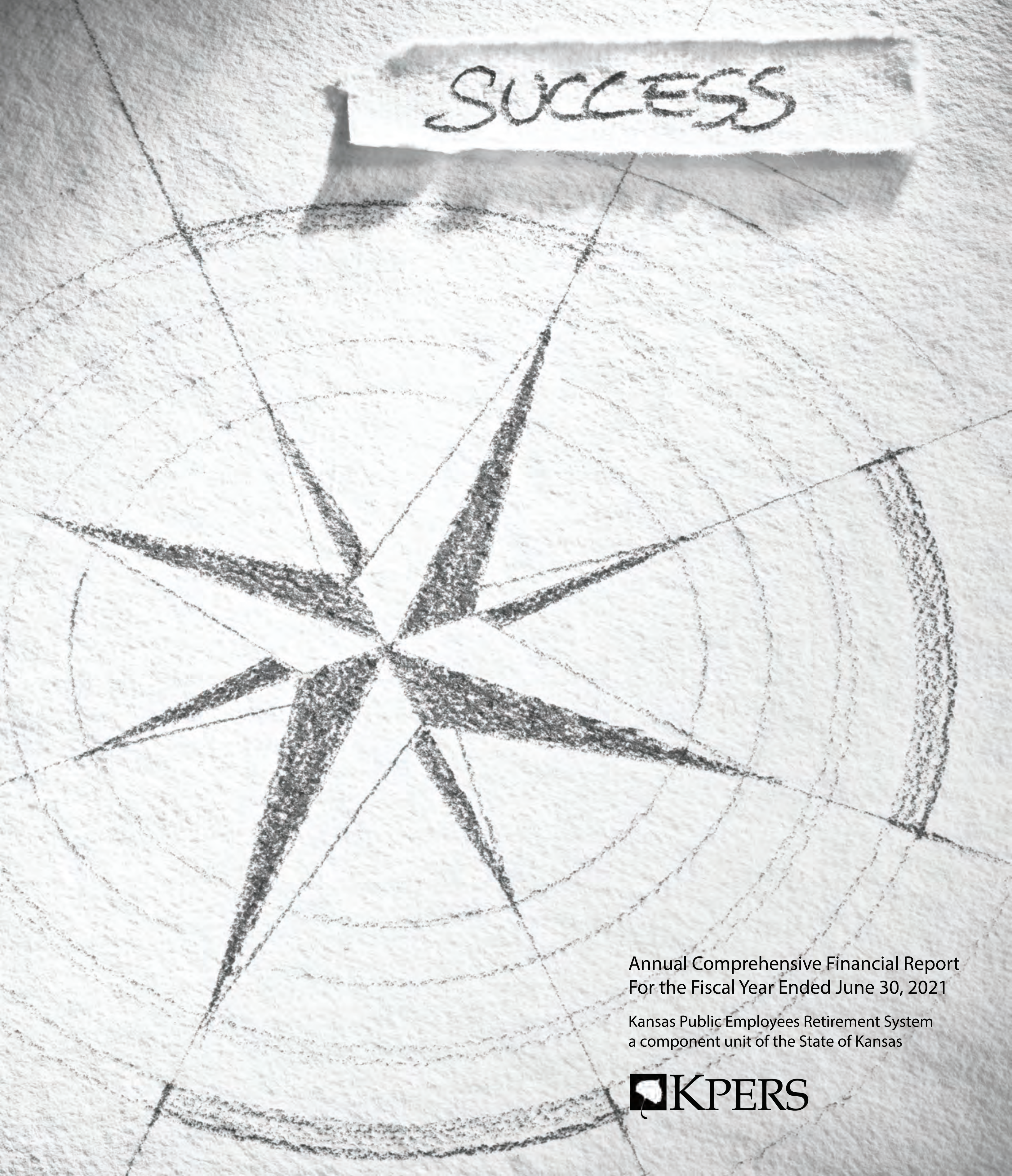
# PURSUING OUR **POTENTIAL**




Annual Comprehensive Financial Report
For the Fiscal Year Ended June 30, 2021

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

KPERS

Annual Comprehensive Financial Report
For the Fiscal Year Ended June 30, 2021

Kansas Public Employees Retirement System
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Prepared by KPERS Staff
611 S. Kansas Ave., Ste 100, Topeka, KS 66603
Alan D. Conroy, Executive Director
Judy McNeal, Chief Fiscal Officer

KPERS

# 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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## STATISTICAL SECTION

# **INTRODUCTORY**
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# TRANSMITTAL LETTER

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM

October 29, 2021

We are pleased to present the Kansas Public Employees Retirement System's (KPERS) Annual Comprehensive Financial Report (ACFR) for Fiscal Year 2021. 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 website, kpers.org.

As the first item in the ACFR, 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 CliftonLarsonAllen LLP conducted an independent audit of the Retirement System's financial statements for Fiscal Year 2021.

## 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 statewide, cost-sharing multiple employer defined benefit retirement plan containing three different groups:

- Public Employees
- Kansas Police and Firefighters
- Judges

Retirement System benefits are offered by slightly over 1,500 state and local employers. KPERS has about 327,000 members, including active, inactive and retired members. The Retirement System paid about $1.9 billion in retirement benefit payments for Fiscal Year 2021. Over 85 percent of those benefits remained in Kansas. Retirement System assets totaled $25.3 billion on June 30, 2021.

Along with the defined benefit plan, KPERS also oversees two voluntary supplemental plans, KPERS 457 and KPERS 401(a). KPERS 457 is a voluntary deferred compensation plan for State of Kansas employees. Another 400 local public employers also participate, including 20 new employers in Fiscal Year 2021. The 401(a) plan has 11 employers, including two new employers in

Fiscal Year 2021. It is an employer sponsored retirement plan that allows for both employee and employer contributions.

The plan has over 25,476 total and about 13,068 actively contributing participants. Total KPERS 457 plan assets equaled about $1.5 billion at the end of Fiscal Year 2021. The KPERS 457 plan's financial information is not included in this annual report.

A nine-member Board of Trustees oversees the Retirement System: four are appointed by the Governor; one is appointed by the President of the Kansas Senate; one is appointed by the Speaker of the Kansas House of Representatives; two are elected by Retirement System members; and one is the statewide 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 7.75 percent. In 2017, the Board changed from an 8 percent assumption to 7.75 percent. For some years, returns will be below that rate and, in other years, returns will exceed it. As of June 30, 2021, KPERS' 25-year annualized total return average was 8.0 percent, exceeding the 7.75 percent target.

For Fiscal Year 2021, the Retirement System's broadly diversified investment portfolio produced a total return of 26.3 percent, outperforming the Policy Index benchmark by 1.3 percent for the Fiscal Year and outperforming the actuarial return assumption of 7.75 percent. This year's total return is outsized relative to normal expectations.

The Retirement System's investment portfolio ended the fiscal year at approximately $24.6 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 51. This section also provides details about our asset allocation and a general overview of each asset class and its performance.

KPERS contracts for the services of various independent consultants essential to the effective and professional operation of the System. A list of the consultants and advisors is included in the Introductory Section on page 14. In the Investments Section a schedule of entities to whom KPERS paid broker commissions is on page 64.

## FINANCIAL POSITION AND FUNDING OUTLOOK

For many years, KPERS has been facing a long-term funding shortfall, significantly affected by two recessions and less than the required employer contributions for 25 years.

The Kansas Legislature has taken steps over the last decade to incrementally address the long-term funding shortfall, including pension funding bonds, increasing member contributions, creating a new cash balance plan for new members and commitments to increase employer contributions over time.

For the first time in decades, the System received the full actuarial contribution amount for all plans and groups in Fiscal Years 2019 and 2020. Both were the result of payments from the Kansas Legislature to make up for previously reduced payments. Past legislation also outlines provisions to pay for some of the shortfalls in annual payments, with interest, over 20 years.

In addition, KPERS is reaching another significant milestone. Beginning in Fiscal Year 2021 the State/School group will be at the actuarially required contribution rate, joining Local employers who have been at the required rate since 2015.

Consistent employer contributions over time are one of the most important factors for plan funding and continuing to improve the System's funded status.

Fiscal Year 2021 brought with it a second significant funding milestone, reaching the 72.5 percent funded ratio mark. It has been a slow and difficult climb from the System's lowest funded ratio of 56.4 percent in 2012. In addition to improved employer contributions, a strong market investment return for Calendar Year 2020 of 11.1 percent also helped attain the milestone.

At the date of this report, projections show the legacy 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. Continued funding improvement hinges on meeting our investment target over time and consistent employer contributions to match actuarial funding requirements.

For information on KPERS' funding projections by plan and group, please see the actuarial section beginning on page 65.

## UNFUNDED ACTUARIAL LIABILITY

The unfunded actuarial liability (UAL) amount is the gap between the actuarial value of assets and the actuarial liability for service already earned by public employees.

According to the December 31, 2020, actuarial valuation, the System's UAL improved by about $500 million to $8.5 billion. The UAL was previously $9.0 billion as of December 31, 2019. The improvement was due in large part to positive investment returns in Calendar Year 2020. The Retirement System's UAL is projected to decrease in the coming years with continued positive investment experience.

## FUNDED RATIO

The funded ratio is the ratio of assets to future liabilities. The valuation showed the System's funded ratio improved to 72.5 percent, up from 70 percent the previous year and up from a low of 56 percent in 2012. Over the long-term, it is expected to improve steadily if assumptions are met and scheduled contributions are made.

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.

## MAJOR INITIATIVES AND ACCOMPLISHMENTS

### Pension Administration System and Business Processes Modernization Initiative

KPERS completed a thorough system assessment in late Fiscal Year 2020 in preparation for a full-scale modernization initiative to improve our pension administration system with efficient business processes, tools for increased organization productivity, and the highest quality interactions with our members and employers.

Fiscal Year 2021 was year one of the five-year initiative and began with "foundational" projects, data improvements, and "as-is" documentation, laying the groundwork for the system modernization and business process improvements to follow. Staff also participated in a "proof of concept" project to improve our member annual statement process, confirming our current software provider to be the appropriate partner for the initiative and for KPERS' future.

### IT/Data Security

KPERS places a premium on protecting the data within our charge. In support of that commitment, we completed a number of IT and data security projects, including:

- Partnered with our external partner Optiv to complete an independent network perimeter scan and intrusion detection against our perimeter security solutions and application penetration testing against our web based applications.
- Oversaw a security policies gap assessment and strategic security assessment.
- Participated in the SOC 1 Type 2 audit of KPERS' census data and participated in review of the IT process as part of the annual financial audit.
- Completed phase one of the LexisNexis identity verification initiative and began planning for full implementation during Fiscal Year 2022. This effort helps identify possible fraudulent access to our member web portal.

### New Asset Allocation Implementation

The KPERS Board of Trustees adopted a new target asset mix in January 2020. Implementing the new asset allocation was a significant accomplishment for the Investment Division during Fiscal Year 2021. The new long-term asset allocation policy targets are as follows: domestic and global equity—47 percent; fixed income—10 percent; yield driven—6 percent; real return—11 percent; real estate—13 percent; private equity—9 percent; cash equivalents—4 percent.

Asset allocation is the primary driver of risk and return in the KPERS' investment portfolio, and investment return is the largest contributor to the System's long-term funding plan. Working with the System's external investment consultants, the Investment Division staff completed the asset class review process for all public and private asset classes and implemented several key changes in the investment portfolio based on the Board's new target asset mix.

## BY THE NUMBERS—IN FISCAL YEAR 2021:

- About 1.3 million retirement benefit payments paid totaling over $1.9 billion
- 6,000 pension inceptions completed
- 24,400 beneficiary designations processed
- $31 million in life insurance benefits paid
- 31,265 member enrollments and transfers processed
- 9,850 withdrawals paid totaling $68.1 million
- $17 million in benefits paid to 1,850 disabled employees
- Average of 405 incoming calls a day answered with an average wait time of 34 seconds to reach customer service
- 24,000 emails answered

## AWARDS & ACKNOWLEDGMENTS

KPERS participated in a benchmarking survey conducted by CEM Benchmarking, Inc. When compared with other public pensions in the 2020 survey, KPERS earned an overall service score of 79 nearly equal to the peer median score of 80. KPERS' peer group is a high service group, including six of the top 10 scoring retirement systems in the CEM database. In addition, we measured very favorably with regard to cost. KPERS' administrative cost per member is $49, well below the peer median cost of $83. 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 2020 ACFR. 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 annual comprehensive financial report, the contents of which must conform to program standards. The annual comprehensive 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 27 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 2021 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 annual report 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 report 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

Alan D. Conroy,
Executive Director

Judy McNeal

Judy McNeal
Chief Fiscal Officer

# BOARD OF TRUSTEES



# OUR ORGANIZATION

**BOARD OF TRUSTEES**

**EXECUTIVE DIRECTOR**
Alan D. Conroy

**ADMINISTRATION**
General Counsel, Laurie McKinnon
Internal Audit, Janette Martin
Planning and Research, Jarod Waltner
Human Resources, Julie Baker
KPERS 457, Arlen Zentner
Communications, Kristen Basso

**INVESTMENTS**
Chief Investment Officer, Elizabeth B.A. Miller
- 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
- Disability and Death Benefits
- Retirement Benefits
- Withdrawal Benefits
- InfoLine
- Education and Training

**INFORMATION TECHNOLOGY**
Chief Information Officer, John Cahill
- Application and Data Management
- Cyber-Security
- Operations

# KPERS STAFF

Melvin Abbott
Kelly Alexander
Crystie Amaro
Michael Arvidson Jr
Paige Ashley
Karina Ayala
Julie Baker
Yohonna Barraud
Kristen Basso
DuWayne Belles
Julie Bevitt
A. Kathleen Billings
John Black
Candace Blythe
Anita Bradley
Breanna Briggs
Amy Brown
Tracy Brull
Annika Bush
John Cahill
Tyler Caleb
Andryana Campbell
James Campbell
Blaine Clark
Amanda Cobler
Alan Conroy
Becky Dekat
Jessica Dodge
Ardith Dunn
Amy Dunton
Letisha Eastman
Joyce Edington
Yarlenis Ensley
Allie Estanol
Daniel Fairbank
Melissa Findlay
Bruce Fink
James Fleming
Jared Flewelling
Renae Forque
Shelly Fruits
Elaine Gaer
Sue Gamblian
Connie Gardner
Raymond Gentry
Billie-Jo Gerisch
Michael Gilliland
Shlomo Ginsburg
Lisa Gonzales
Taryn Gonzales
Mary Beth Green
Kyle Grimes
Susan Hancock
Alec Hawley
Jordan Hecker
Vicky Hein
Connor Henrichs
Lorie Hernandez
Candice Heth
Liza Hoffman
Dalton Holmes
John Hooker
Mirel Howard
Kaylie Hughes
Charla Jefferson
Marais Johnson-Herl
Teresa Jurgens
Casey Kidder
Shannon Kuehler
Les Lauber
Denise Leakey
Lindsey Leslie
Debra Lewis
Melinda Locke
Eric Long
Janette Martin
DeAnna McColm
Heather McHardie
Laurie McKinnon
Jason McKinzie
Judy McNeal
Ash Mehra
Elizabeth Miller
Noble Morrell
Kali Newell
Lisa Ngole
Dawn Nichols
Shawn Nix
Jennifer Osborn
Chris Parsons
Diana Peters
Alissa Powell
Jeeva Purushothaman
Sarah Putman
Sheila Putman
Tyler Pyle
Justin Quick
Teresa Quick
Kimberly Raines
Curtis Rasmusson
Norm Remp
Elizabeth Rincon
Marla Rivares
Dean Roney
Jamie Rose
Rika Rowe
Jasmine Russ
Teresa Ryan
MaryAnn Sachs
Alley Salmon
Nathan Schmidt
Crystal Schnacker
Alan Schuler
Annette Scott
Adam Sester
Aditi Sharma
Hallie Shermoen
Rhonda Shumway
Derek Smith
Brecken Stadler
Marsha Stafford
Raquel Talavera
Amber Tarrant
Carmen Torres
Daniel Tritsch
Jacob Tritsch
Jessica Tufts
Jason Van Fleet
Jackie VandeVelde
Kelly Vu
Daniel Wadsworth
Cynthia Wallace
Jarod Waltner
Barbara Warhurst
Emily Washington
Michaela Watson
Kelsea Watts
Lisa Wehrly
Amy Whitmer
Eric Wigginton
Max Williams
Heather Williamson
Brandy Wilson
Emily Wilson
Susie Wires
Krystal Yegon
Arlen Zentner
Pat Zimmerman

# CONSULTANTS AND ADVISORS

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

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

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

**Information Technology:** The Segal Company, New York, NY

# INVESTMENT CONSULTANTS

Mercer Alternatives, LLC, El Dorado Hills, CA
Meketa Investment Group, Portland, OR
The Townsend Group, Cleveland, OH

# INVESTMENT MANAGERS

Adrian Lee & Partners, Dublin, Ireland
Baillie Gifford Overseas Limited, Edinburgh, Scotland
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 Inc., 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
Payden & Rygel Investment Counsel, Los Angeles, CA
Russell Investment Group, Tacoma, WA
State Street Global Advisors, Boston, MA
T Rowe Price Associates, Inc., Baltimore, MD
Tortoise Capital Advisors, LLC, St. Louis, MO
Wellington Management Company, Boston, MA
Western Asset Management Company, Pasadena, CA

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

**Life Insurance:** Standard Insurance Company, Portland, OR

**Long-Term Disability:** Self Insured, Administered by Disability Management Services, Inc., Springfield, MA

**Brokers:** See the "Schedule of U.S. Equity Commissions" on page 64.

# 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 2020 annual report. KPERS has received the award for each of the last 27 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, 2020

Christopher P. Morrill

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 2021.

PPCC

Public Pension Coordinating Council

**Public Pension Standards Award**
**For Funding and Administration**
**2021**

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)

Alan H. Winkle
Program Administrator

# **FINANCIAL**
# SECTION

CliftonLarsonAllen LLP
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# INDEPENDENT AUDITORS' REPORT

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), a component unit of the State of Kansas, which comprise the statements of fiduciary net position and changes in fiduciary net position, as of and for the year ended June 30, 2021, 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 System'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 System'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.

Board of Trustees
Kansas Public Employees Retirement System

***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, 2021, 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, schedule of changes in the employers' net pension liability, schedule of the employers' net pension liability, schedule of employers' contributions and schedule of investment returns, 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 an opinion 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 October 29, 2021, 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 solely to describe the scope of our testing of internal control over

Board of Trustees
Kansas Public Employees Retirement System

financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the System's 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

**CliftonLarsonAllen LLP**

Denver, Colorado
October 29, 2021

# 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, 2021. 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 the administrator of a cost sharing defined-benefit pension plan (Pension Plan) providing pension benefits to the following three statewide pension groups under one plan, as provided by chapter 74, article 49 of the Kansas Statutes:

- Public Employees
- Police and Firemen
- Judges

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

## FINANCIAL HIGHLIGHTS

The System's net position increased approximately $4.6 billion or approximately positive 22.6 percent to $25.3 billion as of June 30, 2021, compared to a decrease of $41.2 million or approximately negative 0.2 percent, from $20.6 billion to $20.6 billion as of June 30, 2020.

The System's June 30, 2021, financial actuarial valuation calculated a total pension liability at June 30, 2021, of $33.1 billion, compared to $31.1 billion as of June 30, 2020, an increase of $2.0 billion or 6.3 percent. The net pension liability at June 30, 2021, was $7.8 billion, a decrease over the prior year of approximately $2.7 billion. The discount rate used to determine the total pension liability changed from 7.50 percent at the prior measurement date, June 30, 2020, to 7.25 percent at the current measurement date, June 30, 2021.

On a market value basis, this year's money-weighted rate of return on investments was 25.89 percent, compared to last year's return of 1.76 percent.

Monthly retirement benefits paid to retirees and beneficiaries increased 4.8 percent to approximately $1.9 billion for Fiscal Year 2021, compared to $1.8 billion in Fiscal Year 2020.

## OVERVIEW OF THE FINANCIAL STATEMENTS

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

- Financial statements
- Notes to the financial statements
- Required supplementary information
- Other supplementary schedules

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

## FINANCIAL STATEMENTS

A Statement of Fiduciary Net Position as of June 30, 2021, and a Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2021, are presented in this report. These financial statements reflect the resources available to pay benefits to retirees and other beneficiaries.

## NOTES TO THE FINANCIAL STATEMENTS

The financial statement notes provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes to the financial statements can be found immediately following the financial statements.

The 2021 Legislature passed House Bill 2405, which authorized the state of Kansas to issue bonds, series 2021K, with net proceeds of $500 million to fund a portion of the School unfunded actuarial liability. The bond proceeds were received by KPERS on August 26, 2021 and will be reflected in the Fiscal Year 2022 financial statements.

## REQUIRED SUPPLEMENTARY INFORMATION

The required supplementary information consists of schedules and related notes concerning the financial status of the Retirement System (Pension Plan).

## OTHER SUPPLEMENTARY SCHEDULES

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

## 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, 2021, amounted to $25.3 billion. Following are two summary schedules, Fiduciary Net Position and Changes in Fiduciary Net Position, showing information for Fiscal Years 2021 and 2020 for the pension plan.

## SUMMARY STATEMENT OF FIDUCIARY POSITION

| | As of June 30, 2021 | As of June 30, 2020 |
|---|---|---|
| **Assets** | | |
| Cash and Deposits | $ 21,573,889 | $ 16,335,755 |
| Receivables | 484,675,507 | 542,713,151 |
| Investments at Fair Value | 24,818,151,875 | 20,140,089,358 |
| Capital Assets and Supplies Inventory | 2,483,843 | 3,468,846 |
| **Total Assets** | 25,326,885,114 | 20,702,607,110 |
| **Liabilities** | | |
| Administrative Costs | 1,711,880 | 1,618,220 |
| Benefits Payable | 5,529,045 | 2,381,733 |
| Securities Purchased | 65,048,870 | 91,733,152 |
| **Total Liabilities** | 72,289,795 | 95,733,105 |
| **Fiduciary Net Position Restricted for Pensions** | $ 25,254,595,319 | $ 20,606,874,005 |

## SUMMARY STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

| | Year Ended June 30, 2021 | Year Ended June 30, 2020 |
|---|---|---|
| **Additions** | | |
| Contributions | $ 1,466,885,214 | $ 1,511,112,125 |
| Net Investment Income | 5,185,033,888 | 347,463,816 |
| Other Miscellaneous Income | 19,967,235 | 20,699,113 |
| **Total Additions** | 6,671,886,337 | 1,879,275,054 |
| **Deductions** | | |
| Monthly Retirement Benefits | 1,916,524,189 | 1,828,655,721 |
| Refunds | 76,647,575 | 66,928,608 |
| Death Benefits | 13,809,622 | 11,263,225 |
| Administrative Expenses | 17,183,637 | 13,607,382 |
| **Total Deductions** | 2,024,165,023 | 1,920,454,936 |
| Net Increase /(Decrease) | 4,647,721,314 | (41,179,882) |
| **Fiduciary Net Position Beginning of Year** | 20,606,874,005 | 20,648,053,887 |
| **Fiduciary Net Position End of Year** | $ 25,254,595,319 | $ 20,606,874,005 |

## FINANCIAL ANALYSIS OF THE RETIREMENT SYSTEM

Additions to the System's fiduciary net position restricted for pensions include employer and member contributions, as well as investment income. Total contributions to the Retirement System were approximately $1.5 billion in Fiscal Year 2021, compared to approximately $1.5 billion in Fiscal Year 2020.

The System recognized net investment income of $5.2 billion for Fiscal Year 2021. The total time-weighted return for the portfolio, net of fees, was 25.8 percent, compared to the benchmark return of 25.0 percent. System investments at fair value amounted to $24.9 billion at June 30, 2021. The Retirement System's time-weighted one- , three- , five- , ten- and 25-year investment performance returns, net of fees, are shown in the following table. The actuarial assumed rate of return is 7.75 percent.

| 2021 | | | | |
|---|---|---|---|---|
| 1 Year | Last 3 Years | Last 5 Years | Last 10 Years | Last 25 Years |
| 25.8% | 10.8% | 10.6% | 8.8% | 7.8% |

The System recognized net investment income of $347.5 million for the 2020 Fiscal Year. System investments at fair value amounted to $20.2 billion at June 30, 2020.

At June 30, 2021, the System held $13.4 billion in US equity and international equity securities. US equity and international equity securities earned net returns of approximately 43.9 percent and 34.9 percent, respectively, for Fiscal Year 2021.

At June 30, 2020, the System held $10.2 billion in US equity and international equity securities. US equity and international equity securities earned returns of approximately 6.5 percent and negative 1.5 percent, respectively, for Fiscal Year 2020.

The System held $5.8 billion in US debt and international debt securities at June 30, 2021. The net performance of the System's fixed income securities during Fiscal Year 2021 was 1.2 percent. Real estate investments amounted to $2.9 billion at June 30, 2021, and returned approximately 8.5 percent for the 2021 Fiscal Year. The System held $2.3 billion in alternative investments, which earned a return of approximately 50.9 percent for the 2021 Fiscal Year. At June 30, 2021, the pension plan held $265.8 million in short-term investments and the custodial funds held $86.5 million. Cash and deposits include investment cash and foreign currencies held at the custodial bank as of June 30, 2021, totaling approximately $20.5 million.

The System held $5.6 billion in US debt and international debt securities at June 30, 2020. The net performance of the System's fixed income securities during Fiscal Year 2020 was 8.6 percent. Real estate investments amounted to $2.5 billion at June 30, 2020, and returned approximately negative 0.1 percent for the 2020 Fiscal Year. The System held $1.6 billion in alternative investments, which earned a return of approximately negative 3.6 percent for the 2020 Fiscal Year. At June 30, 2020, the pension plan held $244.4 million in short-term investments and the custodial funds held $103.2 million. Cash and deposits include investment cash and foreign currencies held at the custodial bank as of June 30, 2020, totaling approximately $16.1 million.

Deductions from fiduciary net position restricted for pensions include retirement benefits, refunds, survivor benefits and administrative expenses. For the 2021 Fiscal Year, retirement benefits amounted to approximately $1.9 billion, an increase of $87.9 million or 4.8 percent from Fiscal Year 2020. For the 2021 Fiscal Year, System administrative expenses amounted to $17.2 million, an increase of $3.6 million from Fiscal Year 2020. The ratio of System administrative expenses to the number of members continues to be very cost-efficient compared to other statewide retirement plans.

## NET PENSION LIABILITY

The annual financial actuarial valuation for the System, as of June 30, 2021, estimates the total pension liability in accordance with requirements established by GASB Statement No. 67, Financial Reporting Standards for Pension Plans, as amended. The 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. The net pension liability (NPL) is the total pension liability, net of the pension plan's fiduciary net position. As of June 30, 2021, the pension plan's fiduciary net position as a percentage of the total pension liability was 76.40 percent.

## PENSION PLAN

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 statutory cap on employer contributions was increased. For Fiscal Year 2017 and beyond, the statutory cap is 1.2 percent. 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.

Senate Sub. for HB 2052 authorized the delay of $64.1 million in Fiscal Year 2017 contributions. These contributions were set up as a long-term receivable. Payment is scheduled to be made in a series of twenty annual payments of $6.4 million beginning in Fiscal Year 2018. Senate Sub. for HB 2002 authorized the delay of $194.0 million in Fiscal Year 2019 contributions. Payment is scheduled to be made in a series of twenty annual payments of $19.4 million starting in Fiscal Year 2020.

House Sub. For Senate Bill 109 from the 2018 Legislative session provided for additional funding for the KPERS School Group. A payment of $56 million was paid in Fiscal Year 2018. This Bill also authorized a payment of $82 million in Fiscal Year 2019. The 2019 legislative session authorized an additional fiscal year payment for the KPERS School Group. Senate Bill 9 authorized a payment of $115 million for the KPERS School Group. House Sub. For Senate Bill 25 from the 2019 Legislative session authorized additional funding for the KPERS School Group in Fiscal Year 2020 of $51 million.

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 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, 2021*

| | Pension Plan | Custodial Funds |
|---|---|---|
| **Assets:** | | |
| Cash | $ 1,087,810 | $ 2,834,602 |
| Cash at Custodial Bank | 20,486,079 | - |
| Deposits with Insurance Carrier | - | (530,585) |
| **Total Cash** | 21,573,889 | 2,304,017 |
| **Receivables:** | | |
| Contributions | 406,984,395 | 11,206,214 |
| Investment Income | 33,091,524 | 775 |
| Sale of Investment Securities | 44,599,588 | - |
| **Total Receivables** | 484,675,507 | 11,206,989 |
| **Investments at Fair Value:** | | |
| Domestic Equities | 7,709,568,751 | - |
| International Equities | 5,737,806,716 | - |
| Short Term | 265,754,451 | 86,529,213 |
| Fixed Income | 5,830,761,727 | - |
| Alternative Investments | 2,347,703,793 | - |
| Real Estate | 2,926,556,437 | - |
| **Total Investments** | 24,818,151,875 | 86,529,213 |
| Capital Assets and Supplies Inventory | 2,483,843 | - |
| **Total Assets** | 25,326,885,114 | 100,040,219 |
| **Liabilities:** | | |
| Administrative Costs | 1,711,880 | - |
| Benefits Payable | 5,529,045 | 5,422,578 |
| Securities Purchased | 65,048,870 | - |
| **Total Liabilities** | 72,289,795 | 5,422,578 |
| **Net Position** | | |
| Restricted for: | | |
| Pensions | 25,254,595,319 | - |
| Individuals, organizations, and other governments | - | 506,352 |
| Postemployment benefits other than pensions | - | 94,111,289 |
| | $ 25,254,595,319 | $ 94,617,641 |

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

## STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

*Fiscal Year Ended June 30, 2021*

| | Pension Plan | Custodial Funds |
|---|---|---|
| **Additions:** | | |
| Contributions: | | |
| Member Contributions | $ 459,313,973 | $ 7,793,505 |
| Employer Contributions | 1,007,571,241 | 29,955,043 |
| **Total Contributions** | 1,466,885,214 | 37,748,548 |
| **Investments:** | | |
| Net Appreciation in Fair Value of Investments | 4,865,677,791 | - |
| Interest | 133,831,909 | 65,403 |
| Dividends | 195,697,077 | - |
| Real Estate Income, Net of Operating Expenses | 101,335,088 | - |
| Other Investment Income | 33,153,081 | - |
| | 5,329,694,946 | 65,403 |
| Less Investment Expense | 144,661,058 | - |
| Net Investment Income | 5,185,033,888 | 65,403 |
| Other Miscellaneous Income | 19,967,235 | 4,278 |
| **Total Additions** | 6,671,886,337 | 37,818,229 |
| **Deductions:** | | |
| Monthly Retirement Benefits Paid | 1,916,524,189 | - |
| Refunds of Contributions | 76,647,575 | - |
| Death Benefits | 13,809,622 | - |
| Insurance Premiums and Disability Benefits | - | 48,463,877 |
| Administrative Expenses | 17,183,637 | 673,793 |
| **Total Deductions** | 2,024,165,023 | 49,137,670 |
| **Net Increase (Decrease) in Fiduciary Net Position** | 4,647,721,314 | (11,319,441) |
| **Fiduciary Net Position Restricted for Pensions** | | |
| **Beginning of Year** | 20,606,874,005 | 105,937,082 |
| **End of Year** | $ 25,254,595,319 | $ 94,617,641 |

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 pays Death and Disability Plan benefits to members on behalf of employers as provided by K.S.A. 74, article 4927. KPERS also collects and pays premiums for the optional group life insurance plan, as authorized by K.S.A. 74, article 4927. This plan provides additional employee paid life insurance coverage for active members. These benefits are not administered through qualifying trusts based on the criteria in Governmental Accounting Standards Board (GASB) Statement No. 74. Accordingly, the activity for these benefits are presented in custodial funds.

### PLAN MEMBERSHIP BY EMPLOYEE GROUP

Participating membership by statewide pension group as of December 31, 2020, (most recent actuarial valuation date) is as follows:

MEMBERSHIP BY RETIREMENT SYSTEMS [1]

| | KPERS | KP&F | Judges | Total |
|---|---|---|---|---|
| Retirees and beneficiaries currently receiving benefits [2] | 102,194 | 5,899 | 307 | 108,400 |
| Terminated employees entitled to benefits but not yet receiving them | 25,467 | 240 | 9 | 25,716 |
| Inactive members, deferred disabled | 1,566 | 184 | - | 1,750 |
| Inactive members not entitled to benefits | 35,744 | 1,583 | - | 37,327 |
| Current employees | 145,880 | 7,835 | 244 | 153,959 |
| Total | 310,851 | 15,741 | 560 | 327,152 |

*(1) Represents System membership at December 31, 2020.*
*(2) Number of retirement payees as of December 31, 2020.*

NUMBER OF PARTICIPATING EMPLOYERS

| | KPERS | KP&F | Judges |
|---|---|---|---|
| State of Kansas | 1 | 1 | 1 |
| Counties | 105 | 41 | - |
| Cities | 367 | 69 | - |
| Townships | 61 | - | - |
| School Districts | 286 | - | - |
| Libraries | 122 | - | - |
| Conservation Districts | 84 | - | - |
| Extension Councils | 58 | - | - |
| Community Colleges | 19 | - | - |
| Educational Cooperatives | 23 | - | - |
| Recreation Commissions | 46 | 1 | - |
| Hospitals | 28 | - | - |
| Cemetery Districts | 13 | - | - |
| Other | 210 | - | - |
| Total | 1,423 | 112 | 1 |

### 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. Their 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.

For active members (except Police and Firemen) 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 from any group.

**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 statewide 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, school and local 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 1.2 percent of total payroll.

The actuarially determined employer contribution rate and the statutory contribution rates are as follows:

| | Actuarial Employer Rate | Statutory Cap Rate |
|---|---|---|
| State Employee (1) | 9.22% | 14.23% |
| School Employee (1) | 15.59 | 14.23 |
| Judges (1) | 17.26 | 17.26 |
| Local Government Employee (2) | 8.87 | 8.87 |
| Police and Firemen (2) | 22.80 | 22.80 |

*(1) Rates shown for KPERS State, School and Judges represent the rates for fiscal year ending June 30.*

*(2) KPERS Local and KP&F rates are reported for the calendar year.*

Employee contribution rates as a percentage of eligible compensation in Fiscal Year 2021 were 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

The accompanying financial statements have been prepared on the accrual basis of accounting in conformity with US generally accepted accounting principles (GAAP), as prescribed by the Governmental Accounting Standards Board (GASB). KPERS' financial statements include the pension fund and custodial funds.

The pension fund is accounted for on the flow of economic resources measurement focus and the accrual basis of accounting. 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.

The custodial funds are custodial in nature and account for the assets and liabilities held by KPERS as an agent. Death and disability benefits are paid on behalf of other governments and

Optional Group Life Insurance premiums are paid on behalf of employees. These funds do not measure the result of operations.

**SHORT TERM INVESTMENTS**

The Retirement System considers Short Term Investments to include both Money Market Investments (MMI) and Short Term Investment Funds (STIF). MMI are highly liquid debt instruments purchased within one year of maturity, including US Treasury and Agency obligations. Asset-backed securities, derivatives and structured notes are not included in MMI.

