

# STEPPING SOUNDLY

2016 Comprehensive Annual Financial Report  
for the Fiscal Year Ended June 30, 2016



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

2016 COMPREHENSIVE  
**ANNUAL  
FINANCIAL  
REPORT**

Kansas Public Employees Retirement System  
A component unit of the State of Kansas  
Fiscal year ended June 30, 2016

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

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



# 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



## KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

November 1, 2016

We are pleased to present the Kansas Public Employees Retirement System's (KPERs) Comprehensive Annual Financial Report (CAFR) for Fiscal Year 2016. 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, [kpers.org](http://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 2016.

### 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 299,000 members, including active, inactive and retired members. The Retirement System paid almost \$1.55 billion in retirement benefit payments for FY 2016. Over 85 percent of those benefits remained in Kansas. Retirement System assets totaled approximately \$17 billion at June 30, 2016.

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, 293 local public employers also participate. The plan has over 23,600 total and about 12,600



actively contributing participants. Total KPERS 457 plan assets equaled about \$925 million at the end of FY 2016. The KPERS 457 plan's financial information is not included in this CAFR.

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 portfolio to withstand short-term market volatility and economic downturns, as well as to benefit from strong economic and market 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, 2016, KPERS' 25-year average annualized total return average was 8.5 percent, exceeding the 8 percent target.

KPERS' broadly diversified investment portfolio produced a total return of

0.7 percent in FY 2016, underperforming the KPERS Policy Index by 0.5 percent for the fiscal year. As in the previous year, FY 2016 was characterized by substantial global financial market volatility.

The Retirement System's investment portfolio ended the fiscal year at approximately \$17 billion in assets. For more information about KPERS diversified and disciplined approach to executing our investment strategy, please refer to the investment section in this report, beginning on page 56. This section also provides details about our asset allocation and a general overview of each asset class and its performance.

### FINANCIAL POSITION AND FUNDING OUTLOOK

For well over 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, 2015, actuarial valuation continues to show the System's financial health is slowly improving and headed in the right direction.

- Funded ratio increased by 5 percent
- Unfunded actuarial liability decreased by almost \$1 billion
- Contribution rates for Local employers, KP&F and Judges are at the actuarially required contribution rate for employers and beginning to decrease.

In August of 2015 the State of Kansas sold \$1 billion in pension obligation bonds and the proceeds were deposited in the KPERS Trust Fund. The State is responsible for paying the annual debt service on the bonds.

At the date of this report, projections continue to show the unfunded actuarial liability will extinguish in 2033 as scheduled. It is important to remember that to meet this projection, long-term investment returns are crucial, in addition to the State meeting its obligation of consistent employer contributions over time.

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

### UNFUNDED ACTUARIAL LIABILITY

According to the December 31, 2015, actuarial valuation, the System's unfunded actuarial liability (UAL) decreased by about \$1 billion to \$8.5 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 \$9.5 billion as of December 31, 2014. The Retirement System's UAL is projected to hold fairly steady for several years until we see the full results of KPERS employer contribution rates catching up with the actuarially determined rates.

The UAL decreased this year due in large part to past positive investment returns and proceeds from pension obligation bonds sold by the State of Kansas in August 2015. The deposit of bond proceeds into the KPERS Trust Fund had the effect of immediately lowering the unfunded actuarial liability. The debt service on the bonds is an obligation of the State General Fund, not the KPERS Trust Fund.

### FUNDED RATIO

The valuation also showed the System's new funded ratio was 67 percent, up from 62 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 investment target over time and increasing employer contributions.

**LEGISLATION**

While legislation in 2015 provided for issuing pension obligation bonds, it also reduced previously certified employer contribution rates for FY 2016 and FY 2017. In addition to the reduction, the 2016 Legislature passed legislation which provided for the delay of up to \$100 million in State/School contributions for FY 2016 and repayment with 8% interest by June 30, 2018. The Governor used this special authority to delay the State’s employer contributions for the fourth quarter of FY 2016. The delayed payment plus interest equals \$115 million. As result, the KPERS’ Board of Trustees increased the target allocation for cash equivalents from 2 percent to 3 percent in order to be able to meet the System’s liquidity needs without disrupting long-term investments.

In 2016, the Legislature also passed legislation further revising the working-after-retirement rules and the Deferred Retirement Option Program (DROP) for KP&F members with the Kansas Highway Patrol, along with other various technical and clarifying amendments.

KPERS also received legislative approval during the 2016 session for the KPERS 457 plan to offer two new options to local employers, a 401(a) plan that accepts voluntary employer contributions and a 457 Roth option that allows participants to save with post-tax dollars. State employees will also have the Roth options beginning in January 2017. Lastly, KPERS and the KPERS 457 Plan will also have the ability to begin data coordinating initiatives that should ultimately allow participants to have a fuller picture of their retirement savings progress and projections. The KPERS 457 plan’s financial information is not included in this CAFR.

**MAJOR INITIATIVES AND ACCOMPLISHMENTS**

**Triennial Asset Liability Study**

KPERS completed its triennial asset/liability study. The study uses statistical and actuarial methods to project the future growth path of both assets and liabilities. These projections help determine the asset allocation that, when combined with future contributions, most effectively and efficiently supports benefit payments.

After reviewing several investment policy options, all of which contained an emphasis on improving funding programs over time, the KPERS’ Board confirmed that the existing long-term investment policy remains competitive across a variety of risk factors and readopted the current long-term asset allocation targets.

**Working-After-Retirement Legislation Implementation**

The 2015 Legislature initially made significant changes to the

employer and employee rules for those who retire and return to work for a KPERS employer, effective July 1, 2016. Additional legislation in 2016 further defined and made some modifications to the statute. All of these changes affect State, School and Local employers, although some rules vary by group.

Essentially the new rules support the IRS regulation for no “prearrangement” and create penalties for noncompliance. They also create a common annual earnings limit of \$25,000 for KPERS retirees, regardless of which KPERS employer they return to. It also requires employer contributions on their wages and creates some exceptions to the general rules for special education teachers, hard-to-fill positions and instances of a hardship. KP&F retirees’ now have a \$25,000 earnings limit, up from \$15,000.

KPERS spent significant resources implementing these changes, including modifying our IT systems and administrative processes and procedures. We also used various communication channels to educate employers and members about these changes.

**Basic and Optional Life Insurance**

KPERS provides basic life insurance to KPERS and Judges members equal to 150 percent of their salary. In addition, the System offers optional life insurance to all State employees and the employees of Local employers affiliated to offer the benefit.

As part of our fiduciary duty, KPERS published a Request for Proposal to garner the best value for our members in cost and benefit offerings. After an extensive RFP process KPERS selected Standard Insurance Company. KPERS’ decision to partner with The Standard was based on lower overall program costs, lower premiums for members and enhanced benefits.

KPERS staff worked extensively with The Standard’s transition team to implement the change effective July 1, 2016.

**BY THE NUMBERS—IN FY 2016:**

- About 1,000,000 retirement benefit payments totaling almost \$1.55 billion
- 5,876 pension inceptions
- 46,000 beneficiary designations
- \$19.7 million in life insurance benefits
- 31,000 member enrollments and transfers
- 11,000 withdrawals totaling \$48.8 million
- \$21 million in benefits to 2,400 disabled employees
- 103,750 incoming calls with an average wait time of 10 seconds
- 22,000 email 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 \$79. Benchmarking results continue to show KPERS is delivering good customer service for a low, economical cost.

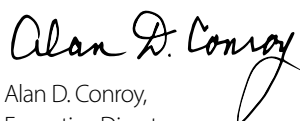
The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Retirement System for the 2015 CAFR. The Certificate of Achievement is a prestigious national award, recognizing conformance with the highest 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 22 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 2016 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, CHAIRPERSON**

Manhattan, Vice President for Investments/Chief Investment Officer, Kansas State University Foundation  
Appointed by the Governor

**KELLY ARNOLD, VICE-CHAIRPERSON**

Wichita, County Clerk, Sedgwick County  
Appointed by the Governor

**ERNIE CLAUDEL**

Olathe, Retired teacher and administrator  
Elected member – school

**SHAWN CREGER**

Prairie Village, Financial Advisor, Edward Jones  
Appointed by the Speaker of the House

**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

**SURESH RAMAMURTHI**

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

**MICHAEL ROGERS**

Manhattan, Certified Public Accountant  
Appointed by the Governor

## OUR ORGANIZATION

**BOARD OF TRUSTEES**

**EXECUTIVE DIRECTOR, ALAN D. CONROY**

**ADMINISTRATION**

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

**INVESTMENTS**

Chief Investment Officer, Elizabeth B.A. Miller, CFA  
Equity Investments  
Real Estate Investments  
Fixed Income Investments  
Alternative Investments

**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	Mary Beth Green	Ron Robinson
Kimberly “Kim” Adams	Joseph Haverkamp	Dean Roney
Crystie Amaro	Elizabeth (Lisa) Hernandez	Jamie Rose
Michael Arvidson Jr	Candice Heth	Rika Rowe
Cole Bailey	John Hooker	Joshua Russell
Julie Baker	Mirel Howard	Teresa Ryan
Yohonna Barraud	Ellen Hurless	MaryAnn Sachs
Kristen Basso	Reshma Jacob	Brandon Salmans
Tyler Bean	Teresa Jurgens	John (Alan) Schuler
DuWayne Belles	Casey Kidder	Kelly Schunk
Lydia Bergman	Shannon Kuehler	Annette Scott
Dianna Berry	Annette Kuti	Hallie Shermoen
A. Kathleen Billings	Debra Lewis	Rhonda Shumway
Jenna Blood	Rebecca “Becky” Linquist	Julie Smith
Candace Blythe	Cheri (Melinda) Locke	Zach Smith
Anita Bradley	Faith Loretto	Marsha Stafford
Jeanette Branam	Jared Lowrey	Austin Sturgis
Michael Branam	Joyce Mark	Rachel Swartz
Terry Brookhouser	Heather McHardie	Maria Swinger-Inskeep
Tracy Brull	Laurie McKinnon	Raquel Talavera
Andryana Campbell	Jason McKinzie	Amber Tarrant
Russell Canaday	Judy McNeal	Carmen Torres
George Clark	Elizabeth Miller	Daniel “Dan” Tritsch
Alan Conroy	Stephanie Moore	Jessica Tufts
Andrea Davenport	Noble Morrell	Jason Van Fleet
Yolanda Dickinson	Kali Newell	Jackie VandeVelde
Ardith Dunn	Lisa Ngole	Daniel Wadsworth
Amy Dunton	Dawn Nichols	Jarod Waltner
Joyce Edington	Shawn Nix	Michaela Watson
Alexandria “Allie” Engnehl-Thomas	Marcus Peavler	Amy Whitmer
Yarlenis Ensley	Diana Peters	Alice Wietharn
Daniel Fairbank	Sammi Peterson	Eric Wigginton
Mitchell Fick	Alissa Powell	Marlin (Max) Williams
Bruce Fink	Jeeva Purushothaman	Emily Wilson
Renaë Forque	Sarah Putman	Deanna Winters
Elaine Gaer	Justin Quick	Susan “Susie” Wires
Yong (Sue) Gamblian	Teresa Quick	Krystal Yegon
Connie Gardner	Cathy Rafferty	
Billie-Jo Gerisch	Kimberley Raines	
Brandon Gil	Stacey Randles	
Michael Gilliland	Curtis Rasmusson	
Kay Gleason	Alberta Rea	
Lisa Gonzales	Norm Remp	

## CONSULTANTS AND ADVISORS

**Auditors:** Clifton Larsen Allen, Greenwood Village, CO

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

**Actuary:** Cavanaugh Macdonald, Englewood, CO

## INVESTMENT CONSULTANTS

Pavilion Alternative Group, Sacramento, CA

Pension Consulting Alliance, Inc., Encino, CA

The Townsend Group, Cleveland, OH

## INVESTMENT MANAGERS

AEW Capital Management, LP, Boston, MA

Adrian Lee & Partners, Dublin, Ireland

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

Insight Investment, 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 Timberlands Management, Jackson, MS

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

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 UnitedHealthcare 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 2015 annual report. KPERS has received the award for each of the last 22 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, 2015**

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 2016.



Public Pension Coordinating Council

### ***Public Pension Standards Award For Funding and Administration 2016***

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









# 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, 2016, 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, 2016, 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 1, 2016, 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 1, 2016

# 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, 2016. 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 \$563 million or approximately 3.4 percent to \$17.3 billion as of June 30, 2016, compared to an increase of \$118 million or approximately 0.7 percent, from \$16.6 billion to \$16.7 billion as of June 30, 2015.

The System's June 30, 2016, financial actuarial valuation calculated a total pension liability at June 30, 2016, of \$26.4 billion, compared to \$25.6 billion as of June 30, 2015, an increase of \$796 million or 3.1 percent. The net pension liability at June 30, 2016 increased to approximately \$9.2 billion, compared to \$9.0 billion as of June 30, 2015, an increase of \$239 million, or 2.7 percent percent.

As of December 31, 2015, the most recent funding actuarial valuation, the unfunded actuarial liability decreased to \$8.5 billion from \$9.5 billion from the prior year.

As of December 31, 2015, the most recent funding actuarial valuation, the Retirement System's funded ratio was 67.1 percent compared with a funded ratio of 62.3 percent for the prior year.

On a market value basis, this year's money weighted net investment rate of return was a positive 0.33 percent, compared with last year's return of a positive 3.58 percent.

Retirement benefits paid to retirees and beneficiaries increased 6.8 percent to approximately \$1.55 billion for Fiscal Year 2016, compared to \$1.45 billion in Fiscal Year 2015.

## 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, 2016, and a Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2016, 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** provides information on the system's fair value measurements of its investment portfolio within the fair value hierarchy established by generally accepted accounting principles.

**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 in general System commitments to real estate and alternative investments. This section also 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, 2016, amounted to \$17.3 billion. Following are two summary schedules, Fiduciary Net Position and Changes in Fiduciary Net Position, showing information for Fiscal Years 2016 and 2015.

### SUMMARY STATEMENT OF FIDUCIARY NET POSITION

	As of June 30, 2016	As of June 30, 2015
<b>Assets</b>		
Cash and Deposits	\$ 18,596,902	\$ 49,987,994
Receivables	270,706,082	288,896,239
Investments at Fair Value	17,099,225,041	16,584,735,006
Capital Assets and Supplies Inventory	<u>2,365,262</u>	<u>3,150,943</u>
Total Assets	<u>17,390,893,287</u>	<u>16,926,770,182</u>
<b>Liabilities</b>		
Administrative Costs	1,609,540	1,065,817
Benefits Payable	12,681,326	14,923,601
Investments Purchased	<u>120,008,923</u>	<u>217,101,001</u>
Total Liabilities	<u>134,299,789</u>	<u>233,090,419</u>
<b>Net Position</b>	<u>\$17,256,593,498</u>	<u>\$16,693,679,763</u>

SUMMARY STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

	Year Ended June 30, 2016	Year Ended June 30, 2015
<b>Additions</b>		
Contributions*	\$ 2,192,161,987	\$ 1,138,895,486
Net Investment Income Other than Securities Lending	49,358,355	557,083,417
Net Investment Income from Securities Lending Activity	—	4,117,512
Total Net Investment Income	<u>49,358,355</u>	<u>561,200,929</u>
Other Miscellaneous Income	<u>2,916,587</u>	<u>1,080,794</u>
Total Additions	<u>2,244,436,929</u>	<u>1,701,177,209</u>
<b>Deductions</b>		
Monthly Retirement Benefits	1,548,362,854	1,449,898,078
Refunds	68,122,735	64,461,998
Death Benefits	10,545,850	10,019,588
Insurance Premiums and Disability Benefits	41,722,791	47,512,701
Administrative	<u>12,768,964</u>	<u>11,265,990</u>
Total Deductions	<u>1,681,523,194</u>	<u>1,583,158,355</u>
Net Increase	<u>562,913,735</u>	<u>118,018,854</u>
Net Position Beginning of Year	<u>16,693,679,763</u>	<u>16,575,660,909</u>
Net Position End of Year	<u>\$ 17,256,593,498</u>	<u>\$ 16,693,679,763</u>

\*The State of Kansas issued pension obligation bonds, 2015H, in August 2015.

**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 System were approximately \$1.19 billion in Fiscal Year 2016, compared to approximately \$1.14 billion in Fiscal Year 2015. In addition, the State of Kansas issued pension obligation bonds, 2015H, in August 2015, with proceeds of \$1.0 billion. The State will pay the annual debt service on the bonds.

The System recognized a net investment income of \$49.4 million for Fiscal Year 2016. Total time weighted return for the portfolio net of fees, was 0.3 percent, compared with the benchmark return of 1.2 percent. System investments at fair value amounted to \$17.1 billion at June 30, 2016. 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.

2016				
	Last 3 Years	Last 5 Years	Last 10 Years	Last 25 Years*
1 Year	0.3%	7.0%	7.1%	5.9%
	0.3%	7.0%	7.1%	5.9%

\*estimated

The System recognized a net investment income of \$562 million for the 2015 Fiscal Year. System investments at fair value amounted to \$16.6 billion at June 30, 2015.

At June 30, 2016, the System held \$9.1 billion in U.S. equity and international equity securities. U.S. equity and international equity securities earned returns of approximately 2.0 percent and negative 10.2 percent, respectively, for the 2016 Fiscal Year.

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 Fiscal Year.

The System held \$5.0 billion in U.S. debt and international debt securities at June 30, 2016. The net performance of the System’s fixed income securities during Fiscal Year 2016 was 4.8 percent. Real estate investments amounted to \$1.8 billion at June 30, 2016, and returned approximately 13.6 percent for the 2016 Fiscal Year. The System held \$761.7 million in private equities which earned a return of approximately 3.2 percent for the 2016 Fiscal Year. At June 30, 2016, the System held \$454.0 million in short-term investments. Cash and deposits



include investment cash and foreign currencies held at the custodial bank as of June 30, 2016, totaling approximately \$6.9 million.

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 Fiscal Year 2015 was 1.2 percent. Real estate investments amounted to \$1.6 billion at June 30, 2015. Real estate investments returned approximately 17.2 percent for the 2015 Fiscal Year. The System held \$605.9 million in alternative investments. Alternative investments earned a return of approximately 10.2 percent for the 2015 Fiscal Year. At June 30, 2015, the System held \$127.1 million in short-term investments. Cash and foreign currencies held at the custodial bank as of June 30, 2015, were approximately \$32.2 million.

Deductions from net assets held in trust for benefits include retirement, refunds, death and insurance and survivor benefits, and administrative expenses. For the 2016 Fiscal Year, retirement, death and insurance benefits amounted to approximately \$1.7 billion, an increase of \$96.9 million or 6.2 percent from Fiscal Year 2015. For the 2016 Fiscal Year, System administrative expenses amounted to \$12.8 million, an increase of \$1.5 million from Fiscal Year 2015. The ratio of System administrative expenses to the number of members continues to be very cost-efficient compared to other statewide retirement plans.

#### **PENSION VALUATION**

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

The annual financial actuarial valuation for the System, required by GASB Statement 67, as of June 30, 2016, 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, 2015, 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 Fiscal Year 2014, 1.0 percent in Fiscal Year 2015, 1.1 percent in Fiscal Year 2016 and 1.2 percent in Fiscal Year 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.

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 Fiscal Year 2016 and 10.81 percent in Fiscal Year 2017.

The 2016 Legislature also passed and the Governor approved Senate Bill 161, authorizing the delay of up to \$100 million in KPERS contributions. The bill requires that the delayed Fiscal Year 2016 contributions be paid by June 30, 2018 with interest at eight percent. The amount delayed, \$97.4 million, has been set up as a long-term receivable.

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, 2016

	Pension Plan	Optional Group Life Insurance	Group Death & Disability Benefits	Total
<b>Assets:</b>				
Cash	\$ 11,421,732	\$ 157,652	\$ 35,545	\$ 11,614,929
Cash at Custodial Bank	6,932,605	—	—	32,213,224
Deposits with Insurance Carrier	—	—	49,368	49,368
<b>Total Cash</b>	<u>18,354,337</u>	<u>157,652</u>	<u>84,913</u>	<u>18,596,902</u>
Receivables:				
Contributions	206,170,918	66,161	126,636	206,363,715
Investment Income	34,593,637	—	25,097	34,618,734
Sale of Investment Securities	<u>29,723,633</u>	<u>—</u>	<u>—</u>	<u>29,723,633</u>
<b>Total Receivables</b>	<u>270,488,188</u>	<u>66,161</u>	<u>151,733</u>	<u>270,706,082</u>
Investments at Fair Value:				
Domestic Equities	5,513,806,657	—	—	5,513,806,657
International Equities	3,599,589,402	—	—	3,599,589,402
Short Term	390,124,450	—	63,883,515	454,007,965
Fixed Income	4,964,359,683	—	—	4,964,359,683
Alternative Investments	761,716,336	—	—	761,716,336
Real Estate	<u>1,805,744,998</u>	<u>—</u>	<u>—</u>	<u>1,805,744,998</u>
Total Investments	<u>17,035,341,526</u>	<u>—</u>	<u>63,883,515</u>	<u>17,099,225,041</u>
Capital Assets and Supplies Inventory	<u>2,365,262</u>	<u>—</u>	<u>—</u>	<u>2,365,262</u>
<b>Total Assets</b>	<u>17,326,549,313</u>	<u>223,813</u>	<u>64,120,161</u>	<u>17,390,893,287</u>
<b>Liabilities:</b>				
Administrative Costs	1,587,521	22,019	—	1,609,540
Benefits Payable	12,520,498	—	160,828	12,681,326
Securities Purchased	<u>120,008,923</u>	<u>—</u>	<u>—</u>	<u>120,008,923</u>
<b>Total Liabilities</b>	<u>134,116,942</u>	<u>22,019</u>	<u>160,828</u>	<u>134,299,789</u>
<b>Net Position Restricted for Pensions</b>	<u>\$ 17,192,432,371</u>	<u>\$ 201,794</u>	<u>\$ 63,959,333</u>	<u>\$ 17,256,593,498</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, 2016

	Pension Plan	Optional Group Life Insurance	Group Death & Disability Benefits	Total
<b>Additions:</b>				
Contributions:				
Member Contributions	\$ 404,856,256	\$ 6,257,252	\$ —	\$ 411,113,517
Employer Contributions*	1,739,183,965	—	41,864,505	1,781,048,470
<b>Total Contributions</b>	<u>2,144,040,230</u>	<u>6,257,252</u>	<u>41,864,505</u>	<u>2,192,161,987</u>
<b>Investments:</b>				
Net (Depreciation) in Fair Value of Investments	(267,355,951)	—	—	(267,355,951)
Interest	137,690,917	—	188,458	137,879,375
Dividends	155,549,081	—	—	155,549,081
Real Estate Income, Net of Operating Expenses	83,484,581	—	—	83,484,581
Other Investment Income	10,708,728	—	—	10,708,728
	120,077,356	—	188,458	120,265,814
Less Investment Expense	70,907,459	—	—	70,907,459
Net Investment Income	49,169,897	—	188,458	49,358,355
<b>Other Miscellaneous Income</b>	<u>2,904,581</u>	<u>1,607</u>	<u>10,399</u>	<u>2,916,587</u>
<b>Total Additions</b>	<u>2,196,114,708</u>	<u>6,258,859</u>	<u>42,063,362</u>	<u>2,244,436,929</u>
<b>Deductions:</b>				
Monthly Retirement Benefits Paid	1,548,362,854	—	—	1,548,362,854
Refunds of Contributions	68,122,735	—	—	68,122,735
Death Benefits	10,545,850	—	—	10,545,850
Insurance Premiums and Disability Benefits	—	6,118,390	35,604,401	41,722,791
Administrative Expenses	12,171,633	75,842	521,489	12,768,964
<b>Total Deductions</b>	<u>1,639,203,072</u>	<u>6,194,232</u>	<u>36,125,890</u>	<u>1,681,523,194</u>
<b>Increase in Net Position</b>	556,911,636	64,627	5,937,472	562,913,735
<b>Net Position Restricted for Pensions</b>				
<b>Beginning of Year</b>	16,635,520,735	137,167	58,021,861	16,693,679,763
<b>End of Year</b>	<u>\$17,192,432,371</u>	<u>\$ 201,794</u>	<u>\$ 63,959,333</u>	<u>\$17,256,593,498</u>

\* The State of Kansas issued pension obligation bonds, Series 2015H, in August 2015.

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, 2015, (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>	89,035	5,041	257	94,333
Terminated employees entitled to benefits but not yet receiving them	20,583	153	8	20,744
Deferred disabled	2,210	210	0	2,420
Inactive members not entitled to benefits	28,905	1,090	0	29,995
Current employees	144,669	7,244	262	152,175
Total	<u>285,402</u>	<u>13,738</u>	<u>527</u>	<u>299,667</u>

(1) Represents System Membership at December 31, 2015.  
 (2) Number of retirement payees as of December 31, 2015.

