



Kansas Public Employees Retirement System  
a component unit of the State of Kansas

# PLANNING FOR HEALTHY GROWTH

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2015 Comprehensive Annual Financial Report  
for the Fiscal Year Ended June 30, 2015

**2015 COMPREHENSIVE**  
ANNUAL  
FINANCIAL  
REPORT

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Kansas Public Employees Retirement System  
A component unit of the State of Kansas  
Fiscal year ended June 30, 2015

Prepared by KPERS staff  
611 S. Kansas Ave., Ste 100  
Topeka, KS 66603-3869

Alan D. Conroy, Executive Director  
Judy McNeal, Chief Fiscal Officer

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# **OUR** MISSION

KPERS, in its fiduciary capacity, exists to deliver retirement, disability and survivor benefits to its members and their beneficiaries.

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# **INTRODUCTORY** SECTION



# TRANSMITTAL LETTER



November 2, 2015

We are pleased to present the Kansas Public Employees Retirement System's (KPERs) Comprehensive Annual Financial Report (CAFR) for Fiscal Year 2015. In addition to informing the Board of Trustees, members and employers, our annual report fulfills KPERs' reporting responsibilities as defined in Kansas statute. Printed copies are readily available to the public and a full version is posted on our web site, [www.kpers.org](http://www.kpers.org).

As the first item in the CAFR, this transmittal letter provides a high-level overview of the Retirement System. The Management's Discussion and Analysis section provides a narrative introduction and analysis of our financial activities over the past fiscal year. This letter is intended to complement the Management's Discussion and Analysis, and they should be read together.

## ENSURING ACCURACY

Responsibility for the preparation, accuracy and completeness of this report, including all disclosures, rests firmly with KPERs' management. Information is presented in accordance with generally accepted accounting principles. To the best of our knowledge, the included data is accurate in all material respects and fairly presents our financial position and operating results.

The Retirement System maintains a framework of internal controls to establish reasonable assurance that assets are safeguarded, transactions are completed accurately and financial statements are fair and reliable. We also have an internal audit program that reports to the Board of Trustees. There are inherent limitations to internal controls, and risk cannot always be foreseen or completely eliminated. KPERs' objective is to provide reasonable, rather than absolute, assurance that the financial statements are free of any material misstatements,

since the cost of internal control should not exceed the benefits obtained. In addition to internal controls, the independent certified public accounting firm CliftonLarsenAllen LLP conducted an independent audit of the Retirement System's financial statements for 2015.

## OUR PROFILE

The Kansas Legislature created the Kansas Public Employees Retirement System in 1962 to secure a financial foundation for those spending their careers in Kansas public service. The Retirement System provides disability and death benefits while employees are still working, and a dependable pension benefit when they retire.

We are a state-wide defined benefit retirement plan containing three different groups:

- Kansas Public Employees Retirement System
- Kansas Police and Firemen's Retirement System
- Kansas Retirement System for Judges

Retirement System benefits are offered by about 1,500 state and local employers. KPERs has over 295,000 members, including active, inactive and retired members. The Retirement System paid almost \$1.45 billion in all benefit payments for FY 2015. Just over 85 percent of those benefits remained in Kansas.

Along with the defined benefit plan, KPERs also oversees KPERs 457, a voluntary 457(b) deferred compensation plan for State of Kansas employees. In addition, 267 local public employers also participate. The plan has over 23,900 total and about 13,000 actively contributing participants. Total KPERs 457 plan assets equaled almost \$1 billion at the end of FY 2015.



A nine-member Board of Trustees oversees the Retirement System: four are appointed by the Governor; one is appointed by the President of the Senate; one is appointed by the Speaker of the House of Representatives; two are elected by Retirement System members; and one is the elected State Treasurer. The Board appoints an executive director who manages a staff to carry out daily operations.

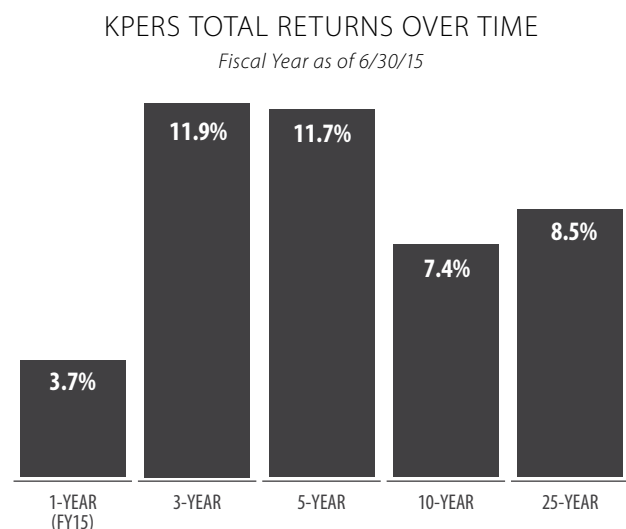
The Board approves the System’s annual operating budget. As a component unit of the State of Kansas, the budget is also approved by the Kansas Legislature and Governor as part of the regular legislative budgetary process.

**INVESTMENTS**

KPERS’ assets are invested according to the “prudent expert standard of care” for the sole purpose of providing benefits to members and beneficiaries. We have designed our investment strategy to withstand short-term market volatility and economic downturns, as well as to benefit from strong market and economic environments.

Over time, solid investment performance is an important component to sound funding. Our actuarial projections assume an average, long-term net investment return of 8 percent. In some years returns will be below that rate, and in other years returns will exceed it. As of June 30, 2015, KPERS’ 25-year investment return average was 8.5 percent, exceeding the 8 percent target.

KPERS’ investment portfolio produced a total return of 3.7 percent in FY 2015, outperforming the KPERS Policy Index by 1.0 percent for the fiscal year. The market environment was less favorable in FY 2015 than it was in the previous two fiscal years, as volatility prevailed in global financial markets.



The Retirement System’s investment portfolio ended the fiscal year at \$16.5 billion in assets. For more information about KPERS diversified and disciplined approach to executing our investment strategy and policies, please refer to the investment section in this report, beginning on page 54. This section also provides details about our asset allocation and a general overview of each asset class.

**FINANCIAL POSITION AND FUNDING OUTLOOK**

For more than a decade, KPERS has been facing a long-term funding shortfall, significantly affected by inadequate employer contribution rates and two significant recessions.

However, KPERS’ December 31, 2014, actuarial valuation continues to show the System’s financial health is slowly improving and headed in the right direction.

- Funded ratio increased by 2 percent
- Unfunded actuarial liability decreased by \$300 million
- Contribution rates for local employers, KP&F and Judges are at the actuarially required contribution rate for employers and beginning to decrease

**UNFUNDED ACTUARIAL LIABILITY**

According to the December 31, 2014, actuarial valuation, the System’s unfunded actuarial liability (UAL) decreased by about \$300 million to \$9.47 billion. This UAL amount is the gap between the actuarial value of assets and the actuarial liability for service already earned by public employees. The UAL was previously \$9.77 billion as of December 31, 2013. The Retirement System’s UAL is projected to hold fairly steady for several years until we see the results of KPERS employer contribution rates catching up with the actuarially determined rates. The UAL decreased this year due in large part to positive investment returns in previous years as well as small gains from demographic experience.

**FUNDED RATIO**

The valuation also showed the System’s new funded ratio was 62 percent, up from 60 percent the previous year. The funded ratio is the ratio of assets to future liabilities. For public pension plans like KPERS, funding over 80 percent and rising is generally good. Funding below 60 percent is poor and needs prompt attention. While the System does not have an immediate crisis, long-term funding requires ongoing, careful oversight. Continued funding improvement hinges on meeting our 8 percent investment target over time and increasing employer contributions.

**LEGISLATION**

As part of a state budget allotment by the Governor, the State/School group employer contribution was decreased for the last half of FY 2015. Legislation then reduced the rate from 11.27 percent to 8.65 percent to correspond with the allotment.

Later in the session Senate Bill 228 was signed into law, affecting System funding in two main ways:

- Authorized issuance of \$1 billion in pension obligation bonds to be used to reduce the UAL for the State/School group. The debt will be serviced through the State's General Fund and not an obligation of KPERS.
- Decreased the State/School group employer contribution rate for FYs 2016 and 2017.

The 2014 valuation does not reflect the projected impact of Senate Bill 228.

While reducing contributions is not ideal, proceeds from the bond sale infused the Retirement System portfolio with additional assets to invest, immediately decreasing the unfunded actuarial liability and increasing the System's funded ratio. Projections continue to show the unfunded actuarial liability will extinguish in 2033 as scheduled.

It is important to remember that to meet these projections, long-term investment returns are crucial. Over the next decade, strong market environments can continue to help with positive investment returns. However, the System may also be vulnerable to any future economic downturns that could cause returns to decline.

For detailed information on the System's funding projections by plan and group, please see the actuarial section beginning on page 68.

## MAJOR INITIATIVES AND ACCOMPLISHMENTS

### Pay Period Reporting and KPERS 3 Implementation

KPERS staff finished with the three-year implementation plan for 2012 legislation House Bill 2333. This legislation has had a significant effect on KPERS' information system, our business processes and staff, and on employers. Moving employers to pay period reporting from the previous annual reporting process was a major portion of those efforts. We successfully implemented pay period reporting with all 1,500 employers in January 2015. The System also implemented the new KPERS 3 cash balance plan in January for all new hires.

### Conversion to New Custodial Bank

In September, 2014, the Retirement System selected State Street Bank and Trust Company as the System's new global master custodian, after an extensive request for proposal (RFP) process. After six months of preparation, the System converted from Bank of New York Mellon to State Street on April 1, 2015. As the System's global master custodian, State Street provides safekeeping and servicing for all of the System's assets under management, which include settlement, safekeeping, delivery, investment accounting,

income collection, securities valuation, investment performance reporting, risk analytics, compliance reporting, and other services.

### Optional Group Life Insurance Child Coverage

Beyond retirement benefits, KPERS also provides life insurance to help members protect their income while they are still working. Members have Basic Life Insurance paid for by their employer and some employers offer Optional Life Insurance as an additional benefit. Members pay the cost of this optional coverage. During FY 2015, KPERS added child coverage as part of the optional insurance. We also began a project to add online open enrollment in fall 2015.

### KPERS 457 Deferred Compensation Plan

After an extensive RFP process, KPERS selected Empower Retirement (previously known as Great-West Retirement) to become the new service provider for KPERS 457, the State's 457(b) deferred compensation plan administered by KPERS. During FY 2015, staff successfully completed the transition, reflecting over six months of planning and preparation. Empower began providing plan administration, record keeping, education and communication in January 2015. We also took this opportunity to implement a new administrative fee equalization plan to provide greater fee transparency and fee equity for participants.

### Governmental Accounting Standards Board

The Governmental Accounting Standards Board (GASB) approved new accounting and financial reporting standards for public pension plans that have affected KPERS and its affiliated employers. The new GASB Statement 68, "Accounting and Financial Reporting for Pensions" now requires employers using GASB standards to report in their financial statements their share of the costs and obligations for the pension plans provided to their employees. Until now they have only reported contribution obligations. Preparing individualized employer costs and obligations has been a major undertaking for KPERS staff and consulting actuary.

### BY THE NUMBERS—IN FY 2015:

- About 1,000,000 retirement benefit payments totaling almost \$1.45 billion
- 5,825 pension inceptions
- 47,000 beneficiary designations
- \$18.4 million in life insurance benefits
- 27,700 member enrollments and transfers
- 10,000 withdrawals totaling \$57.2 million
- \$23 million in benefits to 2,600 disabled employees
- 109,500 incoming calls with an average wait time of 9 seconds
- 16,650 e-mail requests

### AWARDS & ACKNOWLEDGMENTS

KPERS participated in a benchmarking survey conducted by CEM Benchmarking, Inc. When compared with other public pensions

in the 2015 survey, KPERS earned an overall service score of 83, the same score as the peer median. In addition, we measured very favorably with regard to cost. KPERS' administrative cost per member is \$39, which was half the peer median cost of \$78. Benchmarking results continue to show KPERS is delivering good customer service for a low, economical cost.

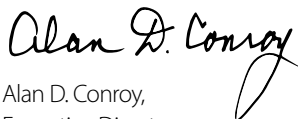
The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Retirement System for the 2014 CAFR. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest standards for preparation of state and local government financial reports.

To be awarded a Certificate of Achievement, a governmental unit must publish an easily readable and efficiently organized comprehensive annual financial report, the contents of which must conform to program standards. The comprehensive annual financial report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. The Retirement System has received the Certificate of Achievement for each of the last 21 consecutive fiscal years. We believe our current report again conforms to the program requirements, and we will submit it to the GFOA to determine its eligibility for another certificate.

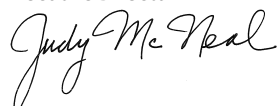
In addition to the GFOA certificate, KPERS also earned the Public Pension Standards Award for Funding and Administration in 2015 from the Public Pension Coordinating Council (PPCC). The standards serve as a benchmark by which to measure public defined benefit plans in the areas of benefits, actuarial valuation, independent audit, investments, communications and long-term funding.

The CAFR continues to be the product of team effort, both KPERS staff and advisors. We thank the Board for its leadership and our entire dedicated staff whose work this report represents. The CAFR is an important asset to our organization, and we use the information in this report to make key decisions. It helps us honor our fiduciary commitment and provide members with the service they need to get the most from their benefits.

Sincerely,



Alan D. Conroy,  
Executive Director



Judy McNeal  
Chief Fiscal Officer



## BOARD OF TRUSTEES

### **LOIS COX, CFA, CFP, VICE-CHAIRPERSON**

Manhattan, Director of Investments  
Kansas State University Foundation  
Appointed by the Governor

### **KELLY ARNOLD**

Wichita, County Clerk, Sedgwick County  
Appointed by the Governor

### **ERNIE CLAUDEL**

Olathe, Retired teacher  
Elected member – school

### **RON ESTES**

Wichita, Kansas State Treasurer  
Statutory member

### **TODD HART**

Olathe, Deputy Chief, Olathe Fire Department  
Elected member – non-school

### **CHRISTOPHER LONG**

Mission Hills, President, Palmer Square Capital  
Appointed by the Governor

### **TERRY MATLACK, CHAIRPERSON**

Shawnee, Managing Director, Tortoise Capital Advisors, LLC.  
Appointed by the Governor

### **DOUG MAYS**

Topeka, Doug Mays & Associates, LLC, Kansas Govt Affairs  
Appointed by the Speaker of the House

### **SURESH RAMAMURTHI**

Topeka, Chairman, CBW Bank  
Appointed by the President of the Senate

## OUR ORGANIZATION

### **BOARD OF TRUSTEES**

### **EXECUTIVE DIRECTOR, ALAN D. CONROY**

#### **ADMINISTRATION**

General Counsel, Laurie McKinnon  
Internal Audit, Alberta Rea  
Planning and Research, Faith Loretto  
Human Resources, Julie Baker  
Communications, Kristen Basso

#### **INVESTMENTS**

Chief Investment Officer, Elizabeth B.A. Miller  
Public Markets: Equity; Fixed Income  
Private Markets: Private Equity, Real Estate

#### **FISCAL SERVICES**

Chief Fiscal Officer, Judy McNeal  
Corporate Accounting  
Employer Reporting  
Investment Accounting  
Employer Auditing

#### **BENEFITS AND MEMBER SERVICES**

Chief Benefits Officer, Mary Beth Green  
Post-Retirement  
Benefits  
Withdrawals

#### **INFORMATION TECHNOLOGY**

Chief Information Officer, Mike Branam  
Data Control  
Operations

## KPERS STAFF

Melvin Abbott  
 Mitchell Allen  
 Crystie Amaro  
 Michael Arvidson Jr  
 Cole Bailey  
 Julie Baker  
 Dale Barbee  
 Yohonna Barraud  
 Jeremy Barton  
 Kristen Basso  
 Julia Baughman  
 Tyler Bean  
 Dianna Berry  
 Justin Bignell  
 A. Kathleen Billings  
 Jenna Blood  
 Candace Blythe  
 Anita Bradley  
 Jeanette Branam  
 Michael Branam  
 Sarah Branam  
 Terry Brookhouser  
 Tracy Brull  
 Craig Callahan  
 Russell Canaday  
 George Clark  
 Alan Conroy  
 Andrea Davenport  
 Don Deseck  
 Yolanda Dickinson  
 Amy Dunton  
 Joyce Edington  
 Jill Emme  
 Yarlenis Ensley  
 Daniel Fairbank  
 Katrina Fama  
 Mitchell Fick  
 Bruce Fink  
 Renae Forque  
 Elaine Gaer  
 Yong (Sue) Gamblian  
 Connie Gardner  
 Nicholas Gawdun

Billie-Jo Gerisch  
 Michael Gilliland  
 Kay Gleason  
 Lisa Gonzales  
 Mary Beth Green  
 Susan Hageman  
 Joseph Haverkamp  
 Elizabeth (Lisa) Hernandez  
 Candice Heth  
 Rachel Hmamouch  
 John Hooker  
 Mirel Howard  
 Ardella (Susie) Huber  
 Ellen Hurlless  
 Emily Hurt  
 Reshma Jacob  
 Melva Janke  
 Teresa Jurgens  
 Melissa Keller  
 Casey Kidder  
 Diana Komarek  
 Shannon Kuehler  
 Annette Kuti  
 Debra Lewis  
 Cheri (Melinda) Locke  
 Faith Loretto  
 Joyce Mark  
 Heather McHardie  
 Laurie McKinnon  
 Jason McKinzie  
 Judy McNeal  
 Elizabeth Miller  
 Stephanie Moore  
 Noble Morrell  
 Lisa Ngole  
 Shawn Nix  
 Carollyne (Carrie) Pare  
 Marcus Peavler  
 Diana Peters  
 Sammi Peterson  
 Alissa Powell  
 Sarah Putman  
 Justin Quick

Teresa Quick  
 Jami Quiett  
 Cathy Rafferty  
 Kimberley Raines  
 Stacey Randles  
 Alberta Rea  
 Norm Remp  
 Marisol Romo  
 Dean Roney  
 Jamie Rose  
 Rika Rowe  
 Joshua Russell  
 Teresa Ryan  
 Sogand Sabahfar  
 MaryAnn Sachs  
 Brandon Salmans  
 John (Alan) Schuler  
 Annette Scott  
 Hallie Shermoen  
 Rhonda Shumway  
 Zachary Smith  
 Julie Smith  
 Marsha Stafford  
 Jaime Sturgeon  
 Maria Swinger-Inskeep  
 Raquel Talavera  
 Amber Tarrant  
 Carmen Torres  
 Jessica Tufts  
 Jason Van Fleet  
 Jackie VandeVelde  
 Christina VanWinkle  
 Daniel Wadsworth  
 Jarod Waltner  
 Michaela Watson  
 Christine Whitlow  
 Amy Whitmer  
 Alice Wietharn  
 Eric Wigginton  
 Marlin (Max) Williams  
 Carol Wilson  
 Deanna Winters



## CONSULTANTS AND ADVISORS

**Auditors:** CliftonLarsenAllen LLP, Greenwood Village, CO

**Accounting:** KPMG LLP, Chicago, IL

**Actuary:** Cavanaugh Macdonald, Bellevue, NE

## INVESTMENT CONSULTANTS

LP Capital Advisors, Sacramento, CA

Pension Consulting Alliance, Inc., Encino, CA

The Townsend Group, Cleveland, OH

## INVESTMENT MANAGERS

AEW Capital Management, LP, Boston, MA

Advisory Research Inc., St. Louis, MO

Baillie Gifford Overseas Limited, Edinburgh, Scotland

Barings Asset Management Limited, London, UK

Blackrock Institutional Trust Company, San Francisco, CA

Brookfield Asset Management, Coral Gables, FL

CenterSquare Investment Management Inc., Plymouth Meeting, PA

Franklin Templeton Institutional, San Mateo, CA

Guggenheim Investments, Topeka, KS

Insight Pareto, New York, NY

JP Morgan Investment Management Inc., New York, NY

Lazard Asset Management, LLC, New York, NY

Loomis Sayles & Company, LP, Boston, MA

Mackay Shields LLC, New York, NY

Mellon Capital Management Corporation, San Francisco, CA

Molpus Timber Investment, Jackson, MS

Morgan Stanley Asset Management, Inc., New York, NY

Pacific Investment Management Company, Newport Beach, CA

Payden & Rygel Investment Counsel, Los Angeles, CA

Russell Investment Group, Tacoma, WA

State Street Global Advisors, Boston, MA

Systematic Financial Management LP, Teaneck, NJ

T Rowe Price Associates, Inc., Baltimore, MD

Voya Investment Management, New York, NY

Western Asset Management Company, Pasadena, CA

**Investment Custodian:** State Street Bank and Trust, Boston, MA

**Life Insurance:** Minnesota Life Insurance Company, St. Paul, MN

**Long-Term Disability:** Self Insured, Administered by United HealthCare Specialty Benefits, LLC, South Portland, ME



# GFOA CERTIFICATE OF ACHIEVEMENT

The Government Finance Officers Association of the United States and Canada (GFOA) awarded the Certificate of Achievement for Excellence in Financial Reporting to KPERS for the 2014 annual report. KPERS has received the award for each of the last 21 consecutive fiscal years.



Government Finance Officers Association

## Certificate of Achievement for Excellence in Financial Reporting

Presented to

### **Kansas Public Employees Retirement System**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**June 30, 2014**

A handwritten signature in black ink, reading "Jeffrey R. Egan". The signature is fluid and cursive.

Executive Director/CEO

# PPCC PUBLIC PENSION STANDARDS AWARD

The Public Pension Coordinating Council (PPCC) awarded the Public Pension Standards Award for Funding and Administration to KPERS for 2015.



Public Pension Coordinating Council

## ***Public Pension Standards Award For Funding and Administration 2015***

Presented to

### ***Kansas Public Employees Retirement System***

In recognition of meeting professional standards for  
plan funding 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 cursive script that reads "Alan H. Winkle".

Alan H. Winkle  
Program Administrator







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# **FINANCIAL** SECTION



## INDEPENDENT AUDITOR'S REPORT



# CliftonLarsonAllen

Board of Trustees  
Kansas Public Employees Retirement System  
Topeka, Kansas

## REPORT ON THE FINANCIAL STATEMENTS

We have audited the accompanying financial statements of the Kansas Public Employees Retirement System (the System) which comprise the statements of fiduciary net position and changes in fiduciary net position, as of and for the year ended June 30, 2015, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

### MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

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

### Auditors' Responsibility

Our responsibility is to express an opinion on these 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 auditors' 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.

### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the System as of June 30, 2015, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.



**OTHER MATTERS**

## Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis, the schedule of changes in the retirement system's net pension liability, the schedule of the retirement system's net pension liability, the schedule of retirement system's contributions, the schedule of investment returns, the schedule of employer contributions death and disability, the schedule of funding progress death and disability as listed in the table of contents 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 opinions on the financial statements that collectively comprise the System's basic financial statements. The other supplementary information listed in the table of contents is presented for purposes of additional analysis and is not a required part of the basic financial statements.

The other supplementary information is the responsibility of management and was derived from and relates 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 other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The Introductory, Investment, Actuarial and Statistical sections, as listed in the table of contents, have not been subjected to the auditing procedures applied in the audit of the financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

**OTHER REPORTING REQUIRED BY GOVERNMENT AUDITING STANDARDS**

In accordance with Government Auditing Standards, we have also issued our report dated November 2, 2015, on our consideration of the System'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 result 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 System's internal control over financial reporting and compliance.

*CliftonLarsonAllen LLP*

Denver, Colorado  
November 2, 2015



## MANAGEMENT'S DISCUSSION AND ANALYSIS

This section presents management's discussion and analysis of the Kansas Public Employees Retirement System's financial performance for the Fiscal Year ended June 30, 2015. It is presented as a narrative overview and analysis in conjunction with the Executive Director's letter of transmittal.

The Kansas Public Employees Retirement System (KPERs, the Retirement System, or the System) is an umbrella organization administering the following three statewide pension groups under one plan, as provided by chapter 74, article 49 of the Kansas Statutes:

- Kansas Public Employees Retirement System (KPERs)
- Kansas Police and Firemen's Retirement System (KP&F)
- Kansas Retirement System for Judges (Judges)

All three systems are part of a governmental, defined benefit, contributory plan covering substantially all Kansas public employees. The Kansas Retirement System for Judges is a single employer group, while the other two are multi-employer, cost-sharing groups. The State of Kansas and Kansas school districts are required to participate. Participation by local political subdivisions is optional but irrevocable once elected.

### FINANCIAL HIGHLIGHTS

The System's net position increased by \$118 million or approximately 0.7 percent to \$16.7 billion as of June 30, 2015, compared to an increase of \$2.2 billion or approximately 8.3 percent, from \$14.4 billion to \$16.6 billion as of June 30, 2014.

The System's June 30, 2015, financial actuarial valuation calculated a total pension liability at June 30, 2015, of \$25.6 billion, compared to \$24.8 billion as of June 30, 2014, an increase of \$787 million or 3.2 percent. The net pension liability at June 30, 2015 increased to approximately \$9 billion, compared to \$8.3 billion as of June 30, 2014, an increase of \$687 million, or 8.3 percent.

As of December 31, 2014, the most recent funding actuarial valuation, the unfunded actuarial liability decreased to \$9.5 billion from \$9.8 billion from the prior year.

As of December 31, 2014, the most recent funding actuarial valuation, the Retirement System's funded ratio was 62.3 percent compared with a funded ratio of 59.9 percent for the prior year.

On a market value basis, this year's money weighted net investment rate of return was a positive 3.58 percent, compared with last year's return of a positive 18.10 percent.

Retirement benefits paid to retirees and beneficiaries increased 6.1 percent to approximately \$1.45 billion for FY 2015, compared to an increase of 6.0 percent from \$1.29 billion in FY 2013 to \$1.37 billion in FY 2014.

### OVERVIEW OF THE FINANCIAL STATEMENTS

This discussion and analysis is an introduction to the System's basic financial statements, which comprise the following components:

- Basic financial statements
- Notes to the basic financial statements
- Required supplementary information
- Other supplementary schedules

The information available in each of these sections is summarized as follows.

### BASIC FINANCIAL STATEMENTS

A Statement of Fiduciary Net Position as of June 30, 2015, and a Statement of Changes in Fiduciary Net Position for the FY ended June 30, 2015, are presented in this report. These financial statements reflect the resources available to pay benefits to retirees and other beneficiaries.

### NOTES TO THE BASIC FINANCIAL STATEMENTS

The financial statement notes provide additional information that is essential to a full understanding of the data provided in the financial statements. Information available in the notes to the financial statements is described in the paragraphs that follow.

**Note 1** provides a general description of the Retirement System, as well as a description of the plan benefits and overview of the contributions that are paid by employers and members. Information regarding a breakdown of the number of participating employers and members is also provided.

**Note 2** provides a summary of significant accounting policies, including the basis of accounting, investments, including investing authority, and the method used to value investments. It also provides summary information on receivables, capital assets, use of estimates and new accounting pronouncements.

**Note 3** provides a summary of cash and investments and investment risk categorizations.

**Note 4** provides information about investment derivatives, futures, options, swaps, TBA agency bonds, and foreign currency forwards.

**Note 5** describes the System's securities lending program.

**Note 6** provides information regarding the Retirement System's required reserves. The various reserves include the Members

Accumulated Contribution Reserve, Retirement Benefit Accumulation Reserve, Retirement Benefit Payment Reserve, Group Insurance Reserve Fund, the Expense Reserve and the Optional Term Life Insurance Reserve.

**Note 7** provides information on the net pension liability of participating employers, including the actuarial assumptions and discount rate used to determine the liability.

**Note 8** provides historical information on the pension obligation bonds issued by the system.

**Note 9** provides information about other post-employment benefits that the System administers. The Governmental Accounting Standards Board issued GASB Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, which was effective for periods beginning after December 15, 2005. The KPERS Death and Disability Plan covers current active members of the System and terminates at retirement. As part of the reporting requirements declared by this statement, the financial status and activity of the KPERS Death and Disability Plan are displayed separately in the Statement of Net Assets and the Statement of Changes in Plan Net Assets. Required supplemental schedules display the funded status and funding progress of the plan, and the significant methods and assumptions used. As noted in the funding status schedules, the KPERS group insurance reserve fund is 15.4 percent funded as of June 30, 2014, the last date of the actuarial valuation of the Death and Disability Plan.

**Note 10** describes System capital expenditure commitments to real estate and alternative investments. This section also generally describes potential System contingencies.

**Note 11** provides the dates through which subsequent events have been evaluated and when the financial statements were available to be issued.

#### REQUIRED SUPPLEMENTARY INFORMATION

The required supplementary information consists of schedules and related notes concerning the financial status of the Retirement System (Pension Plan) and other post-employment benefits (Death and Disability).

#### OTHER SUPPLEMENTARY SCHEDULES

Other schedules include detailed information on contributions by employer coverage groups, administrative expenses, an investment income summary, and a schedule of investment fees and expenses.

#### CONDENSED FINANCIAL INFORMATION OF THE RETIREMENT SYSTEM

The System provides benefits to State of Kansas and other local and school employees. Benefits are funded by member and employer contributions and by investment earnings. Net position at June 30, 2015, amounted to \$16.7 billion. Following are two summary schedules, Fiduciary Net Position and Changes in Fiduciary Net Position, showing information for FY 2015 and 2014.

### SUMMARY STATEMENT OF FIDUCIARY NET POSITION

|  | As of<br>June 30, 2015   | As of<br>June 30, 2014   |
|--|--------------------------|--------------------------|
| <b>Assets</b>                          |                          |                          |
| Cash and Deposits                      | \$ 49,987,994            | \$ 32,958,037            |
| Receivables                            | 3,395,318,980            | 2,400,706,779            |
| Investments at Fair Value              | 16,584,735,006           | 16,501,067,541           |
| Invested Securities Lending Collateral | —                        | 1,794,435,246            |
| Capital Assets and Supplies Inventory  | 3,150,943                | 2,286,058                |
| Total Assets                           | <u>20,033,192,923</u>    | <u>20,731,453,661</u>    |
| <b>Liabilities</b>                     |                          |                          |
| Administrative Costs                   | 1,065,817                | 1,387,667                |
| Benefits Payable                       | 14,923,601               | 6,252,579                |
| Investments Purchased                  | 3,323,523,742            | 2,351,183,713            |
| Securities Lending Collateral          | —                        | 1,796,968,793            |
| Total Liabilities                      | <u>3,339,513,160</u>     | <u>4,155,792,752</u>     |
| <b>Net Position</b>                    | <u>\$ 16,693,679,763</u> | <u>\$ 16,575,660,909</u> |



## SUMMARY STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

|  | Year Ended<br>June 30, 2015 | Year Ended<br>June 30, 2014 |
|--|-----------------------------|-----------------------------|
| <b>Additions</b>                                       |                             |                             |
| Contributions  | \$ 1,138,895,486            | \$ 1,098,071,693            |
| Net Investment Income other than Securities Lending    | 557,083,417                 | 2,548,244,327               |
| Net Investment Income from Securities Lending Activity | <u>4,117,512</u>            | <u>5,609,581</u>            |
| Total Net Investment Income                            | <u>561,200,929</u>          | <u>2,553,853,908</u>        |
| Other Miscellaneous Income                             | <u>1,080,794</u>            | <u>244,459</u>              |
| Total Additions  | <u>1,701,177,209</u>        | <u>3,652,170,060</u>        |
| <b>Deductions</b>                                      |                             |                             |
| Monthly Retirement Benefits                            | 1,449,898,078               | 1,366,173,782               |
| Refunds  | 64,461,998                  | 56,970,769                  |
| Death Benefits   | 10,019,588                  | 9,702,485                   |
| Insurance Premiums and Disability Benefits             | 47,512,701                  | 48,865,630                  |
| Administrative   | <u>11,265,990</u>           | <u>10,085,572</u>           |
| Total Deductions                                       | <u>1,583,158,355</u>        | <u>1,491,798,238</u>        |
| Net Increase   | <u>118,018,854</u>          | <u>2,160,371,822</u>        |
| Net Position Beginning of Year                         | <u>16,575,660,909</u>       | <u>14,415,289,087</u>       |
| Net Position End of Year                               | <u>\$ 16,693,679,763</u>    | <u>\$ 16,575,660,909</u>    |

**FINANCIAL ANALYSIS OF THE RETIREMENT SYSTEM**

Additions to the System's net assets held in trust for benefits include employer and member contributions, as well as investment income. Total contributions to the Retirement were approximately \$1.14 billion in FY 2015, compared to approximately \$1.10 billion in FY 2014.

The System recognized a net investment income (excluding securities lending) of \$557 million for FY 2015. Total time weighted return for the portfolio net of fees, was 3.4 percent, compared with the benchmark return of 2.7 percent. System investments at fair value amounted to \$16.6 billion at June 30, 2015. The Retirement System's time-weighted one-, three-, five-, ten-, and estimated 25-year investment performance return net of fees are shown in the following table. The actuarial assumed rate of return is 8.0 percent.

| 2015   |                 |                 |                  |                   |      |
|--------|-----------------|-----------------|------------------|-------------------|------|
|        | Last<br>3 Years | Last<br>5 Years | Last<br>10 Years | Last<br>25 Years* |      |
| 1 Year | 3.4%            | 11.7%           | 11.4%            | 7.1%              | 8.2% |

\*estimated

The System recognized a net investment income of \$2.6 billion for the 2014 FY, compared with net income of \$1.7 billion for the 2013 FY. System investments at fair value amounted to \$16.5 billion at

June 30, 2014, which was \$2.1 billion more than the \$14.4 billion in total System investments at June 30, 2013.

At June 30, 2015, the System held \$9.2 billion in U.S. equity and international equity securities. U.S. equity and international equity securities earned returns of approximately 6.4 percent and negative 2.7 percent, respectively, for the 2015 FY.

At June 30, 2014, the System held \$9.8 billion in U.S. equity and international equity securities. U.S. equity and international equity securities earned returns of approximately 25.0 percent and 21.7 percent, respectively, for the 2014 FY.

The System held \$5.0 billion in U.S. debt and international debt securities at June 30, 2015. The performance of the System's fixed income securities during FY 2015 was 1.2 percent. Real estate investments amounted to \$1.6 billion at June 30, 2015, and returned approximately 17.2 percent for the 2015 FY. The System held \$605.9 million in alternative investments which earned a return of approximately 10.2 percent for the 2015 FY. At June 30, 2015, the System held \$127.1 million in short-term investments. Cash and deposits include investment cash and foreign currencies held at the custodial bank as of June 30, 2015, totaling approximately \$32.2 million.

The System held \$4.5 billion in U.S. debt and international debt securities at June 30, 2014. The performance of the System's fixed

income securities during FY 2014 was 5.6 percent. Real estate investments amounted to \$1.4 billion at June 30, 2014. Real estate investments returned approximately 14.9 percent for the 2014 FY. The System held \$478.3 million in alternative investments. Alternative investments earned a return of approximately 22.6 percent for the 2014 FY. At June 30, 2014, the System held \$311.7 million in short-term investments. Cash and foreign currencies held at the custodial bank as of June 30, 2014, were approximately \$31.2 million. This amount was reclassified from investments at fair value to conform to the 2015 presentation. This reclassification had no effect on previously reported fiduciary net position.

During the first eight months of FY 2015, the Retirement System earned additional investment income by lending investment securities to brokers. The brokers provided collateral to the System and generally used the borrowed securities to cover short sales and failed trades. The Retirement System invested cash collateral received from the brokers in order to earn interest. For the FY 2015, net securities lending income amounted to \$4.1 million, compared with income of \$5.6 million for FY 2014. The Retirement Systems securities lending activities program was discontinued in February of 2015.

Deductions from net assets held in trust for benefits include retirement, death and insurance and survivor benefits, and administrative expenses. For the 2015 FY, retirement, death and insurance benefits amounted to approximately \$1.6 billion, an increase of \$90.2 million or 6.1 percent from FY 2014. For the 2015 FY, System administrative expenses amounted to \$11.3 million, an increase of \$1.2 million from FY 2014. The ratio of System administrative expenses to the number of members continues to be very cost-efficient compared to other state-wide retirement plans.

#### **PENSION VALUATION**

Due to the requirements of Governmental Accounting Standards Board (GASB) Statements 67 and 68, KPERS had separate actuarial valuations performed for funding purposes and financial reporting as required by GASB Statement 67. The System implemented the standards of GASB Statement 67 in FY 2014.

The annual financial actuarial valuation for the System, required by GASB Statement 67, as of June 30, 2015, emphasizes the obligation an employer incurs to employees through the employment-exchange process. The objective of this statement is to improve the decision-usefulness of reported pension information and to increase the transparency, consistency, and comparability of pension information across governments. GASB Statement 67 established the definitions of Total Pension Liability and Net Pension Liability. Total Pension Liability (TPL) is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of plan member service. Net Pension Liability (NPL) is the Total Pension Liability, net of the pension plan's fiduciary net position.

The funding actuarial valuation performed as of December 31, 2014, is for purposes of providing information to guide the decisions made by the legislature and the governor concerning the funding of the System, establishing contribution rates, and analyzing the System's long-term viability. Under the new pension standards, the System's funded status from this valuation is no longer presented in the footnotes or required supplementary information. This information is presented in the Actuarial section of this report.

#### **RETIREMENT FUNDING STATUS**

In response to KPERS' long-term funding shortfall, the 2012 Legislature made changes to future benefits and contributions, affecting both current members and employers, to improve KPERS long-term sustainability. The Governor signed Senate Substitute for HB 2333 into law on June 1, 2012. This legislation affects new hires, current members and employers. Beginning in 2014, the cap on employer contributions has been increased from 0.6 percent to 0.9 percent in FY 2014, 1.0 percent in FY 2015, 1.1 percent in FY 2016 and 1.2 percent in FY 2017 and beyond. The changes are expected to improve KPERS long-term funding and help all three groups reach full funding by 2033. The actual funding progress will be heavily dependent on the actual investment experience of the System in future years.

Due to budgetary constraints, the Governor enacted allotments on FY 2015 budgetary appropriations. The employer contribution rate for the last two quarters of FY 2015 for the State/School group was reduced to 8.65 percent.

The 2015 Legislature passed and the Governor approved Senate Bill 228 authorizing the issuance of \$1.0 billion in pension obligation bonds. The bonds were successfully issued in August 2015 and the proceeds transferred to the Retirement System. This legislation also set the State/School group employer contribution rate at 10.91 percent in FY 2016 and 10.81 percent in FY 2017.

The legislature and the governor are ultimately responsible for benefits and funding. As a fiduciary devoted to the best financial interest of members, KPERS will continue to advocate for policies that promote the long-term financial health of the Retirement System.

This financial report is designed to provide a general overview of the Kansas Public Employees Retirement Systems' finances for all interested parties. An electronic copy of this report is available at the System's website [www.kpers.org](http://www.kpers.org). Requests for a printed copy of this report should be directed to the System as follows:

Kansas Public Employees Retirement System  
611 S. Kansas Ave., Suite 100  
Topeka, KS 66603-3869  
1-888-275-5737



## STATEMENT OF FIDUCIARY NET POSITION

As of June 30, 2015

|   | Pension Plan             | Optional Group Life Insurance | Group Death & Disability Benefits | Total                    |
|---|--------------------------|-------------------------------|-----------------------------------|--------------------------|
| <b>Assets:</b>                              |                          |                               |                                   |                          |
| Cash  | \$ 15,932,961            | \$ 572,110                    | \$ 1,255,539                      | \$ 17,760,610            |
| Cash at Custodial Bank                      | 32,213,224               | —                             | —                                 | 32,213,224               |
| Deposits with Insurance Carrier             | —                        | —                             | 14,160                            | 14,160                   |
| Total Cash                                  | <u>48,146,185</u>        | <u>572,110</u>                | <u>1,269,699</u>                  | <u>49,987,994</u>        |
| Receivables:                                |                          |                               |                                   |                          |
| Contributions                               | 123,848,993              | 64,533                        | 9,895,022                         | 133,808,548              |
| Investment Income                           | 48,219,409               | —                             | 13,027                            | 48,232,436               |
| Sale of Investment Securities               | <u>3,213,277,996</u>     | <u>—</u>                      | <u>—</u>                          | <u>3,213,277,996</u>     |
| Total Receivables                           | <u>3,385,346,398</u>     | <u>64,533</u>                 | <u>9,908,049</u>                  | <u>3,395,318,980</u>     |
| Investments at Fair Value:                  |                          |                               |                                   |                          |
| Domestic Equities                           | 5,325,211,719            | —                             | —                                 | 5,325,211,719            |
| International Equities                      | 3,920,315,408            | —                             | —                                 | 3,920,315,408            |
| Short Term                                  | 75,898,453               | —                             | 51,207,127                        | 127,105,580              |
| Fixed Income                                | 5,003,364,385            | —                             | —                                 | 5,003,364,385            |
| Alternative Investments                     | 605,868,900              | —                             | —                                 | 605,868,900              |
| Real Estate                                 | <u>1,602,869,014</u>     | <u>—</u>                      | <u>—</u>                          | <u>1,602,869,014</u>     |
| Total Investments                           | <u>16,533,527,879</u>    | <u>—</u>                      | <u>51,207,127</u>                 | <u>16,584,735,006</u>    |
| Capital Assets and Supplies Inventory       | <u>3,150,943</u>         | <u>—</u>                      | <u>—</u>                          | <u>3,150,943</u>         |
| Total Assets                                | <u>19,970,171,405</u>    | <u>636,643</u>                | <u>62,384,875</u>                 | <u>20,033,192,923</u>    |
| <b>Liabilities:</b>                         |                          |                               |                                   |                          |
| Administrative Costs                        | 1,065,817                | —                             | —                                 | 1,065,817                |
| Benefits Payable                            | 10,061,111               | 499,476                       | 4,363,014                         | 14,923,601               |
| Securities Purchased                        | <u>3,323,523,742</u>     | <u>—</u>                      | <u>—</u>                          | <u>3,323,523,742</u>     |
| Total Liabilities                           | <u>3,334,650,670</u>     | <u>499,476</u>                | <u>4,363,014</u>                  | <u>3,339,513,160</u>     |
| <b>Net Position Restricted for Pensions</b> | <u>\$ 16,635,520,735</u> | <u>\$ 137,167</u>             | <u>\$ 58,021,861</u>              | <u>\$ 16,693,679,763</u> |

The accompanying notes to financial statements are an integral part of this statement.



## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

For Year Ended June 30, 2015

|   | Pension Plan            | Optional Group Life Insurance | Group Death & Disability Benefits | Total                    |
|---|-------------------------|-------------------------------|-----------------------------------|--------------------------|
| <b>Additions:</b>                             |                         |                               |                                   |                          |
| Contributions:                                |                         |                               |                                   |                          |
| Member Contributions                          | \$ 382,057,886          | \$ 6,638,479                  | \$ —                              | \$ 388,696,365           |
| Employer Contributions                        | 690,564,482             | —                             | 59,634,639                        | 750,199,121              |
| Total Contributions                           | <u>1,072,622,368</u>    | <u>6,638,479</u>              | <u>59,634,639</u>                 | <u>1,138,895,486</u>     |
| <b>Investments:</b>                           |                         |                               |                                   |                          |
| Net Appreciation in Fair Value of Investments | 263,094,676             | —                             | —                                 | 263,094,676              |
| Interest                                      | 132,688,575             | —                             | 28,124                            | 132,716,699              |
| Dividends                                     | 140,607,740             | —                             | —                                 | 140,607,740              |
| Real Estate Income, Net of Operating Expenses | 75,353,304              | —                             | —                                 | 75,353,304               |
| Other Investment Income                       | <u>10,573,421</u>       | <u>—</u>                      | <u>—</u>                          | <u>10,573,421</u>        |
|   | 622,317,716             | —                             | 28,124                            | 622,345,840              |
| Less Investment Expense                       | <u>65,240,875</u>       | <u>—</u>                      | <u>21,548</u>                     | <u>65,262,423</u>        |
| <b>Net Investment Income, other than</b>      |                         |                               |                                   |                          |
| <b>from Securities Lending</b>                |                         |                               |                                   |                          |
|   | <u>557,076,841</u>      | <u>—</u>                      | <u>6,576</u>                      | <u>557,083,417</u>       |
| From Securities Lending Activities:           |                         |                               |                                   |                          |
| Securities Lending Income                     | 3,932,462               | —                             | —                                 | 3,932,462                |
| Securities Lending Broker Rebate              | 648,826                 | —                             | —                                 | 648,826                  |
| Securities Lending Bank Fees                  | <u>(463,776)</u>        | <u>—</u>                      | <u>—</u>                          | <u>(463,776)</u>         |
| Net Income from Securities Lending Activities | <u>4,117,512</u>        | <u>—</u>                      | <u>—</u>                          | <u>4,117,512</u>         |
| Net Investment Income                         | <u>561,194,353</u>      | <u>—</u>                      | <u>6,576</u>                      | <u>561,200,929</u>       |
| <b>Other Miscellaneous Income</b>             | <u>1,076,391</u>        | <u>555</u>                    | <u>3,848</u>                      | <u>1,080,794</u>         |
| <b>Total Additions</b>                        | <u>1,634,893,112</u>    | <u>6,639,034</u>              | <u>59,645,063</u>                 | <u>1,701,177,209</u>     |
| <b>Deductions:</b>                            |                         |                               |                                   |                          |
| Monthly Retirement Benefits Paid              | 1,449,898,078           | —                             | —                                 | 1,449,898,078            |
| Refunds of Contributions                      | 64,461,998              | —                             | —                                 | 64,461,998               |
| Death Benefits                                | 10,019,588              | —                             | —                                 | 10,019,588               |
| Insurance Premiums and Disability Benefits    | —                       | 6,492,432                     | 41,020,269                        | 47,512,701               |
| Administrative Expenses                       | <u>10,789,271</u>       | <u>74,507</u>                 | <u>402,212</u>                    | <u>11,265,990</u>        |
| Total Deductions                              | <u>1,535,168,935</u>    | <u>6,566,939</u>              | <u>41,422,481</u>                 | <u>1,583,158,355</u>     |
| <b>Increase in Net Position</b>               | 99,724,177              | 72,095                        | 18,222,582                        | 118,018,854              |
| <b>Net Position Restricted for Pensions</b>   |                         |                               |                                   |                          |
| <b>Beginning of Year</b>                      | <u>16,535,796,558</u>   | <u>65,072</u>                 | <u>39,799,279</u>                 | <u>16,575,660,909</u>    |
| <b>End of Year</b>                            | <u>\$16,635,520,735</u> | <u>\$ 137,167</u>             | <u>\$ 58,021,861</u>              | <u>\$ 16,693,679,763</u> |

The accompanying notes to financial statements are an integral part of this statement.



## NOTE 1 – ORGANIZATION AND PLAN DESCRIPTION

The Kansas Public Employees Retirement System (KPERs, or the System) is a body corporate and an instrumentality of the State of Kansas. KPERs is governed by a nine-member board of trustees of which: four trustees are appointed by the Governor, one by the President of the Senate, one by the Speaker of the House of Representatives, two are elected by Retirement System members and one is the elected State Treasurer. The Board of Trustees appoints the executive director, who is the System's managing officer. KPERs is a component unit of the State of Kansas.

KPERs is the administrator of a cost-sharing defined-benefit pension plan (Pension Plan) for the State of Kansas providing pension benefits to the following three statewide pension groups under one plan, as provided by K.S.A. 74, article 49:

- Public Employees
- Police and Firemen
- Judges

Substantially all public employees in Kansas are covered by the plan. The State of Kansas and Kansas schools are required to participate, while participation by local political subdivisions is optional but irrevocable once elected.

KPERs is also the administrator of a cost-sharing defined-benefit multiple-employer post-employment benefit plan as discussed in Note 9.

### PLAN MEMBERSHIP BY EMPLOYEE GROUP

Participating membership by statewide pension group as of December 31, 2014, (most recent actuarial valuation date) is as follows:

#### MEMBERSHIP BY RETIREMENT SYSTEMS<sup>(1)</sup>

|  | KPERs          | KP&F          | Judges     | Total          |
|--|----------------|---------------|------------|----------------|
| Beneficiaries currently receiving benefits <sup>(2)</sup>            | 85,827         | 4,833         | 247        | 90,907         |
| Terminated employees entitled to benefits but not yet receiving them | 18,837         | 142           | 6          | 18,985         |
| Deferred disabled  | 2,340          | 210           | 0          | 2,550          |
| Inactive members not entitled to benefits                            | 27,666         | 1,054         | 0          | 28,720         |
| Current employees  | 146,746        | 7,204         | 253        | 154,203        |
| <b>Total</b>   | <b>281,416</b> | <b>13,443</b> | <b>506</b> | <b>295,365</b> |

<sup>1)</sup> Represents System membership at December 31, 2014.

<sup>2)</sup> Number of retirement payees as of December 31, 2014.

### NUMBER OF PARTICIPATING EMPLOYERS

Participating employers by statewide pension group as of June 30, 2015, are as follows:

#### NUMBER OF PARTICIPATING EMPLOYERS

|                          | KPERs        | KP&F      | Judges   |
|--------------------------|--------------|-----------|----------|
| State of Kansas          | 1            | 1         | 1        |
| Counties                 | 105          | 31        | —        |
| Cities                   | 363          | 63        | —        |
| Townships                | 61           | —         | —        |
| School Districts         | 286          | —         | —        |
| Libraries                | 122          | —         | —        |
| Conservation Districts   | 83           | —         | —        |
| Extension Councils       | 69           | —         | —        |
| Community Colleges       | 19           | —         | —        |
| Educational Cooperatives | 24           | —         | —        |
| Recreation Commissions   | 43           | 1         | —        |
| Hospitals                | 29           | —         | —        |
| Cemetery Districts       | 13           | —         | —        |
| Other                    | 203          | —         | —        |
| <b>Total</b>             | <b>1,421</b> | <b>96</b> | <b>1</b> |

### PLAN BENEFITS

Benefits are established by statute and may only be changed by the Kansas Legislature. Members (except Police and Firemen) with ten or more years of credited service, may retire as early as age 55 (Police and Firemen may be age 50 with 20 years of credited service), with an actuarially reduced monthly benefit. Normal retirement is at age 65, age 62 with ten years of credited service, or whenever a member's combined age and years of credited service equal 85 "points" (Police and Firemen' normal retirement ages are age 60 with 15 years of credited service, age 55 with 20 years, age 50 with 25 years, or any age with 36 years of service). Monthly retirement benefits are based on a statutory formula that includes final average salary and years of service. When ending employment, members may withdraw their contributions from their individual accounts, including interest. Members who withdraw their accumulated contributions lose all rights and privileges of membership. For all pension coverage groups, the accumulated contributions and interest are deposited into and disbursed from the membership accumulated reserve fund as established by K.S.A. 74-4922.

Members choose one of seven payment options for their monthly retirement benefits. At retirement a member may receive a lump-sum payment of up to 50 percent of the actuarial present value of the member's lifetime benefit. His or her monthly retirement benefit is then permanently reduced based on the amount of the lump sum. Benefit increases, including ad hoc post-retirement benefit increases, must be passed into law by the Kansas Legislature. Benefit increases are under the authority of the Legislature and the Governor of the State of Kansas.

The 2012 Legislature made changes affecting new hires, current members and employers. A new KPERS 3 cash balance retirement plan for new hires starting January 1, 2015, was created. Normal retirement age for KPERS 3 is 65 with five years of service or 60 with 30 years of service. Early retirement is available at age 55 with ten years of service, with a reduced benefit. Monthly benefit options are an annuity benefit based on the account balance at retirement.

For all pension coverage groups, the retirement benefits are disbursed from the retirement benefit payment reserve fund as established by K.S.A. 74-4922.

Active members (except Police and Firemen) are covered by basic group life insurance. The life insurance benefit is 150 percent of the annual compensation rate at the time of an active member's death. Generally, in cases of death as a result of an on-the-job accident, for Public Employees there is a \$50,000 Lump-sum benefit and a monthly benefit payable to a spouse, minor children or dependent parents (in this order). Service-connected accidental death benefits are in addition to any life insurance benefit. There is a \$4,000 death benefit payable to the beneficiary(ies) when a retired member dies under any of the systems.

Active members (except KP&F and Judges' members) are also covered by the provisions of the disability income benefit plan. Since 2006, annual disability income benefits have been based on 60 percent of the annual rate of compensation at the time of disability, less primary social security benefits, one-half of worker's compensation, and any other employment-related disability benefit. Members who were approved for disability benefits before 2006 have an annual benefit based on 66 $\frac{2}{3}$  percent of the annual compensation at the time of disability. For both groups, the minimum monthly benefit is \$100. There is a waiting period of 180 continuous days from the date of disability before benefits can be paid. During the period of approved disability, the member continues to be eligible for group life insurance coverage and to accrue participating service credit.

#### CONTRIBUTIONS

Member contribution rates are established by state law, and are paid by the employee according to the provisions of Section 414(h) of the Internal Revenue Code. State law provides that the employer contribution rates be determined based on the results of each annual actuarial valuation for each of the three state-wide pension groups. The contributions and assets of all three groups are deposited in the Kansas Public Employees Retirement Fund established by K.S.A. 74-4921. All of the retirement groups are funded on an actuarial reserve basis.

