

KENTUCKY  
TEACHERS'  
Retirement System

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Serving Kentucky Teachers  
— Since 1940 —

*"Celebrating 75 Years  
of Retirement Security"*

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COMPREHENSIVE  
ANNUAL  
FINANCIAL REPORT

for the fiscal year ended June 30, 2015

# Teachers' Retirement System of the State of Kentucky



## The 75<sup>th</sup> Comprehensive Annual Financial Report

**A Component Unit of the Commonwealth of Kentucky**  
**Fiscal Year Ended June 30, 2015**

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

**GARY L. HARBIN, CPA**  
**Executive Secretary**

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

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Kentucky Teachers' Retirement System

2015



# Introductory Section

## Chairperson's Letter

### Teachers' Retirement System of the State of Kentucky

**GARY L. HARBIN, CPA**  
*Executive Secretary*



December 9, 2015

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, 2015, the 75th 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.

KTRS closed the 2014-2015 fiscal year with \$18.8 billion net assets. The active membership totaled 72,246 and the retired membership was 49,822 with annual annuity and medical insurance benefits of \$2 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 Kentucky Teachers' Retirement System in the most competent and efficient manner possible.

Sincerely,

Arthur Green  
Chairperson  
Board of Trustees

#### BOARD OF TRUSTEES

**ARTHUR GREEN**  
CHAIRPERSON  
ELKTON

**JAY MORGAN, PH.D.**  
VICE CHAIRPERSON  
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DEPARTMENT  
OF EDUCATION

*EX OFFICIO*  
**TODD HOLLENBACH**  
STATE TREASURER

## Letter of Transmittal



### Teachers' Retirement System of the State of Kentucky

December 9, 2015

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

Dear Governor Bevin:

It is my pleasure to submit the 75th Comprehensive Annual Financial Report of the Teachers' Retirement System of the State of Kentucky, a component unit of the Commonwealth of Kentucky, for the fiscal year ended June 30, 2015. State law requires the publication of this report; in addition, an annual audit and an annual actuarial valuation of the retirement system also are required. The Kentucky Teachers' Retirement System (KTRS) produced this annual report that provides you, the General Assembly and the public with information necessary to better understand KTRS. 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, which receive many of those retirement dollars as they are spent by retirees.

This report has been prepared in conformity 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 KTRS management. To the best of our 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 KTRS for the year ended June 30, 2015. Discussion and analysis of net assets and related additions and deductions are presented in

Management's Discussion and Analysis beginning on page 18.

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 fairly presented. There are limits 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 Executive Secretary and the Governance and Audit Committee of the Board of Trustees.

### Profile of KTRS

KTRS 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. KTRS is a blended component unit of the Commonwealth of Kentucky. The plan is described in the notes to the basic financial statements on page 29. Also, the summary of the plan provisions starting on page 104 is useful in understanding benefit and contribution provisions. The population of KTRS membership is stated in the preceding chairperson's letter.

Each year an operating budget is prepared for the administration of the retirement system. The budget is approved by the Board of Trustees and submitted to the Kentucky General Assembly for adoption. KTRS's investment earnings pay for the agency's administrative expenses, which are among the lowest of its peers.

### Major Initiatives

The System continually seeks opportunities to better serve its membership. During the past year, KTRS 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, Careful Management of Medical Insurance Costs and](#)



### *Protecting Members From an Unfair Medicare Part B Premium Increase*

June 30, 2015 marked the end of the fifth year of the six-year phase in of the “shared responsibility” solution for prefunding retired teacher health care. The Board of Trustees and Staff are very pleased to report that \$3.1 billion in actuarial liability has been eliminated from the retired teacher health care plan through implementation of this solution. Another \$1.9 billion savings in actuarial liability was accomplished through careful management of health care costs. Thus, since implementing “shared responsibility” and other cost control measures, more than \$5 billion in actuarial accrued liability has been eliminated from the KTRS Medical Insurance Fund.

Elected officials have commended Kentucky’s education community for its strong leadership and hard work in developing and implementing the solution. Constituent groups – representing retired teachers, active teachers, school boards, school superintendents and the state – all worked on the consensus funding solution. The solution provides that all the groups share in the solution by investing a little more now to receive substantial returns later. After five years, and the \$3.1 billion in lowered liabilities by converting to a prefunded plan and other cost-saving measures, the “shared responsibility” solution is truly a significant accomplishment on the road to retirement security for current and future retired teachers. Kentucky is a national leader in prefunding retiree health benefits.

KTRS is efficient, effective and always working to improve the retirement security of Kentucky’s teachers. Eliminating more than \$5 billion in liability helps the financial condition of the Commonwealth and eases burdens on taxpayers.

The Board of Trustees of KTRS regularly reviews the health care plan to contain costs and maintain a meaningful benefit for retired teachers. The move to Medicare Advantage, now in our ninth year, continues to be stable and financially feasible for our members and the KTRS medical plan.

Some recent cost saving initiatives include moving the KTRS-sponsored Medicare drug plan from fully insured to a self-funded plan to achieve the greatest amount of federal subsidies for 2015.

Additionally, KTRS joined the KY Rx Coalition in 2012, which is spearheaded by the University of Kentucky. By joining the coalition, KTRS will achieve annual savings through leveraging greater prescription purchasing power and deeper drug discounts. As an added benefit, a dedicated staff of pharmacists with the KY Rx Coalition can help each member with their prescriptions and how to maximize their prescription dollars.

In the past year, KTRS played an integral role educating federal lawmakers about a proposed 52 percent Medicare Part B premium increase for our retirees and convincing Congress to approve a less draconian solution. With the assistance of U.S. Senate Majority Leader Mitch McConnell and other members of the congressional delegation, KTRS successfully helped our members avoid the worst of an increase that unfairly impacted our retirees while leaving most Medicare recipients at this year’s rate. Without the reform, our retirees would have paid the full brunt of a federally mandated Medicare Part B premium increase while recipients whose premiums are deducted from their Social Security benefit would have paid nothing additional (because SSI recipients are held harmless from proposed increases when there is no cost of living benefit adjustment.)

KTRS also has undertaken cost containment measures by seeking competitive bids for the Medicare Advantage program that resulted in premium reductions of more than \$13 million for plan year 2015.

The Board has contracted with Edumedics for disease management services for Medicare-eligible retirees with diabetes, hypertension and hyperlipidemia. Edumedics is a Kentucky-based company spun out from the University of Louisville. Edumedics is educating retirees with these conditions about nutrition, drug regime, exercise and other matters. These educational efforts are ongoing, involving routine face-to-face checkups with participating retirees. If deemed successful at the conclusion of a three-year pilot period in 2016, the Board will likely expand this program to other chronic diseases.

### *Investment Program*

For the twelve month period ended June 30, 2015, KTRS’s investment program produced a total return of 5.1%. This ranked in the top 6% of

returns for pension funds with over \$1 billion in assets. During the period including the last five years, KTRS's investment returns rank in the top 9%. Moreover, during the last 20 years, KTRS investment returns have averaged 7.6%, which meets the long-term assumed rate of return of 7.5%.

Because of KTRS's focus on fundamental value and risk control, it was able to continue a multiyear program of diversifying the portfolio. KTRS also continued to implement changes to the investment program based upon an asset liability modeling study and an analysis of the shared responsibility solution for funding retiree health care. 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. KTRS's investment program continues to be recognized as a leader in the public pension community for governance structure, trustee education and cost effectiveness.

#### Information Technology

Members recently began accessing their account information online – available anytime from anywhere – with KTRS's Pathway information technology system. The members' portal is the final phase of a multiyear effort to modernize KTRS's information technology infrastructure. The vendor authorized by the Board to build and install the new system has been working with staff onsite at KTRS since September 2011. In July 2013, member enrollment, employer reporting, service credit purchases and related accounting functions were put into production. In January 2015, new modules for member benefits, insurance, and retiree payroll went live. To date, more than 95% of the overall project has been completed, and work has been proceeding according to schedule and within budget. The project is expected to reach completion by May. The objective of Pathway is to make it easier for members to answer their own questions about their retirement and insurance accounts while streamlining retirement processes and improving staff efficiency in providing services to retirees and active members. In developing Pathway, KTRS is redesigning and improving office processes and applying new web-based

technologies to these processes. This will increase staff productivity, provide seamless member account management, and simplify future system modifications. As KTRS continues to implement changes under Pathway, we expect that the new technology will help the System better serve its membership.

#### Funding Work Group

Leaders from the Kentucky General Assembly and the education community met for the last five months of 2015 to find solutions to address pension underfunding as part of the KTRS Funding Work Group established by then-Gov. Steve Beshear. The Funding Work Group allowed all sides to present their cases and produced valuable information and findings that will aid the development of a solution in the 2016 legislative session. I am encouraged that a single solution can be found, and agreed upon, before the General Assembly convenes in January.

#### Economic Condition

The economic condition of the System is based primarily on investment earnings. The Investment Section of this report starting on page 57 contains asset allocations, strategic target ranges for investments, discussion of the current year market environment and historical performance schedules, among others.

KTRS's investment portfolio outperformed its peers in a year when the markets challenged all investors. The entire pension portfolio gained 5.1% in 2014-15, where peers gained 3.1% – that difference of 2 percentage points shows KTRS's investments outperformed peers by 50 percent. The portfolio's 10-year annualized rate of return is 7.0% and the 20-year annualized rate of return is 7.6%.

The results show KTRS's investment team is meeting the goals set out in Board policy.

According to KRS 161.430 the KTRS Board of Trustees has the responsibility to invest the System's assets. 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 a decrease in value during the 2014-2015 fiscal year as the portfolio's market value went from \$18,527,307,235 to \$18,447,494,794. The decrease in value of the portfolio was the result of negative cash flow for the pension fund and the compounded impact of lost opportunity due to underfunding. This decrease was offset partially by investment income that included interest income and dividends. Employer and employee contributions also provided significant income to the portfolio.

Investment income decreased to \$871,554,710 from the 2013-2014 fiscal year total of \$2,875,609,844 when the portfolio's investments gained 18.1 percent. The major contributing factor of the decrease in return from the System's investment portfolio resulted from the net appreciation in fair value of investments of only \$428,758,194 at June 30, 2015 compared to \$2,485,340,569 at June 30, 2014. It should be noted that KTRS annuities bolster the Commonwealth of Kentucky's economy, as approximately 92% of retired teachers reside within the state. Total benefits (retirement, medical...etc.) paid during the fiscal year were nearly \$2 billion.

### Funding

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 of time, because of this failure to make 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 \$512.9 million (fiscal year 2018). 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 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
2018	13.49	512,883,000

(Source: KTRS Report of the Actuary on the Annual Valuation Prepared as of June 30, 2015).

The Board has always taken action 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, 2015. This report reflects the System's actuarial value of assets totaling \$17.2 billion and actuarial determined liabilities totaling \$31.1 billion. The funded ratio of actuarial assets to liabilities is 55.3%, which is an increase from the previous year and is primarily due to market appreciation of investments and smoothing of investment returns. The actuary reports: "In our opinion, the System is not being funded on an actuarially sound basis since the actuarially determined contributions are not being made by the employer. If contributions by the employer to the System continue to be 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 (on page 51). After 2015 the actuary recommends an increase in employer contributions of 13.49% of pay for the 2017-2018 fiscal year (as detailed on page 90). Annual required employer contributions for the Medical Insurance Fund are provided in the schedule of employer contributions (on page 53). The 2015 employer shortfall of contributions created a net Other Post-Employment Benefits (OPEB) obligation of \$1,480,595,898 (as detailed on page 122).

### **KTRS 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 a 30-year period. The System believes that 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, 2015 indicated that the fund has an unfunded liability of \$2.89 billion. The funded ratio of actuarial assets to liabilities is 18.09%, which is trending upward from past years. The actuary’s opinion is: “... if the State contributions to the Medical Insurance Fund continue to increase to the planned levels, the Retiree Medical Plan will begin to operate in a more actuarially sound basis. Assuming that required contributions to the Medical Insurance Fund are made by the employer from year to year in the future at the levels required on the basis of the successive actuarial valuations, the actuarial soundness of the Medical Insurance Fund to provide 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. KTRS will continue to take measures to contain costs and increase revenues to the Medical Insurance Plan or may adjust coverage to meet existing revenues.

### **Professional Services**

Professional consultants are appointed by the Board of Trustees to perform professional services that are essential to the effective and efficient operation of KTRS. Certifications from the Board’s External Auditor and Independent Actuary are enclosed in this report. The System’s consultants who are appointed by the Board are listed on pages 54, 55, 79 and 85 of this report.

### **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, 2014. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports.

In order 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 CAFR must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. KTRS has received the Certificate of Achievement for the last twenty-seven consecutive years (fiscal years ended 1988-2014). We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to GFOA.

#### **PPCC Achievement Award**

The Public Pension Coordinating Council (PPCC) awarded a Certificate of Achievement to the Teachers’ Retirement of the State of Kentucky for 2015 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 widely acknowledged to be marks of excellence in the public pension industry.

In 2015, for the fourth consecutive year, KTRS was not awarded the PPCC Certificate of Achievement for funding. Failure to qualify for the award reflects the employer's continued underfunding of KTRS's retirement annuity plan.

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.

### Public Sector HealthCare Roundtable

KTRS is a member of the Public Sector HealthCare Roundtable, and I serve as its president and on its board of directors. The Roundtable is a national coalition of public sector health care purchasers that was formed to ensure that the interests of the public sector were properly represented during the formulation and debate, and now implementation of the Patient Protection and Affordable Care Act. Membership in the Roundtable is open to any statewide, regional or local governmental unit that provides health care coverage for public employees and retirees.

### Our Gratitude

Three elected members of the KTRS Board of Trustees left the board during the fiscal year. Dr. Tom Shelton served as an active teacher trustee from July 1, 2008 through December 31, 2014, including as chair of the board from June 1, 2012 through December 31, 2014. Ruth Ann Sweazy served as an active teacher trustee from July 1, 2003 through June 30, 2015, including as chair of the insurance committee from July 1, 2005 through

June 30, 2015. Laura Zimmerman served as an active teacher trustee from September 15, 2003 through June 30, 2015, including as chair of the board from January 1, 2015 through June 30, 2015. During their tenures, the retirement system's retiree health care program secured long-term funding – in addition to implementing cost reductions – that lowered its unfunded liability by more than \$5 billion. We thank them for their exemplary service and numerous contributions to the successful operation of the System.

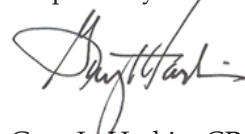
### Acknowledgements

The preparation of this report reflects the combined efforts of the KTRS 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 is also used to determine responsible stewardship of the assets contributed by KTRS members and their employers.

This report is located at the KTRS web address <http://ktrs.ky.gov>, and is made available to all System employer members, whose cooperation continues to contribute significantly to our success, and who form the vital link between KTRS and its active members.

KTRS management and staff are committed to the continued operation of an actuarially sound retirement system. Your support is an essential part of this commitment, and we look forward to working with you.

Respectfully submitted,



Gary L. Harbin, CPA



## BOARD OF TRUSTEES



**Arthur Green**  
Chairperson  
Retired Teacher Trustee  
Elkton



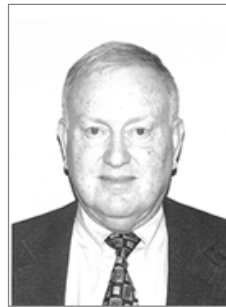
**Jay Morgan, Ph.D.**  
Vice Chairperson  
Teacher Trustee  
Murray



**Mary Adams**  
Active Teacher Trustee  
Brodhead



**Hollis Gritton**  
Lay Trustee  
Union



**Ronald L. Sanders**  
Lay Trustee  
Hodgenville



**Quin Sutton**  
Active Teacher Trustee  
Eddyville



**Ali Wright**  
Active Teacher Trustee  
Georgetown



**Stephen L. Pruitt**  
Ex Officio Trustee  
Commissioner,  
Dept. of Education



**Todd Hollenbach**  
Ex Officio Trustee  
State Treasurer

**Kentucky Teachers' Retirement System**

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  
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*Deputy Executive Secretary  
Finance & Administration*

**TOM SIDEREWICZ, CFA**

*Chief Investment Officer*

**PROFESSIONAL CONSULTANTS**

**ACTUARY**

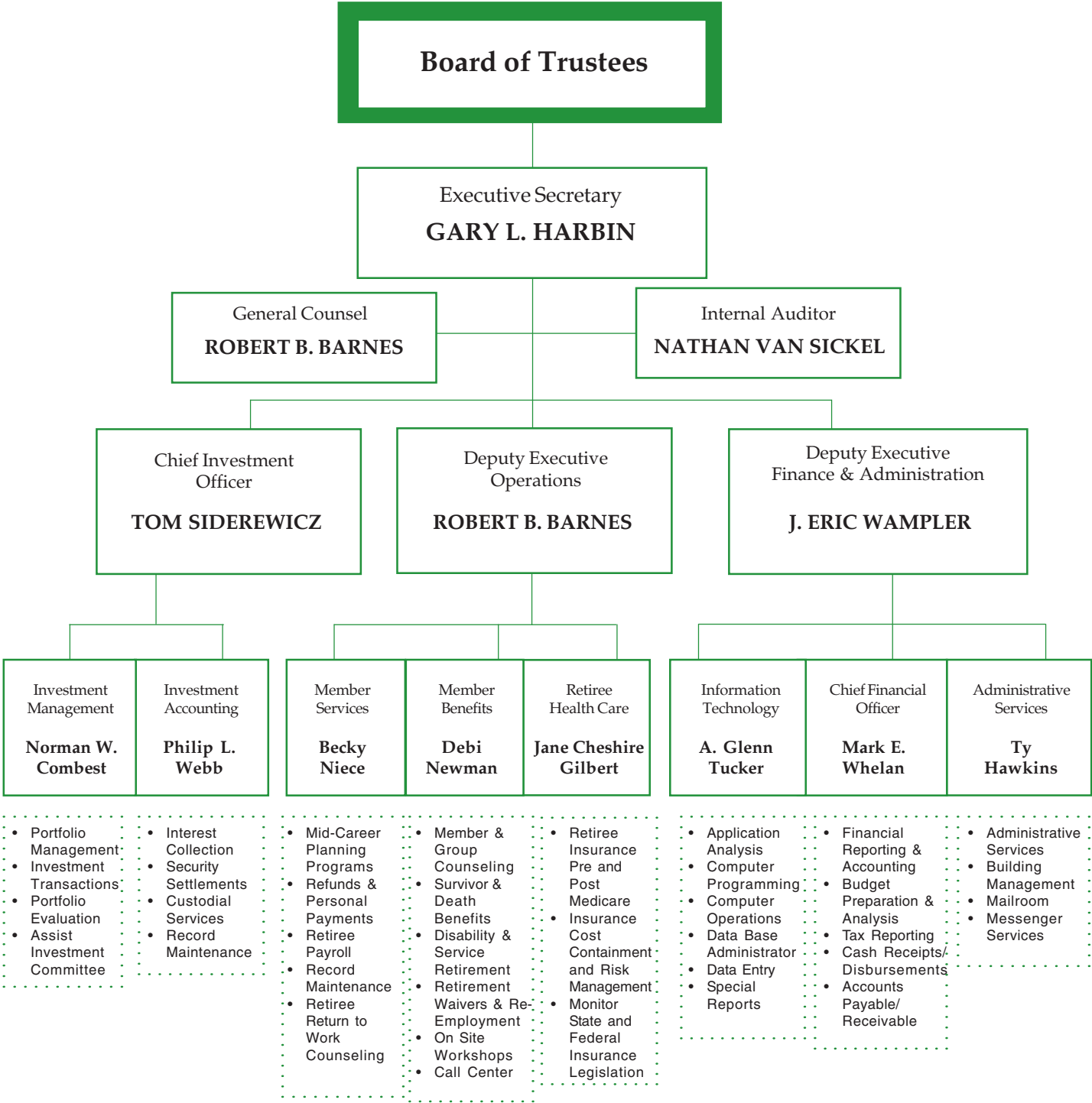
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**AUDITOR**

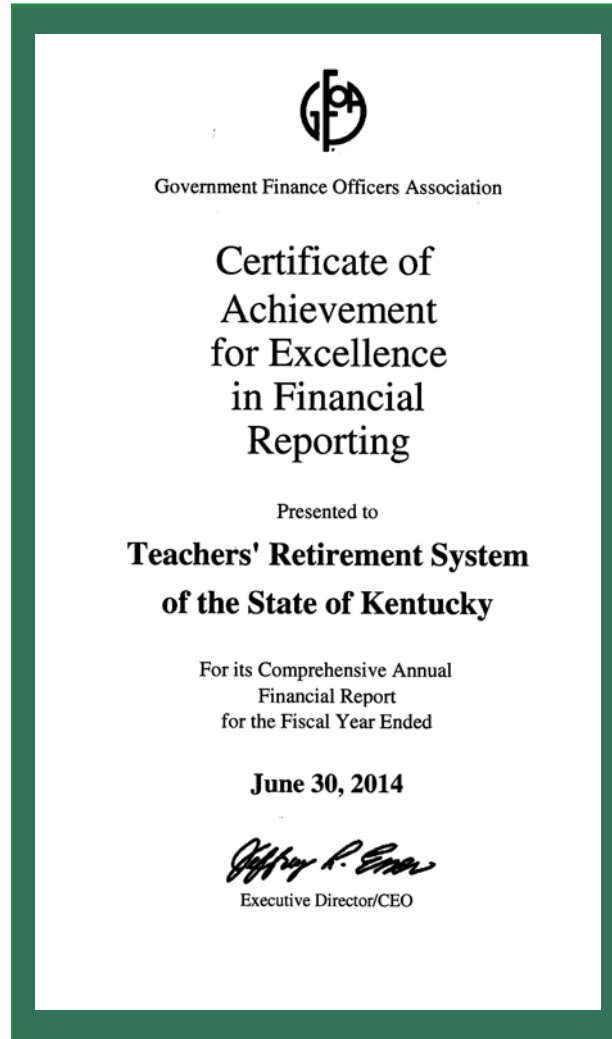
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1000 Bluegrass Corporate Center  
333 West Vine Street  
Lexington, KY 40507

*\* See pages 79 and 85 of the Investment  
Section for investment consultants.*

Kentucky Teachers' Retirement System  
Organizational Chart



## GOVERNMENT FINANCIAL OFFICERS ASSOCIATION (GFOA)



*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 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 KTRS has received the Certificate of Achievement for the last twenty-seven consecutive years (fiscal years ended 1988-2014).*

**PUBLIC PENSION COORDINATING COUNCIL  
PUBLIC PENSION STANDARDS**



**Public Pension Coordinating Council  
Public Pension Standards  
2015 Award**

Presented to

**Kentucky Teachers' Retirement System**

In recognition of meeting professional standards for  
plan design and administration as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation  
of*

National Association of state Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

A handwritten signature in black ink, reading 'Alan H. Winkle'.

Alan H. Winkle  
Program Administrator

*The Public Pension Coordinating Council awarded a Certificate of Achievement to the Teachers' Retirement System of the State of Kentucky for 2015 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 widely acknowledged to be marks of excellence for retirement systems. It represents the highest standards of excellence in the public pension industry.*



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Kentucky Teachers' Retirement System

2015



Financial  
Section



### Independent Auditor's Report

Board of Trustees  
Kentucky Teachers' Retirement Systems  
Frankfort, Kentucky

### Report on the Financial Statements

We have audited the accompanying statement of fiduciary net position of the Teachers' Retirement System of the State of Kentucky as of June 30, 2015, 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 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 financial statements that are free from material misstatement, whether due to fraud or error.

### Auditor's Responsibility on the 2015 Financial Statements

Our responsibility is to express an opinion on the 2015 financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from 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 on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the 2015 financial statements.

### Opinion on the 2015 Financial Statements

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, as of June 30, 2015, and the respective changes in its fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Kentucky  
Indiana  
Ohio

**Mountjoy Chilton Medley LLP**

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**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 50), Schedule of Net Pension Liability (page 51), Schedule of Employer Contributions (page 51) Schedule of Investment Returns (page 52), Medical Insurance Schedule of Funding Progress (page 52) and Schedule of Employer Contributions (page 53), and Life Insurance Schedule of Funding Progress and Schedule of Employer Contributions (page 53) 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 Information*

Our audit was conducted for the purpose of forming an opinion on the 2015 financial statements that collectively comprise the Teachers' Retirement System of the State of Kentucky's basic financial statements. The introductory, financial – supplementary schedules, investment, actuarial and statistical sections listed in the table of contents 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 audit 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 the 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.

*2014 Financial Statements*

The financials statements of the Teachers' Retirement System of the State of Kentucky as of and for the year ended June 30, 2014, were audited by predecessor auditors whose report December 15, 2014, expressed an unmodified opinion on those financial statements.

**Other Reporting Required by Government Auditing Standards**

In accordance with Government Auditing Standards, we have also issued our report dated December 9, 2015, on our consideration of the Teachers' Retirement System of the State of Kentucky's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on 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

Lexington, Kentucky  
December 9, 2015

## 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 (Kentucky Teachers' Retirement System, KTRS, Retirement System, or Plan) financial performance provides an overview of the defined benefit and medical insurance plans' financial year ended June 30, 2015. 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 Retirement 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 Kentucky Teachers' Retirement System 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 and of the medical insurance and life insurance plans from a long-term, ongoing plan perspective and the progress made in accumulating sufficient assets to pay benefits and insurance premiums when due. 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.

### KENTUCKY TEACHERS' RETIREMENT SYSTEM AS A WHOLE

In the fiscal year ended June 30, 2015, Kentucky Teachers' Retirement System's combined fiduciary net position increased by \$46.4 million - from \$18,720.4 million in 2014 to \$18,766.8 million in 2015. In 2013, the combined net position totaled \$16,613.4 million. The following summaries focus on the fiduciary net position and changes in fiduciary net position of Kentucky Teachers' Retirement System's defined benefit retirement annuity plan, medical insurance plan, and life insurance plan.

#### Summary of Fiduciary Net Position (In Millions)

Categories	Defined Benefit Plan			Medical Insurance Plan			Life Insurance Fund		
	2015	2014	2013	2015	2014	2013	2015	2014	2013
Cash & Investments	\$ 18,428.9	\$ 18,426.8	\$ 16,549.7	\$ 609.7	\$ 536.2	\$ 456.5	\$ 88.6	\$ 89.7	\$ 88.8
Receivables	295.4	310.5	173.0	29.1	12.4	16.8	1.1	1.1	1.1
Capital Assets	14.9	11.5	9.2						
Total Assets	18,739.2	18,748.8	16,731.9	638.8	548.6	473.3	89.7	90.8	89.9
Total Liabilities	(690.1)	(656.2)	(623.1)	(11.8)	(12.6)	(59.6)			
Net Position	\$ 18,049.1	\$ 18,092.6	\$ 16,108.8	\$ 627.0	\$ 536.0	\$ 413.7	\$ 89.7	\$ 90.8	\$ 89.9

*TOTALS	2015	2014	2013
Cash & Investments	\$ 19,127.2	\$ 19,052.7	\$ 17,095.0
Receivables	325.6	324.0	190.9
Capital Assets	14.9	11.5	9.2
Total Assets	\$ 19,467.7	\$ 19,388.2	\$ 17,295.1
Total Liabilities	(701.9)	(668.8)	(682.7)
Net Position	\$ 18,765.8	\$ 18,719.4	\$ 16,612.4

\* Other Funds consisting of the 403(b) Tax Shelter Plan, the Excess Benefit Fund and the Losey Scholarship fund had a combined plan net position of \$1.0 million for years ended 2015, 2014 and 2013.



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

The fiduciary net position of the defined benefit retirement annuity plan decreased by .24 percent (\$18,049.1 million compared to \$18,092.6 million) and in 2013, the fiduciary net position of the defined benefit plan totaled \$16,108.8 million. The decrease is primarily due to deteriorations in market conditions which resulted in a net investment income decrease of \$1.9 billion less than 2014. The 2014 amount was \$.8 billion more than 2013. 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 17 percent (\$627 million compared to \$536 million) primarily due to contributions from members and employers exceeding insurance expenses due to legislation passed in 2010. This compares to 2013 where fiduciary net position of the medical insurance fund totaled \$413.7 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)

Categories	Defined Benefit Plan			Medical Insurance Plan			Life Insurance Fund		
	2015	2014	2013	2015	2014	2013	2015	2014	2013
<b>ADDITIONS</b>									
Member Contributions	\$ 308.2	\$ 305.0	\$ 304.7	\$ 157.5	\$ 135.2	\$ 119.8	\$	\$	\$
Employer Contributions	559.6	563.3	568.2	145.3	157.7	166.6	1.0	1.0	1.7
Net Investment Income	862.2	2,803.2	2,039.9	7.4	67.7	30.7	2.0	4.6	0.7
Other Income				22.8	4.9				
<b>TOTAL ADDITIONS</b>	<b>\$ 1,730.0</b>	<b>3,671.5</b>	<b>2,912.8</b>	<b>\$ 333.0</b>	<b>365.5</b>	<b>317.1</b>	<b>3.0</b>	<b>5.6</b>	<b>2.4</b>
<b>DEDUCTIONS</b>									
Benefit Payments	\$ 1,741.5	1,654.4	1,570.7	\$			4.1	4.7	4.6
Refunds	23.1	25.5	22.1						
Administrative Expense	8.9	7.9	8.4	1.6	1.1	1.3			
Insurance Expenses				240.4	242.1	240.9			
<b>TOTAL DEDUCTIONS</b>	<b>1,773.5</b>	<b>1,687.8</b>	<b>1,601.2</b>	<b>242.0</b>	<b>243.2</b>	<b>242.2</b>	<b>4.1</b>	<b>4.7</b>	<b>4.6</b>
<b>Increase (Decrease) in Net Position</b>	<b>\$ (43.5)</b>	<b>\$ 1,983.7</b>	<b>\$ 1,311.6</b>	<b>\$ 91.0</b>	<b>\$ 122.3</b>	<b>\$ 74.9</b>	<b>\$ (1.1)</b>	<b>\$ 0.9</b>	<b>\$ (2.2)</b>

#### \*TOTALS

	2015	2014	2013
<b>ADDITIONS</b>			
Member Contributions	\$ 465.7	\$ 440.2	\$ 424.5
Employer Contributions	705.9	722.0	736.5
Net Investment Income	871.6	2,875.5	2,071.3
Other Income	22.8	4.9	
<b>TOTAL ADDITIONS</b>	<b>\$ 2,066.0</b>	<b>\$ 4,042.6</b>	<b>\$ 3,232.3</b>
<b>DEDUCTIONS</b>			
Benefit Payments	\$ 1,745.6	\$ 1,659.1	\$ 1,575.3
Refunds	23.1	25.5	22.1
Administrative Expense	10.5	9.0	9.7
Insurance Expenses	240.4	242.1	240.9
<b>TOTAL DEDUCTIONS</b>	<b>\$ 2,019.6</b>	<b>\$ 1,935.7</b>	<b>\$ 1,848.0</b>
<b>Increase (Decrease) in Net Position</b>	<b>\$ 46.4</b>	<b>\$ 2,106.9</b>	<b>\$ 1,384.3</b>

\* Other Funds consisting of the 403(b) Tax Shelter Plan, the Excess Benefit Fund and the Losey Scholarship fund had a combined plan net position of \$1.0 million for years ended 2015, 2014 and 2013.

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

#### 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.

In 2015, Employer contributions totaled \$559.6 million, a net decrease of \$3.7 million from the prior fiscal year. The decrease was due to declining amortization payments from the State on prior benefit improvements. In 2014, Employer contributions decreased \$4.9 million compared to the prior fiscal year due to declining amortization payments from the State on prior benefit improvements.

In 2015, the Retirement System experienced a decrease in net investment income compared to the previous year (\$862.2 million compared to \$2,803.2 million). For 2013, net investment income totaled \$2,039.9 million. The decrease in net investment income is mainly due to unfavorable market conditions for the year ended June 30, 2015 compared to 2014. Total deductions in 2015 increased \$85.7 million. The increase was caused principally by an increase of \$87.1 million in defined benefit payments. Members who were drawing benefits as of June 2014 received an increase of one and one-half percent to their retirement allowances in July 2014. Also, there was an increase of 1,246 members and beneficiaries on the retired payroll as of June 30, 2015.

#### OTHER POSTEMPLOYMENT BENEFIT ACTIVITIES

During the 2015 fiscal year, the medical insurance plan member contributions increased \$22.3 million and employer contributions decreased \$12.4 million from fiscal year 2014. The member 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. The employer contributions decreased due to less transition funding paid by the State as the Shared Responsibility Plan phases in until the 2016 fiscal year.

Net investment income for the medical insurance plan decreased \$60.3 million from \$67.7 million in 2014 to \$7.4 million in 2015. In 2013, net investment income totaled \$30.7 million.

The life insurance plan has an actuarial valuation conducted independently from the defined benefit plan. Total life insurance benefits paid for 2015, 2014 and 2013 were \$4.1, \$4.7 and \$4.6 million respectively.

#### FUNDING

Since fiscal year 2008, the state has not paid all of the annual required contribution (ARC), as determined by the actuary, necessary to prefund the pension benefit requirements of members of the Retirement System. Over this period of time, because of the failure to fund the full ARC, the state's additional annual employer contributions have grown significantly from \$60.5 million (Fiscal Year 2009) to \$520 million (Fiscal Year 2017). The latest actuarial valuation was for the period ending June 30, 2015. This report reflects the System's actuarial value of assets totaling \$17.2 billion and actuarial determined liabilities totaling \$31.1 billion. The funded ratio of actuarial assets to liabilities is 55.3%. Based upon these circumstances, the actuary opines the pension system is not being funded on an actuarially sound basis.

KTRS has negative cash flow related to the state not paying the entire ARC. In this regard, KTRS risks having to sell assets in adverse market conditions to satisfy retiree payroll. Because a plan to address the unfunded liability is not in place, the state's credit rating has been downgraded. Moreover, taxpayers pay higher ultimate pension costs as liability grows compounded. Without action to implement a funding plan, the risk rises that the state may be unable to fund the added annual amounts which would further increase the risk to KTRS related selling assets noted above. To address a long-term funding plan, then-Gov. Steven Beshear appointed a 25-member task force that submitted a report in December 2015 outlining funding options to be considered in the upcoming 2016 Regular Session of the General Assembly.