### NUMBER OF PARTICIPATING EMPLOYERS

Participating employers by statewide pension group as of June 30, 2016, are as follows:

#### NUMBER OF PARTICIPATING EMPLOYERS

	KPERs	KP&F	Judges
State of Kansas	1	1	1
Counties	105	31	—
Cities	364	63	—
Townships	61	—	—
School Districts	286	—	—
Libraries	122	—	—
Conservation Districts	83	—	—
Extension Councils	66	—	—
Community Colleges	19	—	—
Educational Cooperatives	24	—	—
Recreation Commissions	44	1	—
Hospitals	29	—	—
Cemetery Districts	13	—	—
Other	203	—	—
Total	<u>1,420</u>	<u>96</u>	<u>1</u>

### PLAN BENEFITS

Benefits are established by statute and may only be changed by the 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 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 fiscal years 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 1.1 percent of total payroll for the fiscal year ended June 30, 2016.

The actuarially determined employer contribution rates (not including the 1.00 percent contribution rate for the Death and Disability Program) and the statutory contribution rates are as follows:

	Actuarial Employer Rate	Statutory Cap Rate
State employee	11.44%	10.91% <sup>(1)</sup>
School employee	16.00	10.91 <sup>(1)</sup>
Judges	23.98	23.98
Local Government employee <sup>(2)</sup>	9.18	9.18
Police and Firemen <sup>(2)</sup>	20.42	20.42

(1) The 2015 legislature passed and the governor approved Senate Bill 228, which authorized the issuance of \$1 billion in pension obligation bonds. This legislation also reset the state/school statutory rate to 10.91 percent for Fiscal Year 2016 and 10.81 percent for Fiscal Year 2017.

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

Employee contribution rates as a percentage of eligible compensation in Fiscal Year 2016 are 6.0 percent for Public Employees, 7.15 percent for Police and Firemen and 6.0 percent or 2.0 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 Short Term Investments to include both Money Market Investments (MMI) and Money Market Funds (MMF) as defined in GASB Statement 31 and discussed in GASB Statement 72. MMI are highly liquid debt instruments

purchased within one year of maturity, including U.S. Treasury and Agency obligations. Asset-backed securities, derivatives and structured notes are not included in MMI. MMF are an open-end mutual fund that complies with the SEC Rule 2a7. Money Market Funds utilized by the System are similar purpose funds managed and provided through the custodian bank.

**METHOD USED TO VALUE INVESTMENTS**

Investments are reported at fair value. Active, publicly traded securities are priced using industry standard methods consistent with the asset class being priced. 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 annual 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 partnerships as reported by the general partner. Dividends are recorded on the ex-dividend date. Note 5 – Fair Value Measurement includes additional information.

**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 percent of the total investment assets 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 24 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 Board of Trustee’s adopted asset allocation policy as of June 30, 2016:

Asset Class	Interim Target Allocation
Domestic Equities	28.0%
International Equities	24.0
Yield Driven <sup>(1)</sup>	8.0
Real Return <sup>(2)</sup>	11.0
Fixed	12.0
Short Term Investments	3.0
Real Estate	9.0
Alternatives	5.0
	100.0%

*(1) The Yield Driven asset class above, is reported in domestic equities and fixed income on the Statement of Fiduciary Position.  
 (2) The Real Return asset class above, is reported in fixed income and real estate on the Statement of Fiduciary Position.*

The System’s asset allocation and investment policies include active and passive investments in international securities. The Systems target allocation is to have 24.0 percent of assets in dedicated international equities. At June, 30 2016, the System utilized two currency overlay managers to reduce risk by hedging up to 100 percent of the developed foreign currency market for international equity portfolios. At June 30, 2016, the System’s total foreign currency exposure was 60.8 percent hedged.



Equities are considered to be common or preferred corporate stocks; warrants or rights; preferred stock which is 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. Core fixed managers invest in large, liquid sectors generally consistent with their benchmark. Strategic fixed managers seek investments from the complete range of global fixed income securities. 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).

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 or natural resources. 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.

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, 2016, the outstanding balance was \$6,327,937. These payments are due over various time periods up through December 31, 2032.

The 2016 Legislature passed and the Governor approved Senate Bill 161, authorizing the delay of up to \$100 million in KPERS State/School contributions. The bill requires that the delayed Fiscal Year 2016 contributions be paid by June 30, 2018, with interest at eight percent. The long term receivable of the delayed contributions plus interest as of June 30, 2016, totals \$99,022,353 and is included in Contributions Receivable in the Statement of Fiduciary Net Position.

#### 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, 2016, was \$18,425,731. In Fiscal Year 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, 2016, was \$2,831,220. The office building and garage are being depreciated over a period of 33 years on an accelerated method. At June 30, 2016, the carrying value of the System's administrative headquarters was \$786,937.

#### USE OF ESTIMATES

The preparation of financial statements in conformity with GAAP requires the System's 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**

The System 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. 72, Fair Value Measurements. KPERS adopted GASB Statement No. 72 during the fiscal year ended June 30, 2016. This Statement addresses accounting and financial reporting issues related to fair value measurements. It defines an investment, defines fair value, and generally requires investments to be measured at fair value. It also requires disclosures to be made about where the fair value measurements fit in the fair value hierarchy, and about valuation techniques used to measure fair value. The adoption of this Statement resulted in expanded note disclosures regarding KPERS' fair value measurements.

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 Fiscal Year 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 Fiscal Year 2018.

GASB Statement No. 82, Pension Issues, an amendment of GASB Statements No. 67, No. 68, and No. 73. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes

and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. Retirement System management is evaluation this Statement. It is effective for Fiscal Year 2017.

## 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, 2016, the Retirement System's deposits with its disability administrator were \$49,368. 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, 2016, at fair value:

Investment Type	Fair Value
Domestic Equities	\$ 5,513,806,657
International Equities	3,599,589,402
Fixed Income:	
U.S. Government	2,005,355,156
U.S. Agencies	406,487,107
U.S. Corporate	2,012,547,500
Foreign Fixed Income	539,969,920
Short Term Investments	454,007,965
Real Estate:	
Partnerships	515,666,047
Commingled Funds	1,172,792,547
Separate Accounts	117,286,404
Alternatives/Private Equities	761,716,336
Total	<u>\$ 17,099,225,041</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, 2016 the custodian bank held \$2.1 million overnight for the System subject to FDIC insurance limits. With that exception, one hundred percent (100 percent) of the Systems 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 (11.3 percent) and Agencies (2.8 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, 2016.

	USD Equivalent				
Equity	Fixed	Currency	Total	Percent	
\$ 114,375,902	\$ 6,829,908	Australian Dollar	\$ 121,205,810	3.28%	
17,754,132	1,967,096	Brazil Real	19,721,228	0.53	
128,341,804	20,817,486	Canadian Dollar	149,159,290	4.04	
2,413,885	—	Chilean Peso	2,413,885	0.07	
956,116	3,497,312	Colombian Peso	4,453,428	0.12	
358,466	—	Czech Koruna	358,466	0.01	
82,138,041	1,723,396	Danish Krone	83,861,437	2.27	
443,185	—	Egyptian Pound	443,185	0.01	
822,319,067	155,406,138	Euro Currency Unit	977,725,205	26.51	
602,489,792	251,383,942	Great Britain Pound	853,873,734	23.15	
183,916,042	—	Hong Kong Dollar	183,916,042	4.98	
546,645	9,785,309	Hungarian Forint	10,331,954	0.28	
16,955,807	4,777,574	Indian Rupee	21,733,381	0.59	
5,470,770	—	Indonesian Rupiah	5,470,770	0.15	
8,326,997	—	Israeli New Sheqel	8,326,997	0.23	
552,267,826	39,876,676	Japanese Yen	592,144,502	16.05	
5,944,927	—	Malaysian Ringgit	5,944,927	0.16	
14,899,517	20,295,606	Mexican New Peso	35,195,123	0.95	
12,551,650	14,641,156	New Zealand Dollar	27,192,806	0.74	
43,926,797	—	Norwegian Krone	43,926,797	1.19	
3,175,620	—	Philippines Peso	3,175,620	0.09	
2,324,764	—	Polish Zloty	2,324,764	0.06	
1,832,473	—	Qatari Rial	1,832,473	0.05	
96	1,947,295	Russian Ruble	1,947,391	0.05	
36,756,670	—	Singapore Dollar	36,756,670	1.00	
3	—	Peruvian Nouveau Sol	3		
—	—				
39,158,537	—	S African Comm Rand	39,158,537	1.06	
91,458,043	—	South Korean Won	91,458,043	2.48	
83,994,704	7,017,745	Swedish Krona	91,012,449	2.47	
191,237,637	—	Swiss Franc	191,237,637	5.18	
59,879,257	—	Taiwan New Dollar	59,879,257	1.62	
15,528,369	—	Thailand Baht	15,528,369	0.42	
6,326,311	—	Turkish New Lira	6,326,311	0.17	
1,651,685	—	United Arab Emirates Dirham	1,651,685	0.04	
<u>\$3,149,721,537</u>	<u>\$539,966,639</u>		<u>\$3,689,688,176</u>	<u>100.00%</u>	

**CREDIT RISK**

Credit risk is the risk that an issuer or other counterparty to a debt investment will not fulfill its obligations. Each fixed portfolio manager is required to maintain a reasonable risk level relative to its benchmark.

In the following table, Money Market 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, 2016, subject to credit risk are shown with current credit ratings.

CREDIT RISK

(In thousands)

Quality Rating	Money Market Investments	Corporate	U.S. Government	Agency	Total
Not Rated	\$ 127,412	\$ 130,009	\$ -	\$ -	\$ 257,421
AAA	201,347	210,774	1,924,960	1,431	2,338,512
AA	21,390	423,533	80,395	405,056	930,374
A	44,132	367,305	-	-	411,437
BBB	22,031	834,485	-	-	856,516
BB	-	342,824	-	-	342,824
B	-	175,923	-	-	175,923
CCC	-	65,456	-	-	65,456
CC	-	8,365	-	-	8,365
C	-	78	-	-	78
D	-	7,383	-	-	7,383
Total	<u>\$ 416,312</u>	<u>\$ 2,566,135</u>	<u>\$ 2,005,355</u>	<u>\$ 406,487</u>	<u>\$ 5,394,289</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 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 the following grouped by effective duration ranges. The weighted effective durations shown in the following table are grouped by asset category.

INTEREST RATE RISK

Effective Duration	Money Market Investments	Corporate	U.S. Government	Agency	Total
0 - 1 Yr	\$ 416,312	\$ 305,853	\$ 217,010	\$ 41,424	\$ 980,599
1 - 3 Yrs	-	422,888	261,193	277,268	961,349
3 - 5 Yrs	-	531,384	199,625	71,777	802,786
5 - 10 Yrs	-	893,432	1,090,334	5,004	1,988,770
> 10 Yrs	-	412,578	237,193	11,014	660,785
Grand Total	<u>\$ 416,312</u>	<u>\$ 2,566,135</u>	<u>\$ 2,005,355</u>	<u>\$ 406,487</u>	<u>\$ 5,394,289</u>

**ANNUAL MONEY-WEIGHTED RATE OF RETURN**

For the year ended June 30, 2016, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 0.33 percent. This return was 3.58 percent for Fiscal Year 2015. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

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.
- 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.

The following table summarizes the derivatives held by the Retirement System as of June 30, 2016.

#### INVESTMENT DERIVATIVE SUMMARY

	Asset Class <sup>(1)</sup>	Notional Value	Fair Value
Domestic Equity Futures	Domestic Equities	\$ 22,706,033	\$ —
International Equity Futures	International Equities	15,336,825	—
Fixed Futures	Fixed	(123,238,654)	—
Credit Default Swaps	Fixed	20,500,000	659,844
TBA Agency Bonds <sup>(2)</sup>	Fixed	70,127,976	70,127,976
Foreign Currency Forwards	Fixed	4,813,141,873	52,406,656
Options Purchased	Fixed	63,637,500	467,500

(1) 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.

(2) 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, 2016, at fair value:

#### INVESTMENT DERIVATIVE FAIR VALUES

	June 30, 2015	Increases	Decreases	June 30, 2016
Pay Fixed Interest Swaps	\$ 187,790	\$ 1,918,328	\$ (2,106,118)	\$ —
Credit Default Swaps	1,960,193	21,159,844	(22,460,193)	659,844
TBA Agency Bonds (2)	65,361,037	1,068,759,788	(1,063,992,849)	70,127,976
Foreign Currency Forwards	(14,167,542)	93,353,645	(26,779,447)	52,406,656
Options Purchased	4,328	5,131,781	(4,668,609)	467,500
	<u>\$53,345,806</u>	<u>\$ 1,190,323,386</u>	<u>\$(1,120,007,216)</u>	<u>\$ 123,661,976</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, 2016, the System had total net margins receivable the next day of \$79,438. 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 losses of \$31.6 million were associated with futures for the year ending June 30, 2016.

#### 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 off-setting 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. Foreign currency forwards are reflected on the financial statements in offsetting notional receivable and payable amounts for the two sides of the contract. Fair value is reflected as unrealized gains or losses when currency rates fluctuate during the life of the contract.

The Retirement System utilizes two currency overlay managers to reduce, or partially hedge, the System’s exposure to foreign currencies through the international equities portfolio. At June 30, 2016, the fair value of international equities was \$3.6 billion. The overlay managers evaluate the System’s international equities exposure to currencies, and buy/sell inverse currency forwards in relation to the overall currency exposures. The inverse relationship of these hedging investment 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 forward contracts are purchased as needs are determined by the hedge manager, and mature quarterly. 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. An investment 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.

Following is a summary of the foreign currency forwards exposure at the fiscal year ended June 30, 2016:

## INVESTMENT CURRENCY FORWARDS

	Notional Cost (USD)	Pending ForeignExchange Receivables (USD)	Pending Foreign Exchange Payables (USD)	Fair Value June 30, 2016 (USD)
Australian Dollar	\$ 173,003,729	\$ 172,916,735	\$ (173,353,552)	\$ (436,816)
Brazil Real	2,564,420	2,580,578	(2,579,783)	795
British Pound	1,532,953,681	1,523,055,148	(1,471,991,431)	51,063,716
Canadian Dollar	218,509,629	218,747,951	(217,034,514)	1,713,437
Danish Krone	41,024,703	41,024,436	(40,277,899)	746,537
Euro Currency Unit	1,533,792,015	1,531,323,093	(1,515,481,557)	15,841,536
Hong Kong Dollar	172,615,654	172,618,237	(172,639,658)	(21,422)
Hungarian Forint	21,105,121	20,937,887	(20,616,383)	321,504
Indian Rupee	5,526,273	5,484,087	(5,526,273)	(42,186)
Israeli Sheqel	38,780,500	38,543,302	(38,780,500)	(237,198)
Japanese Yen	593,912,279	596,158,528	(616,571,763)	(20,413,235)
Mexican New Peso	22,597,297	22,707,943	(22,308,493)	399,450
New Zealand Dollar	132,230,464	133,417,447	(133,143,647)	273,800
Norwegian Krone	23,260,830	23,259,479	(22,666,776)	592,703
Singapore Dollar	37,407,897	37,577,799	(37,490,471)	87,328
South Korean Won	4,078,984	4,074,203	(4,078,984)	(4,781)
Swedish Krona	58,506,035	58,347,846	(57,558,700)	789,147
Swiss Franc	189,557,670	189,371,506	(187,598,921)	1,772,585
Taiwan Dollar	11,714,692	11,652,442	(11,692,686)	(40,244)
	<u>\$ 4,813,141,873</u>	<u>\$ 4,803,798,647</u>	<u>\$ (4,751,391,991)</u>	<u>\$ 52,406,656</u>

Investment Forwards Counterparty Exposure at June 30, 2016, is as follows:

INVESTMENT FORWARDS COUNTERPARTY EXPOSURE

Counterparty Name	Notional \$USD	Fair Value	Worst Long-Term Rating
Australia and New Zealand Banking Group	\$ 268,900,531	\$ 4,458,422	AA
Bank of America, N.A.	471,056,899	(574,314)	A
Barclays Bank PLC Wholesale	917,780,586	21,116,772	A
BNP Paribas SA	34,716,963	(2,293,147)	A
Citibank N.A.	287,264,452	3,739,663	A
Deutsche Bank AG	39,791,834	(32,993)	BBB
Goldman Sachs International	62,655,810	1,142,185	A
HSBC Bank PLC	491,337,263	6,915,435	A
Income Repatriation Boston IBS (Bs2)	359,639	(2,292)	NR
JPMorgan Chase Bank N.A.	16,041,553	40,929	A
JPMorgan Chase Bank NA London	601,588,502	5,497,898	A
Morgan Stanley and Co. International PLC	8,199,969	313,031	A
National Australia Bank Limited	193,488,197	7,836,898	AA
Royal Bank of Canada (UK)	228,910,632	(454,193)	AA
Royal Bank of Scotland PLC	7,861,813	(8,403)	BBB
Standard Chartered Bank	91,968,719	581,602	A
State Street Bank and Trust Company	27,282,469	17,879	AA
State Street Bank London	308,391,105	3,450,046	A
Subcustodian	4,078,984	(4,781)	NR
Toronto Dominion Bank	202,713,635	(4,918,824)	AA
UBS AG London	46,213,228	(71,503)	A
Westpac Banking Corporation	502,539,090	5,656,346	AA
	<u>\$ 4,813,141,873</u>	<u>\$ 52,406,656</u>	

## NOTE 5 – FAIR VALUE MEASUREMENT

The Retirement System categorizes fair value measurements of investment assets and liabilities within the fair value hierarchy established by generally accepted accounting principles. As a pension fund, 100 percent of the System’s custodied assets and liabilities are held primarily for income or profit for the purpose of paying current or future member benefits. These investments are valued through industry standard practices for the respective type of security at a price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The hierarchy is based on the transparency of inputs to the valuation of the assets as of the measurement date. The three levels are defined as follows:

**Level 1** - Inputs to the valuation methodology are quoted prices for identical instruments in active markets.

**Level 2** - Inputs other than quoted prices are observable, either directly or indirectly.

**Level 3** - One or more significant inputs to the valuation methodology are unobservable.

The following table presents the Retirement System’s recurring fair value measurements as of June 30, 2016.

## INVESTMENTS AND DERIVATIVE INSTRUMENTS MEASURED AT FAIR VALUE

	Total as of 6/30/2016	Fair Value Measurements Using:		
		Quoted prices in active markets for identical assets Level 1	Significant other observable inputs Level 2	Significant unobservable inputs Level 3
<i>Investments by Fair Value Level</i>				
<b>Debt Securities</b>				
US Treasury	\$ 1,032,632,596	\$ 67,229,524	\$ 965,403,072	\$ —
US Treasury Commingled	892,327,566	—	892,327,566	—
GNMA	80,394,994	—	80,394,994	—
US Agency	336,359,131	—	336,359,131	—
US Corporate, Municipalities	1,703,076,574	—	1,702,828,617	247,957
US Bank Loans	84,166,350	—	84,166,350	—
Yankees	224,180,514	—	224,180,514	—
International	539,966,639	—	539,966,639	—
<b>Total Debt Securities</b>	<b>4,893,104,364</b>	<b>67,229,524</b>	<b>4,825,626,883</b>	<b>247,957</b>
<b>Equity Securities</b>				
Domestic Common Stock	3,429,519,610	3,429,519,610	—	—
Domestic Commingled and ETF	2,070,201,736	2,070,201,736	—	—
International Common	2,234,783,091	2,234,783,091	—	—
International Commingled and ETF	1,364,806,310	1,364,806,310	—	—
Preferred Stock	14,085,312	14,085,312	—	—
<b>Total Equity Securities</b>	<b>9,113,396,059</b>	<b>9,113,396,059</b>	<b>—</b>	<b>—</b>
<b>Real Estate</b>				
Separate Properties	115,785,591	—	—	115,785,591
Home Office Property, Rentable Partnership	1,500,813 10,640,949	— —	— —	1,500,813 10,640,949
<b>Total Real Estate</b>	<b>127,927,353</b>	<b>—</b>	<b>—</b>	<b>127,927,353</b>
<b>Investments by Fair Value Level</b>	<b>14,134,427,776</b>	<b>9,180,625,583</b>	<b>4,825,626,883</b>	<b>128,175,310</b>
<i>Derivatives by Fair Value</i>				
Swaps, Credit Default, Buy	659,844	—	659,844	—
Put Options	94,612	3,281	91,331	—
Call Options	372,887	365,234	7,653	—
To-Be-Announced Agencies	70,127,976	—	70,127,976	—
<b>Total Derivatives by Fair Value Level</b>	<b>71,255,319</b>	<b>368,515</b>	<b>70,886,804</b>	<b>—</b>
<b>Total Investments and Derivatives by Fair Value Level</b>	<b>\$ 14,205,683,095</b>	<b>\$ 9,180,994,098</b>	<b>\$ 4,896,513,687</b>	<b>\$ 128,175,310</b>

INVESTMENTS MEASURED AT NET ASSET VALUE (NAV)

		Unfunded Commitment	Transfer or Redemption Frequency	Transfer or Redemption Notice
Private Equity Partnerships	\$ 761,716,336	1,104,331,785	Quarterly	30 days
Real Estate Partnerships	505,025,098	370,984,373	Quarterly	30 days
Real Estate Commingled Funds	1,172,792,547	50,000,000	Quarterly	30 days
Money Market Funds	<u>37,696,434</u>		no restrictions	
<b>Total investments measured at NAV</b>	2,477,230,415			
<i>Investments measured at amortized cost</i>				
Money Market Investments	<u>416,311,531</u>			
<b>Total Investments Value</b>	<u>\$ 17,099,225,041</u>			

**EQUITY SECURITIES**

Equity securities classified in Level 1 are priced by identical securities traded on an established exchange. All commingled fund values are the sum of their respective public market holdings and are leveled according to those inputs and not driven by the characteristic of the ownership

**DEBT SECURITIES**

U.S. Treasury Level 1 assets were actively traded 'on the run' at June 30, 2016. GNMA are those agencies explicitly guaranteed by the U.S. government. U.S. Corporate debt in Level 3 are those securities in inactive markets where prices have been determined to be stale or otherwise do not meet observable Level 2 criteria.

Except for the Treasury Level 1 and US Corporate Level 3 securities noted above, debt securities use Level 2 inputs priced by recognized third-party vendors based on actual prices of similar securities and utilizing industry standard models that consider various assumptions including time value, yield curves, volatility factors, default rates, credit rating and treasury rates. Significant inputs are observable in the marketplace, can be derived from observable data, or are supported by observable levels at which transactions are executed in the marketplace.

Yankee bonds are international corporate and government bonds that qualify to be sold on domestic exchanges in US dollars. Bonds in the international category are traded in local currencies and are subject to currency risk. See Note 3.

**REAL ESTATE MEASURED AT FAIR VALUE**

The Retirement System wholly owns four separate properties including timber land and its home office. These are valued according to annual independent professional appraisals and can be sold at any time. Appraisals utilize comparable sales, inventory estimates and present values of cash flows to determine respective property valuations. There are no unfunded commitments for these properties. The home office property is 50 percent System occupied and 50 percent rentable space. This building was split into two units of account at purchase. The System's portion is

included in capital assets. All but one of the System's real estate partnerships are included in the net asset value portion of this table. The real estate partnership shown at level 3 is valued at cost in its audited financial statements. Sale of this partnership would be on an inefficient secondary market that could result in value above or below that listed. Transfer to a buyer would be restricted to quarter end dates. No sale is contemplated.

**FORWARDS**

Currency forwards are included in payables and receivables on the Statement of Net Fiduciary Position. Fair value for these is reflected by adjusting those payable/receivable values for daily fluctuations in currency exchange rates. The System had \$4.8 million in outstanding currency forward contract payables and receivables at June 30, 2016. The net fluctuation in currency rates at that time increased the unrealized fair value of those contracts by \$52,406,656. See Note 4 of these financial statements for more information on KPERS derivative investments.

**INVESTMENTS MEASURED AT NET ASSET VALUE (NAV)**

For sixty-six (66) private equity partnerships, thirty-two (32) real estate partnerships and one infrastructure partnership, the fair value of each investment has been determined using the NAV per share or its equivalent of the Retirement System's ownership interest in the partners' capital. All partnerships provided audited December 31, 2015, financial reports with unmodified opinions, along with unaudited quarterly reports. Net asset values one quarter in arrears plus current quarter cash flows are used when recent information is not available. These partnerships are diversified across types and vintage years. The expected term of each partnership is between seven to ten years. Any sales of these would be on an inefficient secondary market that could result in values above or below those listed. Transfers to buyers is restricted to quarter end dates. No sales are contemplated.

Seven real estate core funds holding domestic properties are owned proportionately by investors. All fund properties have annual independent external appraisals and the fair value of each fund has been determined using the NAV per share or its



equivalent of the Retirement System's ownership interest in the partners' capital. Shares may be redeemed quarterly, with notice to the respective funds, subject to cash availability. No redemptions are contemplated.

#### MONEY MARKET FUNDS

Money Market Funds are cash investment pools provided and operated through the custodian bank. Money market investments are separate short term securities, including treasuries and agencies, purchased within one year of maturity. Fair value and amortized cost for these securities are materially equivalent.

## 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 fiscal year, 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 fiscal year'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, 2016, was \$201,793.