For FY beginning in 1995, Kansas legislation established statutory limits on increases in contribution rates for KPERS employers, which includes the state and the school employers. Annual increases in the employer contribution rates related to subsequent

benefit enhancements are not subject to these limitations. The statutory cap increase over the prior year contribution rate is 1.0 percent of total payroll for the FY ended June 30, 2015.

The actuarially determined employer contribution rates (not including the .85 percent contribution rate for the Death and Disability Program) and the statutory contribution rates are as follows:

|  | Actuarial<br>Employer Rate | Statutory<br>Cap Rate      |
|--|----------------------------|----------------------------|
| State Employee                           | 10.80%                     | 11.27/8.65% <sup>(1)</sup> |
| School Employee                          | 15.41                      | 11.27/8.65% <sup>(1)</sup> |
| Judges                                   | 22.59                      | 22.59                      |
| Local Government Employee <sup>(2)</sup> | 9.48                       | 9.48                       |
| Police and Firemen <sup>(2)</sup>        | 21.36                      | 21.36                      |

1) The governor, using the budgetary allotment process, reduced the KPERS state and school employer rates for the last two quarters of FY 2015 due to budgetary constraints.

2) Rates shown for KPERS State, School and Judges represent the rates for FY ending June 30. KPERS Local and KP&F rates are reported for the calendar year 2015.

In FY 2015 for the state and school employer groups, the Governor declared an allotment affecting the employer rate for the last two quarters of the fiscal year. The employer rate was reduced from 11.27 percent to 8.65 percent.

Employee contribution rates as a percentage of eligible compensation in FY 2015 are 5.0 percent or 6.0 percent for Public Employees, 7.15 percent for Police and Firemen, and 2.0 percent or 6.0 percent for Judges.

## NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### BASIS OF ACCOUNTING

The accompanying financial statements have been prepared on the accrual basis of accounting in conformity with U.S. generally accepted accounting principles (GAAP), as prescribed by the Governmental Accounting Standards Board (GASB). Contributions are due to KPERS when employee services have been performed and paid. Contributions are recognized as revenues when due pursuant to statutory requirements. Benefits and refunds are recognized when due and payable and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made.

#### SHORT-TERM INVESTMENTS

The Retirement System considers 2a7 like pools and investments purchased within 90 days of maturity to be short-term investments.



### METHOD USED TO VALUE INVESTMENTS

Investments are reported at fair value. Securities traded on a national or international securities exchange are valued at the last reported sales price at current exchange rates. The fair value of real estate investments is based on independent appraisals. Fair value of other securities is determined by the mean of the most recent bid and asked prices as obtained from dealers that make markets in such securities. Fair values of the limited partnership investments are based on valuations of the underlying companies of the limited partnerships as reported by the general partner. Fair value of the commingled funds are determined based on the underlying asset values. Dividends are recorded on the ex-dividend date.

### INVESTMENTS

Investments and the investment process are governed by K.S.A. 74-4921. The Board of Trustees maintains a formal Statement of Investment Policy, which addresses the governing provisions of the law, as well as specifying additional guidelines for the investment process.

Statutory authority for the Retirement System's investment program is provided in K.S.A. 74-4901 et seq., effective July 1, 1993. The Retirement Act addresses the following areas:

- Establishes the structure of the Board of Trustees, defines the Trustees' responsibilities, imposing the prudent expert standard upon their actions with respect to managing the assets of the Retirement System.
- Requires that the assets be invested to preserve capital and solely to provide benefits to members and the members' beneficiaries.
- Limits the possible allocation of common stock to 60.0 percent of the total book value of the fund.
- Limits the possible allocation of total alternative investments to 15.0 percent of the total book value of the fund.
- The annual allowance for new alternative (non-publicly traded) investments is limited to 5.0 percent of the market value of the total investment assets of the fund as measured from the end of the preceding calendar year.
- Establishes limits on the structure of future investments in real estate or alternative investments.
- Requires that the Board develop investment policies and objectives to invest fund assets.
- Authorizes the Board to hire qualified professionals/firms to assist in investing the fund and requires that such professionals/firms obtain errors and omissions insurance coverage and fidelity bond insurance coverage.
- Authorizes the Board to pay for the services of retained professionals/firms at the rates fixed by the Board, excluding any reimbursement for expenses and subject to the provisions of the appropriations act.
- Provides for an annual audit and requires that the Board annually examine the investment program, specific investments, and its policies and practices.

In fulfilling its responsibilities, the Board of Trustees has contracted with 25 investment management firms and a master global custodian. The Retirement System has six permissible investment categories: 1) equities 2) real estate 3) fixed-income securities 4) derivative products 5) cash equivalents 6) alternative investments.

The pension plan's policy in regard to the allocation of invested assets is established and may be amended by the Board of Trustees. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan. The following was the Board of Trustee's adopted asset allocation policy as of June 30, 2015:

| Asset Class                 | Interim Target Allocation |
|-----------------------------|---------------------------|
| Domestic Equities           | 26%                       |
| International Equities      | 25                        |
| Yield Driven <sup>(1)</sup> | 8                         |
| Real Return <sup>(2)</sup>  | 11                        |
| Fixed                       | 13                        |
| Short-term Investments      | 2                         |
| Real Estate                 | 10                        |
| Alternatives                | 5                         |
|                             | 100%                      |

1) The Yield Driven asset class per above, is reported in domestic equities and fixed income per the Statement of Fiduciary Net Position.

2) The Real Return asset class per above, is reported in the fixed income and real estate per the Statement of Fiduciary Net Position.

The System's asset allocation and investment policies include active and passive investments in international securities. The System's target allocation is to have 25.0 percent of assets in dedicated international equities. Core Plus bond managers are allowed to invest up to 20.0 percent of their portfolio in non-dollar securities. The System utilizes a currency overlay manager to reduce risk by hedging up to 50 percent of the developed foreign currency market for selected international equity portfolios. At June 30, 2015, the System's total foreign currency exposure was 20.4 percent hedged.

Equities are considered to be common or preferred corporate stocks; warrants or rights; corporate bonds, debentures or preferred stock which are convertible into common stock; investment trusts; or participation in commingled (equity) funds managed by a bank, insurance company or other professional equity investment manager. These stocks are listed on well

recognized or principal exchanges of the United States or foreign countries.

Fixed income securities are considered to be U.S. and foreign Treasury or Government agency obligations; U.S. or foreign corporate bonds; asset backed securities such as CMOs, mortgage backed securities and segments of these types of vehicles; or participation in commingled (fixed income) funds, managed by a bank, insurance company or other professional fixed income investment manager. Subject to the Board's limitations, these investments also include the debt of emerging markets. Emerging markets are considered to be those countries that are included in the JP Morgan Emerging Markets Index Global (EMBI Global).

### INVESTMENTS

Cash equivalent or short term securities are those money market type pools and securities purchased within 90 days of maturity. A security's duration is determined by a third-party pricing agency. Real estate investments are investments in real property on a direct ownership basis, through a realty holding corporation, joint partnership, private real estate investment trusts (REITs) (contained within the real estate portfolio), participation in commingled real estate funds (managed by a bank, insurance company or other professional real estate investment manager) or through debt secured by real estate. Any real estate investment shall support the System's intent to hold a real estate portfolio which is diversified by geographic location, property type, stage of development and degree of leverage.

### RECEIVABLES

In addition to statutorily determined contractually required contributions, certain agencies also make payments through an additional component of their required employer contribution rate or annual installment payments, both options include interest at 8 percent per year, for the cost of service credits granted retroactively when the agency initially joined the Retirement System. As of June 30, 2015, the outstanding balance was \$7,326,458. These payments are due over various time periods up through December 31, 2032.

### CAPITAL ASSETS

Furniture, fixtures and equipment are reported on the Statement of Fiduciary Net Position at historical cost, net of accumulated depreciation. These assets are depreciated on a straight-line basis over an average useful life of three to ten years with no salvage value. Accumulated depreciation on all System assets as of June 30, 2015, was \$16,902,142. In FY 1999, the Retirement System purchased an office building and garage in Topeka, Kansas. Fifty percent of the floor space of the office building is used as the System's administrative headquarters and the remaining 50 percent is a real estate investment. The administrative portion of the building and garage are reported on the Statement of Fiduciary Net Position as a capital asset and are being depreciated. Accumulated depreciation on the administrative portion of

the building and garage as of June 30, 2015, was \$2,780,450. The office building and garage are being depreciated over a period of 33 years on an accelerated method. At June 30, 2015, the carrying value of the System's administrative headquarters was \$837,707.

### USE OF ESTIMATES

The preparation of financial statements in conformity with GAAP requires KPERs' management to make estimates and assumptions that affect the reported amounts of assets, liabilities and changes therein, disclosure of contingent assets and liabilities and the total pension liability at the date of the financial statements. Actual results could differ from those estimates.

### RISKS AND UNCERTAINTIES

KPERs invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the statement of fiduciary net position.

### FEDERAL INCOME TAX

The System is a qualified pension plan under Section 401a of the Internal Revenue Code (IRC) and, as such, is required to withhold federal income tax from member and benefit recipient payments in accordance with IRC. As a public entity, the System is not required to file a federal income tax return with the Internal Revenue Service.

### NEW ACCOUNTING PRONOUNCEMENTS

GASB Statement No. 68, Accounting and Financial Reporting for Pensions, (GASB 68) is effective for FYs beginning after June 15, 2014. This Statement provides accounting and reporting guidance for employers participating in pension plans falling under the guidance of GASB 67. Participating employers will recognize their proportionate share of the collective pension amounts as of a measurement date no earlier than the end of the employer's prior FY. These pension amounts include net pension liability, pension expense, pension deferred outflows of resources and deferred inflows of resources. The Retirement System implemented the provisions of GASB 68 and issued a report as of June 30, 2014, for its participating employers.

GASB Statement No. 71, Pension Transition for Contributions made Subsequent to the Measure Date-an Amendment of GASB Statement No. 68, (GASB 71), is to be applied simultaneously with the provisions of Statement 68. This Statement is to address an issue regarding application of the transition provisions of Statement 68, regarding amounts associated with contributions, if any, made by a state or local government employer or non-employer contributing entity to a defined benefit pension plan. The Retirement System implemented the provisions of GASB 68 and issued a report as of June 30, 2014,



for its participating employers.

GASB Statement No. 72, Fair Value Measurement and Application is effective for FYs beginning after June 15, 2015. This Statement addresses accounting and financial reporting issues related to fair value measurements. It provides guidance for applying fair value to certain investments and disclosures related to all fair value measurement. Retirement System management is evaluating the provisions of this statement and will implement any changes in its FY 2016 reporting.

GASB Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets that are not within the scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68. Retirement System management has evaluated this Statement and has determined this statement does not have an impact on the System's reporting.

GASB Statement No. 74, Financial Reporting for Postemployment Benefit Plans other than Pension Plans. This Statement is to improve the usefulness of information about postemployment benefits other than pensions (other postemployment benefits or OPEB). This Statement will be effective for the Retirement System in FY 2017.

GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits other than Pensions. The objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). This Statement will be effective for the Retirement System in FY 2018.

GASB Statement No. 76, The Hierarchy of Generally Accepted Accounting Principles for State and Local Governments. The objective of this Statement is to identify-in the context of the current governmental financial reporting environment-the hierarchy of generally accepted accounting principles (GAAP). Retirement System management is evaluating this Statement. It is effective for FY 2016.

## NOTE 3 – CASH AND INVESTMENTS

### CASH

The System advances cash deposits to a disability administrator for monthly disability benefits and death benefits for members who are disabled. As of June 30, 2015, the Retirement System's deposits with its disability administrator were \$14,160. The Retirement System does not have a deposit

policy for custodial credit risk associated with these deposits.

### INVESTMENTS

The following table presents a summary of the Retirement System's investments by type as of June 30, 2015, at fair value:

| Investment Type               | Fair Value               |
|-------------------------------|--------------------------|
| Domestic Equities             | \$ 5,325,211,719         |
| International Equities        | 3,920,315,408            |
| Fixed Income:                 |                          |
| U.S. Treasuries               | 1,818,244,879            |
| U.S. Agencies                 | 375,674,743              |
| U.S. Corporate                | 2,221,444,686            |
| Foreign Fixed Income          | 588,000,077              |
| Short-term Investments        | 127,105,580              |
| Real Estate:                  |                          |
| Partnership                   | 563,626,132              |
| Commingled Funds              | 837,530,199              |
| Separate Accounts             | 201,712,683              |
| Alternatives/Private Equities | 605,868,900              |
| Total                         | <u>\$ 16,584,735,006</u> |

### CUSTODIAL CREDIT RISK

The custodial credit risk for investments is the risk that, in the event of the failure of the custodial counterparty to a transaction, the System will not be able to recover the value of investments or collateral securities that are in the possession of the custodial bank. At June 30, 2015, the custodian bank held \$1.55 million overnight for the System subject to FDIC insurance limits. With that exception, 100 percent of the System's investments are held in the System's name and are not subject to creditors of the custodial bank.

### CONCENTRATION OF CREDIT RISK

No single issuer represents 1 percent or more of System assets other than U.S. Government (11.0 percent) and Agencies (2.3 percent). KPERS' investment policy does not prohibit holdings above 5 percent in the debt securities of U.S. government issuers. Government sponsored enterprises (GSEs, such as FNMA) are considered government issuers for the purpose of implementing KPERS 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. The System does not have a formal investment policy which limits its exposure to foreign currency risk. The following table presents the foreign currency risk by type of investment as of June 30, 2015.



| Equity                  | Fixed                 | Currency                    | Total                   |
|-------------------------|-----------------------|-----------------------------|-------------------------|
| \$ 127,087,696          | \$ 9,811,758          | Australian Dollar           | \$ 136,899,454          |
| 20,895,907              | 17,103,025            | Brazil Real                 | 37,998,932              |
| 149,761,441             | 19,279,459            | Canadian Dollar             | 169,040,900             |
| 2,789,483               | 1,671,799             | Chilean Peso                | 4,461,282               |
| 1,316,242               | -                     | Colombian Peso              | 1,316,242               |
| 427,978                 | -                     | Czech Koruna                | 427,978                 |
| 47,335,378              | 1,549,847             | Danish Krone                | 48,885,225              |
| 544,961                 | -                     | Egyptian Pound              | 544,961                 |
| 844,660,552             | 156,207,613           | Euro Currency Unit          | 1,000,868,165           |
| 204,616,991             | -                     | Hong Kong Dollar            | 204,616,991             |
| 536,717                 | -                     | Hungarian Forint            | 536,717                 |
| 17,508,877              | 5,040,207             | Indian Rupee                | 22,549,084              |
| 8,755,981               | -                     | Indonesian Rupiah           | 8,755,981               |
| 632,609,993             | 20,733,268            | Japanese Yen                | 653,343,261             |
| 7,302,231               | 2,536,102             | Malaysian Ringgit           | 9,838,333               |
| 16,011,607              | 31,594,560            | Mexican New Peso            | 47,606,167              |
| 8,375,773               | -                     | New Israeli Sheqel          | 8,375,773               |
| 21                      | -                     | New Russian Ruble           | 21                      |
| 55,781,170              | -                     | New Taiwan Dollar           | 55,781,170              |
| 8,552,060               | 11,921,224            | New Zealand Dollar          | 20,473,284              |
| 32,457,875              | -                     | Norwegian Krone             | 32,457,875              |
| 116                     | -                     | Peruvian Nouveau Sol        | 116                     |
| 7,366,266               | 5,636,061             | Philippines Peso            | 13,002,327              |
| 5,002,998               | 2,387,196             | Polish Zloty                | 7,390,194               |
| 708,794,245             | 253,150,945           | Pound Sterling              | 961,945,190             |
| 2,187,032               | -                     | Qatari Rial                 | 2,187,032               |
| 41,662,501              | -                     | Singapore Dollar            | 41,662,501              |
| 43,281,579              | 2,519,839             | S African Comm Rand         | 45,801,418              |
| 80,980,279              | -                     | South Korean Won            | 80,980,279              |
| 98,996,185              | 7,985,937             | Swedish Krona               | 106,982,122             |
| 281,268,481             | -                     | Swiss Franc                 | 281,268,481             |
| 10,375,559              | -                     | Thailand Baht               | 10,375,559              |
| 10,484,650              | -                     | Turkish New Lira            | 10,484,650              |
| 1,467,440               | -                     | United Arab Emirates Dirham | 1,467,440               |
| <u>\$ 3,479,196,265</u> | <u>\$ 549,128,840</u> |                             | <u>\$ 4,028,325,105</u> |

**CREDIT RISK**

Credit risk is the risk that an issuer or other counterparty to a debt investment will not fulfill its obligations. The Retirement System's investment policies require Core and Core Plus managers to have at least 70.0 percent of holdings in investment grade securities. Each portfolio is required to maintain a reasonable risk level relative to its benchmark.

In the table below, cash equivalents includes commercial paper, repurchase agreements and other short-term securities.

Agency securities are those implicitly guaranteed by the U.S. Government. U.S. Government securities are treasury securities and agencies explicitly guaranteed. Securities rated A1/P1 are included in AA in this table. Securities not rated quality rating are primarily bank loans, certificates of deposit and preferred stock. System assets (in thousands) as of June 30, 2015, subject to credit risk are shown with current credit ratings.

## CREDIT RISK

| Quality Rating | Cash Equivalents | Corporate           | U.S. Government     | Agency            | Total               |
|----------------|------------------|---------------------|---------------------|-------------------|---------------------|
| Not Rated      | \$ 75,898        | \$ 153,304          | \$ —                | \$ —              | \$ 229,202          |
| AAA            | —                | 199,793             | —                   | 1,419             | 201,212             |
| AA             | —                | 454,073             | 1,818,241           | 374,256           | 2,646,570           |
| A              | —                | 445,099             | —                   | —                 | 445,099             |
| BBB            | —                | 902,423             | —                   | —                 | 902,423             |
| BB             | —                | 380,111             | —                   | —                 | 380,111             |
| B              | —                | 263,193             | —                   | —                 | 263,193             |
| CCC            | —                | 73,855              | —                   | —                 | 73,855              |
| CC             | —                | 7,875               | —                   | —                 | 7,875               |
| D              | —                | 5,218               | —                   | —                 | 5,218               |
| Total          | <u>\$ 75,898</u> | <u>\$ 2,884,944</u> | <u>\$ 1,818,241</u> | <u>\$ 375,675</u> | <u>\$ 5,154,758</u> |

**INTEREST RATE RISK**

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Investment policy requires Core and Core+ managers to be within 20.0 percent of their benchmark duration, and all fixed portfolios shall maintain

a reasonable risk level relative to their benchmarks. The same System assets as above are also subject to interest rate risk. These are shown (in thousands) in the following table grouped by effective duration ranges. The weighted effective durations shown in the following table are grouped by asset category.

## INTEREST RATE RISK

| Effective Duration | Cash Equivalents | Corporate           | U.S. Government     | Agency            | Total               |
|--------------------|------------------|---------------------|---------------------|-------------------|---------------------|
| Not Available      | \$ —             | \$ 44,080           | \$ —                | \$ 918            | \$ 44,998           |
| 0-1 Yr             | 75,898           | 734,868             | 145,983             | 30,680            | 987,429             |
| 1-3 Yrs            | —                | 336,661             | 200,441             | 94,433            | 631,535             |
| 3-5 Yrs            | —                | 554,250             | 162,790             | 198,967           | 906,007             |
| 5-10 Yrs           | —                | 863,086             | 1,126,941           | 49,688            | 2,039,715           |
| > 10 Yrs           | —                | 361,999             | 182,086             | 989               | 545,074             |
| <b>Grand Total</b> | <u>\$ 75,898</u> | <u>\$ 2,884,944</u> | <u>\$ 1,818,241</u> | <u>\$ 375,675</u> | <u>\$ 5,154,758</u> |

**ANNUAL MONEY-WEIGHTED RATE OF RETURN**

For the year ended June 30, 2015, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 3.58 percent. This return was 18.10 percent for FY 2014. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

- Substitution: In substitution for “cash market” securities/positions, or for modifying portfolio positioning in lieu of cash market transactions.
- Derivative-based Strategies: As a structural part of an investment strategy.
- Efficiency/Cost Effectiveness: Efficiency and/or cost effectiveness in implementing: portfolio construction, trading, portfolio strategy or managing a portfolio’s risk/return profile.

## NOTE 4 – INVESTMENT DERIVATIVES

Derivative instruments are tools for use by the System’s investment managers for the purposes of:

- Risk Management: Mitigating or managing portfolio risks through hedging or otherwise modifying specific risk exposure.

Alternative investments are those investments that do not trade publicly on an organized exchange. Examples include, but are not limited to, partnership funds that focus on private equity, venture capital, buyout, mezzanine financing or special situations, natural resources or hedge funds. Prospective investment in any alternative investments are subject to the following requirements:



- There are at least two other sophisticated investors.
- The System's portion of an investment will not be more than 20 percent of the total investment.
- Any individual investment (standing alone or within a pool) must not be more than 2.5 percent of the Fund's total alternative investment commitments.
- A favorable recommendation has been received from an independent expert.
- The investment is consistent with the Investment Policy Statement.
- The Board has received and considered the due diligence findings regarding the investment.
- Criteria have been established that will be used as a guideline to determine when no additional investments will be made and when the investment will be liquidated.

The following table summarizes the derivatives held by the Retirement System as of June 30, 2015.

#### INVESTMENT DERIVATIVE SUMMARY AT JUNE 30, 2015

|                                 | Asset Class <sup>(1)</sup> | Notional Value | Fair Value   |
|---------------------------------|----------------------------|----------------|--------------|
| Domestic Equity Futures         | Domestic Equities          | \$ 137,174,140 | \$ —         |
| International Equity Futures    | International Equities     | 163,444,057    | —            |
| Fixed Futures                   | Fixed                      | (196,130,566)  | —            |
| Pay Fixed Interest Swaps        | Fixed                      | 1,918,000      | 187,790      |
| Credit Default Swaps            | Fixed                      | 25,222,600     | 1,960,193    |
| TBA Agency Bonds <sup>(2)</sup> | Fixed                      | 65,361,037     | 65,361,037   |
| Foreign Currency Forwards       | Fixed                      | 2,674,517,407  | (14,167,542) |
| Options Purchased               | Fixed                      | 277,000        | 4,328        |

<sup>1)</sup> The Asset Class that the Fair Values and Revenues are included in other schedules. Futures and Options reflect the summed absolute values of the exposures.

<sup>2)</sup> TBA Agency Bond notional values are equal to their fair values. KPERS investment policy allows managers to carry short TBA values as long as they have offsetting long holdings in similar securities with similar characteristics.

The following table summarizes the activity of the derivatives held by the Retirement System during the year ended June 30, 2015, at fair value:

#### INVESTMENT DERIVATIVE FAIR VALUES

|                             | June 30, 2014        | Increases               | Decreases                | June 30, 2015        |
|-----------------------------|----------------------|-------------------------|--------------------------|----------------------|
| Pay Fixed Interest Swap     | \$ 2,307,371         | \$ 4,091                | \$ (2,123,672)           | \$ 187,790           |
| Receive Fixed Interest Swap | 1,214,012            | 310,028                 | (1,524,040)              | —                    |
| Credit Default Swaps        | 1,661,040            | 2,006,080               | (1,706,927)              | 1,960,193            |
| TBA Agency Bonds            | 103,530,784          | 1,081,926,955           | (1,120,096,702)          | 65,361,037           |
| Foreign Currency Forward    | (6,240,870)          | 414,744,508             | (422,671,180)            | 14,167,542           |
| Options Purchased           | —                    | 4,328                   | —                        | 4,328                |
|                             | <u>\$102,472,337</u> | <u>\$ 1,498,995,990</u> | <u>\$(1,548,122,521)</u> | <u>\$ 53,345,806</u> |



## FUTURES

Futures contracts are commitments for delayed delivery (liability) or receipt (asset) of securities in which the seller agrees to make delivery and the buyer agrees to take delivery at a specified future date, of a specified instrument, at a specified price. Market risk arises due to market price and interest rate fluctuations that may result in a decrease in the fair value of futures contracts. Futures contracts are traded on organized exchanges and require initial margin in the form of cash or marketable securities. Holders of futures contracts look to the exchange for performance under the contract. Accordingly, the credit risk due to nonperformance of counterparties to futures contracts is minimal. Daily, the net change in the futures contract value is settled in cash with the exchanges, making the fair values always equal to zero after the daily margin flow. At the close of business June 30, 2015, the System had total net margins payable the next day of \$256,051. Cash equivalents and short-term investments in amounts necessary to settle the economic value of the futures contracts were held in the portfolio so that no leverage was employed in accordance with the Statement of Investment Policy. The daily margin flows effect cash assets held at broker. Realized gains/losses are recognized at contract maturity and included with underlying security type returns. Total revenues of \$22.5 million were associated with futures for the year ending June 30, 2015.

## OPTIONS

The Retirement System also participates in option contracts. These contractual agreements give the purchaser the right, but not the obligation, to purchase or sell a financial instrument at a specified price within a specified time. The option buyer has some counterparty risk in the event the seller cannot deliver when exercised. This involves opportunity cost and possible loss of option fees. The option seller holds the securities and has minimal counterparty risk. Options strategies used by the Retirement System are designed to provide exposures to positive market moves and limit exposures to interest rate and currency volatility.

## SWAPS

Interest rate swaps are agreements between two counterparties to exchange future cash flows. These are generally fixed vs. variable flows, and can be either received or paid. These swaps are used to adjust interest rate and yield curve exposure and substitute for physical securities. Long swap positions (receive fixed) increase exposure to long-term interest rates; short positions (pay fixed) decrease exposure. Counterparty risk is limited to monthly exchanged or netted cash flows.

Credit default swaps are used to manage credit exposure without direct purchase or sale of securities. Written credit default swaps increase credit exposure (selling protection) obligating the seller to buy the bonds from the counterparty in the event of a default. This creates credit risk, but has very little

counterparty risk. Purchased credit default swaps decrease exposure (buying protection), providing the right to “put” bonds to the counterparty in the event of a default. This decreases credit risk, and has counterparty risk in the event the seller of protection fails to cover the defaulting security. Controls are established by the investment managers to monitor the creditworthiness of the counterparties.

## TBA AGENCY BONDS

A TBA is a contract for the purchase or sale of agency mortgage-backed securities to be delivered at a future agreed-upon date; however, the actual pool identities or the number of pools that will be delivered to fulfill the trade obligation or terms of the contract are unknown at the time of the trade. A common practice is to buy a TBA security thirty to sixty days in advance of the issue date with the issue date as the trade settle date, then selling the security four days before issue date, with the same settle date. This allows the trader to realize a gain or loss on the security based on changes in interest rates, without taking possession of, or paying for, the security. The only cash cost is the broker cost of the trades. These have minimal credit risk, while this scenario is designed specifically to increase interest rate exposure.

## FOREIGN CURRENCY FORWARDS

The Retirement System’s international investment managers use forward contracts to obtain currencies necessary for trade execution and manage the exposure of the international investments to fluctuations in foreign currency. Active international investment managers use forward contracts to enhance returns or to control volatility. Currency risk arises due to foreign exchange rate fluctuations. Forward foreign exchange contracts are negotiated between two counterparties. The Retirement System could incur a loss if its counterparties failed to perform pursuant to the terms of their contractual obligations. Since the System holds the offsetting currency in the contract, and controls are established by the investment managers to monitor the creditworthiness of the counterparties, risk of actual loss is minimized. The Retirement System also contracts with a currency overlay manager to hedge the currency exposure to the System’s international equity portfolio.

The Retirement System utilizes a currency overlay manager to reduce, or partially hedge, the System’s exposure to foreign currencies through the international equities portfolio. The overlay manager evaluates the System’s international equities exposure to currencies, and buys/sells inverse currency forwards in relation to the overall currency exposures. The inverse relationship of these hedging forwards uses their exposure to currency risks to reduce overall System exposure. The Statement of Investment Policy stipulates that the overlay manager should: “Take forward currency exchange contract positions which will have the intent and effect of hedging the currency exposure of the underlying international equity assets.” The Statement of Investment Policy further states the forward currency exchange contract positions

be used to “Maintain an acceptable risk level by reducing the negative volatility of the currency component of return.”

The Retirement System has ongoing foreign currency exposure through its international equities portfolio. At June 30, 2015, the market value of international equities was \$3.9 billion. The Retirement System’s exposure to foreign currencies is converted into a proxy basket of seven liquid currencies that are highly correlated to the movements of the underlying currencies. The weights to be used are calculated with reference to the liquidity and risk of each currency.

There is appropriate statistical evidence that the proxy basket does track the currency exposure closely (residual standard deviation of less than one percent). This proves the intent is to hedge and qualifies as a designated hedge under Generally Accepted Accounting Principles. The forward contracts are purchased as needs are determined by the hedge manager, and mature in the nearest September, December, March or June. Gains/losses are realized during those periods and the contracts are rolled over to the next period as appropriate. Through these processes, hedging contracts can adapt to any

changes to portfolio currency exposures. Since the hedging currency forwards track to the overall exposure, and they reference the same foreign exchange rates as the underlying portfolio, this hedge is known to be effective through consistent critical terms.

A portfolio hedge such as this does not match the hedging forwards to any specific hedged security. The accessibility and liquidity of the currency forwards market allows these hedging forwards to roll forward and seamlessly hedge the ongoing foreign currency exposures. Counterparties to these forwards are carefully analyzed for credit risk. The System has control of one side of the exchange at all times, thereby reducing the costs of a counterparty default to possible lost gains, and inconvenience costs required to re-establish the hedge on short notice with another counterparty.

#### FOREIGN CURRENCY FORWARDS

Following is a summary of the foreign currency forwards activity during the FY ended June 30, 2015:

#### INVESTMENT CURRENCY FORWARDS

|                    | Notional Cost (USD)     | Pending Foreign Exchange Receivables | Pending Foreign Exchange Payables | Fair Value June 30, 2015 |
|--------------------|-------------------------|--------------------------------------|-----------------------------------|--------------------------|
| Australian Dollar  | \$ 108,795,881          | \$ 108,953,638                       | \$ (108,834,166)                  | \$ 119,472               |
| Brazil Real        | 18,439,580              | 18,470,386                           | (18,367,922)                      | 102,464                  |
| British Pound      | 897,741,280             | 898,722,352                          | (913,035,719)                     | (14,313,367)             |
| Canadian Dollar    | 125,506,968             | 125,701,344                          | (124,605,399)                     | 1,095,945                |
| Danish Krone       | 6,303,361               | 6,382,051                            | (6,344,820)                       | 37,231                   |
| Euro Currency Unit | 700,366,262             | 699,848,094                          | (698,794,717)                     | 1,053,377                |
| Hong Kong Dollar   | 57,203,578              | 57,204,088                           | (57,213,409)                      | (9,321)                  |
| Indian Rupee       | 8,405,212               | 8,410,307                            | (8,405,212)                       | 5,095                    |
| Japanese Yen       | 494,387,979             | 494,541,483                          | (497,887,072)                     | (3,345,589)              |
| Malaysian Ringgit  | 5,557,702               | 5,477,552                            | (5,495,608)                       | (18,056)                 |
| Mexican New Peso   | 20,026,291              | 19,940,436                           | (19,520,148)                      | 420,288                  |
| New Taiwan Dollar  | 8,733,032               | 8,733,032                            | (8,757,896)                       | (24,864)                 |
| New Zealand Dollar | 20,446,466              | 20,363,331                           | (18,810,336)                      | 1,552,995                |
| Norwegian Krone    | 28,605,573              | 28,416,787                           | (28,903,369)                      | (486,582)                |
| Philippines Peso   | 14,473,709              | 14,411,311                           | (14,394,923)                      | 16,388                   |
| Polish Zloty       | 2,547,591               | 2,547,591                            | (2,499,572)                       | 48,019                   |
| S African Rand     | 2,434,982               | 2,434,982                            | (2,523,186)                       | (88,204)                 |
| Singapore Dollar   | 28,102,781              | 27,994,861                           | (28,196,095)                      | (201,234)                |
| South Korean Won   | 3,045,654               | 2,985,199                            | (3,019,470)                       | (34,271)                 |
| Swedish Krona      | 20,730,636              | 21,071,548                           | (21,065,166)                      | 6,382                    |
| Swiss Franc        | 102,662,890             | 102,390,215                          | (102,493,925)                     | (103,710)                |
|                    | <u>\$ 2,674,517,408</u> | <u>\$ 2,675,000,588</u>              | <u>\$ (2,689,168,130)</u>         | <u>\$ (14,167,542)</u>   |



Investment Forwards Counterparty Exposure at June 30, 2015, is as follows:

### INVESTMENT FORWARDS COUNTERPARTY EXPOSURE

At June 30, 2015

| Counterparty Name                        | Notional \$USD          | Fair Value             | Worst Long-Term Rating |
|--|-------------------------|------------------------|------------------------|
| Bank Of America, N.A.                    | \$ 82,848,791           | \$ (440,632)           | A                      |
| Bank Of New York                         | 52,667,832              | (365,391)              | A                      |
| Barclays Bank PLC Wholesale              | 141,312,605             | (2,338,383)            | A                      |
| BNP Paribas SA                           | 19,079,213              | 151,910                | A                      |
| Citibank N.A.                            | 85,249,409              | (604,152)              | A                      |
| Citibank N.A. London                     | 206,609,936             | 1,614,023              | A                      |
| Credit Suisse International              | 5,978,604               | (881)                  | A                      |
| Deutsche Bank AG                         | 6,935,227               | 1,653                  | BBB                    |
| Goldman Sachs International              | 161,012,464             | 724,983                | A                      |
| HSBC                                     | 35,841,059              | 797,206                | A                      |
| HSBC Bank PLC                            | 717,074,105             | (5,404,789)            | A                      |
| HSBC Bank USA                            | 4,304,778               | 50,695                 | AA                     |
| JPMorgan Chase Bank N.A.                 | 7,736,324               | (71,116)               | A                      |
| JPMorgan Chase Bank Na London            | 271,380,515             | (551,768)              | A                      |
| Morgan Stanley And Co. International PLC | 25,472,081              | 366,066                | A                      |
| Royal Bank Of Canada (UK)                | 412,238,526             | (6,385,152)            | AA                     |
| LC'Royal Bank Of Scotland Plc            | 61,391,610              | (19,500)               | BBB                    |
| Societe Generale                         | 1,225,902               | 32,325                 | A                      |
| Standard Chartered Bank                  | 10,387,298              | (89,934)               | A                      |
| State Street Bank And Trust Company      | 14,226,000              | 9,412                  | A                      |
| State Street Bank London                 | 1,435,243               | 59,678                 | A                      |
| UBS AG                                   | 25,357                  | (95)                   | A                      |
| UBS AG London                            | 315,773,238             | (1,593,004)            | A                      |
| Westpac Banking Corporation              | 34,311,291              | (110,696)              | AA                     |
|  | <u>\$ 2,674,517,408</u> | <u>\$ (14,167,542)</u> |                        |

## NOTE 5 – SECURITIES LENDING

The KPERS board of trustees chose to discontinue the System's participation in the securities lending program administered by the master global custodian, Bank of New York Mellon. Through February of 2015, the System received income from the loan of the securities, in addition to the income which accrued to the System as owner of the securities. The securities loans were open contracts and therefore could be terminated at any time by either party. The type of securities lent included U.S. government securities, domestic and international equities, and domestic and international bonds. The borrower collateralized the loan with either cash or government securities of 102.0 percent of fair

value on domestic securities and 105.0 percent of fair value on international securities loaned. Cash collateral was invested in the Retirement System's name in a dedicated short-term investment fund consisting of investment grade debt securities. The System did not have the ability to pledge or sell collateral securities without a borrower default.

At June 30, 2015, there were no securities on loan and no collateral pool. Expenses to the System normally included fees to the administrator, Bank of New York Mellon, and interest rebates to the borrowing brokers. In the current low interest environment, those interest rebate expenses turn to additional payments from the brokers to the lender (KPERS) to encourage the loan. For the FY ending June 30, 2015, fees to the agent bank cost \$463,776, while broker 'rebate' income added \$648,826 to the net income produced from securities lending activities, totaling \$4,117,512.

## NOTE 6 – RESERVES

K.S.A. 74-4922, K.S.A. 74-4927 and K.S.A. 74-49,110 define the title and use of the required Retirement System reserves. This law requires the actuary to:

- Make an annual valuation of the Retirement System's liabilities and reserves.
- Make a determination of the contributions required to discharge the Retirement System's liabilities.
- Recommend to the Board of Trustees employer contribution rates required to maintain the System on an actuarial reserve basis.

The Members Accumulated Contribution Reserve represents the accumulation of member contributions, plus interest, credited to individual member accounts of non-retired members. At the date of retirement the individual member's account is transferred to the Retirement Benefit Payment Reserve. After ending employment and applying for withdrawal, employee contributions, plus accumulated interest, are charged to this reserve. Interest is credited to active member accounts on June 30 each year, based on the balance in the account as of the previous December 31. The interest crediting rate, defined by statute as the actuarial interest assumption rate, is 8.0 percent for those who became members prior to July 1, 1993. For those who first became members after June 30, 1993, interest on employee contributions is credited at the rate of 4.0 percent per year.

The Retirement Benefit Accumulation Reserve represents the accumulation of employer contributions, net investment income not credited to any other reserve, and the actuarially computed net pension liability not yet funded.

The Retirement Benefit Payment Reserve represents the actuarially computed present value of future benefits for retired members plus interest credited for the current FY, based upon information as of the preceding January 1.

The Expense Reserve represents investment income which is sufficient to maintain a year-end account balance at two times the most recent FY's administrative expenses amount. The System's administrative expenses are financed from this reserve.

The Optional Term Life Insurance Reserve accumulates employee contributions to pay premiums for optional life insurance coverage and is charged annually with the cost of administering the program. The balance as of June 30, 2015, was \$137,167.

The balance of the System's pension reserves and the net pension liability at June 30, 2015, were as follows:

| Reserves <sup>(1)</sup>                 | Balance               | Net Pension Liability    |
|---|-----------------------|--------------------------|
| Members Accumulated                     |                       |                          |
| Contribution Reserve                    | \$ 5,791,313,287      | \$ —                     |
| Retirement Benefit Accumulation Reserve | 7,631,460,058         | (8,978,950,317)          |
| Retirement Benefit Payment Reserve      | 12,170,173,324        | —                        |
| Expense Reserve                         | 21,524,383            | —                        |
|   | <u>25,614,471,052</u> | <u>(8,978,950,317)</u>   |
| Total Pension Reserves                  |                       | <u>\$ 16,635,520,735</u> |

*1) Optional Group Life Reserve balance of \$137,167 is not included in this schedule.*

## NOTE 7 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

The components of the net pension liability of the participating employers at June 30, 2015, were as follows:

|  | KPERS                   |
|--|-------------------------|
| State  | \$ 4,211,383,621        |
| School   | 13,692,566,770          |
| Local  | 4,685,572,064           |
| KP&F   | 2,858,637,809           |
| Judges   | 166,310,788             |
| Total Pension Liability  | <u>25,614,471,052</u>   |
| Fiduciary Net Position   | <u>16,635,520,735</u>   |
| Employers' Net Pension Liability   | <u>\$ 8,978,950,317</u> |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 64.95%                  |



### ACTUARIAL ASSUMPTIONS

The total pension liability was determined by an actuarial valuation as of December 31, 2014, which was rolled forward to June 30, 2015, using the following actuarial assumptions, applied to all periods included in the measurement:

|                               |  |
|-------------------------------|--|
| Actuarial cost method         | Entry Age Normal   |
| Amortization method           | Level percentage of payroll, closed (Level dollar for Judges)                        |
| Remaining amortization period | 18 years   |
| Asset valuation method        | 5-year smoothed value  |
| Inflation                     | 3.00 percent   |
| Salary increase               | 4.00 to 16.00 percent, including inflation   |
| Investment rate of return     | 8.00 percent compounded annually, net of investment expense, and including inflation |

Mortality rates were based on the RP-2000 Combined Mortality Table for Males or Females, as appropriate, with adjustments for mortality improvements based on Scale AA.

The actuarial assumptions used in the December 31, 2014, valuation were based on the results of an actuarial experience study conducted for three years ending December 31, 2012.

The long-term expected rate of return on pension plan investments was determined using a building-block method 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. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of June 30, 2015, (see the discussion of the pension plan's investment policy) are summarized in the following table:

| Asset Class            | Long-Term Target Allocation | Long-Term Expected Real Rate of Return |
|------------------------|-----------------------------|--|
| Global Equity          | 47.00%                      | 6.30%                                  |
| Fixed Income           | 13.00                       | 0.80                                   |
| Yield Driven           | 8.00                        | 4.20                                   |
| Real Return            | 11.00                       | 1.70                                   |
| Real Estate            | 11.00                       | 5.40                                   |
| Alternatives           | 8.00                        | 9.40                                   |
| Short-term Investments | 2.00                        | (0.50)                                 |

### DISCOUNT RATE

The discount rate used to measure the total pension liability was 8.0 percent. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from school districts will be made at contractually required rates, actuarially determined. 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. Therefore, the long-term expected rate of return on pension

plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

### SENSITIVITY OF THE NET PENSION LIABILITY TO CHANGES IN THE DISCOUNT RATE

The following presents the net pension liability of the Retirement System calculated using the discount rate of 8.0 percent, as well as what the Retirement Systems' net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower 7.0 percent or 1-percentage-point higher 9.0 percent than the current rate:

|                       | 1% Decrease<br>(7.00%) | Current Discount<br>Rate (8.00%) | 1% Increase<br>(9.00%) |
|-----------------------|------------------------|----------------------------------|------------------------|
| Net Pension Liability | \$11,862,179,643       | 8,978,950,317                    | \$6,532,076,018        |

## NOTE 8 – PENSION OBLIGATION BONDS

In February 2004 the State of Kansas issued \$500 million in pension obligation bonds, and KPERS received net proceeds of \$440.2 million in March 2004. The proceeds have been invested to assist with financing the State and School group's unfunded actuarial liability. The debt service on the bonds will be paid by the State of Kansas in addition to the State's regular employer contributions to KPERS.

## NOTE 9 – OTHER POST EMPLOYMENT BENEFIT PLAN (OPEB) – KPERS DEATH AND DISABILITY PLAN

The Kansas Public Employees Retirement System administers one post-employment benefit plan, KPERS Death and Disability Plan. This multiple employer, cost sharing, defined benefit plan,

authorized by K.S.A. 74-4927 provides death benefits for beneficiaries of plan participants and long-term disability benefits to all active members in the KPERS state, school and local coverage groups. In addition, the coverage is extended to other non-Public Employees employed at the Board of Regents institutions and other state officials. The plan provides death benefits to the Judges coverage group. In order to carry out legislative intent, within the funds available, the KPERS Board of Trustees may modify plan benefits from time to time.

#### SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

##### Basis of Accounting

The KPERS Death and Disability Plan's financial statements are prepared on the accrual basis in accordance with accounting principles generally accepted in the United States of America. Employer contributions are recognized as revenues when due pursuant to statutory requirements. Benefits and refunds are recognized when due and payable and expenses are recorded when the corresponding liabilities are incurred, regardless of when contributions are received or payment is made.

##### Method Used to Value Investments.

Investments are reported at fair market value. Securities traded on a national or international securities exchange are valued at the last reported sales price at current exchange rates.

##### PLAN MEMBERSHIP AND BENEFITS

Members in the Death and Disability Plan consisted of the following at June 30, 2014, the date of the last actuarial valuation:

- Active plan members 158,729
- Number of participating employers 1,413
- Open claims 2,521

The Death and Disability Plan provides two primary benefits to active members:

1. Group life insurance equal to 150 percent of annual compensation, which is provided through an insurance contract with an insurance carrier.
2. Self-insured long-term disability (LTD) benefits equal to 60 percent (before January 1, 2006, 66 2/3 percent) of annual

compensation, offset by other benefits. Members receiving LTD benefits also receive service credit toward their retirement benefits under KPERS and have their group life insurance coverage continued under the waiver of premium provision. The group life insurance benefit is increased annually for inflation, at a rate equal to the consumer price index less one percent, beginning five years following the date of disability.

##### CONTRIBUTIONS AND FUNDED STATUS

Prior to FY 2000, employer contributions for group life insurance and long-term disability income benefits were set by statute at 0.6 percent of covered payroll for KPERS and Board of Regents Institutions and 0.4 percent for Judges. Legislation passed in 2000 and 2001 placed a moratorium on contributions related to the group life insurance and disability benefits effective for the period April 1, 2000, through December 31, 2001. Calendar year 2002 and 2003 legislation placed additional moratoriums on contributions. Moratoriums were in effect for the period July 1, 2002, through December 31, 2002, and the period of April 1, 2003, through June 30, 2004. Legislation passed in 2005 increased the insurance contribution rate to 0.8 percent of covered payroll effective July 1, 2005, and to 1.0 percent on July 1, 2006. The rate for Judges remained at 0.4 percent. Legislation passed in early 2009 placed a moratorium on contributions related to the group life insurance and disability benefits effective for the period March 1, 2009, through November 30, 2009. Subsequently, the Legislature passed moratoriums on contributions for each of the following periods, April 1, 2010, through June 30, 2010, April 1, 2011, through June 30, 2011, and April 1, 2012, through June 30, 2012. For the period ending June 30, 2015, employers contributed \$59,634,639 million to the Plan.

The death and disability plan assets are held in the Group Insurance Reserve fund. At June 30, 2015, this reserve held net assets totaling \$58,021,861. This reserve fund is funded from deposits from employer contributions and the respective investment income. Administrative expenses for the death and disability plan are funded from the accumulated investment income of the fund.

The funding status of the death and disability plan at June 30, 2014, the most recent actuarial valuation date:

#### DEATH AND DISABILITY PLAN SCHEDULE OF FUNDING PROGRESS

(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 % of Covered Payroll ((b - a)/c) |
|--------------------------|-------------------------------|---------------------------------------|-----------------------------|--------------------|---------------------|--|
| 06/30/14                 | \$39,799                      | \$257,812                             | \$218,012                   | 15.4%              | \$6,993,412         | 3.1%                                       |





The actuarial valuation dated June 24, 2015, is the most recent actuarial valuation. Only the disability benefits and waiver of premium life insurance provision are included in the actuarial valuation.

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 of future employment, mortality, and long-term disability trends. 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 schedule of funding progress for the Death and Disability Plan (on page 45) presents multi-year trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

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 long-term disability benefits provided at the time of the valuation and the historical funding of the plan, which is funded exclusively by the employer. The projections of benefits for financial reporting purposes do not explicitly incorporate the potential effects of legal or contractual funding limitations on the assumption of the total costs by the employer in the future.

The accompanying schedule of employer contributions (on page 45) presents the amount contributed to the plan by employers in comparison to the actuarial required contribution (ARC) as determined by the actuarial valuation dated June 30, 2014, using GASB 43 requirements. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover normal costs for each year and amortize any unfunded liabilities over 15 years.

The actuarial methods and assumptions used include techniques that are designed to reduce the effects of short-term volatility in actuarial accrued liabilities consistent with the long-term perspective of the calculations. Additional information as of the latest valuation follows:

#### ACTUARIAL VALUATION INFORMATION - DEATH AND DISABILITY PLAN

*Valuation Date June 30, 2014*

|   |                            |
|---|----------------------------|
| Actuarial Cost Method                     | Entry Age Normal           |
| Amortization Method                       | Level Percent of Pay, Open |
| Remaining Amortization Period             | 15 years                   |
| Asset Valuation Method                    | Market Value               |
| Actuarial Assumptions:                    |                            |
| Investment Rate of Return <sup>(1)</sup>  | 4.0%                       |
| Projected Salary Increases <sup>(1)</sup> | 4.0% - 12.0%               |
| Payroll Growth                            | 4.0%                       |

*1) Salary increases and investment rate of return include a 3.00 percent inflation component.*

Changes in the UAAL occur for various reasons. The net decrease in the UAAL from July 1, 2012, to July 1, 2014, was \$31.5 million. The components of this net change are shown in the following table (in millions).

|   |                |
|---|----------------|
| Unfunded Actuarial Accrued Liability, July 1, 2012            | \$249.5        |
| Impact of New Claim Experience different from expected        | (29.2)         |
| Impact of terminated claim experience different from expected | (6.6)          |
| Impact of change in assumptions*                              | 4.6            |
| Impact of new entrants (active)                               | 4.1            |
| Other liability experience and asset experience               | (4.4)          |
| Unfunded Actuarial Accrued Liability, July 1, 2014            | <u>\$218.0</u> |

*\* Beginning with the 6/30/2014 valuation, the interest rate used to discount future benefit payments has been reduced from 4.5 percent to 4.0 percent.*

## NOTE 10 – COMMITMENTS AND CONTINGENCIES

As of June 30, 2015, the Retirement System was committed to additional funding of \$2,954,935 in the form of capital expenditures on separate account real estate holdings in the portfolio \$825,540,451 for commitments on private equity investments, and \$381,007,144 for capital calls on core and noncore real estate property trust investments.

The Retirement System is a defendant in legal proceedings and claims arising out of the ordinary course of business. The Retirement System believes it has adequate legal defenses and that the ultimate outcome of these actions will not have a material adverse effect on the Retirement System's financial position.

## NOTE 11 – SUBSEQUENT EVENTS

In August 2015, the State of Kansas issued pension obligation bonds, Series 2015H, of which KPERS received \$1.0 billion. The proceeds have been invested to assist with financing the State and School group's unfunded actuarial liability. The debt service on the bonds will be paid by the State of Kansas in addition to the State's regular employer contributions to KPERS.

Subsequent events have been evaluated through November 2, 2015, which is the date the financial statements were available to be issued.