### **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. Information required according to new accounting standards regarding the funded status of the defined benefit retirement annuity plan is presented in Note 4 of the financial statements. The blended discount rate mandated by the new 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.

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 Retirement 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 and a shortfall of employer contributions has resulted in an accumulated net Other Postemployment Benefit obligation of \$1,480,595,898 as of June 30, 2015.

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, Kentucky Teachers' Retirement System at 479 Versailles Road, Frankfort, Kentucky 40601.

## FINANCIAL SECTION

### STATEMENT OF FIDUCIARY NET POSITION As of June 30, 2015

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
<b>ASSETS</b>					
Cash	\$ 153,403,413	\$ 27,608,169	\$ 688,739	\$ 66,698	\$ 181,767,019
Prepaid Expenses	109,881	1,000			110,881
<b>Receivables</b>					
Contributions	50,495,681	7,531,532	67,162		58,094,375
Due From Other Trust Funds	4,312,155				4,312,155
State of Kentucky	26,885,159	2,580,839	61,789		29,527,787
Investment Income	40,683,260	1,289,669	999,217	2,434	42,974,580
Investment Sales Receivable	172,483,377	673,686			173,157,063
Other Receivables	588,560	16,979,307			17,567,867
<b>Total Receivables</b>	295,448,192	29,055,033	1,128,168	2,434	325,633,827
Investments at Fair Value (See Note 5)					
Short-Term Investments	611,762,670	35,611,846	2,374,735	439,079	650,188,330
Bonds and Mortgages	2,945,268,960	42,746,464	85,589,214	250,032	3,073,854,670
Equities	11,163,565,280	355,702,555		226,083	11,519,493,918
Alternative Investments	844,688,096	11,698,357			856,386,453
Real Estate	825,335,346	1,762,328			827,097,674
Additional Categories	1,385,897,391	134,576,358			1,520,473,749
<b>Total Investments, at fair value</b>	17,776,517,743	582,097,908	87,963,949	915,194	18,447,494,794
Invested Security Lending Collateral	498,859,702				498,859,702
Capital Assets, at cost net of accumulated depreciation of \$4,486,539 (See Note 2)	14,906,438				14,906,438
<b>Total Assets</b>	18,739,245,369	638,762,110	89,780,856	984,326	19,468,772,661
<b>LIABILITIES</b>					
Accounts Payable	1,666,331	20,094	360	4	1,686,789
Due to Other Trust Funds		4,277,470	33,989	696	4,312,155
Revenues Collected in Advance		4,914,365			4,914,365
Investment Purchases Payable	189,588,599	2,587,811			192,176,410
Obligations Under Securities Lending	498,859,702				498,859,702
<b>Total Liabilities</b>	690,114,632	11,799,740	34,349	700	701,949,421
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>	<u>\$ 18,049,130,737</u>	<u>\$ 626,962,370</u>	<u>\$ 89,746,507</u>	<u>\$ 983,626</u>	<u>\$ 18,766,823,240</u>

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, 2014**

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
<b>ASSETS</b>					
Cash	\$ 63,110,212	\$ 2,954,897	\$ 487,301	\$ 52,939	\$ 66,605,349
Prepaid Expenses	70,971	20,000			90,971
<b>Receivables</b>					
Contributions	40,339,941	7,059,521	110,926		47,510,388
Due From Other Trust Funds	1,177,057				1,177,057
State of Kentucky	54,812,142	2,983,504	65,549		57,861,195
Investment Income	44,000,029	1,152,675	939,004	2,146	46,093,854
Investment Sales Receivable	169,491,434	1,227,111			170,718,545
Other Receivables	653,721				653,721
<b>Total Receivables</b>	<b>310,474,324</b>	<b>12,422,811</b>	<b>1,115,479</b>	<b>2,146</b>	<b>324,014,760</b>
Investments at Fair Value (See Note 5)					
Short-Term Investments	784,994,421	112,371,006	2,755,752	468,433	900,589,612
Bonds and Mortgages	3,242,639,057	21,234,589	86,494,824	243,188	3,350,611,658
Equities	11,266,188,790	300,857,011		205,506	11,567,251,307
Alternative Investments	643,890,290	4,251,239			648,141,529
Real Estate	733,045,846				733,045,846
Additional Categories	1,233,210,529	94,456,754			1,327,667,283
<b>Total Investments, at fair value</b>	<b>17,903,968,933</b>	<b>533,170,599</b>	<b>89,250,576</b>	<b>917,127</b>	<b>18,527,307,235</b>
Invested Security Lending Collateral	459,645,254				459,645,254
Capital Assets, at cost net of accumulated depreciation of \$3,393,372 (See Note 2)	11,495,190				11,495,190
<b>Total Assets</b>	<b>18,748,764,884</b>	<b>548,568,307</b>	<b>90,853,356</b>	<b>972,212</b>	<b>19,389,158,759</b>
<b>LIABILITIES</b>					
Accounts Payable	1,815,576	4,059,733	780	8	5,876,097
Due to Other Trust Funds		1,145,785	29,606	1,665	1,177,056
Insurance Claims Payable		120,992			120,992
Revenues Collected in Advance		3,624,881			3,624,881
Investment Purchases Payable	194,733,439	3,621,466			198,354,905
Obligations Under Securities Lending	459,645,254				459,645,254
<b>Total Liabilities</b>	<b>656,194,269</b>	<b>12,572,857</b>	<b>30,386</b>	<b>1,673</b>	<b>668,799,185</b>
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>	<b>\$ 18,092,570,615</b>	<b>\$ 535,995,450</b>	<b>\$ 90,822,970</b>	<b>\$ 970,539</b>	<b>\$ 18,720,359,574</b>

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, 2015

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
<b>ADDITIONS</b>					
<b>Contributions</b>					
State of Kentucky	\$ 480,073,445	\$ 67,608,148	\$ 855,012	\$	\$ 548,536,605
Other Employers	79,505,845	77,655,778	164,507	80,000	157,406,130
Member	308,159,763	157,467,680			465,627,443
<b>Total Contributions</b>	<b>867,739,053</b>	<b>302,731,606</b>	<b>1,019,519</b>	<b>80,000</b>	<b>1,171,570,178</b>
<b>Other Income</b>					
Recovery Income		22,820,427			22,820,427
<b>Total Other Income</b>		<b>22,820,427</b>			<b>22,820,427</b>
<b>Investment Income</b>					
Net Appreciation/(Depreciation) in					
Fair Value of Investments	429,089,219	783,495	(1,131,703)	17,183	428,758,194
Interest	242,306,932	7,901,793	3,130,146	9,317	253,348,188
Dividends	204,861,024			4,391	204,865,415
Rental Income, Net	28,785,045				28,785,045
Securities Lending, Gross Earnings	2,661,499		204	172	2,661,875
<b>Gross Investment Income</b>	<b>907,703,719</b>	<b>8,685,288</b>	<b>1,998,647</b>	<b>31,063</b>	<b>918,418,717</b>
Less: Investment Expense	(44,726,561)	(1,330,584)	(8,262)	(89)	(46,065,496)
Less: Securities Lending Expense	(798,399)		(61)	(51)	(798,511)
<b>Net Investment Income</b>	<b>862,178,759</b>	<b>7,354,704</b>	<b>1,990,324</b>	<b>30,923</b>	<b>871,554,710</b>
<b>Total Additions</b>	<b>1,729,917,812</b>	<b>332,906,737</b>	<b>3,009,843</b>	<b>110,923</b>	<b>2,065,945,315</b>
<b>DEDUCTIONS</b>					
Benefits	1,741,456,095		4,061,000	97,230	1,745,614,325
Refunds of Contributions	23,032,624				23,032,624
Insurance Expenses		240,394,582			240,394,582
Administrative Expense	8,868,971	1,545,235	25,306	606	10,440,118
<b>Total Deductions</b>	<b>1,773,357,690</b>	<b>241,939,817</b>	<b>4,086,306</b>	<b>97,836</b>	<b>2,019,481,649</b>
<b>Net Increase (Decrease)</b>	<b>(43,439,878)</b>	<b>90,966,920</b>	<b>(1,076,463)</b>	<b>13,087</b>	<b>46,463,666</b>
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>					
<b>Beginning of Year</b>	<b>18,092,570,615</b>	<b>535,995,450</b>	<b>90,822,970</b>	<b>970,539</b>	<b>18,720,359,574</b>
<b>End of Year</b>	<b>\$ 18,049,130,737</b>	<b>\$ 626,962,370</b>	<b>\$ 89,746,507</b>	<b>\$ 983,626</b>	<b>\$ 18,766,823,240</b>

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, 2014**

	Defined Benefit Plan	Medical Insurance Plan	Life Insurance Plan	Other Funds	TOTAL
<b>ADDITIONS</b>					
<b>Contributions</b>					
State of Kentucky	\$ 483,330,289	\$ 105,441,052	\$ 839,681	\$	\$ 589,611,022
Other Employers	79,995,960	52,247,362	166,410	80,000	132,489,732
Member	304,981,620	135,190,891			440,172,511
<b>Total Contributions</b>	<b>868,307,869</b>	<b>292,879,305</b>	<b>1,006,091</b>	<b>80,000</b>	<b>1,162,273,265</b>
<b>Other Income</b>					
Recovery Income		4,879,981			4,879,981
<b>Total Other Income</b>		<b>4,879,981</b>			<b>4,879,981</b>
<b>Investment Income</b>					
Net Appreciation in					
Fair Value of Investments	2,422,760,237	61,300,016	1,244,808	35,535	2,485,340,596
Interest	207,296,849	7,146,893	3,336,961	9,312	217,790,015
Dividends	179,227,537	5,237		3,172	179,235,946
Rental Income, Net	29,245,271				29,245,271
Securities Lending, Gross Earnings	2,708,225		197	77	2,708,499
<b>Gross Investment Income</b>	<b>2,841,238,119</b>	<b>68,452,146</b>	<b>4,581,966</b>	<b>48,096</b>	<b>2,914,320,327</b>
Less: Investment Expense	(37,177,750)	(711,083)	(9,062)	(93)	(37,897,988)
Less: Securities Lending Expense	(812,413)		(59)	(23)	(812,495)
<b>Net Investment Income</b>	<b>2,803,247,956</b>	<b>67,741,063</b>	<b>4,572,845</b>	<b>47,980</b>	<b>2,875,609,844</b>
<b>Total Additions</b>	<b>3,671,555,825</b>	<b>365,500,349</b>	<b>5,578,936</b>	<b>127,980</b>	<b>4,042,763,090</b>
<b>DEDUCTIONS</b>					
Benefits	1,654,375,700		4,692,000	127,564	1,659,195,264
Refunds of Contributions	25,461,843				25,461,843
Insurance Expenses		242,070,531			242,070,531
Administrative Expense	7,955,972	1,100,133	21,324	580	9,078,009
<b>Total Deductions</b>	<b>1,687,793,515</b>	<b>243,170,664</b>	<b>4,713,324</b>	<b>128,144</b>	<b>1,935,805,647</b>
<b>Net Increase (Decrease)</b>	<b>1,983,762,310</b>	<b>122,329,685</b>	<b>865,612</b>	<b>(164)</b>	<b>2,106,957,443</b>
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>					
<b>Beginning of Year</b>	<b>16,108,808,305</b>	<b>413,665,765</b>	<b>89,957,358</b>	<b>970,703</b>	<b>16,613,402,131</b>
<b>End of Year</b>	<b>\$ 18,092,570,615</b>	<b>\$ 535,995,450</b>	<b>\$ 90,822,970</b>	<b>\$ 970,539</b>	<b>\$ 18,720,359,574</b>

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.

## FINANCIAL SECTION

### Combining Statement of Fiduciary Net Position - Other Funds As of June 30, 2015

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
<b>Assets</b>				
Cash	\$	\$ 66,698	\$	\$ 66,698
<b>Receivables</b>				
Investment Income	26		2,408	2,434
<b>Investments at Fair Value</b>				
Short Term Investments	363,978		75,101	439,079
Bonds and Mortgages			250,032	250,032
Equities			226,083	226,083
<b>Total Investments</b>	363,978		551,216	915,194
<b>Total Assets</b>	364,004	66,698	553,624	984,326
<b>Liabilities</b>				
Accounts Payable	2		2	4
Due to Other Trust Funds	119	410	167	696
<b>Total Liabilities</b>	121	410	169	700
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>	<u>\$ 363,883</u>	<u>\$ 66,288</u>	<u>\$ 553,455</u>	<u>\$ 983,626</u>

### Combining Statement of Fiduciary Net Position - Other Funds As of June 30, 2014

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
<b>Assets</b>				
Cash	\$	\$ 52,939	\$	\$ 52,939
<b>Receivables</b>				
Investment Income			2,146	2,146
<b>Investments at Fair Value</b>				
Short Term Investments	377,268		91,165	468,433
Bonds and Mortgages			243,188	243,188
Equities			205,506	205,506
<b>Total Investments</b>	377,268		539,859	917,127
<b>Total Assets</b>	377,268	52,939	542,005	972,212
<b>Liabilities</b>				
Accounts Payable	3		5	8
Due to Other Trust Funds	99	435	1,131	1,665
<b>Total Liabilities</b>	102	435	1,136	1,673
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>	<u>\$ 377,166</u>	<u>\$ 52,504</u>	<u>\$ 540,869</u>	<u>\$ 970,539</u>

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, 2015**

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
<b>Additions</b>				
Contributions				
Other Employers	\$	\$ 80,000	\$	\$ 80,000
<b>Investment Income</b>				
Net Appreciation in Fair Value of Investments			17,183	17,183
Interest	261		9,056	9,317
Dividends			4,391	4,391
Securities Lending, Gross			172	172
<b>Gross Investment Income</b>	261		30,802	31,063
Less Securities Lending Expense			(51)	(51)
Less Investment Expense	(37)		(52)	(89)
<b>Net Investment Income</b>	224		30,699	30,923
<b>Total Additions</b>	224	80,000	30,699	110,923
<b>Deductions</b>				
Benefits	13,423	65,807	18,000	97,230
Administrative Expense	84	410	112	606
<b>Total Deductions</b>	13,507	66,217	18,112	97,836
Net Increase (Decrease)	(13,283)	13,783	12,587	13,087
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>				
Beginning of Year	377,166	52,505	540,868	970,539
End of Year	<u>\$ 363,883</u>	<u>\$ 66,288</u>	<u>\$ 553,455</u>	<u>\$ 983,626</u>

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

## FINANCIAL SECTION

### Combining Statement of Changes in Fiduciary Net Position - Other Funds For the Fiscal Year Ended June 30, 2014

	403(b) Tax Shelter	Supplemental Benefit Fund	Losey Scholarship	TOTAL
<b>Additions</b>				
Contributions				
Other Employers	\$	\$ 80,000	\$	\$ 80,000
<b>Investment Income</b>				
Net Appreciation in Fair Value of Investments			35,535	35,535
Interest	234		9,078	9,312
Dividends			3,172	3,172
Securities Lending, Gross			77	77
<b>Gross Investment Income</b>	234		47,862	48,096
Less Securities Lending Expense			(23)	(23)
Less Investment Expense	(38)		(55)	(93)
<b>Net Investment Income</b>	196		47,784	47,980
<b>Total Additions</b>	196	80,000	47,784	127,980
<b>Deductions</b>				
Benefits	13,986	95,578	18,000	127,564
Administrative Expense	63	436	81	580
<b>Total Deductions</b>	14,049	96,014	18,081	128,144
Net Increase (Decrease)	(13,853)	(16,014)	29,703	(164)
<b>Net Position - Restricted for Pension and Other Postemployment Benefits</b>				
Beginning of Year	391,019	68,518	511,166	970,703
End of Year	<u>\$ 377,166</u>	<u>\$ 52,504</u>	<u>\$ 540,869</u>	<u>\$ 970,539</u>

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 Kentucky Teachers' Retirement System (KTRS) 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). KTRS is a blended component unit of the Commonwealth of Kentucky and therefore is included in the Commonwealth's financial statements. KTRS 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 KTRS, 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, 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 Retirement System.

## B. PARTICIPANTS

As of June 30, 2015 a total of 208 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 Retirement System. The following illustrates the classifications of members:

	<u>2015</u>	<u>2014</u>
Active contributing members:		
Vested	48,426	48,836
Non-vested	23,820	24,571
Inactive members, vested	8,051	7,762
Retirees and beneficiaries currently receiving benefits	49,822	48,576
<b>Total members, retirees, and beneficiaries</b>	<u><b>130,119</b></u>	<u><b>129,745</b></u>

## 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 27 years; (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:**

KTRS provides postemployment 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

KTRS has seven cash accounts. At June 30, 2015, the retirement annuity cash account totaled \$118,364,871, the employer control cash account totaled \$33,760,180 and the administrative expense fund cash account was \$1,278,362 for a total of \$153,403,413 as carrying value of cash in the defined benefit plan. The medical insurance trust cash account totaled \$27,494,961 and the medical insurance claims cash account totaled \$113,208 for a total of \$27,608,169 as carrying value of cash in the medical insurance plan. The life insurance plan cash account totaled \$688,739 and the excess benefit fund cash account contained \$66,698. Therefore, the carrying value of cash was \$181,767,019 and the bank balance was \$198,500,955 and funds controlled by the Commonwealth of Kentucky of \$3,698,608. The variance is primarily due to outstanding checks and items not processed by the bank on June 30, 2015.

### 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; KTRS office buildings, forty years. The Pathway System will replace KTRS's legacy computer system and be KTRS's primary line of business information technology system. The Pathway System will be capitalized and amortized or depreciated over ten years. As of June 30, 2015, the project to build and implement the Pathway System was approximately ninety percent (90%) 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 KTRS's employees are recorded when earned. Upon termination or retirement, employees of KTRS 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, 2015 and 2014 accrued compensated absences were \$1,135,872 and \$1,058,460, respectively.

### F. RISK MANAGEMENT

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

### G. OTHER RECEIVABLES

KTRS 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, 2015 and 2014 installment contract receivables were \$588,560 and \$653,721, respectively.

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

#### **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.

#### **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 Retirement System's management believes that it has operated the plans within the constraints imposed by federal tax law.

#### **J. RECENT PRONOUNCEMENTS**

GASB Statement No. 67 which was adopted during the year ended June 30, 2014, addressed accounting and financial reporting requirements for pension plans. The requirements for GASB No. 67 required changes in presentation of the financial statements, notes to the financial statements, and required supplementary information. Significant changes included an actuarial calculation of total and net pension liability. It also included comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The implementation of GASB No. 67 did not significantly impact the accounting for accounts receivable and investment balances. The total pension liability, determined in accordance with GASB No. 67, is presented in Note 4 and in the Required Supplementary Information.

In February 2015, GASB issued Statement No. 72, Fair Value Measurement and Application. This pronouncement clarifies the definition of fair value for financial reporting purposes, establishes general principles for measuring fair value, providing additional fair value guidance, and enhancing disclosures about fair value measurements. GASB Statement No. 72 is effective for fiscal years beginning after June 15, 2015 (the fiscal year ended June 30, 2016). The impact of this statement on the financial statements has not yet been determined.

In June 2015, GASB issued Statement No. 74, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans and Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits other Than Pensions. GASB Statement No. 74 replaces GASB Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans. GASB Statement No. 75 replaces GASB Statement No. 45, Accounting and Financial Reporting by Employers for Postemployment Benefit Plans Other Than Pensions. GASB Statement No. 74 is effective for fiscal years beginning after June 15, 2016, and GASB Statement No. 75 is effective for fiscal years beginning after June 15, 2017. At this time, management is reviewing the recently issued pronouncements to determine the impact on KTRS's financial statements.

### 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 12.105 percent of their salaries to the Retirement System; university members are required to contribute 9.895 percent of their salaries. KRS 161.565 allows each university to reduce the contribution of its members by 2.215 percent; therefore, university members contribute 7.68 percent of their salary to KTRS. 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 postemployment benefit contributions to the medical and life insurance plans. The member postemployment medical contribution is 3 percent. The employer postemployment medical contribution is .75 percent of member gross salaries. Also, after July 1, 2010 employers (other than the state) contribute 2.25 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 Retirement 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 KTRS. 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 Retirement 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 the System, 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 the System. 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 Retirement System's liability determined in accordance with GASB No. 67 less the fiduciary net position) as of June 30, 2015 is shown below.

Net Pension Liability of Employers (In thousands)						
Fiscal Year Ending June 30	Total Pension Liability A	Plan Fiduciary Net Position B	Employers Net 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]
2015	\$ 42,476,699	\$ 18,049,131	\$ 24,427,568	42.5 %	\$ 3,455,008	707.02 %

#### B. SUMMARY OF ACTUARIAL ASSUMPTIONS

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

Valuation Date	6/30/2014
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	4.00 - 8.20%, including inflation
Inflation rate	3.50%
Municipal Bond Index Rate	3.82%
Single Equivalent Interest Rate	4.88%

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 AA to 2020 with a setback of 1 year for females. The last experience study was performed in 2011 and the next experience study is scheduled to be conducted in 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 KTRS's investment consultant, are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>
U.S. Equity	45.0 %	6.4 %
Non U.S. Equity	17.0	6.5
Fixed Income	24.0	1.6
High Yield Bonds	4.0	3.1
Real Estate	4.0	5.8
Alternatives	4.0	6.8
Cash	2.0	1.5
Total	100.0 %	

*Note 4: Net Pension Liability of Employers continued ...***D. DISCOUNT RATE**

The discount rate used to measure the total pension liability was 4.88%. 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. 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 2039 plan year. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments through 2038 and a municipal bond index rate of 3.82% was applied to all periods of projected benefit payments after 2038. 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 table presents the net pension liability of the Retirement System, calculated using the discount rate of 4.88%, as well as what the Retirement System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (3.88%) or 1-percentage-point higher (5.88%) than the current rate:

<i>(in thousands)</i>	<b>1% Decrease (3.88%)</b>	<b>Current Discount Rate (4.88%)</b>	<b>1% Increase (5.88%)</b>
System's net pension liability	\$ 30,402,796	\$ 24,427,568	\$ 19,482,972

June 30, 2014 is the actuarial valuation date upon which the TPL is based. The TPL as of June 30, 2014 was determined using a discount rate of 4.88% which was based on a municipal bond index rate as of that date equal to 3.82%. An expected TPL is determined as of June 30, 2015 using standard roll forward techniques. 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 for the year. The final TPL as of June 30, 2014 reflects that the assumed municipal bond index rate decrease from 4.35% to 3.82%, resulting in a change in the SEIR from 5.23% to 4.88%. The impact of this change in the discount rate is a change in assumptions that is added to the expected TPL to determine the final TPL as of June 30, 2015.



### 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 KTRS' financial statements assess the risks KTRS 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.

KTRS administers a retirement annuity trust fund and a health insurance trust fund in accordance with state and federal law. KTRS 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 KTRS shall be referred to collectively as the "Retirement 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 Retirement System's deposits may not be returned to the Retirement System. The Retirement System's total cash balance held at J.P. Morgan Chase Bank in noninterest-bearing accounts on June 30, 2015 was \$198,500,955. In addition to these funds, an amount of \$3,698,608 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, 2015, the Retirement System's cash balance in the amount of \$198,500,955 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 \$190,643,775.

## C. INVESTMENTS

All of the Retirement 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".

## FINANCIAL SECTION

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

The following chart represents the fair values of the investments of the Kentucky Teachers' Retirement System for June 30, 2015 and 2014.

#### Schedule of Investments Retirement Annuity Trust

	Fair Value June 30, 2015	Fair Value June 30, 2014
Money Market Fund*	\$ 614,434,346	\$ 787,253,524
STIFF (BNYM)	142,138	965,082
<b>Total Cash Equivalents</b>	<b>614,576,484</b>	<b>788,218,606</b>
U.S. Government	769,355,884	754,145,490
Agency Bonds	82,898,405	97,373,643
Mortgage Backed Securities	103,213,170	126,831,928
Asset Backed Securities	82,126,975	84,761,591
Commercial Mtg Backed Securities	118,318,341	149,223,291
Collateralized Mtg Obligations	12,884,110	18,382,246
Municipal Bonds	444,405,813	472,846,382
Corporate Bonds	1,417,905,508	1,625,812,498
<b>Total Fixed Income</b>	<b>3,031,108,206</b>	<b>3,329,377,069</b>
International Equity	3,964,258,297	3,868,325,879
U.S. Equity	7,199,533,066	7,398,068,417
<b>Total Equities</b>	<b>11,163,791,363</b>	<b>11,266,394,296</b>
Real Estate Equity	825,335,346	733,045,846
<b>Total Real Estate Equity</b>	<b>825,335,346</b>	<b>733,045,846</b>
Private Equity	636,890,428	457,408,594
Timberland	207,797,668	186,481,696
<b>Total Alternative Investments</b>	<b>844,688,096</b>	<b>643,890,290</b>
Opportunistic Credit	524,212,360	501,000,040
Corporate Bonds	308,659,155	336,434,902
Corporate Loans	463,525,551	295,017,173
International Bonds	89,500,325	100,725,256
PPIP		33,158
<b>Total Additional Categories</b>	<b>1,385,897,391</b>	<b>1,233,210,529</b>
<b>TOTAL INVESTMENTS</b>	<b>\$ 17,865,396,886</b>	<b>\$ 17,994,136,636</b>

\* Money Market Funds consist of 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, 2015	Fair Value June 30, 2014
Money Market Fund	\$ 36,640,065	\$ 112,361,997
STIFF (BNYM)	(1,028,219)	9,009
<b>Total Cash Equivalents</b>	<b>35,611,846</b>	<b>112,371,006</b>
Agency Bonds	1,000,830	12,505,055
Asset Backed Securities		704,344
Corporate Bonds	41,745,634	8,025,190
<b>Total Fixed Income</b>	<b>42,746,464</b>	<b>21,234,589</b>
Global Equities	355,702,555	300,857,011
<b>Total Equities</b>	<b>355,702,555</b>	<b>300,857,011</b>
Real Estate Equity	1,762,328	
<b>Total Real Estate Equity</b>	<b>1,762,328</b>	
Private Equity	11,698,357	4,251,239
<b>Total Alternative Investments</b>	<b>11,698,357</b>	<b>4,251,239</b>
Opportunistic Credit	43,821,956	5,421,045
Corporate Bonds	65,525,790	64,614,031
Corporate Loans	25,228,612	24,421,678
<b>Total Additional Categories</b>	<b>134,576,358</b>	<b>94,456,754</b>
<b>TOTAL INVESTMENTS</b>	<b>\$ 582,097,908</b>	<b>\$ 533,170,599</b>

**Custodial Credit Risk**

Custodial Credit Risk for an investment is the risk that, in the event of the failure of counterparty, the Retirement 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 Retirement 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 Retirement 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 KTRS under the terms of Master Repurchase Agreements with various brokers, the terms are dictated by KTRS. 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 KTRS' nominee name. This account is unique to KTRS. 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, 2015, cash collateral reinvestment securities acquired through securities lending for the retirement annuity trust fund by KTRS's custodian, who is also the lending agent/counterparty, amounted to \$498,859,702 related to \$489,589,262 securities lent consistent with the lending agreement with the custodian. (Please refer to a following section entitled Securities Lending.)

## FINANCIAL SECTION

*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 Retirement 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, 2015, the retirement annuity trust and health insurance trusts had the following investment fair values and weighted average maturities:

<u>Retirement Annuity Trust</u>			
<u>Investment Type</u>	<u>Fixed Income</u>	<u>Additional Categories</u>	<u>Average Maturity (years)</u>
U.S. Government	\$ 769,355,884	\$ 75,729	7.10
Agency	82,898,405		7.77
MBS	103,213,170		12.86
CMO	12,884,110		20.48
ABS	82,126,975		11.01
CMBS	118,318,341		20.85
Muni	444,405,813	42,038,499	12.81
Corporate Bonds	1,417,905,508	352,565,519	7.69
Corporate Loans		458,038,262	4.91
<b>TOTAL</b>	<b>\$ 3,031,108,206</b>	<b>\$ 852,718,009</b>	<b>8.54</b>

<u>Health Insurance Trust</u>			
<u>Investment Type</u>	<u>Fixed Income</u>	<u>Additional Categories</u>	<u>Average Maturity (years)</u>
Agency	\$ 1,000,830	\$	4.84
Corporate Bonds	41,745,634	65,525,790	4.97
Corporate Loans		22,228,612	4.96
<b>TOTAL</b>	<b>\$ 42,746,464</b>	<b>\$ 90,754,402</b>	<b>4.97</b>

In addition to the above securities, the Retirement 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 \$650,188,330 and had a weighted average maturity of thirty two (32) 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 Retirement 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

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

mortgage loans on single-family or multi-family residential properties. All of the mortgage-backed securities owned by the Retirement 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 System held \$103.2 million in mortgage-backed securities as of June 30, 2015.

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 System held \$12.9 million in collateralized mortgage obligations as of June 30, 2015.

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 \$82.1 million as of June 30, 2015.

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 Retirement System's commercial mortgage-backed securities investments consist of highly rated relatively senior tranches. The average maturity of the Retirement 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 System held \$118.3 million in commercial mortgage-backed securities investments as of June 30, 2015.



## FINANCIAL SECTION

*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 Retirement System's fixed income investment fair values (net of cash equivalents) according to credit ratings as of June 30, 2015:

<b>Retirement Annuity Trust</b>			
<b>Rating</b>	<b>Bonds &amp; Mortgages</b>	<b>Additional Categories</b>	<b>Total</b>
U.S. Government	\$ 769,355,884	\$ 75,729	\$ 769,431,613
AAA	326,392,237	10,918,140	337,310,377
AA	736,586,417	15,833,604	752,420,021
A	626,012,106	35,403,125	661,415,231
BBB	554,378,423	36,410,306	590,788,729
BB	11,343,807	228,929,279	240,273,086
B	4,220,000	323,979,214	328,199,214
CCC		17,069,370	17,069,370
Not Rated	2,819,332	184,099,242	186,918,574
<b>TOTAL</b>	<b>\$ 3,031,108,206</b>	<b>\$ 852,718,009</b>	<b>\$ 3,883,826,215</b>

<b>Health Insurance Trust</b>			
<b>Rating</b>	<b>Bonds &amp; Mortgages</b>	<b>Additional Categories</b>	<b>Total</b>
AAA	\$ 1,985,000	\$	\$ 1,985,000
AA	9,326,116		9,326,116
A	18,408,228	630,596	19,038,824
BBB	13,027,120	2,557,284	15,584,404
BB		40,453,593	40,453,593
B		41,166,610	41,166,611
CCC		1,311,011	1,311,011
Not Rated		4,635,308	4,635,308
<b>TOTAL</b>	<b>\$ 42,746,464</b>	<b>\$ 90,754,402</b>	<b>\$ 133,500,867</b>

Total fair value of the retirement annuity trust's fixed income portfolio was \$3,883,826,215 on June 30, 2015. The health insurance trust's fixed income portfolio was valued at \$133,500,867. 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 \$614,576,484 in short term investments through the Dreyfus Institutional Cash Advantage Fund. The health insurance trust held \$35,611,846 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."

KTRS 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, 2015, the Retirement System's exposure to foreign currency risk consisted of \$4,588,095,835 and \$208,404,434 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:

<b><u>Retirement Annuity Trust</u></b>		<b><u>Health Insurance Trust</u></b>	
<b>Commingled Funds</b>		<b>Commingled Funds</b>	
Babson Capital European Loan Fd	\$ 91,602,618	Medical Ins. Black Rock Fund B	\$ 178,846,093
Baillie Gifford Intrntl EAFE	843,978,097	<b>Alternative Funds</b>	
Baring All Country World ex US	526,024,693	Medical Ins. Carlyle Europe IV	1,497,542
Black Rock ACWI EX-US IMI	466,047,348	Medical Ins. KKR European IV	680,350
Rogge Global Int'l Fixed Income	70,524,333	<b>Bonds (Fixed Income)</b>	6,992,500
UBS All Country World ex US	665,846,453	<b>Additional Categories (Fixed Income)</b>	15,859,421
<b>Alternative Funds</b>		<b>Additional Categories (Opportunistic)</b>	4,528,528
Carlyle Europe Partners IV, L.P.	7,487,702	<hr/>	
KKR & Co European Fund III	50,737,741	<b>TOTAL</b>	<b>\$ 208,404,434</b>
KKR & European Fund IV	3,401,749	<hr/>	
Oaktree European Principal III	18,061,782		
<b>ADRs (Equities)</b>	463,191,410		
<b>Cross-Listed Equities</b>	924,132,430		
<b>Bonds (Fixed Income)</b>	279,936,698		
<b>Additional Categories (Fixed Income)</b>	96,367,998		
<b>Additional Categories (Opportunistic)</b>	80,754,783		
<hr/>			
<b>TOTAL</b>	<b>\$ 4,588,095,835</b>		
<hr/>			

## FINANCIAL SECTION

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

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

Retirement Annuity Trust		Health Insurance Trust	
Currency	Fair Value	Currency	Fair Value
Argentine Peso	\$ 9,573,070	Australian Dollar	\$ 8,570,261
Australian Dollar	125,655,878	Euro	54,590,346
Euro	1,439,668,665	Bahamian Dollar	5,175
Bermudian Dollar	104,762,665	Bermudian Dollar	1,436,743
Brazilian Real	48,940,406	Brazilian Real	2,614,135
Bulgarian Lev	417,919	Canadian Dollar	23,816,243
Canadian Dollar	351,136,040	Cayman Islands Dollar	845,912
Cayman Islands Dollar	82,745,763	Chilean Peso	454,236
Chilean Peso	4,851,380	Chinese Yuan	175,523
Chinese Yuan	184,096,216	Colombian Peso	195,977
Colombian Peso	524,833	Netherlands Antillean Guilder	301,123
Netherlands Antillean Guilder	55,086,040	Czech Crown	62,819
Czech Crown	240,203	Danish Krone	2,062,546
Danish Krone	60,651,532	Egyptian Pound	121,669
Dominican Peso	154,741	British Pound Sterling	26,776,715
Egyptian Pound	313,239	Hong Kong Dollar	13,084,319
British Pound Sterling	596,398,991	Hungarian Forint	83,044
Hong Kong Dollar	119,845,641	Indian Rupee	3,020,821
Hungarian Forint	196,999	Indonesian Rupiah	893,155
Indian Rupee	91,000,474	Israeli New Shekel	785,964
Indonesian Rupiah	6,055,294	Japanese Yen	29,148,726
Israeli New Shekel	36,678,230	Jersey Pound	201,193
Japanese Yen	497,672,214	South Korean Won	5,868,822
Jersey Pound	95,439,091	Liberian Dollar	343,266
Jordanian Dinar	6,038,950	Malaysian Ringgit	1,209,051
Kazakhstani Tenge	190,519	Mexican Peso	1,611,415
South Korean Won	49,325,951	New Zealand Dollar	284,680
Liberian Dollar	2,955,215	Norwegian Krone	955,333
Malaysian Ringgit	3,703,749	Peruvian Nuevo Sol	20,442
Mexican Peso	52,077,690	Philippine Peso	508,438
New Zealand Dollar	1,061,394	Polish Zloty	526,664
Norwegian Krone	23,573,778	Riyal	321,104
Panamanian Balboa	14,765,490	Russian Ruble	750,276
Peruvian Nuevo Sol	5,940,600	Singapore Dollar	2,195,999
Philippine Peso	1,411,230	South African Rand	2,863,000
Polish Zloty	3,716,872	Swedish Krona	3,889,774
Riyal	897,328	Swiss Franc	11,035,398
Romanian Leu	169,115	Taiwan Dollar	5,021,704
Russian Ruble	27,135,863	Thai Baht	939,983
Singapore Dollar	33,124,684	Turkish Lira	542,881
South African Rand	31,513,022	UAE Dirham	269,555
Swedish Krona	131,945,244	Various	4
Swiss Franc	186,213,918		
Taiwan Dollar	66,602,279		
Thai Baht	5,321,137		
Turkish Lira	16,351,343		
UAE Dirham	9,980,231		
Various	1,974,709		
<b>TOTAL</b>	<b>\$ 4,588,095,835</b>	<b>TOTAL</b>	<b>\$ 208,404,434</b>

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

The majority of foreign investments are held in commingled funds managed by Babson Capital Management, Rogge Global Partners, 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 \$463,191,410 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 \$924,132,430, 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 opportunities. Foreign holdings, including investment receivables/payables, that were not readily 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).