STIF funds are an open-end mutual fund provided and operated by the custodian bank, that serves the daily cash needs of specific investment managers. The STIF funds are not a 2a-7 like investment pool. As such, the unit of account is each share held, and the value of the position is the fair value of the total fund's price multiplied by the number of shares held.

More information regarding the measurement of the fair value of the MMI and STIF Funds is available in Note 5 – Fair Value Measurement.

**METHODS USED TO VALUE INVESTMENTS**

Investments are reported at fair value. The fair value of active, publicly traded securities are quoted market prices. 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.

More information regarding the measurement of the fair value of investments is available in Note 5 – Fair Value Measurements.

**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:

- Established 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 allocations of common stock to 60.0 percent of the total book value of the fund.
- Limits the possible allocation of total alternative investments to 15.0 percent of the total 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 20 investment management firms and a master global custodian. The Retirement System has six permissible investment categories: 1) equities, 2) real estate, 3) fixed-income securities, 4) derivative products, 5) cash equivalents, 6) alternative investments.

The Pension Plan's policy in regard to the allocation of invested assets is established and may be amended by the Board of Trustees. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan. The following was the Board of Trustee's adopted asset allocation policy as of June 30, 2021:

| Asset Class | Interim Target Allocations |
|---|---|
| Domestic Equities | 24.5% |
| International Equities | 24.5 |
| Yield Driven (1) | 6.0 |
| Real Return (2) | 11.0 |
| Fixed | 10.0 |
| Short Term Investments | 4.0 |
| Real Estate | 11.0 |
| Alternatives | 9.0 |
| | 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 24.5 percent of assets in dedicated international equities. At June 30, 2021, 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, 2021, the System's total foreign currency exposure was 57.5 percent hedged.

Equities are considered to be common or preferred corporate stocks; warrants or rights; preferred stock that 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 US and foreign treasury or government agency obligations; US 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 20.0 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 that 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 8.0 percent per year, for the cost of service credits granted retroactively when the agency initially joined the Retirement System. As of June 30, 2021, the outstanding balance was $3,408,088. These payments are due over various time periods up through December 31, 2032.

The 2016 Legislature passed Senate Bill 161 authorizing the delay of $64.1 million in Fiscal Year 2017 contributions. Payment was authorized to be made in a series of twenty annual payments of $6.4 million beginning in Fiscal Year 2018. Senate Sub. for HB 2002 authorized the delay of $194 million in Fiscal Year 2019 contributions. Payment was authorized to be made in a series of twenty annual payments of $19.4 million beginning in Fiscal Year 2020. These amounts have been set up as receivables, the balance as of June 30, 2021, was $242,903,822. The implicit interest rate for these receivables is the assumed investment rate of return, 7.75 percent.

### 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. The book value of furniture, fixtures, equipment and land as of June 30, 2021, was $24,552,313, with accumulated depreciation of $22,103,124. In Fiscal Year 1999, the Retirement System purchased an office building and garage in Topeka, Kansas. Over sixty percent of the floor space of the office building is used as the System's administrative headquarters and the remaining portion is leased as 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, 2021, was $3,085,071. The office building and garage are being depreciated over a period of 33 years on an accelerated method. At June 30, 2021, the carrying value of the System's administrative headquarters was $533,086.

### 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 401(a) 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. 87, Leases. This Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. Retirement management is currently evaluating the impact of GASB Statement No. 87, which will be implemented in Fiscal Year 2022.

GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*; or a SBITA. A SBITA is defined as a contract that conveys control of the right to use another party's information technology software, alone or in combination with tangible capital assets. Under this Statement, a government should recognize a right-to-use subscription asset and a corresponding subscription liability. Retirement management is currently evaluating the impact of GASB Statement No. 96, which will be implemented in Fiscal Year 2023. Retirement management has reviewed upcoming standards and has identified GASB Statement No. 96 as potentially applicable to the plan.

# 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, 2021, the System's deposits with its disability administrator were $0, with an amount due the administrator of $530,585. The 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, 2021, at fair value:

| Investment Type | Fair Value |
|---|---:|
| Domestic Equities | $7,709,568,751 |
| International Equities | 5,737,806,716 |
| Fixed Income: | |
| US Government | 2,392,048,233 |
| US Agencies | 377,389,145 |
| US Corporate | 2,575,107,581 |
| Foreign Fixed Income | 486,216,768 |
| Short Term Investments | 352,283,664 |
| Real Estate: | |
| Partnerships | 1,005,322,975 |
| Commingled Funds | 1,844,371,384 |
| Separate Accounts | 76,862,078 |
| Alternatives | 2,347,703,793 |
| Total | $24,904,681,088 |

## 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, 2021, the System had US Dollar and foreign currency balances at custodial banks with a net value of $20.5 million. This is primarily foreign currency deposits facilitating international investments in the respective local markets. The System's deposits of $3.9 million held at the State Treasury were fully collateralized at fiscal year end by FDIC insurance or pledged collateral (government securities or FHLB letters of credit).

## CONCENTRATION OF CREDIT RISK

No single issuer represents 1.0 percent or more of System assets other than US Government (9.3 percent) and Agencies (1.6 percent). KPERS' investment policy does not prohibit holdings above 5.0 percent in the debt securities of US 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 that limits its exposure to foreign currency risk. The following table presents the foreign currency risk by type of investment as of June 30, 2021:

FOREIGN CURRENCY RISK

| USD Equivalent | | | | |
|---|---|---|---|---|
| Equity | Fixed | Currency | Total | Percent |
| $ 91,363,965 | $ 7,887,968 | Australian Dollar | $ 99,251,933 | 1.89% |
| 31,156,924 | - | Brazilian Real | 31,156,924 | 0.59 |
| 611,670,304 | 261,245,099 | British Pound Sterling | 872,915,403 | 16.63 |
| 273,156,392 | 15,035,488 | Canadian Dollar | 288,191,880 | 5.49 |
| 163,402,074 | 1,831,260 | Danish Krone | 165,233,334 | 3.15 |
| 1,686,019,149 | 166,882,366 | Euro Currency Unit | 1,852,901,515 | 35.29 |
| 508,205,716 | - | Hong Kong Dollar | 508,205,716 | 9.68 |
| 15,676,485 | - | Indonesian Rupiah | 15,676,485 | 0.30 |
| 19,055,778 | - | Israeli New Shekel | 19,055,778 | 0.36 |
| 728,388,478 | 23,942,511 | Japanese Yen | 752,330,989 | 14.33 |
| 105,729,898 | - | New Taiwan Dollar | 105,729,898 | 2.01 |
| 170,678 | 4,135,279 | New Zealand Dollar | 4,305,957 | 0.08 |
| 13,068,703 | - | Norwegian Krone | 13,068,703 | 0.25 |
| 16,360,413 | - | Singapore Dollar | 16,360,413 | 0.31 |
| 16,576,369 | - | S African Comm Rand | 16,576,369 | 0.32 |
| 84,139,958 | - | South Korean Won | 84,139,958 | 1.60 |
| 99,457,722 | 5,256,797 | Swedish Krona | 104,714,519 | 2.00 |
| 292,108,900 | - | Swiss Franc | 292,108,900 | 5.56 |
| 8,343,213 | - | Thailand Baht | 8,343,213 | 0.16 |
| $ 4,764,051,119 | $ 486,216,768 | | $ 5,250,267,887 | 100.00% |

## 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, Short Term includes commercial paper, repurchase agreements and other short-term securities. Agency securities are those implicitly guaranteed by the US Government. US Government securities are treasury securities and agencies explicitly guaranteed. Securities with a "not rated" quality rating are primarily bank loans, certificates of deposit and preferred stock. System assets as of June 30, 2021, subject to credit risk are shown with current credit ratings.

CREDIT RISK

| Quality Rating | Short Term Investments | Corporate (1) | US Government | Agency | Total |
|---|---|---|---|---|---|
| Not Rated | $ 222,375,798 | $ 151,861,377 | $ - | $ - | $ 374,237,175 |
| AAA | 47,102,296 | 381,608,613 | 2,392,048,233 | 18,521,780 | 2,839,280,922 |
| AA | - | 421,903,164 | - | 330,590,050 | 752,493,214 |
| A | 30,312,003 | 297,237,498 | - | 2,371,249 | 329,920,750 |
| A-1/P-1 | - | 82,821,575 | - | - | 82,821,575 |
| BBB | 52,493,567 | 964,017,675 | - | 22,065,263 | 1,038,576,505 |
| BB | - | 307,452,494 | - | 1,825,208 | 309,277,702 |
| B | - | 368,071,527 | - | 2,015,595 | 370,087,122 |
| CCC | - | 141,067,910 | - | - | 141,067,910 |
| CC | - | 5,948,110 | - | - | 5,948,110 |
| C | - | 2,988,664 | - | - | 2,988,664 |
| Total | $ 352,283,664 | $ 3,124,978,607 | $ 2,392,048,233 | $ 377,389,145 | $ 6,246,699,649 |

*(1) Includes preferred equities subject to credit risk.*

## 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 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 table grouped by effective duration ranges. The weighted effective durations shown in the following table are grouped by asset category.

INTEREST RATE RISK

| Effective Duration | Short Term Investments | Corporate (1) | US Government | Agency | Total |
|---|---|---|---|---|---|
| 0 – 1 Yr | $ 352,283,664 | $ 545,527,503 | $ 1,110,841,750 | $ 55,128,217 | $ 2,063,781,134 |
| 1 – 3 Yrs | - | 529,478,322 | 435,897,157 | 61,734,744 | 1,027,110,223 |
| 3 – 5 Yrs | - | 671,415,817 | 304,624,412 | 219,380,032 | 1,195,420,261 |
| 5 – 10 Yrs | - | 880,578,059 | 236,365,282 | 40,794,645 | 1,157,737,986 |
| > 10 Yrs | - | 497,978,906 | 304,319,632 | 351,507 | 802,650,045 |
| Grand Total | $ 352,283,664 | $ 3,124,978,607 | $ 2,392,048,233 | $ 377,389,145 | $ 6,246,699,649 |

*(1) Includes preferred equities subject to interest rate risk.*

### ANNUAL MONEY-WEIGHTED RATE OF RETURN

For the year ended June 30, 2021, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 25.89 percent. This return was 1.76 percent for Fiscal Year 2020. 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, 2021:

INVESTMENT DERIVATIVE SUMMARY

| | Asset Class (1) | Notional Value | Fair Value |
|---|---|---|---|
| Domestic Equity Futures | Domestic Equities | $ 15,976,500 | $ - |
| International Equity Futures | International Equities | 132,146,074 | - |
| Credit Default Swaps | Fixed | 16,250,000 | 1,658,118 |
| Fixed Futures | Fixed | 17,299,766 | - |
| Foreign Currency Forwards | Fixed | 5,628,727,726 | 61,124,880 |
| Options | Fixed | 25,000 | 9,375 |
| TBA Agency Bonds (2) | Fixed | 50,883,107 | 50,883,107 |

*(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, 2021, at fair value:

INVESTMENT DERIVATIVE FAIR VALUES

| | June 30, 2020 | Increases | Decreases | June 30, 2021 |
|---|---|---|---|---|
| Credit Default Swaps | $ (77,065) | $ 64,883,718 | $ (63,148,535) | $ 1,658,118 |
| TBA Agency Bonds | - | 1,954,794,343 | (1,903,911,236) | 50,883,107 |
| Foreign Currency Forwards | 10,678,678 | 80,151,118 | (29,704,916) | 61,124,880 |
| Options Purchased | - | 710,631 | (701,256) | 9,375 |
| | $ 10,601,613 | $ 2,100,539,810 | $ (1,997,465,943) | $ 113,675,480 |

**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, 2021, the System had total net margins receivable the next day of $0. Short-term investments in amounts necessary to settle the economic value of the futures contracts were held in the payable portfolio so that no leverage was employed in accordance with the Statement of Investment Policy. The daily margin flows affect cash assets held at broker. Realized gains/losses are recognized at contract maturity and included with underlying security type returns. Total gains of $38.6 million were associated with futures for the year ending June 30, 2021.

**OPTIONS**

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

**SWAPS**

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

Credit default swaps are used to manage credit exposure without direct purchase or sale of securities. Written credit default swaps increase credit exposure (selling protection) obligating the seller to buy the bonds from the counterparty in the event of a default. This creates credit risk, but has very little counterparty risk. Purchased credit default swaps decrease exposure (buying protection), providing the right to "put" bonds to the counterparty in the event of a default. This decreases credit risk, and has counterparty risk in the event the seller of protection fails to cover the defaulting security. Controls are established by the investment managers to monitor the creditworthiness of the counterparties.

**TBA AGENCY BONDS**

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

**FOREIGN CURRENCY FORWARDS**

The Retirement System's international investment managers use forward contracts to obtain currencies necessary for trade execution and manage the exposure of the international investments to fluctuations in foreign currency. Active international investment managers use forward contracts to enhance returns or to control volatility. Currency risk arises due to foreign exchange rate fluctuations. Forward foreign exchange contracts are negotiated between two counterparties. The Retirement System could incur a loss if its counterparties failed to perform pursuant to the terms of their contractual obligations. Since the System holds the offsetting currency in the contract, and controls are established by the investment managers to monitor the creditworthiness of the counterparties, risk of actual loss is minimized. 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, 2021, the fair value of international equities was $5.7 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, 2021:

INVESTMENT CURRENCY FORWARDS

| | Notional Cost (USD) | Pending Foreign Exchange Receivables (USD) | Pending Foreign Exchange Payables (USD) | Fair Value June 30, 2021 (USD) |
|---|---|---|---|---|
| Australian Dollar | $ 376,645,731 | $ 371,700,233 | $ (372,627,907) | $ (927,674) |
| British Pound Sterling | 1,273,479,863 | 1,272,154,166 | (1,258,228,480) | 13,925,686 |
| Canadian Dollar | 197,552,476 | 196,587,075 | (196,015,921) | 571,154 |
| Danish Krone | 49,240,742 | 49,234,697 | (47,958,529) | 1,276,168 |
| Euro Currency Unit | 1,872,208,287 | 1,871,101,428 | (1,837,435,056) | 33,666,372 |
| Hong Kong Dollar | 290,414,715 | 290,412,383 | (290,206,753) | 205,630 |
| Israeli New Shekel | 5,524,607 | 5,524,607 | (5,503,262) | 21,345 |
| Japanese Yen | 872,554,291 | 871,166,645 | (862,084,320) | 9,082,325 |
| New Zealand Dollar | 106,520,047 | 104,045,883 | (105,899,315) | (1,853,432) |
| Norwegian Krone | 133,836,789 | 130,427,582 | (133,571,967) | (3,144,385) |
| Singapore Dollar | 103,758,586 | 102,500,335 | (103,435,648) | (935,313) |
| Swedish Krona | 83,267,797 | 83,103,935 | (81,257,150) | 1,846,785 |
| Swiss Franc | 263,723,795 | 263,637,211 | (256,246,992) | 7,390,219 |
| | $ 5,628,727,726 | $ 5,611,596,180 | $ (5,550,471,300) | $ 61,124,880 |

Investment forwards counterparty exposure at June 30, 2021, is as follows:

INVESTMENT FORWARDS COUNTERPARTY EXPOSURE

| Counterparty Name | Notional $USD | Fair Value | Lowest Long-Term Rating |
|---|---|---|---|
| Australia & New Zealand Banking Group | $ 105,820,553 | $ 1,390,752 | A+ |
| Bank of America N.A. | 232,592,957 | 2,177,158 | A+ |
| Bank of New York Mellon | 401,139 | (112) | AA- |
| Barclays Bank PLC Wholesale | 435,973,403 | 5,343,820 | A |
| BNP Paribas SA | 201,697,830 | 1,774,387 | A+ |
| Brown Brothers Harriman & Co. | 133,815 | 3 | A+ |
| Citibank N.A. | 48,030,465 | 222,541 | A+ |
| Credit Agricole CIB | 399,579,108 | 5,124,189 | A+ |
| Deutsche Bank AG | 216,075,964 | 1,639,942 | BBB |
| Goldman Sachs International | 210,017,934 | 1,757,845 | A+ |
| Goldman Sachs USA | 1,175,589 | (6,350) | A+ |
| HSBC Bank PLC | 497,900,375 | 10,116,989 | A- |
| HSBC Bank USA | 156,908,041 | 3,793,721 | A+ |
| Income Repatriation Boston IBS | 1,027,379 | (1,026) | NR |
| JP Morgan Chase Bank N.A. London | 490,614,678 | 4,837,193 | A+ |
| Morgan Stanley & Co. International PLC | 225,158,197 | 2,193,067 | BBB+ |
| Royal Bank of Canada (UK) | 116,405,053 | 2,662,928 | A |
| State Street Bank & Trust Company | 14,085,368 | (30,109) | AA- |
| State Street Bank London | 494,553,453 | 3,727,644 | A |
| Toronto Dominion Bank | 791,645,895 | 14,397,180 | AA- |
| UBS AG | 330,626,836 | 3,160,353 | A+ |
| Westpac Banking Corporation | 658,303,694 | (3,157,235) | A+ |
| | $ 5,628,727,726 | $ 61,124,880 | |

# 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, 2021:

INVESTMENTS AND DERIVATIVE INSTRUMENTS MEASURED AT FAIR VALUE

| | Total as of 6/30/2021 | 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 |
|---|---|---|---|---|
| *Investments by Fair Value Level* | | | | |
| Debt Securities | | | | |
| US Treasury | $ 1,268,889,405 | $ 498,956,411 | $ 769,932,994 | $ - |
| US Treasury Commingled | 1,058,767,936 | - | 1,058,767,936 | - |
| GNMA | 64,390,892 | - | 64,390,892 | - |
| US Agency | 326,506,038 | - | 326,506,038 | - |
| US Corporate, Municipalities | 2,219,085,282 | - | 2,219,085,282 | - |
| Yankees | 354,354,807 | - | 354,354,807 | - |
| International | 486,216,767 | - | 486,216,767 | - |
| Total Debt Securities | 5,778,211,127 | 498,956,411 | 5,279,254,716 | - |
| Equity Securities | | | | |
| Domestic Common Stock | 7,701,793,494 | 7,700,373,699 | - | 1,419,795 |
| Domestic Preferred | 7,775,257 | 7,775,257 | - | - |
| International Common | 4,603,656,293 | 4,603,656,293 | - | - |
| International Commingled and ETF | 1,078,271,422 | 1,078,271,422 | - | - |
| International Preferred Stock | 55,879,001 | 55,879,001 | - | - |
| Total Equity Securities | 13,447,375,467 | 13,445,955,672 | - | 1,419,795 |
| Real Estate and Alternatives | | | | |
| Separate Properties | 74,834,472 | - | - | 74,834,472 |
| Home Office Property, Rentable | 2,027,606 | - | - | 2,027,606 |
| Alternatives Distribution | 139,550 | - | - | 139,550 |
| Total Real Estate and Alternatives | 77,001,628 | - | - | 77,001,628 |
| Investments by Fair Value Level | 19,302,588,222 | 13,944,912,083 | 5,279,254,716 | 78,421,423 |
| *Derivatives by Fair Value* | | | | |
| Swaps | 1,658,118 | - | 1,658,118 | - |
| Options | 9,375 | 9,375 | - | - |
| To-Be-Announced Agencies | 50,883,107 | - | 50,883,107 | - |
| Total Derivatives by Fair Value Level | 52,550,600 | 9,375 | 52,541,225 | - |
| Total Investments and Derivatives by Fair Value Level | $ 19,355,138,822 | $ 13,944,921,458 | $ 5,331,795,941 | $ 78,421,423 |

| *Investments Measured at Net Asset Value (NAV)* | | Unfunded Commitment | Transfer or Redemption Frequency | Transfer or Redemption Notice |
|---|---|---|---|---|
| Private Equity Partnerships | $ 2,347,564,243 | $ 1,177,566,424 | Quarterly | 30 days |
| Real Estate Partnerships | 1,005,322,975 | 345,153,091 | Quarterly | 30 days |
| Real Estate Core Funds | 1,770,899,732 | 100,000,000 | Quarterly | 30 days |
| Real Estate Other Funds | 73,471,652 | - | Biannual | 30 days |
| Total investments measured at NAV | 5,197,258,602 | | | |
| *Short Term Investments measured at amortized cost* | | | | |
| STIF Funds | 53,567,833 | | | |
| Money Market Investments | 298,715,831 | | | |
| Total Short Term Investments | 352,283,664 | | | |
| Total Investment Value | $ 24,904,681,088 | | | |

**DEBT SECURITIES**

Except for the Treasury Level 1 securities noted below, 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.

US Treasury Level 1 assets were actively traded "on the run" at June 30, 2021. GNMA are those agencies explicitly guaranteed by the US government. 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.

**EQUITY SECURITIES**

Equity securities include both direct interest in equities and equity funds. The fair value for those equity securities in Level 1 are based on quoted market prices of identical securities or equity funds traded on an established exchange. Level 3 equity securities are valued based on prices provided by investment managers or other unobservable pricing inputs.

**REAL ESTATE AND ALTERNATIVES MEASURED AT FAIR VALUE**

The Retirement System wholly owns three separate properties including timberland 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 partially System occupied and partially rentable space. This building was split into two units of account at purchase. The System's portion is included in capital assets. The alternatives distribution is valued based on general partner information that is unobservable.

**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 $5.6 billion in outstanding currency forward contract payables and receivables at June 30, 2021. The net fluctuation in currency rates at that time increased the unrealized fair value of those contracts by $61,124,880. See Note 4 of these financial statements for more information on KPERS derivative investments.

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

For eighty-two (82) private equity partnerships, thirty-one (31) real estate partnerships and four (4) infrastructure partnerships, 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, 2020, 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 or redemptions are contemplated.

Eight 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 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. One real estate core fund was approved for full redemption by the Board in January 2020 and that fund is actively being redeemed. Real estate other funds are similar to the core funds except that shares may be redeemed biannually. No further redemptions are contemplated.

**SHORT TERM INVESTMENTS**

STIF funds are an open-end mutual fund provided and operated by the custodian bank, that serves the daily cash needs of specific investment managers. The STIF funds are not a 2a-7 like investment pool and are reported at amortized cost. There are no redemption restrictions and shares were redeemable at $1 per share as of June 30, 2021.

Money Market Investments are highly liquid debt instruments purchased within one year of maturity, including US Treasury and Agency obligations. Asset-backed securities, derivatives and structured notes are not included in money market investments. The amortized cost of the Money Market Investments is materially equivalent to fair value.

# 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 7.75 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 custodial fund accumulates employee contributions to pay their premiums for optional life insurance coverage. The balance at June 30, 2021 was $506,352.

The KPERS Death and Disability Plan, a custodial fund, accumulates premium payments from employers for group life insurance for active members, plus employer contributions to fund the post-employment long-term disability (OPEB) benefit program available to all members. The balance at June 30, 2021 was $94,111,289.

The balance of the System's pension reserves and the net pension liability at June 30, 2021, were as follows:

| Reserves | Balance | Net Pension Liability | Pension Reserves |
|---|---|---|---|
| Members Accumulated Contribution Reserve | $ 6,626,246,994 | - | $ 6,626,246,994 |
| Retirement Benefit Accumulations Reserve | 9,973,390,601 | (7,799,450,285) | 2,173,940,316 |
| Retirement Benefit Payment Reserve | 16,427,848,557 | - | 16,427,848,557 |
| Expense Reserve | 26,559,452 | - | 26,559,452 |
| Totals | $ 33,054,045,604 | $ (7,799,450,285) | $ 25,254,595,319 |

# NOTE 7 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

The components of the net pension liability of the participating employers at June 30, 2021, were as follows:

| | |
|---|---|
| State | $ 4,938,053,379 |
| School | 17,552,877,921 |
| Local | 6,360,883,973 |
| KP&F | 3,990,360,545 |
| Judges | 211,869,786 |
| Total Pension Liability | $ 33,054,045,604 |
| Fiduciary Net Position | 25,254,595,319 |
| Employers' Net Pension Liability | $ 7,799,450,285 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 76.40% |

## ACTUARIAL ASSUMPTIONS

The total pension liability was determined by an actuarial valuation as of December 31, 2020, which was rolled forward to June 30, 2021, using the following actuarial assumptions, applied to all periods included in the measurement:

| | |
|---|---|
| Actuarial Cost Method | Entry age normal |
| Price Inflation | 2.75 percent |
| Salary Increase | 3.50 to 12.00 percent, including price inflation |
| Investment Rate of Return | 7.25 percent compounded annually, net of investment expense, and including price inflation |

Mortality rates were based on the RP-2014 Mortality Tables, with age setbacks and age set forwards as well as other adjustments based on different membership groups. Future mortality improvements are anticipated using Scale MP-2016.

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 as of the most recent experience study, dated January 7, 2020, as provided by KPERS' investment consultant, are summarized in the following table:

| Asset Class | Long-Term Target Allocation | Long-Term Expected Real Rate of Return |
|---|---|---|
| US Equities | 23.5% | 5.20% |
| Non-US Equities | 23.5 | 6.40 |
| Fixed Income | 11.0 | 1.55 |
| Yield Driven | 8.0 | 4.70 |
| Real Return | 11.0 | 3.25 |
| Real Estate | 11.0 | 4.45 |
| Alternatives | 8.0 | 9.50 |
| Short Term Investments | 4.0 | 0.25 |

## DISCOUNT RATE

The discount rate used to measure the total pension liability was 7.25 percent. The projection of cash flows used to determine the discount rate was based on member and employer contributions as outlined below.

In KPERS, the State/School and Local groups do not necessarily contribute the full actuarial contribution rate. Based on legislation first passed in 1993, the employer contribution rates certified by the Board may not increase by more than the statutory cap. Subsequent legislation in 2012 set the statutory cap at 0.90 percent for Fiscal Year 2014, 1.0 percent for Fiscal Year 2015, 1.1 percent for Fiscal Year 2016 and 1.2 percent for Fiscal Years 2017 and beyond.

In recent years, the Legislature has made several changes to statutory rates that deviate from the scheduled contribution increases set under the caps established in 2012 for the State/ School group. Under 2015 SB 4, the previously certified State/ School statutory rate for Fiscal Year 2015 of 11.27 percent was reduced to 8.65 percent for the last half of Fiscal Year 2015 as part of the Governor's allotment. That same session, SB 228 recertified statutory rates for the State/School group to 10.91 percent for Fiscal Year 2016 and 10.81 percent for Fiscal Year 2017 in anticipation of the issuance of $1 billion in pension obligation bonds. Legislation in the 2016 session (SB 161) provided for the delay of up to $100 million in State and School contributions to the Retirement System for Fiscal Year 2016. Concurrently, 2016 House Sub for SB 249 provided that the delayed contributions would be paid in full, with interest at 8 percent, by June 30, 2018. However, legislation passed by the 2017 Legislature removed the repayment provision. In addition, 2017 Senate Sub for Sub HB 2052 delayed $64 million in Fiscal Year 2017 contributions, to be paid over 20 years in level dollar installments. The first year payment of $6.4 million was paid in full at the beginning of Fiscal Year 2018, and appropriations for Fiscal Year 2018 were made for the State/ School group at the statutory contribution rate of 12.01 percent for that year. Additional legislation in the 2017 Session (S Sub for HB 2002) provided for a reduction of $194 million from the previously certified contribution rate of 13.21 percent in the State/School contributions for Fiscal Year 2019. Like the Fiscal Year 2017 reduction, it is to be paid back over a 20-year period, beginning in Fiscal Year 2020. Therefore, both reductions are accounted for as receivables by the System. The 2018 Legislature passed House Substitute for Senate Bill 109 that provided additional contributions to the school group of $56 million in Fiscal Year 2018 and $82 million in Fiscal Year 2019. The 2019 Legislature passed Senate Bill 9 that provided additional contributions to the school group of $115 million in Fiscal Year 2019. House Sub for Senate Bill 25 from the 2019 Legislative session authorized additional funding for the KPERS School Group in Fiscal Year 2020 of $51 million.

The 2021 Legislature passed House Bill 2405, which authorizes the state of Kansas to issue bonds with net proceeds of $500 million to fund a portion of the School unfunded actuarial liability, assuming certain criteria are met. As a result, the State/ School contribution rate was recertified for Fiscal Years 2022 and 2023, lowering them respectively to 13.86 and 13.11 percent.

The bond proceeds were received on August 26, 2021, and were reflected in the projected cash flows.

Based on the employer contribution history described above, it is a reasonable assumption that the State/School group's contribution rate may not be certified at the statutory rate at some point in the future.. It has been assumed that the contribution rates will be made within the same range as have been seen in the past few years. Using this assumption, actuarial modeling indicates that employer contribution rates for the State/School group are sufficient to avoid a depletion date.

The statutory contribution rate for the combined State/School group first became equal to the actuarially required rate (ARC rate) in Fiscal Year 2021. Projections based on the same valuation, and an annual return on investments of 7.25 percent, indicate that the contribution rate will remain fairly stable until 2036.

The Local, Kansas Police and Firemen and Judges groups are contributing at the full actuarial contribution rate.

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

The following presents the net pension liability calculated using the discount rate of 7.25 percent, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25 percent) or 1-percentage-point higher (8.25 percent) than the current rate:

| | 1% Decrease (6.25%) | Current Discount Rate (7.25%) | 1% Increase (8.25%) |
|---|---|---|---|
| Net Pension Liability | $11,714,933,819 | $7,799,450,286 | $4,510,590,028 |

# 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 – CONTINGENCIES

As of June 30, 2021, 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 10 – SUBSEQUENT EVENTS

The 2021 Legislature passed House Bill 2405, which authorized the state of Kansas to issue bonds, 2021K, with net proceeds of $500 million to fund a portion of the School group's unfunded actuarial liability. The bond proceeds were received by KPERS on August 26, 2021 and will be reflected in the Fiscal Year 2022 financial statements.

The COVID-19 outbreak which began in December 2019, has caused investment, business and employment disruptions worldwide and is expected to continue into the future. As of the date of the issuance of these financial statements, October 29, 2021, the financial impact on the Kansas Public Employees Retirement System cannot be estimated.

# REQUIRED SUPPLEMENTARY INFORMATION – RETIREMENT PLAN

## SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

*Last Eight Fiscal Years ($ in Thousands) (1)*

| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|---|---|---|---|
| **Total Pension Liability:** | | | | | | | | |
| Service Cost | $ 608,798 | $ 581,722 | $ 563,297 | $ 552,423 | $ 570,703 | $ 571,263 | $ 571,944 | $ 572,291 |
| Interest | 2,257,132 | 2,217,512 | 2,146,531 | 2,084,822 | 2,046,674 | 1,985,329 | 1,926,405 | 1,866,797 |
| Changes of Benefit Terms | 101 | - | - | - | 713 | - | 1,467 | - |
| Differences Between Expected and Actual Experience | 113,131 | 110,055 | 75,441 | (47,143) | (154,326) | (133,493) | (135,542) | (216,248) |
| Changes of Assumptions | 1,001,426 | 529,310 | - | - | 574,844 | - | (53,014) | - |
| Benefit Payments, Including Refunds of Member Contributions | (2,006,981) | (1,906,848) | (1,833,297) | (1,755,854) | (1,686,676) | (1,627,032) | (1,524,380) | (1,432,846) |
| Net Change in Total Pension Liability | 1,973,607 | 1,531,751 | 951,972 | 834,248 | 1,351,932 | 796,067 | 786,880 | 789,994 |
| Total Pension Liability – Beginning | 31,080,439 | 29,548,688 | 28,596,716 | 27,762,469 | 26,410,538 | 25,614,471 | 24,827,591 | 24,037,597 |
| Total Pension Liability – Ending (a) | 33,054,046 | 31,080,439 | 29,548,688 | 28,596,716 | 27,762,469 | 26,410,538 | 25,614,471 | 24,827,591 |
| **Plan Fiduciary Net Position:** | | | | | | | | |
| Contributions – Employer | 1,007,571 | 1,008,544 | 925,352 | 831,735 | 761,610 | 739,184 | 690,564 | 701,818 |
| Contributions – Member | 459,314 | 451,568 | 437,353 | 420,285 | 414,538 | 404,856 | 382,058 | 332,163 |
| Contributions – Non-Employer (2) | - | 51,000 | 213,543 | 56,000 | - | 1,000,000 | - | - |
| Total Net Investment Income | 5,185,034 | 347,464 | 1,216,685 | 1,516,929 | 2,060,925 | 49,171 | 561,174 | 2,553,843 |
| Other Miscellaneous Income | 19,967 | 20,699 | 5,488 | 5,734 | (97,873) | 2,904 | 1,076 | 242 |
| Benefit Payments, Including Refunds of Member Contributions | (2,006,981) | (1,906,848) | (1,833,297) | (1,755,854) | (1,686,676) | (1,627,032) | (1,524,380) | (1,432,846) |
| Administrative Expenses | (17,184) | (13,607) | (13,280) | (12,460) | (11,116) | (12,172) | (10,768) | (9,636) |
| Net Change in Plan Fiduciary Net Position | 4,647,721 | (41,180) | 951,845 | 1,062,369 | 1,441,408 | 556,911 | 99,724 | 2,145,584 |
| Plan Fiduciary Net Position – Beginning | 20,606,874 | 20,648,054 | 19,696,209 | 18,633,840 | 17,192,432 | 16,635,521 | 16,535,797 | 14,390,213 |
| Plan Fiduciary Net Position – Ending (b) | 25,254,595 | 20,606,874 | 20,648,054 | 19,696,209 | 18,633,840 | 17,192,432 | 16,635,521 | 16,535,797 |
| **Employers' Net Pension Liability (a) - (b)** | $ 7,799,451 | $10,473,565 | $ 8,900,634 | $ 8,900,507 | $ 9,128,629 | $ 9,218,106 | $ 8,978,950 | $ 8,291,794 |

See accompanying independent auditors' report.

*(1) Schedule is intended to show information for 10 years. Additional years will be displayed as they are available. Numbers may not add due to rounding.*

*(2) Pension obligation bond proceeds 2015H received in Fiscal Year 2016, additional contributions for the School group in 2018, 2019 and 2020.*

## SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY

*Last Eight Fiscal Years ($ in Thousands)[1]*

| | 2021 | 2020 | 2019 | 2018 |
|---|---|---|---|---|
| Total Pension Liability | $ 33,054,046 | $ 31,080,439 | $ 29,548,688 | $ 28,596,716 |
| Plan Fiduciary Net Position | 25,254,595 | 20,606,874 | 20,648,054 | 19,696,209 |
| Employers' Net Pension Liability | $ 7,799,451 | $ 10,473,565 | $ 8,900,634 | $ 8,900,507 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 76.40% | 66.30% | 69.88% | 68.88% |
| Covered Payroll | $ 7,547,246 | $ 7,411,388 | $ 7,168,557 | $ 6,824,710 |
| Net Pension Liability as a Percentage of Covered Payroll | 103.34% | 141.32% | 124.16% | 130.42% |

| | 2017 | 2016 | 2015 | 2014 |
|---|---|---|---|---|
| Total Pension Liability | $ 27,762,469 | $ 26,410,538 | $ 25,614,471 | $ 24,827,591 |
| Plan Fiduciary Net Position | 18,633,840 | 17,192,432 | 16,635,521 | 16,535,797 |
| Employers' Net Pension Liability | $ 9,128,629 | $ 9,218,106 | $ 8,978,950 | $ 8,291,794 |
| Plan Fiduciary Net Position as a Percentage of the Total Pension Liability | 67.12% | 65.10% | 64.95% | 66.60% |
| Covered Payroll | $ 6,715,593 | $ 6,388,450 | $ 6,635,196 | $ 6,424,739 |
| Net Pension Liability as a Percentage of Covered Payroll | 135.93% | 144.29% | 135.32% | 129.06% |

See accompanying independent auditors' report.