# REQUIRED SUPPLEMENTARY INFORMATION—RETIREMENT PLAN

## SCHEDULE OF CHANGES IN EMPLOYERS' NET PENSION LIABILITY

For the last two fiscal years (\$ in Thousands)

|   | 2015                | 2014                |
|---|---------------------|---------------------|
| <b>Total pension liability:</b>                             |                     |                     |
| Service cost  | \$ 571,944          | \$ 572,291          |
| Interest  | 1,926,405           | 1,866,797           |
| Changes of benefit terms                                    | 1,467               | —                   |
| Differences between expected and actual experience          | (135,542)           | (216,248)           |
| Changes of assumptions                                      | (53,014)            | —                   |
| Benefit payments, including refunds of member contributions | <u>(1,524,380)</u>  | <u>(1,432,846)</u>  |
| Net change in total pension liability                       | 786,880             | 789,994             |
| Total pension liability – beginning                         | <u>24,827,591</u>   | <u>24,037,597</u>   |
| Total pension liability – ending (a)                        | <u>25,614,471</u>   | <u>24,827,591</u>   |
| <b>Plan fiduciary net position:</b>                         |                     |                     |
| Contributions – employer                                    | 690,564             | 701,818             |
| Contributions – member                                      | 382,058             | 332,163             |
| Total net investment income                                 | 561,174             | 2,553,843           |
| Other miscellaneous income                                  | 1,076               | 242                 |
| Benefit payments, including refunds of member contributions | (1,524,380)         | (1,432,846)         |
| Administrative expenses                                     | <u>(10,768)</u>     | <u>(9,636)</u>      |
| Net change in plan fiduciary net position                   | 99,724              | 2,145,584           |
| Plan fiduciary net position – beginning                     | 16,535,797          | 14,390,213          |
| Plan fiduciary net position – ending (b)                    | <u>16,635,521</u>   | <u>16,535,797</u>   |
| Employers' net pension liability (a) - (b)                  | <u>\$ 8,978,950</u> | <u>\$ 8,291,794</u> |
| See accompanying independent auditors' report.              |                     |                     |

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

## SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY

For the last two fiscal years (\$ in Thousands)

|  | 2015                | 2014                |
|--|---------------------|---------------------|
| Total pension liability  | \$ 25,614,471       | \$ 24,827,591       |
| Plan fiduciary net position  | <u>16,635,521</u>   | <u>16,535,797</u>   |
| Employers' net pension liability   | <u>\$ 8,978,950</u> | <u>\$ 8,291,794</u> |
| Plan fiduciary net position as a percentage of the total pension liability   | 64.95%              | 66.60%              |
| Covered-employee payroll   | \$ 6,635,196        | \$ 6,424,739        |
| Employers' net pension liability as a percentage of covered-employee payroll | 135.32%             | 129.06%             |
| See accompanying independent auditors' report.                               |                     |                     |

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



### SCHEDULE OF EMPLOYERS' CONTRIBUTIONS

*Last 10 Fiscal Years (\$ in Thousands)*

|  | 2015              | 2014           | 2013           | 2012           | 2011           |
|--|-------------------|----------------|----------------|----------------|----------------|
| Actuarially determined contribution                                  | \$ 908,019        | 842,286        | 825,197        | 843,362        | 709,964        |
| Contributions in relation to the actuarially determined contribution | <u>676,173</u>    | <u>668,811</u> | <u>617,925</u> | <u>568,015</u> | <u>525,727</u> |
| Contribution deficiency (excess)                                     | <u>\$ 231,846</u> | <u>173,475</u> | <u>207,272</u> | <u>275,347</u> | <u>184,237</u> |
| Covered-employee payroll   | \$6,635,196       | 6,424,739      | 6,523,850      | 6,541,464      | 6,483,143      |
| Contributions as a percentage of covered-employee payroll            | 10.19%            | 10.41%         | 9.47%          | 8.68%          | 8.11%          |
|  | <b>2010</b>       | <b>2009</b>    | <b>2008</b>    | <b>2007</b>    | <b>2006</b>    |
| Actuarially determined contribution                                  | \$ 682,062        | 660,834        | 607,662        | 531,292        | 471,424        |
| Contributions in relation to the actuarially determined contribution | <u>492,006</u>    | <u>449,236</u> | <u>395,752</u> | <u>339,509</u> | <u>298,712</u> |
| Contribution deficiency (excess)                                     | <u>\$ 190,056</u> | <u>211,598</u> | <u>211,910</u> | <u>191,783</u> | <u>172,712</u> |
| Covered-employee payroll   | \$6,527,400       | 6,403,432      | 6,226,754      | 6,032,223      | 5,714,315      |
| Contributions as a percentage of covered-employee payroll            | 7.54%             | 7.02%          | 6.36%          | 5.63%          | 5.23%          |

### SCHEDULE OF INVESTMENT RETURNS

*Last 10 Fiscal Years*

|   | 2015        | 2014        | 2013        | 2012        | 2011        |
|---|-------------|-------------|-------------|-------------|-------------|
| Annual money-weighted rate of return, net of investment expense | 3.58%       | 18.10%      | 13.87%      | 0.67%       | 22.56%      |
|   | <b>2010</b> | <b>2009</b> | <b>2008</b> | <b>2007</b> | <b>2006</b> |
| Annual money-weighted rate of return, net of investment expense | 14.96%      | (20.08)%    | (4.58)%     | 17.82%      | 12.15%      |

## REQUIRED SUPPLEMENTARY INFORMATION – DEATH AND DISABILITY PLAN

### SCHEDULE OF EMPLOYERS' CONTRIBUTIONS

*Last Nine Fiscal Years*

| Year | Annual Required Contribution | Percentage Contribution |
|------|------------------------------|-------------------------|
| 2007 | \$ 71,763,879                | 83%                     |
| 2008 | 76,128,451                   | 82                      |
| 2009 | 75,414,841                   | 48                      |
| 2010 | 62,705,453                   | 47                      |
| 2011 | 57,868,502                   | 85                      |
| 2012 | 57,030,698                   | 87                      |
| 2013 | 57,369,452                   | 86                      |
| 2014 | 58,363,306                   | 99                      |
| 2015 | 57,251,727                   | 104                     |

### SCHEDULE OF FUNDING PROGRESS

*(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) |
|--------------------------|-------------------------------|---------------------------------------|-----------------------------|--------------------|---------------------|---|
| 06/30/06 <sup>(1)</sup>  | \$18,724                      | \$354,150                             | \$335,426                   | 5.3%               | \$5,716,896         | 5.9%  |
| 06/30/07                 | 25,568                        | 355,729                               | 330,161                     | 7.2                | 5,981,324           | 5.5   |
| 06/30/08                 | 38,571                        | 355,060                               | 316,489                     | 10.9               | 6,409,426           | 4.9   |
| 06/30/10                 | 12,751                        | 283,758                               | 271,007                     | 4.5                | 6,822,726           | 4.0   |
| 06/30/12                 | 19,068                        | 268,597                               | 249,528                     | 7.1                | 6,618,909           | 3.8   |
| 06/30/14                 | 39,799                        | 257,812                               | 218,012                     | 15.4               | 6,993,412           | 3.1   |

1) The June 30, 2006, actuarial valuation date was the first valuation performed using actuarial requirements as required by GASB 43.

2) Actuarial Valuation assumes insurance premiums due for the Basic Life Insurance plan are paid by current contributions. The remaining contributions, cash, and investments are reserves for liabilities associated with the long term disability plan.



## NOTES TO REQUIRED SUPPLEMENTARY INFORMATION JUNE 30, 2015

### NOTE 1 – CHANGES OF BENEFIT TERMS

In FY 2014, the Kansas Police & Firemen group had a change in benefit terms. The Legislature increased this group's employee contributions to 7.15 percent and eliminated the reduction of employee contributions to 2.0 percent after 32 years of service. In addition, the maximum retirement benefit increased to 90 percent of final average salary (reached at 36 years of service). Before this change the maximum retirement benefit was limited to 80 percent of final average salary (reached at 32 years of service).

Effective January 1, 2014, KPERS 1 member's employee contribution rate increased to 5.0 percent and then on January 1, 2015, increased to 6.0 percent, with an increase in benefit multiplier to 1.85 percent for future years of service. For KPERS 2 members retiring after July 1, 2012, the cost of living adjustment (COLA) is eliminated, but members will receive a 1.85 percent multiplier for all years of service.

January 1, 2015, the KPERS 3 cash balance plan became effective. Members enrolled in this plan are ones first employed in a KPERS-covered position on or after January 1, 2015, or KPERS 1 or KPERS 2 members who left employment before vesting and returned to employment on or after January 1, 2015. The retirement benefit is an annuity based on the account balance at retirement.

### NOTE 2 – METHOD AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY DETERMINED CONTRIBUTIONS

The actuarially determined contribution rates in the schedule of the Retirement System's contributions are calculated as of June 30, two years prior to the end of the FY in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule.

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows.

|   | KPERS   | KP&F                 | Judges              |
|---|---|----------------------|---------------------|
| Valuation Date                            | 12/31/2014  | 12/31/2014           | 12/31/2014          |
| Actuarial Cost Method                     | Entry Age Normal  | Entry Age Normal     | Entry Age Normal    |
| Age Normal Amortization Method            | Level Percent Closed  | Level Percent Closed | Level Dollar Closed |
| Remaining Amortization Period             | 18 years  | 18 years             | 18 years            |
| Asset Valuation Method                    | Difference between actual return and expected return on market value recognized evenly over five-year period. |                      |                     |
| Actuarial Assumptions:                    |   |                      |                     |
| Investment Rate of Return <sup>(1)</sup>  | 8%  | 8%                   | 8%                  |
| Projected Salary Increases <sup>(1)</sup> | 4.0% - 12.0%  | 4.0% - 12.5%         | 4.5%                |
| Cost of Living Adjustment                 | None  | None                 | None                |

<sup>1)</sup> Salary increases and investment rate of return include an inflation component of 3.0 percent.

## OTHER SUPPLEMENTARY INFORMATION

## SCHEDULE OF CONTRIBUTIONS

For Fiscal Year Ended June 30, 2015

**Kansas Public Employees Retirement System**

## State / School Contributions

|                                    |                    |                |
|------------------------------------|--------------------|----------------|
| Members                            | \$ 251,068,155     |                |
| Employers                          | <u>480,405,235</u> |                |
| Total State / School Contributions |                    | \$ 731,473,390 |

## Local Contributions

|                           |                    |                    |
|---------------------------|--------------------|--------------------|
| Members                   | 95,273,172         |                    |
| Employers                 | <u>167,483,725</u> |                    |
| Total Local Contributions |                    | <u>262,756,897</u> |

**Total Contributions KPERS****\$ 994,230,287****Kansas Police and Firemen's System**

## State Contributions

|                           |                  |            |
|---------------------------|------------------|------------|
| Members                   | 3,124,875        |            |
| Employers                 | <u>8,260,269</u> |            |
| Total State Contributions |                  | 11,385,144 |

## Local Contributions

|                           |                   |                    |
|---------------------------|-------------------|--------------------|
| Members                   | 31,052,885        |                    |
| Employers                 | <u>87,712,589</u> |                    |
| Total Local Contributions |                   | <u>118,765,474</u> |

**Total Contributions KP&F****130,150,618****Kansas Retirement System for Judges**

## State Contributions

|                           |                  |                  |
|---------------------------|------------------|------------------|
| Members                   | 1,538,799        |                  |
| Employers                 | <u>6,337,303</u> |                  |
| Total State Contributions |                  | <u>7,876,102</u> |

**Total Contributions - Judges****7,876,102****Optional Group Life Insurance**

## Member Contributions

|                     |           |                  |
|---------------------|-----------|------------------|
| State Employees     | 3,243,831 |                  |
| Local Employees     | 3,394,648 |                  |
| Total Contributions |           | <u>6,638,479</u> |

**Total Contributions – OGLI****6,638,479****Grand Total All Contributions****\$ 1,138,895,486**



## SCHEDULE OF ADMINISTRATIVE EXPENSES

*For Year Ended June 30, 2015*

|                                |                  |                     |
|--------------------------------|------------------|---------------------|
| <b>Salaries and Wages</b>      |                  | <b>\$5,866,591</b>  |
| <b>Professional Services</b>   |                  |                     |
| Actuarial                      | \$ 373,940       |                     |
| Audit                          | 181,630          |                     |
| Data Processing                | 910,054          |                     |
| Legal                          | 152,782          |                     |
| Other Professional Services    | <u>1,449,983</u> |                     |
| Total Professional Services    |                  | 3,068,389           |
| <b>Communication</b>           |                  |                     |
| Postage                        | 246,245          |                     |
| Printing                       | 120,137          |                     |
| Telephone                      | <u>124,525</u>   |                     |
| Total Communication            |                  | 490,907             |
| <b>Building Administration</b> |                  |                     |
| Building Management            | 84,424           |                     |
| Janitorial Service             | 34,944           |                     |
| Real Estate Taxes              | 71,258           |                     |
| Utilities                      | <u>59,146</u>    |                     |
| Total Building Administration  |                  | 249,772             |
| <b>Miscellaneous</b>           |                  |                     |
| Dues and Subscriptions         | 16,005           |                     |
| Repair and Maintenance         | 805,479          |                     |
| Office and Equipment Rent      | 25,660           |                     |
| Supplies                       | 107,963          |                     |
| Temporary Services             | 17,961           |                     |
| Travel                         | 68,852           |                     |
| Other Miscellaneous            | 265,430          |                     |
| Depreciation                   | <u>282,981</u>   |                     |
| Total Miscellaneous            |                  | <u>1,590,331</u>    |
| Total Administrative Expenses  |                  | <u>\$11,265,990</u> |

## SCHEDULE OF INVESTMENT INCOME BY ASSET CLASS

For Year Ended June 30, 2015

| Asset Classification                          | Interest Dividends and<br>Other Transactions   | Gains and Losses      | Total                 |
|---|--|-----------------------|-----------------------|
| Marketable Equity Securities                  |  |                       |                       |
| Domestic Equities                             | \$ 76,395,264                                  | \$ 216,728,540        | \$ 293,123,804        |
| International Equities                        | <u>64,212,476</u>                              | <u>(36,835,157)</u>   | <u>27,377,319</u>     |
| Subtotal Marketable Equities                  | 140,607,740                                    | 179,893,383           | 320,501,123           |
| Marketable Fixed Income Securities            |  |                       |                       |
| Government                                    | 35,195,435                                     | (62,644,242)          | (27,448,807)          |
| Corporate                                     | <u>97,219,735</u>                              | <u>(81,411,361)</u>   | <u>15,808,374</u>     |
| Subtotal Marketable Fixed                     | 132,415,170                                    | (144,055,603)         | (11,640,433)          |
| Short Term Investments                        | <u>301,529</u>                                 | <u>(2,360,858)</u>    | <u>(2,059,329)</u>    |
| Total Marketable Securities                   | <u>273,324,439</u>                             | <u>33,476,922</u>     | <u>306,801,361</u>    |
| Real Estate                                   | 75,353,304                                     | 174,162,050           | 249,515,354           |
| Alternative Investments                       | <u>10,573,421</u>                              | <u>55,554,746</u>     | <u>66,128,167</u>     |
| Total Real Estate and Alternative Investments | 85,926,725                                     | 229,716,796           | 315,643,521           |
| Other Investment Income                       |  |                       |                       |
| Securities Lending                            | <u>4,117,512</u>                               | <u>(99,042)</u>       | <u>4,018,470</u>      |
| Total Other Investment Income                 | 4,117,512                                      | (99,042)              | 4,018,470             |
|   | <u>\$363,368,676</u>                           | <u>\$ 263,094,676</u> | <u>\$ 626,463,352</u> |
|   | <b>Manager and Custodian Fees and Expenses</b> |                       |                       |
|   |  |                       | (30,521,736)          |
|   |  |                       | (959,887)             |
|   |  |                       | (2,048,025)           |
|   |  |                       | (30,072,472)          |
|   |  |                       | (1,660,303)           |
|   |  |                       | <u>(65,262,423)</u>   |
|   |  |                       | <u>\$ 561,200,929</u> |



## SCHEDULE OF INVESTMENT MANAGEMENT FEES AND EXPENSES

*For Year Ended June 30, 2015*

### Domestic Equity Managers

|                            |                  |
|----------------------------|------------------|
| Advisory Research          | \$ 1,167,734     |
| BlackRock                  | 292,381          |
| Guggenheim                 | 1,165,901        |
| Loomis, Sayles & Co.       | 1,506,861        |
| Mellon Capital Mgmt.       | 174,385          |
| Systematic Financial Mgmt. | 1,024,367        |
| Voya                       | <u>1,437,466</u> |

**Subtotal Domestic Equity Managers** **6,769,095**

### International Equity Managers

|                                 |                  |
|---------------------------------|------------------|
| Baillie Gifford Int'l           | 2,287,125        |
| Barings Int'l                   | 1,817,477        |
| JP Morgan Int'l                 | 2,846,095        |
| Lazard Freres Asset Management  | 1,854,165        |
| Morgan Stanley Asset Management | 1,499,016        |
| State Street Int'l              | 428,403          |
| Templeton Int'l                 | <u>1,851,388</u> |

**Subtotal International Equity Managers** **12,583,669**

### Fixed Income Managers

|                                   |                |
|-----------------------------------|----------------|
| BlackRock                         | 1,051,381      |
| Franklin Templeton                | 435,932        |
| Loomis, Sayles & Co.              | 600,058        |
| MacKay Shields                    | 2,520,604      |
| Pacific Investment Management Co. | 667,373        |
| T. Rowe Price                     | 1,281,400      |
| Western Asset Management Co.      | <u>522,221</u> |

**Subtotal Fixed Income Managers** **7,078,969**

### Overlay Managers

|                 |                |
|-----------------|----------------|
| Insight Pareto  | 1,412,919      |
| Russell Overlay | <u>244,924</u> |

**Subtotal Overlay Managers** **1,657,843**

### Real Estate and REIT Investment Managers

|                        |                |
|------------------------|----------------|
| AEW Capital Management | 856,020        |
| Brookfield Redding     | 638,204        |
| CenterSquare           | <u>542,752</u> |

**Subtotal Real Estate & Alternative Managers** **2,036,976**

### Cash Equivalent Manager

|                                   |                |
|-----------------------------------|----------------|
| Payden & Rygel Investment Counsel | <u>395,184</u> |
|-----------------------------------|----------------|

**Subtotal Cash Management** **395,184**

**Total Investment Management Fees** **30,521,736**

### Other Fees and Expenses

|                                   |                   |
|-----------------------------------|-------------------|
| Custodian Fees and Other Expenses | 959,887           |
| Consultant Fees                   | 1,915,773         |
| Legal Expenses                    | 132,252           |
| Investment Operations             | 1,660,303         |
| Partnership Management Expenses   | <u>30,072,472</u> |

**Subtotal Other Fees and Expenses** **34,740,687**

**Total** **\$ 65,262,423**









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# **INVESTMENTS** SECTION

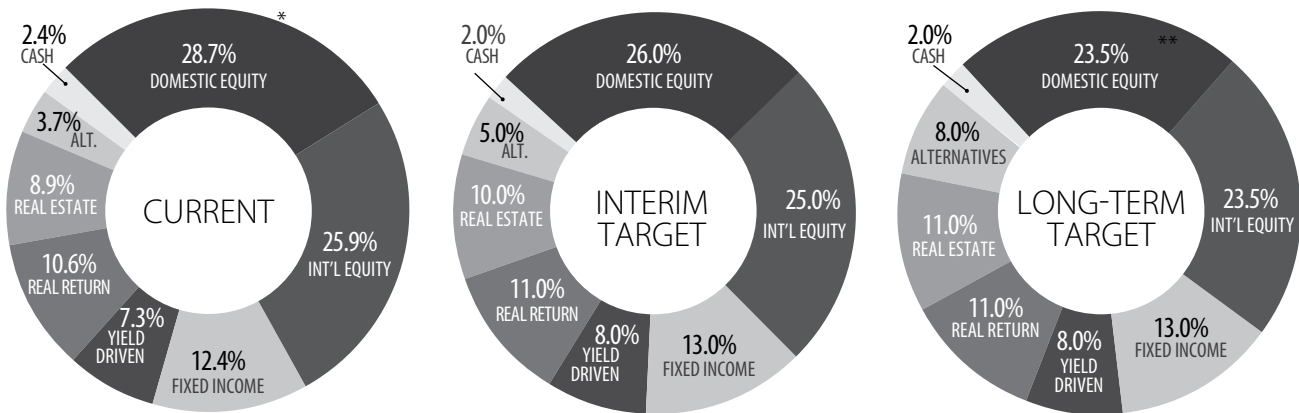
# CHIEF INVESTMENT OFFICER'S REVIEW

The Kansas Public Employees Retirement System investment portfolio represents all contributions to the plan, from both members and their employers, as well as net earnings on these assets. Total assets at the end of Fiscal Year 2015 were \$16.5 billion. The System's investment portfolio is managed for the long term, in order to generate adequate returns to pay the benefits promised to members. In order to achieve that goal, the assets receive the benefit of a broadly diversified investment portfolio which includes domestic and non-U.S. stocks, bonds, real estate, alternative investments and cash equivalents.

## BASIS OF PRESENTATION

The investment performance data is calculated by the Retirement System's custodial bank and prepared by the Retirement System's Investment Division staff. In FY 2015, the System's custodial bank was Bank of New York Mellon for the first nine months of the fiscal year, and the State Street Bank and Trust for the final three months. Performance calculations were prepared using time-weighted rates of return, gross of fees, unless otherwise indicated.

## ASSET ALLOCATION



\*All allocations reflect the impact of the Russell Overlay Program    \*\*Target Allocation adopted November 16, 2012

Portfolio investments are diversified among eight different asset classes for asset allocation and investment performance purposes, including: domestic equity; international (non-US) equity; fixed income; "yield driven" assets; "real return" assets; real estate; alternative investments; and cash equivalents. (NOTE: For financial reporting purposes, as reported in the Financial Section and the Investment Summary in the Investment Section, investments are categorized by the underlying security.)

During FY 2015, the System's Board, investment staff, and investment consultants continued to implement the asset allocation targets which were approved by the Board in late 2012, moving gradually toward the long term target asset allocation mix in order to diversify market timing risk.

The allocation to equity investments (primarily publicly-traded stocks) constitutes the largest portion of the Retirement System's investment portfolio. This allocation reflects the System's long-term investment orientation and the expectation that equities will provide high relative returns over time. Equity investments allow the investment portfolio to participate in the investment returns produced by companies

seeking to grow and profit from their business activities. Equity investments are made globally, sourcing investment return from both domestic and foreign companies, and diversifying the accompanying investment risk across a broad spectrum of economies, currencies, economic sectors and industries. Fixed income investments are also an important component of the System's asset mix. Due to its relatively low correlation with equities, the fixed income portfolio serves to diversify the risk of equity investing, and also provides a source of current income. The fixed income portfolios are constructed using broad mandates, with global opportunities in mind. While these portfolios principally contain US-based and US-dollar denominated assets, the fixed income investment managers have significant latitude to seek out and capture fixed income returns globally, consistent with the System's belief in global sourcing of return and diversification of risk.

The yield driven asset class is designed to house those assets which derive a significant part of their expected return from income and have moderate exposure to growth risk, but also provide a degree of diversification. The yield driven asset class consists of the System's strategic fixed income portfolios, a

portfolio which is invested in short duration high yield and bank loan securities, as well as investments in domestic Real Estate Investment Trusts (REITs) and Master Limited Partnerships (MLPs).

The majority of the real return asset category is made up of Treasury Inflation Protected Securities (TIPS) and global inflation linked bonds (GILBs). The asset class also houses the System's investments in timber and infrastructure assets. In FY 2015, the System made a new commitment to a second globally diversified infrastructure fund.

Real estate investments generate returns in a different manner than equities or fixed income investments, since real estate follows a different (and, typically, longer) market cycle. Because it moves in a different market cycle than publicly-traded stocks and bonds, real estate provides diversification advantages, as well as some inflation protection, to the investment portfolio. The System's real estate portfolio is heavily weighted to "core" real estate, which means that it also produces an attractive income yield.

The System's alternative investments, which consist primarily of investments in private partnerships that make venture capital investments, pursue leveraged buyout strategies or own private debt, represent the higher end of the investment risk/return spectrum. Private equity managers pursue higher growth opportunities in pursuit of higher returns, with commensurate investment risk.

The System also holds cash equivalent investments, primarily to facilitate investment transactions and the cash flows needed to pay benefits.

**INVESTMENT POLICY**

The Board of Trustees has adopted a Statement of Investment Policy, Objectives and Guidelines (the Statement), which serves as a guide to the implementation of the System's broad investment objectives. The Statement complements KPERS' statutes and documents the principles and standards that guide the management of the System's assets. It is binding upon all persons with authority over the assets, including investment managers, custodians, consultants, staff and the members of the Board of Trustees.

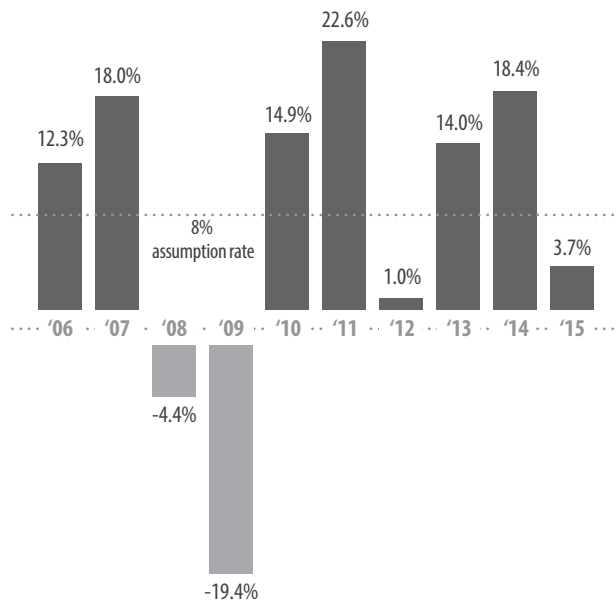
The Statement is the product of the board's careful and prudent study and is reviewed annually and updated as needed. It sets forth the investment policies, objectives and guidelines which the Board of Trustees judge to be appropriate and prudent, in consideration of the needs of the System, and to comply with K.S.A. 74-4901 et seq., to direct the System's assets. Although the System is not subject to the provisions of the Employee Retirement Income Security Act of 1974, as amended (ERISA), the Board intends to abide by

the provisions of ERISA to the greatest extent practicable. As such, this Statement is written to be consistent with ERISA.

Among other things, the Statement establishes the criteria against which the System's investment managers are to be measured. In addition, it serves as a review document to guide ongoing oversight of the investment of the Fund as a yardstick of compliance with K.S.A. 74-4901 et seq.

**TOTAL RETURNS BY FISCAL YEAR**

*Fiscal Year through June 30, 2015*



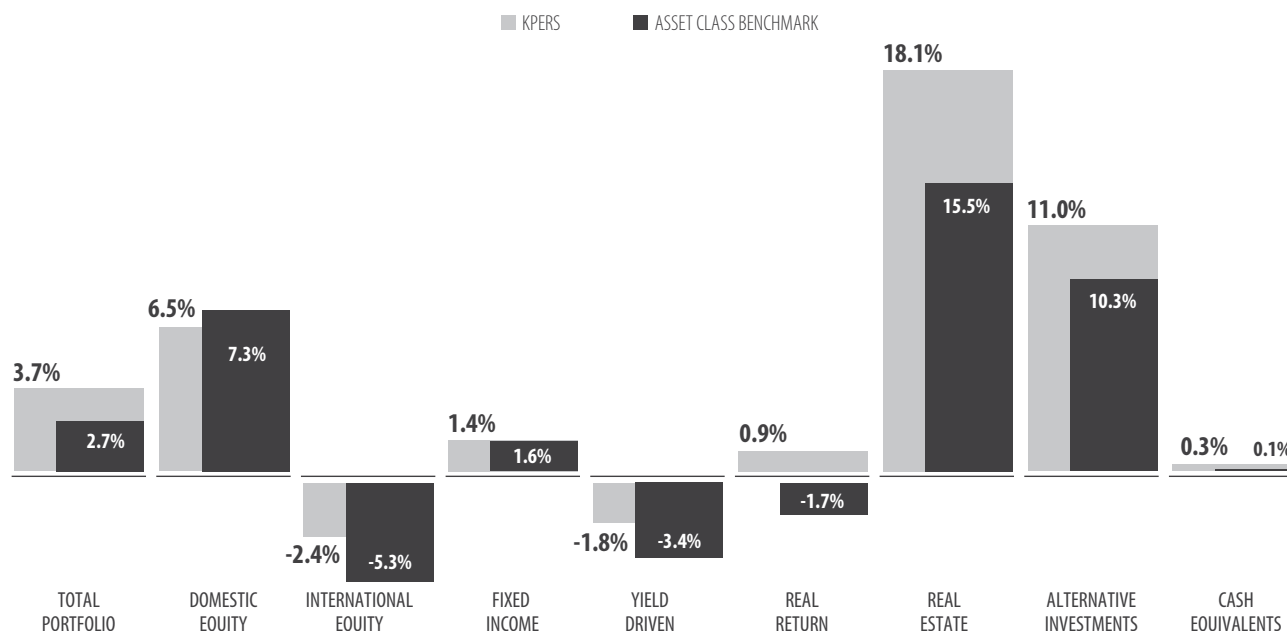
**FISCAL YEAR 2015 INVESTMENT PERFORMANCE**

The Retirement System's total investment portfolio experienced a 3.7 percent total return for the one year ending June 30, 2015. The 3.7 percent return exceeded the KPERS Policy Index by 1.0 percent for the fiscal year. For the three years ending June 30, 2015, the System's total investment portfolio has produced an average annualized return of 11.9 percent, which outperformed the Policy Index by 1.1 percent, and exceeded the 8 percent actuarial assumption. The trailing five-year and ten-year results are also strong, with average annualized total returns of 11.7 percent and 7.4 percent, respectively. As of June 30, 2015, the System's total return on total assets ranked above the median of the Wilshire TUCS universe for all pension plans for all time periods. The System's total return ranking was in the top quartile for the two-, three-, four-, five- and ten-year trailing time periods.



## TIME WEIGHTED TOTAL RETURN BY ASSET CLASS

Fiscal Year 2015



### FINANCIAL MARKET AND PERFORMANCE OVERVIEW

The year ending June 30, 2015, was a difficult time period for so-called “risk assets.” Following two fiscal years of robust, double-digit investment performance results, the System’s broadly diversified investment portfolio struggled to produce a single digit positive total return in FY 2015. The fiscal year was characterized by global financial market volatility, with global equity and fixed income markets largely moving sideways, and U.S. dollar strength reducing non-return streams for the System. Financial market volatility resulted from a variety of sources, including expectations of Federal Reserve “liftoff” in the U.S., concerns about slowing economic growth in China, dramatic declines in energy and other commodity prices, geopolitical strife from several sources, monetary easing by the European Central Bank and the Greek debt crisis.

### INVESTMENT STAFF

The System employs a staff of eight investment professionals to provide oversight and management of the assets and external investment managers. Under the oversight of the Chief Investment Officer (CIO), responsibility for the portfolio is assigned to the respective investment teams. The Deputy CIO for Public Markets has oversight responsibility for the publicly-traded asset classes and oversees the System’s active domestic and international equity investments. The Fixed Income Investment Officer is responsible for the management of the fixed income portfolios across asset classes, while the Assistant Investment Officer oversees the

REIT, MLP and passive domestic and international equity portfolios. The Senior Investment Officer for Private Markets handles the real estate and private equity investments, as well as the allocations to timber and infrastructure. The Chief Investment Officer and the four Investment Officers are supported by a team of three Investment Analysts who provide research support and assistance in managing the portfolios. Investment staff are focused on bringing a consistent, disciplined management process to all aspects of oversight of investment managers, compliance monitoring and risk management.

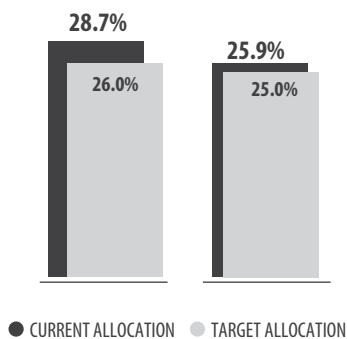
## PUBLIC EQUITY INVESTMENTS

Public equity investments represent the largest strategy allocation within the System’s portfolio. As of June 30, 2015, the market value of the System’s global equity portfolio was \$9.02 billion. The strategy is executed through external managers investing domestically and internationally. Active strategies are utilized for approximately 45.1 percent of the public equity portfolio, focusing on international equities and small and mid-cap U.S. companies. The balance of the global equity portfolio is passively managed to replicate the return of broad market indices.

**PORTFOLIO STRUCTURE**

The following graph describes the current and target allocations at June 30, 2015:

DOMESTIC EQUITY INTERNATIONAL EQUITY  
Percent of Total Assets



**DOMESTIC EQUITY**

Domestic equities represent 52.5 percent of the total public equity portfolio and 28.7 percent of total assets. Domestic equity investments are benchmarked against the Russell 3000 index. It is the System’s view that outperformance through active management is extremely difficult when investing in large cap U.S. equities. Therefore, 83 percent of the domestic equity portfolio is passively managed in an index strategy. This passive exposure is designed to replicate the return on U.S. large cap equities and is implemented through two investment managers.

The balance of the domestic equity portfolio is invested in the mid and small cap segments of the U.S. equity market. These investments are actively managed by three external managers.

**INTERNATIONAL EQUITY**

International equities represent 47.5 percent of the total public equity portfolio and 25.9 percent of total assets. International equity investments are benchmarked against the MSCI All Country World – Ex U.S. Index. Equity investments in companies domiciled outside of the United States offer the potential to add value through prudent active management. Therefore, 76.5 percent of this portfolio is actively managed. The System has retained six active managers to invest across the developed and emerging markets outside of the U.S. The balance of the international equity portfolio is invested to replicate the return on the MSCI All Country World – Ex U.S. Index.

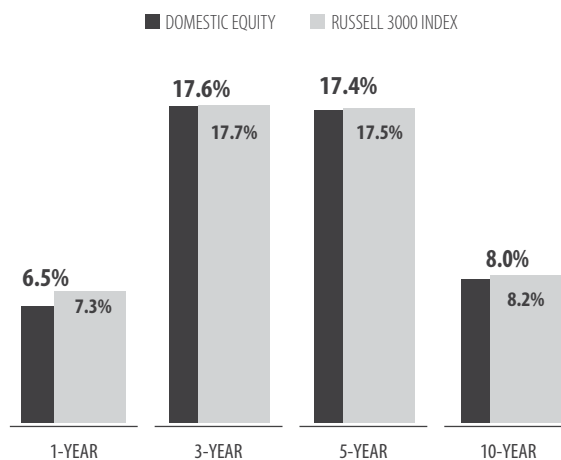
**PERFORMANCE**

The System’s domestic equity portfolio performed satisfactorily in FY 2015 in absolute terms, but underperformed relative to the portfolio’s benchmark. Domestically, the System’s active managers did not add value relative to the broader equity market during FY 2015. Over longer time periods, the return on

the domestic equity portfolio was in line with its benchmark, as expected, given the large passive component.

The following chart reports the performance of the domestic equity portfolio:

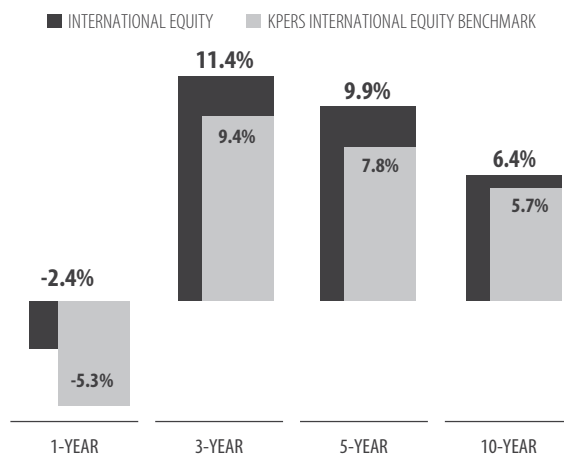
TIME WEIGHTED TOTAL RETURN  
Domestic Equity



The international equity portfolio performed well on a relative basis during FY 2015. Returns were negative in FY 2015, but they were significantly less negative than the strategy benchmark. The international equity portfolio produced a total return of -2.4 percent for the fiscal year, relative to the -5.3 percent return for the benchmark. Over longer time periods, the international equity portfolio has produced strong absolute and relative returns, as active management has added value relative to the benchmark.

The following chart reports the performance of the international equity portfolio:

TIME WEIGHTED TOTAL RETURN  
International Equity

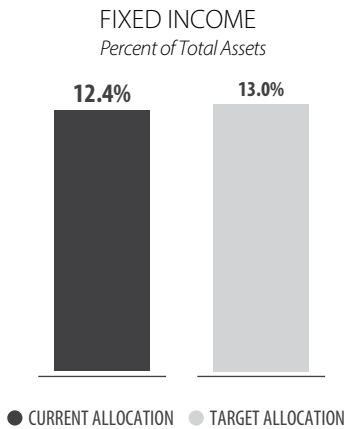


## FIXED INCOME

As of June 30, 2015, KPERS' fixed income portfolio had a market value of \$2.1 billion, representing 12.4 percent of the total assets of the System. The portfolio is structured with external managers investing domestically and internationally through an active core-plus mandate. The strategy is managed by two investment managers.

### PORTFOLIO STRUCTURE

The following table provides details of the fixed income portfolio as of June 30, 2015.



### CORE-PLUS FIXED INCOME

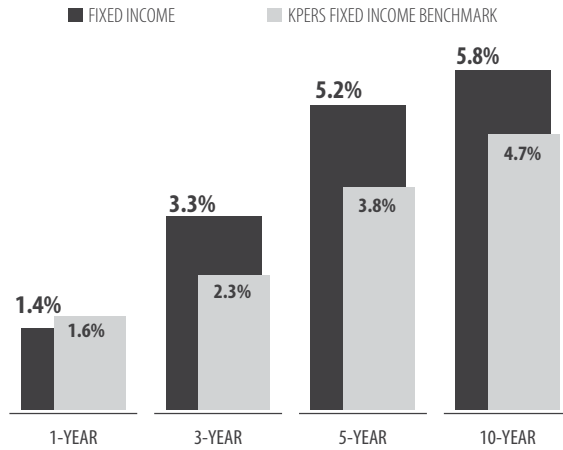
The fixed income portfolio is invested in core plus strategies through two active investment managers. The portfolio's objective is to provide diversification to other assets in the System's portfolio and to preserve capital while providing current income. The core plus strategies are primarily invested in traditional investment grade securities and secondarily in non-investment grade securities. The fixed income portfolio utilizes the Barclays Capital Universal Index as the benchmark.

### PERFORMANCE

The core plus fixed income portfolio underperformed its benchmark slightly during FY 2015, but has outperformed its benchmark by a significant margin across all longer term time periods. Overall, the fixed income portfolio's duration and yield curve positioning and overweight in spread sectors such as high yield and emerging markets drove performance during FY 2015.

The following chart reports the performance of the fixed income portfolio:

## TIME WEIGHTED TOTAL RETURN *Fixed Income*

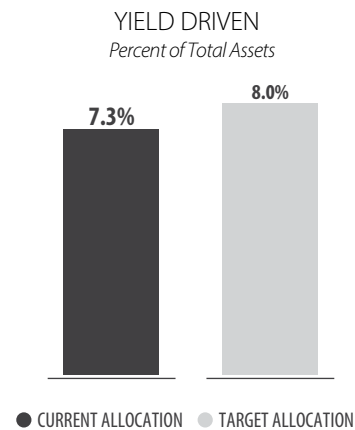


## YIELD DRIVEN

Yield driven investments represent one of the newer strategy allocations within the System's investment portfolio. As of June 30, 2015, the System's yield driven portfolio had a market value of \$1,205.4 million representing 7.3 percent of total assets. The strategy is actively managed by three strategic fixed income managers, one short duration high yield/bank loan manager, two REIT managers and one MLP manager. The yield driven asset class is designed to produce current income and an element of diversification away from equity risk, while also maintaining some degree of correlation with equities.

### PORTFOLIO STRUCTURE

The following graph describes the current and target allocations at June 30, 2015:



### STRATEGIC FIXED INCOME

The strategic fixed income strategy represents approximately 52.1 percent of the total yield driven portfolio and 3.9 percent of total assets. The strategy is measured against custom benchmarks which are weighted to reflect each manager's investment style. It



is the System's view that active management in extended market sectors (such as high yield and emerging markets) facilitates outperformance relative to the benchmark. While the strategic fixed income portfolio is invested in the traditional investment grade securities such as U.S. Treasuries and investment grade corporate bonds, it also has sizeable allocations to high yield, emerging markets and non-dollar securities. The System's two strategic fixed income managers produced modest, positive returns for FY 2015. These returns added value relative to the yield driven portfolio benchmark.

#### REAL ESTATE INVESTMENT TRUSTS (REITS)

REITs represent 19.4 percent of the yield driven asset class and 1.4 percent of the System's total assets. This strategy is benchmarked against the MSCI US REIT Index. The publicly-traded real estate securities portfolio is implemented by managers who actively invest in domestic REITs, real estate operating companies (REOCs) and related investment vehicles. The domestic REIT strategy is actively managed by two investment managers. The System's REIT managers produced the strongest performance in the yield driven asset class during FY 2015.

#### MASTER LIMITED PARTNERSHIPS (MLPS)

MLPs represent 20.3 percent of the yield driven asset class and 1.5 percent of the System's total assets. The strategy is benchmarked against the Alerian MLP Index. The MLP sector offers attractive yields relative to other asset classes, as well as attractive long term growth prospects. The MLP portfolio is comprised of diversified energy sectors including companies focused on "midstream," gathering and processing, infrastructure and natural gas pipelines and storage. The System currently has one active MLP investment manager. While MLPs struggled in FY 2015 due to the decline in oil prices, the System's MLP manager was able to protect capital during a period of negative returns, significantly outperforming the benchmark for the fiscal year. Over longer time periods, returns from the MLP strategy are positive on both an absolute and relative basis.

#### SHORT DURATION HIGH YIELD/BANK LOANS

A short duration high yield/bank loan portfolio manager was added to the yield driven asset class during FY 2015. The allocation represents 8.2 percent of the yield driven asset class and 0.6 percent of the System's total assets. The strategy is measured against a custom benchmark weighted equally to a bank loan index and to a short duration high yield index. The strategy is intended to generate current yield through credit exposure, while mitigating interest rate risk through short duration positioning. Given the limited time since implementation, performance results for the strategy are not yet meaningful.

#### PERFORMANCE

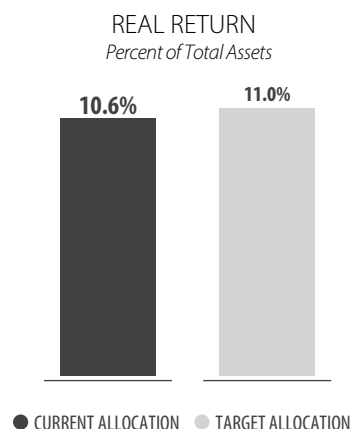
The yield driven portfolio produced a total return of -1.8 percent in FY 2015, beating the benchmark return of -3.4 percent. Since the yield driven portfolio was implemented on January 1, 2013, longer term performance results are not available.

## REAL RETURN INVESTMENTS

The real return portfolio is designed to provide the System with a hedge against future inflationary episodes. This strategy utilizes both public and private market investments. Public market exposure is global and achieved primarily through inflation linked fixed income securities issued by governments and their agencies in the U.S. as well as in developed countries around the world. Exposure in the private markets is currently achieved through investments in timber and infrastructure. The real return portfolio represents 10.6 percent of the System's total assets, and had a market value of \$1.7 billion as of June 30, 2015.

#### PORTFOLIO STRUCTURE

The following graph describes the current and target allocations at June 30, 2015:



#### U.S. TREASURY INFLATION LINKED BONDS (TIPS)

The TIPS portfolio represents 46.6 percent of the real return portfolio and is benchmarked against the Barclays U.S. TIPS Index. This passively managed exposure is designed to replicate the return on domestic inflation linked bonds. It is the System's view that the minimal excess return available through active management of TIPS is not sufficient to compensate for the incremental costs of active management fees. The TIPS portfolio performed in line with its benchmark during FY 2015.

#### GLOBAL INFLATION LINKED BONDS (GILBS)

The GILB portfolio represents 46.1 percent of the real return portfolio and is benchmarked against the Barclays World ILB Index (USD Hedged). The GILB portfolio provides global diversification by broadening the opportunity set to capture unexpected inflation within investment grade sovereign bonds. ILBs' sources of excess return include the identification of mispricing due to the direction of global interest rates, the shape of each country's yield curve, global breakeven inflation and relative value in global nominal bonds. The GILB portfolio underperformed its benchmark in FY 2015.

**TIMBER**

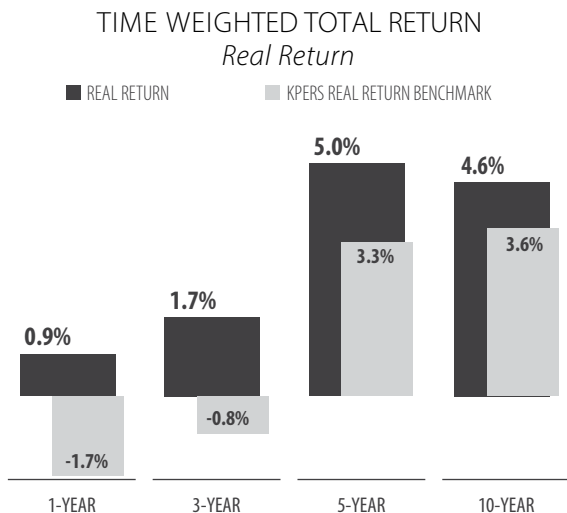
Timber investments are a component of the System's real return asset allocation due to their historically high correlation to inflation. The System is diversified within timber markets located in Texas, Louisiana and Idaho. The System continues to look for ways to diversify its timber portfolio in order to achieve the highest risk-adjusted returns while complying with the timber program's policy objectives and expected return targets. Over time, timber investments are expected to provide the System with current cash yields and modest capital appreciation. For FY 2015, the System's timber investment produced a very robust total return.

**INFRASTRUCTURE**

The System's infrastructure manager has been successful in operating its infrastructure investments. During the fiscal year, the System made a commitment to a second infrastructure manager and expects the capital to be called during FY 2016. The portfolio produced a very robust total return for the fiscal year. The fund's infrastructure portfolio is well diversified, with investments in Australia, the United Kingdom, and throughout North and South America, and diversified across multiple sectors, including renewable power, toll roads, electric utilities, sea ports and energy.

**PERFORMANCE**

The System's real return portfolio outperformed its benchmark in FY 2015, producing a 0.9 percent total return against a benchmark return of -1.7 percent. The portfolio allocations to timber and infrastructure drove the relative outperformance. The real return portfolio has also outperformed its benchmark over the longer term time periods.



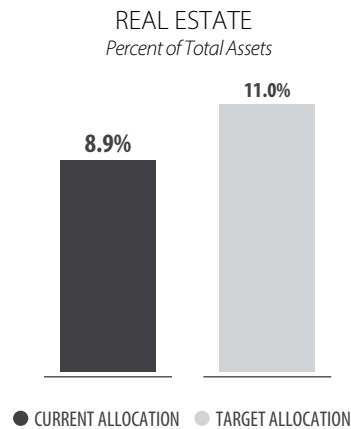
## REAL ESTATE INVESTMENTS

As of June 30, 2015, the real estate portfolio had a market value of \$1.48 billion, representing 8.9 percent of the total fund. The real estate portfolio is primarily designed to provide diversification to the broader portfolio, while also providing a meaningful current

income. Capital appreciation is a tertiary objective of current real estate investment activities.

**PORTFOLIO STRUCTURE**

The System's real estate portfolio is classified into two categories: "core" and "noncore." The "core" portion of the portfolio is targeted at a 65 percent allocation, while the "noncore" segment is targeted at a 35 percent allocation.



**CORE REAL ESTATE**

The largest segment of the real estate portfolio is "core" real estate. This portion of the portfolio is expected to produce steady current income in the form of investment yield while also providing portfolio diversification and serving as an inflation hedge. KPERS' core portfolio currently consists of:

- A separate account containing four directly-owned commercial properties in the U.S.
- Partial and full commitments to six commingled funds.

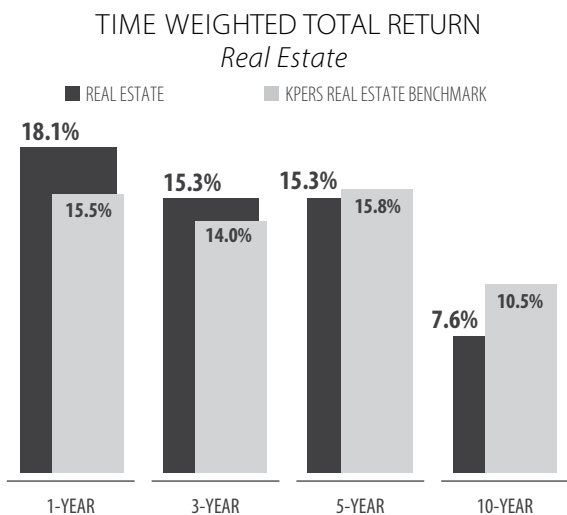
The System continues to pursue the gradual liquidation of the separate account real estate portfolio and reinvestment of the proceeds into pooled real estate investment funds. This strategy is expected to result in improved liquidity, enhanced portfolio diversification, lower management fees and a reduction in the single event risk associated with owning individual real estate assets.

**NON-CORE REAL ESTATE**

The "non-core" segment consists of investments that generally involve some element of property lifecycle risk (such as positioning, leasing and development) while also utilizing greater leverage (debt) than core strategies. While providing elements of inflation protection and a diversification benefit to the broader portfolio, the System expects non-core real estate investments to produce meaningful capital appreciation and higher overall long-term returns than core investments. The non-core portfolio consists of investment funds employing a diversity of strategies and property types, both domestically and internationally.

**REAL ESTATE PERFORMANCE**

The System's real estate portfolio outperformed its benchmark in FY 2015. The core real estate portfolio produced a total return of 14.7 percent, beating its benchmark by 0.3 percent, while the non-core real estate portfolio outperformed its benchmark by 6.7 percent with a total return of 24.1 percent. In total, the System's real estate portfolio produced a very robust total return of 18.1 percent, which outperformed the benchmark return by 2.6 percent. Overall, most of the System's real estate fund investments continued to benefit from the modest improvements to the economic landscape, with the majority generating substantial positive returns.



The alternative investment portfolio consists primarily of interest in private partnerships that provide equity and debt to companies. The portfolio contains two primary sub-portfolios based on investment period. Each portfolio has its own set of directives, guidelines, external fund managers and consultants who provide advice on investment strategy and investment selection during its investment period. The largest portfolio is the Private Equity Program (PEP), representing 94.1 percent of the market value of the asset class. The PEP portfolio actively seeks new commitments to private equity funds in three styles: buyout, venture capital/growth equity and special situations. Since the inception of PEP in 2007, the System has committed \$1.2 billion to 39 funds with 24 general partners.

The second portfolio is the Alternative Investment Portfolio (AIP) which represents 5.9 percent of the market value of the asset class. From 1997 to 2001, AIP made commitments to 54 funds with 35 general partners across five styles: buyout, venture capital, mezzanine, distressed debt and natural resources. As this is a mature portfolio, the remaining funds in the AIP portfolio are currently pursuing exit strategies for their existing holdings.

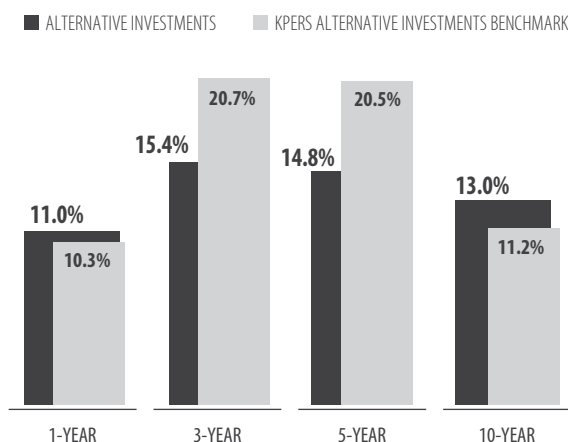
**ALTERNATIVE INVESTMENTS PERFORMANCE**

Private equity investments typically span ten years or longer. Therefore, the longer term returns from this asset class are more relevant in assessing its success in adding value to the overall portfolio. The System's long-term performance objective for alternative investments is to exceed the return of the Russell 3000 plus 3 percent. As the chart below shows, the alternative investments portfolio has surpassed that objective over the ten year time period, with a total return of 13.0 percent.

**ALTERNATIVE INVESTMENTS**

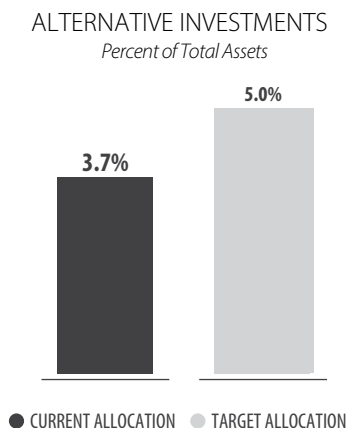
At June 30, 2015, the System's alternative investment portfolio had a fair market value of \$607.5 million, representing 3.7 percent of the total portfolio. Since the inception of the alternative investment program in 1997 through June 30 2015, the System has committed \$2.2 billion to 89 funds with 56 general partners.

TIME WEIGHTED TOTAL RETURN Alternative Investments



**PORTFOLIO STRUCTURE**

The following graph describes the current and target allocations as of June 30, 2015:



As required by K.S.A. 74-4904, a schedule of alternative investments initiated on or after July 1, 1991, is listed on the following pages.

