiscal Year Ending June 30, 2018	Fiscal Year Ending June 30, 2020
	Normal	1.94%	0.03%
	Accrued Liability	5.07	0.02
	Total	7.01%	0.05%
	Member	3.69%	0.00%
	Employer (ARC)	2.97	0.00
	State (ARC)	0.35	0.05
	Total	7.01%	0.05%

Medical Insurance Fund
Solvency Test
(In millions of dollars)

Valuation Date	(1) Active Member Contributions	(2) Retirants and Beneficiaries	(3) Active Members (Employer Financed Portion)	Valuation Assets	Portion of Accrued Liabilities Covered by Assets (1)	(2)	(3)
6/30/2008	n/a	$ 3,084.4	$ 3,350.2	$ 185.9	n/a	6 %	0 %
6/30/2009	n/a	3,203.7	3,251.0	229.1	n/a	7	0
6/30/2010	n/a	1,948.6	1,258.2	241.2	n/a	12	0
6/30/2011	n/a	1,910.1	1,513.1	294.8	n/a	15	0
6/30/2012	n/a	2,046.7	1,547.9	338.7	n/a	17	0
6/30/2013	n/a	2,001.8	1,519.3	412.2	n/a	21	0
6/30/2014	n/a	1,771.9	1,422.8	508.9	n/a	29	0
6/30/2015	n/a	1,982.2	1,543.4	637.8	n/a	32	0
6/30/2016	n/a	1,950.9	1,683.2	795.1	n/a	41	0
6/30/2017	n/a	1,985.1	1,706.6	985.7	n/a	50	0

Schedule A continued ...

Life Insurance Fund
Solvency Test
(In millions of dollars)

Valuation Date	(1) Active Member Contributions	(2) Retirants And Beneficiaries	(3) Active Members (Employer Financed Portion)	Valuation Assets	Portion of Accrued Liabilities Covered by Assets (1)	(2)	(3)
6/30/2008	n/a	$ 66.9	$ 17.4	$ 77.7	n/a	100%	62 %
6/30/2009	n/a	72.0	18.4	84.7	n/a	100	69
6/30/2010	n/a	74.4	17.7	87.9	n/a	100	76
6/30/2011	n/a	72.2	15.9	88.5	n/a	100	103
6/30/2012	n/a	75.2	16.2	92.2	n/a	100	105
6/30/2013	n/a	78.1	16.2	94.9	n/a	100	104
6/30/2014	n/a	81.0	16.3	96.1	n/a	100	93
6/30/2015	n/a	82.7	16.0	97.2	n/a	100	91
6/30/2016	n/a	89.0	17.1	97.3	n/a	100	49
6/30/2017	n/a	92.1	17.0	95.7	n/a	100	21

SCHEDULE B

Development of the Actuarial Value of Assets
Medical Insurance Fund
June 30, 2017

(1)	Actuarial Value of Assets Beginning of Year		$	795,055,116
(2)	Market Value of Assets End of Year			963,269,031
(3)	Market Value of Assets Beginning of Year			733,780,967
(4)	Cash Flow			
	a.	Contributions		367,137,197
	b.	Benefit Payments		231,563,156
	c.	Administrative Expense		1,538,574
	d.	Net: (4)a - (4)b - (4)c		134,035,467
(5)	Investment Income			
	a.	Market total: (2) - (3) - (4)d		95,452,597
	b.	Assumed Rate		8.00%
	c.	Amount for Immediate Recognition: [(3) x (5)b] + [(4)d x (5)b x 0.5]		64,063,896
	d.	Amount for Phased-In Recognition: (5)a - (5)c		31,388,701
(6)	Phased-In Recognition of Investment Income			
	a.	Current Year: 0.20 x (5)d		6,277,740
	b.	First Prior Year		(12,827,105)
	c.	Second Prior Year		(7,773,884)
	d.	Third Prior Year		6,492,851
	e.	Fourth Prior Year		370,219
	f.	Total Recognized Investment Gain		(7,460,179)
(7)	Actuarial Value of Assets End of Year: (1) + (4)d + (5)c + (6)f			985,694,300
(8)	Difference Between Market & Actuarial Values: (2) - (7)		$	(22,425,269)
(9)	Rate of Return on Actuarial Value			6.57%

Schedule B continued ...

Development of the Actuarial Value of Assets
Life Insurance Fund
June 30, 2017

(1)	Actuarial Value of Assets Beginning of Year		$ 97,268,990
(2)	Market Value of Assets End of Year		87,777,405
(3)	Market Value of Assets Beginning of Year		90,990,928
(4)	Cash Flow		
	a.	Contributions	1,049,683
	b.	Benefit Payments	5,151,013
	c.	Administrative Expense	27,690
	d.	Net: (4)a - (4)b - (4)c	(4,129,020)
(5)	Investment Income		
	a.	Market total: (2) - (3) - (4)d	915,497
	b.	Assumed Rate	7.50%
	c.	Amount for Immediate Recognition: [(3) x (5)b] + [(4)d x (5)b x 0.5]	6,669,481
	d.	Amount for Phased-In Recognition: (5)a - (5)c	(5,753,984)
(6)	Phased-In Recognition of Investment Income		
	a.	Current Year: 0.20 x (5)d	(1,150,797)
	b.	First Prior Year	(353,444)
	c.	Second Prior Year	(941,279)
	d.	Third Prior Year	(406,987)
	e.	Fourth Prior Year	(1,226,477)
	f.	Total Recognized Investment Gain	(4,078,984)
(7)	Actuarial Value of Assets End of Year: (1) + (4)d + (5)c + (6)f		95,730,467
(8)	Difference Between Market & Actuarial Values: (2) - (7)		$ (7,953,062)
(9)	Rate of Return on Actuarial Value		2.72%

SCHEDULE C

Medical Insurance Fund
Summary of Receipts & Disbursements
(Market Value)

	For the Year Ending June 30, 2017	June 30, 2016
RECEIPTS FOR THE YEAR		
Contributions		
Members Statutory	$ 128,819,243	$ 128,068,782
Payment by Retired Members	57,941,968	56,296,433
TOTAL MEMBERS	186,761,211	184,365,215
State Statutory Contributions	22,042,563	21,824,740
Employer Contributions	104,879,255	104,271,120
State Statutory - Transition Fund/KEHP	53,454,168	52,542,510
TOTAL EMPLOYER	180,375,986	178,638,370
GRAND TOTAL	367,137,197	363,003,585
Recovery Income	0	43,328,335
Net Investment Income	95,452,597	(9,332,490)
TOTAL	462,589,794	396,999,430
DISBURSEMENTS FOR THE YEAR		
Administrative Expense	1,538,574	1,686,070
Medical Insurance Expense	231,563,156	288,494,763
TOTAL	233,101,730	290,180,833
EXCESS OF RECEIPTS OVER DISBURSEMENTS	229,488,064	106,818,597
RECONCILIATION OF ASSET BALANCES		
Asset Balance as of the Beginning of the Year	733,780,967	626,962,370
Excess of Receipts over Disbursements	229,488,064	106,818,597
Asset Balance as of the End of the Year	$ 963,269,031	$ 733,780,967

Schedule C continued ...

Life Insurance Fund
Summary of Receipts & Disbursements
(Market Value)

	For the Year Ending June 30, 2017	June 30, 2016
RECEIPTS FOR THE YEAR		
Contributions		
Members	0	0
State	881,703	872,990
Employer	167,980	164,779
TOTAL	1,049,683	1,037,769
Net Investment Income	915,497	4,829,336
TOTAL	1,965,180	5,867,105
DISBURSEMENTS FOR THE YEAR		
Benefit Payments	5,151,013	4,595,489
Refunds to Members	0	0
Medical Insurance Payments	0	0
Miscellaneous, including expenses	27,690	27,195
TOTAL	5,178,703	4,622,684
EXCESS OF RECEIPTS OVER DISBURSEMENTS	(3,213,523)	1,244,421
RECONCILIATION OF ASSET BALANCES		
Asset Balance as of the Beginning of the Year	90,990,928	89,746,507
Excess of Receipts over Disbursements	(3,213,523)	1,244,421
Asset Balance as of the End of the Year	$ 87,777,405	$ 90,990,928

SCHEDULE D
Statement of Actuarial Assumptions and Methods

The rates of retirement, disability, mortality, termination, salary increases, and rates of future benefit participation used in the valuation were selected based on the actuarial experience study prepared as of June 30, 2015, submitted to and adopted by the Board on September 19, 2016. The health care cost trend rates, and expected plan costs were determined by the actuary based on recent experience.

Valuation Date: June 30, 2017

Discount Rate: 8.0% per annum, compounded annually for Medical Insurance Fund.
7.5% per annum, compounded annually for Life Insurance Fund.

Schedule D continued ...

Health Care Cost Trend Rates: Following is a chart detailing trend assumptions.

Annual Trend Rate

Fiscal Year Ended	Medicare Part B	Under Age 65	Age 65 and Over
2018	0.00%	7.75%	5.75%
2019	1.87	7.00	5.50
2020	4.29	6.50	5.25
2021	4.39	6.00	5.00
2022	4.88	5.50	5.00
2023	5.68	5.25	5.00
2024	5.19	5.00	5.00
2025	6.06	5.00	5.00
2026	6.49	5.00	5.00
2027	5.62	5.00	5.00
2028	5.37	5.00	5.00
2029	5.12	5.00	5.00
2030 and beyond	5.00	5.00	5.00

Age Related Morbidity: For retirees ages 65 and older, per capita health care costs are adjusted to reflect expected health care cost changes related to age. The increase to the net incurred health care claims is assumed to be:

Participant Age	Annual Increase
65 – 69	3.0 %
70 – 74	2.5
75 – 79	2.0
80 – 84	1.0
85 - 89	0.5
90 and over	0.0

For the retiree health care liabilities of those under age 65, the current premium charged by the Kentucky Employees' Health Plan (KEHP) is used as the base cost and is projected forward using the health care trend assumption. No implicit rate subsidy is calculated or recognized as the implicit rate subsidy is deemed the responsibility of the KEHP. Under Actuarial Standard of Practice No. 6 (ASOP No. 6), aging subsidies (or implicit rate subsidies) should be recognized, as the differences in health care utilization and cost due to age have been demonstrated and well quantified. The impact of aging on a valuation's results can be as significant as the use of mortality, trend, and discounting. It has been the long-standing position that the responsibility for compliance with GASB Statement No. 43, when it relates to KEHP implicit subsidies, rests with KEHP, not the system, as the system has no operational authority over KEHP. As such, KEHP implicit subsidies are excluded from the OPEB valuation process of the Retiree Medical Plan. As GASB 74 and 75 prohibit such a deviation from ASOP No. 6, additional consideration to the current treatment of KEHP implicit rate subsidies may be needed in the future. The estimated impact of KEHP implicit subsidies to the actuarial accrued liability is an increase of $687,878,632.