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

## SCHEDULE OF EMPLOYER'S CONTRIBUTIONS

*Last 10 Fiscal Years ($ in Thousands)*

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|
| Actuarially Determined Contribution | $ 1,029,106 | $ 1,022,243 | $ 921,045 | $ 937,808 | $ 920,789 |
| Contribution In Relation to the Actuarially Determined Contribution | 993,216 | 992,099 | 908,931 | 817,653 | 745,021 |
| Contribution Deficiency (Excess) | $ 35,890 | $ 30,144 | $ 12,114 | $ 120,155 | $ 175,768 |
| Covered Payroll | $ 7,547,246 | $ 7,411,388 | $ 7,168,557 | $ 6,824,710 | $ 6,715,593 |
| Contributions as a Percentage of Covered Payroll | 13.16% | 13.39% | 12.70% | 11.98% | 11.09% |

| | 2016 | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|---|
| Actuarially Determined Contribution | $ 891,638 | $ 908,019 | $ 842,286 | $ 825,197 | $ 843,362 |
| Contribution In Relation to the Actuarially Determined Contribution | 721,313 | 676,173 | 668,811 | 617,925 | 568,015 |
| Contribution Deficiency (Excess) | $ 170,325 | $ 231,846 | $ 173,475 | $ 207,272 | $ 275,347 |
| Covered Payroll | $ 6,388,450 | $ 6,635,196 | $ 6,424,739 | $ 6,523,850 | $ 6,541,464 |
| Contributions as a Percentage of Covered Payroll | 11.29% | 10.19% | 10.41% | 9.47% | 8.68% |

See accompanying independent auditors' report.

## SCHEDULE OF INVESTMENT RETURNS

*Last 10 Fiscal Years*

| | 2021 | 2020 | 2019 | 2018 | 2017 |
|---|---|---|---|---|---|
| Annual Money-Weighted Rate of Return, Net of Investment Expense | 25.89% | 1.76% | 6.31% | 8.34% | 12.35% |

| | 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% |

See accompanying independent auditors' report.

# NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

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 | 12/31/2020 | 12/31/2020 | 12/31/2020 |
| 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 | Layered bases 12-25 years | Layered bases 12-25 years | Layered bases 12-25 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] | 7.75% | 7.75% | 7.75% |
| Projected Salary Increases [1] | 3.50% - 11.50% | 3.50% - 12.00% | 4.00% |
| Cost of Living Adjustment | None | None | None |

*(1) Salary increases and investment rate of return include an inflation component of 2.75 percent.*

# OTHER SUPPLEMENTARY INFORMATION

## SCHEDULE OF CONTRIBUTIONS

Pension Plan

*Fiscal Year Ended June 30, 2021*

| | | | |
|---|---|---|---|
| **Kansas Public Employees Retirement System** | | | |
| State / School Contributions | | | |
| Members | $ 301,109,944 | | |
| Employers | 707,380,542 | | |
| Total State / School Contributions | | $ 1,008,490,486 | |
| Local Contributions | | | |
| Members | 115,408,536 | | |
| Employers | 169,073,574 | | |
| Total Local Contributions | | 284,482,110 | |
| **Total Contributions KPERS** | | | $1,292,972,596 |
| **Kansas Police and Firemen's System** | | | |
| State Contributions | | | |
| Members | 3,871,712 | | |
| Employers | 11,467,276 | | |
| Total State Contributions | | 15,338,988 | |
| Local Contributions | | | |
| Members | 37,317,271 | | |
| Employers | 114,630,478 | | |
| Total Local Contributions | | 151,947,749 | |
| **Total Contributions KP&F** | | | 167,286,737 |
| **Kansas Retirement System for Judges** | | | |
| State Contributions | | | |
| Members | 1,606,510 | | |
| Employers | 5,019,371 | | |
| Total State Contributions | | 6,625,881 | |
| **Total Contributions Judges** | | | 6,625,881 |
| **Grand Total All Contributions** | | | $1,466,885,214 |

## SCHEDULE OF ADMINISTRATIVE EXPENSES

Pension Plan

*Fiscal Year Ended June 30, 2021*

| | | |
|---|---|---|
| **Salaries and Wages** | | $ 8,913,603 |
| **Professional Services** | | |
| Actuarial | $ 275,217 | |
| Audit | 126,695 | |
| Data Processing | 1,646,136 | |
| Legal | 72,986 | |
| Other Professional Services | 2,677,988 | |
| Total Professional Services | | 4,799,022 |
| **Communication** | | |
| Postage | 291,615 | |
| Printing | 31,661 | |
| Telephone | 158,277 | |
| Total Communication | | 481,553 |
| **Building Administration** | | |
| Building Management | 82,219 | |
| Janitorial Service | 85,489 | |
| Utilities | 89,064 | |
| Total Building Administration | | 256,772 |
| **Miscellaneous** | | |
| Dues and Subscriptions | 19,582 | |
| Office and Equipment Rent | 140,377 | |
| Other Miscellaneous | 703,912 | |
| Repair and Maintenance | 98,889 | |
| Supplies | 78,329 | |
| Temporary Services | 329,001 | |
| Travel | 14,981 | |
| Depreciation | 1,347,616 | |
| Total Miscellaneous | | 2,732,687 |
| **Total Administrative Expenses** | | $ 17,183,637 |

# SCHEDULE OF INVESTMENT INCOME BY ASSET CLASS

Pension Plan

*Fiscal Year Ended June 30, 2021*

| Asset Classification | Interest, Dividends and Other Transactions | Gains and Losses | Total |
|---|---|---|---|
| Marketable Equity Securities | | | |
| Domestic Equities | $ 107,131,936 | $ 2,295,252,117 | $ 2,402,384,053 |
| International Equities | 88,565,141 | 1,472,764,750 | 1,561,329,891 |
| Subtotal Marketable Equities | 195,697,077 | 3,768,016,867 | 3,963,713,944 |
| Marketable Fixed Income Securities | | | |
| Government | 32,213,762 | 136,077,829 | 168,291,591 |
| Corporate | 99,077,927 | 78,430,349 | 177,508,276 |
| Subtotal Marketable Fixed | 131,291,689 | 214,508,178 | 345,799,867 |
| Temporary Investments | 2,540,220 | (128,081,088) | (125,540,868) |
| Total Marketable Securities | 329,528,986 | 3,854,443,957 | 4,183,972,943 |
| Real Estate | 101,335,088 | 164,790,077 | 266,125,165 |
| Alternative Investments | 33,153,081 | 846,443,757 | 879,596,838 |
| Total Real Estate and Alternative Investments | 134,488,169 | 1,011,233,834 | 1,145,722,003 |
| | $ 464,017,155 | $ 4,865,677,791 | $ 5,329,694,946 |

| Manager and Custodian Fees and Expenses | |
|---|---|
| Investment Manager Fees | (26,824,111) |
| Custodian Fees & Expenses | (1,325,355) |
| Investment Legal & Consulting Expenses | (2,243,241) |
| Partnership Management Fees & Expenses | (110,898,460) |
| Investment Operations Expenses | (3,369,891) |
| Total Investment Fees and Expenses | (144,661,058) |
| **Net Investment Income** | $ 5,185,033,888 |

# SCHEDULE OF INVESTMENT MANAGEMENT FEES AND EXPENSES

## Pension Plan

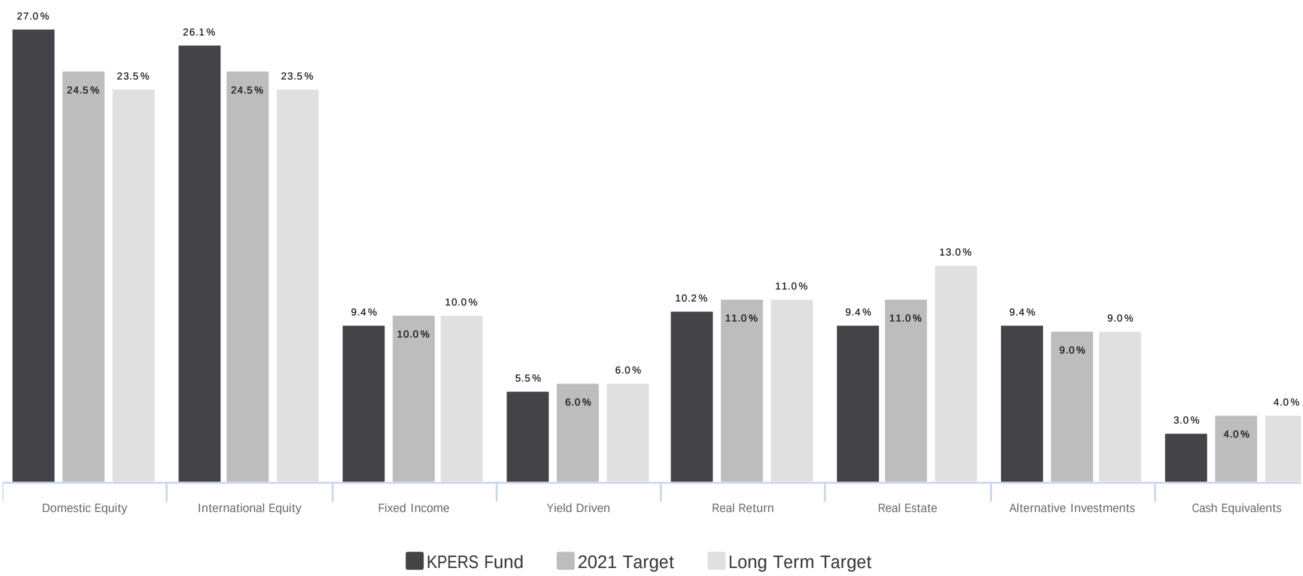
*Fiscal Year Ended June 30, 2021*

| | |
|---|---|
| **Domestic Equity Managers** | |
| BlackRock Institutional Trust Co. | $ 293,900 |
| Mellon Capital Management Corp. | 240,299 |
| Tortoise Capital Advisors LLC | 8,313 |
| **Subtotal Domestic Equity Managers** | **542,512** |
| **International Equity Managers** | |
| Baillie Gifford Overseas Limited | 4,595,750 |
| JP Morgan Investment Management | 996,289 |
| Lazard Asset Management LLC | 3,319,169 |
| State Street Global Advisors | 271,662 |
| Wellington Management Co. | 4,604,318 |
| **Subtotal International Equity Managers** | **13,787,188** |
| **Fixed Income Managers** | |
| BlackRock Institutional Trust Co. | 463,586 |
| Franklin Templeton Institutional | 1,839,932 |
| Loomis Sayles & Co. L.P. | 1,430,971 |
| MacKay Shields LLC | 116,073 |
| T Rowe Price Associates Inc. | 1,150,124 |
| Western Asset Management Co. | 1,510,426 |
| **Subtotal Fixed Income Managers** | **6,511,112** |
| **Currency Overlay and Securitization Managers** | |
| Adrian Lee & Partners | 1,724,559 |
| Insight Investment Inc. | 1,907,412 |
| Russell Investment Group | 136,255 |
| **Subtotal Currency Overlay and Securitization Managers** | **3,768,226** |
| **REIT Investment Managers** | |
| Brookfield Asset Management | 410,812 |
| CenterSquare Investment Management Inc. | 943,548 |
| **Subtotal REIT Managers** | **1,354,360** |
| **Cash Equivalent Manager** | |
| Payden & Rygel Investment Counsel | 860,713 |
| **Subtotal Cash Management** | **860,713** |
| **Total Investment Management Fees** | **26,824,111** |
| **Other Fees and Expenses** | |
| State Street Bank - Custodian Fees and Other Expenses | 1,325,355 |
| Consultant Fees | 2,055,316 |
| Legal Expenses | 187,925 |
| Investment Operations | 3,369,891 |
| Partnership Management Expenses | 110,898,460 |
| **Subtotal Other Fees and Expenses** | **117,836,947** |
| **Total** | **$ 144,661,058** |

# INVESTMENT
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 2021 were $24.9 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, timber, infrastructure, 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 2021, 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-U.S.) 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, Meketa Investment Group (MIG) and investment staff, completed an asset/liability study in January 2020. At the conclusion of the asset/liability study, the Board adopted a new set of 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 long term target asset mix is 23.5 percent domestic equity, 23.5 percent international equity, 10 percent fixed income, 6 percent yield driven assets, 11 percent real return assets, 13 percent real estate, 9 percent alternatives (private equity), and 4 percent cash equivalents. A three year implementation plan to achieve the new long term target asset mix is in progress.

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.

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 and investments in domestic Real Estate Investment Trusts (REITs).

The majority of the real return asset category is made up of Treasury Inflation Protected Securities (TIPS) and global inflation linked bonds (GILBs). These two portfolios are both managed passively. The real return asset class also houses the System's investments in infrastructure and timber assets.

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.

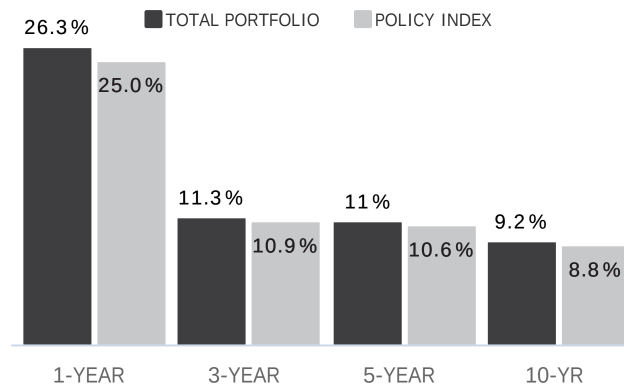
The System also holds cash equivalents investments, primarily to facilitate investment transactions and the cash flows needed to pay benefits. The cash equivalents portfolio is bifurcated, with a portion of the portfolio invested in a slightly longer duration strategy with daily liquidity, while the majority of the portfolio is invested as a STIF (short term investment fund).

**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.

TIME WEIGHTED TOTAL RETURN

*Total Portfolio*



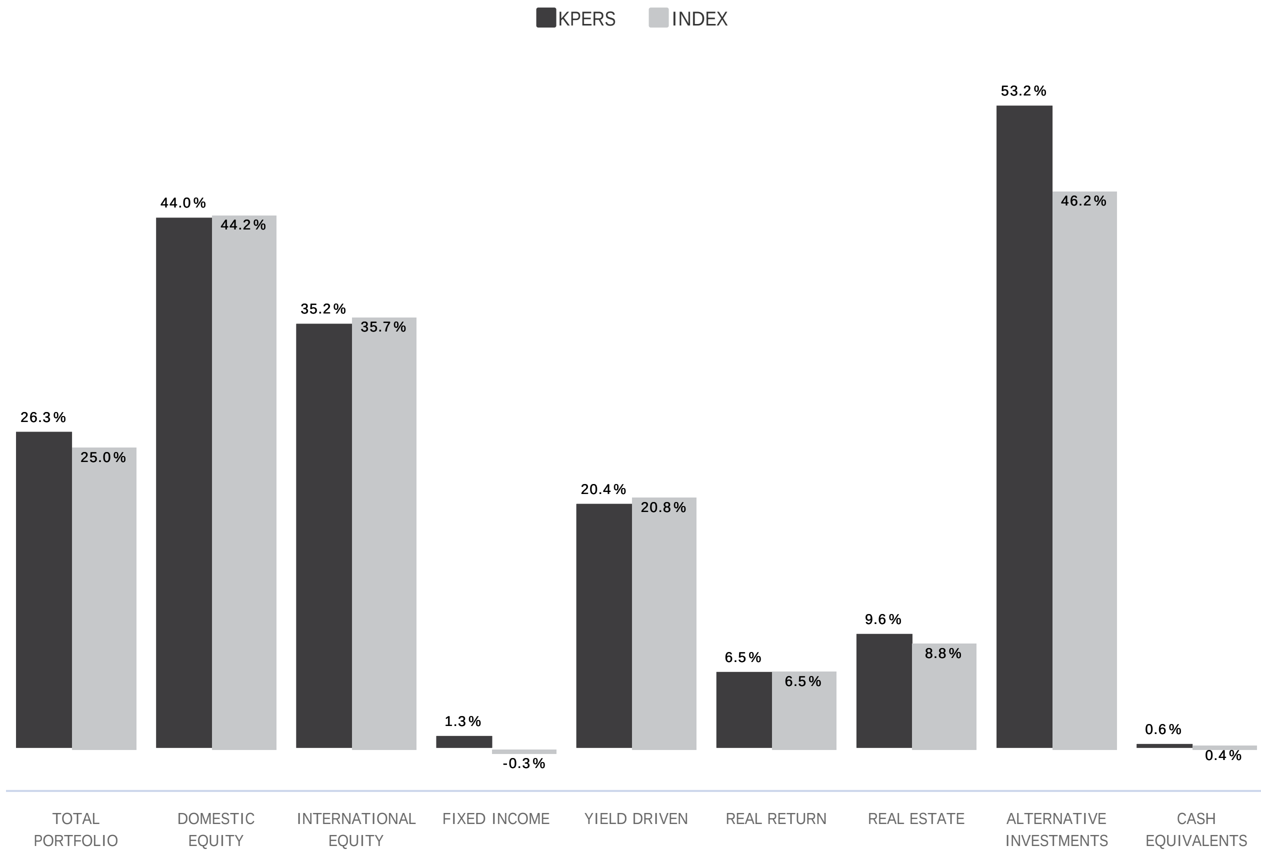

**FISCAL YEAR 2021 INVESTMENT PERFORMANCE**

The Retirement System's total investment portfolio experienced a 26.3 percent total return for the one year ending June 30, 2021. The 26.3 percent return outperformed the KPERS Policy Index by 1.3 percent for the fiscal year. For the three years ending June 30, 2021, the System's total investment portfolio has produced an average annualized return of 11.3 percent, which outperformed the Policy Index by 0.4 percent. The System's investment portfolio generated an 11.0 percent total return during the five years ending June 30, 2021, exceeding the Policy Index benchmark by 0.4 percent. For the ten-year period, total return has been 9.2 percent, and has exceeded the Policy Index by 0.4 percent. As of June 30, 2021, 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 of one year and longer except the three and five year time periods, when the System's ranking was in the 52nd and 53rd percentile, respectively.

For the 25-year period ending June 30, 2021, the System's assets have produced an average annualized total return of 8.0 percent, exceeding the current 7.75 percent actuarial return assumption. (The System's Board of Trustees took action to reduce the actuarially assumed rate of return from 8 percent to 7.75 percent in November 2016.)

TIME WEIGHTED TOTAL RETURN BY ASSET CLASS

*Fiscal Year 2021*




## FINANCIAL MARKET AND PERFORMANCE OVERVIEW

Fiscal Year 2021 was a very hospitable environment for risk assets. The second quarter of the fiscal year was particularly robust for risk assets, boosted by the optimism which was generated by the global rollout of the COVID-19 vaccine. Fixed income assets, however, suffered losses in the third quarter of Fiscal Year 2021, as interest rates rose. This was reversed in the fourth quarter, as interest rates declined, and fixed income assets produced small positive returns for the full fiscal year. Subsequently, financial market uncertainty rose again on concerns about the economic impact of the spread of the COVID-19 Delta variant globally, coupled with uncertainty about the path of Federal Reserve (and global central bank) monetary policy.

Equities, both public and private, were the standout performers in Fiscal Year 2021. For the full fiscal year, the Russell 3000 Index produced a phenomenal 44.2 percent total return, and the Russell 2000 Index produced an amazing 62.0 percent total return. US REITS also performed well in Fiscal Year 2021, producing a total return of 38.1 percent for investors.

International equities also provided strong returns, as the MSCI ACWI ex US Index provided an outstanding 35.7 percent total return. Emerging markets outperformed developed markets, with the MSCI Emerging Markets Index producing a 41.4 percent total return for the fiscal year. US dollar weakness during Fiscal Year 2021 contributed approximately 5.7 percent to the total return of the MSCI ACWI ex US Index.

Fixed income returns were negatively impacted by rising US Treasury yields during two consecutive quarters in Fiscal Year 2021. The Bloomberg Barclays Aggregate Bond Index produced a total return of negative 0.3 percent for the full fiscal year. High yield bonds benefited from demand for yield and narrowing credit spreads, and the Bloomberg Barclays US Corporate High Yield Index produced a 15.3 percent total return for the fiscal year. Rising inflation expectations benefitted inflation-linked bonds, and the Bloomberg Barclays US TIPS Index posted a 6.5 percent total return for the fiscal year. Globally, inflation-linked bonds underperformed US TIPS on a USD hedged basis, with the Bloomberg Barclays World Government Inflation-Linked Bond (Hedged) Index returning 3.3 percent for the fiscal year.

Lagged valuations benefitted the returns from private equity and real assets during the final two quarters of Fiscal Year 2021, as valuation trends became positive, supported by rising equity markets and an improved economic outlook due to the vaccine rollout. Private real estate returns, as measured by the NCREIF ODCE Index, were 3.9 percent during the fourth quarter, and 8.0 percent for the full fiscal year. Private equity returns continued their rebound in the final quarter, as the System's private equity portfolio posted a 12.4 percent total return for the quarter and an amazing 53.2 percent return for the fiscal year.

It is worth noting that the trailing one year returns as of June 30, 2021, are outsized relative to normal expectations. This is the result of an extraordinary time period, during which risk based assets rallied off the market lows experienced in the first quarter of 2020, when global economies basically shut down in response to the spreading pandemic. Returns from both public and private equity assets during Fiscal Year 2021 represent multiple years' worth of annual returns. (Conversely, total returns from core fixed income assets turned negative during Fiscal Year 2021 as interest rates rose.) While this experience does validate the wisdom of maintaining a disciplined approach and a long term commitment to risk based assets for an institutional investor like the Retirement System, returns are not sustainable at these levels. Public equity valuation measures are at historic highs and interest rates are at historic lows. Returns from the growth asset classes are expected to moderate significantly going forward.

### INVESTMENT STAFF

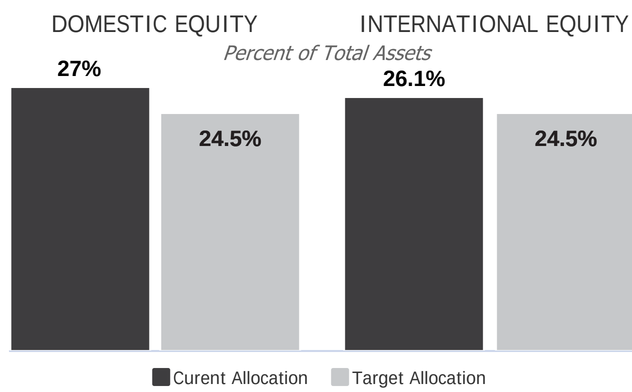
The System employs a staff of eleven investment professionals to provide oversight and management of the assets and external investment managers. Under the oversight of the Chief Investment Officer (CIO), responsibility for the portfolio is assigned to the respective investment teams. The Deputy CIO for Public Markets has oversight responsibility for the publicly-traded asset classes, and oversees the System's active international equity investment portfolios and the currency overlay strategies. The Investment Officer for Public Markets oversees the core fixed income portfolios and the yield driven investment portfolios. The Assistant Investment Officer for Public Markets has oversight responsibility for the passive domestic equity and international equity portfolios, the passive TIPS/GILB portfolios in the real return asset class, and the cash equivalents portfolios. The Deputy CIO for Private Markets and two Assistant Investment Officers for Private Markets manage the System's real estate and private equity investments, as well as the allocations to infrastructure and timber. The Chief Investment Officer and the six 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, 2021, the market value of the System's global equity portfolio was $13.2 billion. The strategy is executed through external managers investing domestically and internationally. Active strategies are utilized for approximately 43.7 percent of the public equity portfolio, focusing entirely on international equities. 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, 2021:




### DOMESTIC EQUITY

Domestic equities represent 50.8 percent of the total public equity portfolio and 27.0 percent of total assets. Domestic equity investments are benchmarked against the Russell 3000 index. It is the System's view that consistent outperformance over time through active management is extremely difficult when investing in U.S. equities. Therefore, 100 percent of the domestic equity portfolio is passively managed in an index strategy. This passive exposure is designed to replicate the return on the Russell 3000 index and is implemented through two investment managers.

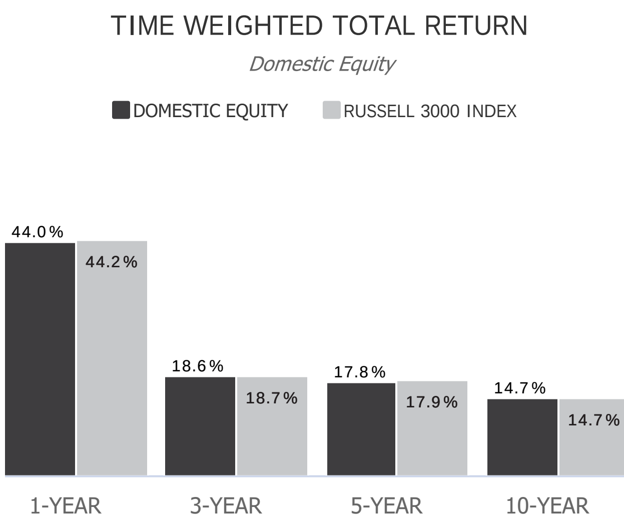
### INTERNATIONAL EQUITY

International equities represent 49.2 percent of the total public equity portfolio and 26.1 percent of total assets. International equity investments are benchmarked against the MSCI All Country World – Ex U.S. Net Index. Equity investments in companies domiciled outside of the United States offer the potential to add value through prudent active management. Therefore, 90 percent of this portfolio is actively managed. The System has retained four active managers to invest across the non-U.S. developed markets and emerging markets. The balance of the international equity portfolio is invested to replicate the return on the MSCI All Country World – Ex U.S. Net Index.

## PERFORMANCE

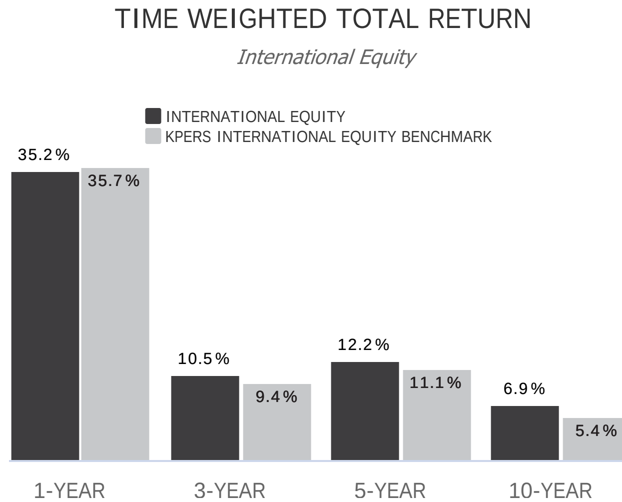
The return of the System's domestic equity portfolio was in line with the portfolio's benchmark during Fiscal Year 2021. The domestic equity portfolio produced a 44.0 percent total return during the fiscal year. Over longer time periods, the return on the domestic equity portfolio was also in line with its benchmark, as expected, given its purely passive approach.

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




The return of the international equity portfolio was positive, though below the benchmark return, during Fiscal Year 2021. The international equity portfolio produced a total return of 35.2 percent for the fiscal year, relative to the 35.7 percent return for the benchmark. Two of the System's active international equity managers outperformed the benchmark during Fiscal Year 2021, and two underperformed 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:

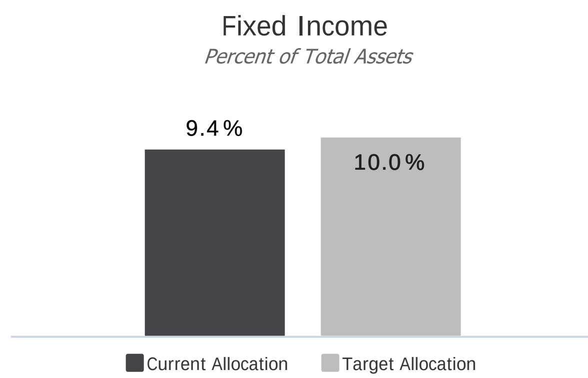



# FIXED INCOME INVESTMENTS

As of June 30, 2021, the Retirement System's fixed income portfolio had a market value of $2.3 billion, representing 9.4 percent of the total assets of the System. The portfolio is structured with external managers investing through an active core fixed income U.S. mandate. Two investment managers manage this strategy.

## PORTFOLIO STRUCTURE

The following graph describes the current and target allocations at June 30, 2021:



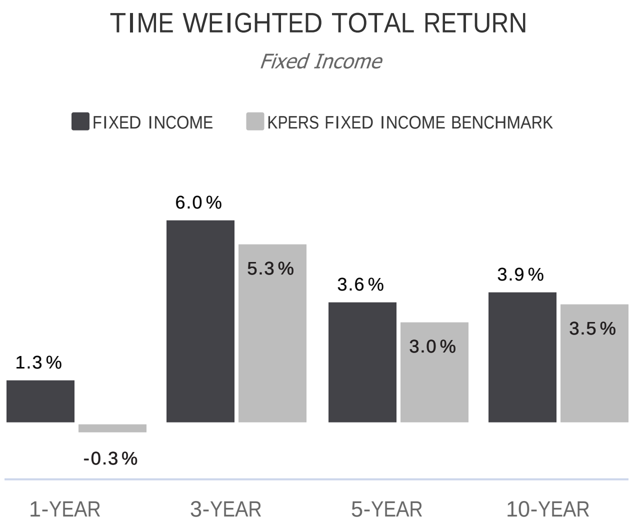

## CORE U.S. FIXED INCOME

The fixed income portfolio is invested in core U.S. 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 fixed income U.S. strategies are primarily invested in traditional investment grade securities. The fixed income portfolio utilizes the Bloomberg Barclays Capital U.S. Aggregate Index as the benchmark.

### PERFORMANCE

The core U.S. fixed income portfolio produced a total return of 1.3 percent during Fiscal Year 2021, outperforming the benchmark return of negative 0.3 percent. Both investment managers contributed positively to outperformance during the period. Over longer periods the portfolio has provided positive absolute returns that have exceeded the benchmark return.

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

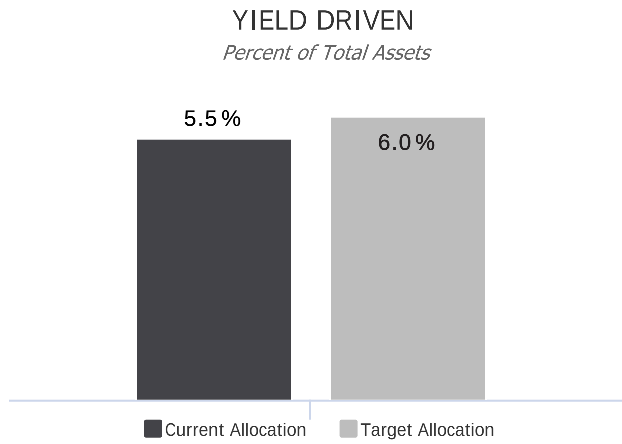



# YIELD DRIVEN INVESTMENTS

As of June 30, 2021, the System's yield driven portfolio had a market value of $1.4 billion representing 5.5 percent of total assets. The strategy is actively managed by two strategic fixed income managers and one REIT 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, 2021:




### STRATEGIC FIXED INCOME

The strategic fixed income strategy represents approximately 71.9 percent of the total yield driven portfolio and 3.9 percent of total assets. The strategy is currently measured against the Barclays U.S. High Yield 2 percent Issuer Cap Index. The strategic fixed income portfolio maintains a minimum investment of 70 percent in high yield corporate debt securities. The System's two strategic fixed income managers produced positive absolute returns, while in aggregate, underperforming the benchmark for Fiscal Year 2021.

### REAL ESTATE INVESTMENT TRUSTS (REITS)

REITs represent 28.1 percent of the yield driven asset class and 1.5 percent of the System's total assets. This strategy is benchmarked against the MSCI U.S. REIT Index. The System terminated one of its REIT managers in Fiscal Year 2021 and transitioned the portfolio to the System's other REIT manager. The System's publicly-traded real estate securities portfolio is now implemented through one manager that actively invests in domestic REITs, real estate operating companies (REOCs) and related investment vehicles. The REIT manager produced a positive total return and outperformed the benchmark for Fiscal Year 2021.

### MASTER LIMITED PARTNERSHIPS (MLPS)

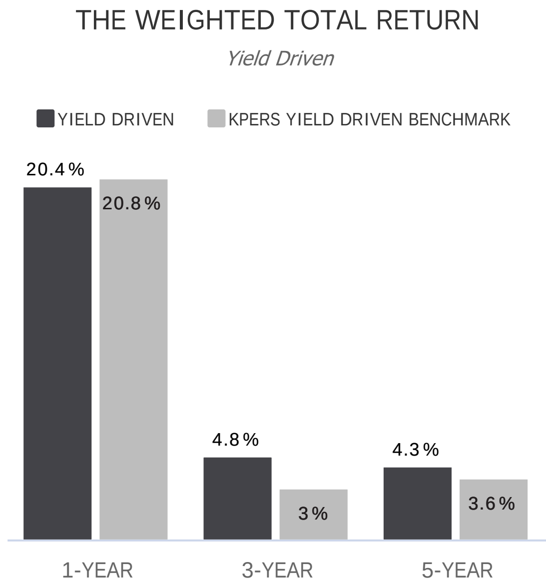
The System terminated its MLP mandate in Fiscal Year 2020 and the portfolio liquidation was completed in Fiscal Year 2021.

### BANK LOANS

The System terminated its bank loan mandate in Fiscal Year 2021 and the portfolio was largely liquidated as of fiscal year end.

### PERFORMANCE

The yield driven portfolio produced a total return of 20.4 percent in Fiscal Year 2021, slightly underperforming the asset class benchmark return of 20.8 percent. The yield driven portfolio has delivered positive returns and outperformed the asset class benchmark over longer time periods.