The balance of the System's pension reserves and the net pension liability at June 30, 2016, were as follows:

Reserves <sup>(1)</sup>	Balance	Net Pension Liability
Members Accumulated Contribution Reserve	\$ 5,942,762,790	\$ —
Retirement Benefit Accumulation Reserve	7,604,660,660	(9,218,105,439)
Retirement Benefit Payment Reserve	12,838,767,879	—
Expense Reserve	24,346,481	—
	<u>26,410,537,810</u>	<u>(9,218,105,439)</u>
Total Pension Reserves		<u>\$ 17,192,432,371</u>

(1) Optional Group Life Reserve balance of \$201,793 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, 2016, were as follows:

	KPERS
State	\$ 4,255,986,133
School	14,040,965,649
Local	4,919,334,816
KP&F	3,024,919,959
Judges	169,331,253
Total Pension Liability	<u>26,410,537,810</u>
Fiduciary Net Position	<u>17,192,432,371</u>
Employers' Net Pension Liability	<u>\$ 9,218,105,439</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	65.10%

**ACTUARIAL ASSUMPTIONS**

The total pension liability was determined by an actuarial valuation as of December 31, 2015, which was rolled forward to June 30, 2016, 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	17 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, 2015, 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, 2016, (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%	6.80%
Fixed Income	13.00	1.25
Yield Driven	8.00	6.55
Real Return	11.00	1.71
Real Estate	11.00	5.05
Alternatives	8.00	9.85
Short-term Investments	2.00	(0.25)

**DISCOUNT RATE**

The discount rate used to measure the total pension liability was 8 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 (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Net Pension Liability	\$12,169,855,880	\$9,218,105,439	\$6,712,855,349

## 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.

In August 2015, the State of Kansas issued \$1 billion in pension obligation bonds and KPERS received the full proceeds. 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. 74-04927 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 Fiscal Year 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, April 1, 2012, through June 30, 2012, and April 1, 2016, through June 30, 2017. For the period ending June 30, 2016, employers contributed \$41,864,505 to the Plan.

The death and disability plan assets are held in the Group Insurance Reserve fund. At June 30, 2016, this reserve held net assets totaling \$63,959,333. 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 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, 2014, 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 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 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%

<sup>(1)</sup> 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 – CONTINGENCIES

As of June 30, 2016, the Retirement System was committed to additional funding of capital expenditures on separate account real estate holdings, commitments on private equity, and capital calls on core and noncore real estate property trust investments; as disclosed in Note 5 – Fair value measurement.

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

The Retirement Act requires the Retirement System to conduct an actuarial experience study every three years. The purpose of the experience study is to evaluate the current actuarial assumptions regarding mortality, retirement, disability, employment, turnover, interest and earnable compensation of the members and beneficiaries of the Retirement System. Based upon the results of this review, the Board of Trustees may adopt such actuarial assumptions as it deems appropriate. The System is currently conducting an actuarial experience study. One of the recommendations made by the System's actuarial firm was to reduce the assumed rate of return. The current rate of return is 8 percent. The recommendation made was a change to a rate in the range from 7.75 percent to 7.50 percent. The earliest actuarial valuation affected would be the December 31, 2016, report. If adopted, this change would affect the funded status of the plan and also the calculation of the total pension liability for fiscal year 2017.

Subsequent events have been evaluated through November 1, 2016, 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 three fiscal years (\$ in Thousands)

	2016	2015	2014
<b>Total pension liability:</b>			
Service cost	\$ 571,263	\$ 571,944	\$ 572,291
Interest	1,985,329	1,926,405	1,866,797
Changes of benefit terms	—	1,467	—
Differences between expected and actual experience	(133,493)	(135,542)	(216,248)
Changes of assumptions	—	(53,014)	—
Benefit payments, including refunds of member contributions	<u>(1,627,032)</u>	<u>(1,524,380)</u>	<u>(1,432,846)</u>
Net change in total pension liability	796,067	786,880	789,994
Total pension liability – beginning	<u>25,614,471</u>	<u>24,827,591</u>	<u>24,037,597</u>
Total pension liability – ending (a)	<u>26,410,538</u>	<u>25,614,471</u>	<u>24,827,591</u>
<b>Plan fiduciary net position:</b>			
Contributions – employer	739,184	690,564	701,818
Contributions – member	404,856	382,058	332,163
Contributions – non-employer <sup>(2)</sup>	1,000,000	—	—
Total net investment income	49,171	561,174	2,553,843
Other miscellaneous income	2,904	1,076	242
Benefit payments, including refunds of member contributions	(1,627,032)	(1,524,380)	(1,432,846)
Administrative expenses	<u>(12,172)</u>	<u>(10,768)</u>	<u>(9,636)</u>
Net change in plan fiduciary net position	556,911	99,724	2,145,584
Plan fiduciary net position – beginning	16,635,521	16,535,797	14,390,213
Plan fiduciary net position – ending (b)	<u>17,192,432</u>	<u>16,635,521</u>	<u>16,535,797</u>
Employers' net pension liability (a) - (b)	<u>\$ 9,218,106</u>	<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.

(2) Pension Obligation Bond proceeds 2015H

## SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY

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

	2016	2015	2014
Total pension liability	\$ 26,410,538	\$ 25,614,471	\$ 24,827,591
Plan fiduciary net position	<u>17,192,432</u>	<u>16,635,521</u>	<u>16,535,797</u>
Employers' net pension liability	<u>\$ 9,218,106</u>	<u>\$ 8,978,950</u>	<u>\$ 8,291,794</u>
Plan fiduciary net position as a percentage of the total pension liability	65.10%	64.95%	66.60%
Covered-employee payroll	\$ 6,388,450	\$ 6,635,196	\$ 6,424,739
Employers' net pension liability as a percentage of covered-employee payroll	144.29%	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)

	2016	2015	2014	2013	2012
Actuarially determined contribution	\$ 891,638	\$ 908,019	\$ 842,286	\$ 825,197	\$ 843,362
Contributions in relation to the actuarially determined contribution	<u>721,313</u>	<u>676,173</u>	<u>668,811</u>	<u>617,925</u>	<u>568,015</u>
Contribution deficiency (excess)	<u>\$ 170,325</u>	<u>\$ 231,846</u>	<u>\$ 173,475</u>	<u>\$ 207,272</u>	<u>\$ 275,347</u>
Covered-employee payroll	\$6,388,450	\$ 6,635,196	\$6,424,739	\$6,523,850	\$ 6,541,464
Contributions as a percentage of covered-employee payroll	11.29%	10.19%	10.41%	9.47%	8.68%
	2011	2010	2009	2008	2007
Actuarially determined contribution	\$ 709,964	\$ 682,062	\$ 660,834	\$ 607,662	\$ 531,292
Contributions in relation to the actuarially determined contribution	<u>525,727</u>	<u>492,006</u>	<u>449,236</u>	<u>395,752</u>	<u>339,509</u>
Contribution deficiency (excess)	<u>\$ 184,237</u>	<u>\$ 190,056</u>	<u>\$ 211,598</u>	<u>\$ 211,910</u>	<u>\$ 191,783</u>
Covered-employee payroll	\$6,483,143	\$ 6,527,400	\$6,403,432	\$6,226,754	\$ 6,032,223
Contributions as a percentage of covered-employee payroll	8.11%	7.54%	7.02%	6.36%	5.63%

## SCHEDULE OF INVESTMENT RETURNS

Last 10 Fiscal Years

	2016	2015	2014	2013	2012
Annual money-weighted rate of return, net of investment expense	0.33%	3.58%	18.10%	13.87%	0.67%
	2011	2010	2009	2008	2007
Annual money-weighted rate of return, net of investment expense	22.56%	14.96%	(20.08)%	(4.58)%	17.82%

# REQUIRED SUPPLEMENTARY INFORMATION – DEATH AND DISABILITY PLAN

## SCHEDULE OF EMPLOYER CONTRIBUTIONS

*Last Ten 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
2016	55,429,064	76

## 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 (1)	\$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, 2016

### NOTE 1 – METHOD AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALY 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 fiscal year 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	12/31/2015	12/31/2015	12/31/2015
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	17 years	17 years	17 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 (1)	8%	8%	8%
Projected Salary Increases (1)	4.0% - 12.0%	4.0% - 12.5%	4.5%
Cost of Living Adjustment	None	None	None

1) 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, 2016

### Kansas Public Employees Retirement System

State / School Contributions		
Members	\$ 263,910,946	
Employers	<u>497,645,281</u>	
Total State / School Contributions		\$ 761,556,227
Local Contributions		
Members	104,038,747	
Employers	<u>173,636,129</u>	
Total Local Contributions		<u>277,674,876</u>
<b>Total Contributions KPERS</b>		<b>\$ 1,039,231,103</b>

### Kansas Police and Firemen's System

State Contributions		
Members	3,152,098	
Employers	<u>9,175,853</u>	
Total State Contributions		12,327,951
Local Contributions		
Members	32,191,514	
Employers	<u>93,897,589</u>	
Total Local Contributions		<u>126,089,103</u>
<b>Total Contributions KP&amp;F</b>		<b>138,417,054</b>

### Kansas Retirement System for Judges

State Contributions		
Members	1,562,959	
Employers	<u>6,693,619</u>	
Total State Contributions		<u>8,256,578</u>
<b>Total Contributions - Judges</b>		<b>8,256,578</b>

### Optional Group Life Insurance

Member Contributions		
State Employees	2,986,661	
Local Employees	3,270,591	
Total Contributions		<u>6,257,252</u>
<b>Total Contributions – OGLI</b>		<u><b>6,257,252</b></u>

<b>Employer Contributions from Bond Proceeds*</b>		<u><b>1,000,000,000</b></u>
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<b>Grand Total All Contributions</b>		<u><b>\$ 2,192,161,986</b></u>
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\*The State of Kansas issued pension obligation bonds, Series 2015 H, in August 2015.

## SCHEDULE OF ADMINISTRATIVE EXPENSES

*For Year Ended June 30, 2016*

<b>Salaries and Wages</b>		\$ 6,645,510
<b>Professional Services</b>		
Actuarial	\$ 559,222	
Audit	109,800	
Data Processing	1,177,203	
Legal	156,035	
Other Professional Services	<u>1,391,404</u>	
Total Professional Services		3,393,664
<b>Communication</b>		
Postage	256,539	
Printing	118,789	
Telephone	<u>144,097</u>	
Total Communication		519,425
<b>Building Administration</b>		
Building Management	78,668	
Janitorial Service	31,163	
Real Estate Taxes	66,400	
Utilities	<u>55,114</u>	
Total Building Administration		231,345
<b>Miscellaneous</b>		
Dues and Subscriptions	15,625	
Repair and Maintenance	50,372	
Office and Equipment Rent	17,516	
Supplies	163,117	
Temporary Services	13,624	
Travel	72,788	
Other Miscellaneous	284,587	
Depreciation	<u>1,361,391</u>	
Total Miscellaneous		<u>1,979,020</u>
Total Administrative Expenses		<u>\$12,768,964</u>

SCHEDULE OF INVESTMENT INCOME BY ASSET CLASS

For Year Ended June 30, 2016

Asset Classification	Interest Dividends and Other Transactions	Gains and Losses	Total
Marketable Equity Securities			
Domestic Equities	\$ 90,996,199	\$ 13,643,162	\$ 104,639,361
International Equities	<u>64,552,882</u>	<u>(530,659,581)</u>	<u>(466,106,699)</u>
Subtotal Marketable Equities	155,549,081	(517,016,419)	(361,467,338)
Marketable Fixed Income Securities			
Government	36,238,580	111,707,526	147,946,106
Corporate	<u>100,477,561</u>	<u>(22,699,783)</u>	<u>77,777,778</u>
Subtotal Marketable Fixed	136,716,141	89,007,743	225,723,884
Temporary Investments	<u>1,163,234</u>	<u>75,652</u>	<u>1,238,886</u>
Total Marketable Securities	<u>293,428,456</u>	<u>(427,933,024)</u>	<u>(134,504,568)</u>
Real Estate	83,484,581	127,000,578	210,485,159
Alternative Investments	<u>10,708,728</u>	<u>33,576,495</u>	<u>44,285,223</u>
Total Real Estate and Alternative Investments	<u>94,193,309</u>	<u>160,577,073</u>	<u>254,770,382</u>
	<u>\$ 387,621,765</u>	<u>\$ (267,355,951)</u>	<u>\$ 120,265,814</u>
<b>Manager and Custodian Fees and Expenses</b>			
			(28,942,347)
Investment Manager Fees			(982,802)
Custodian Fees & Expenses			(2,124,005)
Investment Legal & Consulting Expenses			(36,843,313)
Partnership Mgmt Fees & Expenses			(2,014,992)
Investment Operations Expenses			<u>(70,907,459)</u>
Total Investment Fees and Expenses			<u>(70,907,459)</u>
Net Investment Income			<u>\$ 49,358,355</u>

## SCHEDULE OF INVESTMENT MANAGEMENT FEES AND EXPENSES

For Year Ended June 30, 2016

<b>Domestic Equity Managers</b>		<b>Cash Equivalent Manager</b>	
Advisory Research	\$ 1,206,169	Payden & Rygel Investment Counsel	449,756
BlackRock	304,513	<b>Subtotal Cash Management</b>	<b>449,756</b>
Loomis, Sayles & Co.	1,434,230	<b>Total Investment Management Fees</b>	<b>28,942,347</b>
Mellon Capital Management	176,145	<b>Other Fees and Expenses</b>	
Systematic Financial Management	929,125	Custodian Fees and Other Expenses	982,802
Voya	1,395,284	Consultant Fees	1,996,064
<b>Subtotal Domestic Equity Managers</b>	<b>5,445,466</b>	Legal Expenses	127,941
<b>International Equity Managers</b>		Investment Operations	2,014,992
Baillie Gifford International	2,052,077	Partnership Management Fees and Expenses	36,843,313
Barings International	1,688,165	<b>Subtotal Other Fees and Expenses</b>	<b>41,965,112</b>
JP Morgan International	2,569,042	<b>Total</b>	<b>\$ 70,907,459</b>
Lazard Asset Management	1,691,850		
Morgan Stanley Asset Management	1,258,080		
State Street International	375,976		
Templeton International	1,949,008		
<b>Subtotal International Equity Managers</b>	<b>11,584,198</b>		
<b>Fixed Income Managers</b>			
BlackRock	1,335,695		
Loomis, Sayles & Co.	717,640		
MackKay Shields	2,701,662		
Franklin Templeton	611,226		
T. Rowe Price Associates	1,372,077		
Western Asset Management Co.	709,506		
<b>Subtotal Fixed Income Managers</b>	<b>7,447,806</b>		
<b>Currency Overlay and Securitization Managers</b>			
Adrian Lee & Partners	510,921		
Insight Investment	1,515,763		
Russell Investment Group	216,565		
<b>Subtotal Currency Overlay and Securitization Managers</b>	<b>2,243,249</b>		
<b>Real Estate and REIT Investment Managers</b>			
AEW Capital Management	548,848		
Brookfield Redding	636,344		
CenterSquare	586,680		
<b>Subtotal Real Estate &amp; REIT Managers</b>	<b>1,771,872</b>		



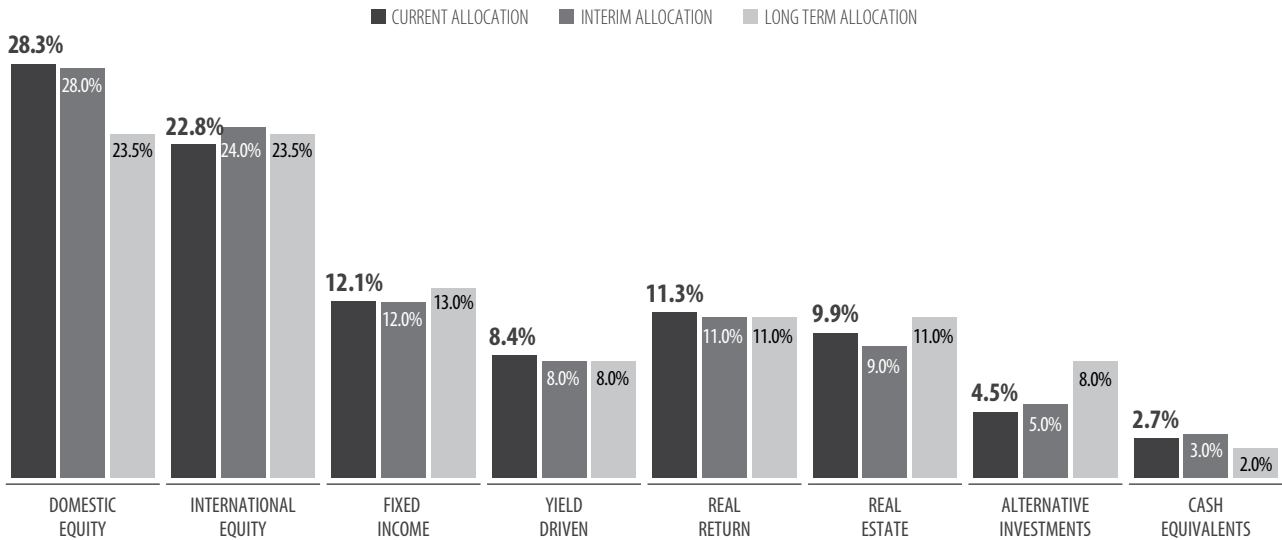


# INVESTMENTS **SECTION**

# 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 2016 were \$16.986 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 Fiscal Year 2016, the System's custodial bank was State Street Bank and Trust. Performance calculations were prepared using time-weighted rates of return, gross of fees, unless otherwise indicated.

## ASSET ALLOCATION

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.)

The Board of Trustees, working with the System's general investment consultant, Pension Consulting Alliance (PCA) and investment staff, completed an asset/liability study in January 2016. The Board reviewed several investment policy options during the asset/liability study, all of which contained an emphasis on improving funding progress over time. At the conclusion of the asset/liability study, the Board re-adopted

the System's existing long term asset allocation targets. The risk philosophy implied by the asset allocation policy targets places significant emphasis on managing and improving the funded status of the Retirement System over time.

The allocation to equity investments (primarily publicly-traded stocks) continues to comprise 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 attractive real 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 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 and 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 Fiscal Year 2016, the System made a new commitment to a third 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 current income.

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 equivalents investments, primarily to facilitate investment transactions and the cash flows needed to pay benefits.

**INVESTMENT POLICY**

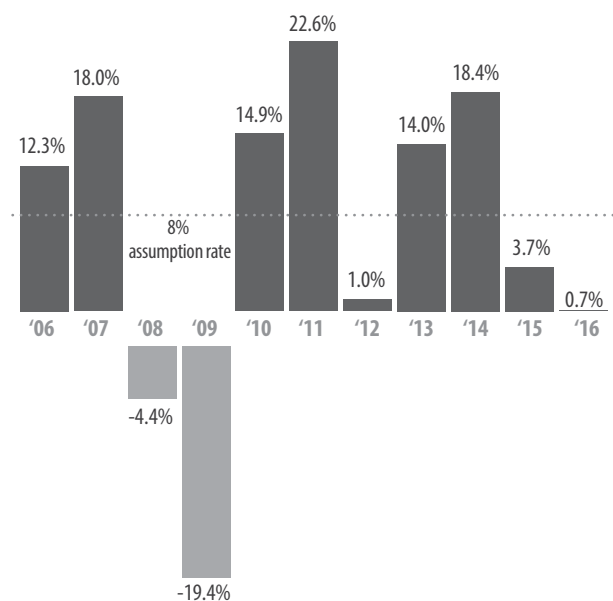
The board of trustees has adopted a Statement of Investment Policy, Objectives and Guidelines (the Statement), which serves as a guide to the implementation of the System’s broad investment objectives. The Statement complements state statutes and documents the principles and standards that guide the 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 judges 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, 2016*



**FISCAL YEAR 2016 INVESTMENT PERFORMANCE**

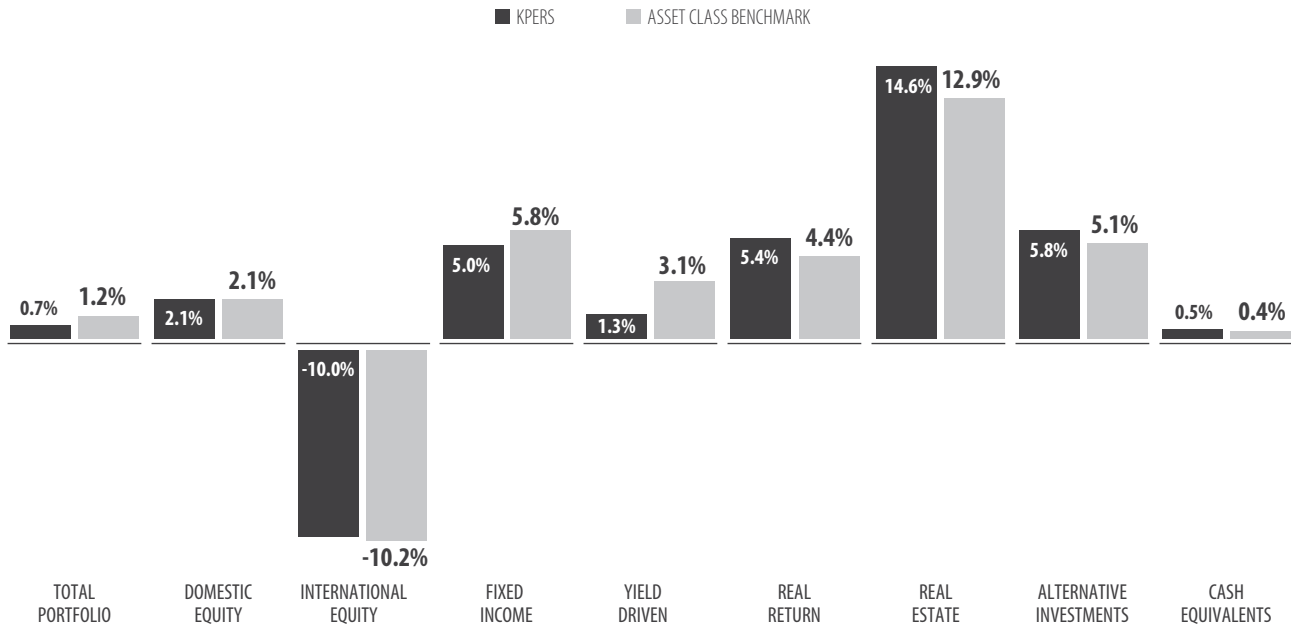
The Retirement System’s total investment portfolio experienced a 0.7 percent total return for the one year ending June 30, 2016. The 0.7 percent return underperformed the KPERS Policy Index by 0.5 percent for the fiscal year. For the three years ending June 30, 2016, the System’s total investment portfolio has produced an average annualized return of 7.3 percent, which outperformed the Policy Index by 0.3 percent. The trailing five year and ten year results were also impacted by the difficult global market environment experienced during the past two fiscal years, resulting in average annualized total returns of 7.4 percent and 6.2 percent, respectively. As of June 30, 2016, 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 except the latest one year time period. The System’s total return ranking was in the top quartile for the 3, 4, 5 and 7 year trailing time periods. For the twenty-five year time period ending June 30, 2016, the System’s assets have produced an average annualized total return of 8.5 percent, exceeding the 8 percent actuarial return assumption.

**FINANCIAL MARKET AND PERFORMANCE OVERVIEW**

The year ending June 30, 2016, was a difficult time period for so-called “risk assets.” Following two fiscal years of robust,

## TIME WEIGHTED TOTAL RETURN BY ASSET CLASS

Fiscal Year 2016



double-digit investment performance results, the System's broadly diversified investment portfolio struggled to produce a single digit positive total return in Fiscal Year 2015 and Fiscal Year 2016. Like Fiscal Year 2015, Fiscal Year 2016 was characterized by substantial global financial market volatility, with domestic equities producing a small positive return, while non-US equity investments suffered from both negative market returns and US dollar strength. Financial market volatility resulted from a host of uncertainties, including slowing global economic growth, policy decisions in China, historically low interest rates in the face of sustained easing in global monetary policy and the UK referendum to leave the European Union (the so called "Brexit" decision).

### INVESTMENT STAFF

The System employs a staff of nine 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 Investment Officer for Public Markets oversees the REIT, MLP and passive domestic and international equity portfolios. The Deputy CIO for Private Markets handles the System's 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

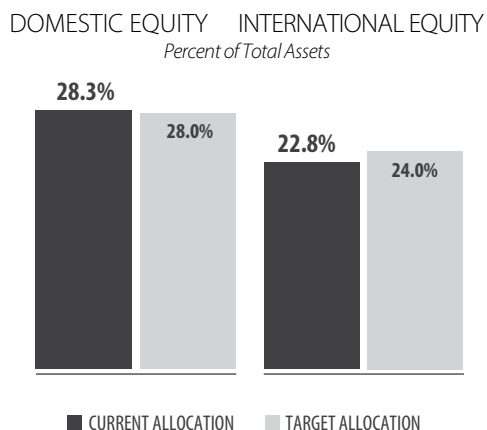
supported by a team of four Investment Analysts who provide research support and assistance in managing the portfolios. Investment staff are focused on bringing a consistent, disciplined management process to all aspects of oversight of investment managers, compliance monitoring and risk management.