Retiree Medical Plan Costs: Assumed per capita health care costs were based on past experience and trended based on the assumptions. Following are charts detailing retiree per capita assumptions. These amounts include medical, drug, and administrative costs and represent the amount that the system pays as the full contribution amount. The amounts include medical and drug costs. An additional $7.44 per month is paid to the Department of Employee Insurance (DEI) and is not included in the under age 65 costs listed below. For retirees ages 65 and older, the average costs shown are normalized to age 65 and then age adjusted in calculating liabilities.

Monthly Under Age 65 (KEHP) Full Costs as of January 1, 2018

Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP
Single	$ 709.46	$ 729.34	$ 685.38	$ 682.80
Parent Plus	978.50	1,037.08	975.91	940.64
Couple	1,325.64	1,589.10	1,497.18	1,450.02
Family	1,479.76	1,767.60	1,666.26	1,615.30
Family C-R	818.96	876.68	824.54	800.94

Schedule D continued ...

Average Monthly TRS Full Costs & Contributions

Calendar Year	Under Age 65 (KEHP) Contributions	Age 65 & Over (MEHP) Full Costs	Age 65 & Over (MEHP) Contributions
2008	$ 484	$ 278	$ 278
2009	545	301[1]	301
2010	594	373[1]	373
2011	626	289[1]	289
2012	622	270[2]	270
2013	635	294[2]	294
2014	679	290[2]	290
2015	669	240[2]	240
2016	681	260[2]	260
2017	680	252[2]	252
2018	688	258[2]	258

1 *Under GASB 45, cost reductions for the amount of the Medicare Part D Retiree Drug Subsidy cannot be taken into account in the gross cost calculations.*

2 *2,257 current, Medicare-eligible benefit recipients have been identified by the client to be ineligible for premium-free Medicare Part A benefits. For these individuals, the full cost of coverage is, on average, $575 per month. It is assumed 9% of current retirees under the age of 65 who were hired prior to 4/1/1986 will be ineligible for premium-free Medicare Part A benefits upon reaching Medicare eligibility (age 65) and 0% of these retirees will cover a spouse. All active members are assumed to have begun contributing to Medicare as of 4/1/1986 and are assumed eligible for premium-free Medicare Part A benefits.*

Current Retiree Medical Plan Participation: Actual census data and current plan elections (including waivers) provided by the system were used for those retirees currently participating in the Retiree Medical Plan. Current participants are assumed to maintain their current Retiree Medical Plan coverage until they are no longer eligible.

Anticipated Retireee Medical Plan Participation: The assumed annual rates of health care plan participation for future retirees are as follows:

Member Participation

Years of Service	Entered TRS Before 7/1/2002	Entered TRS After 6/30/2002 & Before 7/1/2008	Entered TRS After 6/30/2008
5-9.99	20 %	20%	Not Eligible
10-14.99	49	20	Not Eligible
15-19.99	70	41	41%
20-24.99	91	61	61
25-25.99	91	76	76
26-26.99	91	84	84
27 or more	91	91	91

Anticipated Retiree Medical Plan Elections: The assumed rates of plan election for future retirees participating in the KEHP plans are provided in the following table. As the assumed plan election rates are estimates and actual results may be materially different, this assumption will need to be revised as experience evolves.

LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP
42%	43%	12%	3%

Schedule D continued ...

Spouse Coverage in Medical Plans: Actual census data and current plan elections were used for MEHP and KEHP covered spouses (including beneficiaries) of current retirees. For spouses of future retirees, 25% of future male retirees are assumed to cover their spouse and 15% of future female retirees are assumed to cover their spouse. Male retirees are assumed to be three years older than their spouse and female retirees are assumed to be one year younger than their spouse.

Disabled Dependent Children in Retiree Medical Plan: The liability associated with disabled dependent children was determined to be de minimis and was therefore excluded from this valuation.

Withdrawal Assumption: Future vested members who terminate employment prior to retirement are assumed to elect to withdraw their contributions based upon their age and service at termination of employment as follows:

Rates of Withdrawal Upon Termination of Employment

Age at Termination of Employment	Years of Service		
	5 - 10	10 - 15	15+
Under Age 55	20%	15%	10%
Ages 55+	10%	10%	10%

All vested members who terminate employment prior to retirement are assumed to elect to withdraw their contributions prior to receiving a pension benefit based upon their service as follows:

Rates of Withdrawal Prior to Receiving a Pension Benefit

Years of Service			
5 - 10	10 - 15	15 - 27	27+
25%	15%	10%	25%

All vested members who terminate employment prior to retirement and who are assumed to elect to receive a pension benefit are assumed to begin receiving their benefit at age 60.

Payroll Growth: 3.50% per annum, compounded annually.

Price Inflation: 3.00% per annum, compounded annually.

Affordable Care Act (ACA): The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results. While the impact of certain provisions such as the excise tax on high-value health insurance plans beginning in 2020 (if applicable), mandated benefits and participation changes due to the individual mandate should be recognized in the determination of liabilities, overall future plan costs and the resulting liabilities are driven by the assumed rate of health care inflation (i.e., trend). The trend assumption forecasts the anticipated increase to initial per capita costs, taking into account health care cost inflation, increases in benefit utilization, government-mandated benefits, and technological advances. Given the uncertainty regarding the ACA's implementation (e.g., the impact of excise tax on high-value health insurance plans, changes in participation resulting from the implementation of state-based health insurance exchanges), continued monitoring of the ACA's impact on the Retiree Medical Plan's liability will be required.

Asset Valuation Method: Five-year market related actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the ultimate assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The ultimate assumed valuation rate of return is assumed to be 8.00% for the Medical Insurance Fund and 7.50% for the Life Insurance Fund.

Actuarial Cost Method: The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future, of each active member's expected benefit at retirement or death is determined, based on his/her age, service, and gender. The calculations take into account the probability of a

Schedule D continued ...

member's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of his/her terminating with a service, disability or survivor's benefit. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries and deferred vested members to obtain the present value of all expected benefits payable from the system on account of the present group of members and beneficiaries.

The employer contributions required to support the benefits of the system are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

The normal contribution is determined using the "entry age normal" method. Under this method, a calculation is made to determine the uniform and constant percentage rate of employer contribution which, if applied to the compensation of the average new member during the entire period of his/her anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his/her behalf.

The unfunded accrued liability is determined by subtracting the present value of prospective employer normal contributions and member contributions, together with the current actuarial value of assets held, from the present value of expected benefits to be paid from the system.

Separations from Service: Representative values of the assumed annual rates of salary increases, death, disability, withdrawal, service retirement and early retirement are as follows:

Males: Annual Rate of . . .

				WITHDRAWAL			RETIREMENT	
				YEARS OF SERVICE				
AGE	SALARY*	DEATH	DISABILITY	0 - 4	5 - 9	10+	Before 27 Years of Service	After 27 Years of Service**
20	7.20%	0.019%	0.01%	11.00%				
25	6.40	0.021	0.01	11.00	3.00%			
30	5.40	0.025	0.01	11.00	3.00	3.00%		
35	4.70	0.043	0.04	12.00	3.50	1.40		
40	4.20	0.060	0.09	12.00	4.50	1.40		
45	3.80	0.084	0.20	12.00	4.50	1.30		17.0%
50	3.70	0.119	0.30	14.00	4.50	1.90		17.0
55	3.50	0.202	0.58	15.00	4.50	2.40	5.0%	45.0
60	3.50	0.340	0.75	15.00	4.00	2.40	13.0	35.0
62	3.50	0.419	0.75	15.00	3.80	2.40	15.0	25.0
65	3.50	0.565	0.75	15.00	3.50	2.40	20.0	25.0
70	3.50	0.913	0.75	20.00	0.00	0.00	20.0	20.0
75	3.50	1.556	0.75	20.00	0.00	0.00	100.0	100.0

Females: Annual Rate of . . .

				WITHDRAWAL			RETIREMENT	
				YEARS OF SERVICE				
AGE	SALARY*	DEATH	DISABILITY	0 - 4	5 - 9	10+	Before 27 Years of Service	After 27 Years of Service**
20	7.20%	0.007%	0.01%	9.00%				
25	6.40	0.008	0.01	9.00	4.00%			
30	5.40	0.010	0.03	12.00	4.00	1.65%		
35	4.70	0.018	0.06	12.00	4.00	1.50		
40	4.20	0.026	0.12	12.00	4.00	1.30		
45	3.80	0.042	0.25	13.00	4.00	1.20		15.0%
50	3.70	0.062	0.44	13.00	5.00	1.50		18.0
55	3.50	0.096	0.65	15.00	5.00	2.00	5.5%	50.0
60	3.50	0.157	0.85	15.00	5.00	2.00	14.0	40.0
62	3.50	0.197	0.85	15.00	4.60	2.00	14.0	40.0
65	3.50	0.287	0.85	15.00	4.00	2.00	22.0	35.0
70	3.50	0.495	0.85	15.00	0.00	0.00	20.0	35.0
75	3.50	0.831	0.85	15.00	0.00	0.00	100.0	100.0

* *Includes wage inflation at 3.5% per annum.*

** *Plus 7.5% in year when first eligible for unreduced retirement with 27 years of service.*

Schedule D continued ...