ALTERNATIVE INVESTMENTS INITIATED ON OR AFTER JULY 1, 1991<sup>(a)</sup>

As of June 30, 2015

| Description                                 | Cost         | Market Value |
|---|--------------|--------------|
| Advanced Technology Ventures VI, L.P.       | \$ 8,984,267 | \$ 785,903   |
| Apax Europe IV, L.P.                        | 778,519      | 756,884      |
| Apax Europe V, L.P.                         | 8,825,658    | 1,686,484    |
| Apollo Investment Fund VII, L.P.            | 8,042,662    | 9,023,928    |
| Apollo Investment Fund VIII, L.P.           | 11,264,827   | 12,286,986   |
| Ares Corporate Opportunities Fund III, L.P. | 14,200,348   | 16,509,973   |
| Ares Corporate Opportunities Fund IV, L.P.  | 13,002,411   | 18,237,536   |
| Ares SSF IV, L.P.                           | 12,871,287   | 12,387,494   |
| Audax Mezzanine Fund III, L.P.              | 10,915,445   | 10,540,366   |
| Battery Ventures VI, L.P.                   | 3,613,680    | 199,333      |
| Beacon Group Energy Fund II, L.P.           | 1,857,390    | 649,562      |
| Capital Resource Partners IV, L.P.          | 5,285,821    | 1,361,622    |
| CCMP Capital Investors III, L.P.            | 19,676,806   | 21,800,003   |
| Centerbridge Capital Partners II, L.P.      | 19,980,913   | 23,407,421   |
| Centerbridge Capital Partners III, L.P.     | 1,788,532    | 1,788,532    |
| Clayton Dublier & Rice VI, L.P.             | 3,032,896    | 51,077       |
| Crestview Partners III, L.P.                | 5,895,972    | 6,009,175    |
| Cypress Merchant Banking II, L.P.           | 9,698,825    | 3,032,631    |
| El Dorado Ventures VI, L.P.                 | 6,688,352    | 2,592,205    |
| Encap Energy Capital VIII, L.P.             | 16,940,900   | 15,494,337   |
| Encap Energy Capital IX, L.P.               | 19,042,764   | 19,074,122   |
| Encap Energy Capital Fund X, L.P.           | 1,417,600    | 1,692,106    |
| First Reserve Fund XII, L.P.                | 17,827,721   | 13,800,149   |
| FS Equity Partners VII, L.P.                | 4,953,649    | 4,953,524    |
| GSO Capital Solutions Fund, L.P.            | 13,598,622   | 13,994,262   |
| GSO Capital Solutions Fund II, L.P.         | 8,413,016    | 11,052,029   |
| GTCR Fund VII, L.P.                         | —            | 54,972       |
| Halpern Denny Fund III, L.P.                | 4,323,178    | 237,908      |
| Hellman & Friedman VII, L.P.                | 7,963,547    | 9,989,338    |
| JMI Equity Fund VII, L.P.                   | 11,154,726   | 11,374,722   |
| Littlejohn Fund II, L.P.                    | 485,708      | 186,934      |
| Montagu IV, L.P.                            | 14,337,300   | 16,708,659   |
| New Enterprise Associates 13, L.P.          | 7,915,051    | 10,274,452   |
| Oak Hill Capital Partners, L.P.             | 1,287,832    | 197,439      |
| OCM Opportunities Fund III, L.P.            | 1,191,198    | 233,966      |
| OCM Opportunities Fund VIIb, L.P.           | —            | 3,166,326    |
| OneLiberty Fund IV, L.P.                    | 1,155,056    | 1,202,580    |
| OneLiberty Ventures 2000, L.P.              | 14,166,305   | 5,990,271    |
| Pine Brook Capital Partners, L.P.           | 14,552,575   | 15,136,964   |
| Pine Brook Capital Partners II, L.P.        | 20,543,502   | 22,347,833   |
| Platinum Equity Capital Partners III, L.P.  | 10,470,642   | 19,916,769   |
| Snow Phipps II, L.P.                        | 11,442,894   | 16,808,145   |

ALTERNATIVE INVESTMENTS INITIATED ON OR AFTER JULY 1, 1991<sup>(a)</sup> (CONTINUED)

As of June 30, 2015

| Description                                 | Cost                 | Market Value         |
|---|----------------------|----------------------|
| TA IX, L.P.                                 | \$ —                 | \$ 288,644           |
| TCV IV, L.P.                                | 6,910,657            | —                    |
| Thomas H. Lee Equity Fund V, L.P.           | —                    | 188,481              |
| TowerBrook Investors III, L.P.              | 9,917,523            | 14,958,943           |
| TowerBrook Investors IV, L.P.               | 2,112,780            | 3,271,504            |
| TPG Growth II, L.P.                         | 19,126,160           | 35,026,039           |
| TPG Partners VI, L.P.                       | 17,267,477           | 23,121,870           |
| Trinity Ventures VII, L.P.                  | 7,014,721            | 145,863              |
| Trinity Ventures VIII, L.P.                 | 9,493,314            | 247,285              |
| VantagePoint Venture Partners III, L.P.     | 7,533,543            | 655,224              |
| VantagePoint Venture Partners IV, L.P.      | 11,975,706           | 5,536,382            |
| Vestar Capital Partners IV, L.P.            | 1,909,099            | 886,790              |
| Vista Equity Partners Fund IV, L.P.         | 20,528,623           | 30,220,115           |
| Vista Equity Partners Fund V, L.P.          | 32,493,951           | 33,049,986           |
| Warburg, Pincus Equity Partners, L.P.       | —                    | 895,392              |
| Warburg Pincus Private Equity X, L.P.       | 21,090,346           | 38,345,457           |
| Warburg Pincus Private Equity XI, L.P.      | 28,076,259           | 38,488,444           |
| Washington & Congress Capital, L.P.         | —                    | 65,277               |
| Wellspring Capital Partners V, L.P.         | 11,397,637           | 15,908,425           |
| Welsh, Carson, Anderson & Stowe VIII, L.P.  | 2,369,487            | 26,795               |
| Welsh, Carson, Anderson & Stowe IX, L.P.    | 5,562,433            | 6,221,739            |
| Willis Stein & Partners III, L.P.           | 19,308,194           | 652,727              |
| Windjammer Mezzanine & Equity Fund II, L.P. | —                    | 350,967              |
|   | <u>\$603,676,307</u> | <u>\$605,547,271</u> |

a) Investment values quoted without spin-offs or distributions.

LIST OF LARGEST HOLDINGS<sup>(1)</sup>

As of June 30, 2015

| EQUITIES |                              |                 | FIXED INCOME |                            |                    |                 |
|----------|------------------------------|-----------------|--------------|----------------------------|--------------------|-----------------|
| Shares   | Security                     | Fair Value (\$) | Par Value    | Security                   | Description        | Fair Value (\$) |
| 528,157  | Apple Inc                    | \$66,244,092    | 41,366,542   | Treasury 1/8 2024 I/L Gilt | 0.125% 22 Mar 2024 | \$70,317,051    |
| 463,026  | Nestle SA Reg                | 33,443,106      | 50,000,000   | US Treasury Note           | 0.625% 15 Aug 2016 | 50,140,500      |
| 741,632  | Microsoft Corp               | 32,743,053      | 50,000,000   | US Treasury Note           | 0.5% 15 Jun 2016   | 50,094,000      |
| 383,314  | Exxon Mobil Corp             | 31,891,725      | 50,000,000   | US Treasury Note           | 0.5% 30 Jun 2016   | 50,082,000      |
| 104,741  | Roche Holding AG Genusschein | 29,364,017      | 50,000,000   | US Treasury Note           | 0.5% 31 Jul 2016   | 50,074,000      |
| 160,017  | Simon Property Group Inc     | 27,686,141      | 50,000,000   | US Treasury Note           | 0.25% 15 May 2016  | 49,984,500      |
| 271,739  | Novartis AG Reg              | 26,794,445      | 38,920,000   | US Treasury Note           | 2.875% 15 May 2043 | 37,089,592      |
| 254,226  | Johnson & Johnson            | 24,776,866      | 35,838,938   | Treasury Infl Ix Bond      | 0.25% 15 Jan 2025  | 35,152,981      |
| 923,736  | General Electric Co          | 24,543,666      | 31,856,981   | Treasury Infl Ix Bond      | 0.625% 15 Jan 2024 | 32,399,505      |
| 427,112  | Wells Fargo & Co             | 24,020,779      | 30,090,000   | FNMA TBA 30 Yr 4           | 4% 14 Jul 2045     | 31,879,753      |

1) A complete listing of the System's holdings is available at the Retirement System office. Does not include holdings of commingled funds

CHANGES IN FAIR VALUE OF INVESTMENTS<sup>(1)</sup>

(In Thousands)

For the Fiscal Year Ended June 30, 2015

|  | June 30, 2014<br>Fair Value | Purchases and<br>Other Increases | Sales and<br>Other Decreases | June 30, 2015<br>Fair Value | Asset Mix<br>Fair Value |
|--|-----------------------------|----------------------------------|------------------------------|-----------------------------|-------------------------|
| <b>Marketable Securities</b>                     |                             |                                  |                              |                             |                         |
| Domestic Equities                                | \$ 5,542,138                | \$ 1,166,241                     | \$ (1,383,167)               | \$ 5,325,212                | 32.15%                  |
| International Equities                           | 4,236,269                   | 1,961,519                        | (2,277,473)                  | 3,920,315                   | 23.67                   |
| Total Fixed                                      | 4,506,405                   | 6,817,044                        | (6,320,085)                  | 5,003,364                   | 30.20                   |
| Temporary <sup>(2)</sup> Investments             | 308,601                     | 19,088,037                       | (19,288,526)                 | 108,112                     | 0.65                    |
| Total Marketable Securities                      | <u>14,593,413</u>           | <u>29,032,841</u>                | <u>(29,269,251)</u>          | <u>14,357,003</u>           | <u>86.67</u>            |
| <b>Real Estate and Alternative Investments</b>   |                             |                                  |                              |                             |                         |
| Real Estate                                      | 1,425,968                   | 500,904                          | (324,003)                    | 1,602,869                   | 9.67                    |
| Alternatives                                     | 478,289                     | 262,046                          | (134,466)                    | 605,869                     | 3.66                    |
| Total Real Estate and<br>Alternative Investments | <u>1,904,257</u>            | <u>762,950</u>                   | <u>(458,469)</u>             | <u>2,208,738</u>            | <u>13.33</u>            |
| Total  | <u>\$16,497,670</u>         | <u>\$29,795,791</u>              | <u>\$(29,727,720)</u>        | <u>\$16,565,741</u>         | <u>100.00 %</u>         |

1) Amounts include changes in unrealized appreciation and exclude interest and dividend accruals. Amounts exclude security lending FY 2014 cash collateral of \$1,794,435,246, and there is no cash collateral at 06/30/2015.

2) Temporary Investments include currencies, short term pools, and securities maturing within 90 days of purchase. The 06/30/2014 Temporary balance was reduced by \$34.69 million from the FY 2014 CAFR, to exclude the Death & Disability funds not included in the FY 2015 amounts.

## U.S. EQUITY COMMISSIONS

For the Fiscal Year Ending June 30, 2015

| Broker Name                               | Commissions Paid | Shares            | Commission Per Share | Percent of Total Commissions |
|---|------------------|-------------------|----------------------|------------------------------|
| Investment Technology Group, NY           | \$90,852         | 7,555,424         | \$0.01               | 10.9%                        |
| Deutsche Bk Secs Inc, NY                  | \$75,099         | 8,790,310         | 0.01                 | 9.0                          |
| Liquidnet Inc, Brooklyn                   | \$49,584         | 3,525,875         | 0.01                 | 5.9                          |
| JP Morgan Clearing Group, New York        | \$41,872         | 1,798,011         | 0.02                 | 5.0                          |
| Goldman Sachs & Co.                       | \$32,785         | 2,722,277         | 0.01                 | 3.9                          |
| BTIG LLC, San Francisco                   | \$28,649         | 1,286,759         | 0.02                 | 3.4                          |
| Jonestrading Instl Svcs LLC, Westlake     | \$26,434         | 1,153,385         | 0.02                 | 3.2                          |
| Bloomberg Tradebook LLC                   | \$24,840         | 2,484,841         | 0.01                 | 3.0                          |
| UBS Securities LLC, Stamford              | \$24,780         | 891,255           | 0.03                 | 3.0                          |
| Merrill Lynch Pierce Fenner Smith Inc, NY | \$23,388         | 2,469,434         | 0.01                 | 2.6                          |
| Credit Suisse, NY                         | \$21,313         | 1,742,790         | 0.01                 | 2.8                          |
| Weeden & Co, NY                           | \$21,141         | 1,042,985         | 0.02                 | 2.5                          |
| Jefferies & Co. Inc, NY                   | \$19,087         | 618,432           | 0.03                 | 2.3                          |
| Cantor Fitzgerald & Co. Inc, NY           | \$18,496         | 918,614           | 0.02                 | 2.2                          |
| Citigroup Gbl Mkts Salomon, NY            | \$18,183         | 1,676,491         | 0.01                 | 2.2                          |
| Barclays Capital Inc, New Jersey          | \$17,666         | 1,719,225         | 0.01                 | 2.2                          |
| State Street Brokerage Service            | \$15,899         | 1,075,597         | 0.01                 | 1.9                          |
| RBC Capital Markets LLC, NY               | \$15,339         | 487,650           | 0.03                 | 1.8                          |
| Merrill Lynch Pierce Fenner Smith Inc, NY | \$14,677         | 733,136           | 0.02                 | 1.8                          |
| Sandler O'Neill & Partners, New York      | \$14,096         | 469,861           | 0.03                 | 1.7                          |
| Stifel Nicholas                           | \$13,903         | 457,956           | 0.03                 | 1.8                          |
| Morgan Stanley & Co. Inc, NY              | \$12,310         | 722,795           | 0.02                 | 1.5                          |
| Investment Technology Group, NY           | \$11,976         | 352,179           | 0.03                 | 1.4                          |
| Baird, Robert W & Co. Inc, Milwaukee      | \$11,228         | 416,388           | 0.03                 | 1.3                          |
| Raymond James & Assoc Inc, St Petersburg  | \$11,010         | 326,737           | 0.03                 | 1.3                          |
| Others                                    | \$179,695        | 7,499,884         | 0.02                 | 21.5                         |
| <b>Total Broker Commissions</b>           | <b>\$834,302</b> | <b>52,938,291</b> |                      | <b>100.0%</b>                |







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# **ACTUARIAL** SECTION



## ACTUARIAL CERTIFICATION LETTER



**Cavanaugh Macdonald**  
CONSULTING, LLC  
*The experience and dedication you deserve*

October 1, 2015

Board of Trustees  
Kansas Public Employees Retirement System  
611 S. Kansas Ave., Suite 100  
Topeka, KS 66603

Dear Members of the Board:

At your request, we have performed an actuarial valuation of the Kansas Public Employees Retirement System (KPERs) as of December 31, 2014, for purpose of determining contribution rates for fiscal year 2018 for the State and 2017 for Local employers. Actuarial valuations are prepared annually for the System. The Board of Trustees is responsible for establishing and maintaining the funding policy but must comply with the statutory requirement that the employer statutory contribution rate for KPERs cannot increase by more than the statutory cap each year. The major findings of the valuation are contained in this report, which reflects the plan provisions in place on December 31, 2014, as amended by legislation passed by the 2015 Legislature. Also, as a result of an experience study prepared in 2014, there are some changes to the actuarial assumptions and methods that are first reflected in this valuation.

In preparing our report, we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, member data and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

We further certify that all costs, liabilities, rates of interest and other factors for the System have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the System. Nevertheless, the emerging costs will vary from those presented in this valuation to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C of our valuation report.

Future actuarial measurements may differ significantly from the current measurements presented in the December 31, 2014, valuation 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. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this section are for purposes of determining the recommended and statutory funding amounts for the System. The calculations have been made on a basis consistent with our understanding of the System's funding requirements and goals. Determinations

for purposes other than meeting these requirements may be significantly different from the results shown in the December 31, 2014, valuation report. Accordingly, additional determinations may be needed for other purposes.

The actuary prepared the following supporting schedules for the Comprehensive Annual Financial Report:

#### ACTUARIAL SECTION

Schedule of Funding Progress  
 Summary of Change in Unfunded Actuarial Liability  
 Summary of Changes in Actuarial Contribution Rate  
 Summary of Historical Changes to Total System UAL  
 Summary of Principal Results  
 Summary of Actuarial Assumptions and Methods  
 Summary of Membership Data

Actuarial computations, based on the actuarial valuation performed as of December 31, 2014, were also prepared as of June 30, 2015, for purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standard Number 67 (GASB 67). The assumptions used in the funding valuation were also used for GASB 67 reporting, including the use of an 8% discount rate for GASB 67 calculations (8% is the assumed rate of return used in the funding valuation). In addition, the entry age normal actuarial cost method, which is required to be used under GASB 67, is also used in the funding valuation. The actuarial assumptions and methods meet the parameters set by Actuarial Standards of Practice (ASOPs), as issued by the Actuarial Standards Board, and generally accepted accounting principles (GAAP) applicable in the United States of America as promulgated by the Governmental Accounting Standards Board (GASB). The Total Pension Liability was rolled forward to June 30, 2015, based on standard actuarial formulae. Additional information related to GASB 67 can be found in the Financial Section of this report.

Cavanaugh Macdonald Consulting, LLC provided the following supporting schedules:

#### FINANCIAL SECTION

Calculation of the Total Pension Liability and Net Pension Liability  
 Schedule of the Net Pension Liability  
 Sensitivity Analysis of the Net Pension Liability  
 Schedule of Changes in the Net Pension Liability

In addition, the Schedule of Employer Contributions which compares the actuarially determined employer contribution amounts and the actual contribution amounts is included in the Required Supplementary Information (RSI). Amounts in that schedule were provided by the System.

The consultants who worked on this assignment are pension actuaries. Cavanaugh Macdonald Consulting's (CMC) advice


is not intended to be a substitute for qualified legal or accounting counsel.

We certify that, to the best of our knowledge and belief, the December 31, 2014, actuarial valuation report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,



Patrice A. Beckham, FSA, EA, FCA, MAAA  
 Principal and Consulting Actuary



Brent A. Banister, FSA, EA, FCA, MAAA  
 Chief Pension Actuary



## SECTION I BOARD SUMMARY OVERVIEW

The Kansas Public Employees Retirement System is an umbrella organization which administers the following three statewide pension groups: the Kansas Public Employees Retirement System (KPERS), the Kansas Police and Firemen's Retirement System (KP&F) and the Kansas Retirement System for Judges (Judges). The results of the December 31, 2014, actuarial valuations for each of the Systems is discussed below.

The primary purposes of performing actuarial valuations are to:

- determine the employer contribution rates required to fund each System on an actuarial basis,
- determine the statutory employer contribution rates for each System,
- disclose asset and liability measures as of the valuation date,
- determine the experience of the System since the last valuation date, and
- analyze and report on trends in System contributions, assets and liabilities over the past several years.

The 2015 Legislature passed four bills that impacted the provisions of KPERS and KP&F:

- House Bill 2095 (HB 2095) contained both working after retirement provisions and a new DROP pilot program for the Kansas Highway Patrol. The working after retirement provisions change the existing policy governing retirees returning to work starting July 1, 2016. Most new retirees will be subject to an annual \$25,000 earnings limitation if they return to work for any KPERS affiliated employer. Employers contribute the statutory employer contribution rate on all wages paid to the retirees. There are exceptions to the general rule for special education teachers, hard-to-fill positions and instances of a hardship. State hospital nurses, Kansas Law Enforcement Training Center instructors, legislative staff and elected city and county officials are exempted from the earnings limitation.

HB 2095 also created a Deferred Retirement Option Plan (DROP) for the Kansas Highway Patrol members of KP&F. Members are eligible for the DROP at normal retirement age, must select a period of three to five years to continue working, during which time their benefit is deposited into a DROP account. At ultimate retirement, the member receives the balance of the DROP account as a lump sum and continues to receive the monthly benefit. The DROP sunsets in 2020.

- Late in CY 2014, the State/School employer contribution rate was reset for the last half of FY 2015 as a part of a state budget allotment implemented by the Governor. Senate Bill 4, as amended by Senate Substitute for HB 2094 (SB 4) reduced the previously certified FY 2015 employer contribution rate of 11.27 percent to 8.65 percent to correspond with the Governor's allotment.

- Senate Bill 228 (SB 228) authorized the issuance of \$1.0 billion in bonds, net of fees, to be used to reduce the unfunded actuarial accrued liability of the State/School group. The interest rate on the bonds could be no greater than 5 percent and the State Finance Council had to approve any bond issue before the bonds were sold (approval received July 2, 2015). The debt service on the bonds is subject to State General Fund appropriation and is not an obligation of the System. SB 228 also reset the employer contribution rate for the State/School group for FY 2016 and 2017, subject to certain conditions. Bonds were issued and the net proceeds of \$1 billion were deposited into KPERS trust fund on August 20, 2015.

- Senate Substitute for HB 2101 changes the definition of "police", "policeman" or "policemen" and expands the KP&F eligible group to those whose primary duties include engagement in enforcement of law, are certified by the Kansas Law Enforcement Training Center and designated by their employer as a police officer, and who have been contributing to the KP&F retirement system even if they have been assigned full or part time to a local correctional facility.

The valuation process does not include an assumption regarding the re-employment of retirees so the working after retirement provisions of HB 2095 did not have an impact on the valuation results. While the cost impact of working after retirement cannot be reliably determined, the new working after retirement rules appear to have fewer incentives for members to retire when first eligible and return to work. If the new rules change retirement patterns in the future, resulting in later retirement ages, it will have a favorable impact on plan liabilities. The addition of the DROP to the KP&F benefit structure only for members of the Kansas Highway Patrol had a small impact on the overall valuation results because there are only about 450 active members impacted out of a total of 7,200. The actuarial liability increased \$1.4 million, the normal cost rate increased 0.01 percent, and the total KP&F employer actuarial contribution rate increased 0.03 percent.

SB 228 contained several provisions that impact KPERS' funding. Although the legislation authorized \$1.0 billion in net bond proceeds, at the time the valuation was prepared there was uncertainty surrounding the timing and issuance of the bonds within the statutory limit of 5.0 percent on the bond interest rate. Therefore, the December 31, 2014, valuation did not assume that any bond proceeds would be received in the future. The bonds proceeds will be reflected in the results of the December 31, 2015 actuarial valuation. SB 4 reduced the previously certified employer contribution rates for the State/School group for the last half of FY 2015 from 11.27 percent to 8.65 percent to correspond with the Governor's allotment. In addition, SB 228 changed the previously certified employer contribution rate for FY 2016 from

12.37 percent to 10.91 percent and for FY 2017 from 13.57 percent to 10.81 percent. As a result of the lower State/School statutory employer contribution rate in FY 2017, the statutory employer contribution rate for 2018 (set by the 12/31/2014 valuation) is lower than it would have been absent SB 228 (12.01 percent instead of 14.77 percent).

Senate Substitute for HB 2101 had no cost impact on the valuation results because it applies to employees who have been contributing members of KP&F beginning on or after July 1, 1999, and therefore, they have already been included as KP&F members for valuation purposes in the past.

There were changes to both the actuarial assumptions and methods used in the December 31, 2014, actuarial valuation. The Board of Trustees adopted a new set of actuarial assumptions and methods in November 2014, following the completion of the Triennial Experience Study. The changes, recommended by Cavanaugh Macdonald and adopted by the Board, include the following:

**KPERS**

- Increase active member mortality for females in the State and School groups.
- Reduce disability rates by 20 percent for all three KPERS groups.
- Increase the termination of employment rates for State-Males and Local Males and Females.
- Modify the election of a deferred benefit by Local vested members who terminate employment in future years.
- Modify the retirement rates for the C60 group.
- Increase the load for the impact of final average salary provisions for Local, C55 and C60 members hired before July 1, 1993.
- Establish an interest crediting rate of 6.50 percent for KPERS 3 members.

**KP&F**

- No changes

**JUDGES**

- Modify the retirement rates

There was also one change to the actuarial methods implemented in this valuation as a result of the experience study. There is currently a lag between the valuation date in which the contribution rates are determined and the effective date of those contribution rates, i.e., two year lag for Local employers and a two and one-half year lag for the State. A change was made in determining the amortization payment on the unfunded actuarial liability (UAL) by projecting the UAL to the first day of the FY in which the contribution rate will apply. In addition to the changes resulting from the experience study, there were also some refinements made to the actuarial programming as a result of an internal review performed by Cavanaugh Macdonald. The net impact of all changes was a decrease in the actuarial liability,

an increase in the normal cost rate and a decrease in the UAL contribution rate for each group.

The valuation results provide a “snapshot” view of the System’s financial condition on December 31, 2014. The unfunded actuarial liability (UAL), for the System as a whole, decreased by \$298 million due to multiple factors.

In KPERS, the State, School and Local employers do not necessarily contribute the full actuarial contribution rate. Based on legislation passed in 1993, the employer contribution rates certified by the Board may not increase by more than the statutory cap. The statutory cap was 0.90 percent for FY 2014, 1.0 percent for FY 2015, 1.1 percent for FY 2016 and 1.2 percent for FY 2017 and later prior to passage of SB 4 and SB 228 in the 2015 legislative session. The statutory cap of 1.20 percent applies again for FY 2018 (which is based on the December 31, 2014, actuarial valuation). Since the employer contribution rates for the State/School group for FY 2016 and 2017 were previously certified by the Board of Trustees, they had to be recertified to reflect the provisions of SB 228, as summarized in the following table:

RECERTIFIED EMPLOYER CONTRIBUTION RATES

|                         | Actuarial Contribution Rate | Original Statutory Rate | Statutory Rate (Recertified due to SB 228) | Difference |
|-------------------------|-----------------------------|-------------------------|--|------------|
| <i>Fiscal Year 2016</i> |                             |                         |  |            |
| State                   | 11.44%                      | 12.37%                  | 10.91%                                     | 1.46%      |
| School                  | 16.00%                      | 12.37%                  | 10.91%                                     | 1.46%      |
| Correctional Group      |                             |                         |  |            |
| Retirement Age 55       | 12.21%                      | 12.76%                  | 10.91%                                     | 1.85%      |
| Retirement Age 60       | 12.27%                      | 12.50%                  | 10.91%                                     | 1.59%      |
| <i>Fiscal Year 2017</i> |                             |                         |  |            |
| State                   | 10.77%                      | 13.57%                  | 10.81%                                     | 2.76%      |
| School                  | 16.03%                      | 13.57%                  | 10.81%                                     | 2.76%      |
| Correctional Group      |                             |                         |  |            |
| Retirement Age 55       | 11.45%                      | 13.96%                  | 10.81%                                     | 3.15%      |
| Retirement Age 60       | 11.70%                      | 13.70%                  | 10.81%                                     | 2.89%      |

Although separate valuations are performed for the State and School groups, the statutory contribution rate for the two groups is determined using the combined valuation results. If the actuarial required contribution (ARC) for the State is less than the statutory contribution rate when the two groups are combined, the excess of the statutory contribution rate over the actuarial required contribution rate for the State alone is allocated to the School to improve the funding of that group.

A summary of actuarial and statutory employer contribution rates for the Retirement System (excluding the statutory contribution



for the Death and Disability Program) for this valuation and the prior valuation follows:

#### DECEMBER 31, 2014 VALUATION FY 2018

| System                                       | Actuarial | Statutory | Difference |
|--|-----------|-----------|------------|
| State <sup>(1)</sup>                         | 9.62%     | 12.01%    | (2.39%)    |
| School <sup>(1)</sup>                        | 16.38%    | 12.01%    | 4.37%      |
| State/School <sup>(1)</sup>                  | 14.89%    | 12.01%    | 2.88%      |
| Local <sup>(1)</sup>                         | 8.46%     | 8.46%     | 0.00%      |
| Police & Fire - Uniform Rates <sup>(2)</sup> | 19.03%    | 19.03%    | 0.00%      |
| Judges                                       | 15.89%    | 15.89%    | 0.00%      |

#### DECEMBER 31, 2013 VALUATION FY 2017

| System                        | Actuarial | Statutory | Difference |
|-------------------------------|-----------|-----------|------------|
| State <sup>(3)</sup>          | 10.77%    | 10.81%    | (0.04%)    |
| School <sup>(3)</sup>         | 16.03%    | 10.81%    | 5.22%      |
| State/School <sup>(3)</sup>   | 14.85%    | 10.81%    | 4.04%      |
| Local                         | 9.18%     | 9.18%     | 0.00%      |
| Police & Fire - Uniform Rates | 20.42%    | 20.42%    | 0.00%      |
| Judges                        | 21.36%    | 21.36%    | 0.00%      |

1) By statute, rates are allowed to increase by a maximum of 0.9% for FY 2014, 1.0% in FY 2015, 1.1% in FY 2016 and 1.2% in FY 2017 and beyond plus the cost of any benefit enhancements. The December 31, 2014, valuation sets the employer contribution rate for FY 2018 for the State and School group and FY 2017 for the Local group.

2) For KP&F, the statutory contribution rate is equal to the "Uniform" rate. The rate shown is for local employers. The rate for State employers is 18.99% this year. The uniform rate does not include the payment required to amortize the unfunded past service liability determined separately for each employer.

3) Rates recertified to comply with SB 228, passed by the 2015 Legislature.

The rate of return on the market value of assets in 2014 was 6.5 percent, as reported by KPERs, lower than the assumed return of 8 percent. However, due to the unrecognized asset experience from previous years, the rate of return on the actuarial value of assets was 10.6 percent. As a result, as of this valuation date, the State and Local groups continue to be at the ARC rate. In addition, the statutory contribution rate for the School group is projected to converge with the ARC rate before the end of the amortization period (2033), based on the current statutory funding policy and assuming all actuarial assumptions are met in future years.

## EXPERIENCE—ALL SYSTEMS COMBINED

December 31, 2013 – December 31, 2014

In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date, which for this valuation is December 31, 2014. On that date, the assets available for the payment of benefits are appraised. The assets are compared with the liabilities of the System, which are generally in excess of assets. The actuarial process leads to a method of determining the contributions needed by members and employers in the future to balance the System assets and liabilities.

Changes in the Systems' assets and liabilities impacted the change in the actuarial contribution rates between the December 31, 2013, and December 31, 2014, actuarial valuations. On the following pages, each component is examined.

### MEMBERSHIP

The following table contains a summary of the changes in active members between the December 31, 2013, and December 31, 2014, actuarial valuations.

|                             | State      | School       | Local        |
|-----------------------------|------------|--------------|--------------|
| 12/31/2013 (Starting Count) | 23,117     | 85,752       | 39,088       |
| New Actives                 | 2,559      | 10,182       | 5,280        |
| Non-vested Terminations     | 827        | 4,070        | 2,027        |
| Elected Refund              | 614        | 1,372        | 1,370        |
| Vested Terminations         | <u>812</u> | <u>2,562</u> | <u>1,465</u> |
| Total Withdrawals           | 2,253      | 8,004        | 4,862        |
| Deaths                      | 59         | 90           | 73           |
| Disabilities                | 66         | 79           | 66           |
| Retirements                 | 602        | 2,311        | 784          |
| Other/Transfer              | 44         | (103)        | 76           |
| 12/31/2014 (Ending Count)   | 22,740     | 85,347       | 38,659       |

|                             | KP&F      | Judges   | Total        |
|-----------------------------|-----------|----------|--------------|
| 12/31/2013 (Starting Count) | 7,224     | 265      | 155,446      |
| New Actives                 | 555       | 4        | 18,580       |
| Non-vested Terminations     | 237       | 0        | 7,161        |
| Elected Refund              | 95        | 2        | 3,453        |
| Vested Terminations         | <u>78</u> | <u>3</u> | <u>4,920</u> |
| Total Withdrawals           | 410       | 5        | 15,534       |
| Deaths                      | 7         | 1        | 230          |
| Disabilities                | 18        | 0        | 229          |
| Retirements                 | 125       | 8        | 3,830        |
| Other/Transfer              | (15)      | (2)      | 0            |
| 12/31/2014 (Ending Count)   | 7,204     | 253      | 154,203      |

Each of the five groups experienced a decrease in the number of active members. In the current economic environment, this pattern of low (or negative) employee growth is not unusual. As a result of fewer active members, coupled with low salary increases, the total active member payroll did not grow as much as expected, so there were fewer contribution dollars to help pay down the System's UAL.

**ASSETS**

As of December 31, 2014, the System had total funds of \$16.3 billion on a market value basis, excluding assets held for the Group Insurance and Optional Life reserves. This was an increase of \$0.6 billion from the December 31, 2013, figure of \$15.7 billion.

The market value of assets is not used directly in the calculation of contribution rates. An asset valuation method is used to smooth the effect of market fluctuations. The smoothing method calculates the difference between the actual return and the expected return (assumed rate of return) on the market value of assets each year. The difference is recognized equally over a five-year period.

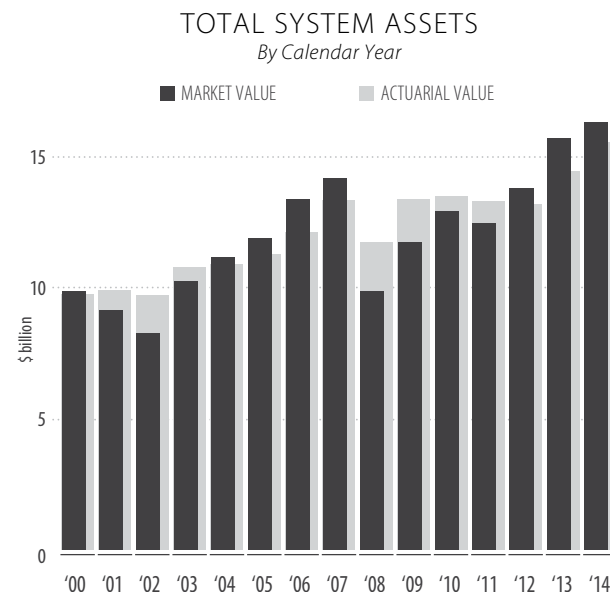
The components of the change in the market value and actuarial value of assets for the Retirement System (in millions) are set forth below.

|                                     | Market Value \$(millions) | Actuarial Value \$(millions) |
|-------------------------------------|---------------------------|------------------------------|
| Assets, December 31, 2013           | \$15,745                  | \$14,563                     |
| • Employer and Member Contributions | 1,069                     | 1,069                        |
| • Benefit Payments and Expenses     | (1,487)                   | (1,487)                      |
| • Investment Income                 | <u>995</u>                | <u>1,517</u>                 |
| Assets, December 31, 2014           | \$16,322                  | \$15,662                     |
| Rate of Return                      | 6.5%                      | 10.6%                        |

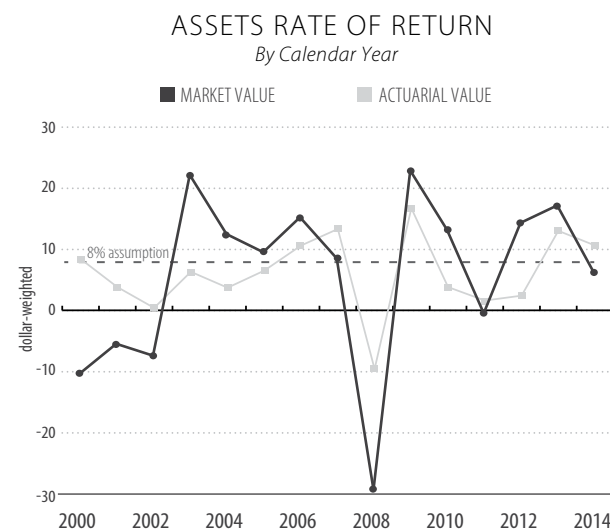
The actuarial value of assets as of December 31, 2014, was \$15.662 billion. The annualized dollar-weighted net rate of

return for 2014 was 10.6 percent measured on the actuarial value of assets and 6.5 percent measured on the market value of assets, as reported by KPERS.

Due to the use of an asset smoothing method, there is \$660 million of net deferred investment gain experience that has not yet been recognized, i.e. the market value of assets is higher than the actuarial value. This deferred investment gain will be reflected in the actuarial value of assets over the next four years, but may be offset by actual investment experience if it is less favorable than assumed.



The actuarial value of assets has been both above and below the market value during the period, which is to be expected when using an asset smoothing method.





The rate of return on the actuarial (smoothed) value of assets has been less volatile than the market value return. The deferred investment gains will be reflected in the actuarial value of assets in the next few years, absent unfavorable investment experience.

### LIABILITIES

The actuarial liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial liability (UAL). The unfunded actuarial liability will be reduced if the employer's contributions exceed the employer's normal cost for the year, after allowing for interest earned on the previous balance of the unfunded actuarial liability. Benefit improvements, experience gains and losses and changes in actuarial assumptions and methods will also impact the total actuarial liability (AL) and the unfunded portion thereof.

There were changes to the actuarial assumptions and methods used in the December 31, 2014, actuarial valuation as a result of the Triennial Experience Study. In addition, some programming changes were implemented in this valuation as the result of an internal review by Cavanaugh Macdonald. The net impact on the actuarial liability was a decrease of \$50 million.

The unfunded actuarial liability (\$ million) by group is summarized below:

|                               | State   | School   | Local   |
|-------------------------------|---------|----------|---------|
| Actuarial Liability           | \$4,161 | \$13,437 | \$4,569 |
| Actuarial Value of Assets     | 3,122   | 7,232    | 3,081   |
| Unfunded Actuarial Liability* | \$1,039 | \$6,205  | \$1,488 |

|                               | KP&F    | Judges | Total*   |
|-------------------------------|---------|--------|----------|
| Actuarial Liability           | \$2,801 | \$163  | \$25,130 |
| Actuarial Value of Assets     | 2,075   | 153    | 15,662   |
| Unfunded Actuarial Liability* | \$726   | \$11   | \$9,468  |

\*May not add due to rounding.

When the actuarial cost method was changed by the Legislature in 1993, the payment methodology for the unfunded actuarial liability (UAL) for all groups (except the Judges System) was set, as a level percentage of payroll, over a 40 year closed period, of which 18 years remain as of this valuation. Under this approach, payments on the UAL increase four percent each year, the same as the payroll growth assumption, resulting in a payment pattern that is a level percentage of pay. With this payment methodology, the dollar amount of the amortization payment is less than the interest on the UAL for over half of the amortization period. As a result, the dollar amount of the UAL is expected to increase for much of the amortization period before it eventually begins to decline. In addition, with the planned difference in KPERS'

statutory and actuarial contribution rates prior to the ARC Date, the unfunded actuarial liability has increased by an additional amount each year.

Other factors influencing the UAL from year to year include actual experience versus that expected based on the actuarial assumptions (on both assets and liabilities), changes in actuarial assumptions, procedures or methods and changes in benefit provisions. The actual experience measured in this valuation is that which occurred during the prior plan year (calendar year 2014). All of the groups had a liability gain for the year, largely from smaller salary increases than expected. Due to the asset smoothing method and deferred investment gains from 2012 and 2013, there was an experience gain on the actuarial value of assets for all groups. The experience gain on liabilities and assets resulted in a total experience gain for the System in 2014 of \$501 million.

The addition of the DROP provisions to KP&F for the Kansas Highway Patrol increased the UAL by \$1.4 million.

Between December 31, 2013, and December 31, 2014, the change in the unfunded actuarial liability for the System, as a whole, was as follows (in millions):

|  | \$ millions     |
|--|-----------------|
| Unfunded Actuarial Liability, December 31, 2013                      | \$9,766         |
| • effect of contribution cap/time lag                                | 178             |
| • expected increase due to amortization method                       | 18              |
| • gain/loss from investment return on actuarial assets               | (368)           |
| • demographic experience <sup>(1)</sup>                              | (133)           |
| • all other experience   | 55              |
| • change in actuarial methods/procedures                             | 0               |
| • change in actuarial assumptions                                    | (50)            |
| • change in plan provisions  | 1               |
| <b>Unfunded Actuarial Liability, December 31, 2014<sup>(2)</sup></b> | <b>\$ 9,468</b> |

<sup>1)</sup> Liability gain is about 0.53% of total actuarial liability.

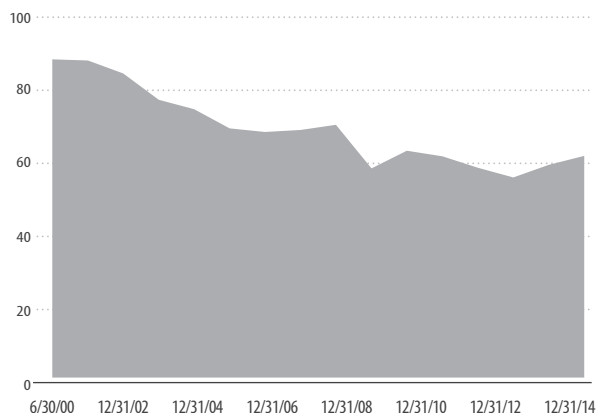
<sup>2)</sup> May not add due to rounding.

An evaluation of the unfunded actuarial liability on a pure dollar basis may not provide a complete analysis since only the difference between the assets and liabilities (which are both very large numbers) is reflected. Another way to evaluate the unfunded actuarial liability and the progress made in its funding is to track the funded status, the ratio of the actuarial value of assets to the actuarial liability. The funded status information for the KPERS System is shown on the next page (in millions).



|   | 12/31/08 | 12/31/09 | 12/31/10 | 12/31/11 | 12/31/12 | 12/31/13 | 12/31/14 |
|---|----------|----------|----------|----------|----------|----------|----------|
| <b>Using Actuarial Value of Assets:</b> |          |          |          |          |          |          |          |
| Funded Ratio (AVA/AL)                   | 59%      | 64%      | 62%      | 59%      | 56%      | 60%      | 62%      |
| Unfunded Actuarial Liability (AL-AVA)   | \$8,279  | \$7,677  | \$8,264  | \$9,228  | \$10,253 | \$9,766  | \$9,468  |
| <b>Using Market Value of Assets:</b>    |          |          |          |          |          |          |          |
| Funded Ratio (MVA/AL)                   | 49%      | 56%      | 59%      | 55%      | 59%      | 65%      | 65%      |
| Unfunded Actuarial Liability (AL-MVA)   | \$10,250 | \$9,384  | \$8,936  | \$10,130 | \$9,714  | \$8,584  | \$8,808  |

FUNDED RATIO – ACTUARIAL VALUE



Changes in actuarial assumptions and methods, coupled with investment returns below the assumed rate and contributions below the actuarial rate significantly reduced the funded ratio over this period. However, the funded ratio improved in the current valuation due to favorable experience on liabilities and valuation assets in 2014. The funded ratio is expected to increase steadily in the future assuming all actuarial assumptions are met.

Given the current funded status of the System, the amount of the deferred investment gain, the amortization method, the amortization period and the scheduled increases in employer contribution rates, the dollar amount of the unfunded actuarial liability for the entire System is expected to remain near the current level for several years and then start to decline. The funded ratio is expected to improve absent experience losses in the future, but will continue to be heavily dependent on the actual investment returns.

**CONTRIBUTION RATES**

The funding objective of the System is to establish contribution rates that over time will remain relatively level, as a percentage of payroll, and to pay off the unfunded actuarial liability by the 2033 valuation.

Generally, the actuarial contribution rates to the various Systems consist of:

- a “normal cost” for the portion of projected liabilities allocated by the actuarial cost method to service of members during the year following the valuation date,
- an “unfunded actuarial liability contribution” for the excess of the portion of projected liabilities allocated to service to date over the actuarial value of assets.

There is also a statutory contribution rate that is used to finance the Death and Disability Program. Contributions for the Death and Disability Program are deposited in a separate trust fund, from which benefits are paid. A separate actuarial analysis and report is prepared for the Death and Disability Program on June 30 of each year. Therefore, the death and disability contribution rate is not reflected in this report.

The results of the December 31, 2014, valuation will set employer contribution rates for FY 2018 for the State, School (July 1, 2017, to June 30, 2018) and 2017 for Local employers (calendar year 2017).

In KPERS, State, School and Local employers do not necessarily contribute the full actuarial contribution rate. Based on legislation passed in 1993, the employer contribution rates certified by the Board may not increase by more than the statutory cap. The statutory cap, which has been changed periodically, is 0.9 percent for FY 2014, 1.0 percent in 2015, 1.1 percent in 2016 and 1.2 percent in 2017 and beyond for all three groups. In 2015, SB 4 reset the previously certified employer contribution rate for the State/School group for the last half of FY 2015 from 11.27 percent to 8.65 percent. In addition, SB 228 lowered the statutory rates for the State/School group from 12.37 percent to 10.91 percent for FY 2016 and 13.57 percent to 10.81 percent for FY 2017.

A summary of the actuarial and statutory employer contribution rates for the System is shown below:

DECEMBER 31, 2014 VALUATION

| System                                       | Actuarial | Statutory | Difference |
|--|-----------|-----------|------------|
| State <sup>(1)</sup>                         | 9.62%     | 12.01%    | (2.39%)    |
| School <sup>(1)</sup>                        | 16.38%    | 12.01%    | 4.37%      |
| State/School <sup>(1)</sup>                  | 14.89%    | 12.01%    | 2.88%      |
| Local <sup>(1)</sup>                         | 8.46%     | 8.46%     | 0.00%      |
| Police & Fire - Uniform Rates <sup>(2)</sup> | 19.03%    | 19.03%    | 0.00%      |
| Judges                                       | 15.89%    | 15.89%    | 0.00%      |

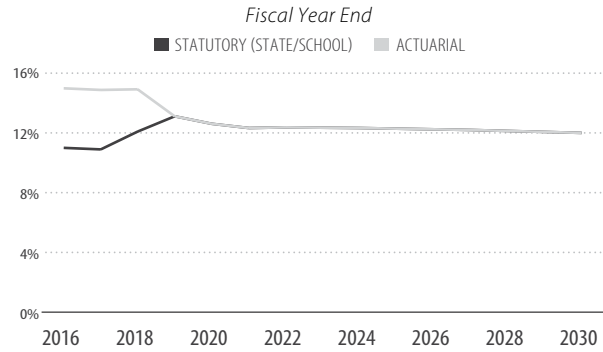
1) By statute, rates are allowed to increase by a maximum of 0.9% for FY 2014, 1.0% in FY 2015, 1.1% in FY 2016 and 1.2% in FY 2017 and after plus the cost of any benefit enhancements. The December 31, 2014, valuation sets the employer contribution rates for FY 2018 for the State and School groups and FY 2017 for Local employers.  
 2) For KP&F, the statutory contribution rate is equal to the "Uniform" rate. The rate shown is for local employers. The rate for State employers is 18.99% this year. The uniform rate does not include the payment required to amortize the unfunded past service liability determined separately for each employer.

Separate employer contribution rates are calculated for two subgroups of the State: Correctional Employee Groups with normal retirement age 55 (C55) and normal retirement age 60 (C60). The contribution rates are calculated by increasing the state statutory contribution rate by the difference in the normal cost rate for the C55 and C60 groups over the normal cost rate for regular state members, but not to exceed the statutory cap on contribution increases. The higher contribution rates finance the earlier normal retirement age. SB 228 reset the statutory employer contribution rates for FY 2016 and 2017 for the Correctional Employee groups to be the same as the employer contribution rate for the State/School group (10.91 percent and 10.81 percent respectively). The contribution rates for the Correctional Employee Groups for FY 2018 are shown below:

| Corrections Group  | Statutory Rate |
|--------------------|----------------|
| Retirement Age 55: | 12.01%         |
| Retirement Age 60: | 12.01%         |

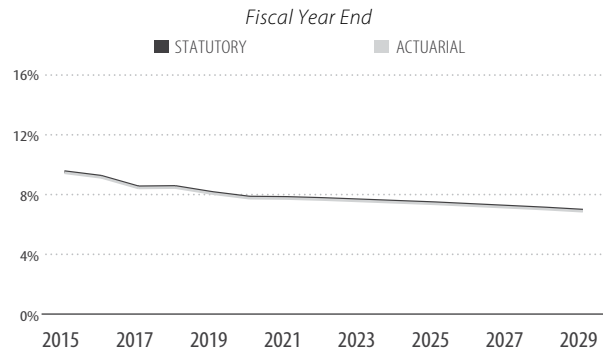
Due to statutory caps, the full actuarial contribution rate is not contributed for all KPERS groups. The State and Local groups reached the ARC date (the year in which the statutory contribution rate is equal to or greater than the actuarial required contribution rate) in 2010 and 2012, respectively, and remain at ARC in this valuation. Note, however, that the recertification of the employer contribution rate for FY 2016 to 10.91 percent resulted in the state/school statutory contribution rate being less than the state actuarial contribution rate for that one year. Based on the current valuation, there is a difference (shortfall) between the actuarial and statutory contribution rates of 4.37 percent for the School group. Assuming an 8 percent return on the market value of assets for 2015 and beyond, all other actuarial assumptions are met in the future, and the current statutory funding policy continues as well as reflecting the deposit of net bond proceeds of \$1 billion, the projected ARC date for the combined State/School group is FY 2019 at a rate of 13.06 percent. For comparison purposes, last year's projections showed a projected ARC date of FY 2019 at a rate of 15.01 percent.

PROJECTED EMPLOYER CONTRIBUTION RATES – STATE/SCHOOL



Based on current modeling results, the ARC date for the State/School group is projected to occur in FY 2019 with an ARC rate of 13.06 percent, assuming all actuarial assumptions are met in future year. Last year's projected ARC date was FY 2019 with an ARC rate of 15.01 percent. Future experience, especially investment returns, will heavily influence the ultimate ARC date and rate.

PROJECTED EMPLOYER CONTRIBUTION RATES – LOCAL

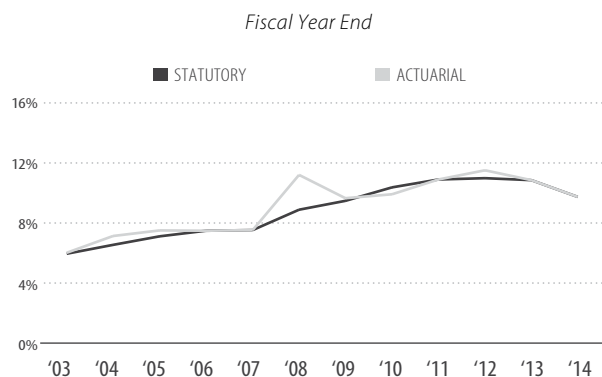


The Local group reached the ARC date in the 2012 valuation with an ARC rate of 9.48 percent, which decreased to 8.46 percent in the 2014 valuation. The projected contribution rate is expected to slowly decline, assuming all actuarial assumptions are met in future years. Actual experience in future years, particularly investment returns, will impact the future actuarial and statutory rates.

Historical contribution rates for each group are shown on the following pages. Please note that prior to the December 31, 2003, valuation, one contribution rate was developed for the State and School together as one group. Legislation passed in 2004 split the actuarial valuations into two separate groups, although the statutory contribution rate is still determined on a combined basis. Any excess of the statutory contribution over the actuarial required contribution for the State is allocated to the School group.

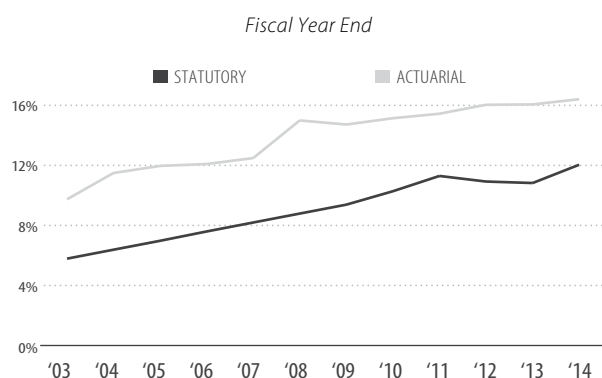
Significant changes in funding methods as well as a Pension Obligation Bond issue occurred in 2003 and actuarial assumptions were changed in the 2004, 2007, 2011 and 2014 valuations. These changes impact the comparability of contribution rates between various valuation dates.

### STATE CONTRIBUTION RATES



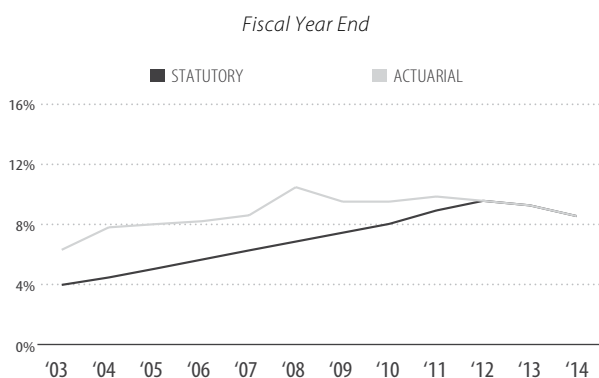
The split of the State group into a separate group with the 2003 valuation, coupled with the bond issue, lowered the State ARC rate. The State reached the full ARC rate in the 2010 valuation and has remained at ARC except for the recertification of the statutory contribution rate for FY 2016 from 12.37 percent to 10.91 percent. In this valuation, the State’s actuarial required contribution rate decreased to 9.62 percent and is again less than the statutory contribution rate.

### SCHOOL CONTRIBUTION RATES



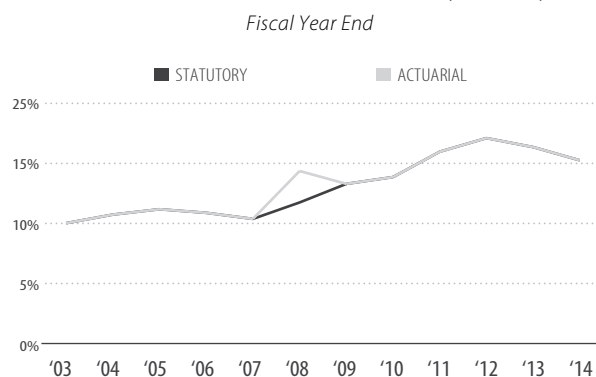
Due to investment experience, changes in actuarial assumptions, and the magnitude of the difference between the actuarial and statutory contribution rates, the funded status of the School group has declined and the ARC rate has increased over this period. However, the ARC rate remained fairly level and the funded ratio improved slightly in the 2014 valuation.

### LOCAL CONTRIBUTION RATES



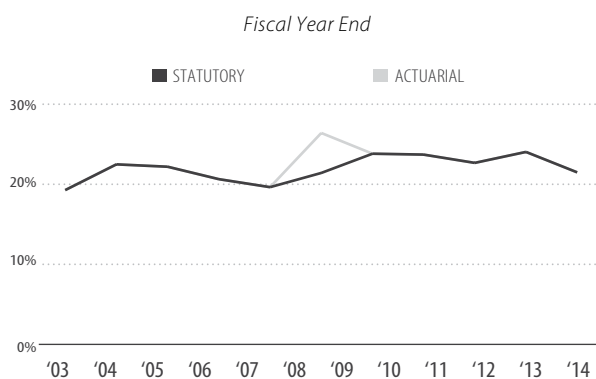
The Local contribution rate has also been impacted by changes in actuarial assumptions and methods as well as investment performance. With the significant changes in 2012 Sub House Bill 2333 and favorable investment returns, the statutory contribution rate was equal to the actuarial required contribution rate (ARC) in the 2012 valuation. The ARC decreased by 0.72 percent in the 2014 valuation so the statutory rate remains equal to the ARC.