**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 Retirement System. The Retirement 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 Retirement 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 Retirement 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, 2015, 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, 2015 and 2014:

<u>Item</u>	<u>2015 Earnings</u>	<u>2014 Earnings</u>
Gross Earnings (Interest and Fees)	\$ 338,644	\$ 285,931
Gross Borrower Rebates	2,323,231	2,422,568
Bank Fees	(798,511)	(812,495)
<b>Net Earnings</b>	<b><u>\$ 1,863,364</u></b>	<b><u>\$ 1,896,004</u></b>

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 Retirement System cannot pledge or sell collateral securities received unless the borrower defaults. The lending agent (Bank of New York Mellon) also indemnifies the Retirement System from any financial loss associated with a borrower's default and collateral inadequacy.

As of June 30, 2015, 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 Retirement System minimizes interest rate risk by limiting the term of cash collateral investments to several days.

## FINANCIAL SECTION

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

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, 2015:

Type of Securities Lent	Fair Value	Cash & Non-Cash Collateral Value Received
Fixed Income	\$ 340,071,345	\$ 347,416,026
Equities	149,517,917	151,443,676
<b>TOTAL</b>	<b>\$ 489,589,262</b>	<b>\$ 498,859,702</b>

### **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:

<b>Annual Rate of Return Net of Investment Expense</b>		
	<b><u>2015</u></b>	<b><u>2014</u></b>
Retirement Annuity Trust	4.96 %	17.95 %
Health Insurance Trust	1.38 %	15.38 %

### **Note 6: Retirement Plan for Employees of the Retirement System**

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

The Retirement System's annual required contributions for KTRS employee members for the fiscal years 2015, 2014 and 2013 were \$767,958, \$656,152 and \$574,432, respectively. KTRS contributed one hundred percent (100%) of the required contribution each year.

All other KTRS 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. KTRS'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 (5%) of their annual creditable compensation and members who joined on or after July 1, 2008 contribute an additional one percent (1%). As the employer, KTRS 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 2015, 2014 and 2013 were 38.41 percent, 26.79 percent and 23.61 percent and KTRS's annual required contributions to KERS were \$552,133, \$365,610, and \$331,989, respectively. KTRS contributed one hundred percent (100%) 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

KTRS 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 Retirement System's Board of Trustees determined that the cost of providing the necessary services to assure the Retirement System of continuing compliance with these laws and regulations was not economically feasible due to the limited participation in the program by KTRS'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, 2015, the ten 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), KTRS 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 Retirement System employed by the employer, whose benefits under the Retirement 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 KTRS for payment of the regular benefits provided by the Retirement System.

### D. JUNITA LOSEY SCHOLARSHIP BEQUEST

Junita Losey, a retired teacher, designated KTRS as a residuary beneficiary of her estate and expressed a desire that KTRS 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 KTRS. The scholarship bequest has at all times been segregated from funds that are maintained by KTRS for payment of the regular benefits provided by the Retirement System. The Scholarship Committee of the Retirement System's Board of Trustees meets each December to consider scholarship standards and administration of the scholarship bequest.

## Note 8: Medical Insurance Plan & Postemployment Benefits

### A. PLAN DESCRIPTION

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

The KTRS 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 KTRS medical plan offers coverage to members under the age of 65 through the Kentucky Employees Health Plan administered by the Kentucky Department of Employee Insurance. KTRS retired members are given a supplement to be used for payment



## Note 8: Medical Insurance Plan & Postemployment Benefits continued . . .

of their health insurance premium. The amount of the member's supplement is based on a contribution supplement table approved by the KTRS Board of Trustees. The retired member pays premiums in excess of the monthly supplement. 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 KTRS Medicare Eligible Health Plan.

At June 30, 2015, KTRS insurance covered 38,075 retirees and 7,129 dependents. There are 208 participating employers and 72,246 active members contributing to the medical plan.

## B. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Basis of Accounting

The KTRS medical plan financial statements are prepared using the accrual basis of accounting. Member contributions and employer matching are recognized in the fiscal year due. Healthcare premiums charged to retired members are recognized when due and any premiums collected in advance are recognized as a liability.

### Method Used to Value Investments

Since the investments are all short-term investments they are reported at cost, which approximates fair value.

## C. CONTRIBUTIONS

The postemployment medical benefit provided by KTRS is financed on a pre-funded basis beginning July 1, 2010 with the implementation of the "Shared Responsibility" legislation. In order to fund medical benefits, active member contributions are matched by the state at .75% of members' gross salaries. Members contributed 1.75% of gross payroll to the KTRS medical plan and beginning July 1, 2010 the contribution increased incrementally to 3.75% on July 1, 2015 under the Shared Responsibility Plan. Also, the premiums collected from retirees and investment income contributes to funding the plan. The KTRS medical plan received bond proceeds of \$152,400,000 in fiscal year 2013 in funding from the state, which was contributed to the insurance trust fund. This transitional funding and increased contributions are for the 2013 and 2014 fiscal years.

## D. FUNDED STATUS AND FUNDING PROGRESS

The funded status of the Medical Insurance Plan as of the most recent actuarial valuation date is as follows:

Schedule of Funding Progress (In Thousands)						
Valuation Year Ending June 30	Actuarial Value of Assets  A	Actuarial Accrued Liabilities  B	Unfunded Actuarial Accrued Liabilities (UAAL)  (B-A)	Funded Ratio  (A/B)	Covered Payroll  C	UAAL as a % of Covered Payroll  [B-A/C]
2015	\$ 637,839	\$ 3,525,584	\$ 2,887,745	18.1 %	\$ 3,515,113	82.2 %

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trend. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future. The schedules of funding progress, presented as required supplementary information following the notes to the financial statements, present multiyear trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

The accompanying schedule of employer contributions present trend information about the amounts contributed to the plan by employers in comparison to the Annual Required Contribution, an amount that is actuarially determined in accordance with the parameters of GASB Statement 43. The Annual Required Contribution represents a level of funding that, if paid on an ongoing basis, is projected to cover normal cost for each year and amortize any unfunded actuarial liabilities (or funding excess) over a period not to exceed thirty years.

**Note 8: Medical Insurance Plan & Postemployment Benefits continued . . .**

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Significant actuarial methodologies and assumptions employed as of the June 30, 2015 valuation date include the following:

<b>Actuarial Cost Method</b>	<b>Actuarial Value of Assets</b>	<b>Assumed Inflation Rate</b>	<b>Investment Rate of Return</b>	<b>Amortization Method</b>	<b>Remaining Amortization Period</b>
Entry Age	Fair value of assets	3.50%	8.00%	Level percent of pay, open	30 years
<b>Medical Trend Assumption</b>				<u>Pre-Medicare</u>	<u>Medicare</u>
Fiscal Year Ending 6/30/2016				7.50%	5.50%
Fiscal Year Ending 6/30/2017				6.75%	5.25%
Ultimate Trend Rate				5.00%	5.00%
Year of Ultimate Trend Rate				2020	2017

**Note 9: Life Insurance Plan****A. PLAN DESCRIPTION**

KTRS 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 208 participating employers. The benefit is \$5,000 for members who are retired for service or disability, and \$2,000 for active contributing members.

**B. SUMMARY OF SIGNIFICANT POLICIES****Basis of Accounting**

The Life Insurance Plan financial statements are prepared using the accrual basis of accounting. Employer contributions are recognized in the fiscal year due.

**Method Used to Value Investments**

Life Insurance Plan investments are reported at fair value. The short-term securities are carried at cost, which approximates fair value. Fixed income is generally valued based on published market prices and quotations from national security exchanges and securities pricing services.

**C. CONTRIBUTIONS**

To finance the life insurance benefit a portion of the employer contribution rate is directed to the plan as recommended by the KTRS's actuary. The contribution rate of active members' payroll recommended by the actuary was .03% for fiscal years 2015 and 2014.

## FINANCIAL SECTION

Note 9: Life Insurance Plan continued . . .

### D. FUNDED STATUS AND FUNDING PROGRESS

The funded status of the Life Insurance Plan as of the most recent actuarial valuation date is as follows:

Schedule of Funding Progress (In Thousands)						
Valuation Year June 30	Actuarial Value of Assets	Actuarial Accrued Liabilities	Unfunded Actuarial Accrued Liabilities (UAAL)	Funded Ratio	Covered Payroll	UAAL as a % of Covered Payroll
	A	B	(B-A)	(A/B)	C	[B-A/C]
2015	\$ 97,186	\$ 98,739	\$ 1,553	98.4%	\$ 3,515,113	0.04%

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. The required supplementary schedules following the notes to the financial section contain more actuarial information. Significant actuarial methodologies and assumptions employed as of the June 30, 2015 valuation date include the following:

Actuarial Cost Method	Actuarial Value of Assets	Assumed Inflation Rate	Investment Rate of Return	Projected Salary Increases	Amortization Method	Remaining Amortization Period
Entry Age	Fair value of assets	3.50%	7.50%	4.00%	Level percent of pay, open	30 years

### REQUIRED SUPPLEMENTARY INFORMATION

#### Schedule of Changes in the Net Pension Liability (In Thousands)

Change in the Total Pension Liability	2015	2014
<b>Total pension liability</b>		
Service Cost	\$ 1,015,080	\$ 1,002,338
Interest	2,029,372	1,956,610
Difference between expected and actual experience	1,511,960	
Changes of assumptions		(353,043)
Benefit payments	(1,741,456)	(1,654,376)
Refunds of contributions	(23,033)	(25,462)
<b>Net change in total pension liability</b>	<b>2,791,923</b>	<b>926,067</b>
<b>Total pension liability - beginning</b>	<b>39,684,776</b>	<b>38,758,709</b>
<b>Total pension liability - ending (a)</b>	<b>\$ 42,476,699</b>	<b>\$ 39,684,776</b>
<b>Plan Net Position</b>		
Contributions - State of Kentucky	\$ 480,073	\$ 483,330
Contributions - Other Employers	79,506	79,996
Contributions - Members	308,160	304,982
Net investment income	862,179	2,803,248
Benefit payments	(1,741,456)	(1,654,375)
Administrative expense	(8,869)	(7,956)
Refunds of contributions	(23,033)	(25,462)
<b>Net change in plan net position</b>	<b>(43,440)</b>	<b>1,983,763</b>
<b>Plan net position - beginning</b>	<b>18,092,571</b>	<b>16,108,808</b>
<b>Plan net position - ending (b)</b>	<b>18,049,131</b>	<b>18,092,571</b>
<b>Net pension liability - ending (a) - (b)</b>	<b>\$ 24,427,568</b>	<b>\$ 21,592,205</b>

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 KTRS'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 Retirement System.

**Changes of Benefit Terms.** None

**Changes of assumptions.** In the 2011 valuation and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables rather than the 1994 Group Annuity Mortality Table, which was used prior to 2011. In the 2011 valuation, rates of withdrawal, retirement, disability and mortality were adjusted to more closely reflect actual experience. In the 2011 valuation, the Board adopted an interest smoothing methodology to calculate liabilities for purposes of determining the actuarially determined contributions.

#### Schedule of Net Pension Liability (In Thousands)

	2015	2014
Total pension liability	\$ 42,476,699	\$ 39,684,776
Plan net position	18,049,131	18,092,571
Net pension liability	<u>\$ 24,427,568</u>	<u>\$ 21,592,205</u>
Ratio of plan net position to total pension liability	42.49%	45.59%
Covered-employee payroll	\$ 3,455,008	\$ 3,317,422*
Net pension liability as a percentage of covered-employee payroll	707.02%	650.87%

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

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

#### Schedule of Employer Contributions (In Thousands)

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
2006	\$ 2,859,477	\$ 406,107	\$ 406,107	\$	14.20 %
2007	2,975,289	434,890	494,565	(59,675)	14.62
2008	3,190,332	466,248	563,789	(97,541)	14.61
2009	3,253,077	442,550	600,283	(157,733)	13.60
2010	3,321,614	479,805	633,938	(154,133)	14.44
2011	3,283,749	1,037,936	678,741	359,195	31.61
2012	3,310,176	557,340	757,822	(200,482)	16.84
2013	3,310,710	568,233	802,985	(234,752)	17.16
2014 *	3,317,422	563,326	823,446	(260,120)	16.98
2015	3,455,008	559,579	913,654	(354,075)	16.20

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

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	Amortization Period	Remaining Amortization Period	Asset Valuation Method	Inflation	Salary Increase	Ultimate Investment Rate of Return*
Entry Age	Level percentage of payroll, open	30 Years	5-year smoothed market	3.50%	4.00 to 8.20%, including inflation	7.50 percent, net of pension plan investment expense, including inflation

\*The actuarially determined contribution rates are determined using the interest smoothing methodology adopted by the Board.

### Schedule of Investment Returns

	2015	2014
Annual money weighted rate of return, net of investment expense	4.96%	17.95%

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

### Medical Insurance Plan – Schedule of Funding Progress

(In Millions)

Valuation Year June 30	Actuarial Value of Assets A	Actuarial Accrued Liabilities (AAL) B	Unfunded Actuarial Accrued Liabilities (UAAL) (B-A)	Funded Ratio (A/B)	Covered Payroll C	UAAL as a % of Covered Payroll [(B-A)/C]
2009	\$ 229.1	\$ 6,454.7	\$ 6,225.6	3.5 %	\$ 3,253.1	191.4 %
2010	241.2	3,206.8	2,965.6	7.5	3,321.6	89.3
2011	294.8	3,423.1	3,128.3	8.6	3,451.8	90.6
2012	338.7	3,594.5	3,255.8	9.4	3,479.6	93.6
2013	412.2	3,521.1	3,108.9	11.7	3,480.0	89.3
2014	508.9	3,194.7	2,685.8	15.9	3,486.3	77.0
2015	637.8	3,525.6	2,887.8	18.1	3,515.1	82.2

The amounts reported in this schedule of funding progress do not include assets or liabilities for the defined benefit or life insurance plans, nor are the assets and liabilities of the tax-sheltered annuity plan included.

Required Supplementary Information continued . . .

## Medical Insurance Plan – Schedule of Employer Contributions

Valuation Year June 30	Annual Required Contribution (ARC) (A)	Actual Employer Contribution (B)	Retiree Drug Subsidy Contribution (C)	Total Contribution (B) + (C)	Percentage of ARC Contributed [(B) + (C)]/(A)
2009	\$ 467,312,904	\$ 164,480,119	\$ 13,611,748	\$ 178,091,867	38.1 %
2010	457,054,117	158,765,496	14,614,285	173,379,781	37.9
2011	477,723,070	188,453,929	280,585	188,734,514	39.5
2012	470,217,067	177,450,206	297,639	177,747,845	37.8
2013	186,725,823	166,611,420		166,611,420	89.2
2014	159,583,400	162,568,395		162,568,395	101.9
2015	106,606,132	168,084,353		168,084,353	157.7

## Life Insurance Plan – Schedule of Funding Progress

(In Thousands)

Valuation Year June 30	Actuarial Value of Assets A	Actuarial Accrued Liabilities (AAL) B	Unfunded AAL (UAAL) (B-A)	Funded Ratio (A/B)	Covered Payroll C	UAAL as a % of Covered Payroll [(B-A)/C]
2009	\$ 84,703	\$ 90,334	\$ 5,631	93.8 %	\$ 3,253,077	0.17 %
2010	87,905	92,091	4,186	95.5	3,321,614	0.13
2011	88,527	88,088	(439)	100.5	3,451,756	(0.01)
2012	92,241	91,398	(843)	100.9	3,479,567	(0.02)
2013	94,863	94,325	(538)	100.6	3,480,066	(0.02)
2014	96,130	97,354	1,224	98.7	3,486,327	0.04
2015	97,186	98,739	1,553	98.4	3,515,113	0.04

The amounts reported in this schedule of funding progress do not include assets or liabilities for the defined benefit or medical insurance plans, nor are the assets and liabilities of the tax-sheltered annuity plan included.

## Life Insurance Plan – Schedule of Employer Contributions

Valuation Year June 30	Annual Required Contribution (ARC) (A)	Actual Employer Contribution (B)	Percentage of ARC Contributed (B) / (A)
2009	\$ 1,498,076	\$ 5,455,473	364.2 %
2010	1,992,969	1,966,826	98.7
2011	1,725,878	1,668,822	96.7
2012	1,732,831	1,684,711	97.2
2013	1,739,908	1,680,495	96.6
2014	1,044,959	1,006,091	96.3
2015	1,050,216	1,019,519	97.1

ADDITIONAL SUPPORTING SCHEDULES

Schedule of Administrative Expenses  
Year Ended June 30, 2015

<u>Expense</u>	<u>Amount</u>
Salaries	\$ 6,207,452
Other Personnel Costs	891,855
Professional Services and Contracts	459,012
Utilities	93,144
Rentals	25,546
Maintenance	150,180
Postage & Related Services	417,187
Printing	175,972
Insurance	172,849
Miscellaneous Services	136,523
Telecommunications	22,875
Computer Services	155,391
Supplies	56,168
Depreciation	1,093,167
Travel	45,910
Dues & Subscriptions	43,337
Miscellaneous Commodities	25,169
Furniture, Fixtures, & Equipment not Capitalized	190,969
Compensated Absences	77,412
<b>Total Administrative Expenses</b>	<b>\$ 10,440,118</b>

Schedule of Professional Services and Contracts  
Year Ended June 30, 2015

<u>Professional</u>	<u>Nature of Service</u>	<u>Amount</u>
Cavanaugh Macdonald Consulting	Actuarial Services	\$ 207,431
Auditor of Public Accounts	Auditing Services	70,005
International Claim Specialist	Investigative Services	960
Ice Miller	Attorney Services	45,191
Reinhart, Boerner VanDeuren	Attorney Services	1,384
Stoll, Keenon, and Ogden	Attorney Services	14,041
Peritus	Communications	120,000
<b>Total Professional Services and Contracts</b>		<b>\$ 459,012</b>

See accompanying independent auditor's report.



Additional Supporting Schedules continued . . .

**Schedule of Contracted Investment Management Expenses**  
**Year Ended June 30, 2015**

	<u>Pension</u>	<u>Medical</u>	<u>Total</u>
<b>Equity Managers</b>			
Baillie Gifford	\$ 3,083,458	\$	\$ 3,083,458
Baring Asset Management, Inc.	2,463,293		2,463,293
Black Rock	235,529	187,274	422,803
GE Asset Management	800,000		800,000
Todd-Veredus Asset Management LLC	1,377,639		1,377,639
UBS Global Asset Management	4,529,001		4,529,001
Wellington Management Company	3,107,897		3,107,897
<b>Total Equity Managers</b>	15,596,817	187,274	15,784,091
<b>Fixed Income Managers</b>			
Fort Washington Investment Advisors	157,680		157,680
Galliard Capital Management	245,252		245,252
<b>Total Fixed Income Managers</b>	402,932		402,932
<b>Real Estate</b>	5,862,636	264,176	6,126,812
<b>Additional Categories</b>	8,043,331	518,978	8,562,309
<b>Alternative Investments</b>	11,478,820	299,357	11,778,177
<b>Custodian</b>			
The Bank of New York Mellon	335,800	8,263	344,063
<b>Consultant</b>			
Hewitt Ennis Knupp, Inc.	358,850		358,850
Bevis Longstreth	55,262		55,262
George Philip	34,134		34,134
<b>Total Consultants</b>	448,246		448,246
<b>Legal &amp; Research</b>			
Ice Miller	84,131		84,131
<b>Total Legal &amp; Research</b>	84,131		84,131
<b>Other</b>			
Administrative and Operational (includes Personnel)	2,473,848	52,536	2,526,384
<b>Total Contracted Investment Management Expenses</b>	<u>\$ 44,726,561</u>	<u>\$ 1,330,584</u>	<u>\$ 46,057,145</u>

See accompanying independent auditor's report.

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Kentucky Teachers' Retirement System

2015



Investment  
Section

### REPORT ON INVESTMENT ACTIVITY

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

**Mr. Tom Siderewicz, CFA**  
Chief Investment Officer

**Mr. Philip L. Webb**  
Director of Investment Accounting

### INVESTMENT COMMITTEE

**Mr. Ronald L. Sanders**  
Chairperson

**Mr. Arthur Green**  
Vice-Chairperson

**Mr. Hollis Gritton**  
Member

**Dr. Jay Morgan**  
Member

**Ms. Ali Wright**  
Member

**Mr. Bevis Longstreth**  
Investment Advisor to KTRS Investment Committee

**Mr. George Philip**  
Investment Advisor to KTRS Investment Committee

### EXECUTIVE INVESTMENT STAFF

**Mr. Gary L. Harbin, CPA**  
Executive Secretary

**Mr. Tom Siderewicz, CFA**  
Chief Investment Officer



December 1, 2015

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

The KTRS investment program produced a total return of 5.1% in the twelve-month period ended June 30, 2015. This return exceeded that of the policy benchmark by 1.7 percentage points and ranked in the top 6% of returns in a peer group universe of 78 public pensions with over \$1 billion in assets. This strong relative performance was driven by favorable investment manager returns relative to their given benchmarks for both internally and externally managed portfolios. Favorable asset allocation strategy and implementation, in addition to the strong manager performance, propelled KTRS to near the top of its peer universe rankings.

Over the past fiscal year, the global economy was characterized by ongoing central bank easing as it became clear that China's economy was experiencing a slowdown and the Eurozone continued to struggle with slow growth and high unemployment. Here in the U.S., the economy showed relatively steady progress as inflation-adjusted gross domestic product grew by 2.7% and the unemployment rate fell from 6.1% to 5.3%.

Equities, which represented 62.8% of the system's assets as of June 30, 2015, returned 5.7%. Domestic equities returned 9.0% versus 7.3% for the S&P 1500 Index. International equities returned -1.9% versus -4.9% for the MSCI All Country (ex-U.S.) Index. Fixed income, which composed 17.4% of assets, returned 2.1% versus 1.7% for the Barclays Government/Credit Index.

The system's other asset classes, including real estate, private equity, and alternative credit strategies, provided solid returns over the fiscal year. Collectively, these strategies represented 17.2% of total assets as of June 30.

Over the trailing five-year period, KTRS' investment returns rank in the top 9% of the pension fund universe cited earlier. We believe the consistently strong relative returns achieved over the past several years have been the result of the successful implementation of a sound investment philosophy and a high degree of professionalism.

The retirement annuity trust fund's returns were calculated by the Segal Rogers Casey performance reporting system using a time-weighted rate of return calculation based upon market values.

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, CFA, CAIA  
Partner

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Investment advice and consulting services provided by Aon Hewitt Investment Consulting, Inc., an Aon Company

# RETIREMENT ANNUITY TRUST FUND

## INVESTMENT POLICY SUMMARY

The KTRS 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 KTRS.

## INVESTMENT OBJECTIVES

KTRS 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, KTRS 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 KTRS investment program faces various risks; however, the primary risk to KTRS 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 KTRS Investment Committee adopts, and regularly reviews, detailed investment strategies for implementation of the investment policy.

## ASSET ALLOCATION

Operating within relevant regulatory limitations, the retirement system's investment consultant, on an annual basis, presents to the Investment Committee for approval target percentages and ranges for the retirement 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 retirement 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 retirement system's asset allocation by fair value as of June 30, 2015, and June 30, 2014, as well as the target and strategic range for each asset class for fiscal year 2015.

Retirement Annuity Trust

	<u>June 30, 2015*</u>	<u>%</u>	<u>June 30, 2014**</u>	<u>%</u>
Cash Equivalents***	\$ 477,398,294	2.6	\$ 420,338,047	2.3
Fixed Income	3,103,821,351	17.4	3,594,965,963	19.9
Domestic Equities	7,798,497,485	43.6	7,982,520,773	44.3
International Equities	3,439,336,257	19.2	3,411,422,169	18.9
Real Estate	825,335,346	4.6	733,045,846	4.1
Private Equity	636,890,428	3.6	457,408,593	2.6
Timberland	207,797,668	1.1	186,481,696	1.0
Additional Categories	1,404,919,549	7.9	1,248,651,062	6.9
<b>TOTALS</b>	<b>\$ 17,893,996,378</b>	<b>100.0</b>	<b>\$ 18,034,834,149</b>	<b>100.0</b>

\* Includes Life Insurance Trust values of \$87,963,949, Tax Shelter Annuity value of \$363,978, and 401(h) value of \$29,150,708.

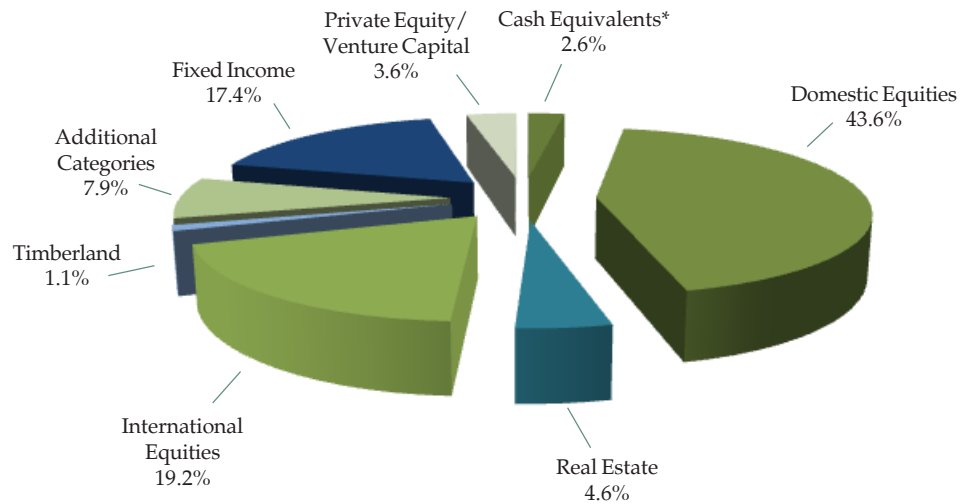
\*\* Includes Life Insurance Trust values of \$89,250,576, Tax Shelter Annuity value of \$377,268, and 401(h) value of \$41,237,374.

\*\*\* 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.

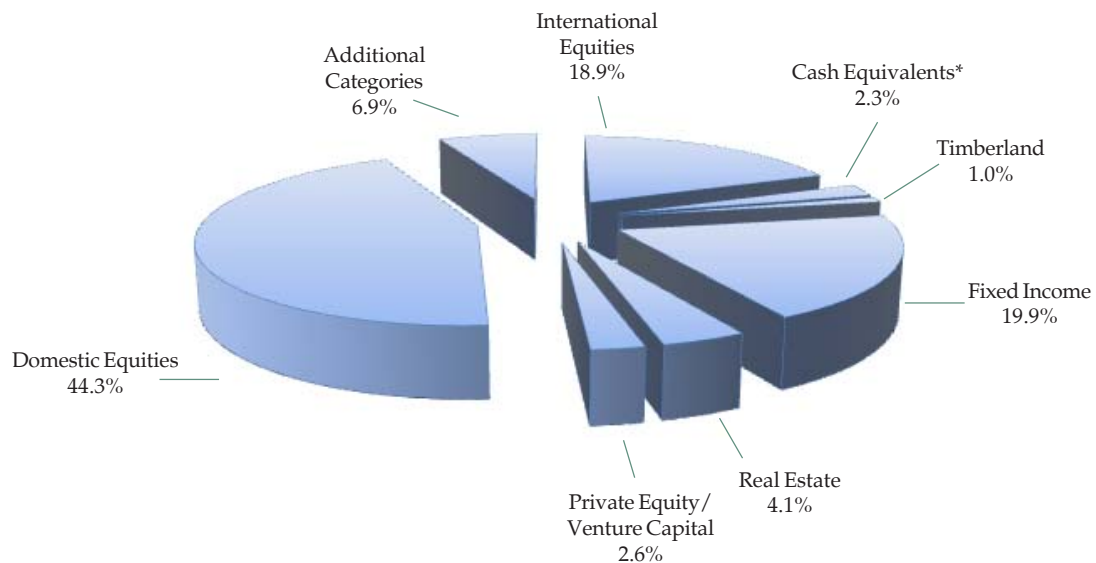


## Distribution of Investments Retirement Annuity Trust\*\* Fair Values

June 30, 2015



June 30, 2014



\* 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)	6/30/2015 (Mkt)**
Cash		1 - 3%	2.0%	2.6%
Fixed Income		14 - 20	17.0	17.4
Government/Agency/Other	Unlimited			9.5
Corporate	35%			7.9
Equity	65%	58 - 65	62.0	62.8
Domestic Large Cap		34 - 42	38.0	37.3
Domestic Mid Cap		1 - 5	3.0	3.9
Domestic Small Cap		1 - 3	2.0	2.4
International***	30%	16 - 22	19.0	19.2
Real Estate	10%	3 - 7	5.0	4.6
Alternative Investments*	10%	2 - 8	5.0	4.7
Additional Categories	15%	6 - 12	9.0	7.9
<b>TOTAL</b>			<b>100.0%</b>	<b>100.0%</b>

\* 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 6/30/15, 19.2% of Total International Equities was invested in Emerging Markets.

## PORTFOLIO RETURNS

For the fiscal year, the retirement annuity trust fund's portfolio generated a total return of 5.1%, exceeding the policy benchmark return of 3.4%. Domestic equities returned 9.0% versus 7.3% for the Standard & Poor's 1500 Index, while international equities returned -1.9% versus -4.9% for the MSCI All Country World (Ex-US) Index. Fixed income investments outperformed, returning 2.1% versus 1.7% 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, 2015. The retirement annuity trust fund's returns were generated by the Segal Rogers Casey performance reporting system using a time-weighted rate of return calculation based upon market values.

## Portfolio Returns continued ...

	<u>1 Yr<sup>(2)</sup></u>	<u>3 Yr<sup>(2)</sup></u>	<u>5 Yr<sup>(2)</sup></u>	<u>10 Yr<sup>(2)</sup></u>	<u>20 Yr<sup>(2)</sup></u>
<b>Total Fund</b>					
KTRS	5.1	12.3	12.0	7.0	7.6
Policy Index <sup>(1)</sup>	3.4	11.1	11.3	-	-
<b>Equities</b>					
Domestic Equities	9.0	19.1	18.1	8.4	9.5
S & P Blended Index <sup>(3)</sup>	7.3	17.5	17.4	8.1	9.0
International Equities <sup>(4)</sup>	-1.9	11.4	9.8	-	-
MSCI AC World (Ex US)	-4.9	9.9	8.2	-	-
Total Equities	5.7	16.8	15.9	7.5	9.0
<b>Fixed Income</b>					
Total Fixed Income	2.1	2.5	4.4	5.3	6.1
Barclays Govt/Credit Index	1.7	1.8	3.5	4.4	5.7
<b>Real Estate</b>					
Non-Core Real Estate	23.0	24.8	-	-	-
NCREIF Index	13.0	11.6	-	-	-
Core Real Estate	14.2	12.5	14.5	-	-
NCREIF ODCE	14.4	13.1	14.4	-	-
Triple Net Lease Real Estate	7.9	7.6	7.6	8.4	8.9
CPI plus 2%	2.2	3.3	3.9	4.1	4.3
<b>Alternative Investments</b>					
Private Equity <sup>(5)</sup>	11.7	12.9	12.8	-	-
Timberland	15.6	7.2	6.3	-	-
NCREIF Timberland Index	10.0	9.8	6.1	-	-
<b>Cash</b>					
Cash (Unallocated)	0.1	0.1	0.1	1.8	2.9
90 Day Treasury Bill	0.0	0.1	0.1	1.4	2.5
<b>Additional Categories</b>					
<b>High Yield</b>					
High Yield Bond Fund	0.6	6.7	8.6	-	-
B of A Merrill Lynch	-0.6	6.8	8.4	-	-
High Yield Master II					
<b>Alternative Credit</b>					
KTRS Credit Fund	-1.0	11.3	-	-	-
Special Situations Fund	2.2	9.4	-	-	-
Oaktree Opportunities Fund	-1.0	-	-	-	-
AG Select Partners Adv Fund	-3.3	-	-	-	-
B of A Merrill Lynch	-0.6	6.8	-	-	-
High Yield Master II					
Shenkman Capital Mgmt	1.5				
Highbridge Pr Str III	11.1	-	-	-	-
Golub Pearls 11	6.2	-	-	-	-
Oaktree Eur Dislocation Fund	7.5	-	-	-	-
Marathon Eur Cr Opp Fund	5.4	-	-	-	-
S & P LSTA Leverage Loan Index	1.8	-	-	-	-
Babson Capital Eur Loan Fund	-	-	-	-	-
CS Institutional WELLI, USD Hedged	-	-	-	-	-
<b>Non-US Dollar Fixed Income</b>					
Rogge Global Intl Fixed Income	-10.9	-	-	-	-
Barclays Global Aggregate ex	-10.7	-	-	-	-
USD 25% EUR 25% JPY Index					

Footnotes on page 65

- (1) Prior to July 1, 2008, KTRS did not benchmark overall fund performance. Effective July 1, 2008, 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.
- (2) Annualized
- (3) Total Domestic Equity is benchmarked to a S&P Blended Index. Total domestic equity was benchmarked to the S&P 500 through the fiscal year ending 6/30/2007. As of 7/1 2007, domestic equity is benchmarked to the S&P 1500 Index since the System's domestic stock mix is most comparable to this index.
- (4) As of 06/30/15 19.2% of Total International Equities were invested in emerging markets.
- (5) For a period of five years private equity investments will be benchmarked against their own returns. The primary reason for this is that these investments have a minimum investment horizon of ten years and there is no market benchmark that would be expected to track these types of assets in their early years. Beginning five years after the first capital call, investments in this class shall be benchmarked versus the S & P 500 plus 3%, which is the System's long-term expected return for this asset class.