Deaths After Retirement: The RP-2000 Combined Mortality Table projected to 2025 using scale BB (set forward two years for males and one year for females) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table (set forward two years for males and seven years for females) is used for death after disability retirement. There is a margin for future mortality improvement in the tables used by the system. Based on the results of the most recent experience study adopted by the Board on September 19, 2016, the numbers of expected future deaths are 15-19% less than the actual number of deaths that occurred during the study period for healthy retirees and 13-17% less than expected under the selected table for disabled retirees. Representative values of the assumed annual rates of death after service retirement and after disability retirement are shown here:

Annual Rate of Death After . . .

	Service Retirement		Disability Retirement	
Age	MALE	FEMALE	MALE	FEMALE
45	0.1609%	0.1135%	2.3306%	1.2482%
50	0.2474	0.1718	2.9279	1.5650
55	0.4246	0.2658	3.4400	1.7807
60	0.6985	0.4409	3.5881	2.3164
65	1.1300	0.8100	3.8275	3.1687
70	1.8697	1.3739	4.7566	4.4032
75	3.2147	2.2899	6.3153	6.0857
80	5.5160	3.7551	8.3527	8.4679
85	9.5631	6.3873	10.9122	12.7572
90	17.2787	11.2476	17.2787	19.4718
95	27.1263	18.1190	27.1263	24.2074

SCHEDULE E
Summary of Main Plan Provisions as Interpreted for Valuation Purposes

Eligibility for Access to Retiree Medical Coverage

Service Retirement: For employees hired prior to July 1, 2008, Retiree Medical Plan coverage eligibility is attained when an employee retires, which is possible after the completion of 27 years of service or attainment of age 55 and 5 years of service. For employees hired on or after July 1, 2008, employees may retire after the completion of 27 years of service, the attainment of age 55 and 10 years of service, or the attainment of age 60 and 5 years of service, but must complete a minimum of 15 years of service to be eligible for Retiree Medical Plan coverage.

Disability Retirement: Disabled employees hired prior to July 1, 2008 with at least 5 years of service, who are totally and permanently incapable of being employed as a teacher, are eligible for Retiree Medical Plan coverage. Disabled employees hired after July 1, 2008 must have 15 years of service to be eligible for Retiree Medical Plan coverage.

Members and dependents under age 65 and eligible for Medicare due to a disability after January 1, 2013 are required to be covered under MEHP. Under age 65 members who retired prior to Jan. 1, 2013, are grandfathered from this requirement and allowed a choice of KEHP or MEHP coverage. Actual census data and current plan elections were used for current disabled retirees. Until sufficient experience emerges, the valuation conservatively assumes all future disabled members under the age of 65 will be covered under KEHP.

Survivors: Spouses of employees who die in service while eligible to retire, as well as survivors of service and disabled retirees, are eligible for Retiree Medical Plan coverage.

Termination: For employees hired prior to July 1, 2008 and who terminated with at least 5 years of service, Retiree Medical Plan coverage eligibility is attained at age 60. For employees hired on or after July 1, 2008 and who terminated with at least 15 years of service, Retiree Medical Plan coverage eligibility is attained at age 60.

Reemployed Retirees: Retirees who return to work in an agency that participates in KEHP are required to terminate their coverage through the system. Additionally, if a retiree returns to work somewhere that does not participate in the KEHP, but offers health insurance, the retiree must terminate system coverage unless the employer coverage is of lesser value. For valuation purposes, active employees identified as currently receiving retiree health care through the system are valued as retirees.

Schedule E continued ...

COVERED MEMBER RETIREE MEDICAL PLAN CONTRIBUTIONS

Under Age 65 Retiree Shared Responsibility Contribution: Effective July 1, 2010, retirees under the age of 65 began a three-year phase-in of the Shared Responsibility Contribution. This contribution reduces the applicable amount of the full contribution provided by the system to retirees, by adjusting the Shared Responsibility Contribution amount by 100% less the appropriate percentage from the Retiree Percentage Contribution table below. Effective July 1, 2012, the full Shared Responsibility Contribution equals the Standard Medicare Part B premium paid by retirees ages 65 and older.

Monthly Under Age 65 Shared Responsibility Contribution Timeline

Effective Date	Medicare Part B Monthly Cost	Formula	Shared Responsibility Contribution
July 1, 2010	$ 110.50	(1/3 x $110.50)	$ 37.00
January 1, 2011	115.40	(1/3 x 115.40)	39.00
July 1, 2011	115.40	(2/3 x 115.40)	77.00
January 1, 2012	99.90	(2/3 x 99.90)	66.00
July 1, 2012	99.90	99.90	99.90
January 1, 2013	104.90	104.90	104.90
January 1, 2014	104.90	104.90	104.90
January 1, 2015	104.90	104.90	104.90
January 1, 2016	121.80	121.80	121.80
January 1, 2017	134.00	134.00	134.00
January 1, 2018	134.00	134.00	134.00

Retiree Years of Service Percentage Contribution: Retirees contribute the following percentages based on years of service at retirement, which are then applied to the Retiree Contribution Rate Basis:

Retiree Percentage Contribution*

Years of Service	Hired before 7/1/2002: Age 65 or Older and Covered Before 1/1/2005	Hired before 7/1/2002: Age 65 After or Covered After 12/31/2004	Entered TRS After 6/30/2002 and Before 7/1/2008	Entered TRS After 6/30/2008
5 - 9.99	30%	75%	90%	Not Eligible
10 - 14.99	20	50	75	Not Eligible
15 - 19.99	10	25	55	55%
20 - 24.99	0	0	35	35
25 - 25.99	0	0	10	10
26 - 26.99	0	0	5	5
27 or more	0	0	0	0

** 0% for disabled retirees that retired prior to 1/1/2002.*

Monthly Retiree Contribution Rate Basis
Effective January 1, 2018
Under Age 65 (KEHP)

Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP	Ages 65 and Older (MEHP)
Single	$ 660.04	$ 646.96	$ 635.46	$ $ 656.60	$ 258.00
Parent Plus	851.84	802.26	847.99	878.24	n/a
Couple	1,029.02	1,060.74	1,197.60	1,189.96	n/a
Family	1,131.64	1,105.34	1,314.66	1,303.24	n/a
Family Cross-Reference	738.64	719.12	743.42	771.84	n/a

Schedule E continued ...

Under Age 65 Retiree Plan Cost Contribution: An additional contribution according to the table below is required to be paid by retirees under the age of 65 based upon the plan elected and the date of retirement:

Monthly Under Age 65 Plan Cost Contribution*
Effective January 1, 2018

Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP
Single	$ 49.42	$ 82.38	$ 49.92	$ 26.20
Parent Plus	126.66	234.82	127.92	62.40
Couple	296.62	528.36	299.58	260.06
Family	348.12	662.26	351.60	312.06
Family Cross-Reference	80.32	157.56	81.12	29.10

* *Does not include the additional contribution required to be paid by retirees under the age of 65 who use tobacco ($40 for Single or Family Cross-Reference, and $80 for Parent Plus, Couple or Family).*

Spouse Contributions: 100% of the full cost for non-Medicare eligible dependents is paid through a combination of payments from beneficiaries and the state. Spouses of current post-65 retirees and surviving spouses of deceased retirees with a date of death on or after July 1, 2002 pay 100% of the full contribution. Spouses of active members who died while eligible to retire prior to July 1, 2002, are provided the same subsidy by the system that would have been provided to the retiree for the lifetime of the spouse, or until remarriage. Spouses of active members who die while eligible to retire on or after July 1, 2002 later pay 100% of the full contribution.

Monthly Surviving Spouse Contribution
Effective January 1, 2018
Under Age 65 (KEHP)

Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP	Age 65 and Older (MEHP)
Single	$ 716.90	$ 736.78	$ 692.82	$ 690.24	$ 258.00
Parent Plus	985.94	1,044.52	983.35	948.08	n/a

System Retiree Medical Plan Contributions: The system contribution rate basis is determined annually by the system; and the full cost is projected based on historical claims data. For retirees, the following percentages are based on years of service at retirement and are then applied to the contribution rate basis:

Percentage of System Contribution Rate Provided to Retirees*

Years of Service	Entered TRS Before 7/1/2002: Age 65 or Older & Covered Before 1/1/2005	Entered TRS Before 7/1/2002: Age 65 After or Covered After 12/31/2004	Entered TRS After 6/30/2002 and Before 7/1/2008	Entered TRS After 6/30/2008
5 - 9.99	70 %	25 %	10 %	Not Eligible
10 - 14.99	80	50	25	Not Eligible
15 - 19.99	90	75	45	45%
20 - 24.99	100	100	65	65
25 - 25.99	100	100	90	90
26 - 26.99	100	100	95	95
27 or more	100	100	100	100

** 100% for disabled retirees that retired prior to 1/1/2002.*

Schedule E continued ...

