

KANSAS PUBLIC EMPLOYEES RETIREMENT SYSTEM
Topeka, Kansas

FINANCIAL STATEMENTS
Year Ended June 30, 2017

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AUDITORS' OPINION



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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) which comprise the statements of fiduciary net position and changes in fiduciary net position, as of and for the year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise the System's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

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

Auditors' Responsibility

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

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the System as of June 30, 2017, and the respective changes in financial position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

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

The other supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated November 1, 2017, 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 financial reporting and compliance and the result 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 System's internal control over financial reporting and compliance.



CliftonLarsonAllen LLP

Denver, Colorado
November 1, 2017

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, 2017. 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 by \$1.44 billion or approximately 8.4 percent to \$18.6 billion as of June 30, 2017, compared to an increase of \$557 million or approximately 3.4 percent, from \$16.6 billion to \$17.2 billion as of June 30, 2016.

The System's June 30, 2017, financial actuarial valuation calculated a total pension liability at June 30, 2017, of \$27.8 billion, compared to \$26.4 billion as of June 30, 2016, an increase of \$1.4 billion or 5.3 percent. The net pension liability at June 30, 2017 decreased to approximately \$9.1 billion, compared to \$9.2 billion as of June 30, 2016, a decrease of \$89.5 million, or 1.0 percent.

As of December 31, 2016, the most recent funding actuarial valuation, the unfunded actuarial liability increased to \$9.1 billion from \$8.5 billion from the prior year.

As of December 31, 2016, the most recent funding actuarial valuation, the Retirement System's funded ratio was 66.8 percent compared with a funded ratio of 67.1 percent for the prior year.

On a market value basis, this year's money weighted net investment rate of return was a positive 12.35 percent, compared with last year's return of a positive 0.33 percent.

Monthly retirement benefits paid to retirees and beneficiaries increased 3.2 percent to approximately \$1.60 billion for Fiscal Year 2017, compared to \$1.55 billion in Fiscal Year 2016.

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, 2017, and a Statement of Changes in Fiduciary Net Position for the fiscal year ended June 30, 2017, 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.

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 statements of changes of assets and liabilities for agency funds.

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, 2017, amounted to \$18.6 billion. Following are two summary schedules, Fiduciary Net Position and Changes in Fiduciary Net Position, showing information for Fiscal Years 2017 and 2016.

SUMMARY STATEMENT OF FIDUCIARY NET POSITION

	As of June 30, 2017	As of June 30, 2016
Assets		
Cash and Deposits	\$ 35,427,133	\$ 18,596,902
Receivables	290,682,499	270,706,082
Investments at Fair Value	18,586,745,502	17,099,225,041
Capital Assets and Supplies Inventory	3,636,022	2,365,262
Total Assets	<u>18,916,491,156</u>	<u>17,390,893,287</u>
Liabilities		
Administrative Costs	1,108,170	1,609,540
Benefits Payable	12,968,807	12,681,326
Securities Purchased	240,802,996	120,008,923
Payables	<u>27,770,762</u>	<u>64,161,127</u>
Total Liabilities	<u>282,650,735</u>	<u>198,460,916</u>
Net Position	\$ <u><u>18,633,840,421</u></u>	\$ <u><u>17,192,432,371</u></u>

SUMMARY STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

	Year Ended June 30, 2017	Year Ended June 30, 2016
Additions		
Contributions	\$ 1,176,147,718	\$ 2,144,040,220
Net Investment Income	2,060,925,477	49,169,897
Other Miscellaneous Income	1,071,115	2,904,581
Total Additions	<u>3,238,144,310</u>	<u>2,196,114,698</u>
Deductions		
Monthly Retirement Benefits	1,604,984,334	1,548,362,844
Refunds	70,481,060	68,122,735
Death Benefits	11,210,914	10,545,850
Administrative Expenses	11,116,172	12,171,633
Uncollectible Pension Contributions	98,943,780	—
Total Deductions	<u>1,796,736,260</u>	<u>1,639,203,062</u>
Net Increase	<u>1,441,408,050</u>	<u>556,911,636</u>
Net Position Beginning of Year (as restated)	17,192,432,371	16,635,520,735
Net Position End of Year	<u>\$ 18,633,840,421</u>	<u>17,192,432,371</u>

FINANCIAL ANALYSIS OF THE RETIREMENT SYSTEM

Additions to the System's net assets held in trust for benefits include employer and member contributions, as well as investment income. Total contributions to the Retirement System were approximately \$1.18 billion in Fiscal Year 2017, compared to approximately \$1.14 billion in Fiscal Year 2016. In addition, the State of Kansas issued pension obligation bonds, 2015H, in August 2015, Fiscal Year 2016, with proceeds of \$1.0 billion. The State will pay the annual debt service on the bonds.