### KP&F CONTRIBUTION RATES (LOCAL)



Investment experience in 2008 and 2011 resulted in higher contribution rates in the latter part of the period. However, as the result of improvements in the funded status in recent years, the actuarial contribution rate has declined in the last two years.

### JUDGES CONTRIBUTION RATES



Investment experience in 2008 and 2011 resulted in higher contribution rates in the middle of the period. However, changes in the actuarial assumptions and methods in the 2014 valuation resulted in a significant decline in the ARC rate for the Judges System.

Over the last decade, the development of a comprehensive plan to address the long-term funding of KPERS has been a high priority and significant changes have been made. HB 1014, which was passed by the 2003 Legislature, increased the statutory cap on the State/School employer contribution rate from 0.20 percent to 0.40 percent in FY2006, 0.50 percent in FY2007 and 0.60 percent in FY 2008 and beyond. It also authorized the issuance of up to \$500 million in pension obligation bonds (POBs). The POBs were sold and proceeds of \$440.2 million were received on March 10, 2004.



The debt service payments on the bonds are paid by the State in addition to the regular KPERS employer contribution rate.

The 2004 Legislature passed SB 520, which continued to address issues related to the long term funding of the System. It gave the KPERS Board of Trustees the authority to establish the actuarial cost method and amortization method/period. With this authority, the Board changed both the actuarial cost method and the asset valuation method with the December 31, 2003, actuarial valuation. SB 520 also increased the statutory cap for Local employers from 0.15 percent to 0.40 percent in FY2006, 0.50 percent in FY2007 and 0.60 percent in FY2008 and beyond.

The 2007 Legislature passed SB 362 which created a new benefit structure for members first employed on or after July 1, 2009. The change was made partially due to long term funding considerations, but also in response to demographic changes in the membership.

The 2011 Legislature passed Senate Substitute for House Bill 2194 (Sub HB 2194). The intent of this law was to strengthen KPERS' long term funding and improve the sustainability of the system. The bill contained significant changes for both KPERS employers and current and future members. In addition, Sub HB 2194 established a 13 member KPERS Study Commission to study alternative plan designs during the last half of 2011 and make a recommendation for KPERS plan design that would provide for the long term sustainability of the System. The Commission report was due to the Legislature by January 6, 2012. Sub HB 2194 required that the report recommendations be voted on by the 2012 Legislature for the other provisions of Senate Substitute for HB 2194 to become effective. The 2012 Legislature did not move the Study Commission recommendation forward, but some of the other provisions were included in the bill that was ultimately passed in 2012, Senate Sub for House Bill 2333.

The 2012 Legislature passed Sub House Bill 2333, affecting new hires, current members and employers. The changes were made to improve KPERS' long term sustainability. The basic provisions of Sub House Bill 2333, as amended by House Bill 2213 in 2013, include:

- Increased the statutory cap on employer contribution rates to 0.9 percent in FY 2014, 1.0 percent in FY 2015, 1.1 percent in FY 2016 and 1.2 percent in FY 2017 and beyond.
- Contingent upon IRS approval, established an election by KPERS 1 members, between different contribution rate and benefit levels. The legislation provided that, if the IRS rejected or did not take action to approve the election, KPERS 1 members would default to an increase in their employee contributions to 5 percent of compensation effective January 1, 2014, and 6 percent effective January 1, 2015, with an increase in the benefit multiplier to 1.85 percent beginning January 1, 2014,

for future years of service only. The IRS did not take action on KPERS' request to approve the election, and therefore, the default was implemented on January 1, 2014.

- For KPERS 2 members retiring after July 1, 2012, the cost of living adjustment (COLA) is eliminated, but members will receive a 1.85 percent multiplier for all years of service.
- Creates a Cash Balance Plan for new hires beginning January 1, 2015. A cash balance plan is a type of defined benefit plan that includes some elements of a defined contribution plan and shares risk between the employer and employee. Each member has a hypothetical account that is credited with employee contributions, employer pay credits and interest credits. At retirement, the account balance is annuitized to create a guaranteed monthly benefit payable for the member's lifetime. Up to 30 percent of the account value at retirement may be paid as a lump sum.
- Beginning in FY 2014, provides for the state to make additional contributions to help pay down KPERS' unfunded actuarial liability until the State/School group reaches a funded ratio of at least 80 percent. The revenue will come from the Expanded Lottery Act Revenues Fund (ELARF). For FY 2014 and 2015, the ELARF funds are being used as a partial funding source to meet the statutory contribution requirements for the School group rather than being contributed in addition to the statutory contributions. Therefore, no additional funding of the UAL is anticipated until FY 2016, at which time the contributions are expected to be around \$40 million.
- If the State of Kansas sells surplus real estate, 80 percent of the proceeds will be used to pay down KPERS' unfunded actuarial liability until the System reaches an 80 percent funded ratio.

The 2014 Legislature passed HB 2533 which made changes to the KPERS 3 benefit structure, generally decreasing the portion of the benefit that is guaranteed. The guaranteed interest crediting rate was reduced from 5.25 percent to 4.00 percent. The dividend changed to a formulaic approach with the dividend in each year equal to 75 percent of the rate of return, on a rolling five year average, over 6 percent. In addition, the annuity interest rate was changed from 6 percent to the assumed investment return less 2 percent. The changes in House Bill 2533 are expected to further improve KPERS long term funding and better manage the investment risk of the plan. While all three groups are projected to reach a funded ratio of 100 percent by 2033, the actual funding progress will be heavily dependent on the actual investment experience of the System in future years and the continuation of the current statutory funding policy for the State/School group.

The 2015 Legislature passed SB 4 which revised the State/School employer contribution rate from 11.27 percent to 8.65 percent for the last half of FY 2015 to correspond with the Governor's

allotment. In addition, SB 228 reduced the previously certified employer contribution rates for FY 2016 and 2017 and provided for bonds to be issued to improve the funded status of the State/School group. The following provisions were included in SB 228:

- Net proceeds of up to \$1.0 billion from bonds issued by the state of Kansas are to be deposited into the KPERS trust fund for the State/School group, subject to certain criteria. The bonds must be issued at an interest rate no greater than 5.0 percent and require the approval of the State Finance Council (approval received July 2, 2015). Bonds were sold and the net proceeds of \$1.0 billion were deposited into the KPERS trust fund on August 20, 2015.
- Revised the previously certified State/School employer contribution rate from 12.37 percent to 10.91 percent for FY 2016 and from 13.57 percent to 10.81 percent for FY 2017. The statutory cap of 1.2 percent per year again applies to employer contribution rates in FY 2018 and beyond.

The 2015 Legislature also passed House Bill 2095 that contained changes to the working after retirement provisions and implemented a pilot program in KP&F for a Deferred Option Retirement Plan for the Kansas Highway Patrol. Neither of these provisions had a significant impact on the long term funding of the System.

#### COMMENTS

Legislation, along with assumption and method changes resulting from the most recent Triennial Experience Study, impacted the valuation results in the December 31, 2014, valuation. Senate Substitute for House Bill 2095 contained both working after retirement provisions and a new DROP pilot program for the Kansas Highway Patrol. The addition of the DROP to the benefit structure of KP&F only for members of the Kansas Highway Patrol had a small impact on the overall valuation results because only about 450 of the total active members of 7,200 were potentially impacted. The KP&F actuarial liability increased \$1.4 million, the normal cost rate increased 0.01 percent, and the total KP&F employer actuarial contribution rate increased 0.03 percent. The valuation process does not include an assumption regarding the re-employment of retirees so this part of HB 2095 did not have an impact on the valuation results. While the cost impact of working after retirement cannot be reliably determined, the new working after retirement rules appear to have fewer incentives for members to retire when first eligible and return to work which is expected to have a favorable impact on the System's funding in the future.

SB 228 contained several provisions that impacted KPERS' funding. Although this bill authorized \$1.0 billion in net bond proceeds, there was uncertainty surrounding the timing and issuance of the bonds within the statutory limit of 5.0 percent on the bond interest rate. Therefore, the December 31, 2014, valuation did not assume any bond proceeds would occur. After

the valuation report was prepared, the full \$1.0 billion of bond proceeds were received by KPERS on August 20, 2015. The impact on the System's funding will be reflected in the December 31, 2015, actuarial valuation. SB 4 and SB 228 changed the statutory employer contribution rates for the State/School group for the last half of FY 2015, and FYs 2016 and 2017. As a result of the lower State/School statutory employer contribution rate in FY 2017, the statutory employer contribution rate for 2018 (set by the results of this year's valuation) is lower than it would have been absent SB 228 (12.01 percent instead of 14.77 percent).

There were changes to both the actuarial assumptions and methods used in the December 31, 2014, actuarial valuation. The Board of Trustees adopted the new set of actuarial assumptions and methods in November 2014 following the completion of the Triennial Experience Study. In addition, some programming refinements were also implemented as a result of an internal review by Cavanaugh Macdonald. The net impact of all changes was a decrease in the actuarial liability of \$50 million and an increase in the normal cost rate for all groups.

Like most public retirement systems, KPERS uses an asset smoothing method to average investment experience above and below the assumed rate of 8 percent per annum. Under the asset smoothing method, the difference between the actual and assumed investment experience is recognized equally over a five year period. With net favorable experience in the prior four years on the market value of assets, the return on the actuarial value of assets in 2014 was 10.6 percent. As of the valuation date, the market value of assets exceeded the actuarial value of assets by more than 4 percent.

The deferred investment experience decreased from a net deferred gain of \$1,182 million last year to a net deferred gain of \$660 million this year. This deferred experience will flow through the asset valuation method in the next four years and be recognized in the valuation process, unless offset by investment experience below the 8 percent assumed rate of return. As the deferred investment experience is recognized, the funded ratio can be expected to increase.

While the use of an asset smoothing method is a common procedure for public retirement systems, it is important to identify the potential impact of the deferred (unrecognized) investment experience. This is particularly important when there are deferred investment losses, but it is also useful to consider the impact on the key actuarial measurements if the deferred investment gains are recognized. To illustrate the impact of the deferred investment experience, the key valuation results are shown below for the State/School and KPF groups using both the actuarial value of assets and the pure market value. The impact would be similar for the other groups.



|                               | State/School  |               | KP&F          |              |
|-------------------------------|---------------|---------------|---------------|--------------|
|                               | Actuarial     | Market        | Actuarial     | Market       |
| Actuarial Liability           | \$17,597      | \$17,597      | \$2,801       | \$2,801      |
| Asset Value                   | <u>10,354</u> | <u>10,797</u> | <u>2,075</u>  | <u>2,160</u> |
| Unfunded Actuarial Liability* | 7,244         | 6,800         | 726           | 641          |
| Funded Ratio                  | 59%           | 61%           | 74%           | 77%          |
| Contribution Rate:            |               |               |               |              |
| Normal Cost Rate              | 8.40%         | 8.40%         | 15.07%        | 15.07%       |
| UAL Payment                   | <u>12.49%</u> | <u>11.62%</u> | <u>11.11%</u> | <u>9.55%</u> |
| Total                         | 20.89%        | 20.02%        | 26.18%        | 24.62%       |
| Employee Rate                 | <u>6.00%</u>  | <u>6.00%</u>  | <u>7.15%</u>  | <u>7.15%</u> |
| Employer Rate                 | 14.89%        | 14.02%        | 19.03%        | 17.47%       |

\*May not add due to rounding

Investment experience in 2008 and 2011 resulted in higher contribution rates in the latter part of the period. However, as the result of improvements in the funded status in recent years, the actuarial contribution rate has declined in the last two years.

The asset smoothing method impacts only the timing of when the actual experience on the market value of assets is recognized. The favorable investment performance in recent

years, resulted in a return of 10.6 percent on the actuarial value of assets. As a result, the unfunded actuarial liability decreased by \$298 million. Future investment experience will impact the extent to which the deferred investment experience (which is currently a net gain) will be recognized. The ultimate impact of the deferred experience on the employer contribution rate would be similar to the column shown above based on the market value of assets, if all actuarial assumptions are met including the 8 percent return in future years.

## SUMMARY OF CHANGE IN UNFUNDED ACTUARIAL LIABILITY BY SYSTEM

December 31, 2014 Valuation (\$ millions)

|  | State                   | School                  | State/School            | Local                   | KP&F                  | Judges               | Total                   |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-----------------------|----------------------|-------------------------|
| <b>UAL in 12/31/2013 Valuation Report</b>      | <b>\$1,129.3</b>        | <b>\$6,222.5</b>        | <b>\$7,351.8</b>        | <b>\$1,589.8</b>        | <b>\$803.1</b>        | <b>\$21.3</b>        | <b>\$9,765.9</b>        |
| · Effect of contribution cap/time lag          | (2.1)                   | 192.9                   | 190.8                   | (0.2)                   | (12.0)                | (0.8)                | 368.6                   |
| · Expected increase due to amortization method | 2.1                     | 11.5                    | 13.6                    | 3.3                     | 2.0                   | (0.5)                | 32.0                    |
| · Actual vs. expected experience               |                         |                         |                         |                         |                       |                      |                         |
| Investment return                              | (75.4)                  | (172.5)                 | (247.9)                 | (69.2)                  | (47.7)                | (3.5)                | (368.3)                 |
| Demographic experience                         | (11.3)                  | (80.5)                  | (91.8)                  | (24.8)                  | (12.7)                | (3.3)                | (132.6)                 |
| All other experience                           | 8.4                     | 36.5                    | 44.9                    | 9.2                     | 0.7                   | 0.5                  | 100.1                   |
| · Change in actuarial assumptions/methods      | (12.2)                  | (5.3)                   | (17.5)                  | (20.3)                  | (8.6)                 | (3.1)                | (67.0)                  |
| · Change in benefit provisions                 | 0.0                     | 0.0                     | 0.0                     | 0.0                     | 1.4                   | 0.0                  | 1.4                     |
| <b>UAL in 12/31/2014 Valuation Report</b>      | <b><u>\$1,038.8</u></b> | <b><u>\$6,205.1</u></b> | <b><u>\$7,243.9</u></b> | <b><u>\$1,487.8</u></b> | <b><u>\$726.2</u></b> | <b><u>\$10.6</u></b> | <b><u>\$9,468.5</u></b> |

Totals may not add due to rounding.

## SUMMARY OF CHANGES IN EMPLOYER ACTUARIAL CONTRIBUTION RATE BY SYSTEM

As of December 31, 2014

| Percentage of Payroll                                      | State         | School        | State/School  | Local       | KP&F <sup>(1)</sup> | Judges      |
|--|---------------|---------------|---------------|-------------|---------------------|-------------|
| <b>Actuarial Contribution Rate in 12/31/2013 Valuation</b> | 10.77%        | 16.03%        | 14.85%        | 9.18%       | 20.42%              | 21.36%      |
| <b>Change Due to Amortization of UAL</b>                   |               |               |               |             |                     |             |
| · effect of contribution cap/time lag                      | (0.02)        | 0.41          | 0.31          | 0.00        | (0.19)              | (0.28)      |
| · amortization method                                      | 0.02          | 0.02          | 0.02          | 0.01        | 0.03                | (0.30)      |
| · investment experience                                    | (0.56)        | (0.36)        | (0.41)        | (0.30)      | (0.75)              | (1.21)      |
| · liability experience                                     | (0.08)        | (0.17)        | (0.15)        | (0.11)      | (0.20)              | (1.14)      |
| · all other experience                                     | 0.37          | 0.45          | 0.42          | 0.24        | 0.51                | 0.72        |
| · change in assumptions/methods                            | (0.94)        | (0.21)        | (0.33)        | (0.72)      | (1.34)              | (2.91)      |
| · change in benefit provisions                             | 0.00          | 0.00          | 0.00          | 0.00        | 0.02                | 0.00        |
| <b>Change in Employer Normal Cost Rate</b>                 |               |               |               |             |                     |             |
| · change in benefit provisions                             | 0.00          | 0.00          | 0.00          | 0.00        | 0.01                | 0.00        |
| · change in assumptions/methods                            | 0.07          | 0.25          | 0.21          | 0.11        | 0.45                | (0.54)      |
| · all other experience                                     | <u>(0.01)</u> | <u>(0.04)</u> | <u>(0.03)</u> | <u>0.05</u> | <u>0.07</u>         | <u>0.19</u> |
| <b>Actuarial Contribution Rate in 12/31/2014 Valuation</b> | 9.62%         | 16.38%        | 14.89%        | 8.46%       | 19.03%              | 15.89%      |

1) Contribution rate for Local employers only.



## SUMMARY OF HISTORICAL CHANGES IN TOTAL SYSTEM UAL

As of December 31, 2014 Valuation

| \$(millions)                      | As Reported on Valuation Date |         |         |         |         |         |         | 6/30/00 | 12/31/00 |
|-----------------------------------|-------------------------------|---------|---------|---------|---------|---------|---------|---------|----------|
|                                   | 6/30/94                       | 6/30/95 | 6/30/96 | 6/30/97 | 6/30/98 | 6/30/99 |         |         |          |
| Actual Experience vs. Assumed     |                               |         |         |         |         |         |         |         |          |
| • Investment                      | \$(102)                       | \$(143) | \$(280) | \$(323) | \$(413) | \$(369) | \$(441) | \$(23)  |          |
| • Other                           | 320                           | 72      | 136     | 157     | 104     | 46      | 99      | 84      |          |
| Assumption Changes                | 0                             | (96)    | 0       | 0       | 350     | 0       | 0       | (206)   |          |
| Changes in Data/Procedures        | 244                           | 0       | 0       | 0       | 0       | 21      | 71      | 145**   |          |
| Change in Cost Method             | 0                             | 0       | 0       | 0       | 0       | 0       | 0       | 0       |          |
| Effect of Contribution Cap/Lag    | *                             | 95      | 70      | 63      | 54      | 78      | 66      | 60      |          |
| Amortization Method               | *                             | 47      | 38      | 35      | 32      | 30      | 22      | 12      |          |
| Change in Benefit Provisions      | 75                            | 0       | 0       | 0       | 88      | 0       | 19      | 0       |          |
| Change in Actuarial Firm/Software | 0                             | 0       | 0       | 0       | 0       | 0       | 0       | 0       |          |
| Bond Issue                        | 0                             | 0       | 0       | 0       | 0       | 0       | 0       | 0       |          |
| Total                             | \$537                         | \$(25)  | \$(36)  | \$(68)  | \$215   | \$(194) | \$(164) | \$72    |          |

| \$(millions)                      | 12/31/01 | 12/31/02 | 12/31/03 | 12/31/04 | 12/31/05 | 12/31/06 | 12/31/07 | 12/31/08 |
|-----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Actual Experience vs. Assumed     |          |          |          |          |          |          |          |          |
| • Investment                      | \$350    | \$644    | \$140    | \$456    | \$167    | \$(293)  | \$(626)  | \$2,332  |
| • Other                           | (9)      | 68       | (32)     | 16       | (84)     | 140      | 99       | 78       |
| Assumption Changes                | 0        | 0        | 0        | 437      | (5)      | 0        | 384      | 0        |
| Changes in Data/Procedures        | 5        | 177**    | (286)*** | 0        | 0        | 0        | 0        | 0        |
| Change in Cost Method             | 0        | 0        | 1,147    | 0        | 0        | 0        | 0        | 0        |
| Effect of Contribution Cap/Lag    | 115      | 143      | 178      | 179      | 247      | 258      | 251      | 246      |
| Amortization Method               | 14       | 21       | 47       | 68       | 84       | 83       | 78       | 71       |
| Change in Benefit Provisions      | 0        | 37       | 3        | 1        | 0        | 24       | 2        | 0        |
| Change in Actuarial Firm/Software | 0        | 0        | 0        | 0        | 0        | 0        | 0        | 0        |
| Bond Issue                        | 0        | (41)     | (440)    | 0        | 0        | 0        | 0        | 0        |
| Total                             | \$475    | \$1,049  | \$757    | \$1,157  | \$409    | \$212    | \$188    | \$2,727  |

| \$(millions)                      | 12/31/09 | 12/31/10  | 12/31/11 | 12/31/12 | 12/31/13 | 12/31/14 | Total   |         |
|-----------------------------------|----------|-----------|----------|----------|----------|----------|---------|---------|
| Actual Experience vs. Assumed     |          |           |          |          |          |          |         |         |
| • Investment                      |          | \$(1,011) | \$560    | \$852    | \$732    | \$(653)  | \$(368) | \$1,188 |
| • Other                           |          | (70)      | (334)    | (190)    | (78)     | (125)    | (78)    | 419     |
| Assumption Changes                |          | 0         | 0        | (64)     | 0        | 0        | (50)    | 750     |
| Changes in Data/Procedures        |          | 0         | 0        | 0        | 0        | 0        | 0       | 377     |
| Change in Cost Method             |          | 0         | 0        | 0        | 0        | 0        | 0       | 1,147   |
| Effect of Contribution Cap/Lag    |          | 383       | 320      | 289      | 303      | 246      | 178     | 3,822   |
| Amortization Method               |          | 96        | 68       | 62       | 49       | 46       | 18      | 1,021   |
| Change in Benefit Provisions      |          | 0         | 0        | 15       | 19       | 0        | 1       | 284     |
| Change in Actuarial Firm/Software |          | 0         | (27)     | 0        | 0        | 0        | 0       | (27)    |
| Bond Issue                        |          | 0         | 0        | 0        | 0        | 0        | 0       | (481)   |
| Total                             |          | \$(602)   | \$587    | \$964    | \$1,025  | \$(487)  | \$(298) | \$8,500 |

Unfunded Actuarial Liability 6/30/93: \$968 Million

Unfunded Actuarial Liability 12/31/14: \$9,468 Million

\* Not calculated for this year

\*\*Reflects the impact of re-establishing the KP&amp;F Supplemental Actuarial Liability at December 31, 2002. The additional unfunded actuarial liability as of December 31, 2000, for the State/School and Local groups not recognized in the prior valuation due to the phase-in of the change in actuarial procedures is included.

\*\*\*Change in asset valuation method.



## SUMMARY OF PRINCIPAL RESULTS – KPERS (STATE)

|  | 12/31/2014<br>Valuation | 12/31/2013<br>Valuation | % Change |
|--|-------------------------|-------------------------|----------|
| <b>1. PARTICIPANT DATA</b>                                       |                         |                         |          |
| Number of:   |                         |                         |          |
| Active Members   | 22,740                  | 23,117                  | (1.6%)   |
| Retired Members and Beneficiaries                                | 18,929                  | 18,413                  | 2.8%     |
| Inactive Members   | <u>7,680</u>            | <u>7,180</u>            | 7.0%     |
| Total Members  | <u>49,349</u>           | <u>48,710</u>           | 1.3%     |
| Projected Annual Salaries of Active Members                      | \$ 969,759,396          | \$ 973,074,168          | (0.3%)   |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 255,795,911          | \$ 244,916,527          | 4.4%     |
| <b>2. ASSETS AND LIABILITIES</b>                                 |                         |                         |          |
| a. Total Actuarial Liability                                     | \$4,160,796,145         | \$4,075,977,044         | 2.1%     |
| b. Assets for Valuation Purposes                                 | 3,122,041,106           | 2,946,723,045           | 5.9%     |
| c. Unfunded Actuarial Liability (a) - (b)                        | 1,038,755,039           | 1,129,253,999           | (8.0%)   |
| d. Funded Ratio (b) / (a)  | 75.0%                   | 72.3%                   | 3.7%     |
| e. Market Value of Assets  | 3,256,683,036           | 3,187,375,166           | 2.2%     |
| f. Funded Ratio on Market Value (e) / (a)                        | 78.3%                   | 78.2%                   | 0.1%     |
| <b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>    |                         |                         |          |
| Normal Cost  |                         |                         |          |
| Total  | 8.10%                   | 8.04%                   |          |
| Member   | <u>6.00%</u>            | <u>6.00%</u>            |          |
| Employer   | 2.10%                   | 2.04%                   |          |
| Amortization of Unfunded Actuarial Liability                     | <u>7.52%</u>            | <u>8.73%</u>            |          |
| Actuarial Contribution Rate                                      | 9.62%                   | 10.77%                  |          |
| Statutory Employer Contribution Rate*                            | <u>12.01%</u>           | <u>10.81%</u>           |          |

\*The Statutory Employer Contribution Rate reflects SB 228, which reduced the rates for State/School from 12.37% to 10.91% in FY 2016 and from 13.57% to 10.81% in FY 2017. The rate in this valuation may not exceed last year's rate by more than the statutory rate increase limit of 1.20% for FY 2018 and later. This rate excludes the contribution rate for the Death and Disability Program. Any excess of the statutory over actuarial contribution rates applied to actual State payroll is deposited to the School assets.



## SUMMARY OF PRINCIPAL RESULTS – KPERS (SCHOOL)

|  | 12/31/2014<br>Valuation | 12/31/2013<br>Valuation | % Change |
|--|-------------------------|-------------------------|----------|
| <b>1. PARTICIPANT DATA</b>                                       |                         |                         |          |
| Number of:   |                         |                         |          |
| Active Members   | 85,347                  | 85,752                  | (0.5%)   |
| Retired Members and Beneficiaries                                | 48,396                  | 46,191                  | 4.8%     |
| Inactive Members   | <u>25,506</u>           | <u>24,038</u>           | 6.1%     |
| Total Members  | <u>159,249</u>          | <u>155,981</u>          | 2.1%     |
| Projected Annual Salaries of Active Members                      | \$3,438,564,123         | \$3,402,845,557         | 1.0%     |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 707,046,829          | \$ 662,838,025          | 6.7%     |
| <b>2. ASSETS AND LIABILITIES</b>                                 |                         |                         |          |
| a. Total Actuarial Liability                                     | \$13,436,665,540        | \$13,002,145,953        | 3.3%     |
| b. Assets for Valuation Purposes                                 | 7,231,564,556           | 6,779,677,943           | 6.7%     |
| c. Unfunded Actuarial Liability (a) - (b)                        | 6,205,100,984           | 6,222,468,010           | (0.3%)   |
| d. Funded Ratio (b) / (a)  | 53.8%                   | 52.1%                   | 3.3%     |
| e. Market Value of Assets  | 7,540,084,183           | 7,331,598,583           | 2.8%     |
| f. Funded Ratio on Market Value (e) / (a)                        | 56.1%                   | 56.4%                   | (0.5%)   |
| <b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>    |                         |                         |          |
| Normal Cost  |                         |                         |          |
| Total  | 8.49%                   | 8.28%                   |          |
| Member   | <u>6.00%</u>            | <u>6.00%</u>            |          |
| Employer   | 2.49%                   | 2.28%                   |          |
| Amortization of Unfunded Actuarial Liability                     | <u>13.89%</u>           | <u>13.75%</u>           |          |
| Actuarial Contribution Rate                                      | 16.38%                  | 16.03%                  |          |
| Statutory Employer Contribution Rate*                            | <u>12.01%</u>           | <u>10.81%</u>           |          |

\* The Statutory Employer Contribution Rate reflects SB 228, which reduced the rates for State/School from 12.37% to 10.91% in FY 2016 and from 13.57% to 10.81% in FY 2017. The rate in this valuation may not exceed last year's rate by more than the statutory rate increase limit of 1.20% for FY 2018 and later. This rate excludes the contribution rate for the Death and Disability Program.

## SUMMARY OF PRINCIPAL RESULTS – KPERS (STATE/SCHOOL)

|  | 12/31/2014<br>Valuation | 12/31/2013<br>Valuation | % Change |
|--|-------------------------|-------------------------|----------|
| <b>1. PARTICIPANT DATA</b>                                       |                         |                         |          |
| Number of:   |                         |                         |          |
| Active Members   | 108,087                 | 108,869                 | (0.7%)   |
| Retired Members and Beneficiaries                                | 67,325                  | 64,604                  | 4.2%     |
| Inactive Members   | <u>33,186</u>           | <u>31,218</u>           | 6.3%     |
| Total Members  | <u>208,598</u>          | <u>204,691</u>          | 1.9%     |
| Projected Annual Salaries of Active Members                      | \$4,408,323,519         | \$4,375,919,725         | 0.7%     |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 962,842,740          | \$ 907,754,552          | 6.1%     |
| <b>2. ASSETS AND LIABILITIES</b>                                 |                         |                         |          |
| a. Total Actuarial Liability                                     | \$17,597,461,685        | \$17,078,122,997        | 3.0%     |
| b. Assets for Valuation Purposes                                 | 10,353,605,662          | 9,726,400,988           | 6.4%     |
| c. Unfunded Actuarial Liability (a) - (b)                        | 7,243,856,023           | 7,351,722,009           | (1.5%)   |
| d. Funded Ratio (b) / (a)  | 58.8%                   | 57.0%                   | 3.2%     |
| e. Market Value of Assets  | 10,796,767,219          | 10,518,973,749          | 2.6%     |
| f. Funded Ratio on Market Value (e) / (a)                        | 61.4%                   | 61.6%                   | (0.3%)   |
| <b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>    |                         |                         |          |
| Normal Cost  |                         |                         |          |
| Total  | 8.40%                   | 8.22%                   |          |
| Member   | <u>6.00%</u>            | <u>6.00%</u>            |          |
| Employer   | 2.40%                   | 2.22%                   |          |
| Amortization of Unfunded Actuarial Liability                     | <u>12.49%</u>           | <u>12.63%</u>           |          |
| Actuarial Contribution Rate                                      | 14.89%                  | 14.85%                  |          |
| Statutory Employer Contribution Rate*                            | <u>12.01%</u>           | <u>10.81%</u>           |          |

\* The Statutory Employer Contribution Rate reflects SB 228, which reduced the rates for State/School from 12.37% to 10.91% in FY 2016 and from 13.57% to 10.81% in FY 2017. The rate in this valuation may not exceed last year's rate by more than the statutory rate increase limit of 1.20% for FY 2018 and later. This rate excludes the contribution rate for the Death and Disability Program.



## SUMMARY OF PRINCIPAL RESULTS – KPERS (LOCAL)

|  | 12/31/2014<br>Valuation | 12/31/2013<br>Valuation | % Change |
|--|-------------------------|-------------------------|----------|
| <b>1. PARTICIPANT DATA</b>                                       |                         |                         |          |
| Number of:   |                         |                         |          |
| Active Members   | 38,659                  | 39,088                  | (1.1%)   |
| Retired Members and Beneficiaries                                | 18,258                  | 17,326                  | 5.4%     |
| Inactive Members   | <u>15,657</u>           | <u>14,878</u>           | 5.2%     |
| Total Members  | <u>72,574</u>           | <u>71,292</u>           | 1.8%     |
| Projected Annual Salaries of Active Members                      | \$ 1,662,175,758        | \$ 1,643,623,267        | 1.1%     |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 200,185,378          | \$ 183,922,144          | 8.8%     |
| <b>2. ASSETS AND LIABILITIES</b>                                 |                         |                         |          |
| a. Total Actuarial Liability                                     | \$4,568,653,804         | \$4,381,654,475         | 4.3%     |
| b. Assets for Valuation Purposes                                 | 3,080,863,872           | 2,791,897,450           | 10.4%    |
| c. Unfunded Actuarial Liability (a) - (b)                        | 1,487,789,932           | 1,589,757,025           | (6.4%)   |
| d. Funded Ratio (b) / (a)  | 67.4%                   | 63.7%                   | 5.8%     |
| e. Market Value of Assets  | 3,205,746,273           | 3,016,067,035           | 6.3%     |
| f. Funded Ratio on Market Value (e) / (a)                        | 70.2%                   | 68.8%                   | 2.0%     |
| <b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>    |                         |                         |          |
| Normal Cost  |                         |                         |          |
| Total  | 8.06%                   | 7.90%                   |          |
| Member   | <u>6.00%</u>            | <u>6.00%</u>            |          |
| Employer   | 2.06%                   | 1.90%                   |          |
| Amortization of Unfunded Actuarial Liability                     | <u>6.40%</u>            | <u>7.28%</u>            |          |
| Actuarial Contribution Rate                                      | 8.46%                   | 9.18%                   |          |
| Statutory Employer Contribution Rate*                            | <u>8.46%</u>            | <u>9.18%</u>            |          |

\* The Statutory Employer Contribution Rate is equal to the Actuarial Rate. This rate excludes the contribution rate for the Death and Disability Program.

## SUMMARY OF PRINCIPAL RESULTS – KANSAS POLICE &amp; FIREMEN'S RETIREMENT SYSTEM

|  | 12/31/2014<br>Valuation | 12/31/2013<br>Valuation | % Change |
|--|-------------------------|-------------------------|----------|
| <b>1. PARTICIPANT DATA</b>                                       |                         |                         |          |
| Number of:   |                         |                         |          |
| Active Members   | 7,204                   | 7,224                   | (0.3%)   |
| Retired Members and Beneficiaries                                | 4,853                   | 4,670                   | 3.9%     |
| Inactive Members   | <u>1,406</u>            | <u>1,382</u>            | 1.7%     |
| Total Members  | <u>13,463</u>           | <u>13,276</u>           | 1.4%     |
| Projected Annual Salaries of Active Members                      | \$ 462,177,399          | \$ 461,814,718          | 0.1%     |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 147,468,612          | \$ 138,798,969          | 6.2%     |
| <b>2. ASSETS AND LIABILITIES</b>                                 |                         |                         |          |
| a. Total Actuarial Liability                                     | \$2,800,878,131         | \$2,706,558,019         | 3.5%     |
| b. Assets for Valuation Purposes                                 | 2,074,703,598           | 1,903,444,252           | 9.0%     |
| c. Unfunded Actuarial Liability (a) - (b)                        | 726,174,533             | 803,113,766             | (9.6%)   |
| d. Funded Ratio (b) / (a)  | 74.1%                   | 70.3%                   | 5.4%     |
| e. Market Value of Assets  | 2,160,304,791           | 2,057,050,931           | 5.0%     |
| f. Funded Ratio on Market Value (e) / (a)                        | 77.1%                   | 76.0%                   | 1.4%     |
| <b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>    |                         |                         |          |
| Normal Cost  |                         |                         |          |
| Total  | 15.07%                  | 14.55%                  |          |
| Member   | <u>7.15%</u>            | <u>7.15%</u>            |          |
| Employer   | 7.92%                   | 7.40%                   |          |
| Amortization of Unfunded Actuarial and Supplemental Liability    | <u>11.11%</u>           | <u>13.02%</u>           |          |
| Actuarial Contribution Rate (Local Employers)                    | 19.03%                  | 20.42%                  |          |
| Statutory Employer Contribution Rate*                            | <u>19.03%</u>           | <u>20.42%</u>           |          |

\* The Statutory Employer Contribution Rate is equal to the Actuarial Rate. This is referred to as the "Uniform" rate, and varies for State and Local employers. The total contribution is equal to the appropriate uniform rate plus the payment required to amortize any unfunded past service liability, determined separately for each employer.

## SUMMARY OF PRINCIPAL RESULTS – KANSAS RETIREMENT SYSTEM FOR JUDGES

|  | 12/31/2014<br>Valuation | 12/31/2013<br>Valuation | % Change |
|--|-------------------------|-------------------------|----------|
| <b>1. PARTICIPANT DATA</b>                                       |                         |                         |          |
| Number of:   |                         |                         |          |
| Active Members   | 253                     | 265                     | (4.5%)   |
| Retired Members and Beneficiaries                                | 257                     | 243                     | 5.8%     |
| Inactive Members   | <u>6</u>                | <u>6</u>                | 0.0%     |
| Total Members  | <u>516</u>              | <u>514</u>              | 0.4%     |
| Projected Annual Salaries of Active Members                      | \$ 27,427,962           | \$ 28,451,524           | (3.6%)   |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 10,375,018           | \$ 9,673,544            | 7.3%     |
| <b>2. ASSETS AND LIABILITIES</b>                                 |                         |                         |          |
| a. Total Actuarial Liability                                     | \$163,473,067           | \$162,334,647           | 0.7%     |
| b. Assets for Valuation Purposes                                 | 152,836,651             | 141,021,935             | 8.4%     |
| c. Unfunded Actuarial Liability (a) - (b)                        | 10,636,416              | 21,312,712              | (50.1%)  |
| d. Funded Ratio (b) / (a)  | 93.5%                   | 86.9%                   | 7.6%     |
| e. Market Value of Assets  | 159,205,632             | 152,430,594             | 4.4%     |
| f. Funded Ratio on Market Value (e) / (a)                        | 97.4%                   | 93.9%                   | 3.7%     |
| <b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>    |                         |                         |          |
| Normal Cost  |                         |                         |          |
| Total  | 19.27%                  | 19.62%                  |          |
| Member   | <u>5.61%</u>            | <u>5.77%</u>            |          |
| Employer   | 13.66%                  | 13.85%                  |          |
| Amortization of Unfunded Actuarial and Supplemental Liability    | <u>2.23%</u>            | <u>7.51%</u>            |          |
| Actuarial Contribution Rate                                      | 15.89%                  | 21.36%                  |          |
| Statutory Employer Contribution Rate*                            | <u>15.89%</u>           | <u>21.36%</u>           |          |

\* Statutory Employer Contribution Rate is equal to the Actuarial Rate. This rate excludes the contribution for the Death and Disability Program.

## SUMMARY OF PRINCIPAL RESULTS – ALL SYSTEMS COMBINED

|  | 12/31/2014<br>Valuation | 12/31/2013<br>Valuation | % Change |
|--|-------------------------|-------------------------|----------|
| <b>1. PARTICIPANT DATA</b>                                       |                         |                         |          |
| Number of:   |                         |                         |          |
| Active Members   | 154,203                 | 155,446                 | (0.8%)   |
| Retired Members and Beneficiaries                                | 90,693                  | 86,843                  | 4.4%     |
| Inactive Members   | <u>50,255</u>           | <u>47,484</u>           | 5.8%     |
| Total Members  | <u>295,151</u>          | <u>289,773</u>          | 1.9%     |
| Projected Annual Salaries of Active Members                      | \$ 6,560,104,638        | \$ 6,509,809,234        | 0.8%     |
| Annual Retirement Payments for Retired Members and Beneficiaries | \$ 1,320,871,748        | \$ 1,240,149,209        | 6.5%     |
| <b>2. ASSETS AND LIABILITIES</b>                                 |                         |                         |          |
| a. Total Actuarial Liability                                     | \$25,130,466,687        | \$24,328,670,138        | 3.3%     |
| b. Assets for Valuation Purposes                                 | 15,662,009,783          | 14,562,764,625          | 7.5%     |
| c. Unfunded Actuarial Liability (a) - (b)                        | 9,468,456,904           | 9,765,905,513           | (3.0%)   |
| d. Funded Ratio (b) / (a)  | 62.3%                   | 59.9%                   | 4.0%     |
| e. Market Value of Assets  | 16,322,023,915          | 15,744,522,309          | 3.7%     |
| f. Funded Ratio on Market Value (e) / (a)                        | 64.9%                   | 64.7%                   | 0.3%     |



## SUMMARY OF PLAN PROVISIONS

### PLAN MEMBERSHIP

The Kansas Public Employees Retirement System (the Retirement System, or the System), is an umbrella organization administering three statewide retirement systems: the Kansas Public Employees Retirement System (KPERs), the Kansas Police and Firemen's Retirement System (KP&F) and the Kansas Retirement System for Judges. All three systems are defined benefit, contributory plans that cover nearly all public employees in Kansas. The Kansas Retirement System for Judges is a single employer plan, while the other two are cost-sharing, multiple employer plans. Participation by the State of Kansas is mandatory, whereas participation by local political subdivisions is optional, but irrevocable once elected. Benefit payments are also provided for a certain group of legislative employees.

## KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

### SUMMARY OF PROVISIONS \*

\* Members who participate on or after July 1, 2009, are referred to as KPERs 2 members.

This valuation reflects the benefit structure in place as of December 31, 2014. KPERs 3 benefits are not included as there were no such members in the valuation.

### EMPLOYEE MEMBERSHIP

Membership is mandatory for all employees in covered positions, except elected officials. A covered position for non-school employees is one that is covered by Social Security, is not seasonal or temporary, and requires at least 1,000 hours of work per year. School employees who work at least 630 hours per year or 3.5 hours per day for at least 180 days are eligible for membership. Effective July 1, 2009, all employees become KPERs members on their date of employment. Prior to July 1, 2009, only School employees were covered immediately. There was a one-year service requirement for the State and Local group. Those who retire under the provisions of the Retirement System may not become contributing members again.

### NORMAL RETIREMENT

**Eligibility – KPERs 1:** (a) Age 65, or (b) age 62 with ten years of credited service, or (c) any age when combined age and years of credited service equal 85 "points". Age is determined by the member's last birthday and is not rounded up.

**KPERs 2:** (a) Age 65 with 5 years of credited service or (b) age 60 with 30 years of credited service.

**Benefits** – Benefits are based on the member's years of credited service, Final Average Salary (FAS), and a statutory multiplier. For those who were hired prior to July 1, 1993, Final Average Salary equals the greater of either: a four-year Final Average Salary, including add-ons, such as sick and annual leave; or a three-year Final Average Salary, excluding add-ons, such as sick and annual leave. For those who are hired on or after July 1, 1993, and before July 1, 2009, Final Average Salary equals the average of the three highest years of salary, excluding add-ons, such as sick and annual leave. Effective July 1, 2009, (KPERs 2), Final Average Salary equals the average of the five highest years of salary, excluding additional compensation.

**Prior Service Credit** – Prior service credit is 0.75 percent or 1.00 percent of Final Average Salary per year [School employees receive 0.75 percent of Final Average Salary for each year of prior service that is not credited under the former Kansas School Retirement System (KSRS)].

### PARTICIPATING SERVICE CREDIT

**KPERs 1:** Participating service credit is 1.75 percent of Final Average Salary for years of service prior to January 1, 2014. Participating service credit is 1.85 percent of Final Average Salary for years of service after December 31, 2013.

**KPERs 2:** For those retiring on or after January 1, 2012, participating service credit is 1.85 percent for all years of service.

### EARLY RETIREMENT

**Eligibility** – Eligibility is age 55 and 10 years of credited service.

**Benefit – KPERs 1:** The normal retirement benefit is reduced 0.2 percent per month for each month between the ages of 60 and 62, and 0.6 percent for each month between the ages of 55 and 60.

**KPERs 2:** The normal retirement benefit is reduced actuarially for early commencement. The reduction factor is 35.0 percent at age 60 and 57.5 percent at age 55. If the member has 30 years of credited service, the early retirement reduction is less (50 percent of regular reduction).

### VESTING REQUIREMENTS

**Eligibility** – Effective July 1, 2009, a member must have five years of credited service (ten years prior to July 1, 2009). Should the vested member terminate employment, the member must leave accumulated contributions on deposit with the Retirement System to be eligible for future benefits. If a vested member terminates employment and withdraws accumulated contributions, the member forfeits all rights and privileges under the Retirement System.



**Benefit** – Retirement benefits are payable when the vested member reaches normal retirement age, or reduced benefits are payable when the vested member reaches a specified early retirement age.

#### OTHER BENEFITS

**Withdrawal Benefit** – Members who terminate employment may withdraw contributions with interest after the last day on the employer's payroll. Withdrawing contributions forfeits all membership rights and benefits, which a member may have accrued prior to withdrawing their contributions from the Retirement System. Inactive, nonvested members who return to covered employment within five years after terminating employment, will not have lost any membership rights or privileges if they haven't withdrawn contributions. The Retirement Act provides for withdrawal of contributions 31 days after employment terminates, but it does not allow members to borrow from contributions.

**Disability Benefit** – Members receiving disability benefits under the KPERS Death and Disability Benefits Program continue to receive service credit under KPERS. If a disabled member retires after receiving disability benefits for at least five years immediately preceding retirement, the member's Final Average Salary is adjusted by the actuarial salary increase assumption rates in existence during the member's period of disability prior to July 1, 1993, 5 percent per year to July 1998 and the change in CPI-U less 1 percent, not to exceed 4 percent after July 1998.

**Death Benefits – Pre-retirement death (non-service connected)** – The member's accumulated contributions plus interest are paid in a lump sum to the designated beneficiary. In lieu of receiving the member's accumulated contributions, the surviving spouse of a member who is eligible to retire at death may elect to receive benefits under any survivor option. The spouse must be the member's sole designated beneficiary to exercise this option. If the member had at least 10 years of credited service, but had not reached retirement age, the spouse may elect to leave the member's contributions on deposit with the System and receive a monthly benefit to begin on the date the member would have been eligible to retire.

**Service-connected accidental death** – The member's accumulated contributions plus interest, plus lump sum amount of \$50,000, plus annual benefit based on 50 percent of Final Average Salary; reduced by Workers' Compensation benefits and subject to a minimum benefit of \$100 a month; are payable to a spouse, minor children, or dependent parents, for life, or until the youngest child reaches age 18 (or up to age 23 if they are full-time students), in this order of preference. The monthly accidental death benefit is in lieu of any joint/survivor benefit for which the surviving spouse would have been eligible.

**Post-retirement death** – A lump sum amount of \$4,000 is payable to the member's beneficiary. If the member has selected

a retirement option, benefits are paid to the joint annuitant or the designated beneficiary. Under joint and survivor retirement options, if the joint annuitant predeceases the retired member, the reduced option benefit is increased to the amount the retired member would have received if no retirement option had been elected. Benefits payable to a joint annuitant cease at the joint annuitant's death. If a member does not select an option, the designated beneficiary receives the excess, if any, of the member's accumulated contributions plus interest over total benefits paid to date of death.

#### MEMBER CONTRIBUTIONS

Prior to January 1, 2014, member contributions were 4 percent of compensation for KPERS 1. 2012 HB 2333 established an election by KPERS 1 members, contingent upon IRS approval, between different contribution rate and benefit levels. The legislation provided that, if the IRS rejected or did not take action to approve the election, KPERS 1 members would default to an increase in their employee contributions to 5 percent of compensation effective January 1, 2014, and 6 percent effective January 1, 2015, with an increase in the benefit multiplier to 1.85 percent beginning January 1, 2014, for future years of service only. Subsequently, the IRS issued a private letter ruling stating that the election granted to KPERS 1 members under 2012 HB 2333 was impermissible.

The member contribution rate for KPERS 2 is 6 percent of compensation. Interest is credited to members' contribution accounts on June 30 each year, based on the account balance as of the preceding December 31. Those who became members prior to July 1, 1993, have interest credited to their accounts at the rate of 8 percent per year. Those who become members on and after July 1, 1993, have interest credited to their accounts at the rate of 4 percent per year.

#### EMPLOYER CONTRIBUTIONS

Rates are certified by the Board of Trustees, based on the results of annual actuarial valuations and statutory provisions.

#### BOARD OF REGENTS PLAN MEMBERS (TIAA AND EQUIVALENTS)

Board of Regents plan members (TIAA and equivalents) do not make contributions to KPERS. They receive prior service benefits for service before 1962; the benefit is 1 percent of Final Average Salary for each year of credited prior service. Service after 1961 is counted for purposes of determining eligibility for vesting.

#### CORRECTIONAL MEMBERS

Correctional employees, as certified to the Board of Trustees by the Secretary of Corrections, are defined in K.S.A. 74-4914a: (a) correctional officers, (b) certain directors and deputy directors of correctional institutions, (c) correctional power plan operators, (d) correctional industries employees, (e) correctional food service employees and (f) correctional maintenance employees.



KPERS 1: For groups (a) and (b) with at least 3 consecutive years of credited service in such positions immediately preceding retirement, normal retirement age is 55 or Rule of 85; and early retirement requirements are age 50 with 10 years of credited service. For groups (c), (d), (e) and (f) with at least 3 consecutive years of service in such positions immediately preceding retirement, normal retirement age is 60 or Rule of 85 and early retirement requirements are 55 with 10 years of credited service.

KPERS 2: For groups (a) and (b) with at least 3 consecutive years of credited service in such positions immediately preceding retirement, normal retirement age is 55 with 10 years of credited service and early retirement requirements are age 50 with 10 years of credited service. For groups (c), (d), (e) and (f) with at least 3 consecutive years of service in such positions immediately preceding retirement, normal retirement age is 60 with 10 years of credited service and early retirement requirements are 55 with 10 years of credited service.

#### **COST OF LIVING ADJUSTMENTS (COLAS)**

KPERS 2 Members Who Retired Prior to July 1, 2012: 2 percent cost-of-living adjustment (COLA) each year beginning at age 65 or the second July 1 after your retirement date, whichever is later. Other KPERS 2 members will not receive a COLA.

## KANSAS POLICE & FIREMEN'S RETIREMENT SYSTEM

#### **NORMAL RETIREMENT**

**Tier I** – age 55 and 20 years of service or 32 years of service (regardless of age).

**Tier II** – age 50 and 25 years of service, or age 55 and 20 years of service, or age 60 and 15 years of service.

**Benefits** – Benefits are based on the member's Final Average Salary. For those who were hired prior to July 1, 1993, Final Average Salary equals the average of the highest three of the last five years of credited participating service, including add-ons, such as sick and annual leave. For those who are hired on or after July 1, 1993, Final Average Salary equals the average of the highest three of the last five years of participating service, excluding add-ons, such as sick and annual leave. Benefits are based on a member's years of credited service and a multiplier of 2.5 percent of Final Average Salary for each year of credited service, to a maximum of 90 percent of Final Average Salary (first effective July 1, 2013).

**Local Plan** – For members covered by local plan provisions on the employer's entry date, normal retirement is at age 50 with 22 years of credited service.

#### **EARLY RETIREMENT**

**Eligibility** – Members must be at least age 50 and have 20 years of credited service.

**Benefit** – Normal retirement benefits are reduced 0.4 percent per month under age 55.

#### **VESTING REQUIREMENTS**

**Eligibility – Tier I:** The member must have 20 years of credited service; if terminating employment, the member must leave contributions on deposit with the Retirement System to be eligible for future benefits. Unreduced benefits are payable at age 55 or reduced benefits are payable as early as age 50.

**Eligibility – Tier II:** The member must have 15 years of credited service to be considered vested. If terminating employment, the member must leave contributions on deposit with the Retirement System to be eligible for future benefits. A vested member may draw unreduced benefits as early as age 50 with 25 years of credited service, age 55 with 20 years of credited service or age 60 with 15 years of credited service. A reduced benefit is available at age 50 with 20 years of credited service.

#### **OTHER BENEFITS**

**Withdrawal Benefits** – Members who terminate employment before retirement may withdraw contributions with interest after the last day on the employer's payroll. Withdrawal of contributions forfeits all membership rights and benefits, which a member may have accrued prior to withdrawing accumulated contributions from the Retirement System. Inactive, nonvested members, who return to covered employment within five years after terminating employment, will not have lost any membership rights or privileges if they haven't withdrawn contributions.

#### **DISABILITY BENEFITS**

**Tier I:** Service-connected disability – There are no age or service requirements to be eligible for this benefit. There is an annual benefit of 50 percent of Final Average Salary, plus 10 percent of Final Average Salary for each dependent child under age 18 (or up to age 23 for full-time students), to a maximum of 75 percent of Final Average Salary. If dependent child benefits aren't payable, the benefit is 50 percent of Final Average Salary or 2.5 percent for each year of credited service up to a maximum of 90 percent of Final Average Salary. Upon the death of a member after two years from the proximate cause of death which is the original service-connected disability, the same benefits are payable. Upon the death of a member after two years from a cause different than the disability for which the member is receiving service-connected disability benefits, the surviving spouse receives a lump sum payment of 50 percent of Final Average Salary. Additionally, a pension benefit of one-half the member's benefit is payable to either the spouse or to the dependent children.

**Tier I:** Non-Service-connected disability – An annual benefit of 2.5 percent times years of credited service times Final Average Salary with a minimum of 25 percent of FAS and a maximum of 90 percent of FAS.

**Tier II:** There is no distinction between service-connected and non-service-connected disability benefits. The annual benefit is 50 percent of Final Average Salary. Service Credit is granted during the period of disability. Disability benefits convert to age and service retirement at the earliest date the member is eligible for full retirement benefits. If the member is disabled for at least five years immediately preceding retirement, the member's Final Average Salary is adjusted during the period of disability.

#### DEATH BENEFITS (TIER I AND TIER II)

**Active Member Service Connected Death** – There is no age or service requirement. An annual benefit of 50 percent of Final Average Salary is payable to the spouse, plus 10 percent of Final Average Salary for each dependent child under age 18 (or up to age 23 for full-time students), to a maximum of 75 percent of Final Average Salary Active Member.

**Active Member Non-Service Connected Death** – A lump sum of 100 percent of Final Average Salary and a pension of 2.5 percent of Final Average Salary per year of credited service (to a maximum of 50 percent) is payable to the spouse. If there is no spouse, the monthly benefit is paid to the dependent children (age 18, or 23 if a full time student). If there is no surviving spouse or eligible children, the beneficiary will receive a lump sum payment of 100 percent of the member's current annual pay inclusive of the member's accumulated contributions.