## PUBLIC EQUITY INVESTMENTS

Public equity investments represent the largest strategy allocation within the System's portfolio. As of June 30, 2016, the market value of the System's global equity portfolio was \$8.7 billion. The strategy is executed through external managers investing domestically and internationally. Active strategies are utilized for approximately 42.4 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 graphs describe the current and target allocations at June 30, 2016:



**DOMESTIC EQUITY**

Domestic equities represent 55.4 percent of the total public equity portfolio and 28.3 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, 85 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**

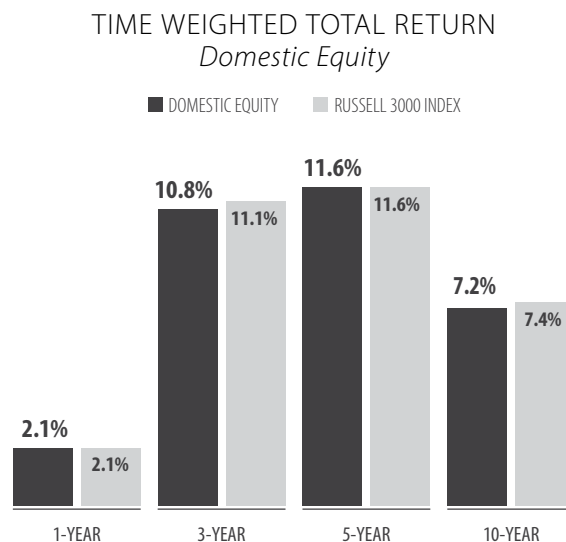
International equities represent 44.6 percent of the total public equity portfolio and 22.8 percent of total assets. International equity investments are benchmarked against the MSCI All Country World – Ex U.S. Index. Equity investments in companies domiciled outside of the United States offer the potential to add value through prudent active management. Therefore, 76.6 percent of this portfolio is actively managed. The System has retained five 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 return of the System’s domestic equity portfolio was in line with the portfolio’s benchmark during Fiscal Year 2016. The System’s active domestic equity managers did not add value relative to the broader equity market during Fiscal Year 2016, as the small and mid cap domestic equity sectors underperformed large cap stocks. The domestic equity portfolio produced a

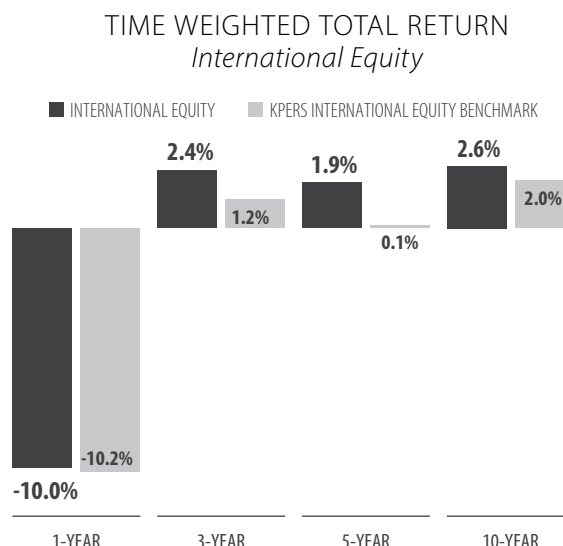
2.1 percent total return during the fiscal year, matching the benchmark. Over longer time periods, the return on the domestic equity portfolio was also in line with its benchmark, as expected, given the large passive component.

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



The international equity portfolio performed well on a relative basis during Fiscal Year 2016. Returns were strongly negative in Fiscal Year 2016, but they were slightly less negative than the strategy benchmark. The international equity portfolio produced a total return of -10.0 percent for the fiscal year, relative to the -10.2 percent return for the benchmark. Over longer time periods, the international equity portfolio has produced strong relative returns, as active management has added value relative to the benchmark.

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

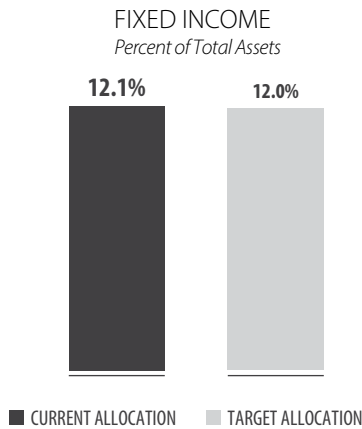


## FIXED INCOME

As of June 30, 2016, KPERS' fixed income portfolio had a market value of \$2.1 billion, representing 12.1 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, 2016:



### CORE-PLUS FIXED INCOME

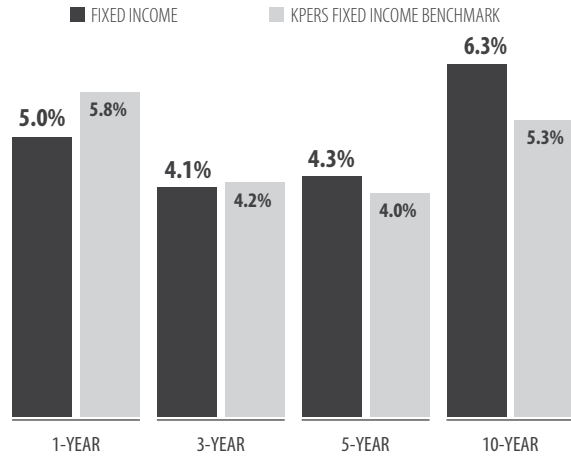
The fixed income portfolio is invested in core plus strategies through two active investment managers. The portfolio's objective is to provide diversification to other assets in the System's portfolio and to preserve capital while providing current income. The core plus strategies are primarily invested 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 Fiscal Year 2016, and has exhibited mixed but mostly positive relative performance 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 Fiscal Year 2016.

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

## TIME WEIGHTED TOTAL RETURN *Fixed Income*

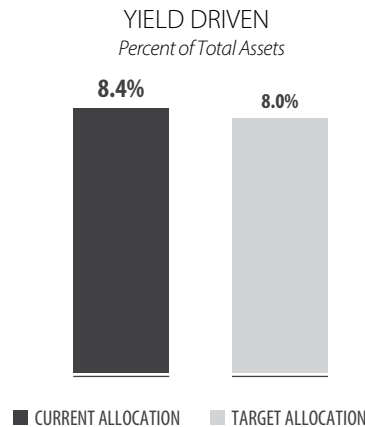


## YIELD DRIVEN

Yield driven investments represent one of the newer strategy allocations within the System's investment portfolio. As of June 30, 2016, the System's yield driven portfolio had a market value of \$1,423.7 million representing 8.4 percent of total assets. The strategy is actively managed by two 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, 2016:



### STRATEGIC FIXED INCOME

The strategic fixed income strategy represents approximately 50.8 percent of the total yield driven portfolio and 4.2 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 positive returns for Fiscal Year 2016. These returns added value relative to the yield driven portfolio benchmark.

**REAL ESTATE INVESTMENT TRUSTS (REITS)**

REITs represent 19.1 percent of the yield driven asset class and 1.6 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 Fiscal Year 2016.

**MASTER LIMITED PARTNERSHIPS (MLPS)**

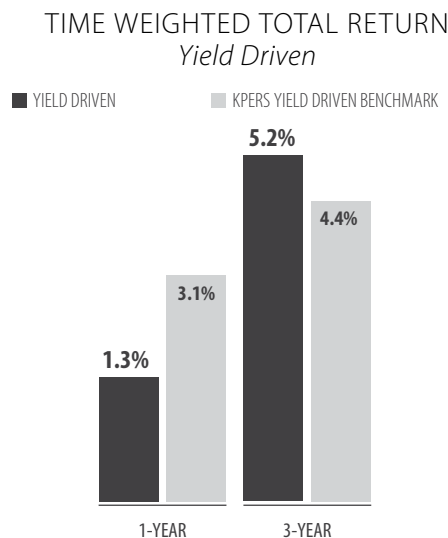
MLPs represent 20.0 percent of the yield driven asset class and 1.7 percent of the System’s total assets. The strategy is benchmarked against the Alerian MLP Index. The MLP sector offers attractive yields and long term growth prospects. The MLP portfolio is comprised of diversified energy sectors including companies focused on “midstream,” gathering and processing, infrastructure and natural gas pipelines and storage. The System currently has one active MLP investment manager. MLPs suffered during Fiscal Year 2016, producing negative returns for the yield driven portfolio.

**SHORT DURATION HIGH YIELD/BANK LOANS**

A short duration high yield/bank loan portfolio manager was added to the yield driven asset class during Fiscal Year 2015. The allocation represents 10.1 percent of the yield driven asset class and 0.8 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. The short duration high yield/bank loan portfolio modestly underperformed its benchmark during Fiscal Year 2016.

**PERFORMANCE**

The yield driven portfolio produced a total return of 1.3 percent in Fiscal Year 2016, underperforming the benchmark return of 3.1 percent. Over the last three years, however, the yield driven portfolio has outperformed the benchmark by 0.8 percent, producing a 5.2 percent total return.

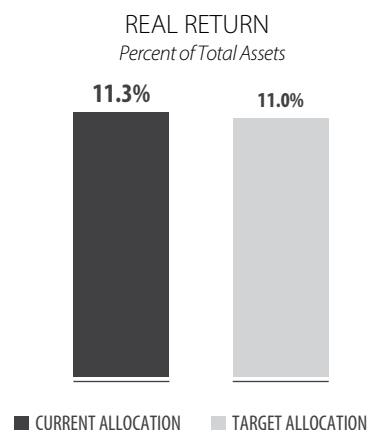


**REAL RETURN INVESTMENTS**

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 11.3 percent of the System’s total assets, and had a market value of \$1.9 billion as of June 30, 2016.

**PORTFOLIO STRUCTURE**

The following graph describes the current and target allocations at June 30, 2016:



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

The TIPS portfolio represents 46.5 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 Fiscal Year 2016, as expected.

**GLOBAL INFLATION LINKED BONDS (GILBS)**

The GILB portfolio represents 46.9 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. GILBs' 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 Fiscal Year 2016, but provided valuable diversification, as the GILB portfolio outperformed the US TIPS portfolio.

**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 Fiscal Year 2016, the System's timber investment produced a 2.1 percent total return, underperforming its benchmark. For the three years ending June 30, 2016, however, the timber portfolio has outperformed its benchmark and produced an 8.9 percent total return.

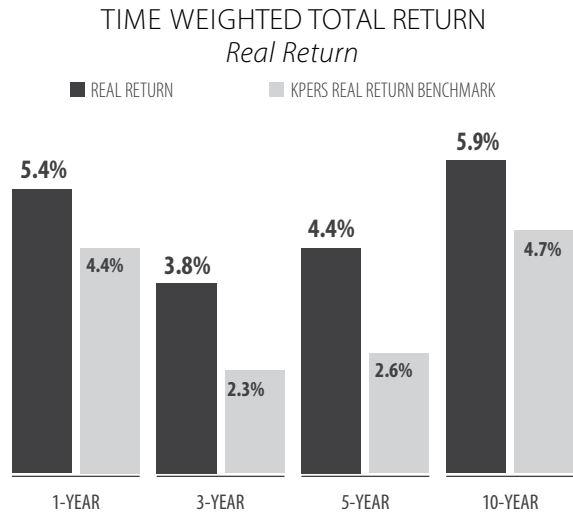
**INFRASTRUCTURE**

The System's infrastructure manager has been successful in operating its infrastructure investments. During the fiscal year, the System approved a commitment to a third infrastructure manager and expects the capital to be called during Fiscal Year 2017. The System's infrastructure portfolio is well diversified, with investments in Australia, the United Kingdom and throughout North and South America, and invested across multiple sectors, including renewable power, toll roads, electric utilities, sea ports and energy. The infrastructure portfolio produced a total return of 8.8 percent for the fiscal year, and outperformed its benchmark.

**PERFORMANCE**

The System's real return portfolio outperformed its benchmark in Fiscal Year 2016, producing a 5.4 percent total return against a benchmark return of 4.4 percent. Infrastructure and global inflation linked bonds were the strongest performing investment strategies in the asset class. The real return portfolio has also

outperformed its benchmark over the three, five, and ten year time periods time periods ending June 30, 2016.

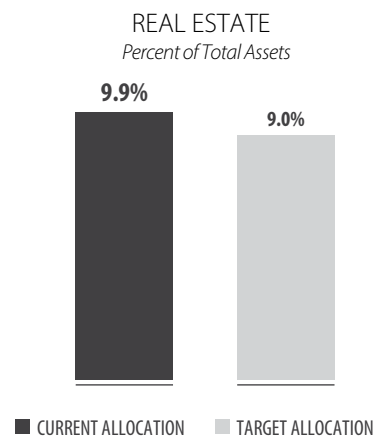


**REAL ESTATE INVESTMENTS**

As of June 30, 2016, the real estate portfolio had a market value of \$1.68 billion, representing 9.9 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 one directly-owned commercial property in the U.S.
- Partial and full commitments to seven 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.

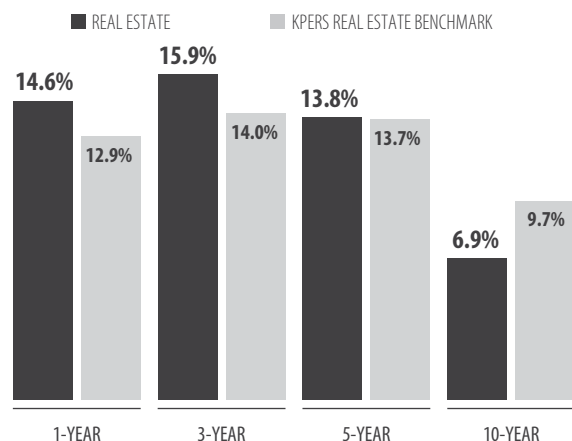
### NON-CORE REAL ESTATE

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 Fiscal Year 2016. The core real estate portfolio produced a total return of 12.1 percent, beating its benchmark by 0.3 percent, while the non-core real estate portfolio outperformed its benchmark by 5.6 percent with a total return of 20.4 percent. In total, the System’s real estate portfolio produced a robust total return of 14.6 percent, which outperformed the benchmark return by 1.7 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.

### TIME WEIGHTED TOTAL RETURN *Real Estate*



## ALTERNATIVE INVESTMENTS

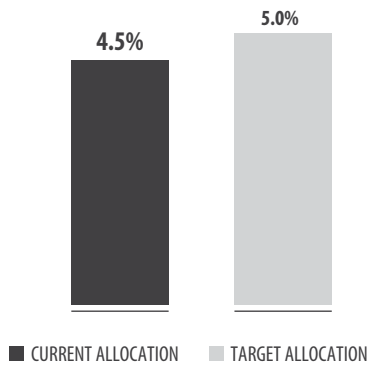
At June 30, 2016, the System’s alternative investment portfolio had a fair market value of \$761.7 million, representing 4.5 percent of the total portfolio. Since the inception of the alternative investment program in 1997 through June 30, 2016 the System has committed \$3.0 billion to 100 funds with 58 general partners.

### PORTFOLIO STRUCTURE

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 97.7 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 \$1.9 billion to 46 funds with 26 general partners.

The second portfolio is the Alternative Investment Portfolio (AIP) which represents 2.3 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.

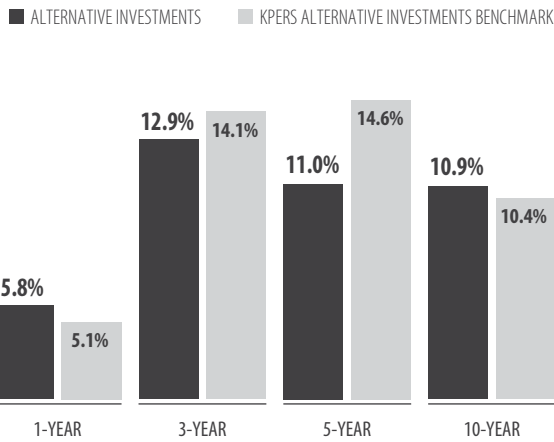
ALTERNATIVE INVESTMENTS  
*Percent of Total Assets*



**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 10.9 percent

TIME WEIGHTED TOTAL RETURN  
*Alternative Investments*



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, 2016

Description	Cost	Market Value
Advanced Technology Ventures VI, L.P.	\$ 8,625,363	\$ 425,446
Apax Europe V, L.P.	7,519,592	97,434
Apollo Investment Fund VII, L.P.	7,666,656	7,113,921
Apollo Investment Fund VIII, L.P.	23,492,520	26,151,168
Ares Corporate Opportunities Fund III, L.P.	11,829,785	17,661,549
Ares Corporate Opportunities Fund IV, L.P.	16,704,141	20,065,281
Ares SSF IV, L.P.	17,326,733	8,304,946
Audax Mezzanine Fund III, L.P.	10,898,836	10,785,162
Battery Ventures VI, L.P.	3,338,584	98,285
Beacon Group Energy Fund II, L.P.	1,841,499	623,301
Capital Resource Partners IV, L.P.	5,241,329	1,856,846
CCMP Capital Investors III, L.P.	22,336,998	26,470,393
Centerbridge Capital Partners II, L.P.	20,293,007	23,051,923
Centerbridge Capital Partners III, L.P.	7,116,991	8,219,199
Clayton Dublier & Rice VI, L.P.	3,032,896	49,515
Crestview Partners III, L.P.	9,868,588	10,606,008
Cypress Merchant Banking II, L.P.	6,945,869	66,979
El Dorado Ventures VI, L.P.	6,688,352	2,530,792
Encap Energy Capital VIII, L.P.	17,885,225	11,398,826
Encap Energy Capital IX, L.P.	27,233,925	32,475,530
Encap Energy Capital Fund X, L.P.	9,457,930	9,524,552
First Reserve Fund XII, L.P.	18,059,816	8,291,316
FS Equity Partners VII, L.P.	25,208,171	25,909,336
GSO Capital Solutions Fund, L.P.	10,321,873	7,923,431
GSO Capital Solutions Fund II, L.P.	16,176,518	17,536,009
Halpern Denny Fund III, L.P.	4,315,958	369,796
Hellman & Friedman VII, L.P.	10,028,843	14,515,998
JMI Equity Fund VII, L.P.	11,604,480	11,831,754
Littlejohn Fund II, L.P.	386,206	77,656
Montagu IV, L.P.	14,135,116	17,206,378
Montagu V, L.P.	714	—
New Enterprise Associates 13, L.P.	8,415,051	11,726,996
Oak Hill Capital Partners, L.P.	1,187,040	93,147
OCM Opportunities Fund III, L.P.	1,191,198	306,226
OCM Opportunities Fund VIIb, L.P.	—	2,259,121
OneLiberty Fund IV, L.P.	1,155,056	1,209,603
OneLiberty Ventures 2000, L.P.	12,493,019	4,112,839
Pine Brook Capital Partners, L.P.	15,008,266	11,511,851
Pine Brook Capital Partners II, L.P.	28,562,234	32,098,981
Platinum Equity Capital Partners III, L.P.	16,127,616	26,585,892
Snow Phipps II, L.P.	15,667,444	24,190,910
Snow Phipps III, L.P.	8,782,744	8,749,554

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

As of June 30, 2016

Description	Cost	Market Value
TA XII, L.P.	\$ 7,945,000	\$ 8,071,111
TCV IV, L.P.	6,910,657	23,220
TowerBrook Investors III, L.P.	7,560,317	9,994,565
TowerBrook Investors IV, L.P.	4,189,766	6,706,726
TPG Growth II, L.P.	20,169,805	41,140,149
TPG Growth III, L.P.	7,516,882	7,195,392
TPG Partners VI, L.P.	15,506,192	16,011,570
TPG Partners VII, L.P.	12,289,531	11,029,166
Trinity Ventures VII, L.P.	7,014,721	127,289
Trinity Ventures VIII, L.P.	9,493,314	235,681
VantagePoint Venture Partners III, L.P.	7,533,543	444,381
VantagePoint Venture Partners IV, L.P.	11,296,098	3,800,403
Vestar Capital Partners IV, L.P.	1,540,658	454,608
Vista Equity Partners Fund IV, L.P.	21,194,078	37,328,176
Vista Equity Partners Fund V, L.P.	57,548,727	59,894,528
Vista Equity Partners Fund VI, L.P.	8,903,722	8,903,722
Warburg, Pincus Equity Partners, L.P.	—	271,242
Warburg Pincus Private Equity X, L.P.	15,852,283	25,426,571
Warburg Pincus Private Equity XI, L.P.	37,290,452	49,691,279
Warburg Pincus Private Equity XII, L.P.	3,409,575	3,913,002
Wellspring Capital Partners V, L.P.	17,995,967	26,775,515
Welsh, Carson, Anderson & Stowe VIII, L.P.	2,369,487	30,315
Welsh, Carson, Anderson & Stowe IX, L.P.	2,434,247	23,050
Windjammer Mezzanine & Equity Fund II, L.P.	—	140,825
	\$ 750,137,204	\$ 761,716,336

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

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

As of June 30, 2016

EQUITIES			FIXED INCOME				
Shares	Security	Fair Value (\$)	Par Value	Security	Description	Fair Value (\$)	
528,157	Apple Inc	\$66,244,092	85,000,000	Citigroup Hldg Inc	0.4% 01 Jul 2016	\$85,000,000	
463,026	Nestle SA Reg	33,443,106	37,696,430	State Street TR	STIF FUND	37,696,430	
741,632	Microsoft Corp	32,743,053	50,000,000	US Treasury N/B	0.875% 15 Jul 2017	50,179,500	
383,314	Exxon Mobil Corp	31,891,725	50,000,000	US Treasury N/B	0.875% 30 Apr 2017	50,152,000	
104,741	Roche Holding AG Genusschein	29,364,017	50,000,000	US Treasury N/B	0.875% 31 Jan 2017	50,124,500	
160,017	Simon Property Group Inc	27,686,141	50,000,000	US Treasury N/B	0.75% 15 Jan 2017	50,083,000	
271,739	Novartis AG Reg	26,794,445	50,000,000	US Treasury N/B	0.625% 30 Jun 2017	50,053,000	
254,226	Johnson & Johnson	24,776,866	50,000,000	US Treasury N/B	0.625% 31 May 2017	50,045,000	
923,736	General Electric Co	24,543,666	50,000,000	US Treasury N/B	0.5% 28 Feb 2017	50,013,500	
427,112	Wells Fargo & Co	24,020,779	31,550,897	Treasury 1/8 2024 I/L Gilt	0.125% 22 Mar 2024	48,244,185	

(a) A complete listing of the System's holdings is available at the Retirement System office.

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

(In Thousands)

For the Fiscal Year Ended June 30, 2016

	June 30, 2015 Fair Value	Purchases and Other Increases	Sales and Other Decreases	June 30, 2016 Fair Value	Asset Mix Fair Value
<b>Marketable Securities</b>					
Domestic Equities	\$ 5,325,212	\$ 1,362,372	\$ (1,173,777)	\$ 5,513,807	32.24%
International Equities	3,920,315	1,379,597	(1,700,323)	3,599,589	21.05
Total Fixed	5,003,364	4,398,535	(4,437,539)	4,964,360	29.03
Temporary <sup>(2)</sup> Investments	108,112	24,624,237	(24,278,341)	454,008	2.66
Total Marketable Securities	<u>14,357,003</u>	<u>31,764,741</u>	<u>(31,589,980)</u>	<u>14,531,764</u>	<u>84.98</u>
<b>Real Estate and Alternative Investments</b>					
Real Estate	1,602,869	424,358	(221,482)	1,805,745	10.56
Alternatives	605,869	230,622	(74,775)	761,716	4.46
Total Real Estate and Alternative Investments	<u>2,208,738</u>	<u>654,980</u>	<u>(296,257)</u>	<u>2,567,461</u>	<u>15.02</u>
Total :	<u>\$ 16,565,741</u>	<u>\$ 32,419,721</u>	<u>\$(31,886,237)</u>	<u>\$ 17,099,225</u>	<u>100.00%</u>

1) Amounts include changes in unrealized appreciation and exclude interest and dividend accruals.

2) Temporary Investments include currencies, short term pools and securities maturing within one year of purchase.