### SCHEDULE OF INVESTMENT RETURNS - RETIREMENT ANNUITY TRUST

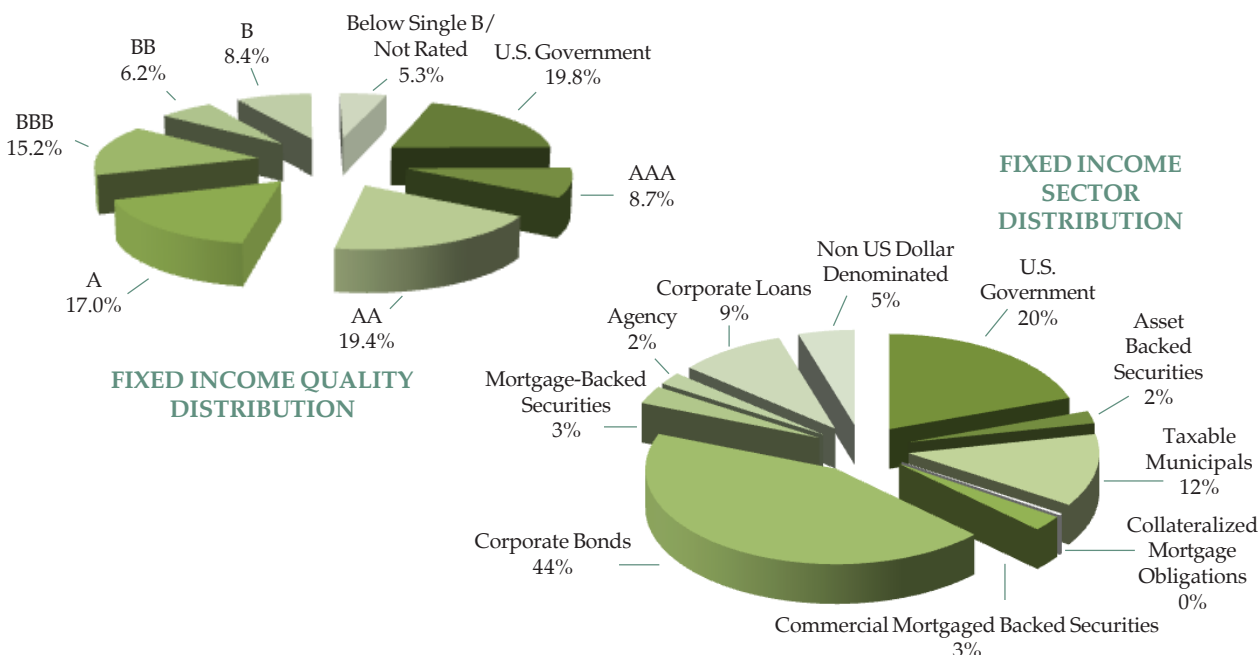
2015	Annual Rate of Return Net of Investment Expense	4.96%
2014	Annual Rate of Return Net of Investment Expense	17.95%

### FIXED INCOME INVESTMENTS

As of June 30, 2015, the retirement annuity trust fund had approximately \$3.1 billion, 17.4% 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, 2015.

In addition, the retirement annuity trust fund had \$1.4 Billion, 7.9% 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 a high yield bond portfolio, an international fixed income portfolio, 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 bond, 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 bond, international fixed income, and the syndicated bank loan portfolios held under "additional categories of investments".



### FIXED INCOME MARKET OVERVIEW

The retirement annuity trust fund's investment grade fixed income portfolios returned 2.1% for the fiscal year ending June 2015. This compares favorably to the trust fund's fixed income benchmark, the Barclays U.S. Government / Credit Index, which returned 1.7%. The outperformance was driven by the system's overweighting in corporate bonds which provided higher coupon interest than government bonds of similar duration.

As has been the case in recent years, fixed income markets were heavily influenced by the development of global Central Bank monetary policy, but additional factors seemed to have a significant weighing on the level of interest rates as the year progressed. Yields on long term U.S. Treasuries ended fiscal year 2015 modestly lower while yields on short term U.S. Treasuries rose over the same time period. This "flattening" of the interest rate term structure is consistent with market expectations of tighter monetary policy from the Federal Reserve, which was in the process of winding down its third asset purchase program, known as Quantitative Easing (QE), as the fiscal year began.

Beginning in February 2014, this latest round of QE was completed in October 2014, and market participants began to speculate about the timing of the first increase in the Federal Funds rate. Initially, investors were anticipating the rate increases to begin in the second quarter of calendar year 2015. At the same time, the Bank of Japan announced it was expanding its QE program and investors were expecting a similar announcement from the European Central Bank. The divergence in monetary policy among the major Central Banks, tighter U.S. policy contrasting with easier policy in Japan and Europe, caused a major rally in the U.S. Dollar. The U.S. Dollar index, which measures average exchange rates between the U.S. Dollar and other major currencies, rose from 79.78 on June 30, 2014 to a peak of 100.39 in mid-March 2015.

The strength in the U.S. Dollar had implications for other financial markets. The CRB commodity index fell from a high of 313.27 at the end of June, 2014 to 206.81 in mid-March, 2015. The drop was led by industrial and energy markets including crude oil. The price per barrel of West Texas Intermediate crude oil fell from \$106.09 to \$42.05 over the same time period. Long term U.S. Treasuries benefited greatly as foreign investors purchased Treasuries to participate in U.S. Dollar strength and U.S. investors lengthened the duration of their portfolios to take advantage of falling commodity price inflation. Yields on 30 year U.S. Treasuries fell from 3.47% at the beginning of the fiscal year to a record low of 2.22% at the end of January 2015. Corporate bonds also performed well during the first half of the fiscal year as corporate yields followed Treasury yields lower. The yield on the Barclays Investment Grade Long Corporate Index, which began the fiscal year at 4.57%, fell to 4.03% at the end of January.

Inflation, which had already been running below the Federal Reserve's stated target of 2%, began to decline in November of 2014, and also dropped significantly in December 2014 and January 2015. In response, the Federal Reserve issued a "dovish" statement following the January 2015 Federal Open Market Committee meeting stating that "inflation is anticipated to decline further in the near term". The statement caused market participants to reassess the timing of interest rate increases. Investors pushed out their expectation of the starting point for rate increases to the fourth quarter of calendar year 2015, later than previously expected. The more dovish view on rates truncated the rally in the U.S. Dollar and reversed some of the market action that had taken place over the first eight months of the fiscal year. The U.S. Dollar index fell to 93.13 before closing the fiscal year at 95.48. Oil rebounded to a near term high of \$61.43 and closed the fiscal year at \$59.47. Yields on both long term U.S. Treasuries and long term corporate bonds rose 90 basis points to finish the fiscal year at 3.12% and 4.93% respectively.

With U.S. Treasury rates and risk premiums on corporate bonds both 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 interest rate risk.

## EQUITY INVESTMENTS

As of June 30, 2015 the retirement annuity trust fund's public equity investments had a market value of \$11.24 billion, representing 62.8% of total assets. Positive equity returns over the fiscal year prompted several rebalancing sales to reduce equity exposure back to target levels and to raise cash to fund pension benefits. The retirement annuity trust fund divides its public equity into two broad categories: domestic and international.

The domestic portfolio had a market value of \$7.80 billion as of June 30, representing 43.6% of total assets. This is a \$180 million decrease from last year due to the rebalancing sales. 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 eleven portfolios. Three of the portfolios are internal passively managed index portfolios benchmarked to the S&P 500, 400, and 600. The other eight portfolios are managed externally by four 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, 2015 was \$3.44 billion, representing 19.2% of total assets, up from 18.9% a year earlier. 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. Five external asset managers manage the retirement annuity trust fund's international equities, one of which is a passively managed international index fund. The retirement annuity trust fund plans to continue incremental increases in the international equity exposure during the coming fiscal year.

## EQUITY MARKET OVERVIEW

Public Equities maintained steady gains throughout fiscal year 2015. The upward trend was fairly consistent starting in October after a volatile first quarter. This steady rise saw just a few hiccups, with the most pronounced setbacks coming in mid-December and January. Returns of domestic stocks as measured by the S&P 1500 and Russell 2000 were 7.31% and 6.49%, respectively. Within the S&P 1500, small (S&P 600) and mid-cap (S&P 400) stocks were up 6.70% and 6.38%, while the large-cap S&P 500 was up 7.42%. The performance of International stocks was a drag on overall equity returns. The Morgan Stanley Capital International (MSCI) All Country World (ex-U.S.) Index returned -4.9%. The MSCI Emerging Markets Index was down -4.8%, with both indices showing volatile returns across international markets.

The domestic markets advanced overall throughout the fiscal year, due largely to easy monetary policies around the world driving asset prices higher. The first half of the year saw three major pullbacks, however. The beginning of August 2014 proved choppy because of geopolitical risks, such as Russia's military presence in Eastern Ukraine, and the US conducting airstrikes in Iraq against ISIS militants. After stocks rallied back, they once again stumbled from mid-September through the fiscal year low point on October 15, 2014. Domestically, this was attributed to the Ebola breakout and concerns over deflation. Globally, there were democracy protests in Hong Kong and major economic slowdowns in Europe and China. As volatile global markets increased investor demand for safe haven assets, the 10-year Treasury yield dropped to 2.06%, down from 2.6%. Again, however, US equities rallied on the back of stronger than expected GDP growth, and a surprise announcement from the Bank of Japan to increase the pace of its purchases of Japanese government bonds. The first half of the fiscal year saw a huge increase in market volatility. This, coupled with an accelerated decline in oil prices, triggered the third market setback in early to mid-December. Crude oil prices fell roughly 50% from July through December going from approximately \$106 to \$53 per barrel. The first half ended on a high note, thanks to China's central bank signaling further stimulus and easing lending requirements for home buying to boost their housing market.

The second half of the fiscal year continued the overall upward trend domestically, but started slow as January produced volatile and negative returns. Oil prices continued its downward spiral, dragging commodities and the energy sector down with it. Global GDP growth became a concern to investors as China and Europe both posted low numbers. Starting in February, markets rallied for most of the second half of the fiscal year. The US economy continued to add jobs at a high pace as inflation remained low and steady below the Fed's 2% target. The European Central Bank launched its quantitative easing program providing another boost to the market. Unfortunately, the last week of the fiscal year saw a 3% selloff in equities losing most of the gains from the previous five months. This was spurred by the revival of the Greek debt crisis and turmoil in China's markets.

Internationally, markets lagged the US as non-US equities produced negative returns for the fiscal year. The main drivers of this were the economic slowdowns in Europe and China. As the US dollar strengthened, international

## INVESTMENT SECTION

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investors fled Europe and Asia to invest in US markets. The Chinese economy grew at its slowest pace in six years as energy prices plummeted. At the end of the fiscal year China was exposed for restricting stock sales for market participants creating further turmoil in their stock market. Crude oil prices plunged to a fiscal year low of \$42.05 per barrel in March sending a ripple effect throughout the global economy, hitting the Chinese and emerging markets the hardest. European markets were negatively affected by the Russian occupancy in the Ukraine and once again by Greece's debt crisis. Japan's quantitative easing was a rallying point for many Japanese and International stocks, but was not enough to bring the International indices into positive territory.

In summary, we experienced a positive equity market for the fiscal year. Domestic large caps were the drivers, but mid and small caps also enjoyed solid gains on the year. International and emerging markets were a drag on equity performance this year. Domestic and International monetary policies provided the tailwinds for equities, while growing geopolitical tension and a dramatic economic slowdown in China proved to be headwinds. In the coming fiscal year FOMC Chair Janet Yellen is expected to announce the first Fed Funds Rate hike in over nine years, however, the Federal Reserve is still expected to keep rates low in the near future.

### REAL ESTATE

The retirement annuity trust fund's real estate investments had a market value of \$825.3 million as of June 30, 2015, representing 4.6% 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.

The retirement annuity trust fund's real estate exposure is currently provided through nine portfolios. The retirement annuity trust fund maintains an internally managed portfolio of directly owned properties under long-term lease agreements with high credit quality tenants. The retirement annuity trust fund 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 seven real estate limited partnerships: Carlyle Realty Partners VI, Blackstone Real Estate Partners VII, Rockwood Capital Real Estate Fund IX, TA Realty Associates Fund X, AG Net Lease Realty Fund III, Carlyle Realty Partners VII, 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

The commercial real estate market continued to attract substantial amounts of new capital during the fiscal year. According to Green Street Advisors, private real estate funds, publicly traded REITs and other entities raised approximately \$440 billion of funds for investment in the U.S. property market in 2014. Over the coming year investor demand for commercial real estate should remain strong as the asset class is expected to generate attractive yields relative to other types of investments while also providing upside price appreciation due to strong supply/demand fundamentals. Depending on the sector, average rents nationwide should grow by 2% to 4% annually over the next two years.

According to Real Capital Analytics, nearly \$424 billion in commercial and multi-family property transactions occurred in 2014. This was an 18% increase over the \$362 billion in deals that were closed in the prior year. The largest volume of deals occurred in the office building and apartment sectors, while the industrial property sector had the least amount of activity. With the large inflow of capital into the market property values have been driven higher due to the increased competition for assets. The greatest run-up in prices has been in the market for core properties located in top-tier cities. This has led to investors focusing more on non-core assets located in secondary markets that offer higher total return potential.

#### Real Estate Investments \$825.3 Million Fair Value As of June 30, 2015





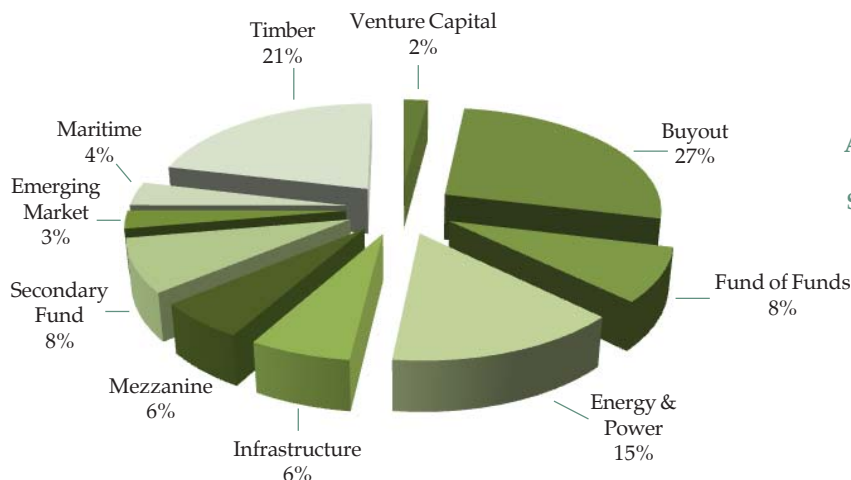
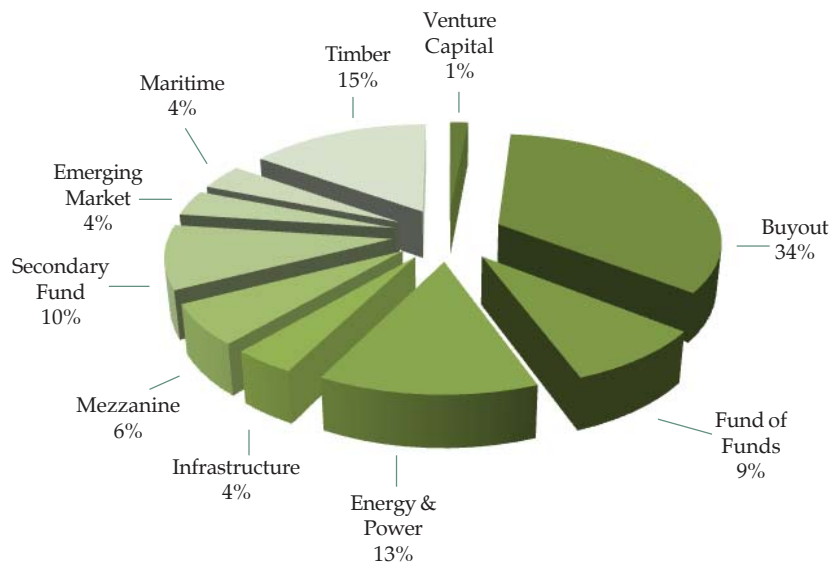
On the debt side of the market, lending activity remained robust across all sectors of commercial real estate. Data provided by the Mortgage Bankers Association show that an estimated \$387 billion in new commercial and multi-family loans were originated in 2014, up from \$359 billion in 2013. Loan originations are expected to grow to over \$400 billion in 2015. Additionally, an estimated \$1 trillion of existing commercial real estate loans are expected to come due over the next three years.

The environment for commercial real estate should remain favorable over the next year as the U.S. economy continues to slowly recover from the Great Recession of 2008-2009. Interest rates remain low, consumer and business confidence is growing, and the employment picture continues to improve. Upward pressure on commercial real estate prices should continue to increase as investors remain drawn to the relative value of the asset class. Furthermore, the steady income and inflation-hedging attributes which have traditionally made real estate an integral part of a diversified investment portfolio remain intact.

### ALTERNATIVE ASSETS

As of June 30, 2015, the retirement annuity trust fund had committed \$1.310 billion to alternative investments and had funded \$784 million of those commitments. The percentage of the retirement annuity trust fund's portfolio invested in alternative assets was 4.7%. The retirement annuity trust fund's current alternative asset portfolio consists of private equity investments and timberland.

**Alternative Assets  
Committed  
\$1.310 Billion as of  
June 30, 2015**



**Alternative Assets  
Funded  
\$784 Million as of  
June 30, 2015**

### 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 is in the early stages of its private equity investment program, which it intends to grow with a disciplined plan of commitments over the next several years. 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 (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

The private equity markets continued to be positively affected by the strong public equity markets in the first half of the fiscal year. Consequently, older vintage funds were able to shed many of their portfolio companies either through a sale or an IPO. This return of capital has encouraged investors, especially institutional investors, to continue to increase their allocation to alternative investments, including private equity. However, the pull back in the public equity markets and the increased volatility in the second half of the fiscal year have caused the private equity markets to see a slowdown in portfolio company exits during this time.

The bifurcation in the private equity market continues with the top tier funds raising capital much easier than less desirable funds. This should, over the long term, provide a shakeup in this space as the weaker firms are forced to exit. The past fiscal year has also seen a large amount of buyout funds returning to the marketplace with mixed results. We continue to see more opportunity in the middle market space and in other niche areas such as infrastructure and distressed credit. Additionally, the stress in the European markets should continue to present investment opportunities in the private equity space over the next fiscal year.

### TIMBERLAND

In addition to private equity, the retirement annuity trust fund has invested in timberland in the alternative asset class. As of June 30, 2015 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

The U.S. continued to see improvement in the housing markets during the fiscal year. In the short term, published forecasts expect housing starts to reach 1.22 million in 2015, a level that has typically stimulated the southern timber market. Long term, demand for sawtimber is bright as forecasters call for sustained increases through 2017. Additionally, while sawtimber exports from the West Coast have been down, southern pine lumber exports were up over 20 percent in 2014. Interestingly, there has been a flurry of Canadian purchases of southern sawmills. With the current high levels of standing southern pine inventory, this additional usage will begin to bring supply back into line with demand.

Currently, however, markets have been impacted by seasonal conditions. 2015 has seen dry weather across the U.S. South, with the exception of the extreme East Coast, resulting in a tightening of the region's timber markets. In-woods operability has been good, and as a result, logging production and regional mill inventories have remained steady. While timber pricing was attractive based on historical levels, spot-market opportunities typically prompted by wet weather events were largely absent. Late spring, rainfall increased significantly, triggering some attractive selling opportunities. However, this situation was short-lived.

Similar market conditions persist in the U.S. North, with frozen ground conditions supporting high levels of logging production earlier in the year. After ending 2014 in somewhat of a panic mode, especially with regard to pulpwood markets, northern buyers have reversed their backsliding inventories, and timber markets have calmed.

## INVESTMENT SECTION

### RETIREMENT ANNUITY TRUST PORTFOLIOS FAIR VALUES \* June 30, 2015

#### Internally Managed

<b>Cash Equivalents</b>	
Cash Collections Fund (Unallocated)	\$ 477,398,294
<b>Fixed Income</b>	
Intermediate Bond Fund	832,814,130
Broad Market Bond Fund	546,362,748
Long Term Bond Fund	521,705,174
Internal Bond Fund	193,485,080
Life Insurance Trust	87,963,949
Tax Shelter Fund	363,978
<b>Equity</b>	
S & P 500 Stock Index Fund (Large Cap)	2,524,072,862
S & P 400 Stock Index Fund (Mid Cap)	383,171,980
S & P 600 Stock Index Fund (Small Cap)	256,604,671
<b>Real Estate</b>	
Internally Managed Fund	383,002,196
<b>Subtotal</b>	<b>6,206,945,062</b>

#### Externally Managed

<b>Fixed Income</b>	
Galliard Capital Management	480,842,149
Ft. Washington Broad Market	440,284,143
<b>Domestic Equity</b>	
Todd Asset Management (Large Cap Core)	1,297,404,384
UBS (Large Cap Value)	987,826,452
GE Asset Management (Large Cap Growth)	713,727,335
Wellington (Large Cap Core)	622,741,774
Todd Asset Management Opportunity Fund	328,809,349
Wellington (Mid Cap Core)	308,007,220
UBS (130/30)	202,012,960
Wellington (Small Cap Core)	174,118,498
<b>International Equity</b>	
Baillie Gifford EAFE Alpha	849,903,142
Todd Asset Management International	796,815,219
UBS All Country World ex US	691,720,452
Baring All Country World ex US	537,126,346
BlackRock All Country World ex US IMI	470,711,520
Todd Asset Management	93,059,578
International Intrinsic Value	
<b>Real Estate</b>	
Prudential PRISA Fund	254,856,900
The Realty Associates Fund X	51,967,460
Blackstone Partners VII, LP	49,484,809
Carlyle Realty Partners VI, LP	34,494,026
Rockwood Capital Real Estate Fund IX	28,063,167
AG Net Lease Realty Fund III, LP	14,655,153
Carlyle Realty Partners VII, LP	4,703,439
Landmark Real Estate Partners, VII	4,108,196

#### Externally Managed continued ...

<b>Alternative Investments</b>	
Molpus Woodlands Group	120,007,522
Lake Superior Timberlands LLC	
IFM Global Infrastructure LP	101,512,225
Molpus Seven States LLC	58,887,805
Alinda Infrastructure Fund II	54,492,129
KKR & Co European Fund III	50,737,741
NGP Natural Resources X, LP	38,493,411
Hellman & Friedman Fund VII	33,773,848
Ft. Washington Fund VI	33,055,512
Hancock Bluegrass LLC - Oregon	28,902,342
Riverstone/Carlyle E & P Fund IV	28,529,319
J. P. Morgan Maritime Fund	27,087,169
Actis Global Fund IV	25,329,873
Chrysalis Venture Fund III	19,476,691
Riverstone E & P Fund V	18,778,403
KKR & Co Fund 2006	18,397,645
Stepstone Pioneer Capital Fund III, LP	18,094,401
Oaktree European Principal Fund III	18,061,782
Lexington Capital Partners Fund VII	17,533,892
Landmark Equity Partners Fund XIV, LP	17,208,362
APAX VIII, LP	15,037,735
Audax Private Equity Fund IV, LP	14,947,109
Ft. Washington Fund V	13,479,197
Audax Mezzanine Fund III	13,245,014
Oaktree Mezzanine Fund III	11,908,903
Carlyle Global Financial Services Partners II	10,203,721
Carlyle Europe Partners IV, LP	7,487,702
Landmark Equity Partners Fund XV, LP	6,629,762
Oaktree Mezzanine Fund IV	5,753,759
Ft. Washington Fund VIII	4,569,146
Lexington Capital Partners Fund VIII	3,940,531
KKR & Co European Fund IV	3,401,749
NGP Natural Resources XI, LP	2,077,283
Public Pension Capital LLC	1,756,764
Gavea Investments Fund V, LP	1,333,912
CapitalSouth Partners Fund III	555,737
<b>Additional Categories</b>	
Fort Washington High Yield Bond Fund	299,669,960
Marathon KTRS/Credit Fund LP	272,347,137
Shenkman Capital Management	262,966,624
Golub Capital Pearls 11, LLC	125,730,280
Babson Capital European Loan Fund	102,840,000
Rogge Global International Fixed Income	89,500,325
Avenue Special Situations Fund VI	74,228,248
Marathon European Credit Opp Fund II	67,927,915
Oaktree Opportunities IX, LP	48,086,629
Highbridge Principal Strategies III	44,742,440
Oaktree European Dislocation Fund, LP	12,826,868
AG Select Partners Advantage Fund	4,053,123
<b>Subtotal</b>	<b>\$ 11,687,051,316</b>
<b>TOTAL ASSETS</b>	<b>\$ 17,893,996,378</b>

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

**Investment Summary**  
**Fair Value – Retirement Annuity Trust\***  
**June 30, 2015**

Type of Investment	Fair Value 07/01/14	Acquisitions	Appreciation (Depreciation)	Sales Redemptions, Maturities & Paydowns	Fair Value 06/30/15
Cash Equivalents	\$ 829,364,814	\$ 3,935,054,978	\$ -	\$ 4,120,767,700	\$ 643,652,091
Fixed Income	3,329,133,881	2,101,712,586	(41,430,930)	2,358,557,363	3,030,858,174
Real Estate	733,045,846	101,760,928	35,722,669	45,194,097	825,335,346
Alternative	643,890,289	298,205,608	53,827,202	151,235,005	844,688,096
Equities	11,266,188,790	3,250,052,524	443,499,691	3,796,175,725	11,163,565,280
Additional Categories	1,233,210,529	551,974,640	(63,558,077)	335,729,700	1,385,897,391
<b>TOTAL</b>	<b>\$ 18,034,834,149</b>	<b>\$ 10,238,761,264</b>	<b>\$ 428,060,555</b>	<b>\$ 10,807,659,590</b>	<b>\$ 17,893,996,378</b>

\* Includes Life Insurance Trust Values of \$87,963,949, Tax Shelter Annuity value of \$363,978, and 401(h) value of \$29,150,708.

**Contracted Investment  
Management Expenses**  
**Fiscal Year 2014-15**  
*(in thousands)*

<u>Investment Counselor Fees</u>	<u>Assets Under Management</u>	<u>Expense</u>	<u>Basis Points <sup>(1)</sup></u>
Equity Manager(s)	\$ 8,073,984	\$ 15,597	19.3
Fixed Income Manager(s)	921,126	403	4.4
Real Estate	442,333	5,863	132.5
Additional Categories	1,404,920	8,043	57.2
Alternative Investments <sup>(2)</sup>	\$844,688	11,479	135.9
<b>TOTAL</b>	<b>\$ 11,687,051</b>	<b>\$ 41,385</b>	<b>35.4</b>
<b><u>Administrative and Operation Expenses</u></b>			
Custodian Fees <sup>(3)</sup>	\$ 17,894,548	\$ 336	0.2
Consultant Fees		448	0.3
Legal & Research		84	0.0
Other Administrative and Operational		2,474	1.5
<b>TOTAL</b>	<b>\$ 17,894,548</b>	<b>\$ 3,342</b>	<b>2.0</b>
<b>GRAND TOTAL</b>		<b>\$ 44,727</b>	<b>25.1</b>

(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.

(3) - Includes J. Losey Scholarship Fund.

## INVESTMENT SECTION

### Schedule of Contracted and Administrative Investment Expenses Retirement Annuity Trust June 30, 2015

#### INVESTMENT COUNSELOR FEES

##### EQUITY MANAGERS

Baillie Gifford	\$ 3,083,458
Baring Asset Management, Inc.	2,463,293
GE Asset Management	800,000
Todd Asset Management LLC	1,377,639
UBS Global Asset Management	4,529,001
Wellington Management Company	3,107,897
Blackrock	235,529
<b>Total Equity Managers</b>	<b>\$ 15,596,817</b>

##### FIXED INCOME MANAGERS

Fort Washington Investment Broad Market	157,680
Galliard Capital Mangement	245,252
<b>Total Fixed Income Managers</b>	<b>\$ 402,932</b>

##### REAL ESTATE

Prudential PRISA	1,713,599
Angelo Gordon Net Lease Fund III	312,555
Blackstone Partners Fund VII, L.P.	704,405
Carlyle Realty Partners Fund VI, L.P.	510,996
Carlyle Realty Partners Fund VII, L.P.	700,000
Landmark Real Estate Fund VII	620,879
Rockwood Capital Real Estate Fund IX, L.P.	685,026
TA Realty Associates Fund X, L.P.	615,176
<b>Total Real Estate Managers</b>	<b>\$ 5,862,636</b>

##### ADDITIONAL CATEGORIES

Angelo Gordon Select Partners Advantage Fund	36,533
Avenue Capital Special Situations Fund VI, L.P.	438,216
Babson European Capital	258,264
Fort Washington Investments High Yield	608,313
Golub Capital - Pearls 11, LLC	835,529
Highbridge Principle Strategies Fund III, L.P.	560,862
Marathon Credit Fund	2,575,817
Marathon European Credit Fund II	481,696
Oaktree European Dislocation Fund, L.P.	144,331
Oaktree Opportunities Fund IX, L.P.	800,000
Rogge Global International Fund	234,376
Shenkman Capital	1,069,394
<b>Total Additional Category Managers</b>	<b>\$ 8,043,331</b>

##### ALTERNATIVE INVESTMENTS

Actis Global Fund IV, L.P.	999,000
Alinda Infrastructure Fund II, L.P.	638,983
APAX Fund VIII, L.P.	485,726
Audax Mezzanine Fund III, L.P.	303,581
Audax Private Equity Fund IV, L.P.	0
Capital South Fund III, L.P.	0
Carlyle Europe Parners IV, L.P.	35,154
Carlyle Global Finacial Services Fund II, L.P.	624,148
Chrysalis Fund III, L.P.	387,162
Fort Washington Fund V, L.P.	87,243
Fort Washington Fund VI, L.P.	222,300
Fort Washington Fund VIII, L.P.	89,700
Gavea V	300,000
Hancock Bluegrass LLC Oregon	234,111
Hellman and Friedman Fund VII, L.P.	733,843
IFM Global	147,480
JP Morgan Maritime Fund , L.P.	561,617
KKR Fund 2006, L.P.	33,555

##### ALTERNATIVE INVESTMENTS continued ...

KKR European Fund III, L.P.	(216,530)
KKR European Fund IV, L.P.	137,271
Landmark Equity Partners Fund XIV, L.P.	299,845
Landmark Equity Partners Fund XV, L.P.	300,000
Lexington Capital Partners Fund VII, L.P.	225,680
Lexington Capital Partners Fund VIII, L.P.	522,719
Molpus Lake Superior Michigan	859,775
Molpus Lake Superior Hiwassee	64,734
Molpus Seven States	577,811
NGP Natural Resources Fund X, L.P.	817,555
NGP Natural Resources Fund XI, L.P.	8,090
Oaktree European Principal Fund III, L.P.	343,776
Oaktree Mezzanine Fund III, L.P.	265,402
Oaktree Mezzanine Fund IV, L.P.	31,635
Stepstone Partners Fund III, L.P.	150,512
Public Pension Capital	857,363
Riverstone / Carlyle Energy and Power Fund IV, L.P.	127,654
Riverstone Energy and Power Fund V, L.P.	221,925
<b>Total Alternative Managers</b>	<b>\$ 11,478,820</b>

#### ADMINISTRATIVE & OPERATIONAL EXPENSES

##### CUSTODIAN

The Bank of New York Mellon	335,800
<b>Total Custodian Fees</b>	<b>\$ 335,800</b>

##### CONSULTANT

Aon Hewitt	358,850
Bevis Longstreth	55,262
George Philip	34,134
<b>Total Consultant Fees</b>	<b>\$ 448,246</b>

##### LEGAL & RESEARCH

Ice Miller	84,131
<b>Total Legal &amp; Research</b>	<b>\$ 84,131</b>

##### OTHER

Other Administrative and Operational (includes Personnel, Subscription services, etc...)	\$ 2,639,773
<b>Total Other Expenses</b>	<b>\$ 2,639,773</b>

**TOTAL INVESTMENT EXPENSES** **\$ 44,892,486**

**Ten Largest Stock Holdings Ranked <sup>(1) (2)</sup>  
by Fair Value  
June 30, 2015**

Rank	Description	Fair Value	Percentage of Equities
1	Apple Inc	221,037,732	2.627
2	JP Morgan Chase	107,408,273	1.276
3	Gilead Sciences	99,455,596	1.182
4	Allergan PLC	90,878,077	1.080
5	UnitedHealth Group	89,772,968	1.067
6	Amazon.com Inc	78,309,402	0.930
7	Home Depot Inc	72,689,133	0.864
8	Disney Walt Co (Holding Co)	71,443,878	0.849
9	Pepsico Inc	66,287,174	0.787
10	Wells Fargo & Co	64,633,314	0.768

**Top Ten Fixed Income Holdings <sup>(2)</sup>  
by Fair Value  
June 30, 2015**

Rank	Description	Maturity	Coupon	Par Value	Fair Value	Percent of Fixed Income
1	U S Treasury	11/15/2017	0.880	65,370,000	65,492,896	2.161
2	U S Treasury	10/15/2016	0.630	50,000,000	50,133,000	1.654
3	U S Treasury	2/15/2025	2.000	48,000,000	46,634,880	1.539
4	U S Treasury	6/30/2019	1.630	45,000,000	45,425,250	1.499
5	U S Treasury Bonds	8/15/2023	6.250	31,900,000	41,636,837	1.374
6	U S Treasury	4/30/2018	0.630	41,290,000	40,919,216	1.350
7	U S Treasury	5/15/2024	2.500	31,000,000	31,530,410	1.040
8	U S Treasury Bonds	8/15/2029	6.130	22,000,000	31,130,000	1.027
9	U S Treasury	11/30/2019	1.500	30,000,000	30,004,800	0.990
10	U S Treasury	7/31/2019	1.630	28,800,000	29,045,376	0.958

(1) Includes only actively managed separate accounts.