The System recognized net investment income of \$2.06 billion for Fiscal Year 2017. Total time weighted return for the portfolio net of fees, was 12.3 percent, compared with the benchmark return of 12.2 percent. System investments at fair value amounted to \$18.6 billion at June 30, 2017. The Retirement System's time-weighted one-, three-, five-, ten-, and estimated 25-year investment performance return net of fees are shown in the following table. The actuarial assumed rate of return is 7.75 percent.

2017				
1 Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 25 Years*
12.3%	5.2%	9.4%	5.4%	8.2%
<i>*estimated</i>				

The System recognized net investment income of \$49.2 million for the 2016 Fiscal Year. System investments at fair value amounted to \$17.2 billion at June 30, 2016.

At June 30, 2017, the System held \$10.0 billion in U.S. equity and international equity securities. U.S. equity and international equity securities earned net returns of approximately 18.3 percent and 21.4 percent, respectively, for the 2017 Fiscal Year.

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

The System held \$4.8 billion in U.S. debt and international debt securities at June 30, 2017. The net performance of the System's fixed income securities during Fiscal Year 2017 was 0.4 percent. Real estate investments amounted to \$2.1 billion at June 30, 2017, and returned approximately 7.2 percent for the 2017 Fiscal Year. The System held \$932.4 million in private equities which earned a return of approximately 14.6 percent for the 2017 Fiscal Year. At June 30, 2017, the System held \$740.8 million in short-term investments. Cash and deposits include investment cash and foreign currencies held at the custodial bank as of June 30, 2017, totaling approximately \$23.1 million.

The System held \$5.0 billion in U.S. debt and international debt securities at June 30, 2016. The net performance of the System's fixed income securities during Fiscal Year 2016 was 4.8 percent. Real estate investments amounted to \$1.8 billion at June 30, 2016 and returned approximately 13.6 percent for the 2016 Fiscal Year. The System held \$761.7 million in private equities which earned a return of approximately 3.2 percent for the 2016 Fiscal Year. At June 30, 2016, the System held \$454.0 million in short-term investments. Cash and deposits include investment cash and foreign currencies held at the custodial bank as of June 30, 2016, totaling approximately \$6.9 million.

Deductions from net assets held in trust for benefits include retirement, refunds, survivor benefits, and administrative expenses. For the 2017 Fiscal Year, retirement benefits amounted to approximately \$1.69 billion, an increase of \$60.0 million or 3.6 percent from Fiscal Year 2016. For the 2017 Fiscal Year, System administrative expenses amounted to \$11.1 million, a decrease of \$1.0 million from Fiscal Year 2016. 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

Due to the requirements of Governmental Accounting Standards Board (GASB) Statement 67, KPERS had separate actuarial valuations performed for funding purposes and financial reporting as required by the Statement.

The annual financial actuarial valuation for the System, as of June 30, 2017, emphasizes the obligation an employer incurs to employees through the employment-exchange process. The objective of this statement is to improve the decision-usefulness of reported pension information and to increase the transparency, consistency and comparability of pension information across governments. Total Pension Liability (TPL) is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of plan member service. Net Pension Liability (NPL) is the Total Pension Liability, net of the pension plan's fiduciary net position. As of June 30, 2017 the pension plan's fiduciary net position as a percentage of the total pension liability was 67.12%.

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 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. This legislation also set the State/School group employer contribution rate at 10.91 percent in Fiscal Year 2016 and 10.81 percent in Fiscal Year 2017.

The 2016 Legislature passed and the Governor approved Senate Bill 161, authorizing the delay of up to \$100 million in KPERS contributions. The bill required that the delayed Fiscal Year 2016 contributions be paid by June 30, 2018 with interest at eight percent.

The 2017 Legislature passed, and the Governor approved, Senate Sub. for HB 2052 which eliminated the requirement to repay the delayed 2016 contributions. The amount set up as a long-term receivable totaling \$99 million in Fiscal Year 2016 has been written off in Fiscal Year 2017. In addition, this bill authorized the delay of \$64.1 million in FY 2017 contributions. These contributions have been set up as a long-term receivable. Repayment is scheduled to be made in a series of twenty annual payments of \$6.4 million. Senate Sub. for HB 2002 authorized the first two annual payments for Fiscal Year 2018 and 2019. The Fiscal Year 2018 payment of \$6.4 million was received by the Pension Plan in July 2017.