**Inactive Member Death** – If an inactive member is eligible for retirement when death occurs and the inactive member's spouse is the sole beneficiary, the spouse may elect to receive benefits as a joint annuitant under any option in lieu of a refund of the member's accumulated contributions.

**Post-Retirement Death** – There is a lump sum amount of \$4,000 payable, less any death benefit payable under local plan provisions. If the member has selected a retirement option, benefits are paid to the joint annuitant or the designated beneficiary. Under joint and survivor options, if the joint annuitant predeceases the retired member, the benefit is increased to the amount the retired member would have received if no option had been selected. Benefits payable to the joint annuitant cease when the joint annuitant dies. If no option is selected, the designated beneficiary receives the excess, if any, of the member's accumulated contributions over total benefits paid to the date of death. The surviving spouse of a transfer member (who was covered by local plan on the employer's entry date, who dies after retirement, and who has not elected a retirement benefit option) receives a lump sum payment of 50 percent of Final Average Salary. Additionally, a

pension benefit of three-fourths of the member's benefit is payable either to the spouse or dependent children.

#### CLASSIFICATIONS

**Tier I** – Members have Tier I coverage if they were employed prior to July 1, 1989, and they did not elect coverage under Tier II.

**Tier II** – Members have Tier II coverage if they were employed July 1, 1989, or later. This also includes members employed before July 1, 1989, who elected Tier II coverage.

Some KP&F members are considered either Tier I or Tier II Transfer or Brazelton members.

**Transfer Member** – A member who is a former member of a local plan who elected to participate in KP&F. Former Kansas Highway Patrol and former Kansas Bureau of Investigation members are included in this group.

**Brazelton member** – A member who participated in a class action lawsuit, whose contribution is lower, and whose benefits are offset by Social Security.

#### MEMBER CONTRIBUTIONS

Member contributions are 7.15 percent of compensation, effective July 1, 2013.

Brazelton members contribute .008 percent with a Social Security offset. Benefits payable to these members are reduced by one-half of original Social Security benefits accruing from employment with the participating employer.

#### EMPLOYER CONTRIBUTIONS

Individual rates are certified by the Board of Trustees for each participating employer based on the results of annual actuarial valuations.

## KANSAS JUDGES RETIREMENT SYSTEM

#### NORMAL RETIREMENT

**Eligibility** – (a) Age 65, or (b) age 62 with ten years of credited service, or (c) any age when combined age and years of credited service equals 85 "points". Age is determined by the member's last birthday and is not rounded up.

**Benefit** – The benefit is based on the member's Final Average Salary, which is the average of the three highest years of service under any retirement system administered by KPERS. The basic formula for those who were members prior to July 1, 1987, is 5 percent of Final Average Salary for each year of service up to ten



years, plus 3.5 percent for each year of service greater than ten, to a maximum of 70 percent of Final Average Salary. For those who became members on or after July 1, 1987, the formula is 3.5 percent for each year, to a maximum benefit of 70 percent of Final Average Salary.

#### **EARLY RETIREMENT**

**Eligibility** – A member must be age 55 and have ten years of credited service to take early retirement.

**Benefit** – The retirement benefit is reduced 0.2 percent per month for each month between the ages of 60 and 62, and 0.6 percent per month for each month between the ages of 55 and 60.

#### **VESTING REQUIREMENTS**

**Eligibility** – There is no minimum service requirement; however, after terminating employment, the member must leave contributions on deposit with the Retirement System in order to be eligible for future benefits. Eligible judges who have service credited under KPERS have vested benefits under both KPERS and the Retirement System for Judges when the combined total credited service equals ten years.

**Benefit** – Normal benefit accrued at termination is payable at age 62 or in reduced amount at age 55, provided the member has 10 years of credited service. Otherwise, benefits are not payable until age 65.

#### **OTHER BENEFITS**

**Disability Benefits** – These benefits are payable if a member is defined as totally and permanently disabled as certified by the Supreme Court. The disability benefit, payable until age 65, is 3.5 percent of Final Average Salary for each year of service (minimum of 50 percent and maximum of 70 percent of Final Average Salary). Benefits are recalculated when the member reaches retirement age based on participating service credit for the period of disability. If a judge is disabled for at least five years immediately preceding retirement, the judge's Final Average Salary is adjusted.

**Withdrawal Benefit** – Members who terminate employment may withdraw contributions with interest, but they will forfeit any right to a future benefit if they do.

**Pre-retirement Death** – A refund of the member's accumulated contributions is payable. In lieu of receiving the member's accumulated contributions, the surviving spouse of a member who is eligible to retire at death may elect to receive benefits under any survivor benefit option. If the member had at least ten years of credited service, but hadn't reached retirement age at the time of death, the spouse may elect a monthly benefit to begin on the date the member first would have been eligible to retire as long as the member's contributions aren't withdrawn.

**Post-retirement Death** – A lump sum death benefit of \$4,000 is payable to the member's beneficiary. If the member had selected an option with survivor benefits, those benefits are paid to the joint annuitant or to the member's designated beneficiary. Under retirement options with survivor benefits, if the joint annuitant predeceases the retired member, the retirement benefit is increased to the amount the retired member would have received if no survivor benefits had been elected. Benefits payable to a joint annuitant cease when the joint annuitant dies. If no option was chosen by the retired member, the member's designated beneficiary receives the excess, if any, of the member's accumulated contributions over the total benefits paid to the date of the retired member's death.

#### **MEMBER CONTRIBUTIONS**

Judges contributions are 6 percent of compensation. Upon reaching the maximum retirement benefit level of 70 percent of Final Average Salary, the contribution rate is reduced to 2 percent.

#### **EMPLOYER CONTRIBUTIONS**

Rates are certified by the Board of Trustees, based on the results of annual actuarial valuations.

# ASSUMPTIONS AND METHODS—KPERs

**Rate of Investment Return** 8.0%

**Price Inflation** 3.0%

**KPERs 3 Interest Crediting Rate** 6.5%

**Rates of Mortality: Post-retirement** The RP-2000 Healthy Annuitant table was first adjusted by an age setback or set forward. Rates were further adjusted to fit actual experience.

Starting Table  
 School Males: RP-2000 M Healthy -2  
 School Females: RP-2000 F Healthy -2  
 State Males: RP-2000 M Healthy +2  
 State Females: RP-2000 F Healthy +0  
 Local Males: RP-2000 M Healthy +2  
 Local Females: RP-2000 F Healthy -1

**Sample Rates (2000)**

| Age | School  |         | State   |         | Local   |         |
|-----|---------|---------|---------|---------|---------|---------|
|     | Male    | Female  | Male    | Female  | Male    | Female  |
| 50  | 0.513%  | 0.183%  | 0.547%  | 0.218%  | 0.587%  | 0.204%  |
| 55  | 0.549%  | 0.226%  | 0.625%  | 0.328%  | 0.670%  | 0.278%  |
| 60  | 0.662%  | 0.384%  | 0.962%  | 0.577%  | 1.031%  | 0.481%  |
| 65  | 1.051%  | 0.664%  | 1.597%  | 0.964%  | 1.712%  | 0.817%  |
| 70  | 1.747%  | 1.074%  | 2.646%  | 1.557%  | 2.837%  | 1.318%  |
| 75  | 2.917%  | 1.792%  | 4.550%  | 2.614%  | 4.878%  | 2.215%  |
| 80  | 5.278%  | 3.643%  | 7.037%  | 4.567%  | 7.545%  | 4.171%  |
| 85  | 9.331%  | 6.751%  | 11.292% | 7.977%  | 12.108% | 7.508%  |
| 90  | 15.661% | 11.589% | 17.978% | 13.563% | 19.278% | 12.869% |
| 95  | 24.301% | 18.407% | 24.888% | 20.034% | 26.687% | 19.742% |
| 100 | 32.791% | 24.186% | 30.850% | 24.459% | 33.080% | 24.990% |

**Pre-retirement**

School Males: 70% of RP-2000 M Employees -2  
 School Females: 70% of RP-2000 F Employees -2  
 State Males: 70% of RP-2000 M Employees +2  
 State Females: 65% of RP-2000 F Employees +0  
 Local Males: 90% of RP-2000 M Employees +2  
 Local Females: 90% of RP-2000 F Employees -1

**Disabled Life Mortality**

RP-2000 Disabled Life Table with same age adjustments as used for Retiree Mortality.

**Rates of Salary Increase**

| Years of Service | Rate of Increase* |        |        |
|------------------|-------------------|--------|--------|
|                  | School            | State  | Local  |
| 1                | 12.00%            | 10.50% | 10.50% |
| 5                | 6.55%             | 5.60%  | 6.20%  |
| 10               | 5.10%             | 4.90%  | 5.20%  |
| 15               | 4.60%             | 4.40%  | 4.80%  |
| 20               | 4.10%             | 4.10%  | 4.60%  |
| 25               | 4.00%             | 4.00%  | 4.10%  |
| 30               | 4.00%             | 4.00%  | 4.00%  |

\*Includes general wage increase assumption of 4.0% (composed of 3.0% inflation and 1.0% productivity)  
 Note: Because KPERs 2 State and Local employees become members immediately, their rates of salary increase are shifted 1 year to be consistent with KPERs 1 members.



**Load for Pre-1993 Hires**

State: 2.0%  
 School: 0.5%  
 Local: 1.8%  
 C55/C60: 1.5%

**Rates of Termination**

| Duration | School |        | State  |        | Local  |        |
|----------|--------|--------|--------|--------|--------|--------|
|          | Male   | Female | Male   | Female | Male   | Female |
| 0        | 21.00% | 23.00% | 18.00% | 19.00% | 20.00% | 23.00% |
| 1        | 18.00% | 18.00% | 15.00% | 15.00% | 16.00% | 20.00% |
| 2        | 14.00% | 13.00% | 13.00% | 11.00% | 13.20% | 17.00% |
| 3        | 10.00% | 11.00% | 11.00% | 10.00% | 11.00% | 14.00% |
| 4        | 8.00%  | 9.00%  | 9.00%  | 9.00%  | 9.60%  | 11.50% |
| 5        | 6.50%  | 7.25%  | 7.50%  | 8.00%  | 8.30%  | 9.00%  |
| 6        | 5.50%  | 6.25%  | 6.50%  | 7.00%  | 7.10%  | 7.50%  |
| 7        | 5.00%  | 5.50%  | 5.70%  | 6.00%  | 6.10%  | 6.80%  |
| 8        | 4.50%  | 4.90%  | 5.20%  | 5.00%  | 5.10%  | 6.20%  |
| 9        | 4.00%  | 4.30%  | 4.90%  | 4.60%  | 4.50%  | 5.60%  |
| 10       | 3.60%  | 3.90%  | 4.50%  | 4.30%  | 4.10%  | 5.00%  |
| 11       | 3.20%  | 3.50%  | 4.30%  | 4.00%  | 3.80%  | 4.50%  |
| 12       | 2.90%  | 3.10%  | 4.10%  | 3.70%  | 3.60%  | 4.20%  |
| 13       | 2.60%  | 2.80%  | 3.90%  | 3.50%  | 3.40%  | 3.90%  |
| 14       | 2.40%  | 2.50%  | 3.70%  | 3.30%  | 3.20%  | 3.60%  |
| 15       | 2.20%  | 2.30%  | 3.50%  | 3.10%  | 3.10%  | 3.30%  |
| 16       | 2.00%  | 2.10%  | 3.30%  | 2.90%  | 3.00%  | 3.00%  |
| 17       | 1.80%  | 1.90%  | 3.00%  | 2.70%  | 2.80%  | 2.80%  |
| 18       | 1.60%  | 1.70%  | 2.70%  | 2.50%  | 2.60%  | 2.60%  |
| 19       | 1.50%  | 1.50%  | 2.40%  | 2.30%  | 2.50%  | 2.40%  |
| 20       | 1.40%  | 1.30%  | 2.20%  | 2.10%  | 2.40%  | 2.20%  |
| 21       | 1.30%  | 1.20%  | 2.00%  | 1.90%  | 2.20%  | 2.00%  |
| 22       | 1.20%  | 1.10%  | 1.80%  | 1.70%  | 2.00%  | 1.80%  |
| 23       | 1.10%  | 1.00%  | 1.60%  | 1.50%  | 1.80%  | 1.60%  |
| 24       | 1.00%  | 0.90%  | 1.40%  | 1.40%  | 1.60%  | 1.40%  |
| 25       | 0.90%  | 0.80%  | 1.20%  | 1.30%  | 1.40%  | 1.20%  |
| 26       | 0.80%  | 0.70%  | 1.10%  | 1.20%  | 1.20%  | 1.00%  |
| 27       | 0.70%  | 0.60%  | 1.00%  | 1.10%  | 1.10%  | 1.00%  |
| 28       | 0.60%  | 0.50%  | 0.90%  | 1.00%  | 1.00%  | 1.00%  |
| 29       | 0.50%  | 0.50%  | 0.80%  | 0.50%  | 0.90%  | 1.00%  |
| 30       | 0.50%  | 0.50%  | 0.70%  | 0.50%  | 0.80%  | 1.00%  |
| 30+      | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.00%  |

*Note: Because KPERS 2 State and Local employees become members immediately, their termination rates are shifted 1 year to be consistent with KPERS 1 members.*

**Retirement Rates**

**School**

| <b>Rule of 85</b> |                |                |                  |      |                   |      |  |
|-------------------|----------------|----------------|------------------|------|-------------------|------|--|
| Age               | 1st Year       | After 1st Year | Early Retirement |      | Normal Retirement |      |  |
|                   | With 85 Points | With 85 Points | Age              | Rate | Age               | Rate |  |
| 53                | 20%            | 18%            | 55               | 5%   | 62                | 30%  |  |
| 55                | 20%            | 18%            | 56               | 5%   | 63                | 25%  |  |
| 57                | 22%            | 18%            | 57               | 8%   | 64                | 35%  |  |
| 59                | 25%            | 23%            | 58               | 10%  | 65                | 35%  |  |
| 61                | 30%            | 30%            | 59               | 12%  | 66-71             | 25%  |  |
|                   |                |                | 60               | 15%  | 72-74             | 20%  |  |
|                   |                |                | 61               | 24%  | 75                | 100% |  |

**State**

| <b>Rule of 85</b> |                |                |                  |      |                   |      |  |
|-------------------|----------------|----------------|------------------|------|-------------------|------|--|
| Age               | 1st Year       | After 1st Year | Early Retirement |      | Normal Retirement |      |  |
|                   | With 85 Points | With 85 Points | Age              | Rate | Age               | Rate |  |
| 53                | 10%            | 10%            | 55               | 5%   | 62                | 30%  |  |
| 55                | 15%            | 12%            | 56               | 5%   | 63                | 20%  |  |
| 57                | 15%            | 12%            | 57               | 5%   | 64                | 30%  |  |
| 59                | 15%            | 12%            | 58               | 6%   | 65                | 35%  |  |
| 61                | 30%            | 25%            | 59               | 10%  | 66-67             | 25%  |  |
|                   |                |                | 60               | 10%  | 68-74             | 20%  |  |
|                   |                |                | 61               | 20%  | 75                | 100% |  |

**Local**

| <b>Rule of 85</b> |                |                |                  |      |                   |      |  |
|-------------------|----------------|----------------|------------------|------|-------------------|------|--|
| Age               | 1st Year       | After 1st Year | Early Retirement |      | Normal Retirement |      |  |
|                   | With 85 Points | With 85 Points | Age              | Rate | Age               | Rate |  |
| 53                | 11%            | 7%             | 55               | 5%   | 62                | 25%  |  |
| 55                | 13%            | 10%            | 56               | 5%   | 63                | 20%  |  |
| 57                | 13%            | 10%            | 57               | 5%   | 64                | 30%  |  |
| 59                | 15%            | 12%            | 58               | 5%   | 65                | 35%  |  |
| 61                | 25%            | 25%            | 59               | 7%   | 66                | 25%  |  |
|                   |                |                | 60               | 7%   | 67-74             | 20%  |  |
|                   |                |                | 61               | 20%  | 75                | 100% |  |

• Inactive vested members – Age 62.

• For correctional employees with an age 55 normal retirement date -

| Age | Rate |
|-----|------|
| 55  | 10%  |
| 58  | 10%  |
| 60  | 15%  |
| 62  | 35%  |
| 65  | 100% |



• For correctional employees with an age 60 normal retirement date -

| Age | Rate |
|-----|------|
| 60  | 20%  |
| 61  | 20%  |
| 62  | 20%  |
| 63  | 20%  |
| 64  | 20%  |
| 65  | 70%  |
| 66  | 70%  |
| 67  | 70%  |
| 68  | 100% |

• For TIAA employees – Age 66.

#### Rates of Disability

| Age | School | State | Local |
|-----|--------|-------|-------|
| 25  | .020%  | .029% | .024% |
| 30  | .022%  | .082% | .052% |
| 35  | .027%  | .129% | .078% |
| 40  | .046%  | .195% | .114% |
| 45  | .088%  | .301% | .167% |
| 50  | .170%  | .409% | .290% |
| 55  | .289%  | .576% | .480% |
| 60  | .544%  | .736% | .680% |

Indexation of Final Average Salary for Disabled Members: 2.5% per year

#### Probability of Vested Members Leaving Contributions with System

KPERS 1:

| Age | School | State | Local |
|-----|--------|-------|-------|
| 25  | 80%    | 65%   | 60%   |
| 30  | 80%    | 65%   | 70%   |
| 35  | 80%    | 65%   | 70%   |
| 40  | 80%    | 65%   | 70%   |
| 45  | 82%    | 75%   | 70%   |
| 50  | 87%    | 85%   | 74%   |
| 55  | 100%   | 100%  | 100%  |

KPERS 2:

Members are assumed to elect to take a refund if it is more valuable than the deferred annuity. The comparison is based on 8% interest and a 50% Male/50% Female blend of the RP-2000 Combined Mortality Table, projected to 2045 (static).

Marriage Assumption: 70% of all members are assumed married with male spouse assumed 3 years older than the female.



## ASSUMPTIONS AND METHODS—KP&F

|                                  |  |                          |                          |             |
|----------------------------------|--|--------------------------|--------------------------|-------------|
| <b>Rate of Investment Return</b> | 8.0%   |                          |                          |             |
| <b>Price Inflation</b>           | 3.0%   |                          |                          |             |
| <b>Rates of Mortality:</b>       |  |                          |                          |             |
| <b>Post-retirement</b>           | RP-2000 Healthy Annuitant Table  |                          |                          |             |
| <b>Pre-retirement</b>            | 90% of RP-2000 Employee Table*<br>*70% of pre-retirement deaths assumed to be service related.               |                          |                          |             |
| <b>Disabled Life Mortality</b>   | RP-2000 Disabled Life Table  |                          |                          |             |
| <b>Rates of Salary Increase</b>  | <b>Years of Service</b>  | <b>Rate of Increase*</b> |                          |             |
|                                  | 1  | 12.5%                    |                          |             |
|                                  | 5  | 7.0%                     |                          |             |
|                                  | 10   | 4.9%                     |                          |             |
|                                  | 15   | 4.3%                     |                          |             |
|                                  | 20   | 4.0%                     |                          |             |
|                                  | 25   | 4.0%                     |                          |             |
|                                  | <i>*Includes general wage increase assumption of 4.0% (composed of 3.0% inflation and 1.0% productivity)</i> |                          |                          |             |
| <b>Rates of Termination</b>      |  |                          |                          |             |
| Tier I:                          | 3% for ages less than 41; 0% thereafter  |                          |                          |             |
| Tier II:                         | <b>Years of Service</b>  | <b>Rate</b>              |                          |             |
|                                  | 1  | 13.0%                    |                          |             |
|                                  | 5  | 6.0%                     |                          |             |
|                                  | 10   | 2.5%                     |                          |             |
|                                  | 15   | 1.0%                     |                          |             |
|                                  | 20   | 1.0%                     |                          |             |
|                                  | 25   | 0.0%                     |                          |             |
| <b>Retirement Rates</b>          |  |                          |                          |             |
| Tier I:                          | <b>Early Retirement</b>  |                          | <b>Normal Retirement</b> |             |
|                                  | <b>Age</b>   | <b>Rate</b>              | <b>Age</b>               | <b>Rate</b> |
|                                  | 50   | 5%                       | 55                       | 40%         |
|                                  | 51   | 5%                       | 56                       | 40%         |
|                                  | 52   | 5%                       | 57                       | 40%         |
|                                  | 53   | 10%                      | 58                       | 35%         |
|                                  | 54   | 30%                      | 59                       | 45%         |
|                                  |  |                          | 60                       | 50%         |
|                                  |  |                          | 61                       | 20%         |
|                                  |  |                          | 62                       | 100%        |



### Retirement Rates Continued

Tier II:

| Early Retirement |      | Normal Retirement |      |
|------------------|------|-------------------|------|
| Age              | Rate | Age               | Rate |
| 50               | 10%  | 50                | 25%  |
| 51               | 10%  | 53                | 25%  |
| 52               | 10%  | 55                | 25%  |
| 53               | 10%  | 58                | 20%  |
| 54               | 20%  | 60                | 25%  |
|                  |      | 61                | 25%  |
|                  |      | 62                | 25%  |
|                  |      | 63                | 100% |

Inactive Vested: Assumed to retire at later of (i) eligibility for unreduced benefits or (ii) age 55.

### Rates of Disability

| Age | Rate* |
|-----|-------|
| 22  | .06%  |
| 27  | .07%  |
| 32  | .15%  |
| 37  | .35%  |
| 42  | .56%  |
| 47  | .76%  |
| 52  | .96%  |
| 57  | 1.00% |

\*90% assumed to be service-connected under KP & F Tier 1.

Marriage Assumption: 80% of all members assumed married with male spouse assumed to be three years older than female.

## ASSUMPTIONS AND METHODS—JUDGES

|                                  |  |
|----------------------------------|--|
| <b>Rate of Investment Return</b> | 8.0%   |
| <b>Price Inflation</b>           | 3.0%   |
| <b>Rates of Mortality:</b>       |  |
| <b>Post-retirement</b>           | RP-2000 Healthy Annuitant Table, set back two years  |
| <b>Pre-retirement</b>            | 70% of RP-2000 Employee Table, set back two years  |
| <b>Rates of Salary Increase</b>  | 4.5%   |
| <b>Rates of Termination</b>      | None assumed   |
| <b>Disabled Life Mortality</b>   | RP-2000 Disabled Life Table, set back two years  |
| <b>Rates of Disability</b>       | None assumed   |
| <b>Retirement Rates</b>          |  |
|                                  | <b>Age</b> <b>Rate</b>   |
|                                  | 60                              20%  |
|                                  | 61                              10%  |
|                                  | 62-64                        15%   |
|                                  | 65-66                        20%   |
|                                  | 67-69                        10%   |
|                                  | 70+                            100%  |
| <b>Marriage Assumption:</b>      | 70% of all members are assumed married with male spouse assumed 3 years older than female. |

# TECHNICAL VALUATION PROCEDURES

## DATA PROCEDURES

**In-pay members:** If a birth date is not available, the member is assumed to have retired at 62. If a retirement date is also not available, the member is assumed to be 75.

If a beneficiary birth date is needed but not supplied, males are assumed to be 3 years older than females.

**Not in-pay members:** If a birth date is not available, it is assigned according to the following schedule:

| System | Active member age at hire | Inactive member age at valuation |
|--------|---------------------------|----------------------------------|
| KPERS  | 34.7                      | 50                               |
| KP&F   | 27.5                      | 49                               |
| Judges | 43.4                      | 54                               |

If gender is not provided, it is assigned randomly with a 40 percent probability of being male and 60 percent probability of being female.

If salary information is not available for an active record, it is assigned according to the following schedule:

| System | Salary   |
|--------|----------|
| KPERS  | \$24,662 |
| KP&F   | \$36,046 |
| Judges | \$65,130 |

Salaries for first year members are annualized.

## OTHER VALUATION PROCEDURES

No actuarial accrued liability in excess of the unclaimed member contribution balance is held for nonvested, inactive members. A reserve is also held for accounts that have been forfeited but could be reclaimed in the future.

Benefits above the projected IRC Section 415 limit for active participants are assumed to be immaterial for the valuation.

The compensation limitation under IRC Section 401(a) (17) is considered in this valuation. On a projected basis, the impact of this limitation is insignificant.

Salary increases are assumed to apply to annual amounts.

Decrements are assumed to occur mid-year, except that immediate retirement is assumed for those who are at or above the age at which retirement rates are 100 percent. Standard adjustments are made for multiple decrements. Withdrawal does not operate once early or unreduced retirement eligibility is met.

## ACTUARIAL METHODS

### 1. Funding Method

Under the EAN cost method, the actuarial present value of each member's projected benefits allocates on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability. The unfunded actuarial liability represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses.

There are several components of the unfunded actuarial liability which are amortized over different periods. The increase in the unfunded actuarial liability resulting from the 1998 COLA is amortized over 15 years. The increase in the unfunded actuarial liability for Local employers resulting from 2003 legislation which made the 13th check for pre-July 2, 1987, retirees a permanent benefit is funded over a 10 year period beginning in 2005. The remainder of the unfunded actuarial liability is amortized over a period originally set at 40 years beginning July 1, 1993.

There is currently a lag between the valuation date in which the employer contribution rates are determined and the effective date of those contribution rates, i.e., two year lag for Local employers and a two and one-half year lag for the State/School group. The unfunded actuarial liability (UAL) is projected from the valuation date to the first day of the fiscal year in which the contribution rate will apply based on the statutory contribution rates and expected payroll in the intervening years. The UAL is amortized as a level percentage of payroll for all groups except Judges, who use a level dollar payment. The payroll growth assumption is 4 percent so the annual amortization payments will increase 4 percent each year. As a result, if total payroll grows 4 percent per year, as assumed, the amortization payment will remain level as a percentage of total current payroll.

### 2. Asset Valuation Method

For actuarial purposes, assets are valued using an asset smoothing method. The difference between the actual return and the expected return (based on the actuarial assumed rate of return) on the market value of assets is calculated each year and recognized equally over a five year period.



## SCHEDULES OF FUNDING PROGRESS

Last Ten Years as of December 31 (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) |
|--------------------------|-------------------------------|---------------------------------------|---------------------------|--------------------|---------------------|---|
| 12/31/05                 | \$11,339,293                  | \$16,491,762                          | \$5,152,469               | 69%                | \$5,270,351         | 98%   |
| 12/31/06                 | 12,189,197                    | 17,552,790                            | 5,363,593                 | 69                 | 5,599,193           | 96  |
| 12/31/07                 | 13,433,115                    | 18,984,915                            | 5,551,800                 | 71                 | 5,949,228           | 93  |
| 12/31/08                 | 11,827,619                    | 20,106,787                            | 8,279,168                 | 59                 | 6,226,526           | 133   |
| 12/31/09                 | 13,461,221                    | 21,138,206                            | 7,676,985                 | 64                 | 6,532,496           | 118   |
| 12/31/10                 | 13,589,658                    | 21,853,783                            | 8,264,125                 | 62                 | 6,494,048           | 127   |
| 12/31/11                 | 13,379,020                    | 22,607,170                            | 9,228,150                 | 59                 | 6,401,462           | 144   |
| 12/31/12                 | 13,278,490                    | 23,531,423                            | 10,252,933                | 56                 | 6,498,962           | 158   |
| 12/31/13                 | 14,562,765                    | 24,328,670                            | 9,765,906                 | 60                 | 6,509,809           | 150   |
| 12/31/14                 | 15,662,010                    | 25,130,467                            | 9,468,457                 | 62                 | 6,560,105           | 144   |

1) Beginning with the 12/31/03 actuarial valuation, the actuarial cost method was changed to the Entry Age Normal (EAN) method.

## SHORT TERM SOLVENCY TEST

Last Ten Years as of December 31

| Valuation Date | Member Contributions (A) | Retirants and Beneficiaries (B) | Active Member Employer Financed Portion (C) | Actuarial Value of Assets | Portions of Accrued Liabilities Covered by Assets |      |     |
|----------------|--------------------------|---------------------------------|---|---------------------------|---|------|-----|
|                |                          |                                 |   |                           | (A)   | (B)  | (C) |
| 12/31/05       | \$4,006,823,805          | \$6,413,679,842                 | \$6,071,258,736                             | \$11,339,292,965          | 100%  | 100% | 15% |
| 12/31/06       | 4,209,698,437            | 6,872,703,437                   | 6,470,388,630                               | 12,189,197,444            | 100   | 100  | 17  |
| 12/31/07       | 4,423,194,339            | 7,417,933,822                   | 7,143,786,763                               | 13,433,115,014            | 100   | 100  | 22  |
| 12/31/08       | 4,642,675,652            | 7,945,452,582                   | 7,518,658,666                               | 11,827,618,574            | 100   | 90   | —   |
| 12/31/09       | 5,132,772,778            | 8,459,191,163                   | 7,546,242,173                               | 13,461,220,705            | 100   | 99   | —   |
| 12/31/10       | 5,017,361,438            | 9,090,575,924                   | 7,745,845,940                               | 13,589,658,118            | 100   | 96   | —   |
| 12/31/11       | 5,334,463,714            | 9,923,555,011                   | 7,349,151,307                               | 13,379,020,161            | 100   | 81   | —   |
| 12/31/12       | 5,448,296,911            | 10,585,891,383                  | 7,497,235,156                               | 13,278,490,294            | 100   | 74   | —   |
| 12/31/13       | 5,636,937,795            | 11,298,180,557                  | 7,393,551,786                               | 14,562,764,625            | 100   | 79   | —   |
| 12/31/14       | 5,791,313,287            | 12,361,327,805                  | 6,977,825,595                               | 15,662,009,783            | 100   | 80   | —   |

SCHEDULE OF ACTIVE MEMBER VALUATION DATA<sup>(1)</sup>*Last Ten Years as of December 31*

| Valuation Date | Number of Active Members <sup>(2)</sup> | Percentage Change in Membership | Percentage Increase               |                                      | Total Annual Payroll (in millions) <sup>(2)</sup> | Average Payroll | Percentage Increase in Average Payroll |
|----------------|---|---------------------------------|-----------------------------------|--------------------------------------|---|-----------------|--|
|                |   |                                 | Number of Participating Employers | in Number of Participating Employers |   |                 |  |
| 12/31/05       | 149,073                                 | 0.9%                            | 1,474                             | 0.9%                                 | \$5,270   | \$34,661        | 2.4%                                   |
| 12/31/06       | 151,449                                 | 1.6                             | 1,474                             | 0.0                                  | 5,599   | 36,246          | 4.4                                    |
| 12/31/07       | 153,804                                 | 1.5                             | 1,482                             | 0.5                                  | 5,949   | 37,922          | 4.4                                    |
| 12/31/08       | 156,073                                 | 1.5                             | 1,492                             | 0.6                                  | 6,227   | 39,113          | 3.1                                    |
| 12/31/09       | 160,831                                 | 3.0                             | 1,499                             | 0.5                                  | 6,532   | 39,821          | 1.8                                    |
| 12/31/10       | 157,919                                 | (1.8)                           | 1,511                             | 0.8                                  | 6,494   | 41,123          | 3.2                                    |
| 12/31/11       | 155,054                                 | (1.9)                           | 1,504                             | -0.5                                 | 6,401   | 41,285          | 0.4                                    |
| 12/31/12       | 156,053                                 | 0.6                             | 1,506                             | 0.1                                  | 6,499   | 41,646          | 0.9                                    |
| 12/31/13       | 155,446                                 | (0.4)                           | 1,508                             | 0.1                                  | 6,510   | 41,878          | 0.6                                    |
| 12/31/14       | 154,203                                 | (0.8)                           | 1,518                             | 0.7                                  | 6,560   | 42,542          | 1.6                                    |

1) Data provided to actuary reflects active membership information as of January 1.

2) Excludes TIAA salaries.

## MEMBERSHIP PROFILE

*Last Ten Years as of December 31*

| Valuation Date | Active  | Inactive | Retirees & Beneficiaries | Total Membership |
|----------------|---------|----------|--------------------------|------------------|
| 12/31/05       | 149,073 | 41,232   | 63,348                   | 253,653          |
| 12/31/06       | 151,449 | 40,672   | 65,765                   | 257,886          |
| 12/31/07       | 153,804 | 41,383   | 67,102                   | 262,289          |
| 12/31/08       | 156,073 | 41,749   | 70,724                   | 268,546          |
| 12/31/09       | 160,831 | 43,324   | 73,339                   | 277,494          |
| 12/31/10       | 157,919 | 44,231   | 76,744                   | 278,894          |
| 12/31/11       | 155,054 | 45,678   | 81,025                   | 281,757          |
| 12/31/12       | 156,053 | 45,969   | 84,318                   | 286,340          |
| 12/31/13       | 155,446 | 47,484   | 87,670                   | 290,600          |
| 12/31/14       | 154,203 | 50,255   | 90,907                   | 295,365          |



## RETIRANTS, BENEFICIARIES - CHANGES IN ROLLS – ALL SYSTEMS

*Last Ten Fiscal Years*

| Year    | Number at Beginning of Year | Additions    |                   | Deletions      |                   | Number at End of Year | % Change in Number of Retirants | % Change in Additions Allowances | Average Annual Allowance | Year-End Annual Allowances |
|---------|-----------------------------|--------------|-------------------|----------------|-------------------|-----------------------|---------------------------------|----------------------------------|--------------------------|----------------------------|
|         |                             | Number Added | Annual Allowances | Number Removed | Annual Allowances |                       |                                 |                                  |                          |                            |
| 6/30/06 | 61,265                      | 4,452        | \$66,239,352      | 1,759          | \$11,185,646      | 63,765                | 4.00%                           | 12.00%                           | \$11,498                 | \$805,978,732              |
| 6/30/07 | 63,765                      | 4,423        | 67,181,677        | 2,125          | 15,218,444        | 66,063                | 3.60                            | 1.40                             | 13,142                   | 868,179,029                |
| 6/30/08 | 66,063                      | 5,195        | 73,055,348        | 2,515          | 18,681,361        | 68,743                | 4.10                            | 8.70                             | 13,758                   | 945,739,016                |
| 6/30/09 | 68,743                      | 5,330        | 81,815,349        | 2,467          | 20,966,802        | 71,606                | 4.20                            | 12.00                            | 13,964                   | 999,939,615                |
| 6/30/10 | 71,606                      | 5,593        | 88,709,733        | 2,332          | 20,528,013        | 74,867                | 4.60                            | 8.40                             | 14,182                   | 1,060,205,818              |
| 6/30/11 | 74,867                      | 6,245        | 99,091,348        | 2,698          | 23,230,288        | 78,414                | 4.70                            | 11.70                            | 14,630                   | 1,147,209,272              |
| 6/30/12 | 78,414                      | 6,941        | 112,628,928       | 2,644          | 23,775,195        | 82,711                | 5.50                            | 13.70                            | 14,962                   | 1,237,559,898              |
| 6/30/13 | 82,711                      | 6,071        | 97,203,958        | 2,707          | 24,577,721        | 86,075                | 4.10                            | (15.90)                          | 14,975                   | 1,288,986,517              |
| 6/30/14 | 86,075                      | 6,022        | 99,401,460        | 2,793          | 26,057,706        | 89,304                | 3.80                            | 2.50                             | 15,298                   | 1,366,173,782              |
| 6/30/15 | 89,304                      | 6,419        | 108,490,198       | 2,981          | 29,617,203        | 92,742                | 3.80                            | 9.10                             | 15,634                   | 1,449,898,078              |

## SUMMARY OF MEMBERSHIP DATA

| Retiree and Beneficiary Member Valuation Data <sup>(1)</sup> | 12/31/14  | 12/31/13  |
|--|-----------|-----------|
| <b>KPERS</b>   |           |           |
| Number   | 85,583    | 81,930    |
| Average Benefit  | \$13,590  | \$13,325  |
| Average Age  | 72.17     | 72.02     |
| <b>Police &amp; Fire</b>                                     |           |           |
| Number   | 4,853     | 4,670     |
| Average Benefit  | \$30,387  | \$29,721  |
| Average Age  | 65.06     | 66.33     |
| <b>Judges</b>  |           |           |
| Number   | 257       | 243       |
| Average Benefit  | \$40,370  | \$39,809  |
| Average Age  | 74.29     | 74.20     |
| <b>System Total</b>  |           |           |
| Number   | 90,693    | 86,843    |
| Average Benefit  | \$14,565  | \$14,280  |
| Average Age  | 71.80     | 71.72     |
| Active Member Valuation Data <sup>(1)</sup>                  | 12/31/14  | 12/31/13  |
| <b>KPERS</b>   |           |           |
| Number   | 146,746   | 147,957   |
| Average Current Age  | 45.40     | 45.46     |
| Average Service  | 11.21     | 11.26     |
| Average Pay  | \$41,367  | \$40,684  |
| <b>Police &amp; Fire</b>                                     |           |           |
| Number   | 7,204     | 7,224     |
| Tier I   | 261       | 294       |
| Tier II  | 6,943     | 6,930     |
| Average Current Age  | 39.67     | 39.61     |
| Average Service  | 11.88     | 11.80     |
| Average Pay  | \$64,156  | \$63,928  |
| <b>Judges</b>  |           |           |
| Number   | 253       | 265       |
| Average Current Age  | 58.18     | 57.81     |
| Average Service  | 11.90     | 11.68     |
| Average Pay  | \$108,411 | \$107,364 |
| <b>System Total</b>  |           |           |
| Number   | 154,203   | 155,446   |
| Average Current Age  | 45.16     | 45.21     |
| Average Service  | 11.24     | 11.28     |
| Average Pay  | \$42,542  | \$41,878  |

1) Data provided to actuary reflects membership information as of January 1.



## SCHEDULE OF EMPLOYER CONTRIBUTION RATES

*Last Ten Fiscal Years<sup>(1)</sup>*

| KPERs State/School |                |                           | KPERs LOCAL |                |                     |
|--------------------|----------------|---------------------------|-------------|----------------|---------------------|
| Fiscal Year        | Actuarial Rate | Actual Rate               | Fiscal Year | Actuarial Rate | Actual Rate         |
| 2006               | 9.94%          | 6.07%                     | 2006        | 7.04%          | 4.61%               |
| 2007               | 9.75           | 6.77                      | 2007        | 8.69           | 5.31                |
| 2008               | 11.37          | 7.37                      | 2008        | 8.92           | 5.93                |
| 2009               | 11.86          | 7.97 <sup>(5)</sup>       | 2009        | 9.12           | 6.54 <sup>(5)</sup> |
| 2010               | 11.98          | 8.57 <sup>(6)</sup>       | 2010        | 9.52           | 7.14 <sup>(6)</sup> |
| 2011               | 12.30          | 9.17 <sup>(6)</sup>       | 2011        | 11.42          | 7.74 <sup>(6)</sup> |
| 2012               | 15.09          | 9.77 <sup>(7)</sup>       | 2012        | 10.44          | 8.34 <sup>(7)</sup> |
| 2013               | 14.46          | 10.37 <sup>(8)</sup>      | 2013        | 10.43          | 8.94 <sup>(8)</sup> |
| 2014               | 14.68          | 10.82                     | 2014        | 10.62          | 9.69                |
| 2015               | 15.19          | 12.12/9.50 <sup>(9)</sup> | 2015        | 10.33          | 10.33               |

| TIAA        |                |                        | KP&F Uniform Rate |                |             |
|-------------|----------------|------------------------|-------------------|----------------|-------------|
| Fiscal Year | Actuarial Rate | Actual Rate            | Fiscal Year       | Actuarial Rate | Actual Rate |
| 1997        | 1.89%          | 1.89%                  | 2006              | 12.39%         | 12.39%      |
| 1998        | 1.66           | 1.66                   | 2007              | 13.32          | 13.32       |
| 1999        | 1.93           | 1.93                   | 2008              | 13.88          | 13.88       |
| 2000        | 1.82           | 1.82                   | 2009              | 13.51          | 13.51       |
| 2001        | 1.21           | 1.21 <sup>(2)</sup>    | 2010              | 12.86          | 12.86       |
| 2002        | 2.03           | 2.03                   | 2011              | 17.88          | 14.57       |
| 2003        | 2.27           | 2.27 <sup>(3)(4)</sup> | 2012              | 16.54          | 16.54       |
|             |                |                        | 2013              | 17.26          | 17.26       |
|             |                |                        | 2014              | 19.92          | 19.92       |
|             |                |                        | 2015              | 21.36          | 21.36       |

| Judges      |                |                      |
|-------------|----------------|----------------------|
| Fiscal Year | Actuarial Rate | Actual Rate          |
| 2006        | 22.37%         | 22.37%               |
| 2007        | 19.51          | 19.51                |
| 2008        | 22.78          | 22.78                |
| 2009        | 22.48          | 22.48 <sup>(5)</sup> |
| 2010        | 20.90          | 20.90 <sup>(6)</sup> |
| 2011        | 19.89          | 19.89 <sup>(6)</sup> |
| 2012        | 21.68          | 21.68 <sup>(7)</sup> |
| 2013        | 24.15          | 24.15 <sup>(8)</sup> |
| 2014        | 24.02          | 24.02                |
| 2015        | 22.99          | 22.99                |

1) Rates shown for KPERs State/School, TIAA and Judges represent the rates for the fiscal years ending June 30. KPERs Local and KP&F rates are reported for the calendar years. Rates include Group Life and Disability insurance when applicable.

2) Per 2000 and 2001 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2000, through December 31, 2001.

3) Per 2002 and 2003 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from July 1, 2002, through December 31, 2002, or from April 1, 2003, through June 30, 2004.

4) Per 2003 legislation, members of the TIAA group were made special members of KPERs and no longer have a separate valuation or contribution rate.

5) Per 2009 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from March 1, 2009, through November 30, 2009.

6) Per 2010 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2010, through June 30, 2010, and April 1, 2011, through June 30, 2011.

7) Per 2012 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2012, through June 30, 2012.

8) Per 2013 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2013, through June 30, 2013.

9) Due to budget constraints, the Governor used the allotment procedure and reduced the State/School KPERs employer combined contribution rate to 9.5% for the second half of the 2015 fiscal year.







# ACTUARIAL CERTIFICATION LETTER—DEATH AND DISABILITY PLAN



121 Middle Street, Suite 401  
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USA

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Fax +1 207 772 7512

June 24, 2015

Board of Trustees  
Kansas Public Employees Retirement System  
611 S. Kansas Ave., Suite 100  
Topeka, KS 66603

Dear Members of the Board:

In accordance with your request, we have performed an actuarial valuation of KPERs Death and Disability Program as of June 30, 2014, for determining contributions beginning July 1, 2014. The major findings of the valuation are contained in this report. This report reflects the benefit provisions and contribution rates in effect as of June 30, 2014.

In preparing this report we relied, without audit, on information (some oral and some in writing) supplied by the System's staff. This information includes, but is not limited to, statutory provisions, employee data and financial information. In our examination of these data, we have found them to be reasonably consistent and comparable with data used for other purposes. Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Actuarial Standards of

Practice promulgated by the Actuarial Standards Board and the applicable Guides to Professional Conduct, amplifying Opinions, and supporting Recommendations of the American Academy of Actuaries.

We further certify that all costs, liabilities, rates of interest and other factors used or provided in this report have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the System and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the System.

Nevertheless, the emerging costs will vary from those presented in this report to the extent actual experience differs from that projected by the actuarial assumptions. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by 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. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of analyzing the sufficiency of the statutory contribution rate. Actuarial computations under GASB Statement No. 43, Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans, are for purposes of fulfilling financial accounting requirements. The computations prepared for these two purposes may differ as disclosed in our report. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System's funding requirements and goals, and of GASB Statement 43. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work product was prepared exclusively for KPERS for a specific and limited purpose. It is a complex, technical analysis that assumes a high level of knowledge concerning KPERS operations, and uses KPERS data, which Milliman has not audited. It is not for the use or benefit of any third party for any purpose. Any third party recipient of Milliman's work product who desires professional guidance should not rely upon Milliman's work product, but should engage qualified professionals for advice appropriate to its own specific needs.

We respectfully submit the following report, and we look forward to discussing it with you.

I, Daniel D. Skwire, F.S.A., am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Allan L. Bittner, F.S.A., am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I, Tasha S. Khan, F.S.A., am a consulting actuary for Milliman, Inc. I am a member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Milliman, Inc.

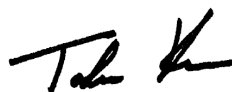
Sincerely,



Daniel D. Skwire, F.S.A.  
Consulting Actuary



Allan L. Bittner, F.S.A.  
Consulting Actuary



Tasha S. Khan, F.S.A.  
Consulting Actuary



## INTRODUCTION AND EXECUTIVE SUMMARY

This report contains the June 30, 2014, actuarial valuation for the KPERS Death and Disability Program. This program provides two primary benefits to active members:

1. Group life insurance equal to 150 percent of annual compensation, which is provided through an insurance contract with Minnesota Life.
2. Self-insured long term disability (LTD) benefits equal to 60 percent (for claims incurred prior to 1/1/2006, 66 2/3 percent) of annual compensation, offset by other benefits. Members receiving LTD benefits also receive service credit toward their retirement benefits under KPERS (which does not affect calculations for the Death and Disability Program) and have their group life insurance coverage continued under the waiver of premium provision. For those employees covered under the waiver of premium provision, the group life insurance benefit is increased annually for inflation, at a rate equal to the consumer price index less one percent, beginning five years following the date of disability.

The scope of the annual actuarial valuation, on both the GASB 43 and illustrative historical basis, includes the LTD and waiver benefits described in Item 2 above. They do not include the fully-insured group life insurance benefit, which is provided only during employment and is therefore not classified as an other post-employment benefit (OPEB) under GASB 43.

The key results from each section of this report are summarized below.

### ACTUARIAL VALUATION UNDER GASB 43

- GASB Statement 43 contains requirements for the valuation of OPEBs by state and local government entities. These requirements, which are analogous to pension accounting practices, attribute the cost of OPEB to the time during which the employee is actively working for the employer.
- Table 1.1 summarizes the calculation of the actuarial liability for active and disabled members. This liability includes the cost of projected LTD benefits, projected waiver benefits, and projected administrative expenses:

TABLE 1.1 KPERS DEATH AND DISABILITY PROGRAM  
Actuarial Liability at 6/30/2014

|                                | Actives             | Disabled             | Total                |
|--------------------------------|---------------------|----------------------|----------------------|
| PV of Total Projected Benefits | \$345,265,520       | \$158,408,880        | \$503,674,400        |
| PV of Future Normal Cost       | <u>245,862,828</u>  | <u>0</u>             | <u>245,862,828</u>   |
| Actuarial Liability            | <u>\$99,402,693</u> | <u>\$158,408,880</u> | <u>\$257,811,573</u> |

NOTE: Totals may not match due to rounding.

- Beginning with the 6/30/2014 valuation, the interest rate used to discount expected future benefit payments has been reduced from 4.5 percent to 4.0 percent. This change reflects expected future investment earnings in the current interest rate environment, given that the plan's assets are currently invested in cash and short-term assets. This updated assumption is also more in-line with the rates used by large disability insurers.
- As of June 30, 2014, the KPERS Death and Disability Fund has an unfunded actuarial liability of \$218,012,294. KPERS has elected to amortize this unfunded actuarial liability over 15 years as a level percent of pay, assuming a 4 percent annual payroll increase.
- The annual required contribution (ARC) for the KPERS Death and Disability Program equals the current year normal cost plus the amortization of the unfunded actuarial liability, all adjusted for interest to mid-year. The ARC for 2014-2015 is \$39,550,833, representing 0.57 percent of estimated annual covered compensation.

### HISTORICAL ANALYSIS

- The historical analysis shows a decreasing pattern in LTD claims and LTD claim payments over the past eight years. Waiver death benefits in 2012-2013 and 2013-2014 are consistent with historical patterns, though showing a modestly decreasing trend. These trends may be driven by lower claim incidence, as well as an increasing focus on managing LTD claims and assisting claimants in rehabilitation and return to work. They may also be driven by the gradual impact on overall experience of the lower benefit percentage on new claims incurred 1/1/2006 and later. Generally, however, we expect to see a modestly increasing trend in LTD and waiver benefits due to the aging of the population and the increasing salaries of active members.
- Under the old valuation basis (4.5 percent interest), the total disabled life liability decreased from \$162.0 million to \$154.2 million from 6/30/2012 to 6/30/2013, and from \$154.2 million to \$147.7 million from 6/30/2013 to 6/30/2014, due primarily to a reduction in the number of open LTD claims. When the 6/30/2014 liabilities were recomputed using the new basis, the total disabled life liability decreased only to \$151.4 million.
- Liability runoff tests performed on the illustrative liability balances for LTD and Waiver claims indicate that the 6/30/2013 balances were sufficient to fund the actual and projected future costs that emerged during the 2013-2014 fiscal year with respect to members disabled as of 6/30/2013.

**PROJECTED CASHFLOWS**

Table 1.2 contains the projected cashflows for the KPERS Death and Disability Fund for the next five years:

**TABLE 1.2 FIVE-YEAR CASHFLOW PROJECTION**

*Expected Benefits and Expenses v. Expected Contributions (millions)  
Excludes Group Life Insurance for Active Members*

| Plan Year | Projected Benefits and Expenses | Projected Contributions |
|-----------|---------------------------------|-------------------------|
| 2014-2015 | \$30.1                          | \$42.0                  |
| 2015-2016 | \$31.4                          | \$43.2                  |
| 2016-2017 | \$32.9                          | \$44.5                  |
| 2017-2018 | \$34.0                          | \$45.9                  |
| 2018-2019 | \$35.2                          | \$47.2                  |

Table 1.2 indicates that the projected contributions are expected to exceed the projected benefits and expenses for each of the next five years, according to the assumptions used for the actuarial valuation, and assuming that the current contribution rate of 0.85 percent (which includes approximately 0.25 percent of payroll for group life insurance) remains unchanged. This pattern would result in an increase in plan assets over the 5-year time horizon. Any future periodic contribution moratoriums implemented by the Legislature will have the impact of spending down any increase in the plan's assets. The current contribution rate of 0.85 percent represents a temporary reduction of 0.15 percent to the statutory contribution rate of 1.0 percent. This reduced rate of 0.85 percent is effective through 6/30/2015. Beginning 7/1/2015 we understand that the statutory contribution rate will revert to 1.0 percent for the first three quarters of fiscal years 2016 and 2017, with a moratorium in the last quarter of each year.

The cashflow projections include self-insured benefits only. They do not include the cost of insurance premiums for the fully-insured group life benefit or the projected contributions intended to cover those premiums. Also, the projections are on a "best-estimate" basis consistent with the liability calculations, which means they do not include an explicit margin. To the extent that KPERS requires a more conservative benefit projection for the purpose of determining funding contributions, it may wish to consider adding a margin of 5-10 percent to the benefits and expenses projected.

**GASB 43**

The Governmental Accounting Standards Board (GASB) issued Statement No. 43, Financial Reporting For Postemployment Benefit Plans Other Than Pension Plans, in order to establish uniform standards of financial reporting by state and local governmental entities for other postemployment benefit plans (OPEB plans). The term "other postemployment benefits" (OPEB) refers to postemployment benefits other than pension benefits and includes (a) postemployment healthcare benefits and (b) other types of postemployment benefits like life insurance, disability

and long term care, if provided separately from a pension plan.

The basis for GASB 43 is to attribute the cost of postemployment benefits to the time during which the employee is actively working for the employer. OPEB arises from an exchange of salaries and benefits for employee services and it is part of the compensation that employers offer for services received.

GASB Statement No. 43 establishes standards for measurement, recognition and display of the assets, liabilities and where applicable net assets and changes in net assets of such funds. In addition, the statement requires two schedules and accompanying notes disclosing information relative to the funded status of the Plan and employer contributions to the Plan.

- The Schedule of Funding Progress provides historical information about the funded status of the plan and the progress being made in accumulating sufficient assets to pay benefits when due.
- The Schedule of Employer Contributions provides historical information about actual contributions made to the plan by participating employers in comparison to annual required contributions (ARC).

GASB 43 was first effective for the KPERS Death and Disability Program for the fiscal year ending June 30, 2007. This valuation addresses the ARC for the fiscal year ending June 30, 2015. Only the disability benefits and waiver of premium life insurance benefits provided by KPERS Death and Disability Program are subject to GASB 43. The group and optional life insurance programs for active members are not OPEBs under GASB 43.

A number of assumptions have been made in developing the liabilities reported in this report. These assumptions, as well as the actuarial methodology, are described in Appendix C of this report. The projections in this report are estimates, and as such, KPERS' actual liability will vary from these estimates. The projections and assumptions should be updated as actual costs under this program develop.

Beginning with the 6/30/2014 valuation, the interest rate used to discount expected future benefit payments has been reduced from 4.5 percent to 4.0 percent. This change reflects expected future investment earnings in the current interest rate environment, given that the plan's assets are currently invested in cash and short-term assets. This updated assumption is also more in-line with the rates used by large disability insurers.