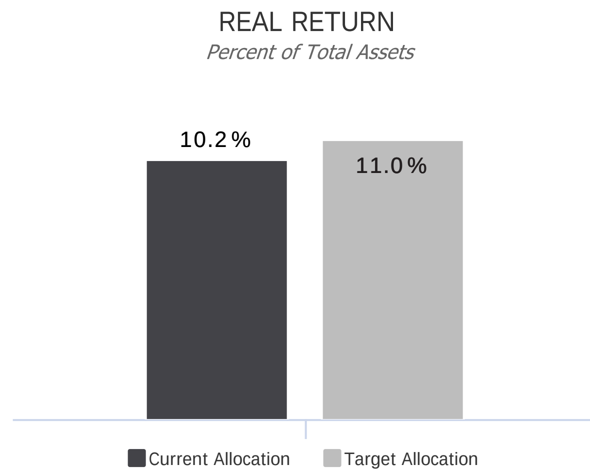



# REAL RETURN INVESTMENTS

The real return portfolio is designed to provide the System with a hedge against future inflationary episodes. This strategy utilizes both public and private market investments. Public market exposure is global and achieved primarily through inflation linked fixed income securities issued by governments and their agencies in the U.S. as well as in developed countries around the world. Exposure in the private markets is currently achieved through investments in timber and infrastructure. The real return portfolio represents 10.2 percent of the System's total assets, and had a market value of $2.5 billion as of June 30, 2021.

### PORTFOLIO STRUCTURE

The following graph describes the current and target allocations at June 30, 2021:




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

The TIPS portfolio represents 41.6 percent of the real return portfolio and is benchmarked against the Barclays U.S. TIPS Index. This passively managed exposure is designed to replicate the return on domestic inflation linked bonds. It is the System's view that the minimal excess return available through active management of TIPS is not sufficient to compensate for the incremental costs of active management fees. The TIPS portfolio performed in line with its benchmark during Fiscal Year 2021, as expected, producing a 6.6 percent total return.

### GLOBAL INFLATION LINKED BONDS (GILBS)

The GILB portfolio represents 34.9 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. This portfolio was transitioned from active management to passive management during Fiscal Year 2019. Since the transition, performance of the GILB portfolio has been in line with the benchmark, as expected. In Fiscal Year 2021, the GILB portfolio produced a 3.3 percent total return.

### TIMBER

Timber investments are a component of the System's real return asset allocation due to their historically high correlation to inflation and comprised 5.8 percent of the real return portfolio. The System is diversified within timber markets located in Idaho and throughout eight states in the southern U.S. Over time, timber investments are expected to provide the System with current cash yields and modest capital appreciation. For Fiscal Year 2021, the System's timber investments produced a 4.1

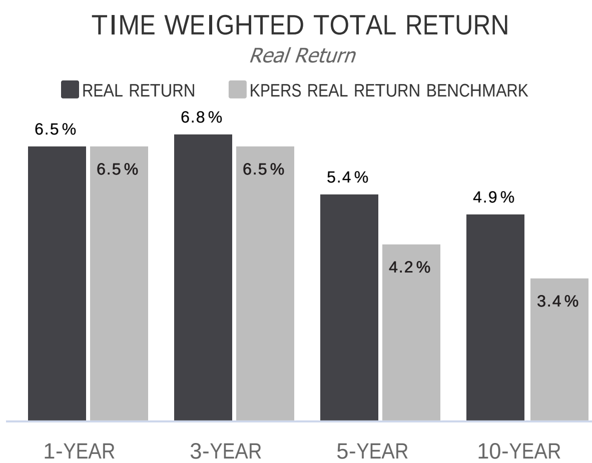
percent total return, underperforming the strategy benchmark and the real return asset class benchmark.

**INFRASTRUCTURE**

The infrastructure portfolio represents 17.7 percent of the real return portfolio. The System's four infrastructure managers have been successful in operating their infrastructure investments. The System's infrastructure portfolio is well diversified, with investments in Australia, Europe, and throughout North and South America. It is invested across multiple sectors, including renewable power, toll roads, electric utilities, airports, seaports and energy. The infrastructure portfolio produced a total return of 13.5 percent for the fiscal year, outperforming the strategy benchmark by 2.6 percent.

**PERFORMANCE**

The System's real return portfolio matched its benchmark in Fiscal Year 2021, producing a 6.5 percent total return against a benchmark return of 6.5 percent. Infrastructure was the strongest performing investment strategy in the asset class. The real return portfolio has outperformed its benchmark over the three, five, and ten year time periods ending June 30, 2021.

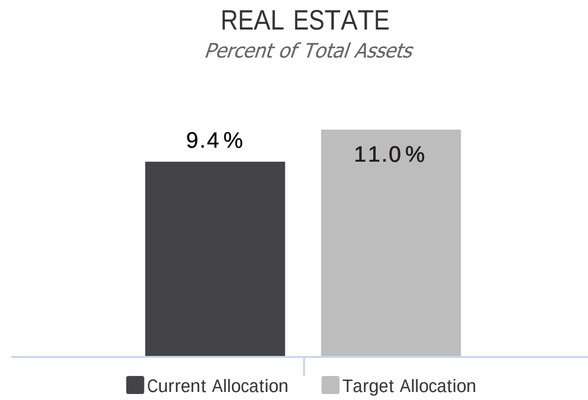



# REAL ESTATE INVESTMENTS

As of June 30, 2021, the real estate portfolio had a market value of $2.3 billion, representing 9.4 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 "non-core." The "core" portion of the portfolio is targeted at a 75 percent allocation, while the "non-core" segment is targeted at a 25 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. The Retirement System's core portfolio primarily consists of partial and full commitments to eight commingled funds.

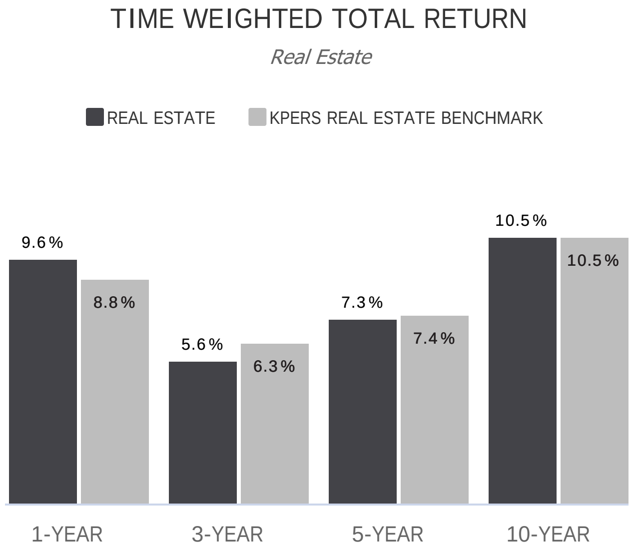
The System continued to invest into pooled real estate investment funds during Fiscal Year 2021.This strategy is expected to result in improved liquidity, enhanced portfolio diversification, lower management fees and a reduction in the single event risk associated with owning individual real estate assets.

**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.

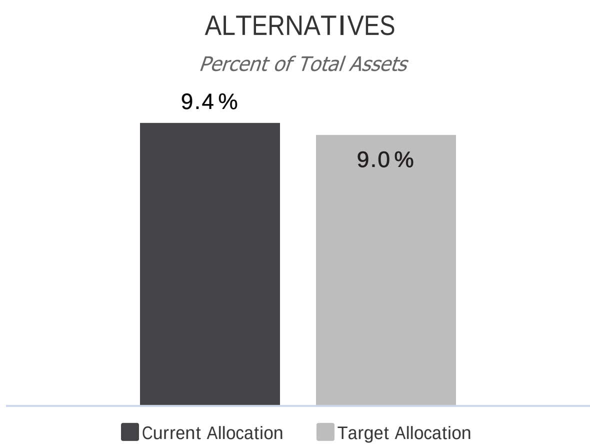
**REAL ESTATE PERFORMANCE**

The System's real estate portfolio outperformed its benchmark in Fiscal Year 2021.The core real estate portfolio produced a total return of 6.4 percent, underperforming the strategy benchmark by 1.6 percent, while the non-core real estate portfolio outperformed its benchmark by 9.0 percent, with a total return of 20.0 percent. In total, the System's real estate portfolio produced a total return of 9.6 percent, which outperformed the benchmark return by 0.8 percent. Overall, most of the System's real estate fund investments continued to benefit from an improving economic landscape, with the majority generating positive returns. Longer term results from the real estate asset class produced a 10.5 percent total return for the trailing ten years, matching the asset class benchmark.




# ALTERNATIVE INVESTMENTS

As of June 30, 2021, the System's alternative investment portfolio had a fair market value of $2.3 billion, representing 9.4 percent of the total portfolio. Since the inception of the alternative investment program in 1997 through June 30, 2021, the System has committed $4.5 billion to 125 funds with 59 general partners.




### PORTFOLIO STRUCTURE

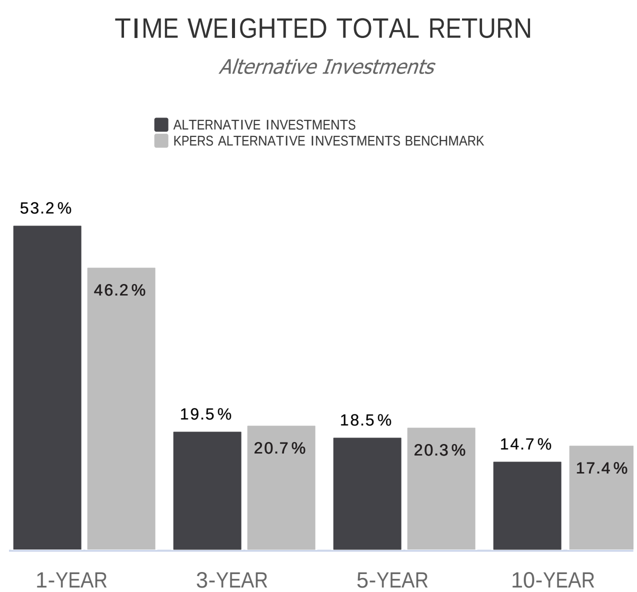
The alternative investment portfolio consists primarily of interests in private partnerships that provide equity and debt to companies. The portfolio contains two primary sub-portfolios based on investment period. Each portfolio has its own set of directives, guidelines, external fund managers and consultants who provide advice on investment strategy and investment selection during its investment period. The largest portfolio is the Private Equity Program (PEP), representing 99.8 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 $3.5 billion to 71 funds with 28 general partners.

The second portfolio is the Alternative Investment Portfolio (AIP) which represents 0.2 percent of the market value of the asset class. From 1997 to 2001, AIP made commitments to 54 funds with 35 general partners across five styles: buyout, venture capital, mezzanine, distressed debt and natural resources. As this is a mature portfolio, the remaining funds in the AIP portfolio are currently pursuing exit strategies for their existing holdings.

### ALTERNATIVE INVESTMENTS PERFORMANCE

The System's alternative investments portfolio outperformed its benchmark in Fiscal Year 2021, producing a 53.2 percent total return against a benchmark return of 46.2 percent.

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 current long-term performance objective for alternative investments is to exceed the return of the Russell 3000 plus 2 percent. As the chart below shows, the alternative investments portfolio is underperforming this objective over the ten year time period, with a total return of 14.7 percent, due to exceptionally strong performance from the publicly-traded domestic equity benchmark in recent years.




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 two pages.

## ALTERNATIVE INVESTMENTS INITIATED ON OR AFTER JULY 1, 1991 (1)

*As of June 30, 2021*

| Description | Cost | Net Asset Value |
|---|---|---|
| Apax Europe IX, L.P. | $ 57,243,475 | $ 119,595,700 |
| Apax Europe X, L.P. | 6,243,959 | 11,359,721 |
| Apollo Investment Fund VII, L.P. | 5,754,147 | 1,924,014 |
| Apollo Investment Fund VIII, L.P. | 33,343,064 | 38,939,897 |
| Apollo Investment Fund IX, L.P. | 25,349,357 | 32,627,158 |
| Ares Corporate Opportunities Fund III, L.P. | 3,369,920 | 1,373,559 |
| Ares Corporate Opportunities Fund IV, L.P. | 11,204,414 | 14,053,114 |
| Ares Corporate Opportunities Fund V, L.P. | 58,902,996 | 65,098,236 |
| Ares Corporate Opportunities Fund VI, L.P. | 13,497,138 | 14,583,833 |
| Ares Special Situations Fund IV, L.P. | 47,686,469 | 40,988,809 |
| Audax Mezzanine Fund III, L.P. | 3,356,501 | 2,120,382 |
| Beacon Group Energy Fund II, L.P. | 1,841,499 | 463,614 |
| Capital Resource Partners IV, L.P. | 1 | - |
| CCMP Capital Investors III, L.P. | 27,507,592 | 45,704,662 |
| Centerbridge Capital Partners II, L.P. | 16,065,005 | 4,399,996 |
| Centerbridge Capital Partners III, L.P. | 22,810,477 | 34,600,004 |
| Clayton Dublier & Rice VI, L.P. | 2,998,283 | 9,409 |
| Consolidated Storage Company, Inc. | 34,155 | 34,155 |
| Crestview Partners III, L.P. | 30,272,227 | 41,105,235 |
| Cypress Merchant Banking II, L.P. | 6,889,672 | 8,502 |
| Encap Energy Capital VIII, L.P. | 16,625,162 | 7,580,525 |
| Encap Energy Capital IX, L.P. | 31,047,073 | 20,873,568 |
| Encap Energy Capital X, L.P. | 40,553,155 | 43,911,930 |
| First Reserve Fund XII, L.P. | 17,441,246 | 1,383,562 |
| FS Equity Partners VII, L.P. | 36,940,050 | 44,800,412 |
| FS Equity Partners VIII, L.P. | 28,128,374 | 31,688,357 |
| Green Equity Investors VII, L.P. | 54,158,214 | 98,855,909 |
| Green Equity Investors VIII, L.P. | 20,338,855 | 19,896,282 |
| GSO Capital Solutions Fund, L.P. | 6,654,891 | 224,044 |
| GSO Capital Solutions Fund II, L.P. | 14,379,320 | 6,495,498 |
| GSO Capital Solutions Fund III, L.P. | 15,850,395 | 13,584,169 |
| Halpern Denny Fund III, L.P. | 1 | - |
| HD Access, Inc. | 180,137 | 105,395 |
| Hellman & Friedman VII, L.P. | 920,842 | 6,751,096 |
| Hellman & Friedman VIII, L.P. | 34,511,471 | 63,757,078 |
| Hellman & Friedman IX, L.P. | 48,861,889 | 59,097,917 |
| JMI Equity Fund VII, L.P. | 3,462,412 | 1,081,862 |
| JMI Equity Fund X, L.P. | - | 1,603,617 |
| Montagu IV, L.P. | 3,381,254 | 6,284,951 |
| Montagu V, L.P. | 52,691,116 | 87,584,888 |
| Montagu VI, L.P. | 4,172,899 | 3,363,472 |

## ALTERNATIVE INVESTMENTS INITIATED ON OR AFTER JULY 1, 1991 (1) (CONTINUED)

*As of June 30, 2021*

| Description | Cost | Net Asset Value |
|---|---|---|
| New Enterprise Associates 13, L.P. | 4,730,968 | 5,204,557 |
| New Enterprise Associates 16, L.P. | 41,610,227 | 69,361,793 |
| New Enterprise Associates 17, L.P. | 23,518,377 | 34,140,899 |
| New Mountain Partners V, L.P. | 42,944,578 | 86,144,719 |
| New Mountain Partners VI, L.P. | 4,298,203 | 4,617,779 |
| OCM Opportunities Fund VIIb, L.P. | - | 19,445 |
| OneLiberty Fund IV, L.P. | 1,155,056 | 699,012 |
| OneLiberty Ventures 2000, L.P. | 11,708,757 | 2,547,357 |
| Pine Brook Capital Partners, L.P. | 7,735,518 | 1,220,278 |
| Pine Brook Capital Partners II, L.P. | 45,923,261 | 57,236,594 |
| Platinum Equity Capital Partners III, L.P. | 11,319,989 | 12,739,301 |
| Platinum Equity Capital Partners IV, L.P. | 53,997,875 | 81,861,534 |
| Platinum Equity Capital Partners V, L.P. | 15,410,431 | 17,194,574 |
| Quad-C Partners IX, L.P. | 31,193,395 | 37,718,523 |
| Snow Phipps II, L.P. | 12,616,430 | 13,898,007 |
| Snow Phipps III, L.P. | 29,142,574 | 41,336,759 |
| TA XII, L.P. | 49,936,672 | 93,820,220 |
| TA XIII, L.P. | 30,816,341 | 39,332,776 |
| TowerBrook Investors III, L.P. | 3,982,077 | 118,658 |
| TowerBrook Investors IV, L.P. | 17,475,796 | 40,567,177 |
| TowerBrook Investors V, L.P. | 14,712,674 | 15,347,938 |
| TPG Growth II, L.P. | 3,408,224 | 1,114,731 |
| TPG Growth III, L.P. | 31,428,965 | 45,955,590 |
| TPG Growth IV, L.P. | 30,707,830 | 44,809,940 |
| TPG Partners VI, L.P. | 8,517,738 | 2,309,423 |
| TPG Partners VII, L.P. | 49,317,742 | 82,828,852 |
| TPG Partners VIII, L.P. | 14,311,574 | 17,776,234 |
| VantagePoint Venture Partners IV, L.P. | 7,889,584 | 251,039 |
| Vestar Capital Partners IV, L.P. | 1,373,358 | 168,810 |
| Vista Equity Partners Fund IV, L.P. | 9,300,598 | 19,105,270 |
| Vista Equity Partners Fund V, L.P. | 49,056,842 | 96,443,348 |
| Vista Equity Partners Fund VI, L.P. | 64,062,202 | 108,584,151 |
| Vista Equity Partners Fund VII L.P. | 44,489,165 | 50,075,002 |
| Warburg Pincus Equity Partners, L.P. | - | 78,581 |
| Warburg Pincus Global Growth, L.P. | 47,617,232 | 54,227,933 |
| Warburg Pincus Private Equity X, L.P. | 1,674,557 | 549,491 |
| Warburg Pincus Private Equity XI, L.P. | 16,072,959 | 28,139,732 |
| Warburg Pincus Private Equity XII, L.P. | 50,273,559 | 82,645,860 |
| Wellspring Capital Partners V, L.P. | 8,782,634 | 8,076,984 |
| Wellspring Capital Partners VI, L.P. | 48,221,201 | 61,496,980 |
| Windjammer Mezzanine & Equity Fund II, L.P. | - | 23,410 |
| | $ 1,745,404,270 | $ 2,347,703,793 |

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

## LIST OF LARGEST HOLDINGS [1]

*As of June 30, 2021*

| EQUITIES | | | FIXED INCOME | | | | |
|---|---|---|---|---|---|---|---|
| Shares | Security | Fair Value ($) | Par Value | Security | | Description | Fair Value ($) |
| 2,369,318 | Apple Inc | $324,501,793 | 92,684,000 | US Treasury N/B | 0.125% | 31 Dec 2022 | $92,604,292 |
| 1,137,118 | Microsoft Corp | 308,045,266 | 73,980,000 | US Treasury N/B | 0.125% | 30 Apr 2023 | 73,841,657 |
| 65,469 | Amazon.Com Inc | 225,223,835 | 65,100,000 | US Treasury N/B | 0.750% | 30 Apr 2026 | 64,769,292 |
| 361,138 | Facebook Inc CL A | 125,571,294 | 62,695,000 | US Treasury N/B | 0.125% | 31 Jan 2023 | 62,633,559 |
| 45,375 | Alphabet Inc CL A | 110,796,221 | 57,395,000 | US Treasury N/B | 2.375% | 15 May 2051 | 61,278,346 |
| 42,795 | Alphabet Inc CL C | 107,257,964 | 53,567,833 | State Street TR | | STIF Fund | 53,567,833 |
| 1,195,181 | Rio Tinto Plc | 98,222,927 | 50,385,000 | US Treasury N/B | 1.250% | 30 Apr 2028 | 50,542,705 |
| 4,566,883 | Taiwan Semiconductor Mfg | 97,525,182 | 40,000,000 | US Treasury N/B | 0.125% | 31 Aug 2022 | 40,001,600 |
| 1,274,559 | Tencent Holdings Ltd | 95,848,163 | 40,000,000 | Citigroup Hldg Inc | 0.050% | 1 Jul 2021 | 40,000,000 |
| 726,107 | Nestle SA Reg | 90,509,059 | 39,800,000 | US Treasury N/B | 0.875% | 30 Jun 2026 | 39,781,294 |

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

## CHANGES IN FAIR VALUE OF INVESTMENTS [1]

*(In Thousands)*

*For the Fiscal Year Ended June 30, 2021*

| | June 30, 2020 Fair Value | Purchases and Other Increases | Sales and Other Decreases | June 30, 2021 Fair Value | Asset Mix Fair Value |
|---|---|---|---|---|---|
| Marketable Securities | | | | | |
| Domestic Equities | $ 5,901,086 | $ 3,353,931 | $ (1,545,448) | $ 7,709,569 | 30.96% |
| International Equities | 4,345,379 | 5,291,318 | (3,898,890) | 5,737,807 | 23.04 |
| Total Fixed | 5,566,727 | 7,446,437 | (7,182,402) | 5,830,762 | 23.41 |
| Temporary [2] Investments | 343,107 | 23,453,392 | (23,444,215) | 352,284 | 1.41 |
| Total Marketable Securities | 16,156,299 | 39,545,078 | (36,070,955) | 19,630,422 | 78.82 |
| Real Estate and Alternative Investments | | | | | |
| Real Estate | 2,490,120 | 436,460 | (24) | 2,926,556 | 11.75 |
| Alternatives | 1,596,879 | 768,560 | (17,735) | 2,347,704 | 9.43 |
| Total Real Estate and Alternative Investments | 4,086,999 | 1,205,020 | (17,759) | 5,274,260 | 21.18 |
| Total | $ 20,243,298 | $ 40,750,098 | $ (36,088,714) | $ 24,904,682 | 100.00% |

*(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 Ended June 30, 2021*

| Broker Name | Comissions Paid | Shares | Comissions per Share | Percent of Total Comissions |
|---|---|---|---|---|
| Bank of America Securities, Inc | $ 58,027 | $ 6,264,319 | 0.01 | 13.4% |
| Liquidnet, Inc | 48,964 | 2,901,190 | 0.02 | 11.3 |
| JP Morgan Securities, LLC | 44,738 | 1,493,188 | 0.03 | 10.3 |
| Morgan Stanley Co., Inc | 36,599 | 1,172,110 | 0.03 | 8.4 |
| Barclays Capital | 34,566 | 3,616,715 | 0.01 | 8.0 |
| Citigroup Global Markets, Inc | 32,680 | 960,409 | 0.03 | 7.5 |
| Wells Fargo Securities, LLC | 28,800 | 1,448,088 | 0.02 | 6.6 |
| Instinet, LLC | 16,558 | 1,529,511 | 0.01 | 3.8 |
| Raymond James & Associates | 16,460 | 696,584 | 0.02 | 3.7 |
| Jefferies & Co., Inc | 14,578 | 1,103,162 | 0.01 | 3.4 |
| Pershing LLC | 14,354 | 1,750,116 | 0.01 | 3.3 |
| Other | 88,223 | 9,180,189 | 0.01 | 20.3 |
| **Total Broker Comissions** | **$ 434,547** | **$ 32,115,581** | | **100.0%** |

# ACTUARIAL
SECTION

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

November 3, 2021

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, 2020 for the purpose of determining contribution rates for Fiscal Year 2024 for the State and Schools (July 1, 2023 to June 30, 2024) and Fiscal Year 2023 for Local employers (calendar year 2023). The major findings of the valuation are contained in the valuation report, which reflects the plan provisions in place on December 31, 2020 and any legislative changes from the 2021 Session. Several bills impacting KPERS were passed by the 2021 Legislature and signed by the Governor. There were two changes to the benefit provisions for the Kansas Police and Firemen's Retirement System. Under prior law, there was no difference in the benefit structure for service-connected and non-service-connected disability benefits. House Bill 2063 provides a different survivor benefit for disabled members who pass away prior to retirement eligibility due to service-connected causes. House Bill 2064 allows Kansas Highway Patrol and Kansas Bureau of Investigation members who initially elect to participate in the Deferred Retirement Option Program (DROP) for less than the maximum five year period to extend their DROP period up to the maximum of five years. House Bill 2405 authorizes the State of Kansas to issue bonds with net proceeds of $500 million to fund a portion of the School unfunded actuarial liability, assuming certain criteria are met. As a result, the State/School contribution rates for Fiscal Year 2022 and Fiscal Year 2023 were recertified in Senate Bill 159. These changes and their impact on the valuation results are discussed in further detail in the Executive Summary of the December 31, 2020 valuation report. Finally, House Bill 2243 changed the timing for the actuarial experience study from every three years to four years. It also gives the KPERS Board of Trustees discretion to vary the timing of the experience study from three to five years, as they deem appropriate from a fiduciary standpoint. This change had no impact on the valuation results.

The last experience study was completed during 2019 and the KPERS Board adopted a new set of actuarial assumptions at their January 17, 2020 meeting. All of the recommended changes to the demographic assumptions were adopted, but the recommended economic assumptions were not adopted. The economic assumptions used in the December 31, 2018 valuation remain in place. Based on the data presented in the experience study report, it is our professional opinion that the set of economic assumptions used in the December 31, 2020 valuation does not represent reasonable expectations of future experience and, therefore, is not compliant with Actuarial Standard of Practice Number 27.

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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 certify that all costs, liabilities, 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 with the exception of the set of economic assumptions. Nevertheless, the emerging costs of the System will vary from those presented herein 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 the set of assumptions in Appendix C of our valuation report.

In order to prepare the results in the December 31, 2020 actuarial valuation report, we have utilized appropriate actuarial models that were developed for that purpose. These models use assumptions about future contingent events along with recognized actuarial approaches to develop the needed results. Future actuarial measurements may differ significantly from the current measurements presented in the December 31, 2020 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 a thorough analysis of the potential range of future measurements.

Actuarial computations presented in this section are for purposes of determining the actuarial recommended and statutory funding amounts for the System and 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, 2020 valuation report. Accordingly, additional determinations may be needed for other purposes.

Based upon the December 31, 2020 valuation results, annual projection forecasting and the presumption that future contributions will be made at the full actuarial contribution rate, it is our opinion that the current funding policy will systematically accumulate assets sufficient to fund all future benefits, if all of the current actuarial assumptions are met.

The actuary prepared the following supporting schedules for the Annual Comprehensive 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, 2020, were also prepared as of June 30, 2021 for purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standard Number 67 (GASB 67). KPERS' State/School, Local and Kansas Police and Fire plans are cost-sharing multiple employer plans while the Judges plan is a single employer plan. The assumptions used in the funding valuation were also used for GASB 67 reporting, with the exception of the 7.25 percent discount rate used for GASB 67 calculations (7.75 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, 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 from the valuation date of December 31, 2020 to June 30, 2021, based on standard actuarial formulae. Additional information related to GASB 67 can be found in the Financial Section.

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, 2020 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 Beckham

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

Brent A. Banister

Brent A. Banister, Ph.D., FSA, EA, FCA, MAAA
Chief 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, 2020 actuarial valuations for each of the groups is presented in the following pages.

The primary purposes of performing actuarial valuations are to:

- determine the employer contribution rates required to fund each group on an actuarial basis,
- determine the statutory employer contribution rates for each group,
- disclose asset and liability measures as of the valuation date,
- evaluate and disclose key risks to funding the System pursuant to Actuarial Standard of Practice Number 51,
- compare the actual experience since the last valuation date to that expected, and
- analyze and report on trends in contributions, assets, and liabilities over the past several years.

There were several bills passed by the 2021 Legislature and signed into law by the Governor that impact KPERS including:

1. House Bill 2405 (HB 2405) provided for net proceeds of up to $500 million from bonds issued by the State of Kansas to be deposited into the KPERS trust fund for the School group, subject to certain criteria. The bonds had to be issued at an interest rate no greater than 4.3 percent and approved by the State Finance Council (approval received on June 24, 2021). Due to the passage of HB 2405, Senate Bill 159, which was the 2021 legislative session's omnibus budget bill, included a provision to reduce the previously certified State/School employer contribution rate from 14.09 percent to 13.33 percent for Fiscal Year 2022 and from 13.86 percent to 13.11 percent for Fiscal Year 2023. The bonds were issued in August and the proceeds of $500 million were received by KPERS on August 26, 2021. The proceeds are reflected in the calculation of the projected unfunded actuarial liability as of July 1, 2023 and the corresponding UAL contribution rate.
2. Under prior law, there was no difference in the KP&F benefit structure for service-connected and non-service-connected disability benefits. If a KPERS 2 disabled member died prior to reaching their earliest retirement age, the death benefit was a lump sum benefit equal to 50 percent of the member's final average salary and a monthly benefit of 50 percent of the member's disability benefit. Under House Bill 2063, a different benefit for disabled members who pass away prior to retirement eligibility is provided if the disability was service-connected:
   - A monthly benefit of 50 percent of the member's final average salary at disability plus 10 percent for each dependent child up to a 75 percent maximum; or
   - If there are no dependent children, the retirement benefit the member would have received if the member had retired on the date of death.

   This change increased the KP&F unfunded actuarial liability by about $100,000 and increased the KP&F contribution rate by 0.04 percent of payroll.
3. House Bill 2064 allows Kansas Highway Patrol and Kansas Bureau of Investigation members who initially elect to participate in the Deferred Retirement Option Program (DROP) for less than the maximum five years to later extend their DROP period up to the maximum of five years. This change, which potentially impacts future DROP election periods, did not impact the December 31, 2020 valuation results. If such elections occur in the future, they will be reflected in the next valuation.
4. House Bill 2243 changed the timing for the actuarial experience study from every three years to four years. It also gives the KPERS Board of Trustees discretion to vary the timing of the experience study from three to five years, as they deem appropriate from a fiduciary standpoint. This change in House Bill 2243 had no impact on the December 31, 2020 valuation.

### Experience Impacting the December 31, 2020 Valuation

The valuation results provide a "snapshot" view of the System's financial condition on December 31, 2020. The net change in the unfunded actuarial liability for the total System was a decrease of $519 million due to multiple factors including:

- The net rate of return on the market value of assets in 2020 was 11.1 percent, as reported by KPERS. However, due to the use of an asset smoothing method, the net rate of return on the actuarial value of assets for 2020 was 9.3 percent, which was higher than the assumed return of 7.75 percent. As a result of the favorable investment experience during 2020, the net deferred investment gain of $568 million in the prior valuation increased to $930 million in the current valuation (about 4 percent of market value).
- Liability experience for calendar year varied by group. State/School and Judges had a net liability gain (lower liabilities than expected) while the experience of the Local group and KP&F reflected a net actuarial loss (higher liabilities than expected). In aggregate, the valuation results reflect a net liability loss of $42 million for the year, about 0.13 percent of the actuarial

liability. The largest component of the liability loss was higher salaries than expected.

- KPERS 3 (Cash Balance members) refers to non-correction members who either began their participation or were rehired on or after January 1, 2015. KPERS 3 members receive guaranteed interest credits of 4.0 percent on their account balances, but additional interest credits may be granted depending on actual investment returns. 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 prior four calendar years on the market value of assets, that is above 6.0 percent. The dividend for 2020 was dependent on the net rate of return on the market value of assets for calendar years 2016 through 2020. The average annualized net return for the five-year period was 9.3 percent so the statutory formula provided for a dividend of 2.475 percent for 2020. Dividend credits are expected to be paid periodically so they are included in the assumed total interest crediting rate of 6.25 percent. Because the 2020 dividend was greater than the assumption of 2.25 percent, it created a small actuarial loss that was part of the net liability experience.
- Employer contributions for the State/School group during calendar year 2020 were $8 million less than the full actuarial contribution rate. For the first time since 1994, the State/School statutory contribution rate for Fiscal Year 2021 was equal to the full actuarial employer contribution rate. However, since the Fiscal Year for the State/School group begins July 1, employer contributions for calendar year 2020 were still slightly less than the full actuarial contribution amount due to the difference in the statutory and actuarial rate from January 1, 2020 to June 30, 2020. After many years of actual employer contributions substantially below the actuarial contributions, this is a key factor in improving the System's funding.

As a result of all experience in 2020, the unfunded liability decreased by $519 million from $9.007 billion to $8.488 billion. A detailed analysis of the components of the change in the unfunded actuarial liability from December 31, 2019, to December 31, 2020, can be found on page 75.

In KPERS, the State, School and Local employer contribution rates certified by the Board may not increase over the prior year by more than the statutory cap. The statutory cap has changed over time, but the current cap is 1.20 percent for Fiscal Year 2024 (the rate set based on the December 31, 2020 actuarial valuation). Also, while separate valuations are performed for the State and School groups, the statutory contribution rate for the two groups is determined using their combined valuation results. Due to the statutory cap, the employer contribution rate was below the actuarial contribution for many years. However, the statutory State/School employer contribution rate has been equal to the actuarial required contribution rate since the December 31, 2017 valuation (Fiscal Year 2021 contribution rates). By statute, 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 in this valuation), 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. The December 31, 2020 actuarial valuation is used to set the employer contribution rate for Fiscal Year 2024 for the State/School, State KP&F and Judges groups and calendar year 2023 for the Local and Local KP&F groups.

| | December 31, 2020 Valuation | | |
|---|---|---|---|
| System | Actuarial | Statutory | Difference |
| State[1] | 9.38% | 12.57% | (3.19%) |
| School[1] | 13.38% | 12.57% | 0.81% |
| State/School[1] | 12.57% | 12.57% | 0.00% |
| Local[1] | 8.43% | 8.43% | 0.00% |
| Police & Fire - Uniform Rates[2] | 22.86% | 22.86% | 0.00% |
| Judges | 16.48% | 16.48% | 0.00% |

| | December 31, 2019 Valuation | | |
|---|---|---|---|
| System | Actuarial | Statutory | Difference |
| State[1] | 10.08% | 13.11% | (3.03%) |
| School[1] | 13.88% | 13.11% | 0.77% |
| State/School[1] | 13.11% | 13.11% | 0.00% |
| Local[1] | 8.90% | 8.90% | 0.00% |
| Police & Fire - Uniform Rates[2] | 22.99% | 22.99% | 0.00% |
| Judges | 17.77% | 17.77% | 0.00% |

(1) By statute, rates are allowed to increase by a maximum of 1.2 percent, plus the cost of any benefit enhancements. The December 31, 2020 valuation sets the employer contribution rate for Fiscal Year 2024 for the State and School group and calendar year 2023 for the Local group. An additional contribution of 0.60 percent applies to the School group in Fiscal Year 2024 due to contribution reductions in Fiscal Year 2017 and Fiscal Year 2019.

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

Based on the results of this valuation, the statutory contribution rates for the State, State/School and Local groups continue to be at the actuarial required contribution rate. Due to the statutory cap for the KPERS group, the statutory contribution rate for the State/School group was less than the actuarial required contribution rate (ARC) for more than 20 years. In the December 31, 2017 actuarial valuation (which set the Fiscal Year 2021 contribution rates), the State/School group reached the ARC date (statutory contribution rate equal to the actuarial contribution rate) at a contribution rate of 14.23 percent. The two contribution rates have continued to be equal since that time. This is an important milestone for the State/School group and will serve to reduce the unfunded actuarial liability and improve the funded ratio of the State/School group in the future.