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



## INVESTMENT SECTION

### Transaction Commissions Fiscal Year 2014-2015

COMPANIES	SHARES TRADED	COMMISSIONS	COMMISSION PER SHARE	% OF TOTAL
Abel Noser	4,995,835.00	\$ 46,642.85	\$ 0.009	2.23 %
Academy Securities, Inc.	20,240.00	708.42	0.035	0.03
Allen & Co	33,300.00	1,577.80	0.047	0.08
Avondale Partners, LLC	4,845.00	3,844.28	0.793	0.18
B. Riley & Co. LLC	30,541.00	1,147.95	0.038	0.05
Barclays	607,962.00	21,300.03	0.035	1.02
Bass / Baypoint Trading	13,030.00	458.39	0.035	0.02
BB & T Capital Markets	25,868.00	905.39	0.035	0.04
Blair, William & Co	68,570.00	8,346.04	0.122	0.40
BMO Capital Markets	94,179.00	3,553.20	0.038	0.17
BNP Paribas Securities Bond	1,650.00	57.75	0.035	0.00
BNY Brokerage	13,441.00	592.47	0.044	0.03
Brean Murray, Carret & Co., LLC	34,186.00	1,196.53	0.035	0.06
BTIG	173,886.00	6,394.34	0.037	0.31
Burke & Quick Partners LLC	1,082.00	37.87	0.035	0.00
Canaccord Genuity, Inc.	142,255.00	5,721.25	0.040	0.27
Cantor Fitzgerald & Co	26,362.00	1,021.80	0.039	0.05
CIBC Worldmarket	41,572.00	10,495.06	0.252	0.50
Citigroup Global	284,133.00	7,434.24	0.026	0.36
ConvergEx - Algos	36,637,262.00	186,809.75	0.005	8.94
ConvergEx - FS	2,007,580.00	21,876.80	0.011	1.05
ConvergEx ADR Conversions	4,957,873.00	109,878.32	0.022	5.26
Cornerstone	775,490.00	22,149.70	0.029	1.06
Cowen & Co	149,511.00	8,789.61	0.059	0.42
Credit Agricole Securities	175,298.00	6,148.69	0.035	0.29
Credit Research & Trading LLC	11,320.00	396.21	0.035	0.02
Credit Suisse Sec. LLC	2,430,284.00	70,061.33	0.029	3.35
Cuttone & Co Inc	5,225.00	182.88	0.035	0.01
Deutsche Bank	432,388.00	12,438.50	0.029	0.60
Drexel Hamilton LLC	25,464.00	891.30	0.035	0.04
Evercore Group LLC	3,560.00	92.60	0.026	0.00
Fidelity Capital Markets	2,670.00	93.45	0.035	0.00
First Kentucky Securities Corp	382,880.00	11,486.40	0.030	0.55
Freidman Billings	59,216.00	14,469.64	0.244	0.69
Goldman Sachs	1,824,240.00	80,420.44	0.044	3.85
Instinet	137,248.00	1,623.83	0.012	0.08
Investment Tech Grp Transition	20,324,639.00	195,971.40	0.010	9.38
Investment Technology Grp	19,095,084.00	208,528.36	0.011	9.98
ISI Group	2,063,441.00	59,263.09	0.029	2.84
J.J.B. Hilliard, W.L. Lyons	1,788,002.00	53,640.06	0.030	2.57
Janney Montgomery Scott Inc	92,839.00	3,232.38	0.035	0.15
Jefferies & Co.	309,307.00	7,217.68	0.023	0.35
Jones & Associates	45,083.00	1,658.22	0.037	0.08
JP Morgan & Chase	421,370.00	12,362.03	0.029	0.59
Keefe Bruyette & Woods	80,204.00	3,212.42	0.040	0.15
Keybank Capital	46,225.00	1,608.74	0.035	0.08
King, CL, & Associates, Inc.	17,800.00	558.99	0.031	0.03
Knight Equity Markets	101,641.00	3,221.78	0.032	0.15
Leerink Swann & Co.	21,404.00	800.46	0.037	0.04
Lexington Investment Co.	169,670.00	5,090.10	0.030	0.24
Liquidnet Inc - Transition	18,294,256.00	137,207.21	0.008	6.57
Liquidnet Inc	12,624,819.00	124,086.29	0.010	5.94
Loop Capital Markets, LLC	8,685.00	86.85	0.010	0.00
MacQuarie Securities Inc	54,230.00	2,044.04	0.038	0.10
Merrill Lynch ADR Conversions	678,382.00	20,351.46	0.030	0.97
Merrill Lynch	3,077,006.00	89,877.50	0.029	4.30
Merrill Lynch, Pierce, Fenner	13,573.00	475.07	0.035	0.02

*Transaction Commissions continued . . .*

COMPANIES	SHARES TRADED	COMMISSIONS	COMMISSION PER SHARE	% OF TOTAL
Mizuho Securities, USA	11,837.00	414.31	0.035	0.02
MKM Partners	29,530.00	1,049.02	0.036	0.05
Morgan Stanley Smith Barney-Huntington	920,400.00	26,971.50	0.029	1.29
Morgan Stanley Smith Barney-Louisville	1,381,800.00	41,454.00	0.030	1.98
Morgan Stanley Smith Barney-Northern KY	1,386,485.00	41,594.55	0.030	1.99
Morgan Stanley	452,102.00	23,148.91	0.051	1.11
Pacific Crest Securities	9,030.00	316.05	0.035	0.02
Pershing LLC	227,133.00	7,875.21	0.035	0.38
Piper Jaffray	113,828.00	4,353.22	0.038	0.21
Pulse Trading	105,920.00	1,059.20	0.010	0.05
R W Baird	238,998.00	8,218.70	0.034	0.39
Raymond James & Assoc	3,106,220.00	94,096.02	0.030	4.50
RBC Capital Markets	147,813.00	9,112.27	0.062	0.44
Rosenblatt Securities LLC	1,865.00	65.28	0.035	0.00
Ross Sinclair & Assoc	164,930.00	4,947.90	0.030	0.24
Royal Bank of Scotland RBS	2,511.00	113.00	0.045	0.01
Sandler O'Neill	23,200.00	14,407.20	0.621	0.69
Sanford C Bernstein	482,035.00	18,760.00	0.039	0.90
Scotia Capital, USA	60,359.00	2,112.59	0.035	0.10
Sidoti & Company LLC	4,780.00	167.30	0.035	0.01
Simmons & Co	6,160.00	215.60	0.035	0.01
State Street Global	1,500.00	60.50	0.040	0.00
Stephens Inc.	126,150.00	14,062.31	0.111	0.67
Sterne, Agee & Leach	1,525.00	53.38	0.035	0.00
Stifel, Nicolaus & Co	1,350,647.00	40,964.09	0.030	1.96
Stifel, Nicolaus & Co-Louisville	192,910.00	5,787.30	0.030	0.28
Suntrust Robinson	77,151.00	8,968.92	0.116	0.43
Susquehanna Brokerage	4,320.00	151.20	0.035	0.01
Telsey Advisory Group LLC	72,032.00	2,521.18	0.035	0.12
UBS/Paine Webber Securities	328,071.00	9,109.65	0.028	0.44
UBS/Paine Webber-Louisville	862,960.00	25,888.80	0.030	1.24
Wedbush Morgan Securities	1,350.00	47.25	0.035	0.00
Weeden & Co	2,187,579.00	66,686.97	0.030	3.19
Wells Fargo Securities, LLC	249,896.00	13,845.94	0.055	0.66
Wunderlich Securities Inc	16,200.00	567.02	0.035	0.03
Zacks & Company	2,900.00	101.50	0.035	0.00
<b>TOTAL</b>	<b>150,310,233.00</b>	<b>\$ 2,089,007.08</b>	<b>\$ 0.014</b>	<b>100%</b>

*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 2014-15, the retirement annuity trust fund bought small capitalization IPOs that generated \$192,743 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 \$2,089,007. 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 retirement system is always cognizant of its significant role in the Commonwealth's economy. Over \$1.7 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 retirement 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

**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  
Rogge Global Partners  
Highbridge Principal Strategies, LLC  
Angelo Gordon & Co.  
Golub Capital  
Babson Capital Management

**Attorney**

Ice Miller LLP

### 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 KTRS Investment Committee adopts and regularly reviews an asset allocation policy designed to meet the fund's needs.

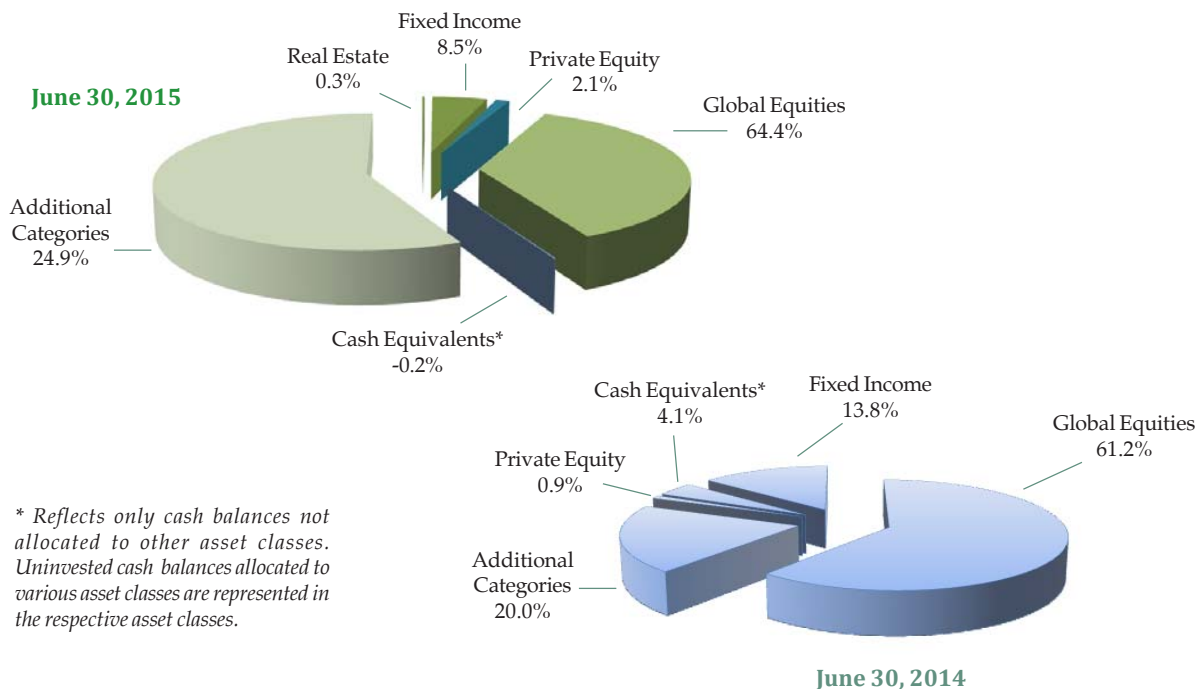
## ASSET ALLOCATION

As of June 30, 2015, the health insurance trust fund had approximately \$552.9 million in total assets. This included \$47 million in short-term high quality bonds for liquidity purposes. This trust fund also had \$65.1 million in high yield bonds, \$355.7 million in a global stock index fund, \$11.3 million in private equity investments, \$28.8 million in bank loan investments, and \$43.7 million in an alternative credit funds, and \$1.2 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 fair value as of June 30, 2015 and June 30, 2014.

Health Insurance Trust				
	June 30, 2015	%	June 30, 2014	%
Cash Equivalents*	\$ -1,034,005	-0.2	\$ 20,149,704	4.1
Fixed Income	47,019,105	8.5	67,647,915	13.8
Global Equities	355,702,555	64.4	300,857,011	61.2
Real Estate	1,762,328	0.3	-	0.0
Additional Categories	137,798,860	24.9	99,027,356	20.0
Private Equity	11,698,357	2.1	4,251,239	0.9
<b>TOTALS</b>	<b>\$ 552,947,200</b>	<b>100.0</b>	<b>\$ 491,933,225</b>	<b>100.0</b>
* 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 Health Insurance Trust Fair Values



## HEALTH INSURANCE TRUST

### PORTFOLIO RETURNS

For the fiscal year, the health insurance trust fund's portfolio returned 1.48%. The fund's global equities returned 1.36% versus .81% for the MSCI All country World IMI Index. A short-term bond fund held for liquidity purposes returned 0.96%. A high yield bond fund returned .55% versus -.55% for its benchmark.

Due to a necessary focus on liquidity needs early in the fund's existence and rapidly evolving asset allocation as its funding mechanism is implemented, no policy benchmark has yet been established. Returns were generated by the Segal Rogers Casey performance reporting system using a time-weighted rate of return calculation based upon market values.

	<u>1 Yr<sup>(1)</sup></u>	<u>3 Yr<sup>(1)</sup></u>	<u>5 Yr<sup>(1)</sup></u>	<u>10 Yr<sup>(1)</sup></u>	<u>20 Yr<sup>(1)</sup></u>
<b>Total Fund</b>					
KTRS Health Insurance Trust	1.5	8.9	-	-	-
<b>Equities</b>					
Global Equities	1.4	13.9	-	-	-
MSCI AC World IMI	0.8	13.3	-	-	-
<b>Fixed Income</b>					
Internal Bond Fund	1.0	0.6	-	-	-
90 Day Treasury Bill	0.0	0.1	-	-	-
<b>Alternative Investments</b>					
Private Equity <sup>(2)</sup>	13.6	23.3	-	-	-
<b>Additional Categories</b>					
<b>High Yield</b>					
High Yield Bond Fund	0.6	6.7	-	-	-
KTRS Credit Fund	-2.3	-	-	-	-
B of A Merrill Lynch High Yield Master II	-0.6	6.8			
<b>Alternative Credit</b>			-	-	-
Shenkman Capital Management	2.4	-	-	-	-
Highbridge Principal Strategies	11.0	-	-	-	-
Marathon European Credit Opportunities	5.3	-	-	-	-
S & P LSTA Leverage Loan Index	1.8	-			
<b>Real Estate</b>			-	-	-
Non-Core Real Estate	-32.4	-	-	-	-
NCREIF Index	13.0	-			
<b>Cash</b>					
Cash(Unallocated)	0.1	0.1			
90 Day Treasury Bill	0.0	0.1			

(1) Annualized.

(2) For a period of five years private equity investments will be benchmarked against their own returns. The primary reason for this is that these investments have a minimum investment horizon of ten years and there is no market benchmark that would be expected to track these types of assets in their early years. Beginning five years after the first capital call, investments in this class shall be benchmarked versus the S & P 500 plus 3%, which is the System's long-term expected return for this asset class.

### SCHEDULE OF INVESTMENT RETURNS - HEALTH INSURANCE TRUST

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, 2015**

**Internally Managed**

<b>Cash Equivalents</b>		
Cash Collections Fund (Unallocated)	\$	(1,034,005)
<b>Fixed Income</b>		
Internal Bond Fund		47,019,105
<b>Subtotal</b>	<b>\$</b>	<b>45,985,100</b>

**Externally Managed**

<b>Global Equities</b>		
BlackRock Fund B		355,702,555
<b>Alternative Investments</b>		
Ft. Washington Fund VII		3,194,928
Actis Global Fund IV		2,532,587
Carlyle Europe Fund IV		1,497,542
Ft. Washington Fund VIII		1,305,470
Landmark Equity XV		1,104,964
Ft. Washington PE Opp III		967,060
KKR European Fund IV		680,350
NGP Natural Resources XI		415,456
<b>Additional Categories</b>		
Fort Washington High Yield Bond Fund		65,150,105
Marathon/KTRS Credit Fund		34,819,185
Shenkman Capital Management		28,826,798
Marathon European Credit Opp Fund II		4,528,528
Highbridge Principal Strategies III		4,474,244
<b>Real Estate</b>		
Carlyle Realty VII		940,688
Landmark Real Estate VII		821,640
<b>Subtotal</b>	<b>\$</b>	<b>506,962,100</b>
<b>TOTAL ASSETS</b>	<b>\$</b>	<b>552,947,200</b>

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

**Investment Summary**  
**Fair Value – Medical Insurance Trust**  
**June 30, 2015**

Type of Investment	Fair Value 06/30/14	Acquisitions	Appreciation (Depreciation)	Sales Redemptions, Maturities & Paydowns	Fair Value 06/30/15
Cash Equivalents	\$ 71,133,632	\$ 161,236,133	\$ -	\$ 225,908,627	\$ 6,461,138
Fixed Income	21,234,589	47,584,313	(278,412)	25,794,026	42,746,464
Real Estate	-	2,430,795	227,808	896,275	1,762,328
Equities	300,857,011	50,001,212	4,844,331	-	355,702,555
Alternative	4,251,239	7,940,611	774,374	1,267,867	11,698,357
Additional Categories	94,456,754	82,629,225	(4,784,606)	37,725,014	134,576,358
<b>TOTAL</b>	<b>\$ 491,933,225</b>	<b>\$ 351,822,289</b>	<b>\$ 783,495</b>	<b>\$ 291,591,809</b>	<b>\$ 552,947,200</b>

## INVESTMENT SECTION

### Health Insurance Trust Fund Contracted Investment Management Expenses Fiscal Year 2014-15 (in thousands)

<u>Investment Counselor Fees</u>	<u>Assets Under Management</u>	<u>Expense</u>	<u>Basis Points <sup>(1)</sup></u>
Equity Manager(s)	\$ 355,703	\$ 187	
Fixed Income Manager(s)	-	-	
Real Estate <sup>(2)</sup>	1,762	264	
Additional Categories	137,799	519	
Alternative Investments <sup>(3)</sup>	11,698	299	
<b>TOTAL</b>	<b>\$ 506,962</b>	<b>\$ 1,269</b>	<b>25.0</b>
<b><u>Other Investment Services</u></b>			
Custodian Fees	552,947	\$ 8	0.1
Consultant Fees		-	0.0
Legal & Research		-	0.0
Other Administrative and Operational		53	1.0
<b>TOTAL</b>	<b>\$ 552,947</b>	<b>\$ 61</b>	<b>1.2</b>
<b>GRAND TOTAL</b>		<b>\$ 1,330</b>	<b>24.1</b>

1 - One basis point is one hundredth of one percent or the equivalent of .0001.

2 - Accrual of fees payable as of June 30, 2015.

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, 2015

#### INVESTMENT COUNSELOR FEES

##### EQUITY MANAGERS

BlackRock	187,274
<b>Total Equity Managers</b>	<b>\$ 187,274</b>

##### REAL ESTATE

Carlyle VII	140,000
Landmark VII	124,176
<b>Total Real Estate</b>	<b>\$ 264,176</b>

##### ADDITIONAL CATEGORIES

Highbridge Principal Strategies Fund III, L.P.	56,088
Fort Washington Investments High Yield	128,982
Marathon Credit Fund	189,343
Marathon European Credit Fund II	32,113
Shenman Capital	112,452
<b>Total Additional Category Managers</b>	<b>\$ 518,978</b>

##### ALTERNATIVE INVESTMENTS

Actis Global Fund IV, L.P.	100,000
Fort Washington Private Equity III, L.P.	43,125
Fort Washington Fund VII, L.P.	37,500
Fort Washington Fund VIII, L.P.	39,660
KKR European IV, L.P.	27,454
Landmark Fund XV, L.P.	50,000
NGP Natural Resources XI, L.P.	1,618
<b>Total Alternative Managers</b>	<b>\$ 299,357</b>

#### ADMINISTRATIVE AND OPERATIONAL EXPENSES

##### CUSTODIAN

The Bank of New York Mellon	8,263
<b>Total Custodian</b>	<b>\$ 8,263</b>

##### LEGAL & RESEARCH

Ice Miller	-
<b>Total Legal &amp; Research</b>	<b>\$ -</b>

##### OTHER

Other Administrative and Operational (includes Personnel, Subscription services, etc...)	52,536
<b>Total Other</b>	<b>\$ 52,536</b>

<b>TOTAL INVESTMENT EXPENSES</b>	<b>\$ 1,330,584</b>
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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

**Global Equity Manager**

BlackRock Institutional Trust Company

**Alternative Investment Managers**

Ft. Washington Private Equity Investors  
Actis LLP  
Landmark Partners  
Kohlberg Kravis Roberts & Co.  
Natural Gas Partners  
Carlyle Global Partners

**Real Estate**

Carlyle Realty Partners  
Landmark Real Estate Partners

**Attorney**

Ice Miller LLP

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Kentucky Teachers' Retirement System

2015



# Actuarial Section

Report of the Actuary  
on the Annual Valuation



# Cavanaugh Macdonald

CONSULTING, LLC

*The experience and dedication you deserve*

December 7, 2015

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, 2015. 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, 2018 required to support the total benefits of the System are as follows:

<u>Group</u>	<u>Combined Member and State Contribution Requirement</u>
University members hired before July 1, 2008	34.90%
University members hired on or after July 1, 2008	35.90%
Non-University members hired before July 1, 2008	37.86%
Non-University members hired on or after July 1, 2008	38.86%

These rates represent a decrease since the previous valuation in the Pension actuarially determined employer contribution rate of 0.07% of payroll for the fiscal year ending June 30, 2018. In addition, there has been a net increase in the expected state special appropriation from 2.70% to 2.94%, or 0.24% of payroll and no change in the amount required for life insurance benefits.

For the fiscal year ending June 30, 2018, in addition to the State statutory contribution rates and the state special appropriation, there is an additional employer contribution rate of 13.49% of payroll required in order to amortize the unfunded accrued liability according to the funding policy adopted by the Board. This is 0.31% less than the 13.80% determined in the previous valuation.

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

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Board of Trustees  
December 7, 2015  
Page 2

4.0% 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.

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 2015 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 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 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.

In our opinion, the System is not being funded on an actuarially sound basis since the full actuarially determined contributions are not being made by the employer. If contributions by the employer to the System continue to be 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, EA, FCA, MAAA  
Principal and Consulting Actuary

Eric H. Gary, FSA, FCA, MAAA  
Chief Health Actuary

Cathy Turcot  
Principal and Managing Director





**Report of Actuary on the Valuation**  
**Prepared as of June 30, 2015**  
**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, 2015	June 30, 2014
Number of active members	72,246	73,407
Annual salaries	\$ 3,515,113	\$ 3,486,327
Number of annuitants and beneficiaries	49,822	48,576
Annual allowances	\$ 1,767,637	\$ 1,684,852
Assets		
Market value	\$ 18,049,131	\$ 18,092,571
Actuarial value	\$ 17,219,520	\$ 16,174,199
Unfunded actuarial accrued liability	\$ 13,930,442	\$ 14,010,205
Funded Ratio	55.3 %	53.6 %
Amortization period (years)	29.3	30

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

**Contribution Rates for University Members**

Valuation Date	June 30, 2015		June 30, 2014	
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
Pension Plan:				
Normal	12.340 %	12.340 %	12.270 %	12.270 %
Accrued liability	22.560	23.560	22.700	23.700
Total	34.900 %	35.900 %	34.970 %	35.970 %
Member	7.625 %	7.625 %	7.625 %	7.625 %
State (ARC)	27.275	28.275	27.345	28.345
Total	34.900 %	35.900 %	34.970 %	35.970 %
Life Insurance Fund:				
State	0.030 %	0.030 %	0.030 %	0.030 %
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	40.480%	40.480%	40.550 %	40.550 %
Member Statutory	10.400 %	10.400 %	10.400 %	10.400 %
State Statutory	13.650	13.650	13.650	13.650
Required Increase	13.490	13.490	13.800	13.800
State Special	2.940	2.940	2.700	2.700
Total	40.480 %	40.480 %	40.550 %	40.550 %



### Contribution Rates for Non-University Members

Valuation Date	June 30, 2015		June 30, 2014	
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
Pension Plan:				
Normal	16.720 %	16.720 %	16.720 %	16.720 %
Accrued liability	21.140	22.140	21.210	22.210
Total	37.860 %	38.860 %	37.930 %	38.930 %
Member	9.105 %	9.105 %	9.105 %	9.105 %
State (ARC)	28.755	29.755	28.825	29.825
Total	37.860 %	38.860 %	37.930 %	38.930 %
Life Insurance Fund:				
State	0.030 %	0.030 %	0.030 %	0.030 %
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	45.390 %	45.390 %	45.460 %	45.460 %
Member Statutory	12.855 %	12.855 %	12.855 %	12.855 %
State Statutory	16.105	16.105	16.105	16.105
Required Increase	13.490	13.490	13.800	13.800
State Special	2.940	2.940	2.700	2.700
Total	45.390 %	45.390 %	45.460 %	45.460 %

- 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.
- Comments on the valuation results as of June 30, 2015 are given in Section IV and further discussion of the contribution levels is set out in Sections V and VI.
- 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. The funding policy is shown in Schedule H of the Report.
- 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.



**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, 2015 on the basis of which the valuation was prepared.

Group	Number	Annual Salaries (\$1,000's)
University hired before 7/1/2008	2,055	\$ 147,256
University hired after 7/1/2008	1,360	67,694
Non-University Full Time hired before 7/1/2008	40,402	2,517,108
Non-University Full Time hired after 7/1/2008	16,764	708,842
Non-University Part Time hired before 7/1/2008	3,317	28,801
Non-University Part Time hired after 7/1/2008	8,348	45,412
<b>TOTAL</b>	<b><u>72,246</u></b>	<b><u>\$ 3,515,113</u></b>

*The table reflects the active membership for whom complete valuation data was submitted. The results of the valuation were adjusted to take account of inactive members and members for whom incomplete data was submitted.*

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.

<b>The Number and Annual Retirement Allowances of Annuitants and Beneficiaries on the Roll as of June 30, 2015</b>		
Group	Number	Annual Retirement Allowances <sup>1</sup> (\$1,000's)
Service Retirements	43,349	\$ 1,609,950
Disability Retirements	2,651	76,399
Beneficiaries of Deceased Members	3,822	81,288
<b>TOTAL</b>	<b><u>49,822</u></b>	<b><u>\$ 1,767,637</u></b>

<sup>1</sup> Includes cost-of-living adjustments effective through July 1, 2015.

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 2 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, 2015 the market value of Pension Plan assets for valuation purposes held by the System amounted to \$18,049,130,737. 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 5.1%. 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, 2015 was \$17,219,519,677. The estimated investment return for the plan year ending June 30, 2015 on an actuarial value of assets basis was 12.41%, 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, 2015.

### 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, 2015. 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 \$17,169,625,916 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 \$19,176,764,815 of which \$851,860,475 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 \$345,742,284. The total prospective liabilities of the System amounts to \$36,692,133,015. Against these liabilities, the System has present assets for valuation purposes of \$17,219,519,677. When this amount is deducted from the total liabilities of \$36,692,133,015, there remains \$19,472,613,338 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 12.34% of payroll for University and 16.72% of payroll for Non-University are required.
4. Prospective normal employer and employee contributions have a present value of \$5,542,171,361. When this amount is subtracted from \$19,472,613,338, which is the present value of the total future contributions to be made by the employer, there remains \$13,930,441,977 as the amount of future unfunded accrued liability contributions.
5. The unfunded accrued liability decreased by approximately \$80 million for the plan year ending June 30, 2015 and the funding ratio increased from 53.6% to 55.3%. The decrease in the unfunded accrued liability was primarily due to the investment return on an actuarial value basis for the year being more than expected. In addition, salary increases were less than assumed which resulted in a gain. Offsetting these gains was a loss due to contribution shortfall for the plan year and a small net demographic loss due to turnover, retirement and mortality. 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,



## ACTUARIAL SECTION

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, 0.03% of payroll will be allocated to the Life Insurance Fund. Based on the results of the valuation, an additional 13.49% 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 2.94% of total payroll will be made by the State. Therefore, the total actuarially determined employer contribution rate to the Pension Plan is 27.275% for university members who become members before July 1, 2008 and 28.275% for university members who become members on or after July 1, 2008. The total actuarially determined employer contribution rate to the Pension Plan is 28.755% for non-university members who become members before July 1, 2008 and 29.755% 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 in the following table.

Contribution Rates by Source University		
Member	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Statutory Total	10.400 %	10.400 %
Statutory Medical Insurance Fund	(2.775)	(2.775)
Contribution to Pension Plan	7.625 %	7.625 %
<b>Employer</b>		
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	(0.030) %	(0.030) %
Additional to Maintain 30-Year Amortization	13.490	13.490
Special Appropriation	2.940	2.940
Contribution to Pension Plan	27.275 %	28.275 %
<b>Total Contribution to Pension Plan</b>	<b>34.900 %</b>	<b>35.900 %</b>
Contribution Rates by Source Non-University		
Member	Members hired before 7/1/2008	Members hired on or after 7/1/2008
Statutory Total	12.855 %	12.855 %
Statutory Medical Insurance Fund	(3.750)	(3.750)
Contribution to Pension Plan	9.105 %	9.105 %
<b>Employer</b>		
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	(0.030) %	(0.030) %
Additional to Maintain 30-Year Amortization	13.490	13.490
Special Appropriation	2.940	2.940
Contribution to Pension Plan	28.755 %	29.755 %
<b>Total Contribution to Pension Plan</b>	<b>37.860 %</b>	<b>38.860 %</b>



4. The valuation indicates that normal contributions at the rate of 12.34% of active university members' salaries and 16.72% 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 22.56% for university members hired before July 1, 2008, 23.56% for university members hired on and after July 1, 2008, 21.14% for non-university members hired before July 1, 2008, and 22.14% for non-university members hired on and after July 1, 2008. These rates include special appropriations of 2.94% of payroll to be made by the State. These rates are shown in the following table:

Actuarially Determined Contribution Rates				
Rate	Percentage of Active Members' Salaries			
	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	12.34 %	12.34 %	16.72 %	16.72 %
Accrued Liability *	22.56	23.56	21.14	22.14
<b>Total</b>	<b>34.90 %</b>	<b>35.90 %</b>	<b>37.86 %</b>	<b>38.86 %</b>

\* Includes special appropriations of 2.94% of payroll to be made by the State.

5. The funding policy shown in Schedule H of this report, states that the unfunded accrued liability determined in the June 30, 2014 valuation, known as the "legacy unfunded liability" will be amortized over a closed 30 year period. New sources of unfunded liability each year after June 30, 2014 will be amortized over closed 20 year periods. The legacy unfunded liability determined as of June 30, 2014 was \$14,010,204,858. The remaining balance of the legacy unfunded liability as of June 30, 2015 of \$14,282,051,575 was determined by adding interest at 7.5% and subtracting the expected amortization payment of \$778,918,647. The new source of unfunded liability of \$(351,609,598) as of June 30, 2015, is determined by subtracting the remaining balance of the legacy unfunded liability from the total unfunded actuarial accrued liability of \$13,930,441,977 as of the valuation date. Accrued liability contributions at the rates in the table above are sufficient to amortize the unfunded actuarial accrued liability in accordance with the Board funding policy, based on the assumption that the payroll will increase by 4.0% annually.

## Section VI - COMMENTS ON LEVEL OF FUNDING

- 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.
- 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 13.49%, 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.
- During the 2005 through 2010 fiscal years, a portion of the contributions required for the pension fund were allocated as loans to the Medical Insurance Fund for Stabilization Funding. Beginning with the 2009 fiscal year, contributions have also been allocated as loans for non-single subsidy funding. Payments are being made to repay these loans. In August 2010, a pension obligation bond was issued with proceeds used to fully repay the loans for the Stabilization Funding. Beginning with the 2011 fiscal year, there have been no further loans for



## ACTUARIAL SECTION

Stabilization Funding. In addition, there were no loans for single-subsidy funding for fiscal years 2013 or 2014. The table on the following page shows the amounts borrowed, annual payments and remaining balances for the non-single subsidy funding as of June 30, 2015:

Medical Insurance Fund Stabilization Funding			
FISCAL YEAR	LOAN AMOUNT	ANNUAL PAYMENT	BALANCES AS OF JUNE 30, 2015
2008/2009	\$ 8,400,000	\$ 1,228,900	\$ 4,213,170
2009/2010	9,200,000	1,345,200	5,565,983
2010/2011	10,700,000	1,564,500	7,503,774
2011/2012	<u>12,300,000</u>	<u>1,798,700</u>	<u>9,726,708</u>
<b>TOTAL</b>	<b>\$ 40,600,000</b>	<b>\$ 5,937,300</b>	<b>\$ 27,009,635</b>

4. There are no excess assets or contributions available to provide additional benefits, and there is a cumulative increase in the required employer contribution of 13.49% of payroll for the fiscal year ending June 30, 2018, as shown in the following table:

VALUATION DATE	FISCAL YEAR	INCREASE	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

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 an decrease of \$79,762,881 in the unfunded accrued liability from \$14,010,204,858 to \$13,930,441,977 during the year ending June 30, 2015.