**ACTUARIAL PRESENT VALUE OF TOTAL PROJECTED BENEFITS**

The actuarial present value of total projected benefits reflects all expected payments in the future discounted to the date of the valuation. The present value is an amount of money that, if it were set aside now and all assumptions met, would be exhausted with the ultimate payment to the last plan member's final expense.



TABLE 3.1 ACTUARIAL PRESENT VALUE OF TOTAL  
PROJECTED BENEFITS  
at 6/30/2014

|                         | Actives              | Disabled             | Total                |
|-------------------------|----------------------|----------------------|----------------------|
| Disability Income       | \$258,893,137        | \$126,395,095        | \$385,288,232        |
| Waiver of Premium       | 71,030,915           | 24,975,072           | 96,005,987           |
| Administrative Expenses | 15,341,468           | 7,038,713            | 22,380,181           |
| Total                   | <u>\$345,265,520</u> | <u>\$158,408,880</u> | <u>\$503,674,400</u> |

NOTE: Totals may not match due to rounding.

The Entry Age Normal Actuarial Cost Method was used to allocate the cost of benefits to years of active service. The objective under this method is to expense each participant's benefit as a level percent of pay over their active working lifetime. At the time the funding method is introduced, there will be a liability which represents the contributions which would have been accumulated if this method of funding had always been used (called the "Actuarial Liability"). The difference between this actuarial liability and the assets (if any) is the unfunded actuarial liability, which is typically amortized over a period of years. The

maximum permissible years under GASB 43 is 30. KPERS has chosen to amortize the unfunded actuarial liability over 15 years, as a level percent of pay.

TABLE 3.2 ACTUARIAL LIABILITY  
at 6/30/2014

|   | Actives             | Disabled             | Total                |
|---|---------------------|----------------------|----------------------|
| Present Value of Total Projected Benefits | \$345,265,520       | \$158,408,880        | \$503,674,400        |
| Present Value of Future Normal Cost       | <u>245,862,828</u>  | <u>0</u>             | <u>245,862,828</u>   |
| Actuarial Liability                       | <u>\$99,402,693</u> | <u>\$158,408,880</u> | <u>\$257,811,573</u> |

NOTE: Totals may not match due to rounding.

#### ANNUAL REQUIRED CONTRIBUTION (ARC)

GASB 43 defines the Annual Required Contribution (ARC) as the employer's normal cost plus amortization of any unfunded actuarial liability over a period not to exceed 30 years. KPERS has chosen to amortize the unfunded actuarial liability over 15 years as a level percentage of payroll.

### ANNUAL REQUIRED CONTRIBUTION FOR FISCAL YEAR ENDING JUNE 30, 2015

#### A. Employer Normal Costs

|  |                |
|--|----------------|
| (1) Normal Cost as of June 30, 2014            | \$ 24,248,630  |
| (2) Assumed Interest (Mid Year Timing Assumed) | <u>480,217</u> |
| (3) Normal Cost for FY 2015                    |                |
| [(1) + (2)]                                    | \$ 24,728,847  |

#### B. Determination of Current Year Amortization Payment

|  |                |
|--|----------------|
| (1) Unfunded Actuarial Liability (see Table 3.3 Item II) | \$ 218,012,294 |
| (2) Amortization Period                                  | 15 years       |
| (3) Amortization Factor                                  | 15.0000        |
| (4) Amortization Amount as of June 30, 2014              |                |
| [(1) / (3)]  | 14,534,153     |
| (5) Assumed Interest (Mid Year Timing Assumed)           | <u>287,833</u> |
| (6) Amortization Amount for FY 2015                      |                |
| [(4) + (5)]  | \$ 14,821,986  |

#### C. Determination of Annual Required Contribution

|  |                   |
|--|-------------------|
| (1) Normal Cost for Benefits Attributable to Service in the Current Year (A.3) | \$ 24,728,847     |
| (2) Amortization of Unfunded Actuarial Liability (B.6)                         | <u>14,821,986</u> |
| (3) Annual Required Contribution (ARC)   |                   |
| [(1) + (2)]  | \$ 39,550,833     |

#### D. Annual Required Contribution

|   |               |
|---|---------------|
| (1) Annual Required Contribution              | \$ 39,550,833 |
| (2) Estimated Annual Compensation for FY 2015 | 6,993,411,501 |
| (3) ARC as a Percentage of Payroll            | 0.57%         |

The amortization of the Unfunded Actuarial Liability is calculated assuming amortization as a level percent of payroll over 15 years. Payroll is assumed to increase 4 percent per year.

Changes in the UAAL occur for various reasons. The net decrease in the UAAL from July 1, 2012, to July 1, 2014, was \$31.5 million. The components of this net change are shown in the table below (in millions):

|   |                 |
|---|-----------------|
| <b>Unfunded Actuarial Accrued Liability, July 1, 2012</b>       | <b>\$ 249.5</b> |
| • Impact of new claim experience different from expected        | (29.2)          |
| • Impact of terminated claim experience different from expected | (6.6)           |
| • Impact of change in assumptions*                              | 4.6             |
| • Impact of new entrants (active)                               | 4.1             |
| • Other liability experience and asset experience               | (4.4)           |
| Unfunded Actuarial Accrued Liability, July 1, 2014              | \$ 218.0        |

\*Beginning with the 6/30/2014 valuation, the interest rate used to discount future benefit payments has been reduced from 4.5% to 4.0%.

### SHORT TERM SOLVENCY TEST-DEATH AND DISABILITY PLAN

*Last Eight Fiscal Years*

|                         | Disabled Employer<br>Financed Portion (A) | Active Member<br>Employer Financed<br>Portion (B) | Actuarial Value<br>of Assets | Portion of Accrued<br>Liabilities Covered<br>by Assets |
|-------------------------|---|---|------------------------------|--|
| 06/30/06                | \$239,753,827                             | \$114,396,152                                     | \$18,723,957                 | 5.3%   |
| 06/30/07                | 237,913,406                               | 117,815,215                                       | 25,567,653                   | 7.2  |
| 06/30/08 <sup>(1)</sup> | 231,282,196                               | 123,777,984                                       | 38,570,957                   | 10.9   |
| 06/30/10                | 188,151,374                               | 95,606,171  | 12,750,759                   | 4.5  |
| 06/30/12                | 169,561,173                               | 99,035,550  | 19,068,466                   | 7.1  |
| 06/30/14                | 158,408,880                               | 99,402,693  | 39,799,279                   | 15.4   |

<sup>1)</sup> Starting June 30, 2008, the KPERS Death and Disability Benefits Program valuation will be performed biennially.

A short term solvency test, which is one means of determining a system's progress under its funding program, compares the plan's present assets with member contributions on deposit, (B) the liability for future benefits to present disabled lives, and (B) the actuarial liability for service already rendered by active members. The Death and Disability Plan requires no member contributions, it is funded by employer contributions.



## SUMMARY OF PLAN PROVISIONS

The KPERS Death and Disability Plan is a cost-sharing multiple employer plan that provides long term disability (LTD) and life insurance benefits to eligible employees. Eligible employees consist of all individuals who are:

1. Currently active members of KPERS;
2. Employees of an educational institution under the Kansas Board of Regents as defined in K.S.A. 74-4925;
3. Elected officials.

The plan provides a group life insurance benefit for active members through a fully-insured program with Minnesota Life Insurance Company. Because this benefit is fully-insured, it is not included in the scope of this actuarial valuation. The plan also provides a self-funded LTD benefit and a self-funded life insurance benefit for disabled members (referred to as "group life waiver of premium"). These items are considered "Other Post-Employment Benefits" (OPEB) under GASB accounting rules, and they are included in this actuarial valuation.

The key provisions of the LTD benefit include the following:

- **Definition of Disability:** For the first 24 months following the end of the benefit waiting period, a member is totally disabled if the member is unable to perform the material and substantial duties of his or her regular occupation due to sickness or injury. Thereafter, the member is totally disabled if the member is unable to perform the material and substantial duties of any gainful occupation due to sickness or injury.
- **Benefit Waiting Period:** For approved claims, benefits begin on the later of (a) the date the member completes 180 continuous days of total disability; or (b) the date the member ceases to draw compensation from his or her employer.
- **Monthly Benefit:** The monthly benefit is 60 percent of the member's monthly rate of compensation, with a minimum of \$100 and a maximum of \$5,000. The monthly benefit is subject to reduction by deductible sources of income, which include Social Security primary disability or retirement benefits, worker's compensation benefits, other disability benefits from any other source by reason of employment, and earnings from any form of employment.
- **Maximum Benefit Period:** If the disability begins before age 60, benefits are payable while disability continues until the member's 65th birthday or retirement date, whichever first occurs. If the disability occurs at or after age 60, benefits are payable while disability continues, for a period of five years

or until the date of the member's retirement, whichever first occurs.

- **Limitation for Mental Illnesses and Substance Abuse:** Benefit payments for disabilities caused or contributed to by substance abuse or non-biologically-based mental illnesses are limited to the term of the disability or 24 months per lifetime, whichever is less.
- **There are no automatic cost-of-living increase provisions.** KPERS has the authority to implement an ad hoc cost-of-living increase.

The key provisions of the group life waiver of premium benefit include the following:

- **Benefit Amount:** Upon the death of a member who is receiving monthly disability benefits, the plan will pay a lump-sum benefit to eligible beneficiaries. The benefit amount will be 150 percent of the greater of (a) the member's annual rate of compensation at the time of disability, or (b) the member's previous 12 months of compensation at the time of the last date on payroll. If the member had been disabled for five or more years, the annual compensation or salary rate at the time of death will be indexed before the life insurance benefit is computed. The indexing is based on the consumer price index, less one percentage point.
- **Accelerated Death Benefit:** If a member is diagnosed as terminally ill with a life expectancy of 12 months or less, he or she may be eligible to receive up to 100 percent of the death benefit rather than having the benefit paid to the beneficiary.
- **Conversion Right:** If a member retires or disability benefits end, he or she may convert the group life insurance coverage to an individual life insurance policy.

## ACTUARIAL METHODS AND ASSUMPTIONS

### ACTUARIAL COST METHOD

The actuarial cost method determines, in a systematic way, the incidence of employer contributions required to provide plan benefits. It also determines how actuarial gains and losses are recognized in Plan costs. These gains and losses result from the difference between the actual experience under the plan and the experience predicted by the actuarial assumptions.

The cost of the Plan is derived by making certain specific assumptions as to rates of interest, disability, mortality, turnover, etc. which are assumed to hold for many years into the future. Since actual experience may differ somewhat from the long term



assumptions, the costs determined by the valuation must be regarded as estimates of the true costs of the Plan.

Actuarial liabilities and comparative costs shown in this Report were computed using the Entry Age Normal (EAN) Actuarial Cost Method, which consists of the following cost components:

Under the EAN cost method, the actuarial present value of each member's projected benefits is allocated on a level basis over the member's compensation between the entry age of the member and the assumed exit ages. The portion of the actuarial present value allocated to the valuation year is called the normal cost. The actuarial present value of benefits allocated to prior years of service is called the actuarial liability. The unfunded actuarial liability represents the difference between the actuarial liability and the actuarial value of assets as of the valuation date. The unfunded actuarial liability is calculated each year and reflects experience gains/losses.

The Unfunded Actuarial Liability (UAL) is the difference between the Actuarial Liability and the Valuation Assets. KPERS has chosen to amortize the UAL over 15 years as a level percentage of payroll.

It should be noted that GASB 43 allows a variety of cost methods to be used. This method was selected because it is consistent with the KPERS retirement system funding and because it tends to produce stable costs. Other methods used do not change the ultimate liability, but do allocate it differently between what has been earned in the past and what will be earned in the future. If a different method was used, the normal cost and unfunded actuarial liability would change. Please note that the net effect of the change may result in an increase or decrease in the annual required contribution (ARC). If desired, we can provide more details.

#### **ASSET VALUATION METHOD**

Assets are valued at market value.



## ACTUARIAL ASSUMPTIONS

**Rate of Investment Return** GASB 43: 4.0% per annum, net of expenses

**Implicit Inflation Rate** 3.00%

### Mortality Rates

#### Post-retirement

#### Sample Rates

| Age | School  |         | State   |         | Local   |         |
|-----|---------|---------|---------|---------|---------|---------|
|     | Male    | Female  | Male    | Female  | Male    | Female  |
| 50  | 0.513%  | 0.183%  | 0.547%  | 0.218%  | 0.587%  | 0.204%  |
| 55  | 0.549%  | 0.226%  | 0.625%  | 0.328%  | 0.670%  | 0.278%  |
| 60  | 0.662%  | 0.384%  | 0.962%  | 0.577%  | 1.031%  | 0.481%  |
| 65  | 1.051%  | 0.664%  | 1.597%  | 0.964%  | 1.712%  | 0.817%  |
| 70  | 1.747%  | 1.074%  | 2.646%  | 1.557%  | 2.837%  | 1.318%  |
| 75  | 2.917%  | 1.792%  | 4.550%  | 2.614%  | 4.878%  | 2.215%  |
| 80  | 5.278%  | 3.643%  | 7.037%  | 4.567%  | 7.545%  | 4.171%  |
| 85  | 9.331%  | 6.751%  | 11.292% | 7.977%  | 12.108% | 7.508%  |
| 90  | 15.661% | 11.589% | 17.978% | 13.563% | 19.278% | 12.869% |
| 95  | 24.301% | 18.407% | 24.888% | 20.034% | 26.687% | 19.742% |
| 100 | 32.791% | 24.186% | 30.850% | 24.459% | 33.080% | 24.990% |

#### Pre-retirement

School Males: 70% of RP-2000 M Employees -2

School Females: 50% of RP-2000 F Employees -2

State Males: 70% of RP-2000 M Employees +2

State Females: 50% of RP-2000 F Employees +0

Local Males: 90% of RP-2000 M Employees +2

Local Females: 90% of RP-2000 F Employees -1

Generational mortality improvements were projected for future years using Scale AA.

#### Disabled Life Mortality

RP-2000 Disabled Life Table with same age adjustments as used for Retiree Mortality.

Generational mortality improvements were projected for future years using Scale AA.

#### Rates of Salary Increase

| Years of Service | Rate of Increase* |        |        |
|------------------|-------------------|--------|--------|
|                  | State             | School | Local  |
| 1                | 10.50%            | 12.00% | 10.50% |
| 5                | 5.60%             | 6.55%  | 6.20%  |
| 10               | 4.90%             | 5.10%  | 5.20%  |
| 15               | 4.40%             | 4.60%  | 4.80%  |
| 20               | 4.10%             | 4.10%  | 4.60%  |
| 25               | 4.00%             | 4.00%  | 4.10%  |
| 30               | 4.00%             | 4.00%  | 4.00%  |

\*Includes general wage increase assumption of 4.0% (composed of 3.0% inflation and 1.0% productivity)

**Rates of Termination**

| Duration | School |        | State  |        | Local  |        |
|----------|--------|--------|--------|--------|--------|--------|
|          | Male   | Female | Male   | Female | Male   | Female |
| 0        | 21.00% | 23.00% | 17.00% | 19.00% | 20.00% | 23.00% |
| 1        | 18.00% | 18.00% | 14.50% | 15.00% | 16.00% | 20.00% |
| 2        | 14.00% | 13.00% | 12.00% | 11.00% | 13.20% | 17.00% |
| 3        | 10.00% | 11.00% | 10.00% | 10.00% | 11.00% | 14.00% |
| 4        | 8.00%  | 9.00%  | 8.00%  | 9.00%  | 9.60%  | 11.50% |
| 5        | 6.50%  | 7.25%  | 7.00%  | 8.00%  | 8.30%  | 9.00%  |
| 6        | 5.50%  | 6.25%  | 6.00%  | 7.00%  | 7.10%  | 7.50%  |
| 7        | 5.00%  | 5.50%  | 5.20%  | 6.00%  | 6.00%  | 6.50%  |
| 8        | 4.50%  | 4.90%  | 4.60%  | 5.00%  | 5.00%  | 5.75%  |
| 9        | 4.00%  | 4.30%  | 4.10%  | 4.60%  | 4.40%  | 5.00%  |
| 10       | 3.60%  | 3.90%  | 3.90%  | 4.30%  | 3.80%  | 4.25%  |
| 11       | 3.20%  | 3.50%  | 3.70%  | 4.00%  | 3.50%  | 3.75%  |
| 12       | 2.90%  | 3.10%  | 3.50%  | 3.70%  | 3.30%  | 3.40%  |
| 13       | 2.60%  | 2.80%  | 3.30%  | 3.50%  | 3.10%  | 3.20%  |
| 14       | 2.40%  | 2.50%  | 3.10%  | 3.30%  | 2.90%  | 3.00%  |
| 15       | 2.20%  | 2.30%  | 2.90%  | 3.10%  | 2.70%  | 2.80%  |
| 16       | 2.00%  | 2.10%  | 2.70%  | 2.90%  | 2.50%  | 2.60%  |
| 17       | 1.80%  | 1.90%  | 2.50%  | 2.70%  | 2.30%  | 2.40%  |
| 18       | 1.60%  | 1.70%  | 2.30%  | 2.50%  | 2.10%  | 2.20%  |
| 19       | 1.50%  | 1.50%  | 2.10%  | 2.30%  | 1.90%  | 2.00%  |
| 20       | 1.40%  | 1.30%  | 1.90%  | 2.10%  | 1.80%  | 1.80%  |
| 21       | 1.30%  | 1.20%  | 1.70%  | 1.90%  | 1.70%  | 1.60%  |
| 22       | 1.20%  | 1.10%  | 1.50%  | 1.70%  | 1.60%  | 1.40%  |
| 23       | 1.10%  | 1.00%  | 1.30%  | 1.50%  | 1.50%  | 1.20%  |
| 24       | 1.00%  | 0.90%  | 1.10%  | 1.40%  | 1.40%  | 1.00%  |
| 25       | 0.90%  | 0.80%  | 0.90%  | 1.30%  | 1.30%  | 0.90%  |
| 26       | 0.80%  | 0.70%  | 0.70%  | 1.20%  | 1.20%  | 0.70%  |
| 27       | 0.70%  | 0.60%  | 0.60%  | 1.10%  | 1.10%  | 0.60%  |
| 28       | 0.60%  | 0.50%  | 0.50%  | 1.00%  | 1.00%  | 0.50%  |
| 29       | 0.50%  | 0.50%  | 0.50%  | 0.50%  | 0.90%  | 0.50%  |
| 30       | 0.50%  | 0.50%  | 0.50%  | 0.50%  | 0.80%  | 0.50%  |
| 31+      | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.00%  | 0.00%  |



### Retirement Rates School

| Rule of 85 |                            |                                  |                         |      |                          |      |  |
|------------|----------------------------|----------------------------------|-------------------------|------|--------------------------|------|--|
| Age        | 1st Year<br>With 85 Points | After 1st Year<br>With 85 Points | Early Retirement<br>Age | Rate | Normal Retirement<br>Age | Rate |  |
| 53         | 20%                        | 18%                              | 55                      | 5%   | 62                       | 30%  |  |
| 55         | 20%                        | 18%                              | 56                      | 5%   | 63                       | 25%  |  |
| 57         | 22%                        | 18%                              | 57                      | 8%   | 64                       | 35%  |  |
| 59         | 25%                        | 23%                              | 58                      | 8%   | 65                       | 35%  |  |
| 61         | 30%                        | 30%                              | 59                      | 12%  | 66-71                    | 25%  |  |
|            |                            |                                  | 60                      | 15%  | 72-74                    | 20%  |  |
|            |                            |                                  | 61                      | 22%  | 75                       | 100% |  |

### State

| Rule of 85 |                            |                                  |                         |      |                          |      |  |
|------------|----------------------------|----------------------------------|-------------------------|------|--------------------------|------|--|
| Age        | 1st Year<br>With 85 Points | After 1st Year<br>With 85 Points | Early Retirement<br>Age | Rate | Normal Retirement<br>Age | Rate |  |
| 53         | 10%                        | 15%                              | 55                      | 5%   | 62                       | 30%  |  |
| 55         | 15%                        | 15%                              | 56                      | 5%   | 63                       | 20%  |  |
| 57         | 15%                        | 12%                              | 57                      | 5%   | 64                       | 30%  |  |
| 59         | 15%                        | 12%                              | 58                      | 5%   | 65                       | 35%  |  |
| 61         | 30%                        | 25%                              | 59                      | 8%   | 66-67                    | 25%  |  |
|            |                            |                                  | 60                      | 8%   | 68-74                    | 20%  |  |
|            |                            |                                  | 61                      | 20%  | 75                       | 100% |  |

### Local

| Rule of 85 |                            |                                  |                         |      |                          |      |  |
|------------|----------------------------|----------------------------------|-------------------------|------|--------------------------|------|--|
| Age        | 1st Year<br>With 85 Points | After 1st Year<br>With 85 Points | Early Retirement<br>Age | Rate | Normal Retirement<br>Age | Rate |  |
| 53         | 11%                        | 10%                              | 55                      | 5%   | 62                       | 25%  |  |
| 55         | 13%                        | 10%                              | 56                      | 5%   | 63                       | 20%  |  |
| 57         | 13%                        | 10%                              | 57                      | 5%   | 64                       | 30%  |  |
| 59         | 15%                        | 12%                              | 58                      | 5%   | 65                       | 35%  |  |
| 61         | 25%                        | 25%                              | 59                      | 5%   | 66                       | 25%  |  |
|            |                            |                                  | 60                      | 5%   | 67-74                    | 20%  |  |
|            |                            |                                  | 61                      | 15%  | 75                       | 100% |  |

- Inactive vested members – Age 62.
- For correctional employees with an age 55 normal retirement date -

| Age | Rate |
|-----|------|
| 55  | 10%  |
| 58  | 10%  |
| 60  | 10%  |
| 62  | 45%  |
| 65  | 100% |

- For correctional employees with an age 60 normal retirement date – Age 62.
- For TIAA employees – Age 66.

**LTD Claim Incidence Rates**

| Attained Age | Male    |         |         | Female  |         |         |
|--------------|---------|---------|---------|---------|---------|---------|
|              | Local   | School  | State   | Local   | School  | State   |
| 25           | 0.00044 | 0.00032 | 0.00078 | 0.00065 | 0.00046 | 0.00115 |
| 30           | 0.00046 | 0.00032 | 0.00081 | 0.00060 | 0.00043 | 0.00107 |
| 35           | 0.00059 | 0.00042 | 0.00104 | 0.00098 | 0.00070 | 0.00173 |
| 40           | 0.00087 | 0.00062 | 0.00153 | 0.00139 | 0.00099 | 0.00246 |
| 45           | 0.00151 | 0.00107 | 0.00266 | 0.00207 | 0.00148 | 0.00367 |
| 50           | 0.00244 | 0.00174 | 0.00432 | 0.00289 | 0.00206 | 0.00511 |
| 55           | 0.00409 | 0.00291 | 0.00723 | 0.00399 | 0.00284 | 0.00704 |
| 60           | 0.00587 | 0.00418 | 0.01038 | 0.00475 | 0.00338 | 0.00840 |
| 65           | 0.00625 | 0.00445 | 0.01104 | 0.00416 | 0.00296 | 0.00735 |
| 70           | 0.00698 | 0.00497 | 0.01234 | 0.00383 | 0.00273 | 0.00678 |

**LTD Claim Termination Rates**

As % of 1987 Commissioners Group Disability Table (Based on Actual KPERS Experience)

| Age at Disability | Claim Duration (Months) |       |       |      |
|-------------------|-------------------------|-------|-------|------|
|                   | 1-12                    | 13-24 | 25-60 | 61+  |
| Under 30          | 55%                     | 75%   | 95%   | 145% |
| 30-39             | 55%                     | 75%   | 95%   | 145% |
| 40-49             | 55%                     | 75%   | 95%   | 145% |
| 50-59             | 95%                     | 135%  | 180%  | 350% |
| 60 and Over       | 350%                    | 350%  | 350%  | 350% |

All claim termination rates are assumed to be 350% of the table for attained ages 60 and older.

**Other LTD Assumptions**

- IBNR Reserve: 60% of expected claim cost for year
- Overpayment Recovery: 65% of overpayment balance
- Future Payroll Growth: 4.0% long-term growth for actuarial valuation. 3.0% near-term growth for cashflow projections.
- Projected Future Claim Cost as % of Payroll (used in cashflow projections): 0.35% in 2014-2015, which increases in future due to aging.
- Administrative Expenses: 4.65% of claims
- Estimated Offsets: Estimated approval rate of 55% to 75% for claims in first three years of disability that do not yet have offsets. Estimated offset amount of 60% of gross benefit.

**Waiver Claim Termination Rates**

As % of 1987 Commissioners Group Disability Table (Based on Actual KPERS Experience)

| Age at Disability | Claim Duration (Months) |       |       |      |
|-------------------|-------------------------|-------|-------|------|
|                   | 1-12                    | 13-24 | 25-60 | 61+  |
| Under 30          | 55%                     | 75%   | 95%   | 145% |
| 30-39             | 55%                     | 75%   | 95%   | 145% |
| 40-49             | 55%                     | 75%   | 95%   | 145% |
| 50-59             | 95%                     | 135%  | 180%  | 350% |
| 60 and Over       | 350%                    | 350%  | 350%  | 350% |

All claim termination rates are assumed to be 350% of the table for attained ages 60 and older.



|                                 |   |  |
|---------------------------------|---|--|
| <b>Other Waiver Assumptions</b> | Mortality:  | 80% of 2005 Society of Actuaries Group Life Waiver Mortality Table, first 5 years of claim. 100% thereafter.   |
|                                 | Benefit Indexing:   | Historical indexing is based on actual retirement plan calculations. Indexing for 2006 and later uses a rate of 2.0%, which is equivalent to a 3% annual assumed increase in the consumer price index, less 1.0% as specified by the plan. |
|                                 | Projected Future Claim Cost as % of Payroll (used in cashflow projections): | 0.09% in 2014-2015, which increases in future due to aging.  |
|                                 | IBNR:   | 12.5% of expected claim cost for year  |

## KPERS DEATH AND DISABILITY VALUATION

Experience Exhibits as of 6/30/2014

### Death Claims by Death Benefit Paid

| Death Benefit Paid | 2012-2013 |             | 2013-2014 |             |
|--------------------|-----------|-------------|-----------|-------------|
|                    | Count     | % of Claims | Count     | % of Claims |
| 0-9,999            | 0         | 0%          | 0         | 0%          |
| 10,000-19,999      | 14        | 13%         | 6         | 7%          |
| 20,000-29,999      | 7         | 6%          | 9         | 10%         |
| 30,000-39,999      | 19        | 17%         | 13        | 15%         |
| 40,000-49,999      | 24        | 22%         | 20        | 22%         |
| 50,000-59,999      | 12        | 11%         | 15        | 17%         |
| 60,000-69,999      | 11        | 10%         | 9         | 10%         |
| 70,000-79,999      | 11        | 10%         | 5         | 6%          |
| 80,000-89,999      | 4         | 4%          | 4         | 4%          |
| 90,000-99,999      | 1         | 1%          | 2         | 2%          |
| 100,000+           | 7         | 6%          | 6         | 7%          |
| Total              | 110       | 100%        | 89        | 100%        |

### Death Claims by Age at Death

| Age at Death | 2012-2013 |             | 2013-2014 |             |
|--------------|-----------|-------------|-----------|-------------|
|              | Count     | % of Claims | Count     | % of Claims |
| 20-29        | 1         | 1%          | 0         | 0%          |
| 30-39        | 7         | 6%          | 2         | 2%          |
| 40-49        | 13        | 12%         | 10        | 11%         |
| 50-59        | 43        | 39%         | 40        | 45%         |
| 60-64        | 32        | 29%         | 36        | 40%         |
| 65+          | 14        | 13%         | 1         | 1%          |
| Total        | 110       | 100%        | 89        | 100%        |

| Active LTD Claims by<br>Age at Disability | 2012-2013         |       | 2013-2014   |       |
|---|-------------------|-------|-------------|-------|
|   | Age at Disability | Count | % of Claims | Count |
| <20                                       | 1                 | 0%    | 1           | 0%    |
| 20-29                                     | 88                | 3%    | 87          | 3%    |
| 30-39                                     | 463               | 18%   | 449         | 18%   |
| 40-49                                     | 1017              | 39%   | 973         | 39%   |
| 50-59                                     | 917               | 35%   | 854         | 34%   |
| 60-64                                     | 136               | 5%    | 134         | 5%    |
| 65+                                       | 19                | 1%    | 23          | 1%    |
| Total                                     | 2641              | 100%  | 2521        | 100%  |

| Active LTD Claims by<br>Attained Age | 2012-2013    |       | 2013-2014   |       |
|--------------------------------------|--------------|-------|-------------|-------|
|                                      | Attained Age | Count | % of Claims | Count |
| <20                                  | 0            | 0%    | 0           | 0%    |
| 20-29                                | 9            | 0%    | 7           | 0%    |
| 30-39                                | 83           | 3%    | 86          | 3%    |
| 40-49                                | 401          | 15%   | 368         | 15%   |
| 50-59                                | 1354         | 51%   | 1251        | 50%   |
| 60-64                                | 731          | 28%   | 735         | 29%   |
| 65+                                  | 63           | 2%    | 74          | 3%    |
| Total                                | 2641         | 100%  | 2521        | 100%  |

| Active LTD Claims by<br>Net Benefit Amount | 2012-2013           |       | 2013-2014   |       |
|--|---------------------|-------|-------------|-------|
|  | Net Monthly Benefit | Count | % of Claims | Count |
| 0-499                                      | 1144                | 43%   | 1080        | 43%   |
| 500-999                                    | 895                 | 34%   | 851         | 34%   |
| 1,000-1,499                                | 372                 | 14%   | 348         | 14%   |
| 1,500-1,999                                | 138                 | 5%    | 143         | 6%    |
| 2,000-2,499                                | 49                  | 2%    | 53          | 2%    |
| 2,500-2,999                                | 29                  | 1%    | 32          | 1%    |
| 3,000-3,499                                | 9                   | 0%    | 11          | 0%    |
| 3,500-3,999                                | 3                   | 0%    | 2           | 0%    |
| 4,000-4,499                                | 1                   | 0%    | 1           | 0%    |
| 4,500-4,999                                | 1                   | 0%    | 0           | 0%    |
| 5,000+                                     | 0                   | 0%    | 0           | 0%    |
| Total                                      | 2641                | 100%  | 2521        | 100%  |

**Active LTD Claims by Diagnosis**

| Diagnosis                  | 2012-2013 |             | 2013-2014 |             |
|----------------------------|-----------|-------------|-----------|-------------|
|                            | Count     | % of Claims | Count     | % of Claims |
| Back/Neck                  | 430       | 16%         | 414       | 16%         |
| Cardiovascular             | 285       | 11%         | 268       | 11%         |
| Musculoskeletal            | 474       | 18%         | 463       | 18%         |
| Neurological               | 363       | 14%         | 352       | 14%         |
| Gastrointestinal           | 59        | 2%          | 52        | 2%          |
| Genitourinary              | 36        | 1%          | 37        | 1%          |
| Glandular                  | 81        | 3%          | 74        | 3%          |
| Respiratory                | 93        | 4%          | 82        | 3%          |
| Aids                       | 9         | 0%          | 8         | 0%          |
| Cancer                     | 134       | 5%          | 132       | 5%          |
| Eyes, Ears and Nose        | 51        | 2%          | 53        | 2%          |
| Complications of Pregnancy | 4         | 0%          | 5         | 0%          |
| Mental/Nervous             | 355       | 13%         | 342       | 14%         |
| Substance Abuse/Addiction  | 0         | 0%          | 0         | 0%          |
| Misc/Other                 | 267       | 10%         | 239       | 9%          |
| Total                      | 2641      | 100%        | 2521      | 100%        |

**New LTD Claims by Age at Disability**

| Age at Disability | 2012-2013 |             | 2013-2014 |             |
|-------------------|-----------|-------------|-----------|-------------|
|                   | Count     | % of Claims | Count     | % of Claims |
| <20               | 0         | 0%          | 0         | 0%          |
| 20-29             | 3         | 1%          | 4         | 2%          |
| 30-39             | 22        | 9%          | 23        | 10%         |
| 40-49             | 58        | 23%         | 63        | 27%         |
| 50-59             | 124       | 49%         | 103       | 44%         |
| 60-64             | 40        | 16%         | 32        | 14%         |
| 65+               | 5         | 2%          | 7         | 3%          |
| Total             | 252       | 100%        | 232       | 100%        |

**New LTD Claims by Attained Age**

| Attained Age | 2012-2013 |             | 2013-2014 |             |
|--------------|-----------|-------------|-----------|-------------|
|              | Count     | % of Claims | Count     | % of Claims |
| <20          | 0         | 0%          | 0         | 0%          |
| 20-29        | 3         | 1%          | 3         | 1%          |
| 30-39        | 16        | 6%          | 21        | 9%          |
| 40-49        | 52        | 21%         | 56        | 24%         |
| 50-59        | 127       | 50%         | 107       | 46%         |
| 60-64        | 43        | 17%         | 37        | 16%         |
| 65+          | 11        | 4%          | 8         | 3%          |
| Total        | 252       | 100%        | 232       | 100%        |



| New LTD Claims by<br>Net Benefit Amount | 2012-2013   |       | 2013-2014   |       |             |
|---|-------------|-------|-------------|-------|-------------|
|   | Net Benefit | Count | % of Claims | Count | % of Claims |
| 0-499                                   |             | 90    | 36%         | 70    | 30%         |
| 500-999                                 |             | 71    | 28%         | 62    | 27%         |
| 1,000-1,499                             |             | 47    | 19%         | 38    | 16%         |
| 1,500-1,999                             |             | 15    | 6%          | 29    | 13%         |
| 2,000-2,499                             |             | 10    | 4%          | 17    | 7%          |
| 2,500-2,999                             |             | 13    | 5%          | 12    | 5%          |
| 3,000-3,499                             |             | 3     | 1%          | 4     | 2%          |
| 3,500-3,999                             |             | 2     | 1%          | 0     | 0%          |
| 4,000-4,499                             |             | 0     | 0%          | 0     | 0%          |
| 4,500-4,999                             |             | 1     | 0%          | 0     | 0%          |
| 5,000+                                  |             | 0     | 0%          | 0     | 0%          |
| Total                                   |             | 252   | 100%        | 232   | 100%        |

| New LTD Claims by Diagnosis | 2012-2013 |       | 2013-2014   |       |
|-----------------------------|-----------|-------|-------------|-------|
|                             | Diagnosis | Count | % of Claims | Count |
| Back/Neck                   | 32        | 13%   | 35          | 15%   |
| Cardiovascular              | 30        | 12%   | 23          | 10%   |
| Musculoskeletal             | 33        | 13%   | 48          | 21%   |
| Neurological                | 31        | 12%   | 30          | 13%   |
| Gastrointestinal            | 14        | 6%    | 5           | 2%    |
| Genitourinary               | 8         | 3%    | 3           | 1%    |
| Glandular                   | 3         | 1%    | 3           | 1%    |
| Respiratory                 | 5         | 2%    | 7           | 3%    |
| Aids                        | 1         | 0%    | 2           | 1%    |
| Cancer                      | 41        | 16%   | 28          | 12%   |
| Eyes, Ears and Nose         | 4         | 2%    | 9           | 4%    |
| Complications of Pregnancy  | 0         | 0%    | 0           | 0%    |
| Mental/Nervous              | 25        | 10%   | 22          | 9%    |
| Substance Abuse/Addiction   | 0         | 0%    | 0           | 0%    |
| Misc/Other                  | 25        | 10%   | 17          | 7%    |
| Total                       | 252       | 100%  | 232         | 100%  |

| Terminated LTD Claims<br>by Term Reason | 2012-2013   |       | 2013-2014   |       |
|---|-------------|-------|-------------|-------|
|   | Term Reason | Count | % of Claims | Count |
| Death                                   | 119         | 26%   | 103         | 25%   |
| Recovery                                | 56          | 12%   | 90          | 22%   |
| Retirement                              | 230         | 50%   | 167         | 41%   |
| Expiry                                  | 53          | 12%   | 45          | 11%   |
| Total                                   | 458         | 100%  | 405         | 100%  |


**LTD Offset Approval Rates  
by Attained Age**

| Attained Age | 06/30/2013 | 06/30/2014 |
|--------------|------------|------------|
| 20-29        | 67%        | 71%        |
| 30-39        | 76%        | 76%        |
| 40-49        | 80%        | 80%        |
| 50-59        | 90%        | 90%        |
| 60-64        | 94%        | 95%        |
| 65+          | 95%        | 96%        |
| Total        | 89%        | 89%        |

**LTD Offset Approval Rates  
by Claim Duration**

| Duration of Claim | 06/30/2013 | 06/30/2014 |
|-------------------|------------|------------|
| 1                 | 73%        | 61%        |
| 2                 | 81%        | 76%        |
| 3                 | 88%        | 88%        |
| 4                 | 90%        | 92%        |
| 5                 | 97%        | 94%        |
| 6-10              | 94%        | 96%        |
| 11+               | 88%        | 89%        |
| Total             | 89%        | 89%        |

**Average LTD Offset by  
Attained Age**

| Attained Age | 06/30/2013 | 06/30/2014 |
|--------------|------------|------------|
| 20-29        | 1,017.47   | 1,271.52   |
| 30-39        | 957.17     | 1,033.87   |
| 40-49        | 986.27     | 1,046.05   |
| 50-59        | 1,031.43   | 1,042.19   |
| 60-64        | 1,034.98   | 1,032.42   |
| 65+          | 1,245.78   | 1,213.45   |
| Total        | 1,029.75   | 1,045.35   |

**Average LTD Offset by  
Claim Duration**

| Duration of Claim | 06/30/2013 | 06/30/2014 |
|-------------------|------------|------------|
| 1                 | 1,257.87   | 1,323.35   |
| 2                 | 1,214.80   | 1,213.51   |
| 3                 | 1,170.16   | 1,238.06   |
| 4                 | 1,158.16   | 1,172.89   |
| 5                 | 1,139.76   | 1,174.63   |
| 6-10              | 1,076.82   | 1,091.34   |
| 11+               | 840.66     | 862.85     |
| Total             | 1,029.75   | 1,045.35   |







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# **STATISTICAL** SECTION



## STATISTICAL HIGHLIGHTS OF THE SYSTEM'S FINANCIAL TRENDS

The Statistical Section presents several schedules that provide financial trend analysis of the Retirement System's overall financial health and additional analytical information on employers' membership data, retirement benefits and other post employment benefits (OPEB). The schedules beginning on this page through page 132 provide revenues, expenses and funding status information for the past ten fiscal years for KPERS and Death and Disability (OPEB) plans. On page 131 a schedule is presented that

allocates the total benefits and type of refunds that were paid. On pages 133 through 136 various schedules are presented to depict the level of monthly benefits by number of retirees, retirement type and options, and years of service. On pages 137 through 142, information is provided showing the top ten participating employers determined by number of covered active employees. The source of the information in these schedules is derived from the comprehensive annual financial reports, unless otherwise noted.

### REVENUES BY SOURCE

*Last Ten Fiscal Years*

| Fiscal Year | Contributions              |               |                               |                           | Misc      | Net Investment Income (KPERS) | Net Investment Income (OPEB) | Total           |
|-------------|----------------------------|---------------|-------------------------------|---------------------------|-----------|-------------------------------|------------------------------|-----------------|
|             | Member                     | Employer      | Optional Group Life Insurance | Employer Insurance (OPEB) |           |                               |                              |                 |
| 2006        | \$246,203,381              | \$298,711,909 | \$ —                          | \$53,319,639              | \$175,539 | \$1,354,021,324               | \$386,439                    | \$1,952,818,231 |
| 2007        | 256,995,275                | 339,509,022   | —                             | 59,308,991                | 228,986   | 2,161,413,409                 | 668,063                      | 2,818,123,746   |
| 2008        | 269,603,155                | 395,752,214   | —                             | 62,400,369                | 225,736   | (650,071,204)                 | 968,222                      | 78,878,492      |
| 2009        | 278,619,872                | 449,235,653   | —                             | 36,334,585 <sup>(1)</sup> | 154,113   | (2,592,555,321)               | 345,732                      | (1,827,865,367) |
| 2010        | 289,616,027                | 492,005,566   | —                             | 29,549,494 <sup>(2)</sup> | 101,899   | 1,485,935,124                 | 32,381                       | 2,297,240,491   |
| 2011        | 294,314,002                | 525,726,734   | —                             | 48,911,197 <sup>(2)</sup> | 190,770   | 2,499,472,278                 | 18,333                       | 3,368,633,314   |
| 2012        | 298,105,053                | 568,015,364   | —                             | 49,620,870 <sup>(3)</sup> | 129,622   | 89,045,782                    | 10,852                       | 1,004,927,543   |
| 2013        | 306,631,621                | 617,925,370   | —                             | 48,891,432 <sup>(4)</sup> | 537,741   | 1,747,230,627                 | 20,823                       | 2,721,237,614   |
| 2014        | 338,498,638                | 701,818,160   | —                             | 57,754,895                | 241,743   | 2,553,842,632                 | 13,992                       | 3,652,170,060   |
| 2015        | 382,057,886 <sup>(5)</sup> | 690,564,482   | 6,638,479                     | 59,634,639                | 1,076,946 | 561,194,353                   | 10,424                       | 1,701,177,209   |

1) Per 2009 legislation, employers were not required to remit the Group Life and Disability Insurance portion of required employer contributions.

2) Per 2010 legislation, employers were not required to remit the Group Life and Disability Insurance portion of required employer contributions from April 1, 2010, through June 30, 2010, and April 1, 2011, through June 30, 2011.

3) Per 2012 legislation, employers were not required to remit the Group Life and Disability Insurance portion of required employer contributions from April 1, 2012, through June 30, 2012.

4) Per 2013 legislation, employers were not required to remit the Group Life and Disability Insurance portion of required employer contributions from April 1, 2013, through June 30, 2013.

5) Before Fiscal Year 2015 member contributions included both KPERS member contributions and member paid premiums for Optional Group Life Insurance.

BENEFITS BY TYPE

Last Ten Fiscal Years

| Fiscal Year | Monthly Retirement Benefits | Retirement Dividend | Death Benefits | Refund of Contributions Separations | Refund of Contributions Deaths | Insurance Premiums (KPERs) | Disability Insurance Premiums (OPEB) |
|-------------|-----------------------------|---------------------|----------------|-------------------------------------|--------------------------------|----------------------------|--------------------------------------|
| 2006        | \$ 800,256,846              | \$ 5,721,885        | \$ 8,810,923   | \$ 40,628,580                       | \$ 6,197,596                   | \$ 5,973,688               | \$ 48,984,269                        |
| 2007        | 862,894,416                 | 5,284,613           | 9,153,582      | 40,632,701                          | 5,496,510                      | 6,382,962                  | 49,202,924                           |
| 2008        | 940,870,530                 | 4,834,127           | 8,388,935      | 43,197,593                          | 5,275,097                      | 6,824,361                  | 49,893,770                           |
| 2009        | 995,530,221                 | 4,409,393           | 9,237,740      | 38,156,001                          | 5,773,422                      | 6,946,461                  | 47,356,797                           |
| 2010        | 1,056,190,915               | 4,014,903           | 8,959,388      | 37,214,954                          | 6,147,736                      | 7,035,185                  | 43,746,954                           |
| 2011        | 1,143,594,256               | 3,615,016           | 9,614,688      | 43,579,892                          | 5,984,123                      | 6,752,185                  | 46,753,126                           |
| 2012        | 1,234,350,781               | 3,209,118           | 9,414,234      | 49,665,542                          | 6,231,284                      | 6,128,984                  | 49,040,446                           |
| 2013        | 1,286,133,859               | 2,852,658           | 9,458,321      | 48,265,870                          | 5,633,961                      | 6,058,253                  | 42,499,559                           |
| 2014        | 1,363,636,798               | 2,536,984           | 9,702,485      | 49,947,483                          | 7,023,286                      | 6,224,235                  | 42,641,395                           |
| 2015        | 1,447,659,817               | 2,238,261           | 10,019,588     | 57,187,901                          | 7,274,097                      | 6,492,432                  | 41,020,269                           |

EXPENSES BY TYPE

Last Ten Fiscal Years

| Fiscal Year | Benefits       | Refund of Contributions |             | Insurance Premiums (OGLI) | Administration (OGLI) <sup>1)</sup> | Administration (Retirement) | Disability Insurance Premiums (OPEB) | Administration (OPEB) <sup>2)</sup> | Total          |
|-------------|----------------|-------------------------|-------------|---------------------------|-------------------------------------|-----------------------------|--------------------------------------|-------------------------------------|----------------|
|             |                | Separations             | Death       |                           |                                     |                             |                                      |                                     |                |
| 2006        | \$ 814,789,655 | \$40,628,580            | \$6,197,596 | \$5,973,688               | \$ —                                | \$ 7,718,879                | \$ 48,984,269                        | \$ —                                | \$ 924,292,667 |
| 2007        | 877,332,611    | 40,632,701              | 5,496,510   | 6,382,962                 | —                                   | 8,552,925                   | 49,202,924                           | 340,619                             | 987,941,252    |
| 2008        | 954,093,592    | 43,197,593              | 5,275,097   | 6,824,361                 | —                                   | 9,253,050                   | 49,893,770                           | 350,076                             | 1,068,887,539  |
| 2009        | 1,009,177,354  | 38,156,001              | 5,773,422   | 6,946,461                 | —                                   | 11,085,498                  | 47,356,797                           | 361,887                             | 1,118,857,420  |
| 2010        | 1,069,165,206  | 37,214,954              | 6,147,736   | 7,035,185                 | —                                   | 10,158,398                  | 43,746,954                           | 375,792                             | 1,173,844,225  |
| 2011        | 1,156,823,960  | 43,579,892              | 5,984,123   | 6,752,185                 | —                                   | 9,261,260                   | 46,753,126                           | 363,357                             | 1,269,517,903  |
| 2012        | 1,246,974,132  | 49,665,542              | 6,231,284   | 6,128,984                 | —                                   | 9,620,933                   | 49,040,446                           | 307,177                             | 1,367,968,498  |
| 2013        | 1,298,444,838  | 48,265,870              | 5,633,961   | 6,058,253                 | —                                   | 10,426,813                  | 42,499,559                           | 431,084                             | 1,411,760,378  |
| 2014        | 1,375,876,267  | 49,947,483              | 7,023,286   | 6,224,235                 | —                                   | 9,703,808                   | 42,641,395                           | 381,764                             | 1,491,798,238  |
| 2015        | 1,459,917,666  | 57,187,901              | 7,274,097   | 6,492,432                 | 74,507                              | 10,789,271                  | 41,020,269                           | 402,212                             | 1,583,158,355  |

1) Administration expenses for the Optional Group Life Insurance Plan (OGLI) prior to FY 2015 are included in the administrative expenses of the Retirement System.  
 2) Administration expenses for the Group Death and Disability Plan prior to FY 2007 are included in the administrative expenses of the Retirement System.



## CHANGES IN NET POSITION

*Last Nine Fiscal Years<sup>(1)</sup>*

|  | 2015                   | 2014                    | 2013                    | 2012                    | 2011                    | 2010                    | 2009                     | 2008                     | 2007                    |
|--|------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|-------------------------|
| <b>Additions</b>   |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Contributions  |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Member Contributions   | \$ 388,696,365         | \$ 338,498,638          | \$ 306,631,621          | \$ 298,105,053          | \$ 294,314,002          | \$ 289,616,027          | \$ 278,619,872           | \$ 269,603,155           | \$ 256,995,275          |
| Employer Contributions                                       | 690,564,482            | 701,818,160             | 617,925,370             | 568,015,364             | 525,726,734             | 492,005,566             | 449,235,653              | 395,752,213              | 339,509,022             |
| <b>Total Contributions</b>                                   | <b>1,079,260,847</b>   | <b>1,040,316,798</b>    | <b>924,556,991</b>      | <b>866,120,417</b>      | <b>820,040,736</b>      | <b>781,621,593</b>      | <b>727,855,525</b>       | <b>665,355,368</b>       | <b>596,504,297</b>      |
| <b>Investments</b>   |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Net Appreciation in Fair                                     |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Value of Investments   | 263,094,676            | 2,267,287,461           | 1,490,141,704           | (132,729,256)           | 2,211,302,374           | 1,221,425,633           | (2,824,249,931)          | (1,012,601,549)          | 1,816,702,680           |
| Interest   | 132,688,575            | 104,382,643             | 100,530,311             | 103,584,321             | 158,120,734             | 160,050,212             | 152,897,354              | 211,727,774              | 195,092,153             |
| Dividends  | 140,607,740            | 165,226,153             | 153,201,135             | 110,902,858             | 123,098,602             | 105,808,081             | 91,464,527               | 137,983,566              | 136,434,906             |
| Real Estate Income,  |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Net of Operating Expenses                                    | 75,353,304             | 62,989,928              | 39,973,754              | 44,259,544              | 48,997,734              | 37,551,411              | 31,062,438               | 40,288,418               | 39,114,763              |
| Other Investment Income                                      | 10,573,421             | 0                       | 0                       | 436,311                 | 388,174                 | 216,499                 | 264,000                  | 264,000                  | 261,734                 |
|  | 622,317,716            | 2,599,886,185           | 1,783,846,904           | 126,453,778             | 2,541,907,618           | 1,525,051,836           | (2,548,561,612)          | (622,337,791)            | 2,187,606,236           |
| Less Investment Expense                                      | (65,240,875)           | (51,653,134)            | (42,584,786)            | (42,225,663)            | (47,586,288)            | (43,748,173)            | (23,376,342)             | (31,029,901)             | (30,249,368)            |
| <b>Net Investment Income</b>                                 | <b>557,076,841</b>     | <b>2,548,233,051</b>    | <b>1,741,262,118</b>    | <b>84,228,115</b>       | <b>2,494,321,330</b>    | <b>1,481,303,663</b>    | <b>(2,571,937,954)</b>   | <b>(653,367,692)</b>     | <b>2,157,356,868</b>    |
| From Securities Lending Activities                           |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Securities Lending Income                                    | 3,932,462              | 5,255,071               | 4,827,054               | 4,353,102               | 5,431,118               | 5,372,538               | (8,838,220)              | 95,645,344               | 125,998,402             |
| Securities Lending Expenses                                  |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Borrower Rebates   | 648,826                | 1,501,910               | 2,450,894               | 1,769,773               | 739,912                 | (48,804)                | (10,469,638)             | (89,471,546)             | (120,938,041)           |
| Management Fees  | (463,776)              | (1,147,400)             | (1,309,439)             | (1,305,208)             | (1,020,082)             | (692,273)               | (1,309,509)              | (2,870,760)              | (1,003,820)             |
| Total Securities Lending                                     |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Activities Expense   | 185,050                | 354,510                 | 1,141,455               | 464,565                 | (280,170)               | (741,077)               | (11,779,147)             | (92,342,306)             | (121,941,861)           |
| <b>Net Income from Security Lending Activities</b>           | <b>4,117,512</b>       | <b>5,609,581</b>        | <b>5,968,509</b>        | <b>4,817,667</b>        | <b>5,150,948</b>        | <b>4,631,461</b>        | <b>(20,617,367)</b>      | <b>3,303,038</b>         | <b>4,056,541</b>        |
| <b>Total Net Investment Income</b>                           | <b>561,194,353</b>     | <b>2,553,842,632</b>    | <b>1,747,230,627</b>    | <b>89,045,782</b>       | <b>2,499,472,278</b>    | <b>1,485,935,124</b>    | <b>(2,592,555,321)</b>   | <b>(650,064,654)</b>     | <b>2,161,413,409</b>    |
| Other Miscellaneous Income                                   | 1,076,946              | 241,743                 | 534,268                 | 127,708                 | 174,430                 | 74,088                  | 110,178                  | 136,955                  | 132,874                 |
| <b>Total Additions (Net Reductions) to Plan Net Position</b> | <b>1,641,532,146</b>   | <b>3,594,401,173</b>    | <b>2,672,321,886</b>    | <b>955,293,907</b>      | <b>3,319,687,444</b>    | <b>2,267,630,805</b>    | <b>(1,864,589,618)</b>   | <b>15,427,669</b>        | <b>2,758,050,580</b>    |
| <b>Deductions</b>  |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Monthly Retirement Benefits                                  | (1,449,898,078)        | (1,366,173,782)         | (1,288,986,517)         | (1,237,559,898)         | (1,147,209,272)         | (1,060,205,818)         | (999,939,614)            | (945,704,657)            | (868,179,029)           |
| Refunds of Contributions                                     | (64,461,998)           | (56,970,769)            | (53,899,831)            | (55,896,826)            | (49,564,015)            | (43,362,690)            | (43,929,423)             | (48,472,690)             | (46,129,211)            |
| Death Benefits   | (10,019,588)           | (9,702,485)             | (9,458,321)             | (9,414,234)             | (9,614,688)             | (8,959,388)             | (9,237,740)              | (8,388,935)              | (9,153,582)             |
| Insurance Premiums and                                       |                        |                         |                         |                         |                         |                         |                          |                          |                         |
| Disability Benefits  | (6,492,432)            | (6,224,235)             | (6,058,253)             | (6,128,984)             | (6,752,185)             | (7,035,185)             | (6,946,461)              | (6,824,361)              | (6,382,962)             |
| Administrative Expenses                                      | (10,863,778)           | (9,703,808)             | (10,426,813)            | (9,620,933)             | (9,261,260)             | (10,158,398)            | (11,085,498)             | (9,253,050)              | (8,552,925)             |
| <b>Total Deductions to Plan Net Position</b>                 | <b>(1,541,735,874)</b> | <b>(1,448,775,079)</b>  | <b>(1,368,829,735)</b>  | <b>(1,318,620,875)</b>  | <b>(1,222,401,420)</b>  | <b>(1,129,721,480)</b>  | <b>(1,071,138,736)</b>   | <b>(1,018,643,693)</b>   | <b>(938,397,709)</b>    |
| <b>Change in Net Position</b>                                | <b>\$ 99,796,272</b>   | <b>\$ 2,145,626,094</b> | <b>\$ 1,303,492,151</b> | <b>\$ (363,326,968)</b> | <b>\$ 2,097,286,025</b> | <b>\$ 1,137,909,326</b> | <b>\$(2,935,728,354)</b> | <b>\$(1,003,216,024)</b> | <b>\$ 1,819,652,871</b> |

<sup>1)</sup> Information available for current and prior eight fiscal years.