Legislation passed in the 2017 session provided for the payment of the delayed contributions for the School group from Fiscal Year 2017 and Fiscal Year 2019 in level annual installments over 20-year periods commencing in Fiscal Year 2018 and Fiscal Year 2020, respectively. These installment payments are determined as an additional contribution rate for the School group and are added to the regular statutory contribution rate determined for the State/School group. The additional annual contribution for the $64 million delayed School contributions from Fiscal Year 2017 is $6.4 million which is 0.16 percent for Fiscal Year 2022, 0.15 percent for Fiscal Year 2023, and 0.15 percent for Fiscal Year 2024. The additional annual contribution for the scheduled $194 million delayed School contributions from Fiscal Year 2019 is $19.4 million which is 0.48 percent for Fiscal Year 2022, 0.46 percent for Fiscal Year 2023 and 0.45 percent for Fiscal Year 2024. The total statutory contribution rates for the School group for Fiscal Year 2022 through Fiscal Year 2024 are shown in the following table:

| System | Fiscal Year 2022 | Fiscal Year 2023 | Fiscal Year 2024 |
|---|---|---|---|
| Regular Statutory State/School Contribution Rate | 13.33% | 13.11% | 12.57% |
| Contribution for Fiscal Year 2017 Contribution Reduction | 0.16% | 0.15% | 0.15% |
| Contribution for Fiscal Year 2019 Contribution Reduction | 0.48% | 0.46% | 0.45% |
| Total School Contribution Rate | 13.97% | 13.72% | 13.17% |

As noted in the Certification Letter, in Cavanaugh Macdonald Consulting (CMC) professional judgement, the set of economic assumptions used in this valuation is not reasonable, as defined in Actuarial Standard of Practice Number 27. Furthermore, the shortfall between the expected return for the KPERS' portfolio and the current assumption of 7.75 percent has increased since the experience study was performed. Further discussion with the Board is recommended before the next valuation is completed in 2022.

The economic assumptions, and the investment return assumption, in particular, have a powerful impact on the liabilities and costs of the System. Therefore, it is important for the Board and other interested parties to be aware of the potential impact of using a different set of economic assumptions. The following table illustrates the impact of a different set of economic assumptions on the valuation results. For purposes of this illustration, the set of economic assumptions includes an investment return assumption of 7.00 percent, an inflation assumption of 2.50 percent, a general wage inflation assumption of 3.00 percent and a payroll growth assumption of 2.50 percent. These assumptions are generally reflective of economic assumptions used by other large public retirement systems. While we believe this set of economic assumptions would comply with Actuarial Standards of Practice 27, it is only being used for illustrative purposes. Our ultimate recommendation regarding the appropriate set of economic assumptions for KPERS will be dependent on the data and analysis performed when a full review of the current economic assumptions is performed.

| | Unfunded Actuarial Liability ($ Millions) | | Funded Ratio | | Employer Contribution Rate | |
|---|---|---|---|---|---|---|
| | Current | Alternative | Current | Alternative | Current | Alternative |
| State/School | $6,143 | $7,684 | 71% | 66% | 12.57% | 15.74% |
| Local | $1,417 | $1,857 | 76% | 71% | 8.43% | 10.82% |
| KPF | $917 | $1,205 | 75% | 70% | 22.86% | 28.19% |
| Judges | $6.5 | $19.1 | 97% | 91% | 16.48% | 23.06% |

Note: increase in UAL from different assumptions is amortized over 25 years.

# EXPERIENCE - ALL SYSTEMS COMBINED

### December 31, 2019 – December 31, 2020

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, 2020. 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 membership, assets and liabilities impacted the change in the actuarial contribution rates between the December 31, 2019 and December 31, 2020 actuarial valuations. On the following pages, each component is examined.

### MEMBERSHIP

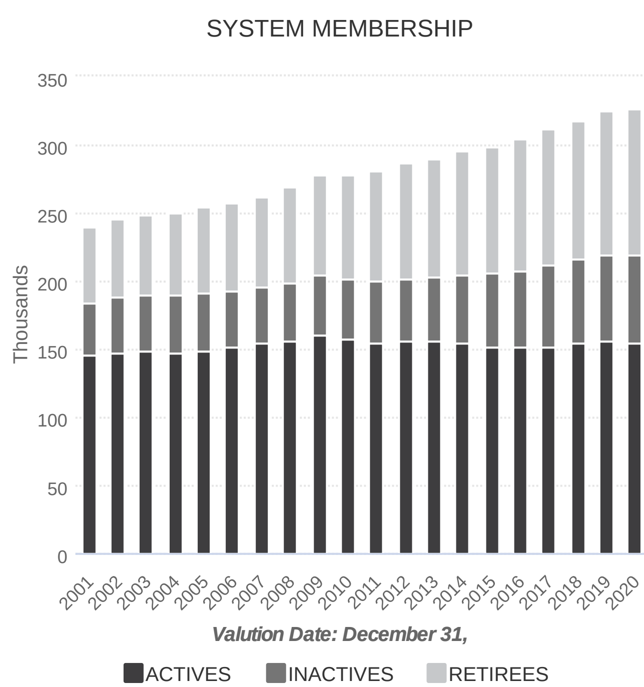
The following table contains a summary of the changes in the active membership between the December 31, 2019 and December 31, 2020 actuarial valuations.

| | State | School | Local |
|---|---|---|---|
| 12/31/2019 (Starting count) | 21,239 | 88,953 | 38,007 |
| New actives | 2,322 | 9,264 | 4,859 |
| Non-vested Terminations | (903) | (4,608) | (2,225) |
| Elected Refund | (455) | (937) | (963) |
| Vested Terminations | (499) | (2,314) | (1,139) |
| Total Withdrawals | (1,857) | (7,859) | (4,327) |
| Deaths | (65) | (112) | (60) |
| Disabilities | (29) | (51) | (28) |
| Retirements | (817) | (2,481) | (1,078) |
| Other/Transfer | 3 | (54) | 51 |
| 12/31/2020 (Ending count) | 20,796 | 87,660 | 37,424 |

| | KP&F | Judges | Total |
|---|---|---|---|
| 12/31/2019 (Starting count) | 7,797 | 257 | 156,253 |
| New actives | 734 | 14 | 17,193 |
| Non-vested Terminations | (333) | - | (8,069) |
| Elected Refund | (93) | - | (2,448) |
| Vested Terminations | (34) | - | (3,986) |
| Total Withdrawals | (460) | - | (14,503) |
| Deaths | (6) | - | (243) |
| Disabilities | (17) | - | (125) |
| Retirements | (213) | (27) | (4,616) |
| Other/Transfer | - | - | - |
| 12/31/2020 (Ending count) | 7,835 | 244 | 153,959 |

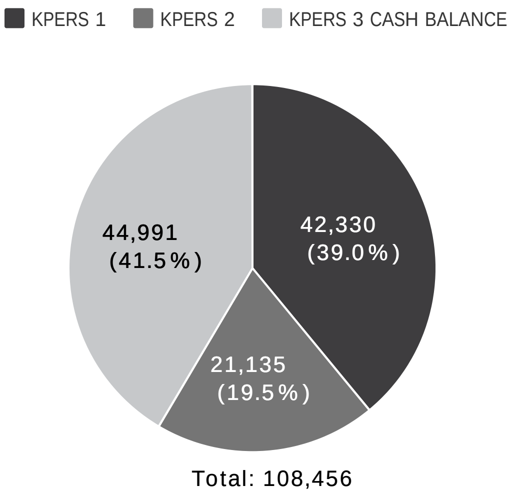
As can be seen from the table, in total KPERS experienced a net decrease in the number of active members with the largest decrease occurring in the School group. As the graph below shows, active membership growth has been relatively stagnant overall for the past decade, with the active membership peaking in the December 31, 2009 valuation. While this pattern of low (or at times negative) active member growth has not been unusual in the public sector, a declining active membership has an adverse impact on the actuarial contribution rate. In general, fewer active members result in total active member payroll that does not increase as expected (3 percent per year). When this occurs, contribution dollars into the System for that plan year are lower so the unfunded actuarial liability does not decrease as scheduled. In addition, the unfunded actuarial liability contribution rate increases because the dollar amount of the amortization payment is divided by a smaller amount of payroll.

The following graph shows the number of active members and retirees and beneficiaries in the last 20 valuations. The number of retirees and beneficiaries has grown significantly more than active members over this period.

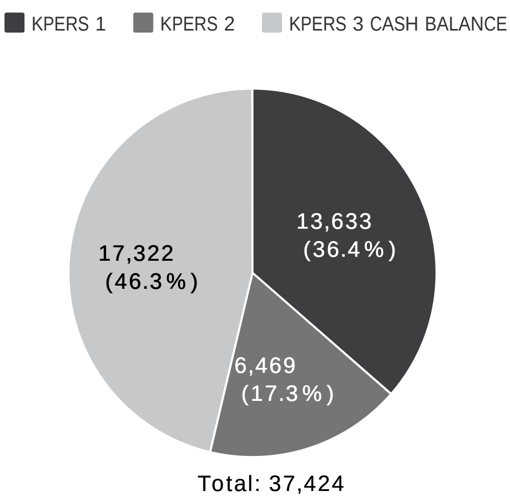



KPERS currently has three different benefit structures. The most recent tier, KPERS 3 (Cash Balance members), covers non-corrections members who either began their participation or were rehired on or after January 1, 2015. KPERS 2 includes members who either began their participation or were rehired on or after July 1, 2009, but before January 1, 2015. Of the 145,880 active KPERS members, 27,604 (about 19 percent) are KPERS 2 members and 62,313 (about 43 percent) are KPERS 3 members as of the valuation date. For the first time, KPERS 3 members represent the largest group of active members, The split of KPERS members in the State/School group and Local group, by benefit tier, is shown in the following charts:

STATE/SCHOOL ACTIVE MEMBERSHIP
*Calendar Year 2020*




LOCAL ACTIVE MEMBERSHIP
*Calendar Year 2020*




Because KPERS 3 is a relatively new group, the members are younger and have lower years of service. Therefore, KPERS 3 members' liability is relatively small so the valuation results are more significantly affected by members of KPERS 1 and KPERS 2. As time passes and more active members are in KPERS 3, the cash balance benefit structure will have an increasing impact on the overall valuation results. One aspect of this change is that total valuation results are expected to have less volatility since KPERS 3 has certain risk sharing features built into the interest crediting rate on account balances. For example, lower actual investment returns will translate into lower dividends, smaller account balances and, therefore, smaller benefit amounts, mitigating the growth in the KPERS 3 actuarial liability.

## ASSETS

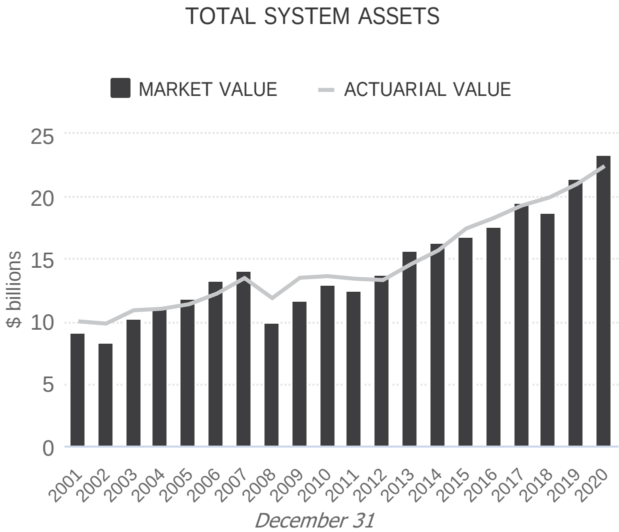
As of December 31, 2020, the System had total funds of $23.4 billion on a market value basis, excluding assets held for the Group Insurance and Optional Life reserves. This was an increase of $1.8 billion from the December 31, 2019 fund balance.

Due to the volatility in the market value of assets, it 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 dollar amount of investment return and the expected return (using the assumed rate of return) on the market value of assets each year. The dollar amount of the difference is recognized equally over a five-year period (20 percent per year).

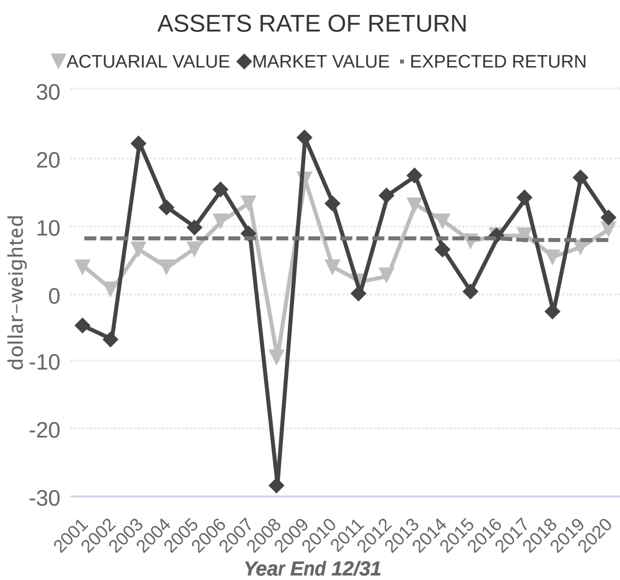
The components of the change in the total market value and actuarial value of assets for the Retirement System (in millions) are set forth in the following table.

| | Market Value $ (millions) | Actuarial Value $ (millions) |
|---|---|---|
| Assets, December 31, 2019 | $ 21,543 | $ 20,976 |
| · Employer and Member Statutory Contributions | 1,478 | 1,478 |
| · Additional Contributions | - | - |
| · Benefit Payments | (1,954) | (1,954) |
| · Investment Income, Net of Expenses | 2,286 | 1,922 |
| Assets, December 31, 2020 | $ 23,353 | $ 22,422 |
| Net Rate of Return | 11.1% | 9.3% |

Due to the use of an asset smoothing method, there is a net deferred investment gain of $930 million that has not yet been recognized, i.e. the market value of assets is greater than the actuarial value. This deferred investment gain will be recognized in the actuarial value of assets over the next four years but may be offset by actual investment experience if it is less favorable than assumed.




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




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

## LIABILITIES

The actuarial liability is that portion of the present value of future benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and asset values at the same date is referred to as the unfunded actuarial liability. 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 and the unfunded portion thereof.

The unfunded actuarial liability by group is summarized below (in millions):

| | State | School | Local |
|---|---|---|---|
| Actuarial Liability | $ 4,675 | $16,385 | $ 5,928 |
| Actuarial Value of Assets | 3,789 | 11,127 | 4,509 |
| Unfunded Actuarial Liability* | $ 886 | $ 5,257 | $ 1,420 |
| Funded Ratio | 81.0% | 67.9% | 76.1% |

| | KP&F | Judges | Total* |
|---|---|---|---|
| Actuarial Liability | $ 3,722 | $ 201 | $30,910 |
| Actuarial Value of Assets | 2,803 | 194 | 22,422 |
| Unfunded Actuarial Liability* | $ 919 | $ 6 | $ 8,488 |
| Funded Ratio | 75.3% | 96.8% | 72.5% |

** May not add due to rounding.*

The unfunded actuarial liability is amortized using a "layered" approach. The legacy unfunded actuarial liability is the amount of unfunded actuarial liability in the December 31, 2015 valuation, projected to June 30, 2018 for State/School and Judges and December 31, 2017 for Local and KP&F to reflect the lag between the valuation date and the fiscal year to which the contribution rates set in the valuation apply. This initial or legacy unfunded actuarial liability amortization base continues to be amortized over the original amortization period, which was set at 40 years beginning July 1, 1993 (12 years remain as of December 31, 2020). As the remaining period for that base has decreased over time, the portion of the payment that is applied to the principal of the outstanding balance increases. This was a key factor in the decrease in the unfunded actuarial liability from the prior valuation, as shown in the table on the following page. The change in the unfunded actuarial liability, resulting from the assumption changes reflected in the 2016 and 2019 valuations, was amortized over a closed 25-year period. Changes in the unfunded actuarial liability that result from actuarial experience each year (gains and losses) are amortized over a closed 20-year period that begins with the fiscal year in which the contribution rates will apply.

Prior to the December 31, 2017 valuation (which set the contribution rates for Fiscal Year 2021), the statutory contribution rate for the State/School group was less than the actuarial contribution rate. The difference in the statutory and actuarial contribution rates since the 1994 valuation resulted in annual increases in the unfunded actuarial liability for that group. The contribution shortfall was the largest single factor in the increase in the amount of the unfunded actuarial liability over the last 25 years. Now that the full actuarial contribution rate is being contributed for all groups, the UAL is expected to decrease absent other factors such as actual experience different than expected based on the actuarial assumptions (on both assets and liabilities), changes in actuarial assumptions, procedures, methods, and changes in benefit provisions.

The actual experience measured in this valuation is that which occurred during the prior plan year (calendar year 2020). For State, Local and KP&F, the valuation results reflect a net liability loss for the year (which increases the unfunded actuarial liability), largely due to salary increases that were higher than expected. In contrast, there was a small net liability gain for School and Judges during 2020 from mortality experience, i.e., more deaths than expected. In aggregate, the net liability loss for the entire System was $42 million, about 0.13 percent of the actuarial liability. In addition, the System experienced a return of 9.3 percent on the actuarial value of assets, which is above the assumed return of 7.75 percent, resulting in an experience gain of $316 million. Therefore, the combined experience (asset and liability) in 2020 for all groups was an experience gain for the total System of $274 million.

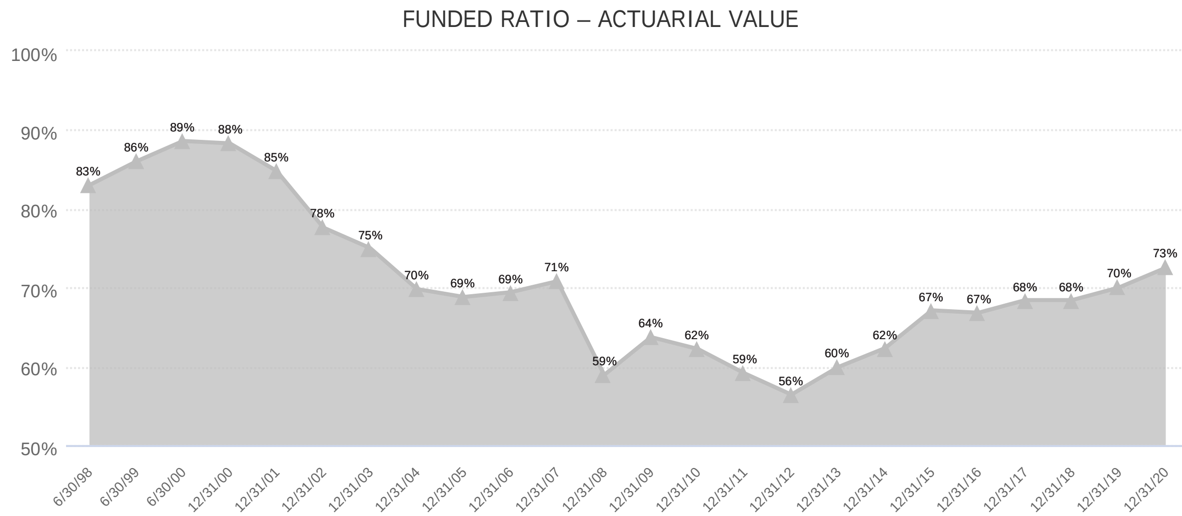
Between December 31, 2019, and December 31, 2020, the change in the unfunded actuarial liability for the System, as a whole, was as follows (in millions):

| | $ millions |
|---|---|
| Unfunded Actuarial Liability, December 31, 2019 | $9,007 |
| · effect of contribution cap | 8 |
| · expected decrease due to amortization method | (225) |
| · (gain)/loss from investment return on actuarial assets | (316) |
| · demographic experience (1) | 42 |
| · all other experience | (28) |
| **Unfunded Actuarial Liability, December 31, 2020 (2)** | $8,488 |

*(1) Liability loss is about 0.13 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 settle all liabilities with current assets. The funded status information for the total System is shown in the following table (in millions).

| | 12/31/15 | 12/31/16 | 12/31/17 | 12/31/18 | 12/31/19 | 12/31/20 |
|---|---|---|---|---|---|---|
| Using Actuarial Value of Assets: | | | | | | |
| Funded Ratio (AVA/AL) | 67% | 67% | 68% | 68% | 70% | 73% |
| Unfunded Actuarial | | | | | | |
| Liability (AL-AVA) | $8,539 | $9,061 | $8,907 | $9,202 | $9,007 | $8,488 |
| Using Market Value of Assets: | | | | | | |
| Funded Ratio (MVA/AL) | 65% | 65% | 70% | 64% | 72% | 76% |
| Unfunded Actuarial | | | | | | |
| Liability (AL-MVA) | $9,055 | $9,627 | $8,569 | $10,430 | $8,439 | $7,558 |




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. The funded ratio is expected to increase steadily in the future assuming assumptions are met and scheduled contributions are made.

Given the current funded status of the System, the deferred investment experience, the amortization method and amortization periods, and the scheduled employer contribution rates, the dollar amount of the unfunded actuarial liability for the entire System is expected to decrease over the next few years as the unrecognized investment experience flows through the asset smoothing method. Over the longer term, the funded ratio is expected to improve, but will continue to be heavily dependent on the actual investment returns in the future.

## 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 in a reasonable timeframe.

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 expense load for administrative expenses for the year,
- 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 information.

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 by the Legislature periodically, is 1.20 percent for all three groups. In 2021, HB 2405 authorized the Kansas Development Finance Authority to issue bonds with net proceeds of $500 million to improve the funding of the School group, subject to certain criteria. The bonds were issued and KPERS received the proceeds on August 26, 2021. The bond proceeds are reflected in the projected UAL at July 1, 2023 and, therefore, the UAL contribution rate. In addition, the previously certified State/School employer contribution rate were changed by the legislature from 14.09 percent to 13.33 percent for Fiscal Year 2022 and from 13.86 percent to 13.11 percent for Fiscal Year 2023.

The results of the December 31, 2020 valuation are used to set employer contribution rates for Fiscal Year 2024 for the State and School (July 1, 2023 to June 30, 2024) and Fiscal Year 2023 for Local employers (calendar year 2023). The unfunded actuarial liability is amortized as a level-percentage of payroll for all groups except the Judges where a level-dollar payment is used. The payroll growth assumption is 3.00 percent, so the dollar amount of the annual amortization payments will increase 3.00 percent each year. As a result, if total payroll grows 3.00 percent per year, as assumed, the amortization payment will remain level as a percentage of total payroll. However, if actual payroll growth is less than 3.00 percent, the unfunded actuarial liability contribution rate will increase.

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

DECEMBER 31, 2020 VALUATION

| System | Actuarial | Statutory | Difference |
|---|---|---|---|
| State [(1)] | 9.38% | 12.57% | (3.19%) |
| School [(1)] | 13.38% | 12.57% | 0.81% |
| State/School [(1)] | 12.57% | 12.57% | 0.00% |
| Local [(1)] | 8.43% | 8.43% | 0.00% |
| Police & Fire - Uniform Rates [(2)] | 22.86% | 22.86% | 0.00% |
| Judges | 16.48% | 16.48% | 0.00% |

*(1) By statute, rates are allowed to increase by a maximum of 1.2 percent, plus the cost of any benefit enhancements. The December 31, 2020 valuation sets the employer contribution rate for Fiscal Year 2024 for the State and School group and calendar year 2023 for the Local group. An additional contribution of 0.60 percent applies to the School group in Fiscal Year 2024 due to contribution reductions in Fiscal Year 2017 and Fiscal Year 2019.*

*(2) For KP&F, the statutory contribution rate is equal to the "Uniform" rate. The rate shown is for both State and Local employers. The uniform rate does not include the payment required to amortize the unfunded past service liability determined separately for each employer.*

Due to statutory caps, the full actuarial contribution rate is not necessarily contributed for all KPERS groups. The State and Local groups reached the actuarial required contribution (ARC) date (the year in which the statutory contribution rate is equal to or greater than the ARC rate) in the 2010 and 2012 valuations, respectively, and remain at the ARC rate in this valuation. However, due to the lag between the valuation date and the applicable fiscal year for the contribution rate, the State group did not actually contribute the full ARC until Fiscal Year 2014 and the Local group until CY 2015. Based on the current valuation, there is a difference (shortfall) between the actuarial and statutory contribution rates of 0.81 percent for the School group. However, the statutory contribution rate is set for the combined State/School group and the ARC date occurred in Fiscal Year 2021 at a rate of 14.23 percent of pay, based on the December 31, 2017 valuation. The statutory and actuarial required contribution rates continue to be equal.

Separate employer contribution rates are calculated for two subgroups of the State: Correctional Employee Groups with a normal retirement age of 55 (C55) and a normal retirement age of 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, 2015 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 for a time. The resulting contribution rates for the Correctional Employee Groups for Fiscal Year 2024 are shown in the following table.

| Corrections Group | Statutory Rate |
|---|---|
| Retirement Age 55: | 12.99% |
| Retirement Age 60: | 13.73% |

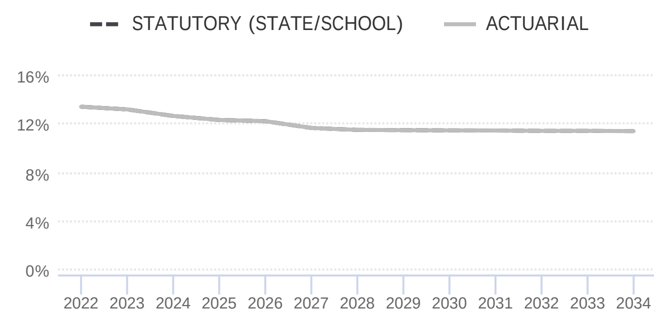
The change in the employer actuarial contribution rate from December 31, 2019 to December 31, 2020 and the primary components thereof are shown in the table on page 84. The employer contribution rates decreased from those in the December 31, 2019 valuation for all groups, primarily due to favorable investment experience during 2020.

The following graphs show the projected employer contribution rates assuming all actuarial assumptions are met in the future, including a 7.75 percent net rate of return on the market value of assets in all years, and that the current statutory funding policy for the State/School group (including the amortization policy) continues and contributions are made as scheduled. Note that we have not reflected any possible impact of the global pandemic upon either future investment returns or mortality experience because the significance of these impacts, if any, cannot be reasonably assessed at this time.

Note that although separate valuations are performed for the State and School groups, the statutory contribution rate for the two is determined using the combined valuation results for the two groups. Contributions which result from the excess of the statutory contribution rate over the actuarial required contribution rate for the State are allocated to the School to improve the funding of that group.

PROJECTED EMPLOYER CONTRIBUTION RATES - STATE/SCHOOL

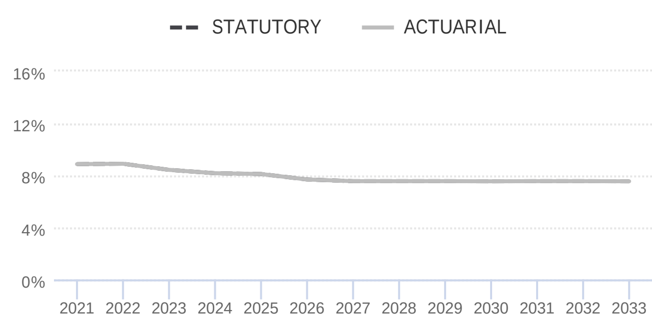
*Fiscal Year End*




Based on the December 31, 2017 valuation results, the actuarial required contribution (ARC) date for the State/School group occurred in Fiscal Year 2021 at an ARC rate of 14.23 percent. Given the deferred investment experience, it decreases to around 11.4 percent and then holds steady at that level. During the entire projection period, the statutory rate is expected to be equal to the ARC rate. Actual experience in future years, particularly investment returns, will significantly impact future actuarial and statutory rates.

PROJECTED EMPLOYER CONTRIBUTION RATES - LOCAL

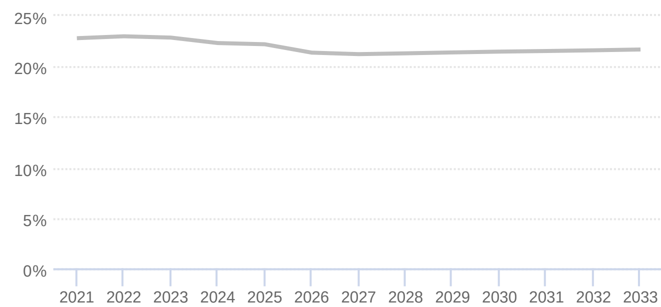
*Fiscal Year End*




The Local group reached the ARC date in the 2012 valuation at an ARC rate of 9.48 percent, which has decreased and is now 8.43 percent in the 2020 valuation. The projected contribution rate is expected to decrease to around 7.5 percent over the long term. Actual experience in future years, particularly investment returns, will significantly impact future actuarial and statutory rates.

PROJECTED EMPLOYER CONTRIBUTION RATES - KP&F

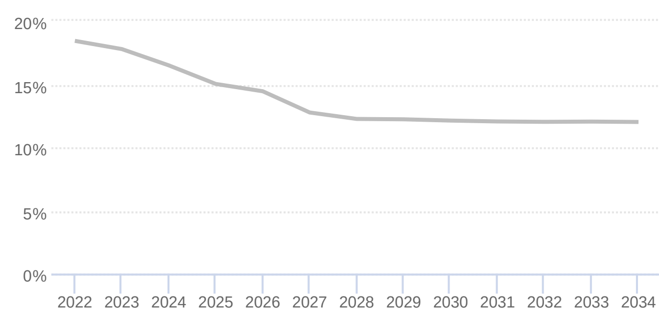
*Fiscal Year End*




The projected employer contribution rate for KP&F is expected to remain steady around 22 percent after the deferred investment experience has been recognized through the asset smoothing method. However, actual experience in future years, particularly investment returns, will significantly impact future contribution rates.

PROJECTED EMPLOYER CONTRIBUTION RATES - JUDGES

*Fiscal Year End*

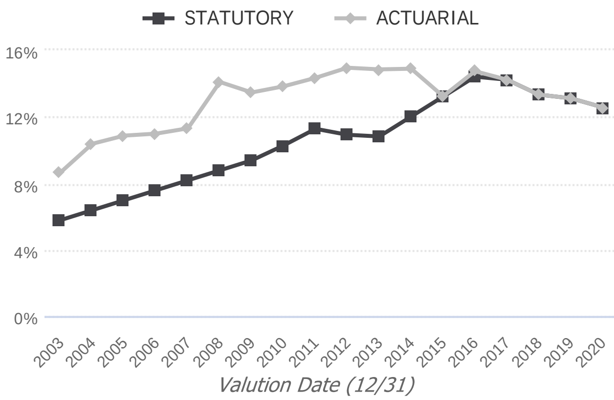



The projected employer contribution rate for Judges is expected to decrease as the deferred investment experience is recognized through the asset smoothing method and the system moves toward full funding. Actual experience in future years, particularly investment returns, will significantly impact future employer contribution 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 has still been determined on a combined basis. By statute, any excess of the statutory contribution over the actuarial required contribution for the State is allocated to the School group.

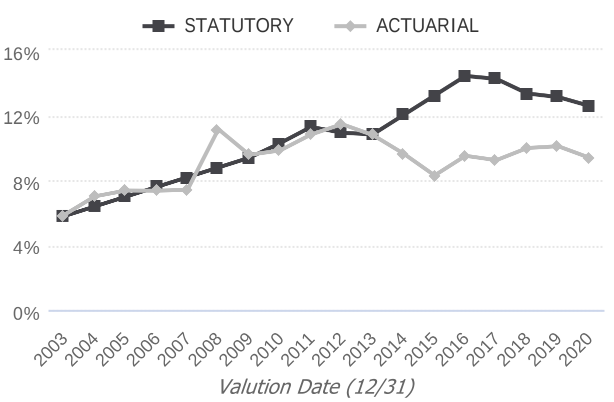
Significant changes to funding methods occurred in 2003, and the System received bond proceeds in 2004, 2015 and expected in 2021. Actuarial assumptions were changed in the 2004, 2007, 2010, 2013, 2016 and 2019 valuations. These changes impact the comparability of contribution rates between various valuation dates.

STATE/SCHOOL CONTRIBUTION RATES



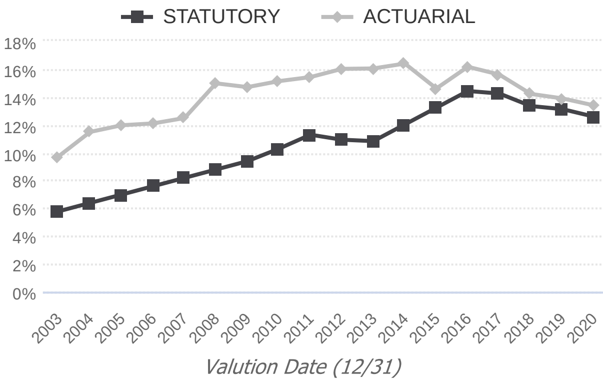

Numerous factors have contributed to the increase in the ARC rate for the State/School group over much of this period including investment experience, changes in actuarial assumptions, and contributions significantly below the actuarial rate. Due to favorable investment experience during 2020, the ARC rate decreased to 12.57 percent.

STATE CONTRIBUTION RATES



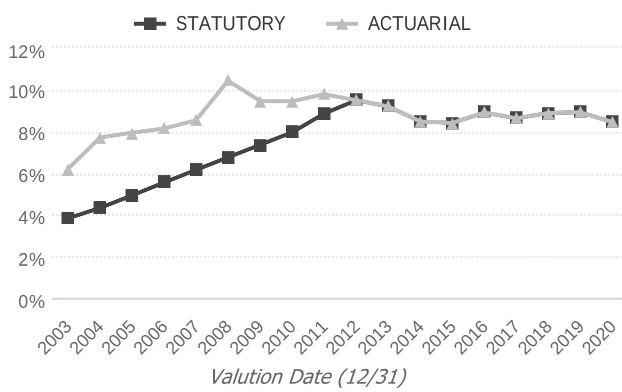

The split of the State group into a separate group with the 2003 valuation, coupled with the bond issue, lowered the State ARC rate. The State reached the full ARC rate in the 2010 valuation and has remained at ARC except for the recertification of the statutory contribution rate for Fiscal Year 2017 from 12.37 percent to 10.91 percent. In this valuation, the State's ARC rate decreased to 9.38 percent, due to favorable investment experience during 2020.

SCHOOL CONTRIBUTION RATES

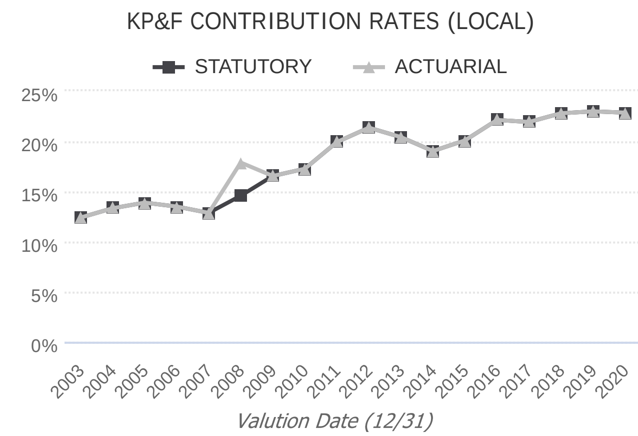



Due to investment experience, changes in actuarial assumptions, and the magnitude of the difference between the actuarial and statutory contribution rates, the ARC rate increased during the early part of this period. Increases to the statutory contribution rate and contribution sharing from the State group has helped to stabilize the ARC rate.