U.S. EQUITY COMMISSIONS

For the Fiscal Year Ending June 30, 2016

Broker Name	Commissions Paid	Shares	Commission Per Share	Percent of Total Commissions
Liquidnet Inc	\$257,761	15,245,319	\$0.02	18.2%
J.P. Morgan Securities Inc.	65,178	2,147,762	0.03	4.6
Citigroup Global Markets Inc	64,375	2,911,401	0.02	4.5
Merrill Lynch Pierce Fenner & Smith Inc	59,767	2,038,150	0.03	4.2
Investment Technology Group Inc.	59,288	4,481,286	0.01	4.2
UBS Securities LLC	57,430	3,705,400	0.02	4.1
Barclays Capital Inc.	52,556	1,810,564	0.03	3.7
Goldman Sachs & Co	49,717	2,877,853	0.02	3.5
Jefferies & Company Inc	48,809	1,948,639	0.03	3.4
Wells Fargo Securities, LLC	46,142	1,477,641	0.03	3.1
Raymond James and Associates Inc	44,396	1,340,697	0.03	3.3
Morgan Stanley Co Incorporated	39,730	1,612,827	0.02	2.8
Credit Suisse Securities (USA) LLC	38,044	2,713,925	0.01	2.7
Deutsche Bank Securities Inc	37,223	1,823,287	0.02	2.6
Stifel Nicolaus & Co Inc	33,475	1,067,174	0.03	2.4
Rbc Capital Markets	33,354	1,223,109	0.03	2.5
ISI Group Inc	28,341	1,001,056	0.03	2.0
State Street Global Markets, LLC	25,933	1,232,517	0.02	1.8
Robert W. Baird Co. Incorporate	21,866	774,232	0.03	1.5
Convergex Execution Solutions LLC	20,574	1,022,290	0.02	1.5
Sanford C. Bernstein and Co. LLC	20,214	959,128	0.02	1.4
ITG Inc.	20,097	582,588	0.03	1.4
Cowen and Company, LLC	19,506	695,955	0.03	1.4
Sandler O'Neill and Partners LP	18,869	628,951	0.03	1.3
Pershing LLC	15,636	741,994	0.02	1.1
Keefe Bruyette & Woods Inc	15,280	509,334	0.03	1.1
Citation Group	14,759	403,330	0.04	1.0
BTIG LLC	14,495	737,854	0.02	1.0
Weeden & Co.	13,945	889,207	0.02	1.0
Jonestrading Institutional Services Llc	13,136	556,216	0.02	0.9
William Blair & Company Llc	13,095	526,703	0.02	0.9
Keybanc Capital Markets Inc	11,340	550,929	0.02	0.8
Instinet	11,170	972,932	0.01	0.8
Other	132,060	4,576,060	0.03	9.3
<b>Total Broker Commissions</b>	<b>\$1,417,561</b>	<b>65,786,310</b>		<b>100.0%</b>







# ACTUARIAL **SECTION**

## ACTUARIAL CERTIFICATION LETTER



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

October 5, 2016

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, 2015, for the purpose of determining contribution rates for Fiscal Year 2019 for the State and 2018 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 section, which reflects the plan provisions in place on December 31, 2015, as amended by legislation passed by the 2016 legislature. There have been no changes to benefit provisions or actuarial assumptions since the prior actuarial valuation; however, this is the first valuation that includes KPERs 3 (Cash Balance Plan) members.

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 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 of our valuation report.

Future actuarial measurements may differ significantly from the current measurements presented in the December 31, 2015, 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, 2015, 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, 2015, were also prepared as of June 30, 2016, 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 percent discount rate for GASB 67 calculations (8 percent 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, 2016, 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, LLC's 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, 2015, 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, Ph.D., 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, 2015, actuarial valuations for each of the Systems follows.

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 2016 Legislature passed two bills that impacted the provisions and funding of KPERS and KP&F:

- House Substitute for SB 168 (KPERS Omnibus Bill) included changes to the working after retirement rules, technical changes to the DROP program for the Kansas Highway Patrol and technical changes to KPERS and the KPERS 457 plans. The provisions of the bill tighten the requirement that there be no pre-arrangement for a retired member to return to work. It also extends from July 1, 2017, to July 1, 2020, the grandfather provisions for those retirees in a licensed school position who retired before May 1, 2015, and establishes a 30 percent employer contribution rate, subject to actuarial review by the Board every three years, for retirees working in positions that are exempt from the general working after retirement rules. The bill also increased the earnings limitation for KP&F retirees from \$15,000 to \$25,000.
- House Sub for SB 161 provided for the delay of up to \$100 million in State and School contributions to the Retirement System for Fiscal Year 2016. House Sub for SB 249 provided that the delayed contributions would be repaid in full, with interest at 8 percent, by June 30, 2018.

The valuation process does not include an assumption regarding the re-employment of retirees so the working after retirement provisions in House Sub for SB 168 did not have an impact on the valuation results. The technical changes to the DROP program and other KPERS provisions also did not have an impact on the valuation results.

Although House Sub for SB 161 and House Sub for SB 249 impacted KPERS' funding, the law requires that the delayed contributions for Fiscal Year 2016 must be paid to KPERS by June 30, 2018, with interest at 8 percent. Because the valuation date

for this report is December 31, 2015, the delayed State/School contributions occurred after the valuation date and thus, did not impact the asset values in the current valuation. However, the calculation of the unfunded actuarial liability (UAL) contribution rate projects the UAL from December 31, 2015, to June 30, 2018. In those calculations, it is assumed that KPERS records the delayed contributions as a long-term receivable so the UAL contribution rate in the current valuation is not impacted by the delayed contributions. In addition, projections were prepared in conjunction with the December 31, 2015, actuarial valuation. Those projections also reflect a long-term receivable from the State for the amount of contributions actually delayed (\$974 million) with interest in the asset values as of December 31, 2016, and subsequent years. Assuming repayment is made by June 30, 2018, the delay of contributions from Fiscal Year 2016 to 2018 will not impact the projection results. However, if such repayment is not made in full, KPERS' funded ratios will be lower and the employer actuarial contribution rates will be higher than shown in the projections.

Legislation passed last year in the 2015 Session authorized the issuance of \$1.0 billion in net bond proceeds, subject to certain requirements including a maximum interest rate for the bonds. Due to the uncertainty at the time, the December 31, 2014, valuation did not assume that any bond proceeds would be received during 2015. However, the bonds were issued and the net proceeds of \$1.0 billion were deposited into the KPERS trust on August 20, 2015, and fully invested shortly thereafter. The additional contribution in the form of bond proceeds is first reflected in the December 31, 2015, actuarial valuation, significantly lowering the unfunded actuarial liability (UAL) and the actuarial contribution rate for the State/School group.

There were no changes to the benefit provisions or actuarial assumptions and methods since the prior actuarial valuation; however, this is the first valuation that includes KPERS 3 (Cash Balance Plan) members. Of the total KPERS active membership of 144,669 about 11 percent (16,125) were KPERS 3 members as of the valuation date. KPERS 3 members receive guaranteed interest of 4 percent on their account balances. There is also the possibility of additional interest credits that are dependent on KPERS' investment return. The additional interest credits, referred to as "dividends", are equal to 75 percent of the five-year average net compound rate of return, as determined by the board, for the preceding calendar year and the previous four calendar years on the market value of assets that is above 6 percent. If applicable, the dividend is granted as soon as administratively feasible after March 31 and is credited on the account balance as of the previous December 31. Transition rules apply for the initial years until the Cash Balance Plan has been effective for five full calendar years (January 1, 2020). The dividend for 2015 was dependent on the rate of return on the market value of assets for 2015. Because the rate of return for 2015 was 0.2 percent, no dividend was payable.

The valuation results provide a “snapshot” view of the System’s financial condition on December 31, 2015. The unfunded actuarial liability (UAL), for the System as a whole, decreased by \$929 million due to multiple factors, the most significant of which was the \$1 billion of bond proceeds.

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 has changed over time, but the current cap is 1.20 percent for Fiscal Year 2019 (based on the December 31, 2015, actuarial valuation). 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 alone is less than the statutory contribution rate when the two groups are combined (as it is this year), 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, 2015 VALUATION

System	Actuarial	Statutory	Difference
State <sup>1</sup>	8.28%	13.21%	(4.93%)
School <sup>1</sup>	14.59	13.21	1.38
State/School <sup>1</sup>	13.23	13.21	0.02
Local <sup>1</sup>	8.39	8.39	0.00
Police & Fire - Uniform Rates <sup>2</sup>	20.09	20.09	0.00
Judges	14.68	14.68	0.00

#### 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 percent for Fiscal Year 2014, 1.0 percent in Fiscal Year 2015, 1.1 percent in Fiscal Year 2016 and 1.2 percent in Fiscal Year 2017 and beyond plus the cost of any benefit enhancements. However, the 2015 Legislature set the State/School statutory rate at 10.91 percent for Fiscal Year 2016 and 10.81 percent for Fiscal Year 2017, with the 1.2 percent statutory cap applying thereafter. The December 31, 2015, valuation sets the employer contribution rate for Fiscal Year 2019 for the State and School group and calendar year 2018 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 20.05 percent this year. The uniform rate does not include the payment required to amortize the unfunded past service liability determined separately for each employer.

The rate of return on the market value of assets in 2015 was 0.2 percent, as reported by KPERS, lower than the assumed return of 8.0 percent. As a result, the net deferred asset gain of \$660 million in the prior valuation has changed to a net deferred asset loss of \$515 million in the current valuation. Due to the asset smoothing method, the resulting rate of return on the actuarial value of assets for calendar year 2015 was 7.6 percent. 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 State/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 and contributions are made, as scheduled, in future years.

## EXPERIENCE - ALL SYSTEMS COMBINED

December 31, 2014 – December 31, 2015

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, 2015. 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 both the System’s assets and liabilities impacted the change in the actuarial contribution rates between the December 31, 2014, and December 31, 2015, 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, 2014, and December 31, 2015, actuarial valuations.

	State	School	Local
12/31/2014 (Starting count)	22,740	85,347	38,659
New actives	2,472	9,697	5,448
Non-vested Terminations	(830)	(3,989)	(1,996)
Elected Refund	(703)	(1,519)	(1,318)
Vested Terminations	<u>(590)</u>	<u>(2,715)</u>	<u>(1,219)</u>
Total Withdrawals	(2,123)	(8,223)	(4,533)
Deaths	(38)	(56)	(64)
Disabilities	(33)	(51)	(35)
Retirements	(855)	(2,588)	(1,092)
Other/Transfer	(46)	(106)	149
12/31/2015 (Ending count)	22,117	84,020	38,532

	KP&F	Judges	Total
12/31/2014 (Starting count)	7,204	253	154,203
New actives	644	21	18,282
Non-vested Terminations	(206)	0	(7,021)
Elected Refund	(110)	(1)	(3,651)
Vested Terminations	(33)	(2)	(4,559)
Total Withdrawals	(349)	(3)	(15,231)
Deaths	(6)	(1)	(165)
Disabilities	(17)	0	(136)
Retirements	(238)	(5)	(4,778)
Other/Transfer	6	(3)	0
12/31/2015 (Ending count)	7,244	262	152,175

All three KPERS groups experienced a decrease in the number of active members with the largest decrease, as a percentage, occurring in the State group. This pattern of low (or negative) employee growth has not been unusual in recent years. However, the decline in active members has an adverse impact on the valuation results. As a result of fewer active members, coupled with low salary increases, the total active member payroll has not grown as expected so there have been fewer contribution dollars to pay down the System's UAL.

**ASSETS**

As of December 31, 2015, the System had total funds of \$16.9 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, 2014, value of \$16.3 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.

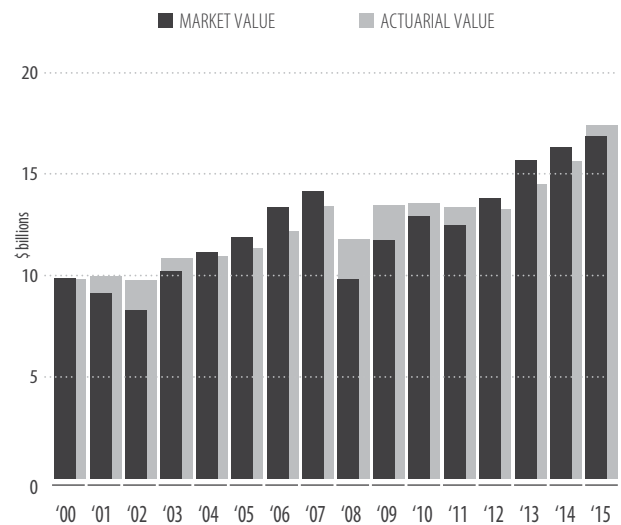
The components of the change in the market value and actuarial value of assets for the Retirement System (in millions):

	Market Value \$(millions)	Actuarial Value \$(millions)
Assets, December 31, 2014	\$16,322	\$15,662
• Employer and Member Contributions	1,131	1,131
• Benefit Payments and Expenses	(1,596)	(1,596)
• Bond Proceeds	1,000	1,000
• Investment Income	36	1,212
Assets, December 31, 2015	\$16,893	\$17,409
Rate of Return	0.2%	7.6%

The actuarial value of assets as of December 31, 2015, was \$17.409 billion. The annualized dollar-weighted net rate of return for 2015 was 7.6 percent measured on the actuarial value of assets, and 0.2 percent measured on the market value of assets, as reported by KPERS.

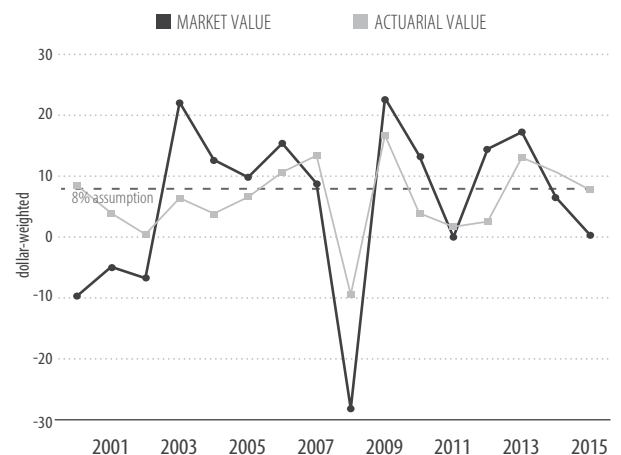
Due to the use of an asset smoothing method, there is \$515 million of net deferred investment loss experience that has not yet been recognized, i.e. the market value of assets is lower than the actuarial value. This deferred investment loss will be reflected in the actuarial value of assets over the next four years, but may be offset by actual investment experience if it is more favorable than assumed.

TOTAL SYSTEM ASSETS  
By Calendar Year



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.

ASSETS RATE OF RETURN



The rate of return on the actuarial (smoothed) value of assets has been less volatile than the market value return. The deferred investment loss will be reflected in the actuarial value of assets in the next few years, absent favorable 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 contributions exceed the employer normal cost for the year, after allowing for interest 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.

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

	State	School	Local
Actuarial Liability	\$4,211	\$13,799	\$4,806
Actuarial Value of Assets	<u>3,341</u>	<u>8,393</u>	<u>3,320</u>
Unfunded Actuarial Liability*	\$870	5,406	\$1,486

	KP&F	Judges	Total*
Actuarial Liability	\$2,966	\$166	\$25,948
Actuarial Value of Assets	<u>2,194</u>	<u>160</u>	<u>17,409</u>
Unfunded Actuarial Liability*	\$772	\$6	\$8,539

\*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 17 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. The remaining amortization period is now short enough that the UAL would be expected to decrease, if the full actuarial contribution rate was contributed. However, 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. Moreover, during the last half of Fiscal Year 2015, the statutory rate for the State/School group was reduced from 11.27 percent to 8.65 percent due to an allotment by the Governor, which was later codified by the 2015 Legislature.

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 2015). For all of the groups, except KPERS Local and KP&F, the valuation reflects a net liability gain for the year, largely from smaller salary increases than expected. The liability loss for the Local group and KP&F was due to the combined impact of more retirements than expected with higher than expected benefit amounts. Due to unfavorable experience on assets, the System experienced a return of 7.6 percent on the actuarial value of assets, which is lower than the assumed return of 8.0 percent. This resulted in an experience loss on the actuarial value of assets for all groups. The net result of all experience (asset and liability) for all groups was an experience gain for the System of \$67 million in 2015.

Between December 31, 2014, and December 31, 2015, the change in the unfunded actuarial liability for the System, as a whole, was as follows (in millions):

	\$ millions
Unfunded Actuarial Liability, December 31, 2014	\$9,468
• effect of contribution cap/time lag/allotment	160
• expected increase due to amortization method	(11)
• gain/loss from investment return on actuarial assets	52
• demographic experience <sup>(1)</sup>	(118)
• all other experience	(12)
• bond proceeds	(1,000)
<b>Unfunded Actuarial Liability, December 31, 2015<sup>(2)</sup></b>	<b>\$ 8,539</b>

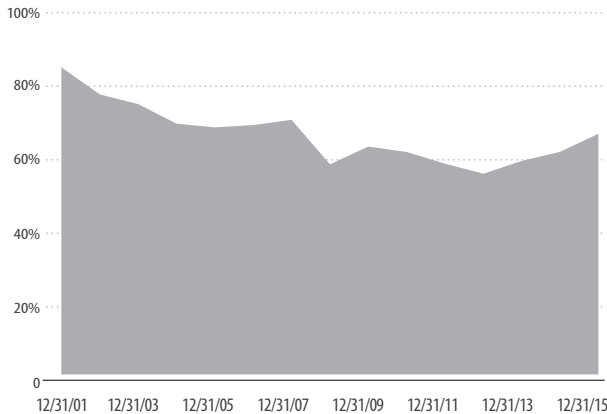
1) Liability gain is about 0.45 percent of total actuarial liability.  
 2) May not add due to rounding.

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 ratio does not necessarily indicate whether or not additional funding is needed, nor does it indicate whether or not the plan could terminate. The funded status information for the KPERS System is as follows (in millions).

	12/31/09	12/31/10	12/31/11	12/31/12	12/31/13	12/31/14	12/31/15
<b>Using Actuarial Value of Assets:</b>							
Funded Ratio (AVA/AL)	64%	62%	59%	56%	60%	62%	67%
Unfunded Actuarial Liability (AL-AVA)	\$7,677	\$8,264	\$9,228	\$10,253	\$9,766	\$9,468	\$8,539
<b>Using Market Value of Assets:</b>							
Funded Ratio (MVA/AL)	56%	59%	55%	59%	65%	65%	65%
Unfunded Actuarial Liability (AL-MVA)	\$9,384	\$8,936	\$10,130	\$9,714	\$8,584	\$8,808	\$9,055

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 much of this period. However, the funded ratio improved in the current valuation due to proceeds from bonds issued by the State in 2015. The funded ratio is expected to increase steadily in the future assuming assumptions are met and scheduled contributions are made.

FUNDED RATIO – ACTUARIAL VALUE



Given the current funded status of the System, the deferred investment experience, 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 and
- 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, so the death and disability contribution rate is not reflected in this report.

The results of the December 31, 2015, valuation are used to set employer contribution rates for Fiscal Year 2019 for the State (July 1, 2018, to June 30, 2019) and 2018 for Local employers (calendar year 2018).

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 currently 1.2 percent for all three groups (0.9 percent in Fiscal Year 2014, 1.0 percent in 2015, 1.1 percent in 2016 and 1.2 percent in 2017 and beyond). In 2015, SB 4 reset the previously certified employer contribution rate for the State/School group for the last half of Fiscal Year 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 Fiscal Year 2016 and 13.57 percent to 10.81 percent for Fiscal Year 2017. The December 31, 2014, valuation set the statutory contribution rates for Fiscal Year 2018 based on the 1.2 percent statutory cap.



A summary of the actuarial and statutory employer contribution rates for the System follows:

DECEMBER 31, 2015 VALUATION

System	Actuarial	Statutory	Difference
State <sup>(1)</sup>	8.28%	13.21%	(4.93%)
School <sup>(1)</sup>	14.59	13.21	1.38
State/School <sup>(1)</sup>	13.23	13.21	0.02
Local <sup>(1)</sup>	8.39	8.39	0.00
Police & Fire - Uniform Rates <sup>(2)</sup>	20.09	20.09	0.00
Judges	14.68	14.68	0.00

1) By statute, rates are allowed to increase by a maximum of 0.9 percent for Fiscal Year 2014, 1.0 percent in Fiscal Year 2015, 1.1 percent in Fiscal Year 2016 and 1.2 percent in Fiscal Year 2017 and beyond plus the cost of any benefit enhancements. However, the 2015 Legislature set the State/School statutory rate at 10.91 percent for Fiscal Year 2016 and 10.81 percent for Fiscal Year 2017, with the 1.2 percent statutory cap applying thereafter. The December 31, 2015, valuation sets the employer contribution rate for Fiscal Year 2019 for the State and School group and calendar year 2018 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 20.05 percent this year. The uniform rate does not include the payment required to amortize the unfunded past service liability determined separately for each employer.

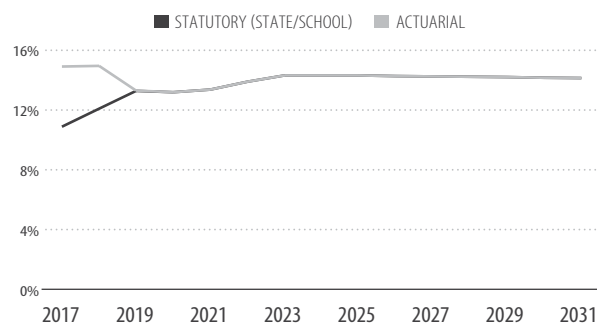
Separate employer contribution rates are calculated for two subgroups of the State: Correctional Employee groups with normal retirement age 55 (C55) and normal retirement age 60 (C60). The contribution rates are calculated by increasing the state statutory contribution rate by the difference in the normal 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 are intended to finance the earlier normal retirement age. However, SB 228 reset the statutory employer contribution rates for Fiscal Year 2016 and Fiscal Year 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), eliminating the intended rate differential. The resulting contribution rates for the Correctional Employee groups for Fiscal Year 2019 are shown in the following table:

Corrections Group	Statutory Rate
Retirement Age 55:	13.21%
Retirement Age 60:	13.21%

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 Fiscal Year 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,

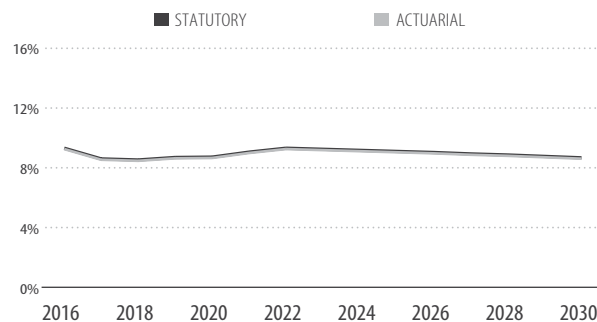
there is a difference (shortfall) between the actuarial and statutory contribution rates of 1.38 percent for the School group and 0.02 percent for the State/School group. Assuming an 8.00 percent return on the market value of assets for 2016 and beyond, all other actuarial assumptions are met in the future and the current statutory funding policy continues and contributions are made as scheduled, the estimated ARC date for the combined State/School group is Fiscal Year 2020 at a rate of 13.12 percent. For comparison purposes, last year's projections showed a projected ARC date of Fiscal Year 2020 at a rate of 13.55 percent, reflecting receipt of the \$1 billion of bond proceeds.

PROJECTED EMPLOYER CONTRIBUTION RATES – STATE/SCHOOL  
Fiscal Year End



Based on preliminary modeling results which are subject to change upon final review, the ARC date for the State/School group is projected to occur in Fiscal Year 2020 with an ARC rate of 13.12 percent, assuming all actuarial assumptions are met in future years, and then increase to around 14.25 percent. The projected ARC date in last year's valuation, reflecting receipt of the bond proceeds, was Fiscal Year 2020 with an ARC rate of 13.55 percent. Future experience, especially investment returns, will heavily influence the ultimate ARC date and rate.

PROJECTED EMPLOYER CONTRIBUTION RATES – LOCAL  
Fiscal Year End



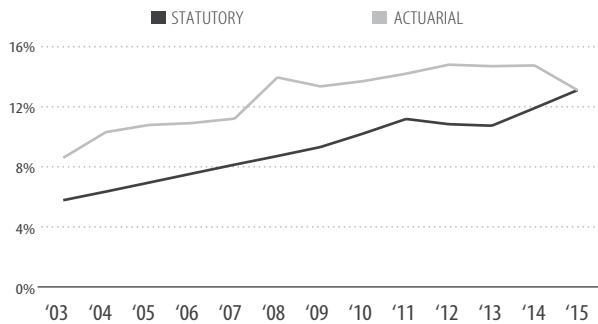
The Local group reached the ARC date in the 2012 valuation with an ARC rate of 9.48 percent, which has decreased over the last few years to 8.39 percent in the 2015 valuation. The projected contribution rate is expected to increase to around 9.18 percent as the deferred investment experience is realized, 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 occurred in 2003, and the System received bond proceeds in 2003 and 2015. 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/SCHOOL CONTRIBUTION RATES

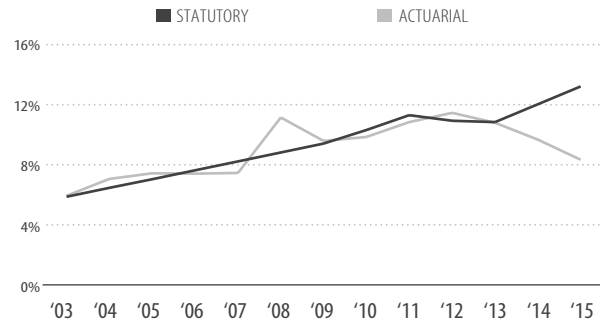
Fiscal Year End



Numerous factors have contributed to the increase in the ARC rate over much of this period including investment experience, changes in actuarial assumptions and contributions significantly below the actuarial rate. The ARC rate declined in the current valuation due to the \$1 billion of bond proceeds issued by the state. As a result, the shortfall between the statutory and actuarial contribution rates was reduced to only 0.02 percent.