Monthly System Contribution Rate Basis
Effective January 1, 2018
Under Age 65 (KEHP)*

Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP	Ages 65 and Older (MEHP)
Single	$ 660.04	$ 646.96	$ 635.46	$ 656.60	$ 258.00
Parent Plus	851.84	802.26	847.99	878.24	n/a
Couple	1,029.02	1,060.74	1,197.60	1,189.96	n/a
Family	1,131.64	1,105.34	1,314.66	1,303.24	n/a
Family Cross-Reference	738.64	719.12	743.42	771.84	n/a

* *Irrespective of a participating retiree's service, an additional $7.44 per month is paid by the system to the Department of Employee Insurance (DEI) for KEHP coverage.*

Active Member Retiree Medical Plan Contributions: Actively employed members make payroll contributions to the Medical Insurance Fund based upon the following schedule:

Active Member Percentage of Payroll Contribution Made to Medical Insurance Fund

UNIVERSITY EMPLOYEES		SCHOOL DISTRICT EMPLOYEES (Non-Federal)		OTHER EMPLOYEES	
Hired Before 7/1/2008	Hired on or After 7/1/2008	Hired Before 7/1/2008	Hired on or After 7/1/2008	Hired Before 7/1/2008	Hired on or After 7/1/2008
2.775 %	2.775 %	3.750 %	3.750%	3.750 %	3.750 %

Life Insurance Plan Benefits:
(1) Effective July 1, 2000, the Teachers' Retirement System shall:

(a) Provide a life insurance benefit in a minimum amount of five thousand dollars ($5,000) for its members who are retired for service or disability. This life insurance benefit shall be payable upon the death of a member retired for service or disability to the member's estate or to a party designated by the member on a form prescribed by the retirement system; and

(b) Provide a life insurance benefit in a minimum amount of two thousand dollars ($2,000) for its active contributing members. This life insurance benefit shall be payable upon the death of an active contributing member to the member's estate or to a party designated by the member on a form prescribed by the retirement system.

Note: Members employed on a substitute or part-time basis and working at least 69% of a full contract year in a single fiscal year will be eligible for a life insurance benefit for the balance of the fiscal year or the immediately succeeding fiscal year under certain conditions. For non-vested members employed on a substitute or part-time basis, the life insurance benefit is provided if death occurs as the result of a physical injury on the job. For vested members employed on a substitute or part-time basis, death does not have to be the result of a physical injury on the job for life insurance benefits to be provided.

SCHEDULE F
Table 1: Age - Service Table
Distribution of Active Members as of June 30, 2017
by Age and Service Groups

Attained Age	Completed Years of Service 0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	>= 35	TOTAL
24 & under	3,124	1							3,125
Total Pay	68,700,220	36,417							68,736,637
Avg. Pay	21,991	36,417							21,996
25 to 29	5,751	1,743	7						7,501
Total Pay	198,454,302	85,098,224	334,900						283,887,426
Avg. Pay	34,508	48,823	47,843						37,847
30 to 34	2,848	4,611	1,634	4					9,097
Total Pay	90,403,505	233,923,522	94,411,429	227,633					418,966,089
Avg. Pay	31,743	50,732	57,779	56,908					46,055
35 to 39	2,295	2,148	4,704	1,350	5				10,502
Total Pay	65,212,518	109,964,711	281,588,809	86,949,175	337,006				544,052,219
Avg. Pay	28,415	51,194	59,862	64,407	67,401				51,805
40 to 44	1,760	1,437	2,082	4,055	1,030	3			10,367
Total Pay	46,610,992	74,259,161	124,959,603	269,604,678	72,709,546	214,424			588,358,404
Avg. Pay	26,484	51,677	60,019	66,487	70,592	71,475			56,753
45 to 49	1,436	1,141	1,563	2,184	3,465	995	1		10,785
Total Pay	36,545,406	58,561,919	92,906,582	141,902,471	242,973,570	73,378,613	87,283		646,355,844
Avg. Pay	25,449	51,325	59,441	64,974	70,122	73,747	87,283		59,931
50 to 54	1,218	666	987	1,260	1,491	1,787	368	2	7,779
Total Pay	25,538,756	33,551,742	59,055,800	81,571,155	103,905,594	133,441,307	27,737,810	137,175	464,939,339
Avg. Pay	20,968	50,378	59,834	64,739	69,689	74,673	75,374	68,588	59,769
55 to 59	1,510	441	637	905	1,009	761	252	30	5,545
Total Pay	22,703,041	19,579,701	37,444,127	57,909,611	71,553,184	59,400,531	22,546,672	2,780,424	293,917,291
Avg. Pay	15,035	44,398	58,782	63,989	70,915	78,056	89,471	92,681	53,006
60 to 64	1,801	339	319	535	513	341	88	48	3,984
Total Pay	22,241,812	13,685,508	19,054,170	35,872,033	37,662,676	26,514,686	8,020,781	4,303,664	167,355,330
Avg. Pay	12,350	40,370	59,731	67,051	73,417	77,756	91,145	89,660	42,007
65 & over	2,176	505	146	186	175	137	68	52	3,445
Total Pay	18,334,805	11,267,510	8,493,619	12,919,583	12,962,784	11,860,877	6,223,797	4,952,788	87,015,763
Avg. Pay	8,426	22,312	58,175	69,460	74,073	86,576	91,526	95,246	25,259
Total	23,919	13,032	12,079	10,478	7,689	4,024	777	132	72,130
Total Pay	594,745,357	639,928,415	718,249,039	686,956,339	542,104,360	304,810,438	64,616,343	12,174,051	3,563,584,342
Avg. Pay	24,865	49,104	59,463	65,562	70,504	75,748	83,161	92,228	49,405

Average Age: 43.5 **Average Service: 10.8**

Schedule F continued ...

Table 2 – Schedule of Active Member Valuation Data

Valuation Date June 30	Number	Annual Payroll	Annual Average Pay	Percentage Increase in Average Pay
2017	72,130	$ 3,563,584,342	$ 49,405	0.35 %
2016	71,848	3,537,226,348	49,232	1.19
2015	72,246	3,515,113,127	48,655	2.45
2014	73,407	3,486,326,799	47,493	2.12
2013	74,831	3,480,066,406	46,506	1.51
2012	75,951	3,479,567,004	45,813	1.33
2011	76,349	3,451,756,287	45,210	3.97
2010	76,387	3,321,614,223	43,484	1.51
2009	75,937	3,253,076,600	42,839	1.43
2008	75,539	3,190,332,239	42,234	6.67

Table 3 – Eligible Deferred Vested Members as of June 30, 2017 Medical Insurance Fund

Male & Female Demographic Breakdown

Attained Age	Number of Males	Number of Females	Total Number
Under 30	1	0	1
30-34	79	354	433
35-39	288	900	1,188
40-44	294	940	1,234
45-49	322	1,116	1,438
50-54	282	974	1,256
55-59	204	782	986
60 & Over	248	626	874
Total	**1,718**	**5,692**	**7,410**

Table 4 – Eligible Deferred Vested Members as of June 30, 2017 Life Insurance Fund

Male & Female Demographic Breakdown

Attained Age	Number of Males	Number of Females	Total Number
Under 30	16	46	62
30-34	169	645	814
35-39	341	1,030	1,371
40-44	338	1,051	1,389
45-49	345	1,216	1,561
50-54	310	1,045	1,355
55-59	222	833	1,055
60 & Over	262	656	918
Total	**2,003**	**6,522**	**8,525**

Schedule F continued ...

Table 5 – All Retirees & Spouses Receiving Health Care Benefits as of June 30, 2017
Male & Female Demographic Breakdown

Attained Age	Number of Males	Number of Females	Total Number
Under 40	3	16	19
40-44	22	46	68
45-49	77	194	271
50-54	398	952	1,350
55-59	1,136	2,818	3,954
60-64	2,461	5,585	8,046
65-69	3,777	8,189	11,966
70-74	3,227	5,739	8,966
75-79	1,993	3,485	5,478
80-84	1,271	2,114	3,385
85-89	607	1,409	2,016
90-94	211	677	888
95-99	50	187	237
100	1	11	12
101	1	6	7
102	0	5	5
103	1	11	12
104	0	1	1
105 & Over	0	5	5
Total	**15,236**	**31,450**	**46,686**

Table 6 – Retirees, Beneficiaries and Survivors Added To and Removed From Rolls *
Medical Insurance Fund

Fiscal Year Ending June 30	Number of Members Added to Rolls	Number of Spouses** Added to Rolls	Total Number Added to Rolls	Number of Members Removed from Rolls	Number of Spouses** Removed from Rolls	Total Number Removed from Rolls	Number of Members on Rolls at the End of the Year	Number of Spouses** on Rolls at the End of the Year	Total Number on Rolls at the End of the Year
2012	1,996	702	2,698	1,029	616	1,645	36,000	7,008	43,008
2013	1,853	664	2,517	1,076	619	1,695	36,777	7,053	43,830
2014	1,663	638	2,301	1,165	660	1,825	37,275	7,031	44,306
2015	1,990	731	2,721	1,190	633	1,823	38,075	7,129	45,204
2016	2,045	726	2,771	1,305	674	1,979	38,815	7,181	45,996
2017	1,835	699	2,534	1,153	691	1,844	39,497	7,189	46,686

* *Reflects members, spouses, and beneficiaries participating in a health care plan.*
** *Includes spouses, beneficiaries, and surviving spouses.*

Schedule F continued ...

Table 7 – Retirees, Beneficiaries and Survivors Added To and Removed From Rolls *
Life Insurance Fund

Fiscal Year Ending June 30	Number Added to Rolls	Life Insurance Benefit ($1,000's)	Number Removed from Rolls	Life Insurance Benefit ($1,000's)	Number on Rolls at the End of the Year	Life Insurance Benefit ($1,000's)	Increase in Life Insurance Benefit	Average Life Insurance Benefit
2012	2,364	$ 11,820	880	$ 4,400	42,602	$ 213,010	3.61 %	$ 5,000
2013	2,195	10,975	952	4,760	43,845	219,225	2.92	5,000
2014	1,964	9,820	954	4,770	44,855	224,275	2.30	5,000
2015	2,270	11,350	1,641	8,205	45,484	227,420	1.40	5,000
2016	2,394	11,970	807	4,035	47,071	235,355	3.49	5,000
2017	2,175	10,875	1,021	5,105	48,225	241,125	2.45	5,000

** The life insurance benefit is payable upon the death of only members retired for service or disability. Numbers do not include life insurance benefits payable upon the death of an active contributing member.*

Sensitivity Analysis
Medical Insurance Fund
as of June 30, 2017

The June 30, 2017 valuation results of the Medical Insurance Fund (MIF) are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing cost. The charts on the following pages provide a simple analysis on how the costs are sensitive to changes to the assumed discount rate, the assumed inflation rate, the assumed rate of payroll growth, and the assumed rates of health care inflation (trend). The charts show the actuarial accrued liability, the unfunded liability, the funded ratio and the employer contribution rate under the following scenarios:

- The discount rate assumption sensitivity analysis shows the valuation results with the baseline discount rate assumption, 8.00%, together with a decrease in the discount rate to 7.00% and an increase in the discount rate to 9.00%. Under this scenario, the underlying inflation rate assumption is held constant at 3.00% and the payroll growth assumption is held constant at 3.50%.