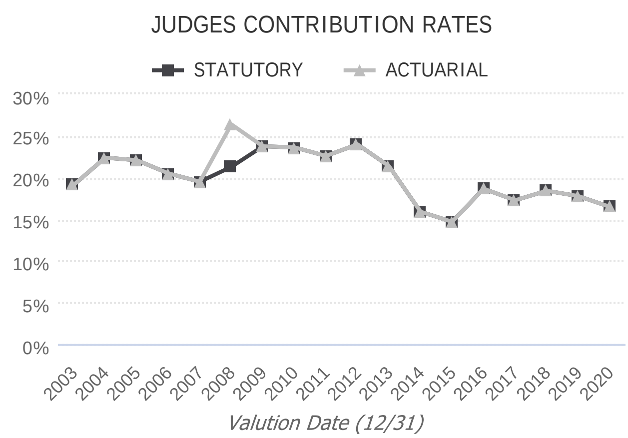
LOCAL CONTRIBUTION RATES




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 ARC rate in the 2012 valuation. In this valuation, the Local group's ARC rate decreased to 8.43 percent, due to favorable investment experience during 2020.




Investment experience in 2008, 2011, and 2018 resulted in higher contribution rates in the latter part of the period. The assumption changes reflected in the 2016 valuation also increased the contribution rate. Favorable investment experience during 2020 resulted in a small decrease in the ARC rate for the KP&F System..




Investment experience in 2008 and 2011 resulted in higher contribution rates in the middle of the period. The assumption changes reflected in the 2016 valuation increased the contribution rate, but assumption changes in the 2019 valuation decreased the contribution rate. Favorable investment experience during 2020 contributed to a decrease in the ARC rate for the Judges System.

Over the last two decades, a comprehensive plan has been developed to address the long-term funding of KPERS and significant changes have occurred. 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 (KPERS 2). 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 KPERS 1 members between different contribution rate and benefit levels. The legislation provided that, if the IRS rejected or did not take action to approve the election, KPERS 1 members would default to an increase in their employee contributions to 5 percent of compensation effective January 1, 2014, and 6 percent effective January 1, 2015, with an increase in the benefit multiplier to 1.85 percent beginning January 1, 2014, for future years of service only. Subsequently, the IRS issued a private letter ruling stating that the election granted to KPERS 1 members under 2012 HB 2333 was impermissible.

- For KPERS 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 Year 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 unfunded actuarial liability has occurred. As a result, projections assume there will not be any additional payments to the unfunded actuarial liability 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 SB 249 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 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 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, 2015 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).

- 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 was still applied 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 for the State/School group and KP&F State contributions during the final quarter of Fiscal Year 2016. However, S Sub for Sub HB 2052, passed in the 2017 session, provided that the repayment of these contributions would not be paid (subsequent legislation passed by the 2019 Legislature repaid these delayed contributions).

The 2017 Legislature passed several bills that impacted the provisions and funding of KPERS:

- Senate Substitute for Substitute HB 2052 (S Sub for Sub HB 2052) provided that a portion of the contributions for the School group for Fiscal Year 2017 would be delayed so the total State/School contribution was $64.13 million less than the scheduled statutory contributions. The delayed employer contributions for Fiscal Year 2017 are repaid in level-dollar annual installments of $6.4 million over twenty years beginning in Fiscal Year 2018. These payments are determined as a contribution rate for School employers to be paid in addition to the statutory State/School contribution rate. Further, S Sub for Sub HB 2052 provided that the repayment of the contribution reduction from Fiscal Year 2016 with interest ($115 million), scheduled in Fiscal Year 2018, would not be paid (subsequent legislation passed by the 2019 Legislature repaid these delayed contributions).

- Senate Substitute for HB 2002 contained KPERS funding provisions for Fiscal Year 2018 and Fiscal Year 2019, including the following:

  - **Fiscal Year 2018:** The contributions for the State/School group for Fiscal Year 2018 was made at the scheduled statutory rate of 12.01 percent. In addition, the first installment of $6.4 million on the 20-year amortization of the delayed contributions for Fiscal Year 2017 was included.

  - **Fiscal Year 2019:** A portion of the employer contributions for School employers within the State/School group for Fiscal Year 2019 were delayed so the total employer contribution was $420 million, including the second installment of $6.4 million on the delayed contribution for Fiscal Year 2017. This resulted in an expected delay of $194 million to be repaid by the School group, as a level dollar amount over 20 years beginning in Fiscal Year 2020.

  - **Fiscal Year 2020:** The current statutory cap of 1.2 percent per year applied in determining the statutory contribution rate for the State/School group for Fiscal Year 2020. The certified statutory rate from Fiscal Year 2019 of 13.21 percent, without inclusion of the $6.4 million amortization of the delayed contributions in Fiscal Year 2017 and $19.4 million amortization of the delayed contributions in Fiscal Year 2019, was increased by 1.2 percent, resulting in a statutory contribution rate for Fiscal Year 2020 of 14.41 percent. The current statutory cap of 1.2 percent per year applies for all subsequent years.

- SB 205 changed the duty-related death benefit for KP&F members to the greater of 50 percent of Final Average Salary and the member's accrued retirement benefit under the 100 percent joint and survivor option, payable to the member's spouse. Including any benefits that may be due to child beneficiaries, the total monthly benefits may not exceed 90 percent of the member's Final Average Salary. Prior to this bill, the duty-related death benefit for a KP&F member was 50 percent of Final Average Salary, and the maximum available to the family was 75 percent of the member's Final Average Salary.

- House Substitute for SB 21 included changes to the working after retirement rules for members who retire on or after January 1, 2018. The key provisions of the bill were to lengthen the waiting period for KPERS members to return to work from 60 days to 180 days for members who retire before attaining age 62, remove the earnings limitation for all retirees, and establish a single employer contribution schedule for all retirees.

The 2018 Legislature passed House Substitute for Senate Bill 109 that provided for the following additional funding to the KPERS School group:

- An additional payment of $82 million in July 2018 (received by KPERS).

- A contingent additional payment of up to $56 million to be paid in Fiscal Year 2018, if actual Fiscal Year 2018 receipts exceed the consensus revenue estimates (full amount received in June, 2018).

- A contingent additional payment of up to $56 million to be paid in Fiscal Year 2019, if actual Fiscal Year 2019 receipts exceed the consensus revenue estimates (this payment was changed by the 2019 Legislature to a transfer of $51 million in Fiscal Year 2020 which was received by KPERS on July 1, 2019).

The 2019 Legislature passed two pieces of legislation that impacted the contributions to KPERS. Senate Bill 9 provided for a transfer of $115 million from the State General Fund to KPERS in March, 2019. This payment covered the $97 million in missed KPERS School contributions for Fiscal Year 2016 plus interest. The additional contribution lowered the State/School actuarial contribution rate by 0.29 percent. The 2019 Legislature also passed House Substitute for Senate Bill 25. This legislation repealed the actions of the 2018 Legislature which provided for a contingent payment of up to $56 million in Fiscal Year 2019, if actual Fiscal Year 2019 receipts exceeded the consensus revenue estimates. Instead, this legislation directly transferred $51 million to the KPERS Trust Fund in Fiscal Year 2020 (received by KPERS on July 1, 2019). The net reduction of $5 million did not have a significant impact on the valuation results.

The 2021 Legislature passed HB 2405, which provided for bonds to be issued to improve the funded status of the School group. As a result, net proceeds of up to $500 million from bonds issued by the State of Kansas are to be deposited into the KPERS trust fund for the School group, subject to certain criteria. The bonds must be issued at an interest rate no greater than 4.3 percent and approved by the State Finance Council. Due to the passage of HB 2405, SB 159, which was the 2021 legislative session's omnibus budget bill, included a provision to reduce the previously certified State/School employer contribution rates from 14.09 percent to 13.33 percent for Fiscal Year 2022 and from 13.86 percent to 13.11 percent for Fiscal Year 2023.

The legacy unfunded actuarial liability is amortized over a closed period ending in 2033 (12 years remaining as of this valuation date). Increases in the unfunded actuarial liability resulting from the assumption changes adopted in the December 31, 2016 and December 31, 2019 valuations are amortized over a closed 25 year period, while other actuarial experience bases (gains/losses) are amortized over closed 20 year periods. While all of the groups (State/School, Local, KP&F, and Judges) are projected to reach a funded ratio of 100 percent, the actual funding progress will be heavily dependent on 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. Any material extension of the amortization periods will delay funding progress by reducing contributions in the short term and increasing them over the long term.

## COMMENTS

Like most public retirement systems, KPERS uses an asset smoothing method to average investment experience above and below the assumed net rate of return (7.75 percent). Under the asset smoothing method, the difference between the dollar amount of the actual and assumed investment experience is recognized equally over a five-year period. While the return on the market value of assets for 2020 was 11.1 percent, only a portion of the favorable experience is recognized in the current valuation. Due to the asset smoothing method, the return on the actuarial value of assets in 2020 was 9.3 percent. This generated an experience gain on assets because the actual return was above the assumed return of 7.75 percent. As of the valuation date, the market value of assets exceeds the actuarial value of assets by about 4.1 percent or $930 million. This deferred experience will flow through the asset smoothing method in the next four years and be recognized in the valuation process. However, it may be offset if future investment experience is below the 7.75 percent assumed rate of return. As the deferred investment experience is recognized, the funded ratio can be expected to increase and the actuarial contribution rate to decrease.

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

| | State/School | | KP&F | |
|---|---|---|---|---|
| | Actuarial | Market | Actuarial | Market |
| Actuarial Liability | $21,060 | $21,060 | $3,722 | $3,722 |
| Asset Value | 14,916 | 15,533 | 2,803 | 2,918 |
| Unfunded Actuarial Liability* | $6,143 | $5,527 | $919 | $803 |
| Funded Ratio | 71% | 74% | 75% | 78% |
| Contribution Rate: | | | | |
| Normal Cost Rate | 7.74% | 7.74% | 15.02% | 15.02% |
| UAL Payment | 10.83% | 9.77% | 14.99% | 13.28% |
| Actuarial Contribution Rate | 18.57% | 17.51% | 30.01% | 28.30% |
| Employee Rate | 6.00% | 6.00% | 7.15% | 7.15% |
| Employer Rate | 12.57% | 11.51% | 22.86% | 21.15% |

** May not add due to rounding*

Future investment experience will impact the extent to which the deferred investment experience (which is currently a net gain) will be recognized. The ultimate impact of the deferred experience on the employer contribution rate would be similar to the column shown above based on the market value of assets, if all actuarial assumptions are met including the 7.75 percent return in future years. Also, please refer to the graphs later in this section that show the projected contribution rates assuming a 7.75 percent net rate of return in all future years.

The triennial experience study was performed during 2019 and the Board adopted changes to the demographic assumptions at the January 17, 2020 meeting. Although Cavanaugh Macdonald Consulting recommended changes to the economic assumptions, they were not adopted by the KPERS Board after discussion and consideration. Instead, the Board elected to continue the use of the economic assumptions used in the December 31, 2018 valuation which include an inflation assumption of 2.75 percent, general wage increase of 3.50 percent and an investment return assumption of 7.75 percent. Based on the data presented in the experience study report, it is our professional opinion that the set of economic assumptions used in this valuation are not reasonable, as defined in Actuarial Standard of Practice Number 27. Furthermore, the difference between the expected return for the KPERS' portfolio and the current assumption of 7.75 percent has increased since the experience study was performed. Further discussion with the Board is recommended before the next valuation is completed in 2022.

## SUMMARY OF CHANGE IN UNFUNDED ACTUARIAL LIABILITY BY SYSTEM

*December 31, 2020 Valuation ($ Millions)*

| | State | School | State/ School | Local | KP&F | Judges | Total |
|---|---|---|---|---|---|---|---|
| **UAL in 12/31/2019 Valuation Report** | $ 962.3 | $ 5,582.7 | $ 6,545.0 | $ 1,502.1 | $ 949.4 | $ 10.3 | $ 9,006.8 |
| · Effect of Contribution Cap | - | 8.2 | 8.2 | - | - | - | 8.2 |
| · Expected Decrease Due to UAL Amortization | (14.7) | (153.5) | (168.2) | (41.3) | (14.6) | (0.5) | (224.6) |
| · Actual vs. Expected Experience | | | | | | | |
| Investment Return | (57.1) | (151.4) | (208.5) | (66.7) | (37.9) | (2.5) | (315.5) |
| Demographic Experience | 4.4 | (12.9) | (8.5) | 26.4 | 24.3 | (0.5) | 41.6 |
| All Other Experience | (8.8) | (15.8) | (24.6) | (0.9) | (2.7) | (0.3) | (28.5) |
| · Additional Contributions | - | - | - | - | - | - | - |
| · Change in Actuarial Assumptions/Methods | - | - | - | - | - | - | - |
| · Benefit Changes | - | - | - | - | 0.1 | - | 0.1 |
| **UAL in 12/31/2020 Valuation Report** | $ 886.1 | $ 5,257.3 | $ 6,143.4 | $ 1,419.6 | $ 918.6 | $ 6.5 | $ 8,488.0 |

*Note: Numbers may not add due to rounding.*

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

*As Of December 31, 2020*

| Percentage of Payroll | State | School | State/ School | Local | KP&F (1) | Judges |
|---|---|---|---|---|---|---|
| **Actuarial Contribution Rate in 12/31/2019 Valuation** | 10.08% | 13.88% | 13.11% | 8.90% | 22.99% | 17.77% |
| **Change Due to Amortization of UAL** | | | | | | |
| · Effect of Contribution Cap | - | 0.01 | 0.01 | - | - | - |
| · UAL Amortization | - | - | - | - | - | (0.09) |
| · Investment Experience | (0.45) | (0.30) | (0.33) | (0.27) | (0.52) | (0.95) |
| · Liability Experience | 0.03 | (0.03) | (0.01) | 0.11 | 0.33 | (0.19) |
| · All Other Experience | (0.19) | (0.12) | (0.15) | (0.14) | (0.12) | (0.13) |
| · Additional Contributions in Fiscal Year 2019 | - | - | - | - | - | - |
| · Payroll Growth | 0.11 | 0.09 | 0.10 | - | 0.02 | - |
| · Change in Assumptions/Methods | - | - | - | - | - | - |
| · Benefit Changes | - | - | - | - | 0.01 | - |
| **Change in Employer Normal Cost Rate** | | | | | | |
| · Benefit Changes | - | - | - | - | 0.03 | - |
| · Change in Assumptions/Methods | - | - | - | - | - | - |
| · All Other Experience | (0.20) | (0.15) | (0.16) | (0.17) | 0.12 | 0.07 |
| **Actuarial Contribution Rate in 12/31/2020 Valuation** | 9.38% | 13.38% | 12.57% | 8.43% | 22.86% | 16.48% |

*(1) Contribution rate for Local employers only.*

*Note: Numbers may not add due to rounding.*

## SUMMARY OF HISTORICAL CHANGES IN TOTAL SYSTEM UAL

*As of December 31, 2020 Valuation*

| | As Reported on Valuation Date | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| $(millions) | 6/30/94 | 6/30/95 | 6/30/96 | 6/30/97 | 6/30/98 | 6/30/99 | 6/30/00 | 12/31/00 |
| Actual Experience vs. Assumed | | | | | | | | |
| · Investment | $ (102) | $ (143) | $ (280) | $ (323) | $ (413) | $ (369) | $ (441) | $ (23) |
| · Other | 320 | 72 | 136 | 157 | 104 | 46 | 99 | 84 |
| Assumption Changes | - | (96) | - | - | 350 | - | - | (206) |
| Changes in Data/Procedures | 244 | - | - | - | - | 21 | 71 | 145 ** |
| Change in Cost Method | - | - | - | - | - | - | - | - |
| 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 | - | - | - | 88 | - | 19 | - |
| Change in Actuarial Firm/Software | - | - | - | - | - | - | - | - |
| Bond Issue | - | - | - | - | - | - | - | - |
| Non-Collectible Pension Contributions | - | - | - | - | - | - | - | - |
| Additional Contributions | - | - | - | - | - | - | - | - |
| 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 | - | - | - | 437 | (5) | - | 384 | - |
| Changes in Data/Procedures | 5 | 177 ** | (286)*** | - | - | - | - | - |
| Change in Cost Method | - | - | 1,147 | - | - | - | - | - |
| 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 | - | 37 | 3 | 1 | - | 24 | 2 | - |
| Change in Actuarial Firm/Software | - | - | - | - | - | - | - | - |
| Bond Issue | - | (41) | (440) | - | - | - | - | - |
| Non-Collectible Pension Contributions | - | - | - | - | - | - | - | - |
| Additional Contributions | - | - | - | - | - | - | - | - |
| Total | $ 475 | $ 1,049 | $ 757 | $ 1,157 | $ 409 | $ 212 | $ 188 | $ 2,727 |

Unfunded actuarial liability 6/30/93: $968 million

Unfunded actuarial liability 12/31/20: $8,488 million

** Not calculated for this year.*

***Reflects the impact of re-establishing the KP&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 HISTORICAL CHANGES IN TOTAL SYSTEM UAL

*As of December 31, 2020 Valuation (continued)*

| | As Reported on Valuation Date | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| $(millions) | 12/31/09 | 12/31/10 | 12/31/11 | 12/31/12 | 12/31/13 | 12/31/14 | 12/31/15 | 12/31/16 |
| Actual Experience vs. Assumed | | | | | | | | |
| · Investment | $ (1,011) | $ 560 | $ 852 | $ 732 | $ (653) | $ (368) | $ 52 | $ (59) |
| · Other | (70) | (334) | (190) | (78) | (125) | (78) | (130) | (144) |
| Assumption Changes | - | - | (64) | - | - | (50) | - | 593 |
| Changes in Data/Procedures | - | - | - | - | - | - | - | - |
| Change in Cost Method | - | - | - | - | - | - | - | - |
| Effect of Contribution Cap/Lag | 383 | 320 | 289 | 303 | 246 | 178 | 160 | 70 |
| Amortization Method | 96 | 68 | 62 | 49 | 46 | 18 | (11) | (38) |
| Change in Benefit Provisions | - | - | 15 | 19 | - | 1 | - | 1 |
| Change in Actuarial Firm/Software | - | (27) | - | - | - | - | - | - |
| Bond Issue | - | - | - | - | - | - | (1,000) | - |
| Non-Collectible Pension Contributions | - | - | - | - | - | - | - | 99 |
| Additional Contributions | - | - | - | - | - | - | - | - |
| Total | $ (602) | $ 587 | $ 964 | $ 1,025 | $ (486) | $ (298) | $ (929) | $ 522 |

| $(millions) | 12/31/17 | 12/31/18 | 12/31/19 | 12/31/20 | Total |
|---|---|---|---|---|---|
| Actual Experience vs. Assumed | | | | | |
| · Investment | $ (117) | $ 476 | $ 210 | $ (316) | $ 1,434 |
| · Other | (50) | 69 | 32 | 14 | 210 |
| Assumption Changes | - | - | (51) | - | 1,292 |
| Changes in Data/Procedures | - | - | (60) | - | 317 |
| Change in Cost Method | - | - | - | - | 1,147 |
| Effect of Contribution Cap/Lag | 149 | 64 | 18 | 8 | 4,291 |
| Amortization Method | (136) | (171) | (169) | (225) | 271 |
| Change in Benefit Provisions | - | - | - | - | 285 |
| Change in Actuarial Firm/Software | - | - | - | - | (27) |
| Bond Issue | - | - | - | - | (1,481) |
| Non-Collectible Pension Contributions | - | - | - | - | 99 |
| Additional Contributions | - | (143) | (175) | - | (318) |
| Total | $ (154) | $ 295 | $ (195) | $ (519) | $ 7,520 |

Unfunded actuarial liability 6/30/93: $968 million

Unfunded actuarial liability 12/31/20: $8,488 million

** Not calculated for this year.*

***Reflects the impact of re-establishing the KP&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)

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 20,796 | 21,239 | (2.1%) |
| Retired Members and Beneficiaries | 21,006 | 20,844 | 0.8% |
| Inactive Members | 9,767 | 9,573 | 2.0% |
| Total Members | 51,569 | 51,656 | (0.2%) |
| Projected Annual Salaries of Active Members | $ 1,010,938,843 | $ 995,918,683 | 1.5% |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 316,931,099 | $ 307,303,369 | 3.1% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 4,675,069,483 | $ 4,603,839,926 | 1.5% |
| b. Assets for Valuation Purposes | $ 3,788,989,089 | $ 3,641,509,766 | 4.0% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 886,080,394 | $ 962,330,160 | (7.9%) |
| d. Funded Ratio (b) / (a) | 81.0% | 79.1% | 2.4% |
| e. Market Value of Assets | $ 3,950,313,620 | $ 3,743,398,257 | 5.5% |
| f. Funded Ratio on Market Value (e) / (a) | 84.5% | 81.3% | 3.9% |
| 3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL | | | |
| Normal Cost | | | |
| Total | 7.39% | 7.59% | |
| Member | 6.00 | 6.00 | |
| Employer | 1.39 | 1.59 | |
| Amortization of Unfunded Actuarial Liability | 7.99 | 8.49 | |
| Actuarial Contribution Rate | 9.38 | 10.08 | |
| Statutory Employer Contribution Rate* | 12.57% | 13.11% | |

**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. The rate set in the December 31, 2019 valuation was recertified from 13.86 percent to 13.11 percent.*

## SUMMARY OF PRINCIPAL RESULTS – KPERS (SCHOOL)

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 87,660 | 88,953 | (1.5%) |
| Retired Members and Beneficiaries | 57,933 | 56,616 | 2.3% |
| Inactive Members | 33,215 | 32,413 | 2.5% |
| Total Members | 178,808 | 177,982 | 0.5% |
| Projected Annual Salaries of Active Members | $ 3,994,624,047 | $ 3,910,350,769 | 2.2% |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 936,499,764 | $ 899,162,177 | 4.2% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 16,384,616,149 | $ 15,900,876,965 | 3.0% |
| b. Assets for Valuation Purposes | $ 11,127,320,391 | $ 10,318,132,870 | 7.8% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 5,257,295,758 | $ 5,582,744,095 | (5.8%) |
| d. Funded Ratio (b) / (a) | 67.9% | 64.9% | 4.6% |
| e. Market Value of Assets | $ 11,582,439,853 | $ 10,590,524,379 | 9.4% |
| f. Funded Ratio on Market Value (e) / (a) | 70.7% | 66.6% | 6.2% |
| 3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL | | | |
| Normal Cost | | | |
| Total | 7.83% | 7.98% | |
| Member | 6.00 | 6.00 | |
| Employer | 1.83 | 1.98 | |
| Amortization of Unfunded Actuarial Liability | 11.55 | 11.90 | |
| Actuarial Contribution Rate | 13.38 | 13.88 | |
| Statutory Employer Contribution Rate* | 12.57% | 13.11% | |

**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. An additional contribution rate of 0.64 percent applies for Fiscal Year 2022, 0.61 percent for Fiscal Year 2023 and 0.60 percent for Fiscal Year 2024. The rate set in the December 31, 2019 valuation was recertified from 13.86 percent to 13.11 percent.*

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

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 108,456 | 110,192 | (1.6%) |
| Retired Members and Beneficiaries | 78,939 | 77,460 | 1.9% |
| Inactive Members | 42,982 | 41,986 | 2.4% |
| Total Members | 230,377 | 229,638 | 0.3% |
| Projected Annual Salaries of Active Members | $ 5,005,562,890 | $ 4,906,269,452 | 2.0% |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 1,253,430,863 | $ 1,206,465,546 | 3.9% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 21,059,685,632 | $ 20,504,716,891 | 2.7% |
| b. Assets for Valuation Purposes | $ 14,916,309,480 | $ 13,959,642,636 | 6.9% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 6,143,376,152 | $ 6,545,074,255 | (6.1%) |
| d. Funded Ratio (b) / (a) | 70.8% | 68.1% | 4.0% |
| e. Market Value of Assets | $ 15,532,753,473 | $ 14,333,922,636 | 8.4% |
| f. Funded Ratio on Market Value (e) / (a) | 73.8% | 69.9% | 5.6% |
| 3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL | | | |
| Normal Cost | | | |
| Total | 7.74% | 7.90% | |
| Member | 6.00 | 6.00 | |
| Employer | 1.74 | 1.90 | |
| Amortization of Unfunded Actuarial Liability | 10.83 | 11.21 | |
| Actuarial Contribution Rate | 12.57 | 13.11 | |
| Statutory Employer Contribution Rate* | 12.57% | 13.11% | |

**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. For the School group only, an additional contribution rate of 0.64 percent applies for Fiscal Year 2022, 0.61 percent for Fiscal Year 2023 and 0.60 percent for Fiscal Year 2024. The rate set in the December 31, 2019 valuation was recertified from 13.86 percent to 13.11 percent.*

## SUMMARY OF PRINCIPAL RESULTS – KPERS (LOCAL)

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 37,424 | 38,007 | (1.5%) |
| Retired Members and Beneficiaries | 22,702 | 22,099 | 2.7% |
| Inactive Members | 19,795 | 19,410 | 2.0% |
| Total Members | 79,921 | 79,516 | 0.5% |
| Projected Annual Salaries of Active Members | $ 1,901,233,030 | $ 1,846,129,228 | 3.0% |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 304,535,627 | $ 286,232,067 | 6.4% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 5,928,449,959 | $ 5,704,514,304 | 3.9% |
| b. Assets for Valuation Purposes | $ 4,508,889,608 | $ 4,202,428,554 | 7.3% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 1,419,560,351 | $ 1,502,085,750 | (5.5%) |
| d. Funded Ratio (b) / (a) | 76.1% | 73.7% | 3.3% |
| e. Market Value of Assets | $ 4,699,700,683 | $ 4,323,027,610 | 8.7% |
| f. Funded Ratio on Market Value (e) / (a) | 79.3% | 75.8% | 4.6% |
| 3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL | | | |
| Normal Cost | | | |
| Total | 7.26% | 7.43% | |
| Member | 6.00 | 6.00 | |
| Employer | 1.26 | 1.43 | |
| Amortization of Unfunded Actuarial Liability | 7.17 | 7.47 | |
| Actuarial Contribution Rate | 8.43 | 8.90 | |
| Statutory Employer Contribution Rate* | 8.43% | 8.90% | |

**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)

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 145,880 | 148,199 | (1.6%) |
| Retired Members and Beneficiaries | 101,641 | 99,559 | 2.1% |
| Inactive Members | 62,777 | 61,396 | 2.2% |
| Total Members | 310,298 | 309,154 | 0.4% |
| Projected Annual Salaries of Active Members | $ 6,906,795,920 | $ 6,752,398,680 | 2.3% |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 1,557,966,490 | $ 1,492,697,613 | 4.4% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 26,988,135,591 | $ 26,209,231,195 | 3.0% |
| b. Assets for Valuation Purposes | $ 19,425,199,088 | $ 18,162,071,190 | 7.0% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 7,562,936,503 | $ 8,047,160,005 | (6.0%) |
| d. Funded Ratio (b) / (a) | 72.0% | 69.3% | 3.9% |
| e. Market Value of Assets | $ 20,232,454,156 | $ 18,656,950,246 | 8.4% |
| f. Funded Ratio on Market Value (e) / (a) | 75.0% | 71.2% | 5.3% |

## SUMMARY OF PRINCIPAL RESULTS – KANSAS POLICE AND FIREMEN'S RETIREMENT SYSTEM

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 7,835 | 7,797 | 0.5% |
| Retired Members and Beneficiaries | 5,890 | 5,763 | 2.2% |
| Inactive Members | 2,007 | 1,852 | 8.4% |
| Total Members | 15,732 | 15,412 | 2.1% |
| Projected Annual Salaries of Active Members | $ 570,630,955 | $ 554,539,001 | 2.9% |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 210,666,075 | $ 201,954,477 | 4.3% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 3,721,643,474 | $ 3,577,512,085 | 4.0% |
| b. Assets for Valuation Purposes | $ 2,803,042,592 | $ 2,628,140,348 | 6.7% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 918,600,882 | $ 949,371,737 | (3.2%) |
| d. Funded Ratio (b) / (a) | 75.3% | 73.5% | 2.4% |
| e. Market Value of Assets | $ 2,918,249,554 | $ 2,696,650,789 | 8.2% |
| f. Funded Ratio on Market Value (e) / (a) | 78.4% | 75.4% | 4.0% |
| 3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL | | | |
| Normal Cost | | | |
| Total | 15.02% | 14.87% | |
| Member | 7.15 | 7.15 | |
| Employer | 7.87 | 7.72 | |
| Amortization of Unfunded Actuarial and Supplemental Liability | 14.99 | 15.27 | |
| Actuarial Contribution Rate (Local Employers) | 22.86 | 22.99 | |
| Statutory Employer Contribution Rate* | 22.86% | 22.99% | |

**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

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 244 | 257 | (5.1%) |
| Retired Members and Beneficiaries | 319 | 298 | 7.0% |
| Inactive Members | 9 | 9 | |
| Total Members | 572 | 564 | 1.4% |
| Projected Annual Salaries of Active Members | $ 28,471,730 | $ 29,066,581 | (2.0%) |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 13,783,400 | $ 12,807,544 | 7.6% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 200,523,122 | $ 195,593,331 | 2.5% |
| b. Assets for Valuation Purposes | $ 194,057,436 | $ 185,323,804 | 4.7% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 6,465,686 | $ 10,269,527 | (37.0%) |
| d. Funded Ratio (b) / (a) | 96.8% | 94.7% | 2.2% |
| e. Market Value of Assets | $ 201,931,613 | $ 189,825,166 | 6.4% |
| f. Funded Ratio on Market Value (e) / (a) | 100.7% | 97.1% | 3.7% |
| 3. EMPLOYER CONTRIBUTION RATES AS A PERCENT OF PAYROLL | | | |
| Normal Cost | | | |
| Total | 20.32% | 20.25% | |
| Member | 5.63 | 5.63 | |
| Employer | 14.69 | 14.62 | |
| Amortization of Unfunded Actuarial and Supplemental Liability | 1.79 | 3.15 | |
| Actuarial Contribution Rate | 16.48 | 17.77 | |
| Statutory Employer Contribution Rate* | 16.48% | 17.77% | |

**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

| | 12/31/2020 Valuation | 12/31/2019 Valuation | % Change |
|---|---|---|---|
| 1. PARTICIPANT DATA | | | |
| Number of: | | | |
| Active Members | 153,959 | 156,253 | (1.5%) |
| Retired Members and Beneficiaries | 107,850 | 105,620 | 2.1% |
| Inactive Members | 64,793 | 63,257 | 2.4% |
| Total Members | 326,602 | 325,130 | 0.5% |
| Projected Annual Salaries of Active Members | $ 7,505,898,605 | $ 7,336,004,262 | 2.3% |
| Annual Retirement Payments for Retired Members and Beneficiaries | $ 1,782,415,965 | $ 1,707,459,634 | 4.4% |
| 2. ASSETS AND LIABILITIES | | | |
| a. Total Actuarial Liability | $ 30,910,302,187 | $ 29,982,336,611 | 3.1% |
| b. Assets for Valuation Purposes | $ 22,422,299,116 | $ 20,975,535,342 | 6.9% |
| c. Unfunded Actuarial Liability (a) - (b) | $ 8,488,003,071 | $ 9,006,801,269 | (5.8%) |
| d. Funded Ratio (b) / (a) | 72.5% | 70.0% | 3.6% |
| e. Market Value of Assets | $ 23,352,635,323 | $ 21,543,426,201 | 8.4% |
| f. Funded Ratio on Market Value (e) / (a) | 75.5% | 71.9% | 5.0% |

# 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 PLAN PROVISIONS

KPERS 1 refers to members before July 1, 2009. KPERS 2 refers to members who either began their participation or rehired on or after July 1, 2009, but before January 1, 2015. KPERS 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 KPERS 3.

This valuation reflects the benefit structure in place as of December 31, 2020.

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

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

Benefit – KPERS 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, (KPERS 2), final average salary equals the average of the five highest years of salary, excluding additional compensation.

KPERS 3: KPERS 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. The interest rate used to calculate the current annuity factors is 5.75 percent (7.75 percent assumed investment return, minus 2.00 percent), and the mortality table used is a set of blended mortality rates from the current post-retirement mortality assumptions for KPERS members. The blended mortality rates are projected to 2030 using improvement scale MP-2016. The weighting used to blend the mortality rates is shown in the following table:

| | Members | Beneficiaries |
|---|---|---|
| State – Males | 17.5% | 42.5% |
| State – Females | 42.5% | 17.5% |
| School – Males | 7.5% | 8.5% |
| School – Females | 8.5% | 7.5% |
| Local – Males | 12.5% | 11.5% |
| Local– Females | 11.5% | 12.5% |

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 schedule follows:

| 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 6.0 percent. A schedule of historical dividend rates is contained in the following table:

| Year | Applicable Rate of Return | Compound Average | Dividend |
|---|---|---|---|
| 2016 | 8.5% | 4.3% | 0.000% |
| 2017 | 14.0% | 7.4% | 1.100% |
| 2018 | (2.9%) | 4.7% | 0.000% |
| 2019 | 17.1% | 7.1% | 0.825% |
| 2020 | 11.1% | 9.3% | 2.475% |

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

### PARTICIPATING SERVICE CREDIT

KPERS 1: Participating service credit is 1.75 percent of final average salary for years of service prior to January 1, 2014. Participating service credit is 1.85 percent of final average salary for years of service after December 31, 2013.

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

KPERS 3: Not applicable for the Cash Balance Plan.

### EARLY RETIREMENT

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

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

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

KPERS 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 – KPERS 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.

KPERS 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 Benefit – KPERS 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 1998 and the change in CPI-U less 1 percent, not to exceed 4 percent after July 1998.

**KPERS 3:** For any KPERS 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) – KPERS 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.

**KPERS 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 KPERS 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

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

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

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

## INTEREST ON MEMBER CONTRIBUTIONS

**KPERS 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 7.75 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.

**KPERS 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.

**KPERS 3:** Interest credited varies by years of service. Please refer to the KPERS 3 Benefit section under Normal Retirement in these Plan Provisions.

### 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.

**Group A:** Joined the Board of Regents prior to January 1, 1962. These members receive prior service benefits for service before 1962. The benefit is 1.00 percent of final average salary for each year of credited prior service. The final average salary is calculated using current pay as a member of the Board of Regents, if higher than pay received under KPERS. Service after 1961 is counted for purposes of determining eligibility for vesting.

**Group B:** Joined the Board of Regents after January 1, 1962, but prior to July 1, 1998. These members receive prior service benefits for service credited under KPERS. The benefit is 1.75 percent of final average salary for each year of credited prior service. The final average salary is calculated using current pay as a member of the Board of Regents, if higher than pay received under KPERS. Service after joining the Board of Regents is counted for purposes of determining eligibility for vesting.