### STATE CONTRIBUTION RATES

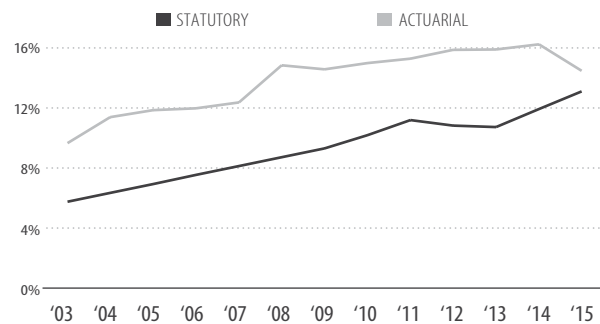
Fiscal Year End



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 Fiscal Year 2016 from 12.37 percent to 10.91 percent. In this valuation, the State's actuarial required contribution rate decreased to 8.28 percent, due to the bond proceeds, and is again less than the statutory contribution rate.

### SCHOOL CONTRIBUTION RATES

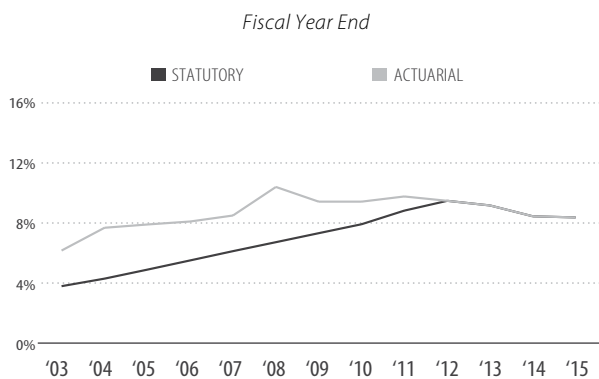
Fiscal Year End



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 much of this period. However, due to the additional revenue received from the bond proceeds, the ARC rate decreased significantly and the funded ratio improved in the 2015 valuation.

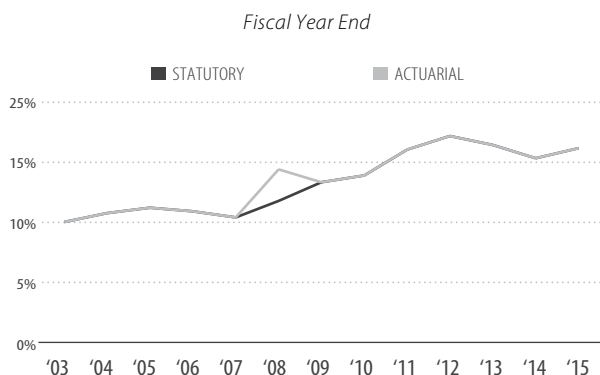


### LOCAL CONTRIBUTION RATES



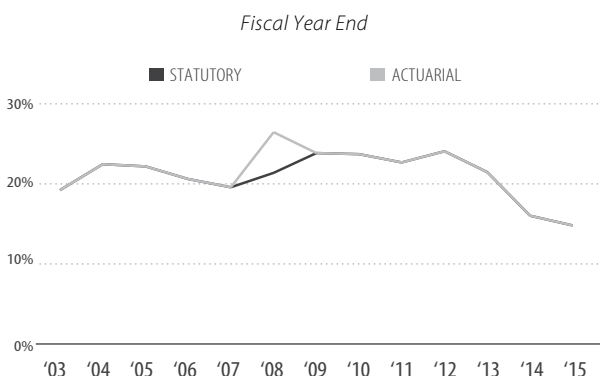
The Local contribution rate has also been impacted by changes in actuarial assumptions and methods as well as investment performance. With the significant changes in 2012 Sub House Bill 2333 and favorable investment returns, the statutory contribution rate was equal to the actuarial required contribution rate (ARC) in the 2012 valuation. The ARC decreased in the 2015 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 had declined prior to the current valuation. Unfavorable experience resulted in an increase in the contribution rate in the 2015 valuation.

### 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 2014, 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 Fiscal Year 2006, 0.50 percent in Fiscal Year 2007 and 0.60 percent in Fiscal Year 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 Fiscal Year 2006, 0.50 percent in Fiscal Year 2007 and 0.60 percent in Fiscal Year 2008 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, included:

- Increased the statutory cap on employer contribution rates to 0.9 percent in Fiscal Year 2014, 1.0 percent in Fiscal Year 2015, 1.1 percent in Fiscal Year 2016 and 1.2 percent in Fiscal Year 2017 and beyond.
- Contingent upon IRS approval, established an election by Tier 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, Tier 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.
- For Tier 2 members retiring after July 1, 2012, the cost of living adjustment (COLA) was eliminated, but members received a 1.85 percent multiplier for all years of service.
- Created 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 Fiscal Year 2014, provided 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 was to come from the Expanded Lottery Act Revenues Fund (ELARF). However, for Fiscal Years 2014 through 2017, the ELARF funds were appropriated as a partial funding source to meet the statutory contribution requirements for the School group rather than contributed in addition to the statutory contributions. Therefore, no additional funding of the UAL has occurred. As a result, projections assume there will not be any additional payments to the UAL from the ELARF funds.
- If the State of Kansas sells surplus real estate, 80 percent of the proceeds is to be used to pay down KPERS' unfunded actuarial liability until the System reaches an 80 percent funded ratio.

However, 2016 SB249 suspended this provision with respect to any sales of surplus real estate during Fiscal Year 2017.

The 2014 Legislature passed HB 2533 which made changes to the KPERS Tier 3 benefit structure, generally decreasing the portion of the benefit that is guaranteed, thereby increasing the risk-sharing portion of the benefit. The changes in House Bill 2533 were designed to further improve KPERS long term funding and to better manage the investment risk.

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 Fiscal Year 2015 to correspond with the Governor's allotment. In addition, SB 228 provided for bonds to be issued to improve the funded status of the State/School group and also reduced the previously certified employer contribution rates for Fiscal Year 2016 and 2017. The following provisions were included in SB 228:

- Net proceeds of up to \$1.0 billion from bonds issued by the state of Kansas were to be deposited into the KPERS trust fund for the State/School group, subject to certain criteria. The bonds had to be issued at an interest rate no greater than 5.0 percent and approved by the State Finance Council (approval received July 2, 2015). Bonds were sold and 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 Fiscal Year 2016 and from 13.57 percent to 10.81 percent for Fiscal Year 2017. The statutory cap of 1.2 percent per year applies again to employer contribution rates in Fiscal Year 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.

The 2016 Legislature passed House Sub for SB 168 which revised the rules pertaining to working after retirement. The bill also made technical and clarifying amendments to statutes related to death and disability contributions, KPERS 3 members and the Deferred Retirement Option Program (DROP) for certain members of KP&F. None of these provisions had an impact on the December 31, 2015, valuation results. The 2016 Legislature also passed House Sub for SB 161 which provided for the delay of up to \$100 million in State and School contributions for Fiscal Year 2016. House Sub for SB 249 provided that the delayed contributions would be repaid in full, with interest at 8 percent, by June 30, 2018. The Governor used this allotment authority to delay payments of \$97.4 million in State/School group contributions during

the final quarter of Fiscal Year 2016. The December 31, 2015, valuation and projections assume that KPERS records the delayed contributions as a long-term receivable.

**COMMENTS**

Like most public retirement systems, KPERS uses an asset smoothing method to average investment experience above and below the assumed rate of 8.0 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. Due to the recognition of the experience in the prior four years in the asset smoothing method, the return on the actuarial value of assets in 2015 was 7.6 percent. As of the valuation date, the actuarial value of assets exceeds the market value of assets by about 3.0 percent.

The deferred investment experience has changed from a net deferred gain of \$660 million in last year’s valuation to a net

deferred loss of \$515 million this year’s valuation. This deferred experience will flow through the asset smoothing method in the next four years and be recognized in the valuation process, unless offset by investment experience above the 8.0 percent assumed rate of return. As the deferred investment experience is recognized, the funded ratio can be expected to decrease.

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 follow for the State/School and KP&F 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	\$18,010	\$18,010	\$2,966	\$2,966
Asset Value	<u>11,734</u>	<u>11,395</u>	<u>2,194</u>	<u>2,127</u>
Unfunded Actuarial Liability*	6,276	6,614	772	839
Funded Ratio	65%	63%	74%	72%
Contribution Rate:				
Normal Cost Rate	8.31%	8.31%	15.07%	15.07%
UAL Payment	<u>10.92%</u>	<u>11.61%</u>	<u>12.17%</u>	<u>13.41%</u>
Total	19.23%	19.92%	27.24%	28.48%
Employee Rate	<u>6.00%</u>	<u>6.00%</u>	<u>7.15%</u>	<u>7.15%</u>
Employer Rate	13.23%	13.92%	20.09%	21.33%

\* May not add due to rounding

The asset smoothing method impacts only the timing of when the actual experience on the market value of assets is recognized. The investment experience over the last five years resulted in a return of 7.6 percent on the actuarial value of assets. As a result, the unfunded actuarial liability increased by \$52 million. Future investment experience will impact the extent to which the deferred investment experience (which is currently a net loss) 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 8.0 percent return in future years.

the actual investment experience of the System in future years, the continuation of the current statutory funding policy for the State/School group and actual contributions at the statutory rate.

While all of the groups (State/School, Local, KP&F and Judges) are projected to reach a funded ratio of 100 percent by 2033, the actual funding progress will be heavily dependent on

SUMMARY OF CHANGES IN UNFUNDED ACTUARIAL LIABILITY BY SYSTEM

December 31, 2015 Valuation (\$ millions)

	State	School	State/School	Local	KP&F	Judges	Total
<b>UAL in 12/31/2014 Valuation Report</b>	<b>\$1,038.8</b>	<b>\$ 6,205.1</b>	<b>\$7,243.9</b>	<b>\$ 1,487.8</b>	<b>\$726.2</b>	<b>\$ 10.6</b>	<b>\$ 9,468.5</b>
· Effect of Contribution Cap/Time Lag/Allotment	7.5	189.2	196.7	(20.8)	(13.3)	(2.4)	160.2
· Expected Increase Due to Amortization Method	(1.2)	(7.0)	(8.2)	(1.7)	(0.8)	(0.3)	(11.0)
· Actual vs. Expected Experience							
Investment return	9.3	25.4	34.7	10.1	6.5	0.4	51.8
Demographic Experience	(45.3)	(134.9)	(180.2)	11.0	54.3	(2.6)	(117.6)
All Other Experience	4.7	(15.7)	(11.0)	(0.7)	(1.3)	0.3	(12.7)
· Change in Actuarial Assumptions/Methods	0.0	0.0	0.0	0.0	0.0	0.0	0.0
· Change in Benefit Provisions	0.0	0.0	0.0	0.0	0.0	0.0	0.0
· Bond Proceeds	(143.4)	(856.6)	(1,000.0)	0.0	0.0	0.0	(1,000.0)
<b>UAL in 12/31/2015 Valuation Report</b>	<b>\$ 870.4</b>	<b>\$ 5,405.5</b>	<b>\$6,275.9</b>	<b>\$1,485.7</b>	<b>\$771.6</b>	<b>\$ 6.0</b>	<b>\$ 8,539.2</b>

Totals may not add due to rounding.

SUMMARY OF CHANGES IN EMPLOYER ACTUARIAL CONTRIBUTION RATE BY SYSTEM

As of December 31, 2015

Percentage of Payroll	State	School	State/School	Local	KP&F <sup>(1)</sup>	Judges
<b>Actuarial Contribution Rate in 12/31/2014 Valuation</b>	9.62%	16.38%	14.89%	8.46%	19.03%	15.89%
<b>Change Due to Amortization of UAL</b>						
· Effect of Contribution Cap/Time Lag/Allotment	0.06	0.42	0.34	(0.09)	(0.21)	(0.83)
· Amortization Method	(0.01)	(0.02)	(0.01)	(0.01)	(0.01)	(0.09)
· Investment Experience	0.07	0.06	0.06	0.04	0.10	0.14
· Liability Experience	(0.36)	(0.30)	(0.31)	0.05	0.86	(0.90)
· All Other Experience	0.10	0.04	0.07	0.07	0.32	0.35
· Change in Assumptions/Methods	0.00	0.00	0.00	0.00	0.00	0.00
· Change in Benefit Provisions	0.00	0.00	0.00	0.00	0.00	0.00
· Bond Proceeds	(1.14)	(1.88)	(1.72)	0.00	0.00	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	0.00	0.00	0.00	0.00	0.00	0.00
· All Other Experience	<u>(0.06)</u>	<u>(0.11)</u>	<u>(0.09)</u>	<u>(0.13)</u>	<u>0.00</u>	<u>0.12</u>
<b>Actuarial Contribution Rate in 12/31/2015 Valuation</b>	8.28%	14.59%	13.23%	8.39%	20.09%	14.68%

1) Contribution rate for Local employers only.

## SUMMARY OF HISTORICAL CHANGES IN TOTAL SYSTEM UAL

As of December 31, 2015 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	12/31/15	Total
Actual Experience vs. Assumed								
• Investment	\$(1,011)	\$560	\$852	\$732	\$(653)	\$(368)	\$52	\$1,240
• Other	(70)	(334)	(190)	(78)	(125)	(78)	(130)	289
Assumption Changes	0	0	(64)	0	0	(50)	0	750
Changes in Data/Procedures	0	0	0	0	0	0	0	377
Change in Cost Method	0	0	0	0	0	0	0	1,147
Effect of Contribution Cap/Lag	383	320	289	303	246	178	160	3,982
Amortization Method	96	68	62	49	46	18	(11)	1,010
Change in Benefit Provisions	0	0	15	19	0	1	0	284
Change in Actuarial Firm/Software	0	(27)	0	0	0	0	0	(27)
Bond Issue	0	0	0	0	0	0	(1,000)	(1,481)
Total	\$(602)	\$587	\$964	\$1,025	\$(487)	\$(298)	\$(929)	\$7,571

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

Unfunded Actuarial Liability 12/31/15: \$8,539 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)

	12/31/2015 Valuation	12/31/2014 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	22,117	22,740	(2.7%)
Retired Members and Beneficiaries	19,311	18,929	2.0
Inactive Members	<u>7,978</u>	<u>7,680</u>	3.9
Total Members	<u>49,406</u>	<u>49,349</u>	0.1
Projected Annual Salaries of Active Members	\$ 950,204,558	\$ 969,759,396	(2.0)
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 266,428,213	\$ 255,795,911	4.2
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 4,211,018,764	\$ 4,160,796,145	1.2
b. Assets for Valuation Purposes	3,340,654,264	3,122,041,106	7.0
c. Unfunded Actuarial Liability (a) - (b)	870,364,500	1,038,755,039	(16.2)
d. Funded Ratio (b) / (a)	79.3%	75.0%	5.7
e. Market Value of Assets	3,244,225,487	3,256,683,036	(0.4)
f. Funded Ratio on Market Value (e) / (a)	77.0%	78.3%	(1.7)
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost			
Total	8.04%	8.10%	
Member	<u>6.00</u>	<u>6.00</u>	
Employer	2.04	2.10	
Amortization of Unfunded Actuarial Liability	<u>6.24</u>	<u>7.52</u>	
Actuarial Contribution Rate	8.28	9.62	
Statutory Employer Contribution Rate*	<u>13.21%</u>	<u>12.01%</u>	

\*The rate in this valuation may not exceed last year's rate by more than the statutory rate increase limit of 1.20 percent for Fiscal Year 2017 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)

	12/31/2015 Valuation	12/31/2014 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	84,020	85,347	(1.6%)
Retired Members and Beneficiaries	50,188	48,396	3.7
Inactive Members	<u>27,321</u>	<u>25,506</u>	7.1
Total Members	<u>161,529</u>	<u>159,249</u>	1.4
Projected Annual Salaries of Active Members	\$ 3,428,810,555	\$ 3,438,564,123	(0.3)
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 749,416,332	\$ 707,046,829	6.0
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 13,798,734,403	\$ 13,436,665,540	2.7
b. Assets for Valuation Purposes	8,393,193,573	7,231,564,556	16.1
c. Unfunded Actuarial Liability (a) - (b)	5,405,540,830	6,205,100,984	(12.9)
d. Funded Ratio (b) / (a)	60.8%	53.8%	13.0
e. Market Value of Assets	8,151,104,207	7,540,084,183	8.1
f. Funded Ratio on Market Value (e) / (a)	59.1%	56.1%	5.3
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost			
Total	8.38%	8.49%	
Member	<u>6.00</u>	<u>6.00</u>	
Employer	2.38	2.49	
Amortization of Unfunded Actuarial Liability	<u>12.21</u>	<u>13.89</u>	
Actuarial Contribution Rate	14.59	16.38	
Statutory Employer Contribution Rate*	<u>13.21%</u>	<u>12.01%</u>	

\*The rate in this valuation may not exceed last year's rate by more than the statutory rate increase limit of 1.20 percent for Fiscal Year 2017 and later. This rate excludes the contribution rate for the Death and Disability Program.

SUMMARY OF PRINCIPAL RESULTS – KPERS (STATE/SCHOOL)

	12/31/2015 Valuation	12/31/2014 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	106,137	108,087	(1.8%)
Retired Members and Beneficiaries	69,499	67,325	3.2
Inactive Members	<u>35,299</u>	<u>33,186</u>	6.4
Total Members	<u>210,935</u>	<u>208,598</u>	1.1
Projected Annual Salaries of Active Members	\$ 4,379,015,113	\$ 4,408,323,519	(0.7)
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 1,015,844,545	\$ 962,842,740	5.5
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 18,009,753,167	\$ 17,597,461,685	2.3
b. Assets for Valuation Purposes	11,733,847,837	10,353,605,662	13.3
c. Unfunded Actuarial Liability (a) - (b)	6,275,905,330	7,243,856,023	(13.4)
d. Funded Ratio (b) / (a)	65.2%	58.8%	10.9
e. Market Value of Assets	11,395,329,694	10,796,767,219	5.5
f. Funded Ratio on Market Value (e) / (a)	63.3%	61.4%	3.1
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost			
Total	8.31%	8.40%	
Member	<u>6.00</u>	<u>6.00</u>	
Employer	2.31	2.40	
Amortization of Unfunded Actuarial Liability	<u>10.92</u>	<u>12.49</u>	
Actuarial Contribution Rate	13.23	14.89	
Statutory Employer Contribution Rate*	<u>13.21%</u>	<u>12.01%</u>	

\*The rate in this valuation may not exceed last year's rate by more than the statutory rate increase limit of 1.20 percent for Fiscal Year 2017 and later. This rate excludes the contribution rate for the Death and Disability Program.



## SUMMARY OF PRINCIPAL RESULTS – KPERS (LOCAL)

	12/31/2015	12/31/2014	
	Valuation	Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	38,532	38,659	(0.3%)
Retired Members and Beneficiaries	19,046	18,258	4.3
Inactive Members	<u>16,399</u>	<u>15,657</u>	4.7
Total Members	<u>73,977</u>	<u>72,574</u>	1.9
Projected Annual Salaries of Active Members	\$ 1,718,698,667	\$ 1,662,175,758	3.4
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 216,314,510	\$ 200,185,378	8.1
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 4,806,144,236	\$ 4,568,653,804	5.2
b. Assets for Valuation Purposes	3,320,449,548	3,080,863,872	7.8
c. Unfunded Actuarial Liability (a) - (b)	1,485,694,688	1,487,789,932	(0.1)
d. Funded Ratio (b) / (a)	69.1%	67.4%	2.5
e. Market Value of Assets	3,216,043,938	3,205,746,273	0.3
f. Funded Ratio on Market Value (e) / (a)	66.9%	70.2%	(4.7)
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost			
Total	7.93%	8.06%	
Member	<u>6.00</u>	<u>6.00</u>	
Employer	1.93	2.06	
Amortization of Unfunded Actuarial Liability	<u>6.46</u>	<u>6.40</u>	
Actuarial Contribution Rate	8.39	8.46	
Statutory Employer Contribution Rate*	<u>8.39%</u>	<u>8.46%</u>	

\*The Statutory Employer Contribution Rate in this valuation may not exceed last year's rate by more than the statutory rate increase limit of 1.20 percent for Fiscal Year 2017 and later. This rate excludes the contribution rate for the Death and Disability Program.

SUMMARY OF PRINCIPAL RESULTS – KPERS (TOTAL KPERS)

	12/31/2015 Valuation	12/31/2014 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	144,669	146,746	(1.4%)
Retired Members and Beneficiaries	88,545	85,583	3.5
Inactive Members	<u>51,698</u>	<u>48,843</u>	5.8
Total Members	<u>284,912</u>	<u>281,172</u>	1.3
Projected Annual Salaries of Active Members	\$ 6,097,713,780	\$ 6,070,499,277	0.4
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 1,232,159,055	\$ 1,163,028,118	5.9
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 22,815,897,403	\$ 22,166,115,489	2.9
b. Assets for Valuation Purposes	15,054,297,385	13,434,469,534	12.1
c. Unfunded Actuarial Liability (a) - (b)	7,761,600,018	8,731,645,955	(11.1)
d. Funded Ratio (b) / (a)	66.0%	60.6%	8.9
e. Market Value of Assets	14,611,373,632	14,002,513,492	4.3
f. Funded Ratio on Market Value (e) / (a)	64.0%	63.2%	1.3

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

	12/31/2015 Valuation	12/31/2014 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	7,244	7,204	0.6%
Retired Members and Beneficiaries	5,065	4,853	4.4
Inactive Members	<u>1,453</u>	<u>1,406</u>	3.3
Total Members	<u>13,762</u>	<u>13,463</u>	2.2
Projected Annual Salaries of Active Members	\$ 477,559,955	\$ 462,177,399	3.3
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 159,271,328	\$ 147,468,612	8.0
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 2,965,712,160	\$ 2,800,878,131	5.9
b. Assets for Valuation Purposes	2,194,103,726	2,074,703,598	5.8
c. Unfunded Actuarial Liability (a) - (b)	771,608,434	726,174,533	6.3
d. Funded Ratio (b) / (a)	74.0%	74.1%	(0.1)
e. Market Value of Assets	2,126,561,947	2,160,304,791	(1.6)
f. Funded Ratio on Market Value (e) / (a)	71.7%	77.1%	(7.0)
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost			
Total	15.07%	15.07%	
Member	<u>7.15</u>	<u>7.15</u>	
Employer	7.92	7.92	
Amortization of Unfunded Actuarial and Supplemental Liability	<u>12.17</u>	<u>11.11</u>	
Actuarial Contribution Rate (Local Employers)	20.09	19.03	
Statutory Employer Contribution Rate*	<u>20.09%</u>	<u>19.03%</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

	12/31/2015 Valuation	12/31/2014 Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	262	253	3.6%
Retired Members and Beneficiaries	256	257	(0.4)
Inactive Members	<u>8</u>	<u>6</u>	33.3
Total Members	<u>526</u>	<u>516</u>	1.9
Projected Annual Salaries of Active Members	\$ 28,339,546	\$ 27,427,962	3.3
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 10,289,243	\$ 10,375,018	(0.8)
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 166,170,995	\$ 163,473,067	1.7
b. Assets for Valuation Purposes	160,176,397	152,836,651	4.8
c. Unfunded Actuarial Liability (a) - (b)	5,994,598	10,636,416	(43.6)
d. Funded Ratio (b) / (a)	96.4%	93.5%	3.1
e. Market Value of Assets	155,264,020	159,205,632	(2.5)
f. Funded Ratio on Market Value (e) / (a)	93.4%	97.4%	(4.1)
<b>3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL</b>			
Normal Cost			
Total	19.39%	19.27%	
Member	<u>5.62</u>	<u>5.61</u>	
Employer	13.77	13.66	
Amortization of Unfunded Actuarial and Supplemental Liability	<u>0.91</u>	<u>2.23</u>	
Actuarial Contribution Rate	14.68	15.89	
Statutory Employer Contribution Rate*	<u>14.68%</u>	<u>15.89%</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

	12/31/2015	12/31/2014	
	Valuation	Valuation	% Change
<b>1. PARTICIPANT DATA</b>			
Number of:			
Active Members	152,175	154,203	(1.3%)
Retired Members and Beneficiaries	93,866	90,693	3.5
Inactive Members	53,159	50,255	5.8
Total Members	299,200	295,151	1.4
Projected Annual Salaries of Active Members	\$ 6,603,613,281	\$ 6,560,104,638	0.7
Annual Retirement Payments for Retired Members and Beneficiaries	\$ 1,401,719,626	\$ 1,320,871,748	6.1
<b>2. ASSETS AND LIABILITIES</b>			
a. Total Actuarial Liability	\$ 25,947,780,558	\$ 25,130,466,687	3.3
b. Assets for Valuation Purposes	17,408,577,508	15,662,009,783	11.2
c. Unfunded Actuarial Liability (a) - (b)	8,539,203,050	9,468,456,904	(9.8)
d. Funded Ratio (b) / (a)	67.1%	62.3%	7.7
e. Market Value of Assets	16,893,199,599	16,322,023,915	3.5
f. Funded Ratio on Market Value (e) / (a)	65.1%	64.9%	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 \*

\*Tier 2 refers to members who either began their participation or rehired on or after July 1, 2009, but before January 1, 2015. Tier 3 refers to non-corrections members who either began their participation or rehired on or after January 1, 2015. Corrections members do not participate in Tier 3.