<b>Analysis of Financial Experience</b> <i>(Dollar amounts in thousands)</i>	
ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.50%) added to previous unfunded accrued liability	\$ 1,050,765
Expected accrued liability contribution	(778,918)
Loss due to Contribution Shortfall and Timing	472,439
Experience:	
Valuation asset growth	(771,835)
Pensioners' mortality	(70,335)
Turnover and retirements	119,009
New entrants	38,561
Salary increases	(139,449)
Amendments	0
Assumption changes	
Method changes	<u>0</u>
<b>Total</b>	<b>\$ (79,763)</b>

## Section VIII - ACCOUNTING INFORMATION

1. 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.

<b>Number of Active and Retired Members</b> <b>as of June 30, 2015</b>	
GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	49,822
Terminated vested employees entitled to benefits but not yet receiving benefits	8,051
Inactive non-vested members	19,720
Active plan members	<u>72,246</u>
<b>Total</b>	<b>149,839</b>



## ACTUARIAL SECTION

2. The schedule of funding progress is shown below.

### Schedule of Funding Progress

(Dollar amount in thousands)

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)
6/30/2010	\$ 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

\* Funding method Projected Unit Credit prior to 6/30/2011

Funding method Entry Age Normal 6/30/2011 and after.

\*\* Reflects change in assumptions and methods.

\*\*\* Reflects change in assumption.

3. The information presented above was determined as part of the actuarial valuation at June 30, 2015. Additional information as of the latest actuarial valuation follows.

Valuation date	06/30/2015
Actuarial cost method	Entry age
Amortization method	Level percent of pay, closed
Remaining amortization period	29.3 years
Asset valuation method	5-year smoothed market

#### Actuarial Assumptions:

Investment rate of return\*

7.50%

Projected salary increases\*\*

4.00 - 8.20%

Cost-of-living adjustments

1.50% Annually

\*Includes price inflation at 3.50%

\*\*Includes wage inflation at 4.00%

### Schedule of Employer Contributions

Fiscal Year Ended June 30	Annual Required Contributions	Actual Employer Contributions	Percentage Contributed
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

\* 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, 2015 (Dollar amount in thousands)

##### ACTUARIAL LIABILITIES

(1)	Present value of prospective benefits payable on account of present active members		
	- Service retirement benefits	\$ 16,040,486	
	- Disability retirement benefits	749,304	
	- Death and survivor benefits	138,675	
	- Refunds of member contributions	241,160	
	Total		\$ 17,169,626
(2)	Present value of prospective benefits payable on account of present retired members, beneficiaries of deceased members, and members entitled to deferred vested benefits	\$ 17,727,682	
	- Service retirement benefits	728,940	
	- Disability retirement benefits	720,142	
	- Death and survivor benefits		
	Total		\$ 19,176,765
(3)	Present value of prospective benefits payable on account of inactive members and members entitled to deferred vested benefits		\$ 345,742
(4)	TOTAL ACTUARIAL LIABILITIES		<u>\$ 36,692,133</u>

##### PRESENT AND PROSPECTIVE ASSETS

(5)	Actuarial value of assets		\$ 17,219,520
(6)	Present value of total future contributions = (4)-(5)	\$ 19,472,613	
(7)	Present value of future member contributions and employer normal contributions		5,542,171
(8)	Prospective unfunded accrued liability contributions = (6)-(7)		<u>13,930,442</u>
(9)	TOTAL PRESENT AND PROSPECTIVE ASSETS		<u>\$ 36,692,133</u>



## ACTUARIAL SECTION

Schedule A continued ...

### Solvency Test

(dollar amounts in millions)

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)
6/30/2010	\$ 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	7,586.4	14,962.8	100	65	0
6/30/2014	3,629.7	18,676.3	7,878.4	16,174.2	100	67	0
6/30/2015	3,700.6	19,522.5	7,926.9	17,219.5	100	69	0

### SCHEDULE B

#### Development of Actuarial Value of Assets as of June 30, 2015

(1)	Actuarial Value of Assets Beginning of Year	\$ 16,174,199,191
(2)	Market Value of Assets End of Year	18,049,130,737
(3)	Market Value of Assets Beginning of Year	18,092,570,615
(4)	Cash Flow	
a.	Contributions	867,739,053
b.	Benefit Payments	1,764,488,719
c.	Administrative Expense	8,868,971
d.	Net: (4)a - (4)b - (4)c	(905,618,637)
(5)	Investment Income	
a.	Market total: (2) - (3) - (4)d	862,178,759
b.	Assumed Rate	7.50%
c.	Amount for Immediate Recognition: [ (3) x (5)b ] + [ (4)d x (5)b x 0.5 ]	1,322,982,097
d.	Amount for Phased-In Recognition: (5)a - (5)c	(460,803,338)
(6)	Phased-In Recognition of Investment Income	
a.	Current Year: 0.20 x (5)d	(92,160,668)
b.	First Prior Year	325,163,609
c.	Second Prior Year	191,479,441
d.	Third Prior Year	(160,195,981)
e.	Fourth Prior Year	363,670,625
f.	Total Recognized Investment Gain	627,957,026
(7)	Actuarial Value of Assets End of Year: (1) + (4)d + (5)c + (6)f	17,219,519,677
(8)	Difference Between Market & Actuarial Values: (2) - (7)	\$ 829,611,060
(9)	Rate of Return on Actuarial Value:	12.41%



**SCHEDULE C**

**PENSION PLAN ASSETS**  
**Summary of Receipts & Disbursements\***  
**(Market Value)**

Receipts for the Year	For the Year Ending	
	June 30, 2015	June 30, 2014
Contributions		
Members	\$ 308,159,763	\$ 304,981,620
Employers	559,579,290	563,326,249
Total	867,739,053	868,307,869
Net Investment Income	862,178,759	2,803,247,956
Total	1,729,917,812	3,671,555,825
<b>Disbursements for the Year</b>		
Benefit Payments	1,741,456,095	1,654,375,700
Refunds to Members	23,032,624	25,461,843
Miscellaneous, including expenses	8,868,971	7,955,972
Total	1,773,357,690	1,687,793,515
<b>Excess of Receipts over Disbursements</b>	(43,439,878)	1,983,762,310
<b>Reconciliation of Asset Balances</b>		
Asset Balance as of the Beginning of the Year	18,092,570,615	16,108,808,305
Excess of Receipts over Disbursements	(43,439,878)	1,983,762,310
Asset Balances as of the End of the Year	<u>18,049,130,737</u>	<u>\$ 18,092,570,615</u>
Rate of Return	5.1%	18.1%

\* 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, 2010, submitted to and adopted by the Board on September 19, 2011.

**INVESTMENT RATE OF RETURN:** 7.5% per annum, compounded annually.

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

Age	20	25	30	35	40	45	50	55	60	65
Annual Rate	8.10%	7.20%	6.20%	5.50%	5.00%	4.60%	4.50%	4.30%	4.20%	4.00%

**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 . . .**

AGE	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
			SERVICE			Before 27 Years of Service	After 27 Years of Service*
			0 - 4	5 - 9	10+		
20	0.012%	0.01%	9.00%				
25	0.015	0.01	9.00	3.00%			
30	0.020	0.02	9.00	3.00	3.00%		
35	0.035	0.05	10.00	3.25	1.75		
40	0.046	0.09	10.00	4.00	1.40		
45	0.058	0.18	11.00	4.00	1.50		17.0%
50	0.074	0.33	9.00	4.00	2.00		17.0
55	0.124	0.55	12.00	3.50	2.50	5.5%	35.0
60	0.244	0.70	12.00	3.50	2.50	13.0	24.0
62	0.324	0.70	12.00	3.50	2.50	15.0	25.0
65	0.480	0.70	12.00	3.50	2.50	21.0	26.0
70	0.821	0.70	0.00	0.00	0.00	100.0	100.0

\*Plus 10% in year when first eligible for unreduced retirement with 27 years of service.



Schedule D continued ...

**FEMALES: Annual Rate of ...**

AGE	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
			0 - 4	SERVICE 5 - 9	10+	Before 27 Years of Service	After 27 Years of Service*
20	0.007%	0.01%	7.00%				
25	0.008	0.02	8.50	4.00%			
30	0.010	0.04	9.00	4.00	1.65%		
35	0.017	0.08	9.00	3.75	1.85		
40	0.024	0.14	8.50	3.25	1.50		
45	0.037	0.32	7.50	3.25	1.25		15.0%
50	0.055	0.42	9.50	3.50	1.75		15.0
55	0.103	0.56	11.00	4.00	2.00	6.0%	35.0
60	0.201	0.85	11.00	4.00	2.00	14.0	30.0
62	0.263	0.85	11.00	4.00	2.00	12.0	25.0
65	0.390	0.85	11.00	4.00	2.00	22.0	30.0
70	0.672	0.85	0.00	0.00	0.00	100.0	100.0

\*Plus 10% in year when first eligible for unreduced retirement with 27 years of service.

**DEATHS AFTER RETIREMENT:** The RP-2000 Combined Mortality Table projected to 2020 using scale AA (set back one year for females) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table (set back seven years for males and set forward five years for females) is used for death after disability retirement. Mortality improvement is anticipated under these assumptions as recent mortality experience shows actual deaths are approximately 4% greater for healthy lives and 5% greater for disabled lives than expected under the selected tables. Representative values of the assumed annual rates of death after service retirement and after disability retirement are shown below.

**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.

**Annual Rate of Death After ...**

AGE	SERVICE RETIREMENT		DISABILITY RETIREMENT	
	MALE	FEMALE	MALE	FEMALE
45	0.1161%	0.0745%	2.2571%	1.1535%
50	0.1487	0.1100	2.2571	1.6544
55	0.2469	0.2064	2.6404	2.1839
60	0.4887	0.4017	3.2859	2.8026
65	0.9607	0.7797	3.9334	3.7635
70	1.6413	1.3443	4.6584	5.2230
75	2.8538	2.1680	5.6909	7.2312
80	5.2647	3.6066	7.3292	10.0203
85	9.6240	6.1634	9.7640	14.0049
90	16.9280	11.2205	12.8343	19.4509
95	25.6992	17.5624	16.2186	23.7467

**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, 2015. 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.

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



*Schedule F continued ...*

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 KTRS 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 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.



### *Schedule F continued ...*

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, 2015**  
**by Age and Service Groups**

Attained Age	0 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 35	>= 35	TOTAL
24 & under	2,213	2							2,215
Total Pay	41,947,049	43,502							41,990,551
Avg. Pay	18,955	21,751							18,957
25 to 29	6,199	1,397	1						7,597
Total Pay	204,011,920	66,904,762	43,050						270,959,732
Avg. Pay	32,910	47,892	43,050						35,667
30 to 34	3,056	4,991	1,307	3					9,357
Total Pay	95,321,748	249,144,319	73,460,486	153,055					418,079,608
Avg. Pay	31,192	49,919	56,205	51,018					44,681
35 to 39	2,213	2,424	4,578	962	4				10,181
Total Pay	62,011,160	121,552,831	267,069,504	61,448,344	254,485				512,336,324
Avg. Pay	28,021	50,146	58,338	63,876	63,621				50,323
40 to 44	1,926	1,566	2,269	4,007	797	1			10,566
Total Pay	48,076,172	78,903,638	133,000,641	260,740,328	54,050,935	64,650			574,836,364
Avg. Pay	24,962	50,385	58,616	65,071	67,818	64,650			54,404
45 to 49	1,436	1,228	1,510	2,120	3,065	762	3		10,124
Total Pay	35,812,710	60,907,248	87,807,089	136,589,683	209,991,357	53,758,353	291,877		585,158,317
Avg. Pay	24,939	49,599	58,150	64,429	68,513	70,549	97,292		57,799
50 to 54	1,197	750	1,085	1,254	1,534	1,754	320	1	7,895
Total Pay	26,138,213	37,365,255	62,125,573	80,091,516	106,724,424	126,744,365	24,411,479	51,329	463,652,154
Avg. Pay	21,836	49,820	57,259	63,869	69,573	72,260	76,286	51,329	58,727
55 to 59	1,417	464	754	984	1,095	865	395	33	6,007
Total Pay	25,813,988	21,457,280	44,157,300	63,512,149	76,152,402	66,191,587	33,976,083	2,927,726	334,188,515
Avg. Pay	18,217	46,244	58,564	64,545	69,546	76,522	86,015	88,719	55,633
60 to 64	1,965	372	400	624	611	451	120	92	4,635
Total Pay	26,415,228	15,272,685	24,733,514	41,330,777	44,908,769	35,340,649	10,764,337	8,630,293	207,396,252
Avg. Pay	13,443	41,056	61,834	66,235	73,500	78,361	89,703	93,808	44,746
65 & over	2,198	484	191	237	220	197	58	84	3,669
Total Pay	19,925,732	12,980,171	11,414,848	16,368,292	16,473,814	15,983,130	4,964,889	8,404,433	106,515,309
Avg. Pay	9,065	26,819	59,764	69,065	74,881	81,133	85,602	100,053	29,031
Total	23,820	13,678	12,095	10,191	7,326	4,030	896	210	72,246
Total Pay	585,473,920	664,531,691	703,812,005	660,234,144	508,556,186	298,082,734	74,408,665	20,013,781	3,515,113,126
Avg. Pay	24,579	48,584	58,190	64,786	69,418	73,966	83,045	95,304	48,655

**Average Age: 43.5**

**Average Service: 10.8**



*Schedule G continued ...*

**Table 2: Number of Retired Members and Beneficiaries  
and their Benefits by Age as of June 30, 2015**

<b>Attained Age</b>	<b>Number of Members</b>	<b>Total Annual Benefits</b>	<b>Average Annual Benefits</b>
49 & Under	851	\$ 10,886,660	\$ 12,793
50 - 54	1,234	46,495,372	37,679
55 - 59	4,148	173,846,860	41,911
60 - 64	9,601	382,583,341	39,848
65 - 69	13,081	485,814,525	37,139
70 - 74	8,460	299,153,859	35,361
75 - 79	5,417	177,327,235	32,735
80 - 84	3,509	104,398,591	29,752
85 - 89	2,221	58,575,369	26,373
90 & Over	1,300	28,554,726	21,965
<b>TOTAL</b>	<b>49,822</b>	<b>\$ 1,767,636,538</b>	<b>\$ 35,479</b>
<b>Average Age:</b>	<b>68.9</b>	<b>Average Age at Retirement:</b>	<b>55.8</b>

**Table 3: Schedule of Retirants, Beneficiaries and Survivors  
Added to and Removed from Rolls**

<b>Fiscal Year</b>	<b>ADD TO ROLLS</b>		<b>REMOVED FROM ROLLS</b>		<b>ROLLS END OF YEAR</b>		<b>Increase In Annual Allowances</b>	<b>Average Annual Allowance</b>
	<b>Number</b>	<b>Annual Allowances (Millions)</b>	<b>Number</b>	<b>Annual Allowances (Millions)</b>	<b>Number</b>	<b>Annual Allowances (Millions)</b>		
2006	2,266	\$ 121.1	1,115	\$ 20.0	38,497	\$ 1,074.2	10.4%	\$ 27,902
2007	2,050	82.1	1,041	20.7	39,506	1,135.6	5.7	28,746
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



## 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 ("KTRS") 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 KTRS 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 KTRS 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 \$487 million (Fiscal Year 2016). 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	

(Source: KTRS Report of the Actuary on the Annual Valuation Prepared as of June 30, 2013).

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.)

*Section H: Board Funding Policy 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 thirty-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 twenty-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 KTRS 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.



Kentucky Teachers' Retirement System

2015



# Actuarial Section

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



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December 7, 2015

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

### Members of the Board:

Governmental Accounting Standards Board Statements No. 43 and 45 require the Teachers' Retirement System of the State of Kentucky (the System) to conduct actuarial valuations of the System's retiree medical and other post-employment benefit plans. 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, 2015. While not verifying the data at source, the actuary performed tests for consistency and reasonability.

The valuation indicates a total annual required contribution of 6.44% of active member payroll for the MIF payable for the fiscal year ending June 30, 2015 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 3.665% and 2.690% 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. Additionally, a liability reflecting explicit KEHP dependent subsidies has been included in the liability of the MIF. Finally, some adjustments to the methods and assumptions have been made to accommodate changes made to the valuation data provided by the System.

The Life Insurance Plan valuation indicates a total annual required contribution of 0.030% of active member payroll payable for the fiscal year ending June 30, 2018 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 which 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 30-year period, on the assumption that payroll will increase by 4.00% 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 43 and 45.

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Board of Trustees  
December 7, 2015  
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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.

In our opinion, if the State contributions to the Medical Insurance Fund continue to increase to the planned levels, the Retiree Medical Plan will begin to operate in an actuarially sound basis. Assuming that required contributions to the Medical Insurance Fund are made by the employer from year to year in the future at the levels required on the basis of the successive actuarial valuations, the actuarial soundness of the Medical Insurance Fund to provide the benefits called for under the Retiree Medical Plan will improve.

Respectfully submitted,

Eric Gary, FSA, FCA, MAAA  
Chief Health Actuary

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

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## Report of Actuary on the Annual Valuation of the Retiree Medical and Life Insurance Plans Prepared as of June 30, 2015 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, 2015	June 30, 2014
Number of active members	72,246	73,407
Annual salaries	\$ 3,515,113	\$ 3,486,327
Number of deferred vested members	5,430	5,188
Number of annuitants in medical plans	38,075	37,275
Number of spouses and beneficiaries in medical plans*	7,129	7,031
Total	45,204	44,306
Assets:		
Market value	\$ 626,962	\$ 535,995
Actuarial value	\$ 637,839	\$ 508,913
Unfunded actuarial accrued liability	\$ 2,887,745	\$ 2,685,776
Amortization period (years)	30	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. 100% of 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, 2015		June 30, 2014	
Contribution For Fiscal Year Ending	June 30, 2016		June 30, 2015	
	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	1.95 %	1.95 %	1.79 %	1.79 %
Accrued liability	4.49	4.49	4.21	4.21
Total	6.44 %	6.44 %	6.00 %	6.00 %
Member	2.775 %	2.775 %	2.270 %	2.275 %
Employer (ARC)	2.775	1.775	2.270	1.270
State (ARC)	0.890	1.890	1.460	2.460
Total	6.440 %	6.440 %	6.000 %	6.000 %

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

Valuation Date	June 30, 2015		June 30, 2014	
Contribution For Fiscal Year Ending	June 30, 2016		June 30, 2015	
	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	1.95 %	1.95 %	1.79 %	1.79 %
Accrued liability	4.49	4.49	4.21	4.21
Total	6.44 %	6.44 %	6.00 %	6.00 %
Member	3.750 %	3.750 %	3.00 %	3.00 %
Employer (ARC)	3.000	3.000	2.25	2.25
State (ARC)	(0.310)	(0.310)	0.75	0.75
Total	6.440 %	6.440 %	6.00 %	6.00 %



**Medical Insurance Fund Contribution Rates for Other Employees**

Valuation Date	June 30, 2015		June 30, 2014	
Contribution For Fiscal Year Ending	June 30, 2016		June 30, 2015	
	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	1.95 %	1.95 %	1.79 %	1.79 %
Accrued liability	4.49	4.49	4.21	4.21
Total	6.44 %	6.44 %	6.00 %	6.00 %
Member	3.750 %	3.750 %	3.00 %	3.00 %
Employer (ARC)	3.750	2.750	3.00	2.00
State (ARC)	(1.060)	(0.060)	0.00	1.00
Total	6.440 %	6.440 %	6.00 %	6.00 %

**Life Insurance Fund**  
(dollar amounts in thousands)

Valuation Date	June 30, 2015	June 30, 2014
Number of active members	72,246	73,407
Annual salaries	\$ 3,515,113	\$ 3,486,327
Number of vested former members	4,295	4,113
Number of retirees in Life Insurance Plan	45,484	44,855
Assets:		
Market value	\$ 89,747	\$ 90,823
Actuarial value	\$ 97,186	\$ 96,130
Unfunded actuarial accrued liability*	\$ 1,553	\$ 1,224
Amortization period (years)	30	30
Discount rate	7.50%	7.50 %
Contribution for fiscal year ending	June 30, 2018	June 30, 2017
Normal	0.03 %	0.03 %
Accrued liability	0.00	0.00
Total	0.03 %	0.03 %

\* 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.

- The valuation indicates combined member, employer, and State contributions of 6.44% of active member payroll would be sufficient to support the current benefits of the Retiree Medical Plan and State contributions of 0.03% 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, 2015 are given in Section IV and further discussion of the contribution levels is set out in Sections VI and VII.
- 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. Additionally adjustments to the methods and assumptions used to value spouses currently covered by KEHP and the costs



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

associated with future benefit recipients assumed to be ineligible for premium-free Medicare Part A have been made to accommodate changes made to the valuation data provided by the System

- There were no changes in benefit provisions since the last valuation. However, the current treatment of KEHP dependent subsidies in the valuation process was reviewed and, as the subsidy has been in effect since 2006 and has been consistently renewed (part of the current substantive plan as understood by the employers and plan members), the liability associated with this benefit has been included in the June 30, 2015 valuation of the Retiree Medical Plan.

## Section II - MEMBERSHIP DATA

- 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, 2015, upon which the valuation was based. Detailed tabulations of the data are given in Schedule F.

Active Members as of June 30, 2015		
Group	Number	Annual Salaries (\$1,000's)
University Full Time hired before 7/1/2008	2,055	\$ 147,256
University Full Time hired after 7/1/2008	1,360	67,694
Non-University Full Time hired before 7/1/2008	40,402	2,517,108
Non-University Full Time hired after 7/1/2008	16,764	708,842
Non-University Part Time hired before 7/1/2008	3,317	28,801
Non-University Part Time hired after 7/1/2008	8,348	45,412
<b>TOTAL</b>	<b>72,246</b>	<b>\$ 3,515,113</b>

*The table reflects the active membership for whom complete valuation data was submitted. The results of the valuation were adjusted to take account of inactive members and members for whom incomplete data was submitted.*

- 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, 2015			
	Under Age 65	Age 65 and Over	TOTAL
Number	12,549	25,526	38,075
Average Age	60.4	73.9	69.5

Spouses Receiving Health Benefits as of June 30, 2015			
Number	2,624	4,505	7,129
Average Age	58.3	74.7	68.7

- The Retiree Medical Plan valuation also includes 5,430 deferred vested members eligible for health care at age 60.



### Section III - ASSETS

1. As of June 30, 2015 the market value of MIF assets held by the Retiree Medical Plan amounted to \$626,962,370 and the market value of LIF assets held by the Life Insurance Plan amounted to \$89,746,507.
2. The five-year market related value of MIF assets used for valuation purposes as of June 30, 2015 was \$637,838,912 and the five-year market related value of LIF assets used for valuation purposes as of June 30, 2015 was \$97,185,537. Schedule B shows the development of the actuarial value of assets as of June 30, 2015.
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 \$1,543,426,532 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 \$25,463,779. The liability on account of benefits payable to retirees and covered spouses amounts to \$1,956,693,974. The total actuarial accrued liability of the Retiree Medical Plan amounts to \$3,525,584,285. Against these liabilities, the Retiree Medical Plan has present assets for valuation purposes of \$637,838,912. When this amount is deducted from the actuarial accrued liability of \$3,525,584,285, there remains \$2,887,745,373 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 \$68,408,971, or 1.95% of payroll.
4. The valuation shows that the Life Insurance Plan has an actuarial accrued liability of \$16,012,905 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 \$2,041,222. The liability on account of benefits payable to retirees amounts to \$80,684,522. The total actuarial accrued liability of the Life Insurance Plan amounts to \$98,738,649. 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 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 \$97,185,537. When this amount is deducted from the actuarial accrued liability of \$98,738,649, there remains \$1,553,112 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 \$1,037,969, 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, 2015 is shown below (\$1,000's).

EXPERIENCE GAIN/(LOSS) OF THE:		MEDICAL INSURANCE FUND	LIFE INSURANCE FUND
(1)	UAAL* as of 6/30/2014	\$ 2,685,776	\$ 1,224
(2)	Normal cost from last valuation	62,262	1,079
(3)	Expected employer contributions	209,047	1,024
(4)	Interest accrual: [(1) + (2) - (3)] x interest**	203,119	96
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	2,742,110	1,375
(6)	Change due to plan amendments	143,896	0
(7)	Change due to new actuarial assumptions	0	0
(8)	Change due to claims experience	(59,191)	0
(9)	Expected UAAL after changes: (5) + (6) + (7) + (8)	\$ 2,826,815	\$ 1,375
(10)	Actual UAAL as of 6/30/2015	\$ 2,887,745	\$ 1,553
(11)	Total gain/(loss): (9) - (10)	(60,930)	(178)
	(a) Contribution excess and investment loss	62,266	(3,005)
	(b) Experience gain/(loss) (11) - (11a)	\$ (123,196)	\$ 2,827
(12)	Accrued liabilities as of 6/30/2014	\$ 3,194,689	\$ 97,354
(13)	Experience gain/(loss) as percent of actuarial accrued liabilities at start of year (11b) / (12)	(3.9%)	2.9%

\* *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 fiscal year, date of membership, and employee type.



**Employer Percentage of Payroll Contributions Made to Medical Insurance Fund**

Fiscal Year Ending	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
2016 and Later	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, 2016, 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 30-year period as a level percentage of payroll, the valuation indicates employer and State contributions of 3.665% of payroll for University employees and 2.690% of payroll for all other members. The State is scheduled to contribute 0.03% of salary to the Life Insurance Fund for the fiscal year ending June 30, 2017. CMC's valuation indicates a contribution of 0.030% for the fiscal year ending June 30, 2018 is required to sufficiently support the benefits of the Life Insurance Plan.

**Required Contribution Rates For Fiscal Year Ending June 30, 2016 Medical Insurance Fund**

Normal	1.95 %
Accrued liability	4.49
Total	6.44 %

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

Normal	0.03 %
Accrued liability	0.00
Total	0.03 %

	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)	0.890	1.890	(0.310)	(0.310)	(1.060)	(0.060)
Total	6.440 %	6.440 %	6.440 %	6.440 %	6.440 %	6.440 %

Member	0.00 %
State (ARC)	0.30
Total	0.30 %

- The valuation indicates that a total normal contribution of 1.95% 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 4.49% of payroll for the Retiree Medical Plan and 0.00% of payroll for the Life Insurance Plan.



3. The unfunded actuarial accrued liability amounts to \$2,887,745,373 for the Retiree Medical Plan and \$1,553,112 for the Life Insurance Plan as of the valuation date. An accrued liability contribution of 4.49% of payroll for the Retiree Medical Plan and 0.00% of payroll for the Life Insurance Plan is sufficient to amortize the unfunded actuarial accrued liabilities over a 30-year period, based on the assumption that the payroll will increase by 4.00% 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 the Retiree Medical Plan in an actuarially sound manner 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 3.665% 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 30 years. For the remaining membership, a member contribution of 3.750% of payroll together with employer and State contributions of 2.690% 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 30 years.

### Section VIII - ACCOUNTING INFORMATION

1. Governmental Accounting Standards Board Statements 43 and 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, 2015**

GROUP	NUMBER
Retirees currently receiving health benefits	38,075
Spouses of retirees currently receiving health benefits	7,129
Terminated employees entitled to benefits but not yet receiving benefits	5,430
Active plan members	72,246
<b>Total</b>	<b><u>122,880</u></b>

**Number of Active and Retired Members in Life  
Insurance Plan as of June 30, 2015**

GROUP	NUMBER
Retirees	45,484
Terminated employees	4,295
Active plan members	72,246
<b>Total</b>	<b><u>122,025</u></b>



**Schedule of Funding Progress  
Medical Insurance Fund  
(Dollar amount in thousands)**

ACTUARIAL VALUATION DATE	ACTUARIAL VALUE OF ASSETS	ACTUARIAL ACCRUED LIABILITIES (AAL) <sup>1</sup>	UNFUNDED AAL (UAAL)	FUNDED RATIO	COVERED PAYROLL	UAAL AS A % OF COVERED PAYROLL
	A	B	(B-A)	(A/B)	C	[(B-A)/C]
6/30/2010 <sup>2</sup>	\$ 241,224	\$ 3,206,806	\$ 2,965,582	7.5 %	\$ 3,321,614	89.3 %
6/30/2011 <sup>3</sup>	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

<sup>1</sup> Actuarial cost method of Projected Unit Credit prior to 6/30/2011 and Entry Age Normal 6/30/2011 and after.

<sup>2</sup> Reflects change in discount rate to 8.0%, change in plan design and updating medical trend.

<sup>3</sup> Reflects change in decrement assumptions and updating medical trend.

**Schedule of Funding Progress  
Life Insurance Fund  
(Dollar amount in thousands)**

ACTUARIAL VALUATION DATE	ACTUARIAL VALUE OF ASSETS	ACTUARIAL ACCRUED LIABILITIES (AAL) <sup>1</sup>	UNFUNDED AAL (UAAL)	FUNDED RATIO	COVERED PAYROLL	UAAL AS A % OF COVERED PAYROLL
	A	B	(B-A)	(A/B)	C	[(B-A)/C]
6/30/2010	\$ 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

<sup>1</sup> Actuarial cost Method of Projected Unit Credit prior to 6/30/2011 and Entry Age Normal 6/30/2011 and after.

2. The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2015. 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*
06/30/2015	Entry age	Level percent of pay, open	30 years	5-Year Smoothed Market	8.00%-Retiree Medical Plan	7.50%-Retiree Life Insurance Plan
<b>Medical Trend Assumption</b>				<u>Pre-Medicare**</u>	<u>Medicare</u>	
Fiscal Year Ending 6/30/2016				7.50 %	5.50 %	
Fiscal Year Ending 6/30/2017				6.75 %	5.25 %	
Ultimate Trend Rate				5.00 %	5.00 %	
Year of Ultimate Trend Rate				2020	2017	
* Includes price inflation at 3.50%.						
**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	RDS CONTRIBUTION	TOTAL CONTRIBUTION	PERCENTAGE OF ARC CONTRIBUTED
	(A)	(B)	(C)	(B) + (C)	[(B) + (C)]/(A)
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

### 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)
6/30/2010	\$ 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

3. Following is the calculation of the Annual OPEB Cost (AOC) and the Net OPEB Obligation (NOO) for the fiscal year ending June 30, 2015. 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, 2015

(a) Employer Annual Required Contribution	\$ 106,606,132
(b) Interest on Net OPEB Obligation	120,316,223
(c) Adjustment to Annual Required Contribution	82,194,890
(d) Annual OPEB Cost: (a) + (b) - (c)	144,727,465
(e) Employer Contributions for Fiscal Year 2015	168,084,353
(f) Increase in Net OPEB Obligation: (d) - (e)	(23,356,888)
(g) Net OPEB Obligation at beginning of Fiscal Year	1,503,952,786
(h) Net OPEB Obligation at end of Fiscal Year: (f) + (g)	<u>1,480,595,898</u>



**Trend Information for the Medical Insurance Fund**

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
6/30/2010	\$ 461,942,516	37.5 %	\$ 814,379,040
6/30/2011	485,294,173	38.9	1,110,938,699
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

**Annual OPEB Cost and Net OPEB Obligation  
for the Life Insurance Fund for Fiscal Year Ending June 30, 2015**

(a) Employer Annual Required Contribution	\$ 1,050,216
(b) Interest on Net OPEB Obligation	(616,132)
(c) Adjustment to Annual Required Contribution	(424,866)
(d) Annual OPEB Cost: (a) + (b) - (c)	858,950
(e) Employer contributions for Fiscal Year 2015	1,019,519
(f) Increase in Net OPEB Obligation: (d) - (e)	(160,569)
(g) Net OPEB Obligation at beginning of Fiscal Year	(8,215,089)
(h) Net OPEB Obligation at end of Fiscal Year: (f) + (g)	<u>\$ (8,375,658)</u>

**Trend Information for the Life Insurance Fund**

Fiscal Year Ending	Annual OPEB Cost (AOC)	Percentage of AOC Contributed	Net OPEB Obligation (NOO)
6/30/2010	\$ 1,817,516	108.2 %	\$ (7,685,177)
6/30/2011	1,546,950	107.9	(7,807,049)
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)

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 AS OF JUNE 30, 2015**  
(Dollar amounts in thousands)

	Medical Insurance Fund	Life Insurance Fund
<b>PAYROLL</b>	\$ 3,515,113	\$ 3,515,113
<b>ACTUARIAL ACCRUED LIABILITY</b>		
Present value of prospective benefits payable in respect of:		
(a) Present active members	1,543,426	\$ 16,013
(b) Present terminated vested members	25,464	2,041
(c) Present retired members and covered spouses	1,956,694	80,685
(d) Total actuarial accrued liability	3,525,584	\$ 98,739
<b>PRESENT ASSETS FOR VALUATION PURPOSES</b>	637,839	97,186
<b>UNFUNDED ACTUARIAL ACCRUED LIABILITY</b>	<u>2,887,745</u>	<u>\$ 1,553</u>
<b>CONTRIBUTIONS</b>	Fiscal Year Ending June 30, 2016	Fiscal Year Ending June 30, 2018
Normal	1.95%	0.03%
Accrued Liability	4.49	0.00
Total	6.44%	0.03%
Member	3.69%	0.00%
Employer (ARC)	2.97	0.00
State (ARC)	(0.22)	0.03
Total	6.44%	0.03%

**MEDICAL INSURANCE FUND**  
**Solvency Test**  
(Dollar amounts in millions)

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)
6/30/2010	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





Schedule A continued ...