- The inflation assumption sensitivity analysis shows the valuation results with the baseline underlying inflation rate assumption, 3.00%, together with decreases in the inflation rate to 2.75% and 2.50%. Under this scenario, the decrease in the underlying inflation rate assumption leads to corresponding decreases in the discount rate, the payroll growth assumption, and the assumed rates of salary increase for active members. The assumed decreases in inflation are not assumed to impact the assumed rates of health care inflation (trend).

- The payroll growth assumption sensitivity analysis shows the valuation results with the baseline underlying payroll growth assumption, 3.50%, together with decreases in the payroll growth assumption to 2.00% and 0.00%. Under this scenario, all other assumptions, including the individual member salary scale, are held constant so that the only impact is in the amortization of the unfunded liability, leading to higher employer contribution rates.

- The health care inflation (trend) assumption sensitivity analysis shows the valuation results with the baseline trend assumption along with a 1.00% increase in all assumed trend rates and a 1.00% decrease in all assumed trend rates.

Sensitivity Analysis continued ...

Assumed Discount Rate Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Decrease Discount Rate	Valuation Results	Increase Discount Rate
Actuarial Accrued Liability	$ 4,197,201	$ 3,691,719	$ 3,274,929
Actuarial Value of Assets	985,694	985,694	985,694
Unfunded Liability	$ 3,211,507	$ 2,706,025	$ 2,289,235
Funded Ratio	23.5%	26.7%	30.1%
Contributions			
Normal Cost	2.56%	1.94%	1.48%
Accrued Liability	5.51%	5.07%	4.66%
Total	8.07%	7.01%	6.14%
Member	(3.69%)	(3.69%)	(3.69%)
Employer/State	4.38%	3.32%	2.45%
Discount Rate	7.00%	8.00%	9.00%
Payroll Growth	3.50%	3.50%	3.50%
Inflation Rate	3.00%	3.00%	3.00%

Inflation Assumption Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Valuation Results	Decrease Inflation Rate 25 Basis Points	Decrease Inflation Rate 50 Basis Points
Actuarial Accrued Liability	$ 3,691,719	$ 3,823,936	$ 3,964,092
Actuarial Value of Assets	985,694	985,694	985,694
Unfunded Liability	$ 2,706,025	$ 2,838,242	$ 2,978,398
Funded Ratio	26.7%	25.8%	24.9%
Contributions			
Normal Cost	1.94%	2.06%	2.19%
Accrued Liability	5.07%	5.32%	5.59%
Total	7.01%	7.38%	7.78%
Member	(3.69%)	(3.69%)	(3.69%)
Employer/State	3.32%	3.69%	4.09%
Discount Rate	8.00%	7.75%	7.50%
Payroll Growth	3.50%	3.25%	3.00%
Inflation Rate	3.00%	2.75%	2.50%

Sensitivity Analysis continued ...

Payroll Growth Assumption Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Valuation Results	Decrease Payroll Growth to 2%	No Payroll Growth
Actuarial Accrued Liability	$ 3,691,719	$ 3,691,719	$ 3,691,719
Actuarial Value of Assets	985,694	985,694	985,694
Unfunded Liability	$ 2,706,025	$ 2,706,025	$ 2,706,025
Funded Ratio	26.7%	26.7%	26.7%
Contributions			
Normal Cost	1.94%	1.94%	1.94%
Accrued Liability	5.07%	5.77%	6.78%
Total	7.01%	7.71%	8.72%
Member	(3.69%)	(3.69%)	(3.69%)
Employer/State	3.32%	4.02%	5.03%
Discount Rate	8.00%	8.00%	8.00%
Payroll Growth	3.50%	2.00%	0.00%
Inflation Rate	3.00%	3.00%	3.00%

Health Care Trend Assumption Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Decrease Trend Rates 100 Basis Points	Valuation Results	Increase Trend Rates 100 Basis Points
Actuarial Accrued Liability	$ 3,234,273	$ 3,691,719	$ 4,258,265
Actuarial Value of Assets	985,694	985,694	985,694
Unfunded Liability	$ 2,248,579	$ 2,706,025	$ 3,272,571
Funded Ratio	30.5%	26.7%	23.1%
Contributions			
Normal Cost	1.53%	1.94%	2.49%
Accrued Liability	4.21%	5.07%	6.13%
Total	5.74%	7.01%	8.62%
Member	(3.69%)	(3.69%)	(3.69%)
Employer/State	2.05%	3.32%	4.93%
Discount Rate	8.00%	8.00%	8.00%
Payroll Growth	3.50%	3.50%	3.50%
Inflation Rate	3.00%	3.00%	3.00%

Sensitivity Analysis
Life Insurance Fund
as of June 30, 2017

The June 30, 2017 valuation results of the Life Insurance Fund (LIF) are projections based on the actuarial assumptions. Actual experience will differ from these assumptions, either increasing or decreasing cost. The charts on the following pages provide a simple analysis on how the costs are sensitive to changes to the assumed discount rate, the assumed inflation rate, and the assumed rate of payroll growth. The charts show the actuarial accrued liability, the unfunded liability, the funded ratio and the employer contribution rate under the following scenarios:

- The discount rate assumption sensitivity analysis shows the valuation results with the baseline discount rate assumption, and 7.50% together with a decrease in the discount rate to 6.50% and an increase in the discount rate to 8.50%. Under this scenario, the underlying inflation rate assumption is held constant at 3.00% and the payroll growth assumption is held constant at 3.50%.

- The inflation assumption sensitivity analysis shows the valuation results with the baseline underlying inflation rate assumption, 3.00%, together with decreases in the inflation rate to 2.75% and 2.50%. Under this scenario, the decrease in the underlying inflation rate assumption leads to corresponding decreases in the discount rate, the payroll growth assumption, and the assumed rates of salary increase for active members.

- The payroll growth assumption sensitivity analysis shows the valuation results with the baseline underlying payroll growth assumption, 3.50%, together with decreases in the payroll growth assumption to 2.00% and 0.00%. Under this scenario, all other assumptions, including the individual member salary scale, are held constant so that the only impact is in the amortization of the unfunded liability, leading to higher employer contribution rates.

Assumed Discount Rate Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Decrease Discount Rate	Valuation Results	Increase Discount Rate
Actuarial Accrued Liability	$ 123,588	$ 109,069	$ 97,172
Actuarial Value of Assets	95,730	95,730	95,730
Unfunded Liability	$ 27,858	$ 13,339	$ 1,442
Funded Ratio	77.5%	87.8%	98.5%
Contributions			
Normal Cost	0.04%	0.03%	0.02%
Accrued Liability	0.04%	0.02%	0.00%
Total	0.08%	0.05%	0.02%
Member	(0.00%)	(0.00%)	(0.00%)
Employer/State	0.08%	0.05%	0.02%
Discount Rate	6.50%	7.50%	8.50%
Payroll Growth	3.50%	3.50%	3.50%
Inflation Rate	3.00%	3.00%	3.00%

Inflation Assumption Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Valuation Results	Decrease Inflation Rate 25 Basis Points	Decrease Inflation Rate 50 Basis Points
Actuarial Accrued Liability	$ 109,069	$ 112,596	$ 116,322
Actuarial Value of Assets	95,730	95,730	95,730
Unfunded Liability	$ 13,339	$ 16,866	$ 20,592
Funded Ratio	87.8%	85.0%	82.3%
Contributions			
Normal Cost	0.03%	0.03%	0.03%
Accrued Liability	0.02%	0.03%	0.03%
Total	0.05%	0.06%	0.06%
Member	(0.00%)	(0.00%)	(0.00%)
Employer/State	0.05%	0.06%	0.06%
Discount Rate	7.50%	7.25%	7.00%
Payroll Growth	3.50%	3.25%	3.00%
Inflation Rate	3.00%	2.75%	2.50%

Payroll Growth Sensitivity Analysis
as of June 30, 2017
(In thousands of dollars)

	Valuation Results	Decrease Payroll Growth to 2%	No Payroll Growth
Actuarial Accrued Liability	$ 109,069	$ 109,069	$ 109,069
Actuarial Value of Assets	95,730	95,730	95,730
Unfunded Liability	$ 13,339	$ 13,339	$ 13,339
Funded Ratio	87.8%	87.8%	87.8%
Contributions			
Normal Cost	0.03%	0.03%	0.03%
Accrued Liability	0.02%	0.03%	0.03%
Total	0.05%	0.06%	0.06%
Member	(0.00%)	(0.00%)	(0.00%)
Employer/State	0.05%	0.06%	0.06%
Discount Rate	7.50%	7.50%	7.50%
Payroll Growth	3.50%	2.00%	0.00%
Inflation Rate	3.00%	7.50%	7.50%

This page was intentionally left blank.

Teachers' Retirement System
of the State of Kentucky

2017

Statistical Section

This section of the Teachers' Retirement System of the State of Kentucky's Comprehensive Annual Financial Report presents detailed information as a context for understanding the information in the financial statements, note disclosures, and required supplementary information regarding the system's overall financial health.

CONTENTS

Financial Trends .... page 169

These schedules contain trend information to help the reader understand how TRS's financial performance and well-being have changed over time.

Demographic & Economic Information .... page 171

These schedules offer demographic and economic indicators to help the reader understand the system's environment within which TRS's financial activities take place.

Operating Information .... page 176

These schedules contain benefits, service and employer contribution data to help the reader understand how TRS's financial report relates to TRS's services and activities.