**Group C:** Joined the Board of Regents after July 1, 1998. These members receive prior service benefits for service credited under KPERS. The benefit is 1.75 percent or 1.85 percent (as applicable under the KPERS 1 and KPERS 2 benefit provisions) of final average salary for each year of credited prior service. The final average salary is calculated using current pay as a member of the Board of Regents, if higher than pay received under KPERS. 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.

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

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

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

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

**KPERS 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 final average salary and a maximum of 90 percent of final average salary.

Tier II: Service-connected disability – 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. If the member dies prior to the conversion of the disability benefit to a service retirement benefit, the spouse's benefit will be:

- 50 percent of the member's final average salary; or
- If there are no dependent children, the benefit the member would have been entitled to if they had retired on the date of death.

In addition, an annual benefit of 10 percent of the member's final average salary would be paid for each of the member's dependent children until the earlier of age 18 (or 23 if a full-time student) or death. However, in no case would the total of benefits payable exceed 75 percent of the member's final average salary.

Tier II: Non-Service-connected disability – 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. If the member dies prior to the conversion of the disability benefit to a service retirement benefit, the member's spouse will receive a lump sum benefit equal to 50 percent of the member's final average salary at the time the member was disabled.

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

Active Member Service Connected Death – There is no age or service requirement. An annual benefit equal to the greater of the accrued retirement benefit under the 100 percent joint and survivor option and 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 90 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 0.008 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)

Upon attaining normal retirement age, members of the Kansas Highway Patrol (KHP) and Kansas Bureau of Investigation (KBI) 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, equaling either 0.0 percent or 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 | 7.75 percent |
| Price Inflation | 2.75 percent |
| Payroll Growth | 3.00 percent |
| KPERS 3 Interest Crediting Rate, Including Dividends | 6.25 percent per annum |
| Administrative Expenses | 0.18 percent of covered payroll |
| Rates of Mortality | The RP-2014 Healthy Annuitant table was first adjusted by an age setback or set forward. |
| Post-retirement | Rates were further adjusted to fit actual experience. Rates are projected into the future using Scale MP-2016. |

Starting Table

| | | |
|---|---|---|
| School Males: | RP-2014 M White Collar Healthy | +0 |
| School Females: | RP-2014 F White Collar Healthy | +0 |
| State Males: | RP-2014 M Healthy | +2 |
| State Females: | RP-2014 F Healthy | +1 |
| Local Males: | RP-2014 M Healthy | +2 |
| Local Females: | RP-2014 F Healthy | +1 |

Sample Rates (2014)

| | School | | State | | Local | |
|---|---|---|---|---|---|---|
| Age | Male | Female | Male | Female | Male | Female |
| 50 | 0.310% | 0.172% | 0.462% | 0.332% | 0.532% | 0.276% |
| 55 | 0.438% | 0.225% | 0.635% | 0.397% | 0.732% | 0.367% |
| 60 | 0.585% | 0.323% | 0.868% | 0.582% | 1.001% | 0.536% |
| 65 | 0.849% | 0.544% | 1.267% | 0.909% | 1.461% | 0.838% |
| 70 | 1.389% | 0.876% | 1.974% | 1.460% | 2.276% | 1.346% |
| 75 | 2.383% | 1.459% | 3.208% | 2.381% | 3.699% | 2.196% |
| 80 | 4.520% | 3.192% | 5.255% | 4.249% | 6.163% | 3.939% |
| 85 | 8.618% | 6.444% | 9.025% | 7.662% | 10.674% | 7.119% |
| 90 | 15.900% | 11.824% | 15.570% | 13.531% | 18.416% | 12.573% |
| 95 | 26.671% | 20.501% | 23.721% | 22.137% | 28.057% | 20.570% |
| 100 | 39.563% | 31.961% | 32.978% | 32.888% | 39.006% | 30.559% |

Pre-retirement

| | | |
|---|---|---|
| School Males: | 80% of RP-2014 M White Collar | +0 |
| School Females: | 80% of RP-2014 F White Collar | +0 |
| State Males: | 90% of RP-2014 M Total Dataset | +2 |
| State Females: | 90% of RP-2014 F Total Dataset | +1 |
| Local Males: | 90% of RP-2014 M Total Dataset | +2 |
| Local Females: | 90% of RP-2014 F Total Dataset | +1 |

Disabled Life Mortality: RP-2014 Disabled Life Table with same age adjustments as used for pre-retirement mortality tables.

Rates of Salary Increase

| | Rate of Increase* | | |
|---|---|---|---|
| Years of Service | School | State | Local |
| 1 | 11.50% | 10.00% | 10.00% |
| 5 | 6.05% | 5.10% | 5.70% |
| 10 | 4.60% | 4.40% | 4.70% |
| 15 | 4.10% | 3.90% | 4.30% |
| 20 | 3.60% | 3.60% | 4.10% |
| 25 | 3.50% | 3.50% | 3.60% |
| 30 | 3.50% | 3.50% | 3.50% |

**Includes general wage increase assumption of 3.50 percent (composed of 2.75 percent inflation and 0.75 percent productivity)*

Load for Pre-1993 Hires

State: 2.5 percent

School: 0.5 percent

Local: 2.0 percent

KPF: 7.5 percent

C55/C60: 2.5 percent

Rates of Termination

| | School | | State | | Local | |
|---|---|---|---|---|---|---|
| Duration | Male | Female | Male | Female | Male | Female |
| 0 | 20.75% | 23.00% | 21.00% | 21.50% | 23.00% | 25.00% |
| 1 | 17.25% | 18.00% | 18.00% | 19.00% | 19.00% | 22.00% |
| 2 | 13.75% | 14.50% | 15.25% | 16.50% | 16.50% | 19.00% |
| 3 | 10.75% | 11.25% | 13.50% | 14.00% | 13.50% | 15.75% |
| 4 | 8.75% | 9.75% | 12.00% | 12.00% | 11.75% | 13.50% |
| 5 | 7.50% | 8.25% | 10.75% | 10.00% | 10.00% | 12.10% |
| 6 | 6.75% | 7.25% | 9.50% | 9.00% | 9.00% | 10.25% |
| 7 | 6.00% | 6.50% | 8.50% | 8.25% | 8.00% | 9.30% |
| 8 | 5.25% | 5.50% | 7.50% | 7.50% | 7.00% | 8.50% |
| 9 | 5.00% | 5.00% | 6.50% | 7.00% | 6.30% | 7.50% |
| 10 | 4.60% | 4.50% | 5.50% | 6.50% | 5.60% | 6.70% |
| 11 | 4.30% | 4.00% | 5.00% | 6.00% | 5.20% | 6.25% |
| 12 | 4.00% | 3.50% | 4.50% | 5.50% | 4.90% | 5.75% |
| 13 | 3.75% | 3.25% | 4.25% | 5.00% | 4.60% | 5.25% |
| 14 | 3.50% | 3.00% | 4.00% | 4.60% | 4.00% | 4.75% |
| 15 | 3.25% | 2.75% | 3.80% | 4.20% | 3.80% | 4.50% |
| 16 | 3.00% | 2.50% | 3.60% | 3.90% | 3.60% | 4.25% |
| 17 | 2.75% | 2.25% | 3.40% | 3.70% | 3.40% | 4.00% |
| 18 | 2.50% | 2.00% | 3.20% | 3.20% | 3.20% | 3.80% |
| 19 | 2.25% | 1.90% | 3.00% | 3.00% | 3.00% | 3.60% |
| 20 | 2.00% | 1.80% | 2.80% | 2.80% | 2.80% | 3.40% |
| 21 | 1.75% | 1.70% | 2.60% | 2.60% | 2.60% | 3.20% |
| 22 | 1.50% | 1.60% | 2.40% | 2.40% | 2.40% | 3.00% |
| 23 | 1.25% | 1.50% | 2.20% | 2.20% | 2.20% | 2.70% |
| 24 | 1.00% | 1.40% | 2.00% | 2.00% | 2.00% | 2.40% |
| 25 | 1.00% | 1.30% | 1.80% | 1.80% | 1.80% | 2.00% |
| 26 | 1.00% | 1.20% | 1.60% | 1.60% | 1.60% | 1.75% |
| 27 | 1.00% | 1.10% | 1.40% | 1.40% | 1.40% | 1.50% |
| 28 | 1.00% | 1.00% | 1.20% | 1.20% | 1.20% | 1.25% |
| 29 | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% | 1.00% |
| 30 | 1.00% | 1.00% | 0.80% | 0.80% | 0.80% | 0.80% |
| 30+ | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |

Retirement Rates

School Members:

| | Early Retirement | | | Normal Retirement | | | Rule of 85 (Tier 1 Only) | |
|---|---|---|---|---|---|---|---|---|
| Age | Tier 1 | Tier 2 | Tier 3 | Tier 1 | Tier 2 | Tier 3 | 1St Year With 85 Points | After 1st Year With 85 Points |
| 53 | - | - | - | - | - | - | 20.0% | - |
| 54 | - | - | - | - | - | - | 20.0% | 15.0% |
| 55 | 3.0% | 3.0% | 3.0% | - | - | - | 20.0% | 15.0% |
| 56 | 3.0% | 3.0% | 3.0% | - | - | - | 22.0% | 15.0% |
| 57 | 3.0% | 3.0% | 3.0% | - | - | - | 24.0% | 15.0% |
| 58 | 3.0% | 3.0% | 3.0% | - | - | - | 26.0% | 15.0% |
| 59 | 5.0% | 5.0% | 5.0% | - | - | - | 28.0% | 20.0% |
| 60 | 10.0% | 10.0% | 5.0% | - | 35.0% | 20.0% | 35.0% | 22.0% |
| 61 | 15.0% | 15.0% | 5.0% | - | 22.0% | 15.0% | 25.0% | 22.0% |
| 62 | - | 25.0% | 5.0% | 25.0% | 25.0% | 15.0% | - | 25.0% |
| 63 | - | 22.0% | 5.0% | 22.0% | 22.0% | 15.0% | - | 22.0% |
| 64 | - | 22.0% | 5.0% | 22.0% | 22.0% | 15.0% | - | 22.0% |
| 65 | - | - | - | 35.0% | 35.0% | 30.0% | - | 35.0% |
| 66 | - | - | - | 35.0% | 35.0% | 30.0% | - | 35.0% |
| 67-74 | - | - | - | 30.0% | 30.0% | 35.0% | - | 30.0% |
| 75 | - | - | - | 100.0% | 100.0% | 100.0% | - | 100.0% |

State Members:

| | Early Retirement | | | Normal Retirement | | | Rule of 85 (Tier 1 Only) | |
|---|---|---|---|---|---|---|---|---|
| Age | Tier 1 | Tier 2 | Tier 3 | Tier 1 | Tier 2 | Tier 3 | 1St Year With 85 Points | After 1st Year With 85 Points |
| 53 | - | - | - | - | - | - | 18.0% | - |
| 54 | - | - | - | - | - | - | 18.0% | 10.0% |
| 55 | 4.0% | 4.0% | 3.0% | - | - | - | 18.0% | 10.0% |
| 56 | 4.0% | 4.0% | 3.0% | - | - | - | 18.0% | 10.0% |
| 57 | 4.0% | 4.0% | 3.0% | - | - | - | 18.0% | 10.0% |
| 58 | 5.0% | 5.0% | 3.0% | - | - | - | 18.0% | 10.0% |
| 59 | 5.0% | 5.0% | 5.0% | - | - | - | 18.0% | 10.0% |
| 60 | 5.0% | 5.0% | 5.0% | - | 18.0% | 15.0% | 18.0% | 10.0% |
| 61 | 10.0% | 10.0% | 5.0% | - | 18.0% | 10.0% | 18.0% | 15.0% |
| 62 | - | 15.0% | 5.0% | 18.0% | 18.0% | 10.0% | - | 18.0% |
| 63 | - | 15.0% | 5.0% | 18.0% | 18.0% | 10.0% | - | 18.0% |
| 64 | - | 15.0% | 5.0% | 18.0% | 18.0% | 10.0% | - | 18.0% |
| 65 | - | - | - | 30.0% | 30.0% | 25.0% | - | 30.0% |
| 66 | - | - | - | 30.0% | 30.0% | 25.0% | - | 30.0% |
| 67-72 | - | - | - | 27.0% | 27.0% | 25.0% | - | 27.0% |
| 73 | - | - | - | 20.0% | 20.0% | 25.0% | - | 20.0% |
| 74 | - | - | - | 20.0% | 20.0% | 25.0% | - | 20.0% |
| 75 | - | - | - | 100.0% | 100.0% | 100.0% | - | 100.0% |

Local Members:

| | Early Retirement | | | Normal Retirement | | | Rule of 85 (Tier 1 Only) | |
|---|---|---|---|---|---|---|---|---|
| Age | Tier 1 | Tier 2 | Tier 3 | Tier 1 | Tier 2 | Tier 3 | 1St Year With 85 Points | After 1st Year With 85 Points |
| 53 | - | - | - | - | - | - | 15.0% | - |
| 54 | - | - | - | - | - | - | 15.0% | 8.0% |
| 55 | 3.0% | 3.0% | 3.0% | - | - | - | 15.0% | 8.0% |
| 56 | 3.0% | 3.0% | 3.0% | - | - | - | 15.0% | 8.0% |
| 57 | 3.0% | 3.0% | 3.0% | - | - | - | 15.0% | 8.0% |
| 58 | 3.0% | 3.0% | 3.0% | - | - | - | 15.0% | 10.0% |
| 59 | 6.0% | 6.0% | 5.0% | - | - | - | 15.0% | 10.0% |
| 60 | 6.0% | 6.0% | 5.0% | - | 15.0% | 15.0% | 15.0% | 10.0% |
| 61 | 10.0% | 10.0% | 5.0% | - | 20.0% | 10.0% | 25.0% | 20.0% |
| 62 | - | 20.0% | 5.0% | 20.0% | 20.0% | 10.0% | - | 20.0% |
| 63 | - | 20.0% | 5.0% | 20.0% | 20.0% | 10.0% | - | 20.0% |
| 64 | - | 20.0% | 5.0% | 20.0% | 20.0% | 10.0% | - | 20.0% |
| 65 | - | - | - | 30.0% | 30.0% | 25.0% | - | 30.0% |
| 66 | - | - | - | 30.0% | 30.0% | 25.0% | - | 30.0% |
| 67-70 | - | - | - | 30.0% | 30.0% | 30.0% | - | 30.0% |
| 71-74 | - | - | - | 22.0% | 22.0% | 30.0% | - | 22.0% |
| 75 | - | - | - | 100.0% | 100.0% | 100.0% | - | 100.0% |

Inactive vested members: Earliest unreduced retirement age.

Correctional employees with an age 55 normal retirement date:

| Age | Rate |
|---|---|
| 55-59 | 10% |
| 60 | 15% |
| 61-63 | 20% |
| 64 | 35% |
| 65 | 100% |

Correctional employees with an age 60 normal retirement date -

| Age | Rate |
|---|---|
| 60 | 20% |
| 61 | 20% |
| 62 | 35% |
| 63 | 20% |
| 64 | 20% |
| 65 | 45% |
| 66 | 45% |
| 67 | 45% |
| 68 | 100% |

TIAA employees: Age 66.

Rates of Disability

| Age | School | State | Local |
|---|---|---|---|
| 25 | 0.017% | 0.015% | 0.015% |
| 30 | 0.019% | 0.043% | 0.033% |
| 35 | 0.023% | 0.067% | 0.049% |
| 40 | 0.039% | 0.130% | 0.072% |
| 45 | 0.075% | 0.195% | 0.126% |
| 50 | 0.123% | 0.260% | 0.182% |
| 55 | 0.166% | 0.325% | 0.217% |
| 60 | 0.238% | 0.358% | 0.266% |

Indexation of Final Average Salary for Disabled Members 1.75 percent per year

Probability of Vested Members Leaving Contributions With System

KPERS 1:

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

KPERS 2: Members are assumed to elect to take a refund if it is more valuable than the deferred annuity. The comparison is based on 7.75 percent interest and a 50 percent Male/50 percent Female blend of the RP-2014 Mortality Table, projected to 2045 (static).

KPERS 3: 100 percent of vested members are assumed to leave their contributions with the System.

Marriage Assumption: 70 percent of all members are assumed married with male spouse assumed to be three years older than the female.

Partial Lump Sum Option (PLSO): 40 percent of KPERS 1 and KPERS 2 members are assumed to take a PLSO equal to 30 percent of the value of their benefit upon retirement. 100 percent of KPERS 3 members are assumed to take a PLSO equal to 30 percent of the value of their benefit upon retirement.

PLSO Factors: Interest Rate: 7.75 percent

Mortality: SOA 1983 Group Annuity Mortality Table, blended 50 percent male and 50 percent female.

# ASSUMPTIONS AND METHODS – KP&F

| | |
|---|---|
| Rate of Investment Return | 7.75 percent |
| Price Inflation | 2.75 percent |
| Payroll Growth | 3.00 percent |
| Administrative Expenses | 0.18 percent of covered payroll |
| Rates of Mortality | Mortality rates are projected into the future using Scale MP-2016 |
| Post-retirement | RP-2014 Total Dataset Table, set forward one year |
| Pre-retirement | 90 percent of the RP-2014 Total Dataset Table, set forward one year* |

**70 percent of preretirement deaths assumed to be service related.*

Disabled Life Mortality: RP-2014 Disabled Life Table, set forward one year

Rates of Salary Increase

| Years of Service | Rate of Increase* |
|---|---|
| 1 | 12.0% |
| 5 | 6.5% |
| 10 | 4.4% |
| 15 | 3.8% |
| 20 | 3.5% |
| 25 | 3.5% |

**Includes general wage increase assumption of 3.50 percent (composed of 2.75 percent inflation and 0.75 percent productivity)*

Rates of Termination

| Years of Service | Rate |
|---|---|
| 1 | 11.0% |
| 5 | 6.0% |
| 10 | 2.8% |
| 15 | 1.8% |
| 20 | 1.1% |
| 25 | 0.0% |

Retirement Rates

Tier 1:

| Early Retirement | | Normal Retirement | |
|---|---|---|---|
| Age | Rate | Age | Rate |
| 50 | 5% | 55 | 35% |
| 51 | 7% | 56 | 30% |
| 52 | 7% | 57 | 30% |
| 53 | 15% | 58 | 35% |
| 54 | 30% | 59 | 30% |
| | | 60 | 30% |
| | | 61 | 35% |
| | | 62 | 100% |

Tier 2:

| Early Retirement | | Normal Retirement | |
|---|---|---|---|
| Age | Rate | Age | Rate |
| 50 | 10% | 50 | 30% |
| 51 | 10% | 51 | 25% |
| 52 | 10% | 52 | 25% |
| 53 | 10% | 53 | 25% |
| 54 | 20% | 54 | 25% |
| | | 55 | 25% |
| | | 56 | 25% |
| | | 57 | 25% |
| | | 58 | 20% |
| | | 59 | 30% |
| | | 60 | 25% |
| | | 61 | 25% |
| | | 62 | 30% |
| | | 63 | 30% |
| | | 64 | 30% |
| | | 65 | 100% |

Inactive Vested

Earliest unreduced retirement age.

Rates of Disability

| Age | Rate* |
|---|---|
| 22 | 0.04% |
| 27 | 0.07% |
| 32 | 0.15% |
| 37 | 0.35% |
| 42 | 0.56% |
| 47 | 0.76% |
| 52 | 0.96% |
| 57 | 1.00% |

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

Marriage Assumption

80 percent of all members are assumed married with male spouse assumed to be three years older than female. When an active member dies, they have no child beneficiaries.

DROP Election

75 percent of Kansas Highway Patrol and Kansas Bureau of Investigation members are assumed to enter DROP for the maximum DROP period.

It is assumed that no members enter DROP with less than 25 years of service.

Interest Credited on DROP Accounts

3 percent, compounded annually.

# ASSUMPTIONS AND METHODS – JUDGES

| | |
|---|---|
| Rate of Investment Return | 7.75 percent |
| Price Inflation | 2.75 percent |
| Administrative Expenses | 0.18 percent of covered payroll |
| Rates of Mortality | Mortality rates are projected into the future using Scale MP-2016. |
| Post-retirement | RP-2014 Total Dataset Table, set back two years |
| Pre-retirement | 80 percent of RP-2014 Total Dataset Table, set back two years |
| Rates of Salary Increase | 4.00 percent |
| Rates of Termination | None assumed |
| Disabled Life Mortality | RP-2014 Disabled Retiree Table, set back two years |
| Rates of Disability | None assumed |

Retirement Rates

| Age | Rate |
|---|---|
| 62 | 15% |
| 63-64 | 10% |
| 65-66 | 33% |
| 67-69 | 15% |
| 70+ | 100% |

Marriage Assumption: 70 percent of all members are assumed married with male spouse assumed to be three 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 three 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 |
| KPF | 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 | $ 24,700 |
| KPF | $ 36,100 |
| Judges | $ 79,100 |

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.

KPERS 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 entry age normal 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.

   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., a 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 scheduled statutory contribution rates and expected payroll in the intervening years.

   For valuations beginning with December 31, 2016 and following, the unfunded actuarial liability is amortized using a "layered" approach. The unfunded actuarial liability in the December 31, 2015 valuation, which was projected to June 30, 2018 for the State/School and Judges groups and to December 31, 2017 for the Local and KP&F groups, serves as the initial or "legacy" amortization base and continues to be amortized over the original period, set at 40 years beginning July 1, 1993 (12 years in the December 31, 2020 valuation). The change in the unfunded actuarial liability, resulting from the assumption changes reflected in the 2016 and 2019 valuations, was amortized over a closed 25-year period. Changes in the unfunded actuarial liability that result from actuarial experience each year (gains and losses) are amortized over a closed 20-year period that begins with the fiscal year in which the contribution rates will apply.

   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 3 percent so the annual amortization payments will increase 3 percent each year. As a result, if total payroll grows 3 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 net rate of return) on the market value of assets is calculated each year and recognized equally over a five-year period.

## SCHEDULE 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) |
|---|---|---|---|---|---|---|
| 12/31/11 | $ 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 | 9,765,905 | 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 | 8,539,204 | 67 | 6,603,613 | 129 |
| 12/31/16 | 18,256,373 | 27,317,754 | 9,061,381 | 67 | 6,650,451 | 136 |
| 12/31/17 | 19,246,613 | 28,153,827 | 8,907,214 | 68 | 6,744,301 | 132 |
| 12/31/18 | 19,898,330 | 29,100,136 | 9,201,806 | 68 | 7,048,621 | 131 |
| 12/31/19 | 20,975,535 | 29,982,337 | 9,006,802 | 70 | 7,336,004 | 123 |
| 12/31/20 | 22,422,299 | 30,910,302 | 8,488,003 | 73 | 7,505,899 | 113 |

## SHORT TERM SOLVENCY TEST

*Last Ten Years as of December 31*

| Valuation Date | Member Contributions | Retirants and Beneficiaries | Active Member Employer Financed Portion | Actuarial Value of Assets | Portions of Accrued Liabilities Covered by Assets | | |
|---|---|---|---|---|---|---|---|
| | (A) | (B) | (C) | | (A) | (B) | (C) |
| 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 | - |
| 12/31/16 | 6,008,633,568 | 14,095,278,126 | 7,213,842,679 | 18,256,373,273 | 100 | 87 | - |
| 12/31/17 | 6,008,405,879 | 14,751,711,502 | 7,393,709,608 | 19,246,613,272 | 100 | 90 | - |
| 12/31/18 | 6,132,527,315 | 15,401,874,720 | 7,565,734,390 | 19,898,329,527 | 100 | 89 | - |
| 12/31/19 | 6,298,997,993 | 15,982,142,480 | 7,701,196,138 | 20,975,535,342 | 100 | 92 | - |
| 12/31/20 | 6,440,728,342 | 16,664,329,950 | 7,805,243,895 | 22,422,299,116 | 100 | 96 | - |

## SCHEDULE OF ACTIVE MEMBER VALUATION DATA[1]

*Last Ten Years as of December 31*

| Valuation Date | Number of Active Members | Percentage Change in Membership | Number of Participating Employers | Percentage Increase in Number of Participating Employers | Total Annual Payroll (in millions) | Average Payroll | Percentage Increase in Average Payroll |
|---|---|---|---|---|---|---|---|
| 12/31/11 | 155,054 | (1.90%) | 1,504 | (0.50%) | $ 6,401 | $ 41,285 | 0.40% |
| 12/31/12 | 156,053 | 0.60 | 1,506 | 0.10 | 6,499 | 41,646 | 0.90 |
| 12/31/13 | 155,446 | (0.40) | 1,508 | 0.10 | 6,510 | 41,878 | 0.60 |
| 12/31/14 | 154,203 | (0.80) | 1,518 | 0.70 | 6,560 | 42,542 | 1.60 |
| 12/31/15 | 152,175 | (1.30) | 1,517 | (0.10) | 6,603 | 43,395 | 2.00 |
| 12/31/16 | 152,119 | (0.04) | 1,515 | (0.10) | 6,650 | 43,719 | 0.80 |
| 12/31/17 | 151,687 | (0.30) | 1,523 | 0.50 | 6,744 | 44,462 | 1.70 |
| 12/31/18 | 154,055 | 1.60 | 1,526 | 0.20 | 7,048 | 45,754 | 2.90 |
| 12/31/19 | 156,253 | 1.43 | 1,534 | 0.52 | 7,336 | 46,950 | 2.61 |
| 12/31/20 | 153,959 | (1.47) | 1,536 | 0.13 | 7,506 | 48,753 | 3.84 |

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

## MEMBERSHIP PROFILE

*Last Ten Years as of December 31*

| Valuation Date | Active | Inactive | Retirees & Beneficiaries | Total Membership |
|---|---|---|---|---|
| 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 |
| 12/31/16 | 152,119 | 55,755 | 97,547 | 305,421 |
| 12/31/17 | 151,687 | 59,966 | 100,575 | 312,228 |
| 12/31/18 | 154,055 | 61,495 | 103,216 | 318,766 |
| 12/31/19 | 156,253 | 63,257 | 106,058 | 325,568 |
| 12/31/20 | 153,959 | 64,793 | 108,400 | 327,152 |

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

*Last Ten Fiscal Years*

| | | Additions | | Deletions | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Year | Number at Beginning of Year | Number Added | Annual Allowances | Number Removed | Annual Allowances | Number at End of Year | Percentage Change in Number of Retirants | Percentage Change in Additions Allowances | Average Annual Allowance | Year-End Annual Allowances |
| 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 |
| 6/30/17 | 96,150 | 6,252 | 108,364,288 | 3,203 | 32,500,089 | 99,199 | 3.20 | 3.70 | 16,179 | 1,604,984,334 |
| 6/30/18 | 99,199 | 6,164 | 108,928,173 | 4,788 | 36,466,045 | 100,575 | 1.42 | 3.20 | 16,700 | 1,679,587,567 |
| 6/30/19 | 100,575 | 6,180 | 112,564,089 | 3,371 | 37,385,700 | 103,384 | 2.82 | 1.42 | 16,904 | 1,747,623,791 |
| 6/30/20 | 103,384 | 5,946 | 113,015,303 | 3,241 | 39,376,802 | 106,058 | 2.59 | 2.79 | 17,242 | 1,828,655,721 |
| 6/30/21 | 106,058 | 6,810 | 127,741,773 | 4,171 | 48,133,609 | 108,697 | 2.49 | 2.59 | 17,632 | 1,916,524,189 |

## SUMMARY OF MEMBERSHIP DATA

| Retiree and Beneficiary Member Valuation Data [1] | | 12/31/20 | | 12/31/19 |
|---|---|---|---|---|
| **KPERS** | | | | |
| Number | | 101,641 | | 99,559 |
| Average Benefit | $ | 15,328 | $ | 14,993 |
| Average Age | | 72.79 | | 72.79 |
| **Police & Fire** | | | | |
| Number | | 5,890 | | 5,763 |
| Average Benefit | $ | 35,767 | $ | 35,043 |
| Average Age | | 66.24 | | 66.1 |
| **Judges** | | | | |
| Number | | 319 | | 298 |
| Average Benefit | $ | 43,208 | $ | 42,978 |
| Average Age | | 75.24 | | 75.36 |
| **System Total** | | | | |
| Number | | 107,850 | | 105,620 |
| Average Benefit | $ | 16,527 | $ | 16,166 |
| Average Age | | 72.56 | | 72.43 |

| Active Member Valuation Data [1] | | 12/31/20 | | 12/31/19 |
|---|---|---|---|---|
| **KPERS** | | | | |
| Number | | 145,880 | | 148,199 |
| Average Current Age | | 44.95 | | 45.03 |
| Average Service | | 10.92 | | 10.83 |
| Average Pay | $ | 47,346 | $ | 45,563 |
| **Police & Fire** | | | | |
| Number | | 7,835 | | 7,797 |
| Tier I | | 24 | | 41 |
| Tier II | | 36 | | 7,731 |
| DROP | | 7775 | | 25 |
| Average Current Age | | 38.73 | | 38.8 |
| Average Service | | 10.88 | | 10.92 |
| Average Pay | $ | 72,831 | $ | 71,122 |
| **Judges** | | | | |
| Number | | 244 | | 257 |
| Average Current Age | | 57.41 | | 58.09 |
| Average Service | | 10.52 | | 11.11 |
| Average Pay | $ | 116,687 | $ | 113,100 |
| **System Total** | | | | |
| Number | | 153,959 | | 156,253 |
| Average Current Age | | 44.66 | | 44.74 |
| Average Service | | 10.92 | | 10.84 |
| Average Pay | $ | 48,753 | $ | 46,950 |

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

## SCHEDULE OF EMPLOYER CONTRIBUTION RATES

*Last Ten Fiscal Years (1)*

### KPERS State/School

| Fiscal Year | Actuarial Rate | Actual Rate |
|---|---|---|
| 2012 | 14.09% | 8.77% |
| 2013 | 13.46 | 9.37 |
| 2014 | 13.83 | 10.27 |
| 2015[2] | 14.34 | 11.27/8.65 |
| 2016 | 14.95 | 10.91 |
| 2017 | 14.85 | 10.81 |
| 2018 | 14.89 | 12.01 |
| 2019 | 13.23 | 13.21 |
| 2020 | 14.74 | 14.41 |
| 2021 | 14.23 | 14.23 |

### KPERS Local

| Fiscal Year | Actuarial Rate | Actual Rate |
|---|---|---|
| 2012 | 9.44% | 7.34% |
| 2013 | 9.43 | 7.94 |
| 2014 | 9.77 | 8.84 |
| 2015 | 9.48 | 9.48 |
| 2016 | 9.18 | 9.18 |
| 2017 | 8.46 | 8.46 |
| 2018 | 8.39 | 8.39 |
| 2019 | 8.89 | 8.89 |
| 2020 | 8.61 | 8.61 |
| 2021 | 8.87 | 8.87 |

### KP&F Uniform Rate

| Fiscal Year | Actuarial Rate | Actual Rate |
|---|---|---|
| 2012 | 16.54% | 16.54% |
| 2013 | 17.26 | 17.26 |
| 2014 | 19.92 | 19.92 |
| 2015 | 21.36 | 21.36 |
| 2016 | 20.42 | 20.42 |
| 2017 | 19.03 | 19.03 |
| 2018 | 20.09 | 20.09 |
| 2019 | 22.13 | 22.13 |
| 2020 | 21.93 | 21.93 |
| 2021 | 22.80 | 22.80 |

### Judges

| Fiscal Year | Actuarial Rate | Actual Rate |
|---|---|---|
| 2012 | 21.28% | 21.28% |
| 2013 | 23.75 | 23.75 |
| 2014 | 23.62 | 23.62 |
| 2015 | 22.59 | 22.59 |
| 2016 | 23.98 | 23.98 |
| 2017 | 21.36 | 21.36 |
| 2018 | 15.89 | 15.89 |
| 2019 | 14.68 | 14.68 |
| 2020 | 18.65 | 18.65 |
| 2021 | 17.26 | 17.26 |

*(1) Rates shown for KPERS State/School, 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 have been restated to exclude Group Life and Disability insurance premiums.*

*(2) Due to budget constraints, the Governor used the allotment procedure and reduced the State/School KPERS employer combined contribution rate to 8.65 percent for the second half of the 2015 fiscal year.*

# **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 and retirement benefits. The schedules beginning on this page through page 119 provide revenues, expenses and funding status information for the past ten years for the pension plan. On page 120, a schedule shows the total benefits and type of refunds that were paid.

On pages 121 through 125, various schedules are presented to depict the level of monthly benefits by number of retirees, retirement type and options and years of service. Starting on page 126, 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 annual comprehensive financial reports, unless otherwise indicated.