<sup>2)</sup> Schedule combines Pension Plan and Optional Group Life Insurance.



CHANGES IN NET POSITION-DEATH AND DISABILITY PLAN

Last Nine Fiscal Years<sup>(1)</sup>

|   | 2015                 | 2014                 | 2013                | 2012              | 2011                | 2010                   | 2009                   | 2008                 | 2007                |
|---|----------------------|----------------------|---------------------|-------------------|---------------------|------------------------|------------------------|----------------------|---------------------|
| <b>Additions</b>                                  |                      |                      |                     |                   |                     |                        |                        |                      |                     |
| Contributions                                     |                      |                      |                     |                   |                     |                        |                        |                      |                     |
| Employer Contributions                            | \$ 59,634,639        | \$ 57,754,895        | \$ 48,891,432       | \$ 49,620,870     | \$ 48,911,197       | \$ 29,549,494          | \$ 36,334,585          | \$ 62,400,370        | \$ 59,308,991       |
| <b>Total Contributions</b>                        | <u>59,634,639</u>    | <u>57,754,895</u>    | <u>48,891,432</u>   | <u>49,620,870</u> | <u>48,911,197</u>   | <u>29,549,494</u>      | <u>36,334,585</u>      | <u>62,400,370</u>    | <u>59,308,991</u>   |
| Investments                                       |                      |                      |                     |                   |                     |                        |                        |                      |                     |
| Interest  | 28,124               | 11,276               | 20,823              | 10,852            | 18,333              | 36,229                 | 351,362                | 968,222              | 668,063             |
| Less Investment Expense                           | (21,548)             | 0                    | 0                   | 0                 | (114)               | (3,848)                | (5,630)                | (6,550)              | (6,239)             |
| Net Investment Income                             | 6,576                | 11,276               | 20,823              | 10,852            | 18,219              | 32,381                 | 345,732                | 961,672              | (6,239)             |
| <b>Total Net Investment Income</b>                | <u>6,576</u>         | <u>11,276</u>        | <u>20,823</u>       | <u>10,852</u>     | <u>18,219</u>       | <u>32,381</u>          | <u>345,732</u>         | <u>961,672</u>       | <u>(6,239)</u>      |
| Other Miscellaneous Income                        | 3,848                | 2,716                | 3,473               | 1,914             | 16,340              | 27,811                 | 43,935                 | 88,781               | 96,112              |
| <b>Net Position</b>                               | <u>59,645,063</u>    | <u>57,768,887</u>    | <u>48,915,728</u>   | <u>49,633,636</u> | <u>48,945,756</u>   | <u>29,609,686</u>      | <u>36,724,252</u>      | <u>63,450,823</u>    | <u>59,398,864</u>   |
| <b>Deductions</b>                                 |                      |                      |                     |                   |                     |                        |                        |                      |                     |
| Insurance Premiums and Disability Benefits (OPEB) |                      |                      |                     |                   |                     |                        |                        |                      |                     |
|   | 41,020,269           | 42,641,395           | 42,499,559          | 49,040,446        | 46,753,126          | 43,746,954             | 47,356,797             | 49,893,770           | 49,202,924          |
| Administrative Expenses                           | 402,212              | 381,764              | 431,084             | 307,177           | 363,243             | 375,792                | 361,887                | 350,076              | 334,380             |
| <b>Total Deductions to Plan Net Position</b>      | <u>41,422,481</u>    | <u>43,023,159</u>    | <u>42,930,643</u>   | <u>49,347,623</u> | <u>47,116,369</u>   | <u>44,122,746</u>      | <u>47,718,684</u>      | <u>50,243,846</u>    | <u>49,537,304</u>   |
| <b>Change in Net Position</b>                     | <u>\$ 18,222,582</u> | <u>\$ 14,745,728</u> | <u>\$ 5,985,085</u> | <u>\$ 286,013</u> | <u>\$ 1,829,387</u> | <u>\$ (14,513,060)</u> | <u>\$ (10,994,432)</u> | <u>\$ 13,206,977</u> | <u>\$ 9,861,560</u> |

<sup>1)</sup> Information available for current and prior eight fiscal years.

BENEFIT AND REFUND DEDUCTIONS FROM NET POSITION BY TYPE

Last Ten Fiscal Years

|   | 2015                 | 2014                 | 2013                 | 2012                 | 2011                 | 2010                 | 2009                 | 2008                 | 2007                 | 2006                 |
|---|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| <b>Type of Benefit</b>                            |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Age and Service Benefits:                         |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Retirees  | \$1,383,140,272      | \$1,302,838,465      | \$1,228,537,001      | \$1,180,214,270      | \$1,092,518,456      | \$1,008,271,726      | \$950,746,107        | \$898,910,097        | \$823,994,836        | \$763,960,585        |
| Survivors   | 66,757,806           | 63,335,317           | 60,449,516           | 57,345,628           | 54,690,816           | 51,934,092           | 49,193,507           | 46,794,560           | 44,184,193           | 42,018,147           |
| Death in Service Benefits                         | 10,019,588           | 9,702,485            | 9,458,321            | 9,414,234            | 9,614,688            | 8,959,388            | 9,237,740            | 8,388,935            | 9,153,582            | 8,810,923            |
| Insurance Premiums                                | 6,492,432            | 6,224,235            | 6,058,253            | 6,128,984            | 6,752,185            | 7,035,185            | 6,946,461            | 6,824,361            | 6,383,962            | 5,973,688            |
| Insurance Premiums and Disability Benefits (OPEB) | 41,020,269           | 42,641,395           | 42,499,559           | 49,040,446           | 46,753,126           | 43,746,954           | 47,356,797           | 49,893,770           | 49,202,924           | 48,984,269           |
| <b>Total Benefits</b>                             | <u>1,507,430,367</u> | <u>1,424,741,897</u> | <u>1,347,002,650</u> | <u>1,302,143,562</u> | <u>1,210,329,271</u> | <u>1,119,947,345</u> | <u>1,063,480,612</u> | <u>1,010,811,723</u> | <u>932,919,497</u>   | <u>869,747,612</u>   |
| <b>Type of Refund</b>                             |                      |                      |                      |                      |                      |                      |                      |                      |                      |                      |
| Death   | \$7,274,097          | \$7,023,286          | \$5,633,961          | \$6,231,284          | \$5,984,123          | \$6,147,736          | \$5,773,422          | \$5,275,097          | \$5,496,510          | \$6,197,596          |
| Separation  | 57,187,901           | 49,947,483           | 48,265,870           | 49,665,542           | 43,579,892           | 37,214,954           | 38,156,001           | 43,197,593           | 40,632,701           | 40,628,580           |
| <b>Total Refunds</b>                              | <u>\$ 64,461,998</u> | <u>\$ 56,970,769</u> | <u>\$ 53,899,831</u> | <u>\$ 55,896,826</u> | <u>\$ 49,564,015</u> | <u>\$ 43,362,690</u> | <u>\$ 43,929,423</u> | <u>\$ 48,472,690</u> | <u>\$ 46,129,211</u> | <u>\$ 46,826,176</u> |



## HIGHLIGHT OF OPERATIONS

Ten Year Summary

|   | 2015        | 2014    | 2013    | 2012    | 2011    | 2010    | 2009    | 2008    | 2007    | 2006    |
|---|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <b>Membership Composition</b>                     |             |         |         |         |         |         |         |         |         |         |
| Number of Retirants                               | 83,911      | 80,900  | 77,727  | 74,665  | 70,349  | 67,219  | 64,803  | 61,489  | 60,166  | 57,954  |
| Number of Survivors <sup>(b)</sup>                | 6,996       | 6,770   | 6,591   | 6,360   | 6,149   | 5,945   | 5,764   | 5,613   | 5,599   | 5,394   |
| New Retirants During<br>the Fiscal Year           | 6,419       | 6,022   | 6,071   | 6,941   | 6,245   | 5,188   | 4,893   | 4,780   | 4,423   | 4,452   |
| Active and Inactive Members <sup>(a)</sup>        | 204,458     | 202,930 | 202,022 | 200,732 | 202,150 | 204,155 | 197,822 | 195,187 | 192,307 | 190,305 |
| Participating Employers                           | 1,518       | 1,508   | 1,506   | 1,504   | 1,511   | 1,499   | 1,492   | 1,482   | 1,474   | 1,474   |
| <b>Financial Results (in millions)</b>            |             |         |         |         |         |         |         |         |         |         |
| Member Contributions                              | \$388       | \$338   | \$307   | \$298   | \$294   | \$290   | \$279   | \$270   | \$257   | \$246   |
| Employer Contributions                            | 750         | 760     | 667     | 618     | 575     | 522     | 486     | 458     | 399     | 352     |
| Retirement/Death Benefits                         | 1,460       | 1,376   | 1,298   | 1,247   | 1,157   | 1,069   | 1,009   | 954     | 877     | 815     |
| Investment Income <sup>(c)</sup>                  | 561         | 2,554   | 1,747   | 89      | 2,499   | 1,486   | (2,592) | (649)   | 2,162   | 1,354   |
| <b>Employer Contribution Rate<sup>(d)</sup></b>   |             |         |         |         |         |         |         |         |         |         |
| KPERS—State/School <sup>(e)</sup>                 | 12.12/9.50% | 11.12%  | 10.37%  | 9.77%   | 9.17%   | 8.57%   | 7.97%   | 7.37%   | 6.77%   | 6.07%   |
| KPERS—Local <sup>(f)</sup>                        | 10.33       | 9.69    | 8.94    | 8.34    | 7.74    | 7.14    | 6.54    | 5.93    | 5.31    | 4.61    |
| KP&F (Uniform Participating) <sup>(f)</sup>       | 21.36       | 19.92   | 17.26   | 16.54   | 14.57   | 12.86   | 13.51   | 13.88   | 13.32   | 12.39   |
| Judges  | 22.99       | 24.02   | 24.15   | 21.68   | 19.89   | 20.90   | 22.08   | 22.38   | 19.11   | 21.97   |
| TIAA  | —           | —       | —       | —       | —       | —       | —       | —       | —       | —       |
| <b>Unfunded Actuarial Liability (in millions)</b> |             |         |         |         |         |         |         |         |         |         |
| KPERS—State/School                                | \$7,351     | \$7,351 | \$7,658 | \$6,920 | \$6,244 | \$5,805 | \$6,240 | \$4,312 | \$4,135 | \$3,926 |
| KPERS—Local                                       | 1,590       | 1,590   | 1,699   | 1,542   | 1,395   | 1,315   | 1,385   | 941     | 893     | 869     |
| KP&F  | 803         | 803     | 866     | 739     | 598     | 530     | 619     | 284     | 322     | 341     |
| Judges  | 21          | 21      | 29      | 27      | 27      | 26      | 36      | 15      | 15      | 17      |
| TIAA <sup>(g)</sup>                               | —           | —       | —       | —       | —       | —       | —       | —       | —       | —       |
| <b>Funding Ratios<sup>(h)</sup></b>               |             |         |         |         |         |         |         |         |         |         |
| KPERS—State/School                                | 58.80%      | 57.00%  | 53.90%  | 56.80%  | 59.90%  | 61.60%  | 56.90%  | 68.60%  | 67.50%  | 67.21%  |
| KPERS—Local                                       | 67.40       | 63.70   | 59.50   | 61.20   | 63.20   | 63.70   | 59.00   | 70.10   | 68.80   | 67.38   |
| KP&F  | 74.10       | 70.30   | 66.50   | 69.80   | 74.20   | 76.20   | 70.50   | 85.50   | 82.40   | 80.46   |
| Judges  | 93.50       | 86.90   | 81.40   | 82.50   | 82.50   | 82.30   | 74.60   | 88.70   | 87.40   | 85.02   |
| TIAA  | —           | —       | —       | —       | —       | —       | —       | —       | —       | —       |

a) Membership information taken from System's actuarial valuation.

b) This is the number of joint annuants as of December 31st, per the System's records, starting December 31, 2005.

c) Investment income for prior years has been adjusted to reflect changes in unrealized appreciation.

d) Rates include Group Life and Disability contributions where applicable. Per 2000 and 2001 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2000, through December 31, 2001. Per 2002 and 2003 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from July 1, 2002, through December 31, 2002, or from April 1, 2003, through June 30, 2004. Per 2009 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from March 1, 2009, through November 30, 2009. Per 2010 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2010, through June 30, 2010, and from April 1, 2011, through June 30, 2011. Per 2012 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2012, through June 30, 2012, and from April 1, 2013, through June 30, 2013.

e) Due to budget constraints the Governor, using the allotment process, reduced the KPERS State/School employer rate to 9.5 percent for the last two quarters of FY 2015.

f) KPERS Local and KP&F contribution rates are reported on a calendar year basis.

g) Legislation provided for bonds to be issued December 31, 2002, to fully fund the existing unfunded liability for the TIAA group.

h) The funding percentage indicates the actuarial soundness of the System. Generally, the greater the percentage, the stronger the System.

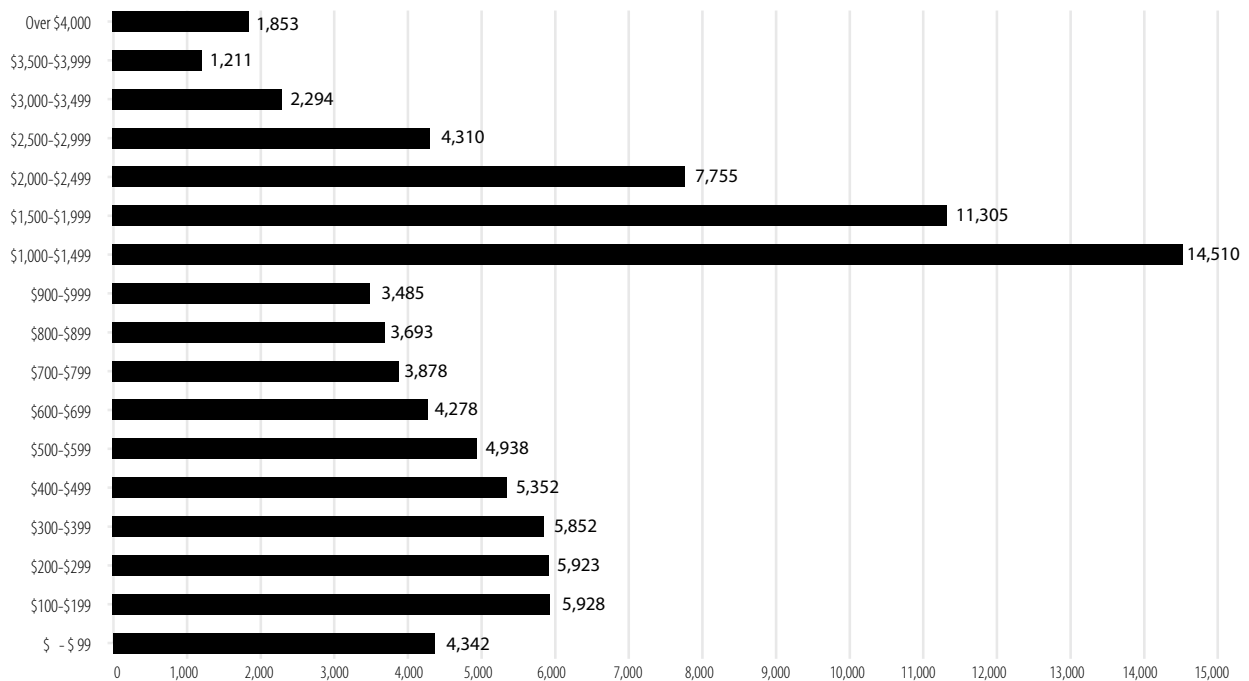
NUMBER OF RETIRED MEMBERS AND SURVIVORS BY TYPE OF BENEFIT

As of December 31, 2014

| Monthly Benefit | Number of Retirees | Normal Retirement | Early Retirement | Service-Connected Death or Disability | Nonservice-Connected Death or Disability |
|-----------------|--------------------|-------------------|------------------|---------------------------------------|--|
| \$ - 99         | 4,342              | 3,955             | 379              | 3                                     | 5  |
| \$100-199       | 5,928              | 4,032             | 1,855            | 29                                    | 12                                       |
| \$200-299       | 5,923              | 3,564             | 2,332            | 20                                    | 7  |
| \$300-399       | 5,852              | 3,511             | 2,298            | 26                                    | 17                                       |
| \$400-499       | 5,352              | 3,323             | 1,980            | 34                                    | 15                                       |
| \$500-599       | 4,938              | 3,195             | 1,701            | 29                                    | 13                                       |
| \$600-699       | 4,278              | 2,839             | 1,400            | 25                                    | 14                                       |
| \$700-799       | 3,878              | 2,639             | 1,200            | 30                                    | 9  |
| \$800-899       | 3,693              | 2,650             | 989              | 47                                    | 7  |
| \$900-999       | 3,485              | 2,635             | 797              | 38                                    | 15                                       |
| \$1,000-1,499   | 14,510             | 12,328            | 1,923            | 187                                   | 72                                       |
| \$1,500-1,999   | 11,305             | 10,588            | 493              | 125                                   | 99                                       |
| \$2,000-2,499   | 7,755              | 7,501             | 150              | 47                                    | 57                                       |
| \$2,500-2,999   | 4,310              | 4,188             | 62               | 20                                    | 40                                       |
| \$3,000-3,499   | 2,294              | 2,225             | 39               | 17                                    | 13                                       |
| \$3,500-3,999   | 1,211              | 1,182             | 14               | 12                                    | 3  |
| \$4,000 or More | 1,853              | 1,815             | 31               | 7                                     | 0  |
| Totals          | 90,907             | 72,170            | 17,643           | 696                                   | 398                                      |

NUMBER OF RETIRED MEMBERS AND SURVIVORS BY MONTHLY BENEFIT AMOUNT

As of December 31, 2014





NUMBER OF RETIRED MEMBERS AND SURVIVORS BY TYPE OF PAYMENT OPTION

As of December 31, 2014

| Monthly Benefit | Maximum No Survivor | Joint 1/2 to Survivor | Joint Same to Survivor | Life Certain w/10 Yrs | Joint 3/4 to Survivor | Widowed Children Survivor | Life Certain w/5 Yrs | Life Certain w/15 Yrs |
|-----------------|---------------------|-----------------------|------------------------|-----------------------|-----------------------|---------------------------|----------------------|-----------------------|
| \$ - 99         | 3,393               | 260                   | 464                    | 59                    | 40                    | 4                         | 31                   | 91                    |
| \$100-199       | 4,215               | 576                   | 749                    | 112                   | 113                   | 28                        | 29                   | 106                   |
| \$200-299       | 4,159               | 627                   | 813                    | 88                    | 131                   | 13                        | 23                   | 69                    |
| \$300-399       | 4,003               | 657                   | 807                    | 69                    | 157                   | 34                        | 31                   | 94                    |
| \$400-499       | 3,661               | 607                   | 732                    | 95                    | 147                   | 41                        | 14                   | 55                    |
| \$500-599       | 3,357               | 587                   | 678                    | 52                    | 158                   | 30                        | 26                   | 50                    |
| \$600-699       | 2,891               | 493                   | 603                    | 60                    | 138                   | 34                        | 15                   | 44                    |
| \$700-799       | 2,570               | 491                   | 523                    | 47                    | 158                   | 31                        | 15                   | 43                    |
| \$800-899       | 2,390               | 549                   | 484                    | 43                    | 145                   | 37                        | 12                   | 33                    |
| \$900-999       | 2,224               | 565                   | 453                    | 39                    | 141                   | 29                        | 12                   | 22                    |
| \$1,000-1,499   | 9,014               | 2,326                 | 1,896                  | 150                   | 796                   | 177                       | 43                   | 108                   |
| \$1,500-1,999   | 7,164               | 1,891                 | 1,276                  | 70                    | 684                   | 135                       | 29                   | 56                    |
| \$2,000-2,499   | 5,061               | 1,312                 | 759                    | 56                    | 464                   | 62                        | 21                   | 20                    |
| \$2,500-2,999   | 2,789               | 775                   | 394                    | 31                    | 277                   | 27                        | 8                    | 9                     |
| \$3,000-3,499   | 1,476               | 408                   | 221                    | 13                    | 154                   | 11                        | 3                    | 8                     |
| \$3,500-3,999   | 742                 | 223                   | 130                    | 6                     | 96                    | 10                        | 1                    | 3                     |
| \$4,000 or More | 968                 | 447                   | 258                    | 9                     | 166                   | 0                         | 1                    | 4                     |
| Totals          | <u>60,077</u>       | <u>12,794</u>         | <u>11,240</u>          | <u>999</u>            | <u>3,965</u>          | <u>703</u>                | <u>314</u>           | <u>815</u>            |

## AVERAGE BENEFIT BY YEARS OF SERVICE - FIVE YEAR SUMMARY

New Retirees by Calendar Year

| Service Credit |                 | 2010        | 2011        | 2012        | 2013        | 2014        |
|----------------|-----------------|-------------|-------------|-------------|-------------|-------------|
| Less Than 5    | Retired Members | 263         | 305         | 259         | 185         | 172         |
|                | Average FAS*    | \$23,919.51 | \$24,025.35 | \$27,378.64 | \$29,524.62 | \$33,225.92 |
|                | Average Benefit | \$93.25     | \$104.10    | \$138.07    | \$171.29    | \$213.67    |
|                | Average Years   | 2.65        | 2.82        | 2.80        | 2.92        | 3.46        |
| 5-9.99         | Retired Members | 435         | 460         | 459         | 517         | 586         |
|                | Average FAS*    | \$28,869.68 | \$30,982.85 | \$32,228.24 | \$32,086.25 | \$34,679.01 |
|                | Average Benefit | \$292.23    | \$312.36    | \$325.52    | \$313.09    | \$349.62    |
|                | Average Years   | 7.75        | 7.76        | 7.61        | 7.56        | 7.58        |
| 10-14.99       | Retired Members | 877         | 1,036       | 975         | 946         | 929         |
|                | Average FAS*    | \$33,333.42 | \$35,236.86 | \$33,774.49 | \$34,608.84 | \$37,012.47 |
|                | Average Benefit | \$478.88    | \$507.92    | \$484.07    | \$506.31    | \$570.48    |
|                | Average Years   | 12.14       | 12.23       | 12.22       | 12.32       | 12.41       |
| 15-19.99       | Retired Members | 822         | 972         | 770         | 803         | 822         |
|                | Average FAS*    | \$39,884.61 | \$39,410.16 | \$39,659.90 | \$40,507.90 | \$41,291.91 |
|                | Average Benefit | \$830.36    | \$837.31    | \$860.25    | \$901.19    | \$901.18    |
|                | Average Years   | 17.30       | 17.30       | 17.38       | 17.37       | 17.30       |
| 20-24.99       | Retired Members | 819         | 988         | 911         | 892         | 930         |
|                | Average FAS*    | \$44,677.45 | \$45,174.03 | \$45,799.95 | \$47,140.00 | \$44,664.92 |
|                | Average Benefit | \$1,238.44  | \$1,236.79  | \$1,308.97  | \$1,327.01  | \$1,311.24  |
|                | Average Years   | 22.23       | 22.37       | 22.42       | 22.39       | 22.50       |
| 25-29.99       | Retired Members | 852         | 1,026       | 870         | 967         | 967         |
|                | Average FAS*    | \$50,662.87 | \$52,267.39 | \$53,691.38 | \$53,522.25 | \$54,795.55 |
|                | Average Benefit | \$1,775.08  | \$1,839.53  | \$1,944.89  | \$1,936.22  | \$2,007.73  |
|                | Average Years   | 27.35       | 27.30       | 27.25       | 27.25       | 27.40       |
| 30-34.99       | Retired Members | 926         | 1,056       | 799         | 807         | 752         |
|                | Average FAS*    | \$57,899.34 | \$57,115.11 | \$57,857.40 | \$58,014.33 | \$59,822.27 |
|                | Average Benefit | \$2,418.71  | \$2,373.81  | \$2,475.40  | \$2,426.52  | \$2,542.62  |
|                | Average Years   | 32.03       | 32.14       | 32.10       | 32.11       | 32.15       |
| 35-39.99       | Retired Members | 401         | 468         | 311         | 372         | 359         |
|                | Average FAS*    | \$60,225.79 | \$58,272.80 | \$61,819.37 | \$62,230.61 | \$64,093.82 |
|                | Average Benefit | \$2,710.63  | \$2,650.18  | \$2,915.96  | \$2,856.00  | \$3,036.30  |
|                | Average Years   | 36.92       | 37.07       | 36.95       | 36.90       | 37.11       |
| 40-44.99       | Retired Members | 143         | 144         | 108         | 122         | 113         |
|                | Average FAS*    | \$61,221.12 | \$59,078.25 | \$65,700.90 | \$65,508.74 | \$62,560.20 |
|                | Average Benefit | \$2,964.44  | \$3,080.72  | \$3,230.99  | \$3,287.98  | \$3,353.11  |
|                | Average Years   | 41.72       | 41.78       | 41.52       | 41.77       | 42.06       |
| 45-49.99       | Retired Members | 8           | 15          | 11          | 24          | 15          |
|                | Average FAS*    | \$59,155.97 | \$59,128.20 | \$56,584.64 | \$60,619.03 | \$51,048.89 |
|                | Average Benefit | \$2,926.19  | \$2,936.16  | \$2,842.29  | \$4,126.28  | \$2,917.43  |
|                | Average Years   | 46.31       | 46.47       | 47.34       | 46.90       | 47.17       |
| 50 and Over    | Retired Members | 4           | 3           | 1           | 5           | 1           |
|                | Average FAS*    | \$71,532.67 | \$82,670.19 | \$79,425.94 | \$72,383.16 | \$49,358.02 |
|                | Average Benefit | \$4,209.75  | \$4,305.29  | \$4,676.20  | \$3,876.26  | \$8,337.12  |
|                | Average Years   | 56.06       | 52.08       | 50.25       | 53.05       | 51.00       |
| Total Number   | Retired Members | 5,550       | 6,473       | 5,474       | 5,640       | 5,646       |
|                | Average FAS*    | \$44,667.14 | \$45,091.55 | \$45,129.48 | \$46,258.78 | \$46,895.04 |
|                | Average Benefit | \$1,364.27  | \$1,370.68  | \$1,365.30  | \$1,417.09  | \$1,435.77  |
|                | Average Years   | 21.89       | 21.97       | 21.16       | 21.72       | 21.47       |

\*Average Final Average Salary

Source: Data provided by KPERS Information Technology and Benefit Member Services divisions.



## AVERAGE DISABILITY BENEFIT BY YEARS OF SERVICE - FIVE YEAR SUMMARY

*New Disabilitants by Calendar Year*

| Service Credit    |                          | 2010        | 2011        | 2012        | 2013        | 2014        |
|-------------------|--------------------------|-------------|-------------|-------------|-------------|-------------|
| Less than 5 Years | Disabled Members         | 81          | 72          | 56          | 40          | 23          |
|                   | Average Salary           | \$29,526.92 | \$28,597.98 | \$31,748.72 | \$30,462.92 | \$22,956.46 |
|                   | Average Benefit          | \$1,045.77  | \$1,319.23  | \$1,325.58  | \$1,405.71  | \$812.97    |
|                   | Average Years of Service | 2.66        | 2.84        | 3.01        | 2.98        | 3.13        |
| 5-9.99            | Disabled Members         | 69          | 68          | 61          | 51          | 56          |
|                   | Average Salary           | \$32,223.67 | \$32,943.15 | \$30,020.24 | \$33,560.38 | \$33,527.96 |
|                   | Average Benefit          | \$1,130.36  | \$1,028.63  | \$1,101.85  | \$938.59    | \$1,070.05  |
|                   | Average Years of Service | 7.60        | 7.44        | 7.25        | 7.28        | 7.79        |
| 10-14.99          | Disabled Members         | 52          | 51          | 55          | 48          | 50          |
|                   | Average Salary           | \$32,113.93 | \$32,661.68 | \$36,117.04 | \$33,243.75 | \$36,073.41 |
|                   | Average Benefit          | \$747.65    | \$847.87    | \$1,224.19  | \$845.76    | \$938.50    |
|                   | Average Years of Service | 12.36       | 12.58       | 12.38       | 12.53       | 12.39       |
| 15-19.99          | Disabled Members         | 35          | 42          | 32          | 39          | 44          |
|                   | Average Salary           | \$37,625.23 | \$35,329.36 | \$41,292.37 | \$43,104.81 | \$39,868.21 |
|                   | Average Benefit          | \$938.26    | \$1,220.56  | \$1,546.76  | \$1,222.40  | \$1,161.02  |
|                   | Average Years of Service | 17.35       | 17.17       | 17.18       | 17.31       | 17.11       |
| 20-24.99          | Disabled Members         | 28          | 25          | 30          | 28          | 27          |
|                   | Average Salary           | \$37,481.11 | \$43,402.06 | \$44,493.04 | \$42,805.89 | \$45,561.82 |
|                   | Average Benefit          | \$805.98    | \$800.35    | \$1,551.89  | \$1,258.11  | \$1,236.02  |
|                   | Average Years of Service | 21.97       | 22.41       | 22.03       | 22.24       | 22.22       |
| 25-29.99          | Disabled Members         | 18          | 14          | 17          | 14          | 16          |
|                   | Average Salary           | \$41,753.35 | \$52,830.15 | \$44,310.61 | \$39,334.26 | \$44,508.21 |
|                   | Average Benefit          | \$1,246.54  | \$1,153.77  | \$1,174.05  | \$1,547.35  | \$932.79    |
|                   | Average Years of Service | 27.68       | 27.56       | 26.74       | 26.72       | 27.36       |
| 30-34.99          | Disabled Members         | 4           | 9           | 8           | 4           | 6           |
|                   | Average Salary           | \$78,098.37 | \$44,017.96 | \$51,962.72 | \$59,937.27 | \$51,744.26 |
|                   | Average Benefit          | \$5,645.17  | \$1,189.04  | \$576.82    | \$431.96    | \$1,276.59  |
|                   | Average Years of Service | 31.41       | 31.41       | 31.73       | 32.58       | 32.58       |
| 35-39.99          | Disabled Members         | 1           | 2           | 1           | 2           | —           |
|                   | Average Salary           | \$52,011.00 | \$54,747.96 | \$61,550.64 | \$89,426.88 | \$—         |
|                   | Average Benefit          | \$271.07    | \$447.58    | \$3,176.28  | \$1,487.65  | \$—         |
|                   | Average Years of Service | 38.92       | 37.21       | 36.11       | 38.44       | —           |
| Total Number      | Disabled Members         | 288         | 283         | 260         | 226         | 222         |
|                   | Average Salary           | \$33,914.43 | \$34,555.12 | \$36,470.31 | \$37,056.33 | \$37,009.92 |
|                   | Average Benefit          | \$1,049.57  | \$1,085.49  | \$1,279.15  | \$1,123.71  | \$1,047.69  |
|                   | Average Years of Service | 11.34       | 11.93       | 12.49       | 13.15       | 14.02       |

## PRINCIPAL PARTICIPATING EMPLOYERS

Last Ten Calendar Years

| Participating Government       | 2015              |      |                   | 2014              |      |                   |
|--------------------------------|-------------------|------|-------------------|-------------------|------|-------------------|
|                                | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas                | 24,389            | 1    | 15.82%            | 24,631            | 1    | 15.78%            |
| USD 259, Wichita               | 6,921             | 2    | 4.49%             | 6,861             | 2    | 4.40%             |
| USD 233, Olathe                | 4,310             | 3    | 2.80%             | 4,293             | 3    | 2.75%             |
| USD 500, Kansas City           | 3,544             | 4    | 2.30%             | 3,392             | 5    | 2.17%             |
| USD 512, Shawnee Mission       | 3,428             | 5    | 2.22%             | 3,621             | 4    | 2.32%             |
| USD 229, Blue Valley           | 3,106             | 6    | 2.01%             | 3,130             | 6    | 2.01%             |
| Johnson County                 | 3,052             | 7    | 1.98%             | 3,099             | 7    | 1.99%             |
| Sedgwick County                | 2,536             | 8    | 1.64%             | 2,535             | 8    | 1.62%             |
| USD 501, Topeka Public Schools | 2,408             | 9    | 1.56%             | 2,387             | 9    | 1.53%             |
| USD 497, Lawrence              | 1,784             | 10   | 1.16%             | 1,733             | 10   | 1.11%             |
| All Other <sup>(a)</sup>       | 98,725            |      | 64.02%            | 100,375           |      | 64.32%            |
| <b>Total (1,516 employers)</b> | <b>154,203</b>    |      | <b>100.00%</b>    | <b>155,446</b>    |      | <b>100.00%</b>    |

| Participating Government       | 2013              |      |                   | 2012              |      |                   |
|--------------------------------|-------------------|------|-------------------|-------------------|------|-------------------|
|                                | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas                | 25,293            | 1    | 16.21%            | 25,382            | 1    | 16.37%            |
| USD 259, Wichita               | 6,709             | 2    | 4.30%             | 6,542             | 2    | 4.22%             |
| USD 233, Olathe                | 4,274             | 3    | 2.74%             | 4,185             | 3    | 2.70%             |
| USD 500, Kansas City           | 3,287             | 5    | 2.11%             | 3,191             | 5    | 2.06%             |
| USD 512, Shawnee Mission       | 3,678             | 4    | 2.36%             | 3,705             | 4    | 2.39%             |
| USD 229, Blue Valley           | 3,088             | 6    | 1.98%             | 3,098             | 6    | 2.00%             |
| Johnson County                 | 3,065             | 7    | 1.96%             | 3,014             | 7    | 1.94%             |
| Sedgwick County                | 2,549             | 8    | 1.63%             | 2,336             | 8    | 1.51%             |
| USD 501, Topeka Public Schools | 2,339             | 9    | 1.50%             | 2,605             | 9    | 1.68%             |
| USD 497, Lawrence              | 1,697             | 10   | 1.09%             | 1,627             | 10   | 1.05%             |
| All Other <sup>(a)</sup>       | 100,074           |      | 64.13%            | 99,369            |      | 64.09%            |
| <b>Total (1,516 employers)</b> | <b>156,053</b>    |      | <b>100.00%</b>    | <b>155,054</b>    |      | <b>100.00%</b>    |

a) In 2015, "All Other" consisted of:

| Type                                    | Number       | Covered Employees |
|---|--------------|-------------------|
| School Districts                        | 279          | 47,890            |
| Cities and Counties                     | 558          | 27,975            |
| Post-Secondary Education <sup>(b)</sup> | 50           | 12,000            |
| Other                                   | 619          | 10,860            |
|   | <u>1,506</u> | <u>98,725</u>     |

b) Not including State Board of Regents institutions.

Source: Data provided by KPERS Information Technology and Benefit and Member Services divisions.



## PRINCIPAL PARTICIPATING EMPLOYERS

*Last Ten Calendar Years*

| Participating Government       | 2011              |      |                   | 2010              |      |                   |
|--------------------------------|-------------------|------|-------------------|-------------------|------|-------------------|
|                                | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas                | 27,066            | 1    | 17.05%            | 26,735            | 1    | 16.55%            |
| USD 259, Wichita               | 6,749             | 2    | 4.25%             | 6,861             | 2    | 4.25%             |
| USD 233, Olathe                | 4,082             | 3    | 2.57%             | 4,339             | 3    | 2.69%             |
| USD 500, Kansas City           | 3,165             | 5    | 1.99%             | 3,178             | 5    | 1.97%             |
| USD 512, Shawnee Mission       | 3,837             | 4    | 2.42%             | 4,005             | 4    | 2.48%             |
| USD 229, Blue Valley           | 2,633             | 7    | 1.66%             | 2,706             | 7    | 1.68%             |
| Johnson County                 | 2,977             | 6    | 1.88%             | 2,957             | 6    | 1.83%             |
| Sedgwick County                | 2,341             | 8    | 1.48%             | 2,466             | 8    | 1.53%             |
| USD 501, Topeka Public Schools | 2,256             | 9    | 1.42%             | 2,298             | 9    | 1.42%             |
| USD 497, Lawrence              | 1,595             | 10   | 1.01%             | 1,715             | 10   | 1.06%             |
| All Other <sup>(a)</sup>       | 102,004           |      | 64.27%            | 104,291           |      | 64.56%            |
| <b>Total</b>                   | <b>158,705</b>    |      | <b>100.00%</b>    | <b>161,551</b>    |      | <b>100.00%</b>    |

| Participating Government       | 2009              |      |                   | 2008              |      |                   |
|--------------------------------|-------------------|------|-------------------|-------------------|------|-------------------|
|                                | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas                | 25,775            | 1    | 16.41%            | 25,299            | 1    | 16.35%            |
| USD 259, Wichita               | 6,850             | 2    | 4.36%             | 6,748             | 2    | 4.36%             |
| USD 233, Olathe                | 4,625             | 3    | 2.94%             | 4,307             | 3    | 2.78%             |
| USD 500, Kansas City           | 3,324             | 5    | 2.12%             | 3,337             | 5    | 2.16%             |
| USD 512, Shawnee Mission       | 4,167             | 4    | 2.65%             | 4,128             | 4    | 2.67%             |
| USD 229, Blue Valley           | 2,476             | 8    | 1.58%             | 3,137             | 6    | 2.03%             |
| Johnson County                 | 2,983             | 6    | 1.90%             | 2,930             | 7    | 1.89%             |
| Sedgwick County                | 2,529             | 7    | 1.61%             | 2,548             | 8    | 1.65%             |
| USD 501, Topeka Public Schools | 1,847             | 9    | 1.18%             | 2,313             | 9    | 1.50%             |
| USD 497, Lawrence              | 1,766             | 10   | 1.12%             | 1,712             | 10   | 1.11%             |
| All Other <sup>(a)</sup>       | 100,723           |      | 64.13%            | 98,231            |      | 63.50%            |
| <b>Total</b>                   | <b>157,065</b>    |      | <b>100.00%</b>    | <b>154,690</b>    |      | <b>100.00%</b>    |

a) In 2015, "All Other" consisted of:

| Type                                    | Number       | Covered Employees |
|---|--------------|-------------------|
| School Districts                        | 279          | 47,890            |
| Cities and Counties                     | 558          | 27,975            |
| Post-Secondary Education <sup>(b)</sup> | 50           | 12,000            |
| Other                                   | 619          | 10,860            |
|   | <b>1,506</b> | <b>98,725</b>     |

b) Not including State Board of Regents institutions.

Source: Data provided by KPERS Information Technology and Benefit and Member Services divisions.



## PRINCIPAL PARTICIPATING EMPLOYERS

Last Ten Calendar Years

| Participating Government       | 2007                  |      |                       | 2006                  |      |                       |
|--------------------------------|-----------------------|------|-----------------------|-----------------------|------|-----------------------|
|                                | Covered Employees     | Rank | % of Total System     | Covered Employees     | Rank | % of Total System     |
| State of Kansas                | 25,069                | 1    | 16.55%                | 25,134                | 1    | 16.86%                |
| USD 259, Wichita               | 6,590                 | 2    | 4.35%                 | 6,546                 | 2    | 4.39%                 |
| USD 233, Olathe                | 4,277                 | 3    | 2.82%                 | 4,155                 | 3    | 2.79%                 |
| USD 500, Kansas City           | 3,334                 | 5    | 2.20%                 | 3,436                 | 5    | 2.30%                 |
| USD 512, Shawnee Mission       | 4,007                 | 4    | 2.65%                 | 3,968                 | 4    | 2.66%                 |
| USD 229, Blue Valley           | 3,002                 | 6    | 1.98%                 | 2,770                 | 7    | 1.86%                 |
| Johnson County                 | 2,809                 | 7    | 1.85%                 | 3,229                 | 6    | 2.17%                 |
| Sedgwick County                | 2,469                 | 8    | 1.63%                 | 2,434                 | 9    | 1.63%                 |
| USD 501, Topeka Public Schools | 2,309                 | 9    | 1.52%                 | 2,544                 | 8    | 1.71%                 |
| USD 497, Lawrence              | 1,692                 | 10   | 1.12%                 | 1,736                 | 10   | 1.16%                 |
| All Other <sup>(a)</sup>       | <u>95,891</u>         |      | <u>63.33%</u>         | <u>93,121</u>         |      | <u>62.47%</u>         |
| <b>Total</b>                   | <b><u>151,449</u></b> |      | <b><u>100.00%</u></b> | <b><u>149,073</u></b> |      | <b><u>100.00%</u></b> |

a) In 2015, "All Other" consisted of:

| Type                                    | Number       | Covered Employees |
|---|--------------|-------------------|
| School Districts                        | 279          | 47,890            |
| Cities and Counties                     | 558          | 27,975            |
| Post-Secondary Education <sup>(b)</sup> | 50           | 12,000            |
| Other                                   | <u>619</u>   | <u>10,860</u>     |
|   | <u>1,506</u> | <u>98,725</u>     |

b) Not including State Board of Regents institutions.

Source: Data provided by KPERs Information Technology and Benefit and Member Services divisions.



## PRINCIPAL PARTICIPATING EMPLOYER-DEATH AND DISABILITY PLAN

*Last Nine Fiscal Years<sup>(1)</sup>*

| Participating Government       | 2015                  |      |                       | 2014                  |      |                       |
|--------------------------------|-----------------------|------|-----------------------|-----------------------|------|-----------------------|
|                                | Covered Employees     | Rank | % of Total System     | Covered Employees     | Rank | % of Total System     |
| State of Kansas                | 35,394                | 1    | 22.34%                | 34,343                | 1    | 21.76%                |
| USD 259, Wichita               | 6,921                 | 2    | 4.37%                 | 6,861                 | 2    | 4.35%                 |
| USD 233, Olathe                | 4,310                 | 3    | 2.72%                 | 4,293                 | 3    | 2.72%                 |
| USD 500, Kansas City           | 3,544                 | 4    | 2.24%                 | 3,392                 | 5    | 2.15%                 |
| USD 512, Shawnee Mission       | 3,428                 | 5    | 2.16%                 | 3,621                 | 4    | 2.29%                 |
| USD 229, Blue Valley           | 3,106                 | 6    | 1.96%                 | 3,130                 | 6    | 1.98%                 |
| Johnson County                 | 3,052                 | 7    | 1.93%                 | 2,481                 | 7    | 1.57%                 |
| USD 501, Topeka Public Schools | 2,536                 | 8    | 1.60%                 | 2,387                 | 8    | 1.51%                 |
| Sedgwick County                | 2,408                 | 9    | 1.52%                 | 2,022                 | 9    | 1.28%                 |
| USD 497, Lawrence              | 1,784                 | 10   | 1.13%                 | 1,733                 | 10   | 1.10%                 |
| All Other <sup>(2)</sup>       | <u>91,960</u>         |      | <u>58.04%</u>         | <u>93,531</u>         |      | <u>59.27%</u>         |
| <b>Total (1,421 employers)</b> | <b><u>158,443</u></b> |      | <b><u>100.00%</u></b> | <b><u>157,794</u></b> |      | <b><u>100.00%</u></b> |

| Participating Government       | 2013                  |      |                       | 2012                  |      |                       |
|--------------------------------|-----------------------|------|-----------------------|-----------------------|------|-----------------------|
|                                | Covered Employees     | Rank | % of Total System     | Covered Employees     | Rank | % of Total System     |
| State of Kansas                | 29,553                | 1    | 19.35%                | 32,085                | 1    | 20.66%                |
| USD 259, Wichita               | 6,709                 | 2    | 4.39%                 | 6,542                 | 2    | 4.21%                 |
| USD 233, Olathe                | 4,274                 | 3    | 2.80%                 | 4,185                 | 3    | 2.69%                 |
| USD 500, Kansas City           | 3,287                 | 5    | 2.41%                 | 3,191                 | 5    | 2.05%                 |
| USD 512, Shawnee Mission       | 3,678                 | 4    | 2.15%                 | 3,705                 | 4    | 2.39%                 |
| USD 229, Blue Valley           | 3,088                 | 6    | 2.02%                 | 3,014                 | 6    | 1.94%                 |
| Johnson County                 | 2,447                 | 7    | 1.60%                 | 2,488                 | 7    | 1.60%                 |
| USD 501, Topeka Public Schools | 2,339                 | 8    | 1.53%                 | 2,336                 | 8    | 1.50%                 |
| Sedgwick County                | 2,030                 | 9    | 1.33%                 | 2,082                 | 9    | 1.34%                 |
| USD 497, Lawrence              | 1,697                 | 10   | 1.11%                 | 1,627                 | 10   | 1.05%                 |
| All Other <sup>(2)</sup>       | <u>93,590</u>         |      | <u>61.29%</u>         | <u>94,058</u>         |      | <u>60.56%</u>         |
| <b>Total (1,421 employers)</b> | <b><u>152,692</u></b> |      | <b><u>100.00%</u></b> | <b><u>155,313</u></b> |      | <b><u>100.00%</u></b> |

<sup>1)</sup> Information only available for current and prior eight years. State of Kansas includes the Board of Regents.

<sup>2)</sup> In 2015, "All Other" consisted of:

| Type                     | Number              | Covered Employees    |
|--------------------------|---------------------|----------------------|
| School Districts         | 279                 | 47,890               |
| Cities and Counties      | 466                 | 21,444               |
| Post-Secondary Education | 50                  | 12,000               |
| Other                    | <u>616</u>          | <u>10,626</u>        |
|                          | <b><u>1,411</u></b> | <b><u>91,960</u></b> |

Source: Data provided by KPERS Information Technology and Benefit and Member Services divisions.

PRINCIPAL PARTICIPATING EMPLOYER-DEATH AND DISABILITY PLAN

Last Nine Fiscal Years<sup>(1)</sup>

| Participating Government       | 2011                  |      |                       | 2010                  |      |                       |
|--------------------------------|-----------------------|------|-----------------------|-----------------------|------|-----------------------|
|                                | Covered Employees     | Rank | % of Total System     | Covered Employees     | Rank | % of Total System     |
| State of Kansas                | 37,904                | 1    | 24.01%                | 37,756                | 1    | 22.79%                |
| USD 259, Wichita               | 6,749                 | 2    | 4.28%                 | 6,861                 | 2    | 4.14%                 |
| USD 233, Olathe                | 4,082                 | 3    | 2.59%                 | 4,339                 | 3    | 2.62%                 |
| USD 500, Kansas City           | 3,165                 | 5    | 2.00%                 | 3,178                 | 5    | 1.92%                 |
| USD 512, Shawnee Mission       | 3,837                 | 4    | 2.43%                 | 4,005                 | 4    | 2.42%                 |
| USD 229, Blue Valley           | 2,977                 | 6    | 1.89%                 | 2,957                 | 6    | 1.78%                 |
| Johnson County                 | 2,633                 | 7    | 1.67%                 | 2,706                 | 7    | 1.63%                 |
| USD 501, Topeka Public Schools | 2,341                 | 8    | 1.48%                 | 2,466                 | 8    | 1.49%                 |
| Sedgwick County                | 2,256                 | 9    | 1.43%                 | 2,298                 | 9    | 1.39%                 |
| USD 497, Lawrence              | 1,595                 | 10   | 1.01%                 | 1,715                 | 10   | 1.04%                 |
| All Other <sup>(2)</sup>       | <u>90,319</u>         |      | <u>57.22%</u>         | <u>97,393</u>         |      | <u>58.79%</u>         |
| <b>Total</b>                   | <b><u>157,858</u></b> |      | <b><u>100.00%</u></b> | <b><u>165,674</u></b> |      | <b><u>100.00%</u></b> |

| Participating Government       | 2009                  |      |                       | 2008                  |      |                       |
|--------------------------------|-----------------------|------|-----------------------|-----------------------|------|-----------------------|
|                                | Covered Employees     | Rank | % of Total System     | Covered Employees     | Rank | % of Total System     |
| State of Kansas                | 38,230                | 1    | 23.38%                | 40,431                | 1    | 24.67%                |
| USD 259, Wichita               | 6,850                 | 2    | 4.19%                 | 6,748                 | 2    | 4.12%                 |
| USD 233, Olathe                | 4,625                 | 3    | 2.83%                 | 4,307                 | 3    | 2.63%                 |
| USD 500, Kansas City           | 3,324                 | 5    | 2.03%                 | 3,337                 | 5    | 2.04%                 |
| USD 512, Shawnee Mission       | 4,167                 | 4    | 2.55%                 | 4,128                 | 4    | 2.52%                 |
| USD 229, Blue Valley           | 2,983                 | 7    | 1.82%                 | 2,930                 | 7    | 1.79%                 |
| Johnson County                 | 2,476                 | 6    | 1.51%                 | 3,137                 | 6    | 1.91%                 |
| USD 501, Topeka Public Schools | 2,529                 | 8    | 1.55%                 | 2,548                 | 8    | 1.55%                 |
| Sedgwick County                | 1,847                 | 9    | 1.13%                 | 2,313                 | 9    | 1.41%                 |
| USD 497, Lawrence              | 1,766                 | 10   | 1.08%                 | 1,712                 | 10   | 1.04%                 |
| All Other <sup>(2)</sup>       | <u>94,685</u>         |      | <u>57.92%</u>         | <u>92,321</u>         |      | <u>56.32%</u>         |
| <b>Total</b>                   | <b><u>163,482</u></b> |      | <b><u>100.00%</u></b> | <b><u>163,912</u></b> |      | <b><u>100.00%</u></b> |

1) Information only available for current and prior eight years. State of Kansas includes the Board of Regents.

2) In 2015, "All Other" consisted of:

| Type                     | Number              | Covered Employees    |
|--------------------------|---------------------|----------------------|
| School Districts         | 279                 | 47,890               |
| Cities and Counties      | 466                 | 21,444               |
| Post-Secondary Education | 50                  | 12,000               |
| Other                    | <u>616</u>          | <u>10,626</u>        |
|                          | <b><u>1,411</u></b> | <b><u>91,960</u></b> |

Source: Data provided by KPERS Information Technology and Benefit and Member Services divisions.



## PRINCIPAL PARTICIPATING EMPLOYER-DEATH AND DISABILITY PLAN

*Last Nine Fiscal Years<sup>(1)</sup>*

| Participating<br>Government    | 2007                 |      | % of Total<br>System |
|--------------------------------|----------------------|------|----------------------|
|                                | Covered<br>Employees | Rank |                      |
| State of Kansas                | 37,871               | 1    | 16.55%               |
| USD 259, Wichita               | 6,590                | 2    | 4.35%                |
| USD 233, Olathe                | 4,277                | 3    | 2.82%                |
| USD 500, Kansas City           | 3,334                | 5    | 2.20%                |
| USD 512, Shawnee Mission       | 4,007                | 4    | 2.65%                |
| USD 229, Blue Valley           | 2,809                | 7    | 1.98%                |
| Johnson County                 | 3,002                | 6    | 1.85%                |
| USD 501, Topeka Public Schools | 2,469                | 8    | 1.52%                |
| Sedgwick County                | 2,309                | 9    | 1.63%                |
| USD 497, Lawrence              | 1,692                | 10   | 1.12%                |
| All Other <sup>(2)</sup>       | <u>90,826</u>        |      | <u>63.33%</u>        |
| <b>Total</b>                   | <u>159,186</u>       |      | <u>100.00%</u>       |

1) Information only available for current and prior eight years. State of Kansas includes the Board of Regents.

2) In 2015, "All Other" consisted of:

| Type                     | Number       | Covered<br>Employees |
|--------------------------|--------------|----------------------|
| School Districts         | 279          | 47,890               |
| Cities and Counties      | 466          | 21,444               |
| Post-Secondary Education | 50           | 12,000               |
| Other                    | <u>616</u>   | <u>10,626</u>        |
|                          | <u>1,411</u> | <u>91,960</u>        |

Source: Data provided by KPERS Information Technology and Benefit and Member Services divisions.