This valuation reflects the benefit structure in place as of December 31, 2015.

## 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, but there was a one-year service requirement for the State and Local groups. Members who retire under the provisions of the Retirement System may not become contributing members again.

## NORMAL RETIREMENT

**Eligibility – Tier 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.

**Tiers 2 & 3:** (a) Age 65 with 5 years of credited service or (b) age 60 with 30 years of credited service.

**Benefit –Tiers 1 & 2:** 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, (Tier 2), Final Average Salary equals the average of the five highest years of salary, excluding additional compensation.

**Tier 3:** Tier 3 members participate in a cash balance plan with benefits based on the Annuity Savings Account balance, the Retirement Annuity Account balance and an annuity factor. The member’s annuity factor at retirement is based on the member’s age and benefit payment form. The current annuity factors were adopted by the Board upon recommendation of the actuary. They are expected to be updated periodically. A member’s Annuity Savings Account balance is the sum of mandatory member contributions plus the interest credits and dividends on those contributions. A member’s Retirement Annuity Account is the sum of all employer retirement credits to the account plus the interest credits and dividends on those credits.

Mandatory member contributions are 6 percent of compensation. The employer retirement credits are after the following schedule:

Years of Service	Retirement Credit Rate
Less than 5	3%
5 – 11	4%
12 – 23	5%
24 or more	6%

Interest credits are 4 percent per annum, paid quarterly. The interest credits are based on the account balances as of the last day of the preceding quarter. There is also a possibility of additional interest credits, depending on KPERs’ investment return. These additional interest credits are called “dividends” and are equal to 75 percent of the five-year average net compound rate of return, as determined by the board, for the preceding calendar year and the previous four calendar years on the market value of assets that is above 6 percent. A schedule of historical dividend rates is contained in the following table:

Year	Applicable Rate of Return	Dividend
2015	0.2%	0.0%

**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**

**Tier 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.

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

**Tier 3:** Not applicable for the Cash Balance Plan

#### **EARLY RETIREMENT**

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

**Benefit – Tier 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.

**Tier 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).

**Tier 3:** The early retirement benefit is determined in the same manner as a normal retirement benefit, but is based on the account balances and annuity factor at the member's retirement age.

#### **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 – Tiers 1 & 2:** 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.

**Tier 3:** Retirement benefits are payable when the vested member meets the retirement eligibility requirements and is based

on the member's account balances at retirement. The member's vested account will be granted interest credits and dividends during the deferral period between termination of employment and retirement.

#### **OTHER BENEFITS**

**Withdrawal Benefit** – Members who terminate employment may withdraw contributions with interest after the last day on the employer's payroll. Withdrawing member contributions forfeits all membership rights and benefits, which a member may have accrued prior to withdrawing their contributions from the Retirement System. Inactive, non-vested 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 Benefits – Tiers 1 & 2:** 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 1, 1998 and the change in CPI-U less 1 percent, not to exceed 4 percent after July 1, 1998.

**Tier 3:** For any Tier 3 member who becomes disabled, such member's Annuity Savings Account and Retirement Annuity Account will be credited with employee contributions, employer retirement credits, interest credits and dividends for the entire period of disability, but no later than the member's normal retirement age. The salary upon which credits are based shall be the employee's salary at the time of disability. After five years of disability, the underlying salary shall be increased by the lesser of (a) the percentage increase in CPI-U, minus 1 percent and (b) 4 percent per annum.

**Death Benefits – Pre-retirement death (non-service connected) – Tiers 1 & 2:** 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.

**Tier 3:** If a vested member dies before attaining normal retirement age, the member's surviving spouse shall receive an annuity on the date the member would have attained normal retirement age had such member not died. The benefit is based upon the member's Annuity Savings Account and Retirement Annuity Account, and is payable as a single life annuity with 10-year certain.

**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. For Tier 3 members, Final Average Salary equals the average of the three final years of salary.

**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**

**Tier 1:** Prior to January 1, 2014, member contributions were 4 percent of compensation for Tier 1. 2012 HB 2333 established an election by Tier 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, Tier 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.

**Tier 2:** The member contribution rate for Tier 2 is 6 percent of compensation.

**Tier 3:** The member contribution rate for Tier 3 is 6 percent of compensation.

**INTEREST ON MEMBER CONTRIBUTIONS**

**Tier 1:** 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.

**Tier 2:** Interest is credited to members' contribution accounts on June 30 each year, based on the account balance as of the preceding December 31, at the rate of 4 percent per year.

**Tier 3:** Please see page 111.

**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 plant operators, (d) correctional industries employees, (e) correctional food service employees and (f) correctional maintenance employees.

**Tier 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.

**Tier 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)**

Tier 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 the retirement date, whichever is later. Other Tier 2 members will not receive a COLA.

**Tier 3:** Upon retirement, the benefit option selected by the member may include a self-funded cost of living adjustment feature, in which the account value is converted to a benefit amount that increases by a fixed percentage over time.

## 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.

Deferred Retirement Option Program (DROP) for Kansas Highway Patrol (KHP)

Upon attaining normal retirement age, members of the KHP have the option of participating in the DROP plan for a minimum of three years and no more than five years. This is a one-time, irrevocable election. After electing to participate, a member’s monthly retirement benefit is deposited into the member’s DROP account for the duration of the DROP period. The DROP account accrues interest on an annual basis, ranging from 0.0 percent to 3.0 percent. Employer and employee contributions continue to be made to the System, but the member does not earn any additional service credit after the effective date of the DROP election. At the end of the DROP period, a member is entitled to a distribution from the DROP account.

## 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, Including Dividends** 6.5% per annum

**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 Tier 2 and Tier 3 State and Local employees become members immediately, their rates of salary increase are shifted 1 year to be consistent with Tier 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 Tier 2 and Tier 3 State and Local employees become members immediately, their termination rates are shifted 1 year to be consistent with Tier 1 members.*

**Retirement Rates**

**School**

**Rule of 85**

Age	1st Year		After 1st Year		Early Retirement		Normal Retirement	
	With 85 Points	With 85 Points	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**

**Rule of 85**

Age	1st Year		After 1st Year		Early Retirement		Normal Retirement	
	With 85 Points	With 85 Points	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**

**Rule of 85**

Age	1st Year		After 1st Year		Early Retirement		Normal Retirement	
	With 85 Points	With 85 Points	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 Tier 1 and Tier 2, and normal retirement age for Tier 3.

• 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**

Tier 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

Tier 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).

Tier 3: 100% of vested members are assumed to leave their contributions with the System.  
 Marriage Assumption: 70% of all members are assumed married with male spouse assumed 3 years older than the female.  
 Partial Lump Sum Option (PLSO): 40% of Tier 1 and Tier 2 members are assumed to take a PLSO equal to 30% of the value of their benefit upon retirement. 100 percent of Tier 3 members are assumed to take a PSLO equal to 30% of the value of their benefit upon retirement.

## ASSUMPTIONS AND METHODS—KP&F

**Rate of Investment Return** 8.0%

**Price Inflation** 3.0%

**Rates of Mortality:**

**Post-retirement** RP-2000 Healthy Annuitant Table

**Pre-retirement** 90% of RP-2000 Employee Table\*

*\*70% of preretirement deaths assumed to be service related.*

**Disabled Life Mortality** RP-2000 Disabled Life Table

**Rates of Salary Increase**

Years of Service	Rate of Increase*
1	12.5%
5	7.0
10	4.9
15	4.3
20	4.0
25	4.0

*\*Includes general wage increase assumption of 4.0% (composed of 3.0% inflation and 1.0% productivity)*

**Rates of Termination**

Tier 1: 3% for ages less than 41; 0% thereafter

Tier 2:

Years of Service	Rate of Increase*
1	13.0%
5	6.0
10	2.5
15	1.0
20	1.0
25	0.0

**Retirement Rates**

Tier 1:

Early Retirement		Normal Retirement	
Age	Rate	Age	Rate
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



Tier 2:

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 (a) eligibility for unreduced benefits or (b) 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.

**DROP Election**

75% of Kansas Highway Patrol members are assumed to enter DROP for the maximum DROP period.

## ASSUMPTIONS AND METHODS—JUDGES

**Rate of Investment Return** 8.0%

**Price Inflation** 3.0%

**Rates of Mortality:**

**Post-retirement** RP-2000 Healthy Annuitant Table, set back two years

**Pre-retirement** 70% of RP-2000 Employee Table, set back two years

**Rates of Salary Increase** 4.5%

**Rates of Termination** None assumed

**Disabled Life Mortality** RP-2000 Disabled Life Table, set back two years

**Rates of Disability** None assumed

**Retirement Rates**

Age	Rate
60	20%
61	10
62-64	15
65-66	20
67-69	10
70+	100

**Marriage Assumption:** 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.

Tier 3 employees who transfer employment to a non-KPERS covered position are treated as actives who are not accruing benefits.

## 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)
12/31/06	\$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
12/31/15	17,408,577	25,947,781	8,539,203	67	6,603,613	129

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)
12/31/06	\$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	—
12/31/15	5,942,762,790	13,095,276,871	6,909,740,897	17,408,577,508	100	88	—

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			
12/31/06	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
12/31/15	152,175	(1.3)	1,517	(0.1)	6,604	43,395	2.0

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
12/31/06	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
12/31/15	152,175	53,159	94,333	299,667

## 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					
6/30/07	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
6/30/16	92,742	6,494	110,741,918	3,055	30,319,950	96,150	3.70	2.10	16,104	1,548,362,854

SUMMARY OF MEMBERSHIP DATA

Retiree and Beneficiary Member Valuation Data <sup>(1)</sup>	12/31/15	12/31/14
<b>KPERS</b>		
Number	88,545	85,583
Average Benefit	\$13,915	\$13,590
Average Age	72.15	72.17
<b>Police &amp; Fire</b>		
Number	5,065	4,853
Average Benefit	\$31,445	\$30,387
Average Age	65.01	65.06
<b>Judges</b>		
Number	256	257
Average Benefit	\$40,192	\$40,370
Average Age	74.77	74.29
<b>System Total</b>		
Number	93,866	90,693
Average Benefit	\$14,933	\$14,565
Average Age	71.77	71.80
Active Member Valuation Data <sup>(1)</sup>	12/31/15	12/31/14
<b>KPERS</b>		
Number	144,669	146,746
Average Current Age	45.36	45.40
Average Service	11.19	11.21
Average Pay	\$42,149	\$41,367
<b>Police &amp; Fire</b>		
Number	7,244	7,204
Tier I	200	261
Tier II	7,044	6,943
Average Current Age	39.45	39.67
Average Service	11.69	11.88
Average Pay	\$65,925	\$64,156
<b>Judges</b>		
Number	262	253
Average Current Age	58.44	58.18
Average Service	11.97	11.90
Average Pay	\$108,166	\$108,411
<b>System Total</b>		
Number	152,175	154,203
Average Current Age	45.11	45.16
Average Service	11.22	11.24
Average Pay	\$43,395	\$42,542

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
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
2010	11.98	8.57 <sup>(6)</sup>	2010	9.52	7.14 <sup>(5)</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>(6)</sup>
2013	14.46	10.37 <sup>(8)</sup>	2013	10.43	8.94 <sup>(7)</sup>
2014	14.68	10.82	2014	10.62	9.69 <sup>(8)</sup>
2015	15.19	12.12/9.5 <sup>(9)</sup>	2015	10.33	10.33
2016	15.95	11.91 <sup>(10)</sup>	2016	10.18	10.18 <sup>(10)</sup>

TIAA			KP&F Uniform Rate		
Fiscal Year	Actuarial Rate	Actual Rate	Fiscal Year	Actuarial Rate	Actual Rate
1997	1.89%	1.89%	2007	13.32%	13.32%
1998	1.66	1.66	2008	13.88	13.88
1999	1.93	1.93	2009	13.51	13.51
2000	1.82	1.82	2010	12.86	12.86
2001	1.21	1.21 <sup>(2)</sup>	2011	17.88	14.57
2002	2.03	2.03	2012	16.54	16.54
2003	2.27	2.27 <sup>(3)(4)</sup>	2013	17.26	17.26
			2014	19.92	19.92
			2015	21.36	21.36
			2016	20.42	20.42

Judges		
Fiscal Year	Actuarial Rate	Actual Rate
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
2016	24.39	24.38

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.

10) Per 2016 legislation, employers were not required to remit the Group Life and Disability portion of the Actual Rate from April 1, 2016, through June 30, 2017.

# ACTUARIAL CERTIFICATION LETTER—DEATH AND DISABILITY PLAN



121 Middle Street, Suite 401  
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USA

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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	<u>15,341,468</u>	<u>7,038,713</u>	<u>22,380,181</u>
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 Financed Portion (A)	Active Member Employer Financed Portion (B)	Actuarial Value of Assets	Portion of Accrued Liabilities Covered 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		After 1st Year		Early Retirement		Normal Retirement	
	With 85 Points	With 85 Points	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	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		After 1st Year		Early Retirement		Normal Retirement	
	With 85 Points	With 85 Points	With 85 Points	With 85 Points	Age	Rate	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		After 1st Year		Early Retirement		Normal Retirement	
	With 85 Points	With 85 Points	With 85 Points	With 85 Points	Age	Rate	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	State	Local	State
25	0.00044	0.00032	0.00065	0.00046
30	0.00046	0.00032	0.00060	0.00043
35	0.00059	0.00042	0.00098	0.00070
40	0.00087	0.00062	0.00139	0.00099
45	0.00151	0.00107	0.00207	0.00148
50	0.00244	0.00174	0.00289	0.00206
55	0.00409	0.00291	0.00399	0.00284
60	0.00587	0.00418	0.00475	0.00338
65	0.00625	0.00445	0.00416	0.00296
70	0.00698	0.00497	0.00383	0.00273

**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.

**Other Waiver Assumptions**

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  
Age at Disability**

Age at Disability	2012-2013		2013-2014	
	Count	% of Claims	Count	% of Claims
<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  
Attained Age**

Attained Age	2012-2013		2013-2014	
	Count	% of Claims	Count	% of Claims
<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  
Net Benefit Amount**

Net Monthly Benefit	2012-2013		2013-2014	
	Count	% of Claims	Count	% of Claims
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	2,641	100	2,521	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  
Net Benefit Amount**

Net Benefit	2012-2013		2013-2014	
	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**

Diagnosis	2012-2013		2013-2014	
	Count	% of Claims	Count	% of Claims
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  
by Term Reason**

Term Reason	2012-2013		2013-2014	
	Count	% of Claims	Count	% of Claims
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









# 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, optional group life insurance and other post employment benefits (OPEB). The schedules beginning on this page through page 137 provide revenues, expenses and funding status information for the past ten fiscal years for KPERS, the optional group life insurance and Death and Disability (OPEB) plans. On page 136, a schedule is presented that allocates the

total benefits and type of refunds that were paid. On pages 138 through 140, 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 141 through 146, 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					Net Investment Income (KPERS)	Net Investment Income (OPEB)	Total
	Member	Employer	Optional Group Life Insurance	Employer Insurance (OPEB)	Misc			
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	690,564,482	6,638,479	59,634,639 <sup>(5)</sup>	1,076,946	561,194,353	10,424	1,701,177,209
2016	404,856,265	1,739,183,965 <sup>(6)</sup>	6,257,252	41,864,505 <sup>(7)</sup>	2,906,188	49,169,897	198,857	2,244,436,929

<sup>1)</sup> Per 2009 legislation, employers were not required to remit the Group Life and Disability Insurance portion of required employer contributions

<sup>2)</sup> 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.

<sup>3)</sup> 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.

<sup>4)</sup> 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.

<sup>5)</sup> Before Fiscal Year 2015 member contributions included both KPERS member contributions and member paid premiums for Optional Group Life Insurance.

<sup>6)</sup> The State of Kansas issued \$1 billion in pension obligation bonds, Series 2015H, in August 2015.

<sup>7)</sup> Per 2015 legislation, employers were not required to remit the Group Life and Disability Insurance portion of required employer contributions from April 1, 2016 through June 30, 2016.

## 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)
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
2016	1,546,424,413	1,938,441	10,545,850	62,141,534	5,981,201	6,118,390	35,604,401

## 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)	Total
		Separations	Death						
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
2016	1,558,908,704	62,141,534	5,981,201	6,118,390	75,842	12,171,633	35,604,401	521,489	1,681,523,194

(1) Administration expenses for the Optional Group Life Insurance Plan (OGLI) prior to fiscal year 2015 are included in the administrative expenses of the Retirement System.

## CHANGES IN NET POSITION

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

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Additions</b>										
Contributions										
Member Contributions	\$ 404,856,265	\$ 382,057,886	\$ 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	1,739,183,965	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>2,144,040,230</b>	<b>1,072,622,368</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>
Investments										
Net Appreciation in Fair										
Value of Investments	(267,355,951)	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	137,732,569	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	160,160,990	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	79,977,708	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	9,562,040	10,573,421	0	0	436,311	388,174	216,499	264,000	264,000	261,734
	120,077,356	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	(70,907,459)	(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>49,169,897</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	0	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	0	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	0	(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	0	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>0</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>										
	49,169,897	561,194,353	2,553,842,632	1,747,230,627	89,045,782	2,499,472,278	1,485,935,124	(2,592,555,321)	(650,064,654)	2,161,413,409
<b>Other Miscellaneous Income</b>	<b>2,904,581</b>	<b>1,076,391</b>	<b>241,743</b>	<b>534,268</b>	<b>127,708</b>	<b>174,430</b>	<b>74,088</b>	<b>110,178</b>	<b>136,955</b>	<b>132,874</b>
<b>Total Additions (Net Reductions)</b>										
<b>to Plan Net Position</b>	<b>2,196,114,708</b>	<b>1,634,893,112</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>
Deductions										
Monthly Retirement Benefits	(1,548,362,854)	(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	(68,122,735)	(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	(10,545,850)	(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	0	0	(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	(12,171,633)	(10,789,271)	(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>(1,639,203,072)</b>	<b>(1,535,168,935)</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>										
	\$ 556,911,636	\$ 99,724,177	\$ 2,145,626,094	\$ 1,303,492,151	\$ (363,326,968)	\$ 2,097,286,025	\$ 1,137,909,326	\$ (2,935,728,354)	\$ (1,003,216,024)	\$ 1,819,652,871

<sup>1)</sup> Schedule combines Pension Plan and Optional Group Life Insurance for fiscal years 2014 and prior.

## CHANGES IN NET POSITION – DEATH AND DISABILITY PLAN

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

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Additions</b>										
Contributions										
Employer Contributions	\$ 41,864,505	\$ 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>41,864,505</u>	<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	188,458	28,124	11,276	20,823	10,852	18,333	36,229	351,362	968,222	668,063
Less Investment Expense	0	(21,548)	0	0	0	(114)	(3,848)	(5,630)	(6,550)	(6,239)
Net Investment Income	188,458	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>188,458</u>	<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	10,399	3,848	2,716	3,473	1,914	16,340	27,811	43,935	88,781	96,112
<b>Net Position</b>	<u>42,063,362</u>	<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)										
	35,604,401	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	521,489	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>36,125,890</u>	<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>\$ 5,937,472</u>	<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>

## CHANGES IN NET POSITION-OPTIONAL GROUP LIFE INSURANCE

Last Two Fiscal Years<sup>(1)</sup>

	2016	2015
<b>Additions</b>		
Contributions		
Member Contributions	\$ 6,257,252	\$ 6,638,479
<b>Total Contributions</b>	<u>6,257,252</u>	<u>6,638,479</u>
Other Miscellaneous Income	1,607	555
<b>Total Additions to Plan Net Position</b>	<u>6,258,859</u>	<u>6,639,034</u>
<b>Deductions</b>		
Insurance Premiums		
	(6,118,390)	(6,492,432)
Administrative Expenses	(75,842)	(74,507)
<b>Total Deductions to Plan Net Position</b>	<u>(6,194,232)</u>	<u>(6,566,939)</u>
<b>Change in Net Position</b>	<u>\$ 64,627</u>	<u>\$ 72,095</u>

<sup>1)</sup> Optional Group Life Insurance was included in the Pension Plan's information in fiscal years prior to 2015.

BENEFIT AND REFUND DEDUCTIONS FROM NET POSITION BY TYPE

*Last Ten Fiscal Years*

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Type of Benefit</b>										
Age and Service Benefits:										
Retirees	\$ 1,478,101,413	\$ 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
Survivors	70,261,441	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
Death in Service Benefits	10,545,850	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	6,118,390	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
Insurance Premiums and Disability Benefits (OPEB)	35,604,401	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
<b>Total Benefits</b>	<b>1,600,631,495</b>	<b>1,507,430,367</b>	<b>1,424,741,897</b>	<b>1,347,002,650</b>	<b>1,302,143,562</b>	<b>1,210,329,271</b>	<b>1,119,947,345</b>	<b>1,063,480,612</b>	<b>1,010,811,723</b>	<b>932,919,497</b>
<b>Type of Refund</b>										
Death	5,981,201	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
Separation	62,141,534	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
<b>Total Refunds</b>	<b>\$ 68,122,735</b>	<b>\$ 64,461,998</b>	<b>\$ 56,970,769</b>	<b>\$ 53,899,831</b>	<b>\$ 55,896,826</b>	<b>\$ 49,564,015</b>	<b>\$ 43,362,690</b>	<b>\$ 43,929,423</b>	<b>\$ 48,472,690</b>	<b>\$ 46,129,211</b>



## HIGHLIGHT OF OPERATIONS

Ten Year Summary

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
<b>Membership Composition</b>										
Number of Retirants	87,103	83,911	80,900	77,727	74,665	70,349	67,219	64,803	61,489	60,166
Number of Survivors <sup>(a)</sup>	7,230	6,996	6,770	6,591	6,360	6,149	5,945	5,764	5,613	5,599
New Retirants During the Fiscal Year	6,494	6,419	6,022	6,071	6,941	6,245	5,188	4,893	4,780	4,423
Active and Inactive Members <sup>(b)</sup>	205,334	204,458	202,930	202,022	200,732	202,150	204,155	197,822	195,187	192,307
Participating Employers	1,517	1,518	1,508	1,506	1,504	1,511	1,499	1,492	1,482	1,474
<b>Financial Results (in millions)</b>										
Member Contributions	\$411	\$388	\$338	\$307	\$298	\$294	\$290	\$279	\$270	\$257
Employer Contributions <sup>(c)</sup>	1,781	750	760	667	618	575	522	486	458	399
Retirement / Death Benefits	1,559	1,460	1,376	1,298	1,247	1,157	1,069	1,009	954	877
Investment Income <sup>(d)</sup>	49	561	2,554	1,747	89	2,499	1,486	(2,592)	(649)	2,162
<b>Employer Contribution Rate <sup>(e)</sup></b>										
KPERS—State/School <sup>(e)</sup>	11.91%	12.12/9.50%	11.12%	10.37%	9.77%	9.17%	8.57%	7.97%	7.37%	6.77%
KPERS—Local <sup>(f)</sup>	10.18	10.33	9.69	8.94	8.34	7.74	7.14	6.54	5.93	5.31
KP&F (Uniform Participating) <sup>(f)</sup>	20.42	21.36	19.92	17.26	16.54	14.57	12.86	13.51	13.88	13.32
Judges	24.38	22.99	24.02	24.15	21.68	19.89	20.90	22.08	22.38	19.11
TIAA	—	—	—	—	—	—	—	—	—	—
<b>Unfunded Actuarial Liability (in millions)</b>										
KPERS—State / School	\$6,276	\$7,244	\$7,351	\$7,658	\$6,920	\$6,244	\$5,805	\$6,240	\$4,312	\$4,135
KPERS—Local	1,486	1,488	1,590	1,699	1,542	1,395	1,315	1,385	941	893
KP&F	772	726	803	866	739	598	530	619	284	322
Judges	6	11	21	29	27	27	26	36	15	15
<b>Funding Ratios <sup>(g)</sup></b>										
KPERS—State / School	65.20%	58.80%	57.00%	53.90%	56.80%	59.90%	61.60%	56.90%	68.60%	67.50%
KPERS—Local	69.10	67.40	63.70	59.50	61.20	63.20	63.70	59.00	70.10	68.80
KP&F	74.00	74.10	70.30	66.50	69.80	74.20	76.20	70.50	85.50	82.40
Judges	96.40	93.50	86.90	81.40	82.50	82.50	82.30	74.60	88.70	87.40

a) This is the number of joint annuants as of December 31st, per the System's records, starting December 31, 2005.

b) Membership information taken from System's actuarial valuation.

c) The State of Kansas issued pension obligation bonds, Series 2015H, in August 2015.