Defined Benefit Plan
Past 10 Fiscal Years

Additions by Source

Year	Employer Contributions	Member Contributions	Net Investment Income (Loss)	Total Additions to Plan Net Position
2017	$ 1,060,719,993	$ 313,625,434	$ 2,475,752,798	$ 3,850,098,225
2016	565,454,590	313,044,226	(245,214,860)	633,283,956
2015	559,579,290	308,159,763	862,178,759	1,729,917,812
2014	563,326,249	304,981,620	2,803,247,956	3,671,555,825
2013	568,233,446	304,738,728	2,039,874,263	2,912,846,437
2012	557,339,552	309,729,924	309,696,252	1,176,765,728
2011	1,037,935,993	302,262,819	2,760,972,224	4,101,171,036
2010	479,805,088	297,613,965	1,509,785,381	2,287,204,434
2009	442,549,935	293,678,564	(2,020,682,522)	(1,284,454,023)
2008	466,247,782	291,423,948	(909,083,525)	(151,411,795)

Deductions by Type
(Including Benefits by Type)

Year	Service Retirants	Disability Retirants	Survivors	Total Benefits	Refunds	Administrative Expense	Total Deductions to Plan Net Position
2017	$ 1,817,594,617	$ 82,466,114	$ 18,551,397	$ 1,918,612,128	$ 26,305,240	$10,313,715	$ 1,955,231,083
2016	1,735,374,416	79,808,432	18,015,782	1,833,198,630	27,747,742	8,636,438	1,869,582,810
2015	1,647,205,474	76,912,574	17,338,047	1,741,456,095	23,032,624	8,868,971	1,773,357,690
2014	1,563,634,993	73,501,441	17,239,266	1,654,375,700	25,461,843	7,955,972	1,687,793,515
2013	1,484,132,938	69,808,291	16,781,695	1,570,722,924	22,059,094	8,377,003	1,601,159,021
2012	1,401,380,816	65,297,491	16,260,858	1,482,939,165	19,549,073	7,762,880	1,510,251,118
2011	1,326,033,698	60,950,214	15,551,801	1,402,535,713	17,325,387	7,322,739	1,427,183,839
2010	1,249,272,057	57,782,651	14,754,062	1,321,808,770	15,310,680	8,830,054	1,345,949,504
2009	1,184,075,934	54,562,038	14,342,435	1,252,980,407	15,208,419	8,165,757	1,276,354,583
2008	1,105,078,345	51,842,271	14,048,485	1,170,969,101	15,965,083	7,551,936	1,194,486,120

Changes in Plan Net Position

Year	Total Additions to Plan Net Position	Total Deductions to Plan Net Position	Changes in Plan Net Position
2017	$ 3,850,098,225	$ 1,955,231,083	$ 1,894,867,142
2016	633,283,956	1,869,582,810	(1,236,298,854)
2015	1,729,917,812	1,773,357,690	(43,439,878)
2014	3,671,555,825	1,687,793,515	1,983,762,310
2013	2,912,846,437	1,601,159,021	1,311,687,416
2012	1,176,765,728	1,510,251,118	(333,485,390)
2011	4,101,171,036	1,427,183,839	2,673,987,197
2010	2,287,204,434	1,345,949,504	941,254,930
2009	(1,284,454,023)	1,276,354,583	(2,560,808,606)
2008	(151,411,795)	1,194,486,120	(1,345,897,915)

Medical Insurance Plan
Past 10 Fiscal Years

Additions by Source

Year	Employer Contributions	Member Contributions*	Recovery Income*	Net Investment Income (Loss)	Total Additions to Plan Net Position
2017	$ 180,375,986	$ 128,819,243	$	$ 95,452,597	$ 404,647,826
2016	178,638,370	128,068,781		(9,332,490)	297,374,661
2015	145,263,926	157,467,680	22,820,427	7,354,704	332,906,737
2014	157,688,414	135,190,891	4,879,981	67,741,063	365,500,349
2013	166,576,444	119,795,780	34,976	30,718,836	317,126,036
2012	173,966,623	100,346,070	3,781,222	(3,989,202)	274,104,713
2011	188,241,202	84,147,337	493,312	8,334,296	281,216,147
2010	158,761,433	63,805,573	14,618,348	12,312,999	249,498,353
2009	164,408,037	58,688,767	13,683,830	11,296,280	248,076,914
2008	148,929,322	55,402,830	11,936,887	8,128,179	224,397,218

* *Amounts paid by retirees and recovery income is netted against insurance expenses beginning fiscal year 2016.*

Deductions by Type
(Including Benefits by Type)

	Insurance Benefit Expense					
Year	Under Age 65	Age 65 & Over	Administrative Expense	Total Insurance Benefits Expense	Refunds*	Total Deductions to Plan Net Position
2017	$ 124,079,802	$ 54,420,744	$ 1,538,574	$ 180,039,120	$	$ 180,039,120
2016	127,673,325	61,196,669	1,686,070	190,556,064		190,556,064
2015	131,396,480	108,998,102	1,545,235	241,939,817		241,939,817
2014	136,963,208	105,107,323	1,100,133	243,170,664		243,170,664
2013	142,170,438	98,761,180	1,275,206	242,206,824		242,206,824
2012	156,228,181	72,746,945	1,201,629	230,176,755		230,176,755
2011	145,544,405	80,890,958	1,186,029	227,621,392		227,621,392
2010	136,702,152	100,675,376		237,377,528		237,377,528
2009	123,819,475	81,037,647		204,857,122		204,857,122
2008	107,437,450	71,838,765		179,276,215	10,014	179,286,229

**Refunds are netted against member contributions beginning fiscal year 2009.*

Changes in Plan Net Position

Year	Total Additions to Plan Net Position	Total Deductions to Plan Net Position	Changes in Plan Net Position
2017	$ 404,647,826	$ 180,039,120	$ 224,608,706
2016	297,374,661	190,556,064	106,818,597
2015	332,906,737	241,939,817	90,966,920
2014	365,500,349	243,170,664	122,329,685
2013	317,126,036	242,206,824	74,919,212
2012	274,104,713	230,176,755	43,927,958
2011	281,216,147	227,621,392	53,594,755
2010	249,498,353	237,377,528	12,120,825
2009	248,076,914	204,857,122	43,219,792
2008	224,397,218	179,286,229	45,110,989

Life Insurance Plan
Past 10 Fiscal Years

Additions by Source

Year	Employer Contributions	Net Investment Income (Loss)	Total Additions to Plan Net Position
2017	$ 1,049,683	$ 915,497	$ 1,965,180
2016	1,037,769	4,829,336	5,867,105
2015	1,019,519	1,990,324	3,009,843
2014	1,006,091	4,572,845	5,578,936
2013	1,680,495	674,760	2,355,255
2012	1,684,711	6,450,022	8,134,733
2011	1,668,822	3,094,776	4,763,598
2010	1,966,826	5,383,644	7,350,470
2009	5,455,473	5,282,958	10,738,431
2008	5,411,249	6,321,491	11,732,740

Deductions by Type
(Including Benefits by Type)

Changes in Plan Net Position

Year	Life Insurance	Administrative Expense	Total Deductions to Plan Net Position	Total Additions to Plan Net Position	Total Deductions to Plan Net Position	Changes in Plan Net Position
2017	$ 5,151,013	$ 27,690	$ 5,178,703	$ 1,965,180	$ 5,178,703	$ (3,213,523)
2016	4,595,489	27,195	4,622,684	5,867,105	4,622,684	1,244,421
2015	4,061,000	25,306	4,086,306	3,009,843	4,086,306	(1,076,463)
2014	4,692,000	21,324	4,713,324	5,578,936	4,713,324	865,612
2013	4,614,718	24,425	4,639,143	2,355,255	4,639,143	(2,283,888)
2012	4,397,281	22,886	4,420,167	8,134,733	4,420,167	3,714,566
2011	4,120,000	21,511	4,141,511	4,763,598	4,141,511	622,087
2010	4,148,511		4,148,511	7,350,470	4,148,511	3,201,959
2009	3,694,000		3,694,000	10,738,431	3,694,000	7,044,431
2008	4,003,000		4,003,000	11,732,740	4,003,000	7,729,740

Distribution of Active Contributing Members as of June 30, 2017

By Age

Age	Male	Female
20-24	620	2,556
25-29	1,763	5,821
30-34	2,218	6,965
35-39	2,560	8,014
40-44	2,592	7,822
45-49	2,570	8,307
50-54	1,993	6,105
55-59	1,467	4,673
60-64	1,135	3,299
65 & over	1,151	2,722
Total	**18,069**	**56,284**

By Service

Years of Service	Male	Female
Less than 1	2,408	7,476
1-4	4,000	12,636
5-9	3,208	9,782
10-14	2,854	9,086
15-19	2,394	7,920
20-24	1,824	5,360
25-29	1,063	3,191
30-34	274	738
35 or more	44	95
Total	**18,069**	**56,284**

Principal Participating Employers
Current Year and Nine Years Ago

	2017			2008		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
Jefferson County Schools	10,532	1	14.16%	9,950	1	12.96%
Fayette County Public Schools	4,616	2	6.21	4,102	2	5.34
Boone County Schools	1,979	3	2.66	1,671	3	2.18
Warren County Schools	1,368	4	1.84	1,186	7	1.54
Hardin County Schools	1,347	5	1.81	1,359	4	1.77
Kenton County Schools	1,283	6	1.73	1,308	5	1.70
Bullitt County Schools	1,266	7	1.70	1,230	6	1.60
Oldham County Schools	1,221	8	1.64	1,167	8	1.52
Daviess County Schools	1,117	9	1.50	1,156	9	1.51
Madison County Schools	1,089	10	1.46	1,136	10	1.48
All Other*	48,535		65.29	52,512		68.40
Total (207 Employers)	**74,353**		**100.00%**	**76,777**		**100.00%**

* In 2017, "all other" consisted of:

Type	Number	Employees
Local School Districts	163	43,221
Higher Education	6	3,319
State Agencies	14	1,508
Educational Cooperatives	8	366
Other	6	121
Total	**197**	**48,535**