## REVENUES BY SOURCE

*Last Ten Fiscal Years*

| | Contributions | | | | |
|---|---|---|---|---|---|
| Fiscal Year | Member | Employer | Miscellaneous | Net Investment Income | Total |
| 2012 | $ 291,894,311 | $ 568,015,364 | $ 129,622 | $ 89,045,782 | $ 949,085,079 |
| 2013 | 300,471,480 | 617,925,370 | 537,741 | 1,747,230,627 | 2,666,165,218 |
| 2014 | 332,163,439 | 701,818,160 | 241,743 | 2,553,842,632 | 3,588,065,974 |
| 2015 | 382,057,886 | 690,564,482 | 1,076,946 | 561,194,353 | 1,634,893,667 |
| 2016 (1) | 404,856,265 | 1,739,183,965 | 2,906,188 | 49,169,897 | 2,196,116,315 |
| 2017 | 414,537,657 | 761,610,061 | 1,071,115 | 2,060,925,477 | 3,238,144,310 |
| 2018 | 420,284,941 | 887,734,800 | 5,733,655 | 1,516,929,281 | 2,830,682,677 |
| 2019 | 437,352,839 | 1,138,895,032 | 5,488,299 | 1,216,685,443 | 2,798,421,613 |
| 2020 | 451,568,458 | 1,059,543,667 | 20,699,113 | 347,463,816 | 1,879,275,054 |
| 2021 | 459,313,973 | 1,007,571,241 | 19,967,235 | 5,185,033,888 | 6,671,886,337 |

*(1) The State of Kansas issued $1 billion in pension obligation bonds, Series 2015H, in August 2015.*

## BENEFITS BY TYPE

*Last Ten Fiscal Years*

| Fiscal Year | Monthly Retirement Benefits | Retirement Dividend | Death Benefits | Refund of Contributions Separations | Refund of Contributions Deaths |
|---|---|---|---|---|---|
| 2012 | $ 1,234,350,781 | $ 3,209,118 | $ 9,414,234 | $ 49,665,542 | $ 6,231,284 |
| 2013 | 1,286,133,859 | 2,852,658 | 9,458,321 | 48,265,870 | 5,633,961 |
| 2014 | 1,363,636,798 | 2,536,984 | 9,702,485 | 49,947,483 | 7,023,286 |
| 2015 | 1,447,659,817 | 2,238,261 | 10,019,588 | 57,187,901 | 7,274,097 |
| 2016 | 1,546,424,413 | 1,938,441 | 10,545,850 | 62,141,534 | 5,981,201 |
| 2017 | 1,603,302,992 | 1,681,412 | 11,210,914 | 63,915,235 | 6,565,825 |
| 2018 | 1,678,136,889 | 1,450,678 | 11,299,715 | 58,339,135 | 6,627,827 |
| 2019 | 1,746,382,699 | 1,241,092 | 11,357,122 | 68,199,860 | 6,116,462 |
| 2020 | 1,827,588,769 | 1,066,952 | 11,263,225 | 58,076,648 | 8,851,960 |
| 2021 | 1,915,616,690 | 907,500 | 13,809,622 | 68,143,781 | 8,503,793 |

## EXPENSES BY TYPE

*Last Ten Fiscal Years*

| Fiscal Year | Benefits | Refund of Contributions Separations | Refund of Contributions Death | Administration | Uncollectable Pension Contributions (1) | Total |
|---|---|---|---|---|---|---|
| 2012 | $ 1,246,974,132 | $ 49,665,542 | $ 6,231,284 | $ 9,620,933 | $ - | $ 1,312,491,891 |
| 2013 | 1,298,444,838 | 48,265,870 | 5,633,961 | 10,426,813 | - | 1,362,771,482 |
| 2014 | 1,375,876,267 | 49,947,483 | 7,023,286 | 9,703,808 | - | 1,442,550,844 |
| 2015 | 1,459,917,666 | 57,187,901 | 7,274,097 | 10,789,271 | - | 1,535,168,935 |
| 2016 | 1,558,908,704 | 62,141,534 | 5,981,201 | 12,171,633 | - | 1,639,203,072 |
| 2017 | 1,616,195,248 | 63,915,235 | 6,565,825 | 11,116,172 | 98,943,780 | 1,796,736,260 |
| 2018 | 1,690,887,282 | 58,339,135 | 6,627,827 | 12,459,619 | - | 1,768,313,863 |
| 2019 | 1,758,980,913 | 68,199,860 | 6,116,462 | 13,279,726 | - | 1,846,576,961 |
| 2020 | 1,839,918,946 | 58,076,648 | 8,851,960 | 13,607,382 | - | 1,920,454,936 |
| 2021 | 1,930,333,812 | 68,143,781 | 8,503,793 | 17,183,637 | - | 2,024,165,023 |

*(1) In the 2017 Legislative session, Sub for HB 2052 eliminated the repayment of delayed Fiscal Year 2016 contributions. The receivable was written off in Fiscal Year 2017. In the 2019 Legislative session, legislation was passed to pay the Fiscal Year 2016 contributions with interest, $115 million was received.*

# CHANGES IN NET POSITION

*Last Ten Fiscal Years*

| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Additions** | | | | | | | | | | |
| Contributions | | | | | | | | | | |
| Member Contributions | $ 459,313,973 | $ 451,568,458 | $ 437,352,839 | $ 420,284,941 | $ 414,537,657 | $ 404,856,265 | $ 382,057,886 | $ 332,163,439 | $ 300,501,667 | $ 291,901,525 |
| Employer Contributions | 1,007,571,241 | 1,059,543,667 | 1,138,895,032 | 887,734,800 | 761,610,061 | 1,739,183,965 | 690,564,482 | 701,818,160 | 617,925,370 | 568,015,364 |
| **Total Contributions** | 1,466,885,214 | 1,511,112,125 | 1,576,247,871 | 1,308,019,741 | 1,176,147,718 | 2,144,040,230 | 1,072,622,368 | 1,033,981,599 | 918,427,037 | 859,916,889 |
| **Investments** | | | | | | | | | | |
| Net Appreciation (Depreciation) | | | | | | | | | | |
| in Fair Value of Investments | 4,865,677,791 | (9,577,522) | 798,206,290 | 1,145,750,895 | 1,708,585,923 | (267,355,951) | 263,094,676 | 2,267,287,461 | 1,490,141,704 | (132,729,256) |
| Interest | 133,831,909 | 152,608,428 | 162,200,077 | 143,874,114 | 125,024,597 | 137,732,569 | 132,688,575 | 104,382,643 | 100,530,311 | 103,584,321 |
| Dividends | 195,697,077 | 206,409,770 | 240,616,896 | 219,737,719 | 196,065,374 | 160,160,990 | 140,607,740 | 165,226,153 | 153,201,135 | 110,902,858 |
| Real Estate Income, | | | | | | | | | | |
| Net of Operating Expenses | 101,335,088 | 93,651,199 | 106,326,053 | 94,853,455 | 91,728,610 | 79,977,708 | 75,353,304 | 62,989,928 | 39,973,754 | 44,259,544 |
| Other Investment Income | 33,153,081 | 17,622,755 | 16,525,693 | 14,706,420 | 13,394,069 | 9,562,040 | 10,573,421 | - | - | 436,311 |
| | 5,329,694,946 | 460,714,630 | 1,323,875,009 | 1,618,922,603 | 2,134,798,573 | 120,077,356 | 622,317,716 | 2,599,886,185 | 1,783,846,904 | 126,453,778 |
| Less Investment Expense | (144,661,058) | (113,250,814) | (107,189,566) | (101,993,321) | (73,873,096) | (70,907,459) | (65,240,875) | (51,653,134) | (42,584,786) | (42,225,663) |
| **Net Investment Income** | 5,185,033,888 | 347,463,816 | 1,216,685,443 | 1,516,929,282 | 2,060,925,477 | 49,169,897 | 557,076,841 | 2,548,233,051 | 1,741,262,118 | 84,228,115 |
| **From Securities Lending Activities** | | | | | | | | | | |
| Securities Lending Income | - | - | - | - | - | - | 3,932,462 | 5,255,071 | 4,827,054 | 4,353,102 |
| Securities Lending Expenses | | | | | | | | | | |
| Borrower Rebates | - | - | - | - | - | - | 648,826 | 1,501,910 | 2,450,894 | 1,769,773 |
| Management Fees | - | - | - | - | - | - | (463,776) | (1,147,400) | (1,309,439) | (1,305,208) |
| **Total Securities Lending** | | | | | | | | | | |
| **Activities Expense** | - | - | - | - | - | - | 185,050 | 354,510 | 1,141,455 | 464,565 |
| **Net Income from Security** | | | | | | | | | | |
| **Lending Activities** | - | - | - | - | - | - | 4,117,512 | 5,609,581 | 5,968,509 | 4,817,667 |
| **Total Net Investment Income** | 5,185,033,888 | 347,463,816 | 1,216,685,443 | 1,516,929,282 | 2,060,925,477 | 49,169,897 | 561,194,353 | 2,553,842,632 | 1,747,230,627 | 89,045,782 |
| **Other Miscellaneous Income** | 19,967,235 | 20,699,113 | 5,488,299 | 5,733,655 | 1,071,115 | 2,904,581 | 1,076,391 | 241,438 | 533,842 | 127,412 |
| **Total Additions** | | | | | | | | | | |
| **Plan Net Position** | 6,671,886,337 | 1,879,275,054 | 2,798,421,613 | 2,830,682,678 | 3,238,144,310 | 2,196,114,708 | 1,634,893,112 | 3,588,065,668 | 2,666,191,506 | 949,090,083 |
| **Deductions** | | | | | | | | | | |
| Monthly Retirement Benefits | (1,916,524,189) | (1,828,655,721) | (1,747,623,791) | (1,679,587,567) | (1,604,984,334) | (1,548,362,854) | (1,449,898,078) | (1,366,173,782) | (1,288,986,517) | (1,237,559,898) |
| Refunds of Contributions | (76,647,575) | (66,928,608) | (74,316,322) | (64,966,962) | (70,481,060) | (68,122,735) | (64,461,998) | (56,970,769) | (53,899,831) | (55,896,826) |
| Death Benefits | (13,809,622) | (11,263,225) | (11,357,122) | (11,299,715) | (11,210,914) | (10,545,850) | (10,019,588) | (9,702,485) | (9,458,321) | (9,414,234) |
| Administrative Expenses | (17,183,637) | (13,607,382) | (13,279,726) | (12,459,620) | (11,116,172) | (12,171,633) | (10,789,271) | (9,634,863) | (10,426,813) | (9,620,933) |
| Uncollectable Pension | | | | | | | | | | |
| Contributions | - | - | - | - | (98,943,780) | - | - | - | - | - |
| **Total Deductions to** | | | | | | | | | | |
| **Plan Net Position** | (2,024,165,023) | (1,920,454,936) | (1,846,576,961) | (1,768,313,864) | (1,796,736,260) | (1,639,203,072) | (1,535,168,935) | (1,442,481,899) | (1,362,771,482) | (1,312,491,891) |
| **Change in Net Position** | $ 4,647,721,314 | $ (41,179,882) | $ 951,844,652 | $ 1,062,368,814 | $ 1,441,408,050 | $ 556,911,636 | $ 99,724,177 | $ 2,145,583,769 | $ 1,303,420,023 | $ (363,401,808) |

## BENEFIT AND REFUND DEDUCTIONS FROM NET POSITION BY TYPE

*Last Ten Fiscal Years*

| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Type of Benefit** | | | | | | | | | | |
| Age and Service Benefits: | | | | | | | | | | |
| Retirees | $ 1,828,132,888 | $ 1,743,975,045 | $ 1,667,501,420 | $ 1,602,718,657 | $ 1,531,384,982 | $ 1,478,101,413 | $ 1,383,140,272 | $ 1,302,838,465 | $ 1,228,537,001 | $ 1,180,214,270 |
| Survivors | 87,483,802 | 83,613,724 | 80,122,371 | 76,868,910 | 73,599,352 | 70,261,441 | 66,757,806 | 63,335,317 | 60,449,516 | 57,345,628 |
| Death in Service Benefits | 13,809,622 | 11,263,225 | 11,357,122 | 11,299,715 | 11,210,914 | 10,545,850 | 10,019,588 | 9,702,485 | 9,458,321 | 9,414,234 |
| **Total Benefits** | $ 1,929,426,312 | $ 1,838,851,994 | $ 1,758,980,913 | $ 1,690,887,282 | $ 1,616,195,248 | $ 1,558,908,704 | $ 1,459,917,666 | $ 1,375,876,267 | $ 1,298,444,838 | $ 1,246,974,132 |
| **Type of Refund** | | | | | | | | | | |
| Death | $ 8,503,794 | $ 8,851,960 | $ 6,116,462 | $ 6,627,827 | $ 6,643,401 | $ 5,981,201 | $ 7,274,097 | $ 7,023,286 | $ 5,633,961 | $ 6,231,284 |
| Separation | 68,143,781 | 58,076,648 | 68,199,860 | 58,339,135 | 63,837,659 | 62,141,534 | 57,187,901 | 49,947,483 | 48,265,870 | 49,665,542 |
| **Total Refunds** | $ 76,647,575 | $ 66,928,608 | $ 74,316,322 | $ 64,966,962 | $ 70,481,060 | $ 68,122,735 | $ 64,461,998 | $ 56,970,769 | $ 53,899,831 | $ 55,896,826 |

## HIGHLIGHT OF OPERATIONS

*Last Ten Fiscal Years*

| | 2021 | 2020 | 2019 | 2018 | 2017 | 2016 | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Membership Composition** | | | | | | | | | | |
| Number of Retirants | 99,617 | 97,570 | 94,869 | 92,101 | 89,284 | 87,103 | 83,911 | 80,900 | 77,727 | 74,665 |
| Number of Survivors (1) | 8,233 | 8,050 | 7,864 | 7,706 | 7,490 | 7,230 | 6,996 | 6,770 | 6,591 | 6,360 |
| New Retirants During the Fiscal Year | 5,583 | 5,584 | 5,548 | 5,534 | 4,277 | 6,494 | 6,419 | 6,022 | 6,071 | 6,941 |
| Active and Inactive Members (2) | 218,752 | 219,510 | 215,550 | 211,653 | 207,874 | 205,334 | 204,458 | 202,930 | 202,022 | 200,732 |
| Participating Employers | 1,536 | 1,534 | 1,526 | 1,523 | 1,515 | 1,517 | 1,518 | 1,508 | 1,506 | 1,504 |
| **Financial Results (in millions)** | | | | | | | | | | |
| Member Contributions | $ 459 | $ 452 | $ 437 | $ 420 | $ 415 | $ 405 | $ 382 | $ 332 | $ 301 | $ 292 |
| Employer Contributions (3) | 1,008 | 1,060 | 1139 | 888 | 762 | 1,781 | 691 | 702 | 617 | 568 |
| Retirement/Death Benefits | 1,930 | 1,840 | 1,759 | 1,691 | 1,616 | 1,559 | 1,460 | 1,376 | 1,298 | 1,247 |
| Investment Income | 5,185 | 347 | 1,217 | 1,517 | 2,061 | 49 | 561 | 2,554 | 1,747 | 89 |
| **Employer Contribution Rate** | | | | | | | | | | |
| KPERS--State/School | 14.23% | 14.41% | 13.21% | 12.01% | 10.81% | 10.91% | 11.27% | 10.27% | 9.37% | 8.77% |
| | | | | | | | 8.65% | | | |
| KPERS--Local (4) | 8.87 | 8.61 | 8.89 | 8.39 | 8.46 | 9.18 | 9.48 | 8.84 | 7.94 | 7.34 |
| KP&F (Uniform Participating) (4) | 22.80 | 21.93 | 22.13 | 20.09 | 19.03 | 20.42 | 21.36 | 19.92 | 17.26 | 16.54 |
| Judges | 17.26 | 18.65 | 14.68 | 15.89 | 21.36 | 23.98 | 22.59 | 23.62 | 23.75 | 21.28 |
| **Unfunded Actuarial Liability (in millions)** | | | | | | | | | | |
| KPERS--State/School | $ 6,143 | $ 6,545 | $ 6,756 | $ 6,581 | $ 6,690 | $ 6,276 | $ 7,244 | $ 7,351 | $ 7,658 | $ 6,920 |
| KPERS--Local | 1,420 | 1,502 | 1,502 | 1,458 | 1,515 | 1,486 | 1,488 | 1,590 | 1,699 | 1,542 |
| KP&F | 919 | 949 | 933 | 860 | 846 | 772 | 726 | 803 | 866 | 739 |
| Judges | 6 | 10 | 11 | 8 | 11 | 6 | 11 | 21 | 29 | 27 |
| **Funding Ratios (5)** | | | | | | | | | | |
| KPERS--State/School | 70.80% | 68.10% | 66.10% | 66.00% | 64.50% | 65.20% | 58.80% | 57.00% | 53.90% | 56.80% |
| KPERS--Local | 76.10 | 73.70 | 72.70 | 72.50 | 70.30 | 69.10 | 67.40 | 63.70 | 59.50 | 61.20 |
| KP&F | 75.30 | 73.50 | 73.00 | 74.10 | 73.40 | 74.00 | 74.10 | 70.30 | 66.50 | 69.80 |
| Judges | 96.80 | 94.70 | 94.40 | 95.90 | 93.90 | 96.40 | 93.50 | 86.90 | 81.40 | 82.50 |

*(1) This is the number of joint annuiants as of December 31st, per the System's records.*

*(2) Membership information taken from System's actuarial valuation.*

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

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

*(5) The funding percentage indicates the actuarial soundess of the System. Generally, the greater the percentage, the stronger the System.*

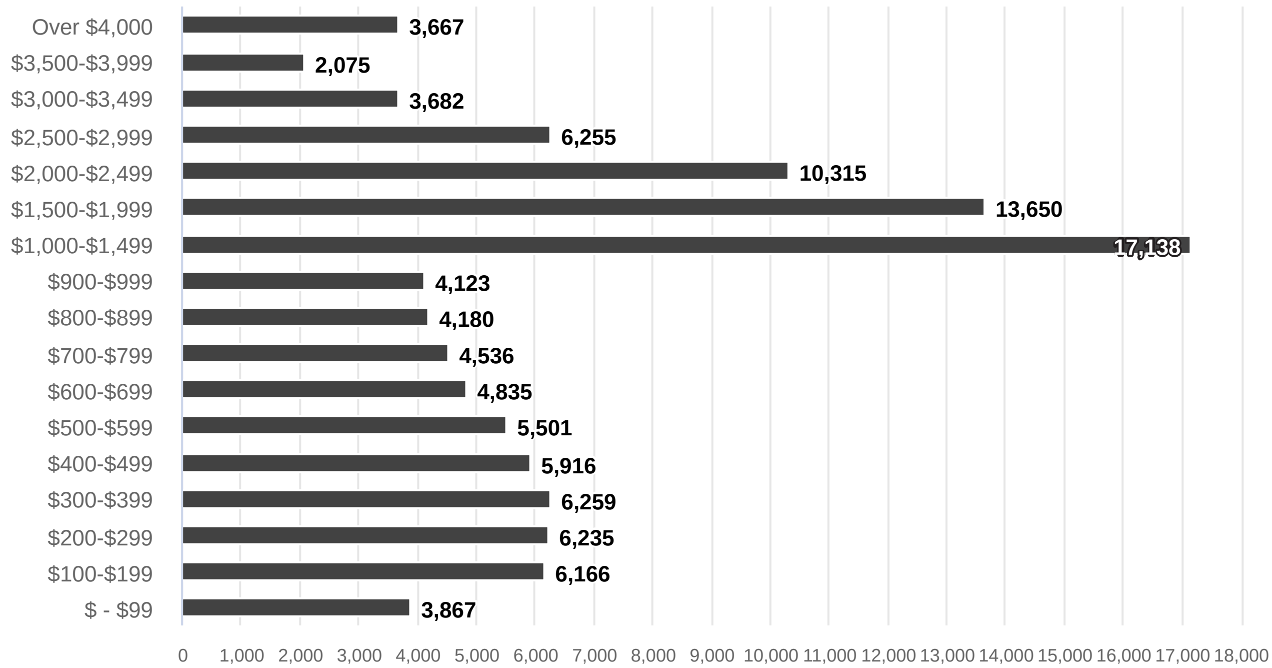
NUMBER OF RETIRED MEMBERS AND SURVIVORS BY TYPE OF BENEFIT

*as of December 31, 2020*

| Monthly Benefit | Number of Retirees | Normal Retirement | Early Retirement | Service-Connected Death or Disability | Nonservice-Connected Death or Disability |
|---|---|---|---|---|---|
| $ - 99 | 3,867 | 3,420 | 443 | 1 | 3 |
| $100-199 | 6,166 | 4,356 | 1,786 | 14 | 10 |
| $200-299 | 6,235 | 4,102 | 2,119 | 8 | 6 |
| $300-399 | 6,259 | 4,030 | 2,199 | 15 | 15 |
| $400-499 | 5,916 | 3,990 | 1,889 | 20 | 17 |
| $500-599 | 5,501 | 3,754 | 1,705 | 25 | 17 |
| $600-699 | 4,835 | 3,411 | 1,387 | 17 | 20 |
| $700-799 | 4,536 | 3,299 | 1,203 | 23 | 11 |
| $800-899 | 4,180 | 3,124 | 1,008 | 38 | 10 |
| $900-999 | 4,123 | 3,216 | 857 | 30 | 20 |
| $1,000-1,499 | 17,138 | 14,631 | 2,306 | 139 | 62 |
| $1,500-1,999 | 13,650 | 12,763 | 706 | 103 | 78 |
| $2,000-2,499 | 10,315 | 10,013 | 234 | 36 | 32 |
| $2,500-2,999 | 6,255 | 6,114 | 92 | 23 | 26 |
| $3,000-3,499 | 3,682 | 3,603 | 53 | 17 | 9 |
| $3,500-3,999 | 2,075 | 2,026 | 28 | 13 | 8 |
| $4,000 or More | 3,667 | 3,604 | 50 | 10 | 3 |
| Totals | 108,400 | 89,456 | 18,065 | 532 | 347 |

NUMBER OF RETIRED MEMBERS AND SURVIVORS BY MONTHLY BENEFIT AMOUNT

*As of December 31, 2019*



## NUMBER OF RETIRED MEMBERS AND SURVIVORS BY TYPE OF PAYMENT OPTION

*as of December 31, 2020*

| 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 | Lump Sum Acc Contr |
|---|---|---|---|---|---|---|---|---|---|
| $ - 99 | 2,850 | 260 | 477 | 94 | 38 | 4 | 40 | 104 | - |
| $100-199 | 4,274 | 571 | 893 | 112 | 128 | 24 | 40 | 123 | 1 |
| $200-299 | 4,255 | 628 | 978 | 92 | 123 | 13 | 36 | 110 | - |
| $300-399 | 4,283 | 664 | 911 | 76 | 170 | 29 | 23 | 103 | - |
| $400-499 | 3,967 | 708 | 878 | 87 | 145 | 37 | 26 | 68 | - |
| $500-599 | 3,684 | 684 | 775 | 52 | 171 | 41 | 30 | 64 | - |
| $600-699 | 3,181 | 604 | 725 | 55 | 165 | 35 | 13 | 57 | - |
| $700-799 | 2,957 | 594 | 653 | 51 | 179 | 32 | 21 | 49 | - |
| $800-899 | 2,653 | 625 | 601 | 43 | 165 | 45 | 15 | 33 | - |
| $900-999 | 2,561 | 663 | 589 | 40 | 177 | 47 | 16 | 30 | - |
| $1,000-1,499 | 10,493 | 2,718 | 2,444 | 167 | 963 | 183 | 51 | 119 | - |
| $1,500-1,999 | 8,471 | 2,286 | 1,716 | 90 | 806 | 186 | 32 | 63 | - |
| $2,000-2,499 | 6,639 | 1,787 | 1,072 | 61 | 598 | 111 | 19 | 28 | - |
| $2,500-2,999 | 4,035 | 1,100 | 617 | 41 | 360 | 70 | 18 | 14 | - |
| $3,000-3,499 | 2,382 | 622 | 367 | 15 | 236 | 44 | 4 | 12 | - |
| $3,500-3,999 | 1,293 | 362 | 226 | 9 | 150 | 28 | 2 | 5 | - |
| $4,000 or More | 1,958 | 856 | 494 | 18 | 318 | 14 | 2 | 7 | - |
| Totals | 69,936 | 15,732 | 14,416 | 1,103 | 4,892 | 943 | 388 | 989 | 1 |

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

*New Retirees by Calendar Year*

| Service Credit | | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| Less Than 5 | Retired Members | 270 | 365 | 408 | 521 | 610 |
| | Average FAS* | $ 30,267.75 | $ 33,846.93 | $ 34,306.65 | $ 34,717.32 | $ 32,598.61 |
| | Average Benefit | $ 223.01 | $ 283.62 | $ 322.15 | $ 382.91 | $ 371.67 |
| | Average Years | 3.33 | 2.85 | 2.70 | 2.61 | 2.30 |
| 5-9.99 | Retired Members | 731 | 828 | 822 | 849 | 854 |
| | Average FAS* | $ 35,021.46 | $ 37,992.46 | $ 37,193.02 | $ 38,845.72 | $ 40,334.48 |
| | Average Benefit | $ 428.48 | $ 497.32 | $ 507.31 | $ 571.28 | $ 678.27 |
| | Average Years | 7.63 | 7.29 | 7.33 | 7.38 | 7.27 |
| 10-14.99 | Retired Members | 943 | 832 | 847 | 947 | 977 |
| | Average FAS* | $ 37,846.67 | $ 39,212.18 | $ 41,189.43 | $ 42,358.16 | $ 43,788.04 |
| | Average Benefit | $ 634.00 | $ 761.52 | $ 820.14 | $ 907.08 | $ 995.85 |
| | Average Years | 12.30 | 12.43 | 12.41 | 12.44 | 12.44 |
| 15-19.99 | Retired Members | 803 | 882 | 926 | 923 | 958 |
| | Average FAS* | $ 42,730.81 | $ 46,143.88 | $ 46,008.60 | $ 48,170.28 | $ 49,126.55 |
| | Average Benefit | $ 1,052.23 | $ 1,228.16 | $ 1,244.67 | $ 1,381.52 | $ 1,509.56 |
| | Average Years | 17.34 | 17.38 | 17.34 | 17.37 | 17.44 |
| 20-24.99 | Retired Members | 1,023 | 1,084 | 1,049 | 1,026 | 1,044 |
| | Average FAS* | $ 49,807.58 | $ 53,412.30 | $ 54,313.03 | $ 57,724.11 | $ 60,576.34 |
| | Average Benefit | $ 1,607.37 | $ 1,856.53 | $ 1,939.82 | $ 2,141.85 | $ 2,369.88 |
| | Average Years | 22.42 | 22.45 | 22.46 | 22.41 | 22.45 |
| 25-29.99 | Retired Members | 1,014 | 928 | 905 | 808 | 687 |
| | Average FAS* | $ 59,197.60 | $ 61,798.08 | $ 62,292.51 | $ 66,556.55 | $ 66,454.21 |
| | Average Benefit | $ 2,369.66 | $ 2,546.49 | $ 2,642.76 | $ 2,941.62 | $ 2,897.55 |
| | Average Years | 27.40 | 27.18 | 27.10 | 27.04 | 27.06 |
| 30-34.99 | Retired Members | 601 | 411 | 387 | 347 | 322 |
| | Average FAS* | $ 62,791.89 | $ 64,043.08 | $ 63,627.78 | $ 65,555.78 | $ 67,355.53 |
| | Average Benefit | $ 2,848.18 | $ 3,021.72 | $ 3,059.22 | $ 3,204.28 | $ 3,281.49 |
| | Average Years | 32.12 | 32.18 | 32.21 | 32.32 | 32.29 |
| 35-39.99 | Retired Members | 260 | 167 | 166 | 142 | 112 |
| | Average FAS* | $ 62,497.86 | $ 64,763.50 | $ 65,925.81 | $ 64,734.42 | $ 66,267.26 |
| | Average Benefit | $ 3,030.92 | $ 3,253.21 | $ 3,333.23 | $ 3,425.34 | $ 3,549.21 |
| | Average Years | 36.88 | 36.91 | 36.82 | 36.81 | 36.64 |
| 40-44.99 | Retired Members | 59 | 40 | 31 | 19 | 13 |
| | Average FAS* | $ 60,403.31 | $ 68,167.31 | $ 65,221.88 | $ 57,189.40 | $ 67,785.50 |
| | Average Benefit | $ 3,224.57 | $ 3,810.83 | $ 3,513.57 | $ 3,602.29 | $ 3,941.62 |
| | Average Years | 41.59 | 41.41 | 41.02 | 41.62 | 41.81 |
| 45-49.99 | Retired Members | 8 | 7 | 6 | 2 | 4 |
| | Average FAS* | $ 62,219.46 | $ 71,886.65 | $ 70,200.30 | $ 79,448.46 | $ 70,960.18 |
| | Average Benefit | $ 3,666.62 | $ 4,424.05 | $ 4,111.87 | $ 4,608.91 | $ 4,848.39 |
| | Average Years | 46.69 | 46.46 | 46.54 | 46.50 | 46.56 |
| 50 and Over | Retired Members | - | 3 | 1 | - | 2 |
| | Average FAS* | $ - | $ 50,134.77 | $ 61,330.24 | $ - | $ 112,775.69 |
| | Average Benefit | $ - | $ 3,517.13 | $ 5,182.41 | $ - | $ 7,795.94 |
| | Average Years | - | 54.00 | 55.00 | - | 52.75 |
| Total Number | Retired Members | 5,712 | 5,547 | 5,548 | 5,584 | 5,583 |
| | Average FAS* | $ 47,759.75 | $ 49,197.83 | $ 49,293.86 | $ 50,471.05 | $ 50,471.05 |
| | Average Benefit | $ 1,502.21 | $ 1,548.03 | $ 1,567.82 | $ 1,624.10 | $ 1,624.10 |
| | Average Years | 20.04 | 18.72 | 18.38 | 17.48 | 17.48 |

**Average "Final Average Salary"*

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

## PRINCIPAL PARTICIPATING EMPLOYERS

*Last Ten Calendar Years*

| | 2020 | | | 2019 | | |
|---|---|---|---|---|---|---|
| Participating Government | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas | 22,955 | 1 | 14.91 % | 23,237 | 1 | 14.87 % |
| USD 259 Wichita | 7,596 | 2 | 4.93 | 7,386 | 2 | 4.73 |
| USD 233 Olathe | 5,076 | 3 | 3.30 | 4,802 | 3 | 3.07 |
| USD 500 Kansas City | 3,628 | 4 | 2.36 | 3,668 | 4 | 2.35 |
| USD 512 Shawnee Mission | 3,502 | 5 | 2.28 | 3,471 | 5 | 2.22 |
| Johnson County | 3,228 | 6 | 2.10 | 3,355 | 6 | 2.15 |
| USD 229 Blue Valley | 3,222 | 7 | 2.09 | 2,626 | 7 | 1.68 |
| Sedgwick County | 2,484 | 8 | 1.61 | 2,347 | 8 | 1.50 |
| USD 501 Topeka Public Schools | 2,344 | 9 | 1.52 | 2,069 | 9 | 1.32 |
| Unified Government of Wyandotte Co | 1,985 | 10 | 1.29 | 1,758 | 10 | 1.13 |
| All Other (1) | 97,939 | | 63.61 | 101,534 | | 64.98 |
| **Total (1,536 employers)** | **153,959** | | **100.00 %** | **156,253** | | **100.00 %** |

| | 2018 | | | 2017 | | |
|---|---|---|---|---|---|---|
| Participating Government | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas | 22,872 | 1 | 14.70 % | 23,215 | 1 | 15.19 % |
| USD 259 Wichita | 7,051 | 2 | 4.53 | 6,903 | 2 | 4.52 |
| USD 233 Olathe | 4,611 | 3 | 2.96 | 4,441 | 3 | 2.91 |
| USD 500 Kansas City | 3,678 | 4 | 2.36 | 3,558 | 4 | 2.33 |
| USD 512 Shawnee Mission | 3,424 | 5 | 2.20 | 3,385 | 5 | 2.22 |
| USD 229 Blue Valley | 3,295 | 6 | 2.12 | 3,200 | 6 | 2.09 |
| Johnson County | 3,202 | 7 | 2.06 | 3,162 | 7 | 2.07 |
| Sedgwick County | 2,521 | 8 | 1.62 | 2,514 | 8 | 1.65 |
| USD 501 Topeka Public Schools | 2,403 | 9 | 1.54 | 2,373 | 9 | 1.55 |
| Unified Government of Wyandotte Co | 2,009 | 10 | 1.29 | 2,048 | 10 | 1.34 |
| All Other | 98,989 | | 64.60 | 96,888 | | 64.14 |
| **Total** | **154,055** | | **100.00 %** | **151,687** | | **100.00 %** |

(1) In 2020, "All Other" consisted of:

| Type | Number | Covered Employees |
|---|---|---|
| School Districts | 280 | 49,926 |
| Cities and Counties | 579 | 26,872 |
| Post Secondary Education (2) | 42 | 11,715 |
| Other | 625 | 9,426 |
| | **1,526** | **97,939** |

(2) 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*

| | 2016 | | | 2015 | | |
|---|---|---|---|---|---|---|
| Participating Government | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas | 23,577 | 1 | 15.50 % | 23,748 | 1 | 15.49 % |
| USD 259 Wichita | 6,820 | 2 | 4.48 | 6,926 | 2 | 4.52 |
| USD 233 Olathe | 4,233 | 3 | 2.78 | 4,225 | 3 | 2.76 |
| USD 500 Kansas City | 3,488 | 4 | 2.29 | 3,493 | 4 | 2.28 |
| USD 512 Shawnee Mission | 3,315 | 5 | 2.18 | 3,337 | 5 | 2.18 |
| USD 229 Blue Valley | 3,118 | 6 | 2.05 | 3,100 | 6 | 2.02 |
| Johnson County | 3,065 | 7 | 2.01 | 3,067 | 7 | 2.00 |
| Sedgwick County | 2,488 | 8 | 1.64 | 2,490 | 8 | 1.62 |
| USD 501 Topeka Public Schools | 2,374 | 9 | 1.56 | 2,351 | 9 | 1.53 |
| Unified Government of Wyandotte Co | 2,029 | 10 | 1.33 | 1,757 | 10 | 1.15 |
| All Other | 97,612 | | 64.17 | 98,843 | | 64.46 |
| **Total** | **152,119** | | **100.00 %** | **153,337** | | **100.00 %** |

| | 2014 | | | 2013 | | |
|---|---|---|---|---|---|---|
| Participating Government | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas | 24,389 | 1 | 15.82 % | 24,631 | 1 | 15.78 % |
| USD 259 Wichita | 6,921 | 2 | 4.49 | 6,861 | 2 | 4.40 |
| USD 233 Olathe | 4,310 | 3 | 2.80 | 4,293 | 3 | 2.75 |
| USD 500 Kansas City | 3,544 | 5 | 2.30 | 3,392 | 5 | 2.17 |
| USD 512 Shawnee Mission | 3,428 | 4 | 2.22 | 3,621 | 4 | 2.32 |
| USD 229 Blue Valley | 3,106 | 6 | 2.01 | 3,130 | 6 | 2.01 |
| Johnson County | 3,052 | 7 | 1.98 | 3,099 | 7 | 1.99 |
| Sedgwick County | 2,536 | 8 | 1.64 | 2,535 | 8 | 1.62 |
| USD 501 Topeka Public Schools | 2,408 | 9 | 1.56 | 2,387 | 9 | 1.53 |
| Unified Government of Wyandotte Co | 1,784 | 10 | 1.16 | 1,733 | 10 | 1.11 |
| All Other | 98,725 | | 64.02 | 100,375 | | 64.32 |
| **Total** | **154,203** | | **100.00 %** | **155,446** | | **100.00 %** |

## PRINCIPAL PARTICIPATING EMPLOYERS

*Last Ten Calendar Years*

| | 2012 | | | 2011 | | |
|---|---|---|---|---|---|---|
| Participating Government | Covered Employees | Rank | % of Total System | Covered Employees | Rank | % of Total System |
| State of Kansas | 25,293 | 1 | 16.21 % | 25,382 | 1 | 16.37 % |
| USD 259 Wichita | 6,709 | 2 | 4.30 | 6,542 | 2 | 4.22 |
| USD 233 Olathe | 4,274 | 3 | 2.74 | 4,185 | 3 | 2.70 |
| USD 500 Kansas City | 3,287 | 5 | 2.11 | 3,191 | 5 | 2.06 |
| USD 512 Shawnee Mission | 3,678 | 4 | 2.36 | 3,705 | 4 | 2.39 |
| USD 229 Blue Valley | 3,088 | 6 | 1.98 | 3,098 | 7 | 2.00 |
| Johnson County | 3,065 | 7 | 1.96 | 3,014 | 6 | 1.94 |
| Sedgwick County | 2,549 | 8 | 1.63 | 2,336 | 8 | 1.51 |
| USD 501 Topeka Public Schools | 2,339 | 9 | 1.50 | 2,605 | 9 | 1.68 |
| Unified Government of Wyandotte Co | 1,697 | 10 | 1.09 | 1,627 | 10 | 1.05 |
| All Other | 100,074 | | 64.13 | 99,369 | | 64.09 |
| **Total** | **156,053** | | **100.00 %** | **155,054** | | **100.00 %** |

# 2021 ANNUAL COMPREHENSIVE FINANCIAL REPORT

Kansas Public Employees Retirement System
A component unit of the State of Kansas
For the Fiscal Year Ended June 30, 2021

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

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