<b>LIFE INSURANCE FUND</b> <b>Solvency Test</b> <b>(Dollar amounts in millions)</b>							
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)
6/30/2010	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

**SCHEDULE B**

<b>DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS</b> <b>MEDICAL INSURANCE FUND</b>		
(1)	Actuarial Value of Assets Beginning of Year	\$ 508,913,385
(2)	Market Value of Assets End of Year	\$ 626,962,370
(3)	Market Value of Assets Beginning of Year	\$ 535,995,450
(4)	Cash Flow	
a.	Contributions	\$ 325,552,033
b.	Benefit Payments	240,394,582
c.	Administrative Expense	1,545,235
d.	Net: (4)a - (4)b - (4)c	\$ 83,631,216
(5)	Investment Income	
a.	Market total: (2) - (3) - (4)d	\$ 7,354,704
b.	Assumed Rate	8.00%
c.	Amount for Immediate Recognition: [ (3) x (5)b ] + [ (4)d x (5)b x 0.5 ]	46,224,125
d.	Amount for Phased-In Recognition: (5)a - (5)c	\$ (38,869,421)
(6)	Phased-In Recognition of Investment Income	
a.	Current Year: 0.20 x (5)d	\$ (7,773,884)
b.	First Prior Year	6,492,851
c.	Second Prior Year	370,219
d.	Third Prior Year	0
e.	Fourth Prior Year	0
f.	Total Recognized Investment Gain	\$ (910,814)
(7)	Actuarial Value of Assets End of Year: (1) + (4)d + (5)c + (6)f	\$ 637,838,912
(8)	Difference Between Market & Actuarial Values: (2) - (7)	\$ (10,876,542)
(9)	Rate of Return on Actuarial Value:	8.23%



*Schedule B continued ...*

**DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS  
LIFE INSURANCE FUND  
AS OF JUNE 30, 2015**

(1)	Actuarial Value of Assets Beginning of Year	\$	96,130,349
(2)	Market Value of Assets End of Year	\$	89,746,507
(3)	Market Value of Assets Beginning of Year	\$	90,822,970
(4)	Cash Flow		
a.	Contributions	\$	1,019,519
b.	Benefit Payments		4,061,000
c.	Administrative Expense		25,306
d.	Net: (4)a - (4)b - (4)c	\$	(3,066,787)
(5)	Investment Income		
a.	Market total: (2) - (3) - (4)d	\$	1,990,324
b.	Assumed Rate		7.50%
c.	Amount for Immediate Recognition: [ (3) x (5)b ] + [ (4)d x (5)b x 0.5 ]		6,696,718
d.	Amount for Phased-In Recognition: (5)a - (5)c	\$	(4,706,394)
(6)	Phased-In Recognition of Investment Income		
a.	Current Year: 0.20 x (5)d	\$	(941,279)
b.	First Prior Year		(406,987)
c.	Second Prior Year		(1,226,477)
d.	Third Prior Year		0
e.	Fourth Prior Year		0
f.	Total Recognized Investment Gain	\$	(2,574,743)
(7)	Actuarial Value of Assets End of Year: (1) + (4)d + (5)c + (6)f	\$	97,185,537
(8)	Difference Between Market & Actuarial Values: (2) - (7)	\$	(7,439,030)
(9)	Rate of Return on Actuarial Value:		4.36%



### SCHEDULE C

#### MEDICAL INSURANCE FUND Summary of Receipts & Disbursements (Market Value)

<u>RECEIPTS FOR THE YEAR</u>	<i>For the Year Ending</i>	
	June 30, 2015	June 30, 2014
Contributions		
Members Statutory	\$ 100,622,991	\$ 74,329,798
Payment by Retired Members	56,844,689	60,861,093
TOTAL MEMBERS	157,467,680	135,190,891
State Statutory Contributions	21,375,292	20,841,052
Employer Contributions	77,655,778	52,247,362
State Statutory - Transition Fund/KEHP	46,232,856	84,600,000
TOTAL EMPLOYER	145,263,926	157,688,414
GRAND TOTAL	302,731,606	292,879,305
Recovery Income	22,820,427	4,879,981
Net Investment Income	7,354,704	67,741,063
TOTAL	332,906,737	365,500,349
<u>DISBURSEMENTS FOR THE YEAR</u>		
Administrative Expense	1,545,235	1,100,133
Medical Insurance Expense	240,394,582	242,070,531
TOTAL	241,939,817	243,170,664
Excess of Receipts over Disbursements	90,966,920	122,329,685
<u>RECONCILIATION OF ASSET BALANCES</u>		
Asset Balance as of the Beginning of the Year	535,995,450	413,665,765
Excess of Receipts over Disbursements	90,966,920	122,329,685
Asset Balance as of the End of the Year	<u>\$ 626,962,370</u>	<u>\$ 535,995,450</u>



Schedule C continued ...

**LIFE INSURANCE FUND**  
**Summary of Receipts & Disbursements**  
**(Market Value)**

<u>RECEIPTS FOR THE YEAR</u>	<u>For the Year Ending</u>	
	June 30, 2015	June 30, 2014
Contributions		
Members	\$ 0	\$ 0
State	855,012	839,681
Employer	164,507	166,410
TOTAL	\$ 1,019,519	\$ 1,006,091
Net Investment Income	1,990,324	4,572,845
TOTAL	\$ 3,009,843	\$ 5,578,936
 <u>DISBURSEMENTS FOR THE YEAR</u>		
Benefit Payments	\$ 4,061,000	\$ 4,692,000
Refunds to Members	0	0
Medical Insurance Payments	0	0
Miscellaneous, including expenses	25,306	21,324
TOTAL	\$ 4,086,306	\$ 4,713,324
 <u>EXCESS OF RECEIPTS OVER DISBURSEMENTS</u>	 \$ (1,076,463)	 \$ 865,612
 <u>RECONCILIATION OF ASSET BALANCES</u>		
Asset Balance as of the Beginning of the Year	\$ 90,822,970	\$ 89,957,358
Excess of Receipts over Disbursements	(1,076,463)	865,612
Asset Balance as of the End of the Year	<u>\$ 89,746,507</u>	<u>\$ 90,822,970</u>

**SCHEDULE D**  
**Statement of Actuarial Assumptions and Methods**

The rates of retirement, disability, mortality, termination, and salary increases used in the valuation were selected based on the actuarial experience study prepared as of June 30, 2010, submitted to and adopted by the Board on September 19, 2011. The rates of future participation, health care cost trend rates, and expected plan costs were determined by the actuary based on plan experience.

**Valuation Date:** June 30, 2015

**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
2016	8.29 %	7.50 %	5.50 %
2017	1.43	6.75	5.25
2018	4.62	6.25	5.00
2019	6.79	5.75	5.00
2020	4.46	5.25	5.00
2021	4.40	5.00	5.00
2022	5.57	5.00	5.00
2023	5.65	5.00	5.00
2024	5.60	5.00	5.00
2025	5.37	5.00	5.00
2026	5.12	5.00	5.00
2027 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 Increases
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 KTRS, as KTRS 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.

**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 KTRS pays as the full contribution amount. The amounts include medical and drug costs. An additional \$6.58 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.

Under Age 65 (KEHP) Full Costs as of January 1, 2016				
Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP
Single	\$ 702.10	\$ 721.14	\$ 677.74	\$ 663.68
Parent Plus	967.18	1,023.04	963.36	930.34
Couple	1,302.74	1,564.20	1,474.84	1,429.26
Family	1,453.94	1,738.40	1,640.84	1,591.52
Family C-R	810.00	865.64	814.72	792.90



Schedule D continued ...

### Average Monthly KTRS Full Costs & Contributions

Calendar Year	Under Age 65 (KEHP) Contributions	Age 65 & Over (MEHP) Full Costs	Age 65 & Over (MEHP) Contributions
2004	\$ 293	\$ 274	\$ 274
2005	412	288	288
2006	461	315	315
2007	458	283	283
2008	484	278	278
2009	545	301 <sup>1</sup>	285
2010	594	373 <sup>1</sup>	342
2011	626	289	289
2012	622	270 <sup>2</sup>	270
2013	635	294 <sup>2</sup>	290
2014	679	290 <sup>2</sup>	290
2015	669	240 <sup>2</sup>	240
2016	681	260	260

<sup>1</sup> Under GASB 43 and 45, cost reductions for the amount of the Medicare Part D Retiree Drug Subsidy cannot be taken into account in the gross cost calculations.

<sup>2</sup> 2,101 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, \$595 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 2% 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 Retiree Medical Plan Participation:** The assumed annual rates of health care plan participation for future retirees are as follows:

### Member Participation\*

Years of Service	Entered KTRS Before 7/1/2002	Entered KTRS After 6/30/2002 & Before 7/1/2008	Entered KTRS After 6/30/2008
5-9.99	23%	9%	Not Eligible
10-14.99	45	23	Not Eligible
15-19.99	68	41	41%
20-24.99	93	59	59
25-25.99	93	81	81
26-26.99	93	86	86
27 or more	93	93	93

\* Members retiring from deferred vested status are assumed to participate at 50% of the corresponding rate listed.

**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
39%	46%	8%	7%

*Schedule D continued ...*

**Spouse Coverage in Medical Plans:** Actual census data and current plan elections were used for MEHP covered spouses (including beneficiaries) of current retirees. For KEHP covered spouses of current retirees, current plan elections were used and females were assumed to be 3 years younger than males. For spouses of future retirees, 20% of future retirees are assumed to cover their spouse, with females assumed to be 3 years younger than males.

**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:** It is assumed 30% of future vested members who terminate elect to withdraw their contributions while the remaining 70% elect to leave their contributions in the plan in order to be eligible for a benefit at their retirement date.

**Payroll Growth:** 4.00% per annum, compounded annually.

**Price Inflation:** 3.50% 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 2018 (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 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.





*Schedule D continued ...*

**Separation 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 ...								
AGE	SALARY*	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
				SERVICE			Before 27 Years of Service	After 27 Years of Service**
				0 - 4	5 - 9	10+		
20	8.10%	0.012%	0.01%	9.00%				
25	7.20	0.015	0.01	9.00	3.00%			
30	6.20	0.020	0.02	9.00	3.00	3.00%		
35	5.50	0.035	0.05	10.00	3.25	1.75		
40	5.00	0.046	0.09	10.00	4.00	1.40		
45	4.60	0.058	0.18	11.00	4.00	1.50		17.0%
50	4.50	0.074	0.33	9.00	4.00	2.00		17.0
55	4.30	0.124	0.55	12.00	3.50	2.50	5.5%	35.0
60	4.20	0.244	0.70	12.00	3.50	2.50	13.0	24.0
62	4.10	0.324	0.70	12.00	3.50	2.50	15.0	25.0
65	4.00	0.480	0.70	12.00	3.50	2.50	21.0	26.0
70	4.00	0.821	0.70	0.00	0.00	0.00	100.0	100.0

\* Includes inflation at 3.5% per annum.

\*\* Plus 10% in year when first eligible for unreduced retirement with 27 years of service.

FEMALES: Annual Rate of ...								
AGE	SALARY*	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
				SERVICE			Before 27 Years of Service	After 27 Years of Service**
				0 - 4	5 - 9	10+		
20	8.10%	0.007%	0.01%	7.00%				
25	7.20	0.008	0.02	8.50	4.00%			
30	6.20	0.010	0.04	9.00	4.00	1.65%		
35	5.50	0.017	0.08	9.00	3.75	1.85		
40	5.00	0.024	0.14	8.50	3.25	1.50		
45	4.60	0.037	0.32	7.50	3.25	1.25		15.0%
50	4.50	0.055	0.42	9.50	3.50	1.75		15.0
55	4.30	0.103	0.56	11.00	4.00	2.00	6.0%	35.0
60	4.20	0.201	0.85	11.00	4.00	2.00	14.0	30.0
62	4.10	0.263	0.85	11.00	4.00	2.00	12.5	25.0
65	4.00	0.390	0.85	11.00	4.00	2.00	22.0	30.0
70	4.00	0.672	0.85	0.00	0.00	0.00	100.0	100.0

\* Includes inflation at 3.5% per annum.

\*\* Plus 10% 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 2020 using scale AA (set back one year for females) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table (set back seven years for males and set forward five years for females) is used for death after disability retirement. Mortality improvement is anticipated under these assumptions as recent mortality experience shows actual deaths are approximately 4% greater for healthy lives and 5% greater for disabled lives than expected under the selected tables. Representative values of the assumed annual rates of death after service retirement and after disability retirement are shown below:

Annual Rate of Death After . . .					
Age	Service Retirement			Disability Retirement	
	MALE	FEMALE		MALE	FEMALE
45	0.1161%	0.0745%		2.2571%	1.1535%
50	0.1487	0.1100		2.2571	1.6544
55	0.2469	0.2064		2.6404	2.1839
60	0.4887	0.4017		3.2859	2.8026
65	0.9607	0.7797		3.9334	3.7635
70	1.6413	1.3443		4.6584	5.2230
75	2.8538	2.1680		5.6909	7.2312
80	5.2647	3.6066		7.3292	10.0203
85	9.6240	6.1634		9.7640	14.0049
90	16.9280	11.2205		12.8343	19.4509
95	25.6992	17.5624		16.2186	23.7467

## 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.

**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 KTRS. Additionally, if a retiree returns to work somewhere that does not participate in the KEHP, but offers health insurance, the retiree must terminate KTRS coverage unless the employer coverage is of lesser value. For valuation purposes, active employees identified as currently receiving retiree health care through KTRS are valued as retirees.



Schedule E continued ...

### COVERED MEMBER 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 on the following page. Effective July 1, 2012, the full Shared Responsibility Contribution equals the Standard Medicare Part B premium paid by retirees ages 65 and older.

#### Under Age 65 Shared Responsibility Contribution Timeline

Effective Date	Medicare Part B Monthly Cost	Formula	Shared Responsibility Contribution
July 1, 2010	\$ 110.50	$(1/3 \times \$110.50)$	\$ 37.00
January 1, 2011	115.40	$(1/3 \times 115.40)$	39.00
July 1, 2011	115.40	$(2/3 \times 115.40)$	77.00
January 1, 2012	99.90	$(2/3 \times 99.90)$	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

**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 KTRS After 6/30/2002 and Before 7/1/2008	Entered KTRS 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.

#### Retiree Contribution Rate Basis Effective January 1, 2016

Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP	Ages 65 and Older (MEHP)
Single	\$ 654.12	\$ 641.16	\$ 629.76	\$ 650.70	\$ 260.00
Parent Plus	654.12	654.12	654.12	654.12	260.00
Couple	654.12	654.12	654.12	654.12	260.00
Family	654.12	654.12	654.12	654.12	260.00
Family C-R	654.12	654.12	654.12	654.12	260.00



Schedule E continued ...

**Under Age 65 Retiree Plan Cost Contribution:** A contribution according to the table below is required to be paid by retirees under the age of 65 based upon the plan elected:

Under Age 65 Plan Cost Contribution* Effective January 1, 2016				
Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP
Single	\$ 47.98	\$ 79.98	\$ 47.98	\$ 12.98
Parent Plus**	313.06	368.92	309.24	276.22
Couple**	648.62	910.08	820.72	775.14
Family**	799.82	1,084.28	986.72	937.40
Family C-R**	155.88	211.52	160.60	138.78

\* Does not include the additional contribution required to be paid by retirees under the age of 65 who smoke (\$40 for Single or Family Cross-Reference, and \$80 for Parent Plus, Couple or Family).

\*\* Contribution for Parent Plus, Couple, Family and Family Cross-Reference tiers is offset by the State Under Age 65 Spouse/Dependent Subsidy.

The Under Age 65 Plan Cost Contribution is reduced by subtracting the State Under Age 65 Spouse/Dependent Subsidy multiplied by 100% less the appropriate percentage in the Retiree Percentage Contribution table on the previous page, from the Under Age 65 Plan Cost Contribution.

State Under Age 65 Spouse/Dependent Subsidy Effective January 1, 2016				
Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP
Parent Plus	\$ 190.08	\$ 140.94	\$ 186.26	\$ 216.24
Couple	360.64	397.10	532.74	525.16
Family	461.84	441.30	648.74	637.42
Family C-R	77.90	58.54	82.62	110.80

**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 post-65 retirees, as well as surviving spouses of deceased retirees 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 KTRS 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 July 1, 2002, and later, pay 100% of the full contribution.

Surviving Spouse Monthly Contribution Effective January 1, 2016 Under Age 65 (KEHP)					
Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP	Age 65 & Over (MEHP)
Single	\$ 708.68	\$ 727.72	\$ 684.32	\$ 670.26	\$ 260.00
Parent Plus	973.76	1,029.62	969.94	936.92	n/a



*Schedule E continued ...*

**System Retiree Medical Plan Contributions:** The System Contribution Rate Basis is determined annually by KTRS; 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 System Contribution Rate Basis:

**Percentage of System Contribution Rate Provided to Retirees\***

Years of Service	Entered KTRS Before 7/1/2002: Age 65 or Older & Covered Before 1/1/2005	Entered KTRS Before 7/1/2002: Age 65 After or Covered After 12/31/2004	Entered KTRS After 6/30/2002 and Before 7/1/2008	Entered KTRS 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.

**System Monthly Contribution Rate Basis  
Effective January 1, 2016  
Under Age 65 (KEHP)**

Tier Elected	LivingWell CDHP	LivingWell PPO	Standard PPO	Standard CDHP	Ages 65 and Older (MEHP)
Single	\$ 654.12	\$ 641.16	\$ 629.76	\$ 650.70	\$ 260.00
Parent Plus	654.12	654.12	654.12	654.12	260.00
Couple	654.12	654.12	654.12	654.12	260.00
Family	654.12	654.12	654.12	654.12	260.00
Family C-R	654.12	654.12	654.12	654.12	260.00

**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**

Fiscal Year Ending	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
2016 & Later	2.775 %	2.775 %	3.750 %	3.750%	3.750 %	3.750 %

---

*Schedule E continued ...***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 – Service Table**  
**Distribution of Active Members as of June 30, 2015**  
**by Age and Service Groups**

Attained Age	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	2,213	2							2,215
Total Pay	41,947,049	43,502							41,990,551
Avg. Pay	18,955	21,751							18,957
25 to 29	6,199	1,397	1						7,597
Total Pay	204,011,920	66,904,762	43,050						270,959,732
Avg. Pay	32,910	47,892	43,050						35,667
30 to 34	3,056	4,991	1,307	3					9,357
Total Pay	95,321,748	249,144,319	73,460,486	153,055					418,079,608
Avg. Pay	31,192	49,919	56,205	51,018					44,681
35 to 39	2,213	2,424	4,578	962	4				10,181
Total Pay	62,011,160	121,552,831	267,069,504	61,448,344	254,485				512,336,324
Avg. Pay	28,021	50,146	58,338	63,876	63,621				50,323
40 to 44	1,926	1,566	2,269	4,007	797	1			10,566
Total Pay	48,076,172	78,903,638	133,000,641	260,740,328	54,050,935	64,650			574,836,364
Avg. Pay	24,962	50,385	58,616	65,071	67,818	64,650			54,404
45 to 49	1,436	1,228	1,510	2,120	3,065	762	3		10,124
Total Pay	35,812,710	60,907,248	87,807,089	136,589,683	209,991,357	53,758,353	291,877		585,158,317
Avg. Pay	24,939	49,599	58,150	64,429	68,513	70,549	97,292		57,799
50 to 54	1,197	750	1,085	1,254	1,534	1,754	320	1	7,895
Total Pay	26,138,213	37,365,255	62,125,573	80,091,516	106,724,424	126,744,365	24,411,479	51,329	463,652,154
Avg. Pay	21,836	49,820	57,259	63,869	69,573	72,260	76,286	51,329	58,727
55 to 59	1,417	464	754	984	1,095	865	395	33	6,007
Total Pay	25,813,988	21,457,280	44,157,300	63,512,149	76,152,402	66,191,587	33,976,083	2,927,726	334,188,515
Avg. Pay	18,217	46,244	58,564	64,545	69,546	76,522	86,015	88,719	55,633
60 to 64	1,965	372	400	624	611	451	120	92	4,635
Total Pay	26,415,228	15,272,685	24,733,514	41,330,777	44,908,769	35,340,649	10,764,337	8,630,293	207,396,252
Avg. Pay	13,443	41,056	61,834	66,235	73,500	78,361	89,703	93,808	44,746
65 & over	2,198	484	191	237	220	197	58	84	3,669
Total Pay	19,925,732	12,980,171	11,414,848	16,368,292	16,473,814	15,983,130	4,964,889	8,404,433	106,515,309
Avg. Pay	9,065	26,819	59,764	69,065	74,881	81,133	85,602	100,053	29,031
Total	23,820	13,678	12,095	10,191	7,326	4,030	896	210	72,246
Total Pay	585,473,920	664,531,691	703,812,005	660,234,144	508,556,186	298,082,734	74,408,665	20,013,781	3,515,113,126
Avg. Pay	24,579	48,584	58,190	64,786	69,418	73,966	83,045	95,304	48,655

Average Age: 43.5

Average Service: 10.8





Schedule F continued ...

**Table 2 – Total Active Member Valuation Data**

Valuation Date	Number	Annual Payroll	Annual Average Pay	Percentage Increase in Average Pay
6/30/2015	72,246	\$ 3,515,113,126	\$ 48,655	2.45 %
6/30/2014	73,407	3,486,326,799	47,493	2.12
6/30/2013	74,831	3,480,066,406	46,506	1.51
6/30/2012	75,951	3,479,567,004	45,813	1.33
6/30/2011	76,349	3,451,756,288	45,210	3.97
6/30/2010	76,387	3,321,614,223	43,484	1.51
6/30/2009	75,937	3,253,076,600	42,839	1.43

**Table 3 – Eligible Deferred Vested Members  
as of June 30, 2015  
Medical Insurance Fund  
Male & Female Demographic Breakdown**

Attained Age	Number of Males	Number of Females	Total Number
Under 30	0	5	5
30-34	73	329	402
35-39	191	631	822
40-44	229	708	937
45-49	225	750	975
50-54	225	683	908
55-59	188	606	794
60 & Over	170	417	587
<b>Total</b>	<b>1,301</b>	<b>4,129</b>	<b>5,430</b>

**Table 3 – Eligible Deferred Vested Members  
as of June 30, 2015  
Life Insurance Fund  
Male & Female Demographic Breakdown**

Attained Age	Number of Males	Number of Females	Total Number
Under 30	3	29	32
30-34	66	343	409
35-39	133	516	649
40-44	183	579	762
45-49	178	584	762
50-54	178	532	710
55-59	149	453	602
60 & Over	96	273	369
<b>Total</b>	<b>986</b>	<b>3,309</b>	<b>4,295</b>



Schedule F continued ...

**Table 4 – All Retirees & Spouses Receiving Health Care Benefits  
as of June 30, 2015  
Male & Female Demographic Breakdown**

Attained Age	Number of Males	Number of Females	Total Number
Under 40	4	10	14
40-44	22	37	59
45-49	151	124	275
50-54	662	822	1,484
55-59	1,546	2,949	4,495
60-64	2,276	6,389	8,665
65-69	3,762	7,831	11,593
70-74	2,814	4,842	7,656
75-79	1,771	2,996	4,767
80-84	1,163	1,958	3,121
85-89	565	1,417	1,982
90-94	201	629	830
95-99	34	180	214
100	2	13	15
101	2	14	16
102	0	5	5
103	1	3	4
104	0	5	5
105 & Over	0	4	4
<b>Total</b>	<b>14,976</b>	<b>30,228</b>	<b>45,204</b>

**Table 5 – 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
2010	1,710	555	2,265	876	529	1,405	34,315	6,834	41,149
2011	1,770	629	2,399	1,052	541	1,593	35,033	6,922	41,955
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

\* Reflects members, spouses, and beneficiaries participating in a health care plan.

\*\* Includes spouses, beneficiaries, and surviving spouses.



Schedule F continued ...

**Table 6 – 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
2010	1,799	\$ 8,995	806	\$ 4,030	39,951	\$ 199,755	2.55 %	\$ 5,000
2011	2,025	10,125	858	4,290	41,118	205,590	2.92	5,000
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

*\* 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.*

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Kentucky Teachers' Retirement System

2015



# Actuarial Section

Additional Report on  
GASB Statement Number 67



December 4, 2015

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

Members of the Board:

Presented in this report is information to assist the Teachers' Retirement System of the State of Kentucky (KTRS), in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 67. This report has been prepared as of June 30, 2015 (the Measurement Date) to assist KTRS in better understanding the requirements of GASB 67 and to identify the information to be provided by KTRS's actuary, Cavanaugh Macdonald Consulting (CMC).

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of June 30, 2014. The valuation was based upon data, furnished by the Executive Secretary and KTRS staff, concerning active, inactive and retired members along with pertinent financial information.

To the best of our knowledge, this report is complete and accurate. The necessary calculations were performed by, and under the supervision of, independent actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The calculations were prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board, and, in our opinion, meet the requirements of GASB 67.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the System, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the System. In addition, the

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calculations were completed in compliance with the laws governing the System. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 67 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Respectfully submitted,



Edward A. Macdonald, ASA, FCA, MAAA  
President



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



**REPORT OF THE ANNUAL GASB STATEMENT NO. 67  
REQUIRED INFORMATION FOR THE  
TEACHERS' RETIREMENT SYSTEM OF THE STATE OF KENTUCKY  
PREPARED AS OF JUNE 30, 2015**

**Section 1: Introduction**

The Governmental Accounting Standards Board issued Statement No. 67 (GASB 67), *"Financial Reporting For Pension Plans"*, in June 2012. This report, prepared as of June 30, 2015 (the Measurement Date), presents information to assist the Teachers' Retirement System of the State of Kentucky (KTRS), in meeting the requirements of GASB 67. Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of KTRS as of June 30, 2014. The results of that valuation were detailed in a report dated December 12, 2014.

GASB 67 requires a measurement of the Total Pension Liability (TPL) utilizing the Entry Age Normal actuarial funding method. If the valuation date at which the TPL is determined is before the measurement date, as is the case here, the TPL must be rolled forward to the measurement date. The Net Pension Liability (NPL) is then set equal to the rolled forward TPL minus the System's Fiduciary Net Position (FNP) (basically the market values of assets) as of the Measurement Date. The benefit provisions recognized in the calculation of the TPL are summarized in Schedule B. The development of the roll-forward of the TPL is shown in the table on page 148.

Among the assumptions needed for the liability calculation is a Single Equivalent Interest Rate (SEIR) as described by GASB 67. To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefits payable under the plan's provisions applicable to the membership and beneficiaries of the System on the Measurement Date. We have projected future employer contributions to be made based on the amounts required by statute. Although the KTRS Board of Trustees adopted a funding policy, shown in Schedule E, on December 16, 2013, the State has not funded the actuarially determined contributions since 2009. On this basis, if the FNP is not projected to be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted, the SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. Our calculations indicated that the FNP is projected to be depleted, so a bond rate is used in the determination of the SEIR. On this basis, we have determined that a discount rate of 4.88 percent meets the requirements of GASB 67.

The sections that follow provide the results of all the necessary calculations, presented in the order laid out in GASB 67 for note disclosure and Required Supplementary Information.

**Section 2: Financial Statement Notes**

The material presented herein will follow the order presented in GASB 67. Paragraph numbers are provided for ease of reference.

**Paragraphs 30(a) (1)-(3):** The information required is to be supplied by the System.

**Paragraph 30(a) (4):** The data required regarding the membership of the KTRS were furnished by the System office. The following table summarizes the membership of the System as of June 30, 2014, the actuarial valuation date.

Membership	
	Number
Retirees And Survivors Currently Receiving Benefits	48,576
Terminated Vested Employees Entitled To But Not Yet Receiving Benefits	7,762
Inactive Non-vested Members	27,689
Active Members	73,407
<b>TOTAL</b>	<b>157,434</b>

**Paragraphs 30(a)(5)-(6) and Paragraphs 30(b)-(f):** The information required is to be supplied by the System.

**Paragraphs 31(a) (1)-(4):** The information is provided in the following table. As stated on the previous page, the Net Pension Liability (NPL) is equal to the Total Pension Liability (TPL) minus the Fiduciary Net Position (FNP). That result as of June 30, 2015 is presented in the table below (\$ thousands).

	Fiscal Year Ending 6/30/2015
Total Pension Liability (TPL)	\$ 42,476,699
Fiduciary Net Position (FNP)	18,049,131
Net Pension Liability (NPL)	<u>\$ 24,427,568</u>
Ratio of FNP to TPL	42.49%

**Paragraph 31(b) (1)(a)-(f):** This paragraph requires information regarding the actuarial assumptions used to measure the TPL. The set of actuarial assumptions utilized in developing the TPL are outlined in Schedule C. The total pension liability was determined by an actuarial valuation as of June 30, 2014, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.50 percent
Salary increases	4.00 - 8.20 percent, including inflation
Investment rate of return	7.50 percent, net of pension plan investment expense, including inflation
Municipal Bond Index Rate	3.82%
Single Equivalent Interest Rate	4.88%

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 AA to 2020 with a set back of 1 year for females.

The actuarial assumptions used in the June 30, 2014 valuation were based on the results of an actuarial experience study for the period July 1, 2005 - June 30, 2010 adopted by the Board on December 19, 2011.

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 asset allocation and best estimates of arithmetic real rates of return for each major asset class, as provided by KTRS's investment consultant, are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
U.S. Equity	45.0%	6.4%
Non U.S. Equity	17.0%	6.5%
Fixed Income	24.0%	1.6%
High Yield Bonds	4.0%	3.1%
Real Estate	4.0%	5.8%
Alternatives	4.0%	6.8%
Cash	2.0%	1.5%
Total	<u>100.0%</u>	

Section 2: Financial Statement Notes continued ...

*Discount rate.* The discount rate used to measure the total pension liability was 4.88 percent. 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 that Employer contributions will be made at statutorily required rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members until the 2039 plan year. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments through 2038 and a municipal bond index rate of 3.82 percent was applied to all periods of projected benefit payments after 2038. 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.

**Paragraph 31(b) (1) (g):** This paragraph requires disclosure of the sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of the System, calculated using the discount rate of 4.88 percent, 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 (3.88 percent) or 1-percentage-point higher (5.88 percent) than the current rate (\$ thousands):

<i>(in thousands)</i>	<b>1% Decrease (3.88%)</b>	<b>Current Discount Rate (4.88%)</b>	<b>1% Increase (5.88%)</b>
System's net pension liability	\$ 30,402,796	\$ 24,427,568	\$ 19,482,972

**Paragraph 31(c):** June 30, 2014 is the actuarial valuation date upon which the TPL is based. The TPL as of June 30, 2014 was determined using a discount rate of 4.88% which was based on a municipal bond index rate as of that date equal to 3.82%. An expected TPL is determined as of June 30, 2015 using standard roll forward techniques. 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. This procedure is shown in the following table:

<b>TPL Roll-Forward</b> <i>(in thousands)</i>	
(a) TPL based on June 30, 2014 Valuation (4.88%)	\$ 41,167,140
(b) Entry Age Normal Cost for the Year July 1, 2014 - June 30, 2015 (4.88%)	1,108,145
(c) Actual Benefit Payments (including refunds) for the Year July 1, 2014 - June 30, 2015	1,764,489
(d) TPL as of June 30, 2015 = [ (a) × (1.0488) ] + (b) - [ (c) × (1.0244) ]	<u>\$ 42,476,699</u>

The following shows the development of the difference between expected and actual experience:

<b>Determination of Experience Gain/(Loss)</b> <i>(in thousands)</i>	
(a) TPL as of June 30, 2014 (5.23%)	\$ 39,684,776
(b) Entry Age Normal Cost for the Year July 1, 2014 - June 30, 2015 (5.23%)	1,015,080
(c) Actual Benefit Payments (including refunds) for the Year July 1, 2014 - June 30, 2015	1,764,489
(d) Expected TPL as of June 30, 2015 = [ (a) × (1.0523) ] + (b) - [ (c) × (1.02615) ]	\$ 40,964,739
(e) Actual TPL as of June 30, 2015 (4.88%)	\$ 42,476,699
(f) Difference between expected and actual Experience as of June 30, 2015 = (d) - (e)	<u>\$ (1,511,960)</u>

### Section 3: Required Supplementary Information

There are several tables of Required Supplementary Information (RSI) that need to be included in the System's financial statements:

**Paragraphs 32(a)-(c):** The required tables are provided in Schedule A.

**Paragraph 32(d):** The money-weighted rates of return required are to be supplied by the System.

**Paragraph 34:** In addition the following should be noted regarding the RSI:

**Changes of benefit terms.** None

**Changes of assumptions.** In the 2011 valuation and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables rather than the 1994 Group Annuity Mortality Table, which was used prior to 2011. In the 2011 valuation, rates of withdrawal, retirement, disability and mortality were adjusted to more closely reflect actual experience. In the 2011 valuation, the Board adopted an interest smoothing methodology to calculate liabilities for purposes of determining the actuarially determined contributions.

**Methods and assumptions used in calculations of actuarially determined contributions.** 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 (as of June 30, 2012 for the fiscal year 2015 contributions). The following actuarial methods and assumptions were used to determine contribution rates reported in the most recent year of that schedule:

<u>Actuarial Cost Method</u>	<u>Amortization Method</u>	<u>Remaining Amortization Period</u>	<u>Asset Valuation Method</u>	<u>Inflation</u>	<u>Salary Increase</u>	<u>Ultimate Investment Rate of Return*</u>
Entry Age	Level percent of pay, open	30 years	5-year smoothed market	3.50%	4.00 to 8.20 percent, including inflation	7.50 percent, net of pension plan investment expense, including inflation
* The actuarially determined contribution rates are determined using the interest smoothing methodology adopted by the Board.						