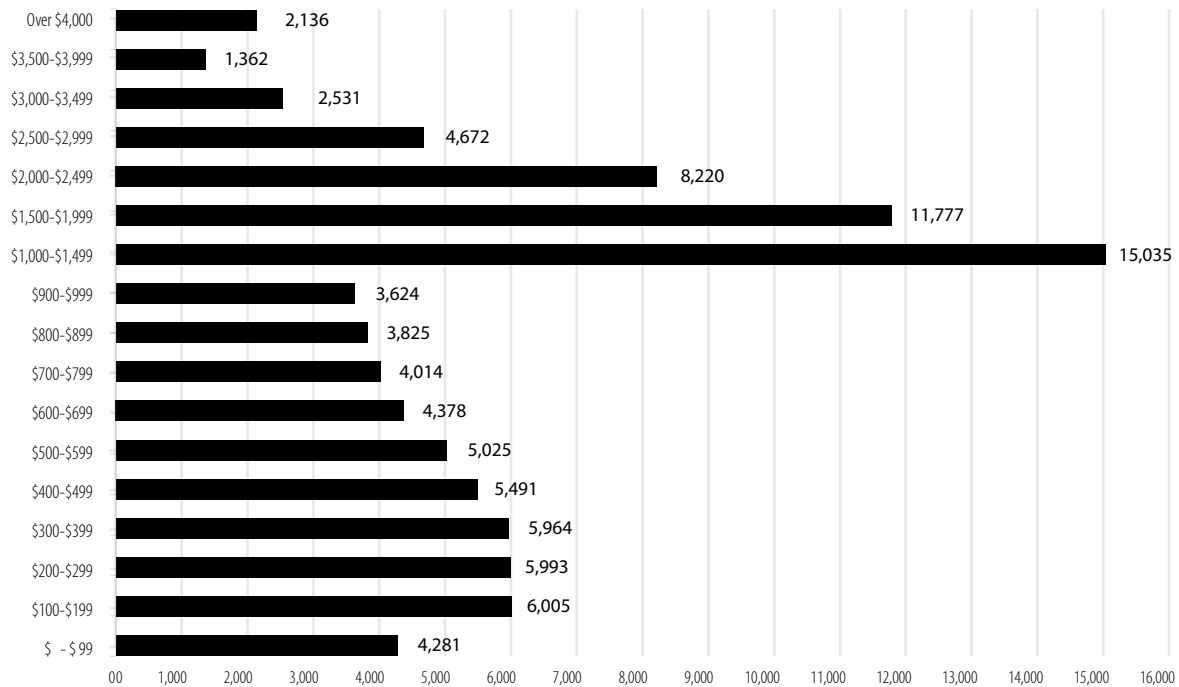
d) Investment income for prior years has been adjusted to reflect changes in unrealized appreciation.

e) 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. Per the most recent legislation, employers are not required to remit the Group Life and Disability portion of the employer rate from April 1, 2016 through June 30, 2017.

f) KPERS Local and KP&F contribution rates are reported on a calendar year basis.

g) 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 MONTHLY BENEFIT AMOUNT  
As of December 31, 2015



NUMBER OF RETIRED MEMBERS AND SURVIVORS BY TYPE OF PAYMENT OPTION  
As of December 31, 2015

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	3,321	270	464	53	39	4	32	98
\$100-199	4,255	567	773	117	118	27	30	118
\$200-299	4,185	636	837	89	133	14	26	73
\$300-399	4,085	675	812	75	160	33	30	94
\$400-499	3,735	631	762	92	153	42	19	57
\$500-599	3,405	596	699	52	164	29	28	52
\$600-699	2,944	513	629	60	136	33	16	47
\$700-799	2,665	496	551	47	160	29	17	49
\$800-899	2,469	572	507	41	156	36	13	31
\$900-999	2,305	580	476	40	153	32	13	25
\$1,000-1,499	9,299	2,414	2,010	155	827	178	44	108
\$1,500-1,999	7,457	1,983	1,350	75	687	142	29	54
\$2,000-2,499	5,368	1,397	801	56	488	68	21	21
\$2,500-2,999	3,026	851	428	32	288	30	8	9
\$3,000-3,499	1,632	444	244	14	174	11	4	8
\$3,500-3,999	844	246	147	7	102	12	1	3
\$4,000 or More	1,134	514	289	8	186	0	1	4
<b>Totals</b>	<b>62,129</b>	<b>13,385</b>	<b>11,779</b>	<b>1,013</b>	<b>4,124</b>	<b>720</b>	<b>332</b>	<b>851</b>

## AVERAGE BENEFIT BY YEARS OF SERVICE - FIVE YEAR SUMMARY

New Retirees by Calendar Year

Service Credit		2011	2012	2013	2014	2015
Less Than 5	Retired Members	305	259	185	172	211
	Average FAS*	\$24,025.35	\$27,378.64	\$29,524.62	\$33,225.92	\$32,163.67
	Average Benefit	\$104.10	\$138.07	\$171.29	\$213.67	\$226.67
	Average Years	2.82	2.80	2.92	3.46	3.46
5-9.99	Retired Members	460	459	517	586	698
	Average FAS*	\$30,982.85	\$32,228.24	\$32,086.25	\$34,679.01	\$33,764.28
	Average Benefit	\$312.36	\$325.52	\$313.09	\$349.62	\$372.98
	Average Years	7.76	7.61	7.56	7.58	7.77
10-14.99	Retired Members	1,036	975	946	929	941
	Average FAS*	\$35,236.86	\$33,774.49	\$34,608.84	\$37,012.47	\$36,877.93
	Average Benefit	\$507.92	\$484.07	\$506.31	\$570.48	\$629.08
	Average Years	12.23	12.22	12.32	12.41	12.37
15-19.99	Retired Members	972	770	803	822	899
	Average FAS*	\$39,410.16	\$39,659.90	\$40,507.90	\$41,291.91	\$41,886.24
	Average Benefit	\$837.31	\$860.25	\$901.19	\$901.18	\$949.16
	Average Years	17.30	17.38	17.37	17.30	17.33
20-24.99	Retired Members	988	911	892	930	1,015
	Average FAS*	\$45,174.03	\$45,799.95	\$47,140.00	\$44,664.92	\$49,276.16
	Average Benefit	\$1,236.79	\$1,308.97	\$1,327.01	\$1,311.24	\$1,504.25
	Average Years	22.37	22.42	22.39	22.50	22.40
25-29.99	Retired Members	1,026	870	967	967	1,048
	Average FAS*	\$52,267.39	\$53,691.38	\$53,522.25	\$54,795.55	\$57,442.35
	Average Benefit	\$1,839.53	\$1,944.89	\$1,936.22	\$2,007.73	\$2,199.23
	Average Years	27.30	27.25	27.25	27.40	27.44
30-34.99	Retired Members	1,056	799	807	752	750
	Average FAS*	\$57,115.11	\$57,857.40	\$58,014.33	\$59,822.27	\$62,314.41
	Average Benefit	\$2,373.81	\$2,475.40	\$2,426.52	\$2,542.62	\$2,698.51
	Average Years	32.14	32.10	32.11	32.15	32.12
35-39.99	Retired Members	468	311	372	359	313
	Average FAS*	\$58,272.80	\$61,819.37	\$62,230.61	\$64,093.82	\$64,900.76
	Average Benefit	\$2,650.18	\$2,915.96	\$2,856.00	\$3,036.30	\$3,080.16
	Average Years	37.07	36.95	36.90	37.11	36.94
40-44.99	Retired Members	144	108	122	113	89
	Average FAS*	\$59,078.25	\$65,700.90	\$65,508.74	\$62,560.20	\$63,507.91
	Average Benefit	\$3,080.72	\$3,230.99	\$3,287.98	\$3,353.11	\$3,326.81
	Average Years	41.78	41.52	41.77	42.06	41.65
45-49.99	Retired Members	15	11	24	15	12
	Average FAS*	\$59,128.20	\$56,584.64	\$60,619.03	\$51,048.89	\$64,115.21
	Average Benefit	\$2,936.16	\$2,842.29	\$4,126.28	\$2,917.43	\$3,643.02
	Average Years	46.47	47.34	46.90	47.17	46.13
50 and Over	Retired Members	3	1	5	1	4
	Average FAS*	\$82,670.19	\$79,425.94	\$72,383.16	\$49,358.02	\$66,836.27
	Average Benefit	\$4,305.29	\$4,676.20	\$3,876.26	\$8,337.12	\$4,228.92
	Average Years	52.08	50.25	53.05	51.00	52.56
<b>Total Number</b>	Retired Members	<b>6,473</b>	<b>5,474</b>	<b>5,640</b>	<b>5,646</b>	<b>5,980</b>
	Average FAS*	\$45,091.55	\$45,129.48	\$46,258.78	\$46,895.04	\$47,937.36
	Average Benefit	\$1,370.68	\$1,365.30	\$1,417.09	\$1,435.77	\$1,493.26
	Average Years	21.97	21.16	21.72	21.47	20.90

\*Average Final Average Salary

Source: Data provided by KPERS Information Technology and Benefits and Member Services divisions.

AVERAGE DISABILITY BENEFIT BY YEARS OF SERVICE - FIVE YEAR SUMMARY

*New Disabilitants by Calendar Year*

Service Credit		2011	2012	2013	2014	2015
Less than 5 Years	Disabled Members	72	56	40	23	32
	Average Salary	\$28,597.98	\$31,748.72	\$30,462.92	\$22,956.46	\$20,383.32
	Average Benefit	\$1,319.23	\$1,325.58	\$1,405.71	\$812.97	\$1,058.61
	Average Years of Service	2.84	3.01	2.98	3.13	3.49
5-9.99	Disabled Members	68	61	51	56	54
	Average Salary	\$32,943.15	\$30,020.24	\$33,560.38	\$33,527.96	\$28,142.23
	Average Benefit	\$1,028.63	\$1,101.85	\$938.59	\$1,070.05	\$968.17
	Average Years of Service	7.44	7.25	7.28	7.79	7.32
10-14.99	Disabled Members	51	55	48	50	37
	Average Salary	\$32,661.68	\$36,117.04	\$33,243.75	\$36,073.41	\$41,099.31
	Average Benefit	\$847.87	\$1,224.19	\$845.76	\$938.50	\$1,086.24
	Average Years of Service	12.58	12.38	12.53	12.39	13.02
15-19.99	Disabled Members	42	32	39	44	36
	Average Salary	\$35,329.36	\$41,292.37	\$43,104.81	\$39,868.21	\$39,108.08
	Average Benefit	\$1,220.56	\$1,546.76	\$1,222.40	\$1,161.02	\$1,465.39
	Average Years of Service	17.17	17.18	17.31	17.11	17.31
20-24.99	Disabled Members	25	30	28	27	25
	Average Salary	\$43,402.06	\$44,493.04	\$42,805.89	\$45,561.82	\$42,096.99
	Average Benefit	\$800.35	\$1,551.89	\$1,258.11	\$1,236.02	\$1,063.16
	Average Years of Service	22.41	22.03	22.24	22.22	22.24
25-29.99	Disabled Members	14	17	14	16	14
	Average Salary	\$52,830.15	\$44,310.61	\$39,334.26	\$44,508.21	\$46,733.37
	Average Benefit	\$1,153.77	\$1,174.05	\$1,547.35	\$932.79	\$1,541.27
	Average Years of Service	27.56	26.74	26.72	27.36	26.73
30-34.99	Disabled Members	9	8	4	6	2
	Average Salary	\$44,017.96	\$51,962.72	\$59,937.27	\$51,744.26	\$60,440.65
	Average Benefit	\$1,189.04	\$576.82	\$431.96	\$1,276.59	\$3,807.79
	Average Years of Service	31.41	31.73	32.58	32.58	33.25
35-39.99	Disabled Members	2	1	2	—	2
	Average Salary	\$54,747.96	\$61,550.64	\$89,426.88	\$—	\$76,054.95
	Average Benefit	\$447.58	\$3,176.28	\$1,487.65	\$—	\$1,310.13
	Average Years of Service	37.21	36.11	38.44	—	38.63
<b>Total Number</b>	<b>Disabled Members</b>	<b>283</b>	<b>260</b>	<b>226</b>	<b>222</b>	<b>202</b>
	Average Salary	\$34,555.12	\$36,470.31	\$37,056.33	\$37,009.92	\$35,070.47
	Average Benefit	\$1,085.49	\$1,279.15	\$1,123.71	\$1,047.69	\$1,175.71
	Average Years of Service	11.93	12.49	13.15	14.02	13.30

## 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	23,748	1	15.49%	24,389	1	15.82%
USD 259, Wichita	6,926	2	4.52%	6,921	2	4.49%
USD 233, Olathe	4,225	3	2.76%	4,310	3	2.80%
USD 500, Kansas City	3,493	4	2.28%	3,544	4	2.30%
USD 512, Shawnee Mission	3,337	5	2.18%	3,428	5	2.22%
USD 229, Blue Valley	3,100	6	2.02%	3,106	6	2.01%
Johnson County	3,067	7	2.00%	3,052	7	1.98%
Sedgwick County	2,490	8	1.62%	2,536	8	1.64%
USD 501, Topeka Public Schools	2,351	9	1.53%	2,408	9	1.56%
USD 497, Lawrence	1,757	10	1.15%	1,784	10	1.16%
All Other <sup>(a)</sup>	98,843		64.46%	98,725		64.02%
<b>Total (1,515 employers)</b>	<b>153,337</b>		<b>100.00%</b>	<b>154,203</b>		<b>100.00%</b>

Participating Government	2013			2012		
	Covered Employees	Rank	% of Total System	Covered Employees	Rank	% of Total System
State of Kansas	24,631	1	15.78%	25,293	1	16.21%
USD 259, Wichita	6,861	2	4.40%	6,709	2	4.30%
USD 233, Olathe	4,293	3	2.75%	4,274	3	2.74%
USD 500, Kansas City	3,392	5	2.17%	3,287	5	2.11%
USD 512, Shawnee Mission	3,621	4	2.32%	3,678	4	2.36%
USD 229, Blue Valley	3,130	6	2.01%	3,088	6	1.98%
Johnson County	3,099	7	1.99%	3,065	7	1.96%
Sedgwick County	2,535	8	1.62%	2,549	8	1.63%
USD 501, Topeka Public Schools	2,387	9	1.53%	2,339	9	1.50%
USD 497, Lawrence	1,733	10	1.11%	1,697	10	1.09%
All Other <sup>(a)</sup>	100,375		64.32%	100,074		64.13%
<b>Total (1,515 employers)</b>	<b>155,446</b>		<b>100.00%</b>	<b>156,053</b>		<b>100.00%</b>

(a) In 2015, "All Other" consisted of:

Type	Number	Covered Employees
School Districts	279	46,892
Cities and Counties	558	34,645
Post-Secondary Education(b)	50	11,941
Other	618	10,860
	<u>1,505</u>	<u>104,338</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	25,382	1	16.37%	27,066	1	17.05%
USD 259, Wichita	6,542	2	4.22%	6,749	2	4.25%
USD 233, Olathe	4,185	3	2.70%	4,082	3	2.57%
USD 500, Kansas City	3,191	5	2.06%	3,165	5	1.99%
USD 512, Shawnee Mission	3,705	4	2.39%	3,837	4	2.42%
USD 229, Blue Valley	3,098	6	2.00%	2,633	7	1.66%
Johnson County	3,014	7	1.94%	2,977	6	1.88%
Sedgwick County	2,336	8	1.51%	2,341	8	1.48%
USD 501, Topeka Public Schools	2,605	9	1.68%	2,256	9	1.42%
USD 497, Lawrence	1,627	10	1.05%	1,595	10	1.01%
All Other <sup>(a)</sup>	99,369		64.09%	102,004		64.27%
<b>Total (1,515 employers)</b>	<b>155,054</b>		<b>100.00%</b>	<b>158,705</b>		<b>100.00%</b>

Participating Government	2009			2008		
	Covered Employees	Rank	% of Total System	Covered Employees	Rank	% of Total System
State of Kansas	26,735	1	16.55%	25,775	1	16.41%
USD 259, Wichita	6,861	2	4.25%	6,850	2	4.36%
USD 233, Olathe	4,339	3	2.69%	4,625	3	2.94%
USD 500, Kansas City	3,178	5	1.97%	3,324	5	2.12%
USD 512, Shawnee Mission	4,005	4	2.48%	4,167	4	2.65%
USD 229, Blue Valley	2,706	7	1.68%	2,476	8	1.58%
Johnson County	2,957	6	1.83%	2,983	6	1.90%
Sedgwick County	2,466	8	1.53%	2,529	7	1.61%
USD 501, Topeka Public Schools	2,298	9	1.42%	1,847	9	1.18%
USD 497, Lawrence	1,715	10	1.06%	1,766	10	1.12%
All Other <sup>(a)</sup>	104,291		64.56%	100,723		64.13%
<b>Total (1,515 employers)</b>	<b>161,551</b>		<b>100.00%</b>	<b>157,065</b>		<b>100.00%</b>

(a) In 2015, "All Other" consisted of:

Type	Number	Covered Employees
School Districts	279	46,892
Cities and Counties	558	34,645
Post-Secondary Education(b)	50	11,941
Other	618	10,860
	<u>1,505</u>	<u>104,338</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	2007			2006		
	Covered Employees	Rank	% of Total System	Covered Employees	Rank	% of Total System
State of Kansas	25,299	1	16.35%	25,069	1	16.55%
USD 259, Wichita	6,748	2	4.36%	6,590	2	4.35%
USD 233, Olathe	4,307	3	2.78%	4,277	3	2.82%
USD 500, Kansas City	3,337	5	2.16%	3,334	5	2.20%
USD 512, Shawnee Mission	4,128	4	2.67%	4,007	4	2.65%
USD 229, Blue Valley	3,137	6	2.03%	3,002	6	1.98%
Johnson County	2,930	7	1.89%	2,809	7	1.85%
Sedgwick County	2,548	8	1.65%	2,469	8	1.63%
USD 501, Topeka Public Schools	2,313	9	1.50%	2,309	9	1.52%
USD 497, Lawrence	1,712	10	1.11%	1,692	10	1.12%
All Other <sup>(a)</sup>	<u>98,231</u>		<u>63.50%</u>	<u>95,891</u>		<u>63.33%</u>
<b>Total (1,515 employers)</b>	<b><u>154,690</u></b>		<b><u>100.00%</u></b>	<b><u>151,449</u></b>		<b><u>100.00%</u></b>

(a) In 2015, "All Other" consisted of:

(a) In 2015, "All Other" consisted of:

Type	Number	Covered Employees
School Districts	279	46,892
Cities and Counties	558	34,645
Post-Secondary Education(b)	50	11,941
Other	<u>618</u>	<u>10,860</u>
	<u>1,505</u>	<u>104,338</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 Ten Fiscal Years<sup>(1)</sup>

Participating Government	2015			2014		
	Covered Employees	Rank	% of Total System	Covered Employees	Rank	% of Total System
State of Kansas	34,635	1	22.12%	35,394	1	22.34%
USD 259, Wichita	6,921	2	4.42%	6,921	2	4.37%
USD 233, Olathe	4,310	3	2.75%	4,310	3	2.72%
USD 512, Shawnee Mission	3,544	4	2.26%	3,544	4	2.24%
USD 500, Kansas City	3,428	5	2.19%	3,428	5	2.16%
USD 229, Blue Valley	3,106	6	1.98%	3,106	6	1.96%
USD 501, Topeka Public Schools	2,536	8	1.62%	2,536	8	1.60%
Johnson County	2,457	7	1.57%	3,052	7	1.93%
Sedgwick County	1,899	9	1.21%	2,408	9	1.52%
USD 497, Lawrence	1,784	10	1.14%	1,784	10	1.13%
All Other <sup>(2)</sup>	<u>91,960</u>		<u>58.73%</u>	<u>91,960</u>		<u>58.04%</u>
<b>Total (1,421 employers)</b>	<b><u>156,580</u></b>		<b><u>100.00%</u></b>	<b><u>158,443</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	34,343	1	21.76%	29,553	1	19.35%
USD 259, Wichita	6,861	2	4.35%	6,709	2	4.39%
USD 233, Olathe	4,293	3	2.72%	4,274	3	2.80%
USD 512, Shawnee Mission	3,621	4	2.29%	3,678	4	2.41%
USD 500, Kansas City	3,392	5	2.15%	3,287	5	2.15%
USD 229, Blue Valley	3,130	6	1.98%	3,088	6	2.02%
USD 501, Topeka Public Schools	2,387	8	1.51%	2,339	8	1.53%
Johnson County	2,481	7	1.57%	2,447	7	1.60%
Sedgwick County	2,022	9	1.28%	2,030	9	1.33%
USD 497, Lawrence	1,733	10	1.09%	1,697	10	1.11%
All Other <sup>(2)</sup>	<u>93,531</u>		<u>59.27%</u>	<u>93,590</u>		<u>61.29%</u>
<b>Total (1,421 employers)</b>	<b><u>157,794</u></b>		<b><u>100.00%</u></b>	<b><u>152,692</u></b>		<b><u>100.00%</u></b>

(1) In calendar year 2015, "All Other" consisted of:

Type	Number	Covered Employees
School Districts	279	47,890
Cities and Counties	466	15,994
Post-Secondary Education(b)	50	12,000
Other	<u>616</u>	<u>10,626</u>
	<b><u>1,411</u></b>	<b><u>91,960</u></b>

(2) Post-Secondary Education does not include 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 Ten Fiscal Years<sup>(1)</sup>

Participating Government	2011			2010		
	Covered Employees	Rank	% of Total System	Covered Employees	Rank	% of Total System
State of Kansas	32,085	1	20.66%	37,904	1	24.01%
USD 259, Wichita	6,542	2	4.21%	6,749	2	4.28%
USD 233, Olathe	4,185	3	2.69%	4,082	3	2.59%
USD 512, Shawnee Mission	3,705	4	2.39%	3,837	4	2.43%
USD 500, Kansas City	3,191	5	2.05%	3,165	5	2.00%
USD 229, Blue Valley	3,014	6	1.94%	2,977	6	1.89%
USD 501, Topeka Public Schools	2,336	8	1.50%	2,341	8	1.48%
Johnson County	2,488	7	1.60%	2,633	7	1.67%
Sedgwick County	2,082	9	1.34%	2,256	9	1.43%
USD 497, Lawrence	1,627	10	1.05%	1,595	10	1.01%
All Other <sup>(2)</sup>	<u>94,058</u>		<u>60.56%</u>	<u>90,319</u>		<u>57.22%</u>
<b>Total (1,421 employers)</b>	<b><u>155,313</u></b>		<b><u>100.00%</u></b>	<b><u>157,858</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	37,756	1	22.79%	38,230	1	23.38%
USD 259, Wichita	6,861	2	4.14%	6,850	2	4.19%
USD 233, Olathe	4,339	3	2.62%	4,625	3	2.83%
USD 512, Shawnee Mission	4,005	4	2.42%	4,167	4	2.55%
USD 500, Kansas City	3,178	5	1.92%	3,324	5	2.03%
USD 229, Blue Valley	2,957	6	1.78%	2,983	7	1.82%
USD 501, Topeka Public Schools	2,466	8	1.49%	2,529	8	1.55%
Johnson County	2,706	7	1.63%	2,476	6	1.51%
Sedgwick County	2,298	9	1.39%	1,847	9	1.13%
USD 497, Lawrence	1,715	10	1.04%	1,766	10	1.08%
All Other <sup>(2)</sup>	<u>97,393</u>		<u>58.79%</u>	<u>94,685</u>		<u>57.92%</u>
<b>Total (1,421 employers)</b>	<b><u>165,674</u></b>		<b><u>100.00%</u></b>	<b><u>163,482</u></b>		<b><u>100.00%</u></b>

(1) In calendar year 2015, "All Other" consisted of:

Type	Number	Covered Employees
School Districts	279	47,890
Cities and Counties	466	15,994
Post-Secondary Education(b)	50	12,000
Other	616	10,626
	<u>1,411</u>	<u>91,960</u>

(2) Post-Secondary Education does not include 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 Ten Fiscal Years<sup>(1)</sup>

Participating Government	2007			2006		
	Covered Employees	Rank	% of Total System	Covered Employees	Rank	% of Total System
State of Kansas	40,431	1	24.67%	37,871	1	16.55%
USD 259, Wichita	6,748	2	4.12%	6,590	2	4.35%
USD 233, Olathe	4,307	3	2.63%	4,277	3	2.82%
USD 512, Shawnee Mission	4,128	4	2.52%	4,007	4	2.65%
USD 500, Kansas City	3,337	5	2.04%	3,334	5	2.20%
USD 229, Blue Valley	2,930	7	1.79%	2,809	7	1.98%
USD 501, Topeka Public Schools	2,548	8	1.55%	2,469	8	1.52%
Johnson County	3,137	6	1.91%	3,002	6	1.85%
Sedgwick County	2,313	9	1.41%	2,309	9	1.63%
USD 497, Lawrence	1,712	10	1.04%	1,692	10	1.12%
All Other <sup>(2)</sup>	<u>92,321</u>		<u>56.32%</u>	<u>90,826</u>		<u>63.33%</u>
<b>Total (1,421 employers)</b>	<u>163,912</u>		<u>100.00%</u>	<u>159,186</u>		<u>100.00%</u>

(1) In calendar year 2015, "All Other" consisted of:

Type	Number	Covered Employees
School Districts	279	47,890
Cities and Counties	466	15,994
Post-Secondary Education(b)	50	12,000
Other	616	10,626
	<u>1,411</u>	<u>91,960</u>

(2) Post-Secondary Education does not include State Board of Regents institutions.

Source: Data provided by KPERS Information Technology and Benefit and Member Services divisions.