TRS Schedule of Participating Employers
School Districts: County Schools

1. Adair
2. Allen
3. Anderson
4. Ballard
5. Barren
6. Bath
7. Bell
8. Boone
9. Bourbon
10. Boyd
11. Boyle
12. Bracken
13. Breathitt
14. Breckinridge
15. Bullitt
16. Butler
17. Caldwell
18. Calloway
19. Campbell
20. Carlisle
21. Carroll
22. Carter
23. Casey
24. Christian
25. Clark
26. Clay
27. Clinton
28. Crittenden
29. Cumberland
30. Daviess
31. Edmonson
32. Elliott
33. Estill
34. Fayette
35. Fleming
36. Floyd
37. Franklin
38. Fulton
39. Gallatin
40. Garrard
41. Grant
42. Graves
43. Grayson
44. Green
45. Greenup
46. Hancock
47. Hardin
48. Harlan
49. Harrison
50. Hart
51. Henderson
52. Henry
53. Hickman
54. Hopkins
55. Jackson
56. Jefferson
57. Jessamine
58. Johnson
59. Kenton
60. Knott
61. Knox
62. Larue
63. Laurel
64. Lawrence
65. Lee
66. Leslie
67. Letcher
68. Lewis
69. Lincoln
70. Livingston
71. Logan
72. Lyon
73. Madison
74. Magoffin
75. Marion
76. Marshall
77. Martin
78. Mason
79. McCracken
80. McCreary
81. McLean
82. Meade
83. Menifee
84. Mercer
85. Metcalfe
86. Monroe
87. Montgomery
88. Morgan
89. Muhlenberg
90. Nelson
91. Nicholas
92. Ohio
93. Oldham
94. Owen
95. Owsley
96. Pendleton
97. Perry
98. Pike
99. Powell
100. Pulaski
101. Robertson
102. Rockcastle
103. Rowan
104. Russell
105. Scott
106. Shelby
107. Simpson
108. Spencer
109. Taylor
110. Todd
111. Trigg
112. Trimble
113. Union
114. Warren
115. Washington
116. Wayne
117. Webster
118. Whitley
119. Wolfe
120. Woodford

TRS Schedule of Participating Employers *(continued)*
School Districts: City Schools

1. Anchorage
2. Ashland
3. Augusta
4. Barbourville
5. Bardstown
6. Beechwood
7. Bellevue
8. Berea
9. Bowling Green
10. Burgin
11. Campbellsville
12. Caverna
13. Cloverport
14. Corbin
15. Covington
16. Danville
17. Dawson Springs
18. Dayton
19. East Bernstadt
20. Elizabethtown
21. Eminence
22. Erlanger-Elsmere
23. Fairview
24. Fort Thomas
25. Frankfort
26. Fulton
27. Glasgow
28. Harlan
29. Hazard
30. Jackson
31. Jenkins
32. Ludlow
33. Mayfield
34. Middlesboro
35. Murray
36. Newport
37. Owensboro
38. Paducah
39. Paintsville
40. Paris
41. Pikeville
42. Pineville
43. Raceland
44. Russell
45. Russellville
46. Science Hill
47. Silver Grove
48. Somerset
48. Southgate
50. Walton-Verona
51. West Point
52. Williamsburg
53. Williamstown

Universities & Community/ Technical Colleges

1. Eastern Kentucky
2. Kentucky State
3. Morehead State
4. Murray State
5. Western Kentucky
6. Kentucky Community & Technical College System

State of Kentucky/ Other Organizations

1. Education and Workforce Development Cabinet
2. Department of Corrections

Other Organizations

1. Education Professional Standards Board
2. Kentucky Education Association
3. Kentucky Academic Association
4. Kentucky Educational Development Cooperative
5. Kentucky High School Athletic Association
6. Kentucky School Boards Association
7. Kentucky Valley Educational Cooperative
8. Northern Kentucky Cooperative for Educational Services
9. Ohio Valley Educational Cooperative
10. West Kentucky Education Cooperative
11. Green River Regional Education Cooperative
12. Central Kentucky Special Education Cooperative
13. Southeast South-Central Educational Cooperative

Distribution of Retirement and Medical Payments Worldwide as of June 30, 2017

Number of Recipients in United States Outside Kentucky

143	Alabama
4	Alaska
89	Arizona
38	Arkansas
104	California
62	Colorado
8	Connecticut
12	Delaware
1,275	Florida
260	Georgia
7	Hawaii
8	Idaho
114	Illinois
729	Indiana
17	Iowa
33	Kansas
38	Louisiana
17	Maine
37	Maryland
23	Massachusetts
52	Michigan
26	Minnesota
57	Mississippi
94	Missouri
8	Montana
9	Nebraska
26	Nevada
6	New Hampshire
8	New Jersey
17	New Mexico
46	New York
276	North Carolina
2	North Dakota
662	Ohio
29	Oklahoma
30	Oregon
61	Pennsylvania
216	South Carolina
8	South Dakota
985	Tennessee
214	Texas
27	Utah
1	Vermont
171	Virginia
49	Washington
112	West Virginia
31	Wisconsin
5	Wyoming

Number of Recipients Outside United States

7	District Of Columbia
5	Military APO
2	Australia
1	Barbados
6	Canada
1	Mexico
1	New Zealand
1	Philippines
1	Poland
1	Sweden
1	Switzerland
1	United Kingdom

TOTALS

Number of Recipients Outside of Kentucky	Amount of Payments Outside of Kentucky	Total Number of Recipients	Total Amount of Payments
6,274	$ 180,867,715	55,075	$ 2,097,112,674

Distribution of Retirement and Medical Payments Statewide as of June 30, 2017

County Name	Total Payments	Number of Recipients
Adair	$ 8,349,473	230
Allen	7,387,091	188
Anderson	8,651,904	246
Ballard	4,506,608	130
Barren	16,846,637	438
Bath	4,781,565	143
Bell	14,558,770	384
Boone	42,764,869	1,022
Bourbon	7,814,913	213
Boyd	22,631,086	561
Boyle	19,089,930	490
Bracken	4,252,385	110
Breathitt	9,187,818	257
Breckinridge	7,090,130	179
Bullitt	19,020,789	453
Butler	4,149,760	109
Caldwell	7,546,683	201
Calloway	28,078,894	712
Campbell	30,294,774	739
Carlisle	1,837,245	54
Carroll	3,934,024	98
Carter	15,220,505	421
Casey	6,156,389	168
Christian	22,013,754	590
Clark	14,231,424	372
Clay	12,186,629	313
Clinton	5,408,627	150
Crittenden	2,216,144	69
Cumberland	3,679,684	97
Daviess	47,330,145	1,217
Edmonson	4,065,473	109
Elliott	2,373,484	70
Estill	6,259,419	164
Fayette	126,384,525	3,258
Fleming	7,271,037	200
Floyd	21,371,330	585
Franklin	30,809,551	960
Fulton	2,894,486	77
Gallatin	1,256,602	34
Garrard	8,671,214	229
Grant	8,227,001	186
Graves	16,882,948	436
Grayson	10,640,731	281
Green	4,881,320	127
Greenup	15,945,630	417
Hancock	2,902,497	75
Hardin	37,993,753	945
Harlan	15,896,423	433
Harrison	8,109,601	215
Hart	5,500,427	144
Henderson	18,226,145	467
Henry	7,385,345	211
Hickman	1,489,552	40
Hopkins	19,508,885	496
Jackson	5,357,605	154
Jefferson	325,973,164	7,289
Jessamine	17,242,752	456
Johnson	14,370,755	371
Kenton	40,429,928	1,004
Knott	9,617,287	260
Knox	10,648,695	302
Larue	6,975,948	168

County Name	Total Payments	Number of Recipients
Laurel	26,062,905	693
Lawrence	5,245,298	147
Lee	3,149,476	88
Leslie	5,992,621	151
Letcher	12,997,960	356
Lewis	7,286,404	198
Lincoln	11,822,733	299
Livingston	3,364,524	91
Logan	11,244,369	295
Lyon	4,454,845	116
Madison	57,363,760	1,453
Magoffin	7,599,350	199
Marion	7,347,853	196
Marshall	14,968,501	385
Martin	5,307,464	144
Mason	8,328,948	219
McCracken	29,674,284	768
McCreary	8,328,283	224
McLean	4,969,513	124
Meade	8,072,912	186
Menifee	2,376,989	79
Mercer	10,167,707	293
Metcalfe	3,818,954	100
Monroe	6,097,439	158
Montgomery	13,314,627	345
Morgan	7,129,266	196
Muhlenberg	15,097,469	374
Nelson	16,862,220	440
Nicholas	2,351,104	63
Ohio	7,964,079	229
Oldham	21,481,720	500
Owen	4,104,891	107
Owsley	4,460,850	119
Pendleton	5,511,512	142
Perry	16,223,636	427
Pike	31,227,858	822
Powell	5,175,946	133
Pulaski	28,230,623	761
Robertson	1,054,841	29
Rockcastle	7,996,672	198
Rowan	20,026,627	528
Russell	9,518,952	246
Scott	18,757,885	480
Shelby	20,941,742	510
Simpson	6,565,048	178
Spencer	6,271,919	149
Taylor	12,383,957	331
Todd	3,479,555	99
Trigg	7,063,534	198
Trimble	2,541,481	61
Union	4,662,063	132
Warren	69,979,995	1,814
Washington	4,889,627	132
Wayne	8,981,150	238
Webster	5,063,236	144
Whitley	26,642,898	728
Wolfe	4,570,660	123
Woodford	12,892,052	346
Total in Kentucky	**$ 1,916,244,959**	**48,801**