Schedule A  
**Required Supplementary Information**  
**Schedule of Changes in the Net Pension Liability**  
**GASB 67 Paragraph 32(a)**  
*(In Thousands)*

	2015	2014
<b>Total Pension Liability</b>		
Service Cost	\$ 1,015,080	\$ 1,002,338
Interest	2,029,372	1,956,610
Benefit Changes	0	0
Difference Between Expected and Actual Experience	1,511,960	0
Changes of Assumptions	0	(353,043)
Benefit Payments	(1,741,456)	(1,654,376)
Refunds of Contributions	<u>(23,033)</u>	<u>(25,462)</u>
<b>Net Change in Total Pension Liability</b>	2,791,923	926,067
<b>Total Pension Liability- Beginning</b>	<u>39,684,776</u>	<u>38,758,709</u>
<b>Total Pension Liability- Ending (a)</b>	<u>\$ 42,476,699</u>	<u>\$ 39,684,776</u>
 <b>Plan Net Position</b>		
Contributions-State of KY	\$ 480,073	\$ 483,330
Contributions-Other Employers	79,506	79,996
Contributions-Member	308,160	304,982
Net Investment Income	862,179	2,803,249
Benefit Payments	(1,741,456)	(1,654,376)
Administrative Expense	(8,869)	(7,956)
Refunds of Contributions	(23,033)	(25,462)
Other	<u>0</u>	<u>0</u>
<b>Net Change in Plan Net Position</b>	(43,440)	1,983,763
<b>Plan Net Position - Beginning</b>	<u>18,092,571</u>	<u>16,108,808</u>
<b>Plan Net Position - Ending (b)</b>	<u>\$ 18,049,131</u>	<u>\$ 18,092,571</u>
<b>Employers' Net Pension Liability - Ending (a) - (b)</b>	<u>\$ 24,427,568</u>	<u>\$ 21,592,205</u>

*Schedule A: Required Supplementary Information continued ...*

**Schedule A**  
**Required Supplementary Information**  
**Schedule of Net Pension Liability**  
**GASB 67 Paragraph 32(b)**  
*(In Thousands)*

	2015	2014*
<b>Total Pension Liability</b>	\$ 42,476,699	\$ 39,684,776
Plan Net Position	<u>18,049,131</u>	<u>18,092,571</u>
Net Pension Liability	\$ 24,427,568	\$ 21,592,205
Ratio of Plan Net Position to Total Pension Liability	42.49%	45.59%
Covered-Employee Payroll	\$ 3,455,008	\$ 3,317,422
Net Pension Liability as a Percentage of Covered-Employee Payroll	707.02%	650.87%

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

**Schedule A**  
**Required Supplementary Information**  
**Schedule of Employer Contributions**  
**GASB 67 Paragraph 32(c)**  
*(In Thousands)*

	2015	2014*	2013	2012	2011	2010	2009	2008	2007	2006
Covered-Employee Payroll	\$ 3,455,008	\$ 3,317,422	\$ 3,310,710	\$ 3,310,176	\$ 3,283,749	\$ 3,321,614	\$ 3,253,077	\$ 3,190,332	\$ 2,975,289	\$ 2,859,477
Actual Employer Contributions	\$ 559,579	\$ 563,326	\$ 568,233	\$ 557,340	\$ 1,037,936	\$ 479,805	\$ 442,550	\$ 466,248	\$ 434,890	\$ 406,107
Actuarially Determined Employer Contributions	913,654	823,446	802,985	757,822	678,741	633,938	600,283	563,789	494,565	406,107
Annual Contribution Excess (Deficiency)	\$ <u>(354,075)</u>	\$ <u>(260,120)</u>	\$ <u>(234,752)</u>	\$ <u>(200,482)</u>	\$ <u>359,195</u>	\$ <u>(154,133)</u>	\$ <u>(157,733)</u>	\$ <u>(97,541)</u>	\$ <u>(59,675)</u>	\$ <u>0</u>
Actual Contributions as a Percentage of Covered-Employee Payroll	16.20%	16.98%	17.16%	16.84%	31.61%	14.44%	13.60%	14.61%	14.62%	14.20%

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

**Schedule B****Summary of Main Benefit Provisions**

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, 2014. 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 Retirement**

- 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.

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 Retirement**

- 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**

- 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.



*Section B: Summary of Main Benefit Provisions continued ...*

**Disability Retirement Allowance**

**Condition for Retirement**

- 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 KTRS 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 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.

## Section B: Summary of Main Benefit Provisions continued ...

### 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 C

### Statement of Actuarial Assumptions and Methods

**Investment Rate of Return:** 7.50% per annum, compounded annually.

**Salary Increases:** Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 3.50% per annum:

Age	20	25	30	35	40	45	50	55	60	65
Annual Rate	8.10%	7.20%	6.20%	5.50%	5.00%	4.60%	4.50%	4.30%	4.20%	4.00%

**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 ...

AGE	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
			SERVICE			Before 27 Years of Service	After 27 Years of Service*
			0 - 4	5 - 9	10+		
20	0.012%	0.01%	9.00%				
25	0.015	0.01	9.00	3.00%			
30	0.020	0.02	9.00	3.00	3.00%		
35	0.035	0.05	10.00	3.25	1.75		
40	0.046	0.09	10.00	4.00	1.40		
45	0.058	0.18	11.00	4.00	1.50		17.0%
50	0.074	0.33	9.00	4.00	2.00		17.0
55	0.124	0.55	12.00	3.50	2.50	5.5%	35.0
60	0.244	0.70	12.00	3.50	2.50	13.0	24.0
62	0.324	0.70	12.00	3.50	2.50	15.0	25.0
65	0.480	0.70	12.00	3.50	2.50	21.0	26.0
70	0.821	0.70	0.00	0.00	0.00	100.0	100.0

\*Plus 10% in year when first eligible for unreduced retirement with 27 years of service.

Section C: Statement of Actuarial Assumptions and Methods continued ...

FEMALES: Annual Rate of ...

AGE	DEATH	DISABILITY	WITHDRAWAL			RETIREMENT	
			SERVICE			Before 27 Years of Service	After 27 Years of Service*
			0 - 4	5 - 9	10+		
20	0.007%	0.01%	7.00%				
25	0.008	0.02	8.50	4.00%			
30	0.010	0.04	9.00	4.00	1.65%		
35	0.017	0.08	9.00	3.75	1.85		
40	0.024	0.14	8.50	3.25	1.50		
45	0.037	0.32	7.50	3.25	1.25		15.0%
50	0.055	0.42	9.50	3.50	1.75		15.0
55	0.103	0.56	11.00	4.00	2.00	6.0%	35.0
60	0.201	0.85	11.00	4.00	2.00	14.0	30.0
62	0.263	0.85	11.00	4.00	2.00	12.0	25.0
65	0.390	0.85	11.00	4.00	2.00	22.0	30.0
70	0.672	0.85	0.00	0.00	0.00	100.0	100.0

\*Plus 10% in year when first eligible for unreduced retirement with 27 years of service.

**Deaths After Retirement:** The RP-2000 Combined Mortality Table projected to 2020 using scale AA (set back one year for females) is used for death after service retirement and beneficiaries. The RP-2000 Disabled Mortality Table (set back seven years for males and set forward five years for females) is used for death after disability retirement. Mortality improvement is anticipated under these assumptions as recent mortality experience shows actual deaths are approximately 4% greater for healthy lives and 5% greater for disabled lives than expected under the selected tables. Representative values of the assumed annual rates of death after service retirement and after disability retirement are shown below:

Annual Rate of Death After ...

AGE	SERVICE RETIREMENT		DISABILITY RETIREMENT	
	MALE	FEMALE	MALE	FEMALE
45	0.1161%	0.0745%	2.2571%	1.1535%
50	0.1487	0.1100	2.2571	1.6544
55	0.2469	0.2064	2.6404	2.1839
60	0.4887	0.4017	3.2859	2.8026
65	0.9607	0.7797	3.9334	3.7635
70	1.6413	1.3443	4.6584	5.2230
75	2.8538	2.1680	5.6909	7.2312
80	5.2647	3.6066	7.3292	10.0203
85	9.6240	6.1634	9.7640	14.0049
90	16.9280	11.2205	12.8343	19.4509
95	25.6992	17.5624	16.2186	23.7467

**ASSETS:** Market Value

**EXPENSE LOAD:** None.

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

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

### Schedule D

#### 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, 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 E

#### Board Funding Policy

##### Introduction

Pursuant to the provisions of KRS 161.250, the Board of Trustees ("Board") of the Kentucky Teachers' Retirement Systems ("KTRS") 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 KTRS 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 KTRS 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:

Section E: Board Funding Policy continued ...

	Cumulative Increase as a % of Payroll	Cumulative Increase of Annual Retirement Appropriations Payable by the State	
2009	1.88	\$ 60,499,800	(Source: KTRS Report of the Actuary on the Annual Valuation Prepared as of June 30, 2014).
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	

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.)
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 thirty-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 twenty-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.

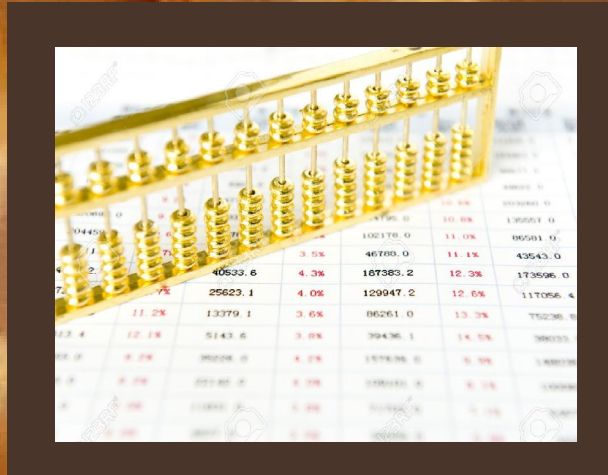
The Board also recognizes that, from time to time, the state may desire to contribute lump sum payments toward satisfaction of unfunded liability rather than amortization of the debt. Total unfunded liability is published in every annual valuation of the retirement system and KTRS will work with the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

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# Kentucky Teachers' Retirement System

# 2015



## Statistical Section



This section of the Kentucky Teachers' Retirement System Comprehensive Annual Financial Report (KTRS CAFR) 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 161

These schedules contain trend information to help the reader understand how KTRS's financial performance & well-being have changed over time.

Demographic & Economic Information ..... page 163

These schedules offer demographic and economic indicators to help the reader understand the System's environment within which KTRS's financial activities take place.

Operating Information ..... page 168

These schedules contain benefits, service, and employer contribution data to help the reader understand how KTRS's financial report relates to KTRS's services and activities.

**Defined Benefit Plan**  
Past Ten Fiscal Years

**Additions by Source**

Year	Employer Contributions	Member Contributions	Net Investment Income	Total Additions to Plan Net Position
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)
2007	434,890,469	269,687,864	2,063,878,767	2,768,457,100
2006	410,920,969	258,464,856	717,308,002	1,386,693,827

**Deductions by Type**  
(Including Benefits by Type)

Year	Service Retirants	Disability Retirants	Survivors	Life Insurance*	TOTAL Benefits	Refunds	Administrative Expense	Total Deductions to Plan Net Position
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
2007	1,040,003,417	48,863,876	13,671,586		1,102,538,879	14,822,827	7,351,846	1,124,713,552
2006	972,018,057	46,750,585	12,943,639	3,894,000	1,035,606,281	12,834,222	6,839,859	1,055,280,362

\* Life Insurance Plan valued separately-- see page 153.

**Changes in Plan Net Position**

Year	Total Additions to Plan Net Position	Total Deductions to Plan Net Position	Changes in Plan Net Position
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)
2007	2,768,457,100	1,124,713,552	1,643,743,548
2006	1,386,693,827	1,055,280,362	331,413,465

**Medical Insurance Plan**  
Past Ten Fiscal Years

**Additions by Source**

Year	Employer Contributions	Member Contributions	Recovery Income	Net Investment Income	Total Additions to Plan Net Position
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
2007	113,233,784	53,099,678	10,337,338	6,722,080	183,392,880
2006	89,319,498	51,697,167	6,117,979	6,804,286	153,938,930

**Deductions by Type**  
(Including Benefits by Type)

Year	Insurance Benefit Expense		Administrative Expense	Total Insurance Benefits Expense	Refunds*	Total Deductions to Plan Net Position
	Under Age 65	Age 65 & Over				
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
2007	104,828,254	69,400,843		174,229,097	5,834	174,234,931
2006	102,970,290	66,660,106		169,630,396	5,143	169,635,539

\*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
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
2007	183,392,880	174,234,931	9,157,949
2006	153,938,930	169,635,539	(15,696,609)

**Life Insurance Plan**  
Past Nine Fiscal Years

**Additions by Source**

Year	Employer Contributions	Net Investment Income	Total Additions to Plan Net Position
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
2007	5,022,137	(3,413,537)	1,608,600

**Deductions by Type**  
(Including Benefits by Type)

Year	Life Insurance	Total Deductions to Plan Net Position
2015	\$ 4,061,000	\$ 4,086,306
2014	4,692,000	4,713,324
2013	4,614,718	4,639,143
2012	4,397,281	4,420,167
2011	4,120,000	4,141,511
2010	4,148,511	4,148,511
2009	3,694,000	3,694,000
2008	4,003,000	4,003,000
2007	4,245,000	4,245,000

**Changes in Plan Net Position**

Total Additions to Plan Net Position	Total Deductions to Plan Net Position	Changes in Plan Net Position
\$ 3,009,843	\$ 4,086,306	\$ (1,076,463)
5,578,936	4,713,324	865,612
2,355,255	4,639,143	(2,283,888)
8,134,733	4,420,167	3,714,566
4,763,598	4,141,511	622,087
7,350,470	4,148,511	3,201,959
10,738,431	3,694,000	7,044,431
11,732,740	4,003,000	7,729,740
1,608,600	4,245,000	(2,636,400)

**Distribution of Active Contributing Members**  
as of June 30, 2015

Age	By Age	
	Male	Female
20-24	611	2,269
25-29	1,783	6,050
30-34	2,384	7,213
35-39	2,520	7,708
40-44	2,650	8,126
45-49	2,303	7,490
50-54	1,934	6,083
55-59	1,552	4,788
60-64	1,273	3,610
65 & over	1,121	2,569
<b>TOTAL</b>	<b>18,131</b>	<b>55,906</b>

Years of Service	By Service	
	Male	Female
Less than 1	2,511	8,085
1-4	4,200	12,650
5-9	3,326	10,255
10-14	2,805	9,019
15-19	2,380	7,456
20-24	1,659	4,996
25-29	954	2,737
30-34	228	588
35 or more	68	120
<b>TOTAL</b>	<b>18,131</b>	<b>55,906</b>

**Principal Participating Employers  
Current Year and Nine Years Ago**

	2015			2006		
	Covered Employees	Rank	Percentage of Total System	Covered Employees	Rank	Percentage of Total System
Jefferson County Schools	10,300	1	13.91%	9,738	1	12.96%
Fayette County Public Schools	4,433	2	5.99	3,974	2	5.29
Boone County Schools	1,871	3	2.53	1,546	3	2.06
Hardin County Schools	1,318	4	1.78	1,325	4	1.76
Kenton County Schools	1,261	5	1.70	1,177	5	1.57
Warren County Schools	1,258	6	1.70	1,089	10	1.45
Bullitt County Schools	1,222	7	1.65	1,102	9	1.47
Oldham County Schools	1,192	8	1.61	1,055	11	1.40
Madison County Schools	1,109	9	1.50	1,125	7	1.50
Daviess County Schools	1,082	10	1.46	1,112	8	1.48
All Other*	48,993		66.17	51,896		69.07
<b>TOTAL (208 Employers)</b>	<b><u>74,039</u></b>		<b><u>100.00%</u></b>	<b><u>75,139</u></b>		<b><u>100.00%</u></b>

\* In 2015, "all other" consisted of:

Type	Number	Employees
Local School Districts	163	43,395
Higher Education	6	3,510
State Agencies	15	1,647
Regional Coops	8	329
Other	6	112
<b>TOTAL</b>	<b><u>198</u></b>	<b><u>48,993</u></b>

**KTRS Schedule of Participating Employers  
School Districts: County Schools**

1. Adair	25. Clark	49. Harrison	73. Madison	97. Perry
2. Allen	26. Clay	50. Hart	74. Magoffin	98. Pike
3. Anderson	27. Clinton	51. Henderson	75. Marion	99. Powell
4. Ballard	28. Crittenden	52. Henry	76. Marshall	100. Pulaski
5. Barren	29. Cumberland	53. Hickman	77. Martin	101. Robertson
6. Bath	30. Daviess	54. Hopkins	78. Mason	102. Rockcastle
7. Bell	31. Edmonson	55. Jackson	79. McCracken	103. Rowan
8. Boone	32. Elliott	56. Jefferson	80. McCreary	104. Russell
9. Bourbon	33. Estill	57. Jessamine	81. McLean	105. Scott
10. Boyd	34. Fayette	58. Johnson	82. Meade	106. Shelby
11. Boyle	35. Fleming	59. Kenton	83. Menifee	107. Simpson
12. Bracken	36. Floyd	60. Knott	84. Mercer	108. Spencer
13. Breathitt	37. Franklin	61. Knox	85. Metcalfe	109. Taylor
14. Breckinridge	38. Fulton	62. Larue	86. Monroe	110. Todd
15. Bullitt	39. Gallatin	63. Laurel	87. Montgomery	111. Trigg
16. Butler	40. Garrard	64. Lawrence	88. Morgan	112. Trimble
17. Caldwell	41. Grant	65. Lee	89. Muhlenberg	113. Union
18. Calloway	42. Graves	66. Leslie	90. Nelson	114. Warren
19. Campbell	43. Grayson	67. Letcher	91. Nicholas	115. Washington
20. Carlisle	44. Green	68. Lewis	92. Ohio	116. Wayne
21. Carroll	45. Greenup	69. Lincoln	93. Oldham	117. Webster
22. Carter	46. Hancock	70. Livingston	94. Owen	118. Whitley
23. Casey	47. Hardin	71. Logan	95. Owsley	119. Wolfe
24. Christian	48. Harlan	72. Lyon	96. Pendleton	120. Woodford

**KTRS Schedule of Participating Employers (continued)**  
**School Districts: City Schools**

- |                    |                      |                 |                   |
|--------------------|----------------------|-----------------|-------------------|
| 1. Anchorage       | 15. Covington        | 29. Hazard      | 43. Raceland      |
| 2. Ashland         | 16. Danville         | 30. Jackson     | 44. Russell       |
| 3. Augusta         | 17. Dawson Springs   | 31. Jenkins     | 45. Russellville  |
| 4. Barbourville    | 18. Dayton           | 32. Ludlow      | 46. Science Hill  |
| 5. Bardstown       | 19. East Bernstadt   | 33. Mayfield    | 47. Silver Grove  |
| 6. Beechwood       | 20. Elizabethtown    | 34. Middlesboro | 48. Somerset      |
| 7. Bellevue        | 21. Eminence         | 35. Murray      | 48. Southgate     |
| 8. Berea           | 22. Erlanger-Elsmere | 36. Newport     | 50. Walton-Verona |
| 9. Bowling Green   | 23. Fairview         | 37. Owensboro   | 51. West Point    |
| 10. Burgin         | 24. Fort Thomas      | 38. Paducah     | 52. Williamsburg  |
| 11. Campbellsville | 25. Frankfort        | 39. Paintsville | 53. Williamstown  |
| 12. Caverna        | 26. Fulton           | 40. Paris       |                   |
| 13. Cloverport     | 27. Glasgow          | 41. Pikeville   |                   |
| 14. Corbin         | 28. Harlan           | 42. Pineville   |                   |

**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. Legislative Research Commission
3. Finance and Administration Cabinet

**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

### Number of Payments in United States

122 ALABAMA	8 NEW JERSEY
1 ALASKA	16 NEW MEXICO
86 ARIZONA	41 NEW YORK
33 ARKANSAS	248 NORTH CAROLINA
110 CALIFORNIA	2 NORTH DAKOTA
60 COLORADO	610 OHIO
8 CONNECTICUT	24 OKLAHOMA
7 DELAWARE	30 OREGON
1,090 FLORIDA	51 PENNSYLVANIA
235 GEORGIA	RHODE ISLAND
5 HAWAII	187 SOUTH CAROLINA
9 IDAHO	9 SOUTH DAKOTA
102 ILLINOIS	870 TENNESSEE
685 INDIANA	190 TEXAS
16 IOWA	27 UTAH
32 KANSAS	1 VERMONT
45 LOUISIANA	151 VIRGINIA
16 MAINE	41 WASHINGTON
29 MARYLAND	100 WEST VIRGINIA
20 MASSACHUSETTS	28 WISCONSIN
44 MICHIGAN	2 WYOMING
21 MINNESOTA	
48 MISSISSIPPI	
78 MISSOURI	
6 MONTANA	
7 NEBRASKA	
26 NEVADA	
4 NEW HAMPSHIRE	

### Distribution of Retirement and Medical Payments Worldwide

As of June 30, 2015



### Number of Payments Outside United States

8 DISTRICT OF COLUMBIA	1 NEW ZEALAND
2 AMERICAN SAMOA	1 PHILIPPINES
3 MILITARY APO	1 SWEDEN
1 AUSTRALIA	1 SWITZERLAND
1 BARBADOS	1 UNITED KINGDOM
5 CANADA	

### TOTALS

Number of Out of State Payments .....	5,606
Out of State Payments .....	\$163,465,555
Number of Payments .....	51,401
Amount of Payments .....	\$1,982,360,207



**Distribution of Retirement and Medical Payments Statewide  
as of June 30, 2015**

County Name	Total Payments	Number of Recipients	County Name	Total Payments	Number of Recipients
Adair	\$ 8,051,476	215	Laurel	24,965,851	666
Allen	7,207,822	183	Lawrence	5,612,114	152
Anderson	8,312,377	231	Lee	2,876,287	82
Ballard	2,846,353	75	Leslie	6,259,012	160
Barren	16,575,934	426	Letcher	12,586,314	339
Bath	4,586,176	132	Lewis	7,267,067	193
Bell	14,701,232	378	Lincoln	11,506,090	295
Boone	38,859,347	925	Livingston	3,283,302	89
Bourbon	7,814,502	206	Logan	10,713,964	271
Boyd	21,533,538	527	Lyon	4,162,393	104
Boyle	18,387,992	462	Madison	54,276,319	1,360
Bracken	4,110,939	101	Magoffin	6,945,399	182
Breathitt	9,035,669	252	Marion	7,325,279	199
Breckinridge	6,993,374	175	Marshall	14,647,621	366
Bullitt	18,554,870	441	Martin	5,199,667	140
Butler	4,025,148	111	Mason	7,954,365	207
Caldwell	7,192,224	188	McCracken	30,743,119	776
Calloway	26,474,474	679	McCreary	8,025,963	215
Campbell	29,587,080	704	McLean	4,576,088	115
Carlisle	1,755,025	50	Meade	7,983,515	185
Carroll	3,613,058	90	Menifee	2,402,241	74
Carter	14,216,276	384	Mercer	9,673,232	271
Casey	5,825,376	161	Metcalfe	3,839,728	101
Christian	21,493,134	551	Monroe	5,958,839	156
Clark	13,385,076	352	Montgomery	12,987,504	329
Clay	11,780,301	291	Morgan	7,046,747	189
Clinton	5,631,234	154	Muhlenberg	12,781,466	340
Crittenden	2,499,917	74	Nelson	16,072,289	410
Cumberland	3,878,749	99	Nicholas	2,263,558	59
Daviess	44,510,989	1,111	Ohio	7,463,377	203
Edmonson	3,933,327	102	Oldham	19,928,793	460
Elliott	2,412,824	70	Owen	3,568,396	91
Estill	5,660,006	148	Owsley	4,223,122	115
Fayette	117,771,963	3,012	Pendleton	5,007,771	138
Fleming	6,855,210	185	Perry	15,202,722	395
Floyd	20,872,041	565	Pike	31,044,321	823
Franklin	29,503,298	916	Powell	4,959,645	127
Fulton	2,953,150	77	Pulaski	27,072,119	742
Gallatin	1,130,922	29	Robertson	1,008,370	25
Garrard	7,866,278	200	Rockcastle	7,709,623	194
Grant	7,736,540	177	Rowan	19,231,001	505
Graves	16,875,004	429	Russell	9,171,706	234
Grayson	10,417,691	269	Scott	16,166,441	411
Green	4,530,502	117	Shelby	18,851,659	463
Greenup	15,193,276	384	Simpson	6,515,984	167
Hancock	3,288,437	81	Spencer	5,876,715	138
Hardin	34,657,312	867	Taylor	12,199,724	322
Harlan	15,698,839	409	Todd	3,534,977	98
Harrison	7,942,295	204	Trigg	6,785,822	185
Hart	5,450,359	133	Trimble	2,148,374	51
Henderson	17,575,041	443	Union	4,511,538	121
Henry	7,246,667	193	Warren	64,862,197	1,667
Hickman	1,554,074	40	Washington	4,339,736	117
Hopkins	19,002,828	485	Wayne	8,847,022	232
Jackson	5,119,502	145	Webster	4,831,199	132
Jefferson	304,692,601	6,752	Whitley	25,729,245	682
Jessamine	14,677,948	393	Wolfe	4,242,350	118
Johnson	13,795,312	340	Woodford	11,844,470	298
Kenton	37,642,326	927			
Knott	9,313,632	245			
Knox	10,444,306	292			
Larue	6,827,722	159			
			<b>Total in Kentucky</b>	<b>\$ 1,818,894,651</b>	<b>45,795</b>

**Growth in Annuitants  
as of June 30, 2015**

Fiscal Year	Service Retirees	Disabilities	Beneficiaries of Retired Members	Beneficiaries of Deceased Members Eligible to Retire	Survivors	Disabled Adult Child
2005-06	33,618	2,039	1,631	531	495	263
2006-07	34,462	2,086	1,722	549	466	267
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

**Schedule of Annuitants by Type of Benefit  
as of June 30, 2015**

Amount of Monthly Benefit (\$)	Number of Annuitants	Type of Benefit*					
		1	2	3	4	5	6
1 - 500	3,630	2,738	10	166	41	347	328
501 - 1,000	2,774	2,201	175	303	95	0	0
1,001 - 1,500	3,023	2,132	289	484	116	2	0
1,501 - 2,000	3,573	2,709	391	390	83	0	0
2,001 - 2,500	5,165	4,170	579	311	105	0	0
2,501 - 3,000	8,456	7,394	691	291	80	0	0
3,001 - 3,500	7,957	7,401	327	177	52	0	0
3,501 - 4,000	5,607	5,316	133	129	29	0	0
4,001 - 4,500	3,643	3,488	53	82	20	0	0
4,501 - 5,000	2,325	2,246	27	40	12	0	0
5,001 & OVER	3,944	3,839	16	69	20	0	0
<b>TOTAL</b>	<b>50,097</b>	<b>43,634</b>	<b>2,691</b>	<b>2,442</b>	<b>653</b>	<b>349</b>	<b>328</b>

\*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, 2015**

Amount of Monthly Benefit (\$)	Option Selected*							
	1	2	3	4	5	6	7	None
1 - 500	1,790	373	270	46	5	384	86	676
501 - 1,000	1,550	332	233	117	9	340	188	5
1,001 - 1,500	1,526	305	287	149	9	407	326	14
1,501 - 2,000	1,909	389	328	155	10	471	278	33
2,001 - 2,500	2,512	493	465	186	4	836	504	165
2,501 - 3,000	4,186	843	685	224	9	1,428	784	297
3,001 - 3,500	4,201	869	551	215	11	1,177	837	96
3,501 - 4,000	2,879	589	449	171	10	878	587	44
4,001 - 4,500	1,857	370	316	115	4	527	442	12
4,501 - 5,000	1,208	241	178	85	10	338	254	11
5,001 & OVER	2,028	358	405	187	16	480	464	6
<b>TOTAL</b>	<b>25,646</b>	<b>5,162</b>	<b>4,167</b>	<b>1,650</b>	<b>97</b>	<b>7,266</b>	<b>4,750</b>	<b>1,359</b>

\*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

**Defined Benefit Plan**  
**Average Benefit Payments for the Past Ten Years**  
**By Years of Service Credit**

<b>Retirement Effective Dates</b>	<b>00-4.99</b>	<b>05-9.99</b>	<b>10-14.99</b>	<b>15-19.99</b>	<b>20-24.99</b>	<b>25-29.99</b>	<b>30&gt;=</b>	<b>TOTAL</b>
<b>07/01/2005 TO 06/30/2006</b>								
Average monthly benefit	\$202	\$473	\$1,019	\$1,493	\$2,037	\$2,998	\$4,063	<b>\$2,827</b>
Average final average salary	\$4,106	\$3,253	\$4,052	\$4,117	\$4,317	\$4,721	\$5,490	<b>\$4,773</b>
Number of retired members	44	105	106	132	145	689	604	<b>1,873</b>
<b>07/01/2006 TO 06/30/2007</b>								
Average monthly benefit	\$178	\$514	\$930	\$1,559	\$2,136	\$3,140	\$4,263	<b>\$2,900</b>
Average final average salary	\$4,102	\$3,346	\$3,590	\$4,228	\$4,537	\$4,970	\$5,758	<b>\$4,916</b>
Number of retired members	48	113	90	109	193	534	514	<b>1,577</b>
<b>07/01/2007 TO 06/30/2008</b>								
Average monthly benefit	\$199	\$524	\$1,117	\$1,658	\$2,276	\$3,279	\$4,319	<b>\$2,984</b>
Average final average salary	\$3,816	\$3,066	\$4,215	\$4,412	\$4,612	\$5,067	\$5,786	<b>\$5,017</b>
Number of retired members	50	130	112	150	169	557	615	<b>1,831</b>
<b>07/01/2008 TO 06/30/2009</b>								
Average monthly benefit	\$200	\$573	\$1,005	\$1,725	\$2,436	\$3,368	\$4,496	<b>\$2,941</b>
Average final average salary	\$4,617	\$3,942	\$3,873	\$4,686	\$4,983	\$5,278	\$5,960	<b>\$5,164</b>
Number of retired members	72	168	137	115	217	505	585	<b>1,824</b>
<b>07/01/2009 TO 06/30/2010</b>								
Average monthly benefit	\$185	\$525	\$1,104	\$1,700	\$2,427	\$3,468	\$4,670	<b>\$3,222</b>
Average final average salary	\$3,654	\$3,637	\$4,124	\$4,508	\$4,974	\$5,383	\$6,102	<b>\$5,316</b>
Number of retired members	28	133	98	103	242	442	601	<b>1,647</b>
<b>07/01/2010 TO 06/30/2011</b>								
Average monthly benefit	\$149	\$519	\$1,225	\$1,781	\$2,513	\$3,621	\$4,827	<b>\$3,240</b>
Average final average salary	\$3,570	\$3,640	\$4,423	\$4,825	\$5,184	\$5,574	\$6,235	<b>\$5,392</b>
Number of retired members	45	157	144	112	242	544	617	<b>1,854</b>
<b>07/01/2011 TO 06/30/2012</b>								
Average monthly benefit	\$175	\$507	\$1,170	\$1,897	\$2,613	\$3,674	\$4,726	<b>\$3,148</b>
Average final average salary	\$3,292	\$3,759	\$4,307	\$4,898	\$5,219	\$5,605	\$6,109	<b>\$5,331</b>
Number of retired members	45	197	146	162	303	778	569	<b>2,200</b>
<b>07/01/2012 TO 06/30/2013</b>								
Average monthly benefit	\$161	\$475	\$1,186	\$1,963	\$2,781	\$3,811	\$5,162	<b>\$3,149</b>
Average final average salary	\$3,362	\$3,660	\$4,498	\$4,956	\$5,518	\$5,799	\$6,632	<b>\$5,476</b>
Number of retired members	44	234	156	154	294	685	447	<b>2,014</b>
<b>07/01/2013 TO 06/30/2014</b>								
Average monthly benefit	\$192	\$484	\$1,270	\$2,068	\$2,797	\$3,847	\$5,362	<b>\$3,126</b>
Average final average salary	\$4,148	\$3,677	\$4,751	\$5,364	\$5,600	\$5,902	\$6,860	<b>\$5,589</b>
Number of retired members	56	211	161	145	258	678	344	<b>1,853</b>
<b>07/01/2014 TO 06/30/2015</b>								
Average monthly benefit	\$157	\$472	\$1,282	\$2,038	\$2,890	\$3,898	\$5,124	<b>\$3,173</b>
Average final average salary	\$3,331	\$3,577	\$4,892	\$5,266	\$5,709	\$5,948	\$6,552	<b>\$5,577</b>
Number of retired members	60	231	183	206	314	806	456	<b>2,256</b>
<b>Ten Years Ended June 30, 2015</b>								
Average monthly benefit	\$181	\$504	\$1,151	\$1,814	\$2,575	\$3,537	\$4,651	<b>\$3,076</b>
Average final average salary	\$3,845	\$3,594	\$4,341	\$4,776	\$5,206	\$5,458	\$6,095	<b>\$5,269</b>
Number of retired members	492	1,679	1,333	1,388	2,467	6,218	5,352	<b>18,929</b>

**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
07/01/2010 to 06/30/2011					
Average monthly supplement	\$ 167.03	\$ 311.93	\$ 438.84	\$ 597.41	
Number of retired members	30	71	109	1360	1,570
07/01/2011 to 06/30/2012					
Average monthly supplement	\$ 164.12	\$ 302.19	\$ 433.25	\$ 579.29	
Number of retired members	29	81	121	1568	1,799
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	1373	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	1227	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	1411	1,712

## Summary of Fiscal Year 2014-2015

### Retiree Sick Leave Payments

#### ACTUARIAL RATE

Total Members Retiring		2,428
Total members receiving sick leave payments		1,727
Total amount of sick leave payments @12.105% contribution rate	\$	22,207,337
Average payment per retiree	\$	12,866
Total increase in final 3/5 Yr average salary base	\$	6,171,007
Average increase in FAS	\$	3,233
Total service credit of 1,727 retirees		44,522
Average service credit of 1,727 retirees		25.78

#### ANTICIPATED LIFETIME PAYOUT OF ADDITIONAL ANNUITY

Actuarial cost of sick leave as salary credit	\$	51,290,488
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### Funding of Additional Payments

Member contributions $9.105\% \times \$22,207,337 =$	\$	2,021,978
Employer contributions $12.305\% \times \$22,207,337 =$		2,732,613

<b>Total Contributions</b>	<b>\$</b>	<b><u>4,754,591</u></b>
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#### DEFICIT:

Anticipated additional payout	\$	51,290,488
Less total member & state contributions		<u>4,754,591</u>

Subtotal unfunded debt		46,535,897
Less current year appropriation		<u>4,527,300</u>

<b>TOTAL DEFICIT (overpayment)*</b>	<b>\$</b>	<b><u>42,008,597</u></b>
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\* NOTE: Actuarial factors used for sick leave calculations changed effective July 1, 1998. Sick leave deficits are amortized over 20 year periods.

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