Growth in Annuitants
as of June 30, 2017

Fiscal Year	Service Retirees	Disabilities	Beneficiaries of Retired Members	Beneficiaries of Deceased Members Eligible to Retire	Survivors	Disabled Adult Child
2007-08	35,550	2,155	1,778	554	468	271
2008-09	36,684	2,209	1,837	559	448	283
2009-10	37,607	2,284	1,915	567	435	291
2010-11	38,705	2,379	2,003	584	430	296
2011-12	40,107	2,478	2,126	596	444	304
2012-13	41,255	2,582	2,207	601	432	303
2013-14	42,581	2,641	2,304	596	429	316
2014-15	43,634	2,691	2,442	653	349	328
2015-16	45,096	2,762	2,544	652	370	327
2016-17	46,356	2,806	2,675	655	349	333

Schedule of Annuitants by Type of Benefit
as of June 30, 2017

Amount of Monthly Benefit ($)	Number of Annuitants	Type of Benefit*					
		1	2	3	4	5	6
1 - 500	3,847	2,951	13	171	32	347	333
501 - 1,000	2,893	2,348	161	292	92	0	0
1,001 - 1,500	2,998	2,105	293	489	109	2	0
1,501 - 2,000	3,514	2,629	389	422	74	0	0
2,001 - 2,500	4,799	3,822	544	334	99	0	0
2,501 - 3,000	7,967	6,822	721	335	89	0	0
3,001 - 3,500	8,586	7,904	396	223	63	0	0
3,501 - 4,000	6,367	6,026	161	148	32	0	0
4,001 - 4,500	4,237	4,027	76	106	28	0	0
4,501 - 5,000	2,943	2,846	24	60	13	0	0
5,001 & OVER	5,023	4,876	28	95	24	0	0
Total	**53,174**	**46,356**	**2,806**	**2,675**	**655**	**349**	**333**

*Type of Benefit
1-*Normal Retirement for Age & Service*
2-*Disability Retirement*
3-*Beneficiaries of Retired Members*
4-*Beneficiaries of Deceased Member Eligible to Retire*
5-*Survivor Payments*
6-*Disabled Adult Child*

Schedule of Annuitants by Option Selected
as of June 30, 2017

Amount of Monthly Benefit ($)	Option Selected*							
	1	2	3	4	5	6	7	8
1 - 500	1,929	415	286	44	2	395	94	682
501 - 1,000	1,632	376	231	96	8	358	187	5
1,001 - 1,500	1,489	320	296	148	17	387	326	15
1,501 - 2,000	1,802	403	325	155	7	489	306	27
2,001 - 2,500	2,370	479	433	173	3	753	459	129
2,501 - 3,000	3,808	801	664	223	9	1,427	758	277
3,001 - 3,500	4,472	998	607	221	9	1,317	859	103
3,501 - 4,000	3,307	685	472	181	10	994	671	47
4,001 - 4,500	2,191	427	338	121	5	636	502	17
4,501 - 5,000	1,525	320	231	96	9	422	338	2
5,001 & OVER	2,564	481	491	225	16	664	573	9
TOTAL	27,089	**5,705**	**4,374**	**1,683**	**95**	**7,842**	**5,073**	**1,313**

***Option selected:**
1 - Straight-life annuity with refundable balance
2 - Period certain benefit and life thereafter
3 - Joint-survivor annuity
4 - Joint-survivor annuity, one-half benefit to beneficiary
5 - Other payment - special option
6 - Joint-survivor annuity with "pop-up" option
7 - Joint-survivor annuity, one-half benefit to beneficiary with "pop-up" option
8 - Disability, survivors and disabled adult children - set by statute

Defined Benefit Plan
Average Benefit Payments for the Past Ten Years
By Years of Service Credit

Retirement Effective Dates	00-4.99	05-9.99	10-14.99	15-19.99	20-24.99	25-29.99	30>=	TOTAL
07/01/2007 TO 06/30/2008								
Average monthly benefit	$199	$524	$1,117	$1,658	$2,436	$3,279	$4,319	**$2,984**
Average final average salary	$3,816	$3,066	$4,215	$4,412	$4,983	$5,067	$5,786	**$5,017**
Number of retired members	50	130	112	150	217	557	615	**1,831**
07/01/2008 TO 06/30/2009								
Average monthly benefit	$200	$573	$1,005	$1,725	$2,427	$3,368	$4,496	**$2,941**
Average final average salary	$4,617	$3,942	$3,873	$4,686	$4,974	$5,278	$5,960	**$5,164**
Number of retired members	72	168	137	115	242	505	585	**1,824**
07/01/2009 TO 06/30/2010								
Average monthly benefit	$185	$525	$1,104	$1,700	$2,513	$3,468	$4,670	**$3,222**
Average final average salary	$3,654	$3,637	$4,124	$4,508	$5,184	$5,383	$6,102	**$5,316**
Number of retired members	28	133	98	103	242	442	601	**1,647**
07/01/2010 TO 06/30/2011								
Average monthly benefit	$149	$519	$1,225	$1,781	$2,529	$3,621	$4,827	**$3,240**
Average final average salary	$3,570	$3,640	$4,423	$4,825	$5,143	$5,574	$6,235	**$5,392**
Number of retired members	45	157	144	112	235	544	617	**1,854**
07/01/2011 TO 06/30/2012								
Average monthly benefit	$175	$507	$1,170	$1,897	$2,613	$3,674	$4,726	**$3,148**
Average final average salary	$3,292	$3,759	$4,307	$4,898	$5,219	$5,605	$6,109	**$5,331**
Number of retired members	45	197	146	162	303	778	569	**2,200**
07/01/2012 TO 06/30/2013								
Average monthly benefit	$161	$475	$1,186	$1,963	$2,781	$3,811	$5,162	**$3,149**
Average final average salary	$3,362	$3,660	$4,498	$4,956	$5,518	$5,799	$6,632	**$5,476**
Number of retired members	44	234	156	154	294	685	447	**2,014**
07/01/2013 TO 06/30/2014								
Average monthly benefit	$192	$484	$1,270	$2,068	$2,797	$3,847	$5,362	**$3,126**
Average final average salary	$4,148	$3,677	$4,751	$5,364	$5,600	$5,902	$6,860	**$5,589**
Number of retired members	56	211	161	145	258	678	344	**1,853**
07/01/2014 TO 06/30/2015								
Average monthly benefit	$157	$472	$1,282	$2,038	$2,890	$3,898	$5,124	**$3,173**
Average final average salary	$3,331	$3,577	$4,892	$5,266	$5,709	$5,948	$6,552	**$5,577**
Number of retired members	60	231	183	206	314	806	456	**2,256**
07/01/2015 TO 06/30/2016								
Average monthly benefit	$177	$519	$1,316	$1,998	$2,934	$3,935	$5,389	$3,195
Average final average salary	$3,364	$3,791	$4,847	$5,188	$5,777	$6,019	$6,858	$5,664
Number of retired members	61	254	194	217	356	807	448	2,337
07/01/2016 TO 06/30/2017								
Average monthly benefit	$176	$473	$1,235	$2,039	$2,902	$3,935	$5,179	$3,040
Average final average salary	$3,691	$3,506	$4,588	$5,208	$5,722	$6,024	$6,666	$5,514
Number of retired members	53	259	162	212	346	766	320	2,118
Ten Years Ended June 30, 2017								
Average monthly benefit	**$178**	**$503**	**$1,204**	**$1,914**	**$2,710**	**$3,721**	**$4,862**	**$3,123**
Average final average salary	**$3,759**	**$3,640**	**$4,500**	**$4,984**	**$5,424**	**$5,709**	**$6,308**	**$5,416**
Number of retired members	**514**	**1,974**	**1,493**	**1,576**	**2,807**	**6,568**	**5,002**	**19,934**

Medical Insurance Plan
Average Insurance Premium Supplements for the Last Five Years
By Years of Service Credit

Retirement Effective Dates	00-9.99	10-14.99	15-19.99	20>=	TOTAL
07/01/2012 to 06/30/2013					
Average monthly supplement	$ 80.23	$ 227.32	$ 366.98	$ 499.25	
Number of retired members	29	90	104	1,373	1,596
07/01/2013 to 06/30/2014					
Average monthly supplement	$ 51.99	$ 189.59	$ 335.34	$ 483.65	
Number of retired members	15	82	100	1,227	1,424
07/01/2014 to 06/30/2015					
Average monthly supplement	$ 78.48	$ 204.26	$ 369.27	$ 492.30	
Number of retired members	24	101	176	1,411	1,712
07/01/2015 to 06/30/2016					
Average monthly supplement	$ 86.82	$ 182.41	$ 323.14	$ 483.93	
Number of retired members	68	98	178	1,407	1,751
07/01/2016 to 06/30/2017					
Average monthly supplement	$ 74.65	$ 192.30	$ 333.08	$476.86	
Number of retired members	62	71	194	1,291	1,618

Summary of Fiscal Year 2016-17
Retiree Sick Leave Payments

Total members retiring		2,325
Total members receiving sick leave payments		1,500
Total amount of sick leave payments @12.855% contribution rate	$	19,914,607
Average sick leave payment per retiree	$	13,276
Total increase in final 3 or 5 year average salary base	$	5,356,914
Average increase in final average salary	$	3,571
Total service credit of 1,500 retirees		38,832
Average service credit of 1,500 retirees		25.89

ANTICIPATED LIFETIME PAYOUT OF ADDITIONAL ANNUITY

Actuarial cost of sick leave as salary credit	$	43,962,241

Funding of Additional Payments

Member Contributions ($19,914,607 x 9.105%) =	$ 1,813,225
Employer Contributions ($19,914,607 x 12.325%) =	2,454,475
TOTAL CONTRIBUTIONS	$ 4,267,700
DEFICIT:	
Anticipated additional payout	$ 43,962,241
Less: total member and state contributions	4,267,700
Subtotal unfunded debt	$ 39,694,541
Less: current year appropriation	5,623,500
TOTAL UNFUNDED COST OF SICK LEAVE PAYMENTS*	$ 34,071,041

* *This amount will be amortized over a 20-year period.*

NOTE: Actuarial factors used for sick leave calculations changed effective July 1, 1998. The unfunded cost of sick leave payments are amortized over 20-year periods per KRS 161.553.

This page was intentionally left blank.