The Retirement System conducted an experience study in November 2016 and as a result there have been several changes to actuarial assumptions and methods, effective December 31, 2016, which are discussed in detail in the Actuarial Section of this report. As a result of the new experience study, the investment return assumption was lowered from 8.00 percent to 7.75 percent.

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

This financial report is designed to provide a general overview of the Kansas Public Employees Retirement Systems' finances for all interested parties. An electronic copy of this report is available at the System's website www.kpers.org. 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

June 30, 2017

	<u>Pension Plan</u>	<u>Agency Funds¹</u>
Assets:		
Cash		
Cash	\$ 11,624,494	\$ 544,256
Cash at Custodial Bank	23,077,182	—
Deposits with Insurance Carrier	—	181,201
Total Cash	34,701,676	725,457
Receivables:		
Contributions	183,383,512	43,026
Investment Income	56,337,227	—
Sale of Investment Securities	50,864,042	16,738
Due from Others	—	37,954
Total Receivables	290,584,781	97,718
Investments at Fair Value:		
Domestic Equities	5,876,550,272	—
International Equities	4,111,025,326	—
Short Term	713,879,636	26,947,587
Fixed Income	4,815,658,886	—
Alternative Investments	932,394,415	—
Real Estate	2,110,289,380	—
Total Investments	18,559,797,915	26,947,587
Capital Assets and Supplies Inventory	3,636,022	—
Total Assets	18,888,720,394	27,770,762
Liabilities:		
Administrative Costs	1,108,170	—
Benefits Payable	12,968,807	—
Securities Purchased	240,802,996	—
Due to Others	—	27,770,762
Total Liabilities	254,879,973	27,770,762
Net Position Restricted for Pensions	\$ 18,633,840,421	\$ —

(1) See Note 2 Summary of Significant Accounting Policies, New Accounting Pronouncements
The accompanying notes to financial statements are an integral part of this statement.

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

	Pension Plan
Additions:	
Contributions	
Member Contributions	\$ 414,537,657
Employer Contributions ¹	761,610,061
Total Contributions	1,176,147,718
Investments:	
Net Appreciation in Fair Value of Investments	1,708,585,923
Interest	125,024,597
Dividends	196,065,374
Real Estate Income, Net of Operating Expenses	91,728,610
Other Investment Income	13,394,069
	2,134,798,573
Less Investment Expense	(73,873,096)
Net Investment Income	2,060,925,477
Other Miscellaneous Income	1,071,115
Total Additions	3,238,144,310
Deductions:	
Monthly Retirement Benefits Paid	(1,604,984,334)
Refunds of Contributions	(70,481,060)
Death Benefits	(11,210,914)
Administrative Expenses	(11,116,172)
Uncollectible Pension Contributions ¹	(98,943,780)
Total Deductions	(1,796,736,260)
Increase in Net Position	1,441,408,050
Net Position Restricted for Pensions	
Beginning of Year (as restated, see Note 2)	17,192,432,371
End of Year	\$ 18,633,840,421

(1) See Note 2 Summary of Significant Accounting Policies, Receivables
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. The benefits are not administered through a qualifying trust based on the criteria in Governmental Accounting Standards Board (GASB) Statement No. 74 and the assets and liabilities are presented in an agency fund.

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. The assets and liabilities are presented in an agency fund.

PLAN MEMBERSHIP BY EMPLOYEE GROUP

Participating membership by statewide pension group as of December 31, 2016, (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)	92,048	5,240	259	97,547
Terminated Employees Entitled to Benefits But Not Yet Receiving Them	21,209	181	9	21,399
Inactive Members, Deferred Disabled	2,051	204	0	2,255
Inactive Members Not Entitled to Benefits	30,931	1,170	0	32,101
Current Employees	144,564	7,303	252	152,119
Total	290,803	14,098	520	305,421

(1) Represents System membership at December 31, 2016.

(2) Number of retirement payees as of December 31, 2016.

NUMBER OF PARTICIPATING EMPLOYERS

Participating employers by statewide pension group as of June 30, 2017, are as follows:

	KPERS	KP&F	Judges
State of Kansas	1	1	1
Counties	105	32	—
Cities	364	63	—
Townships	60	—	—
School Districts	286	—	—
Libraries	122	—	—
Conservation Districts	83	—	—
Extension Councils	65	—	—
Community Colleges	19	—	—
Educational Cooperatives	24	—	—
Recreation Commissions	44	1	—
Hospitals	29	—	—
Cemetery Districts	13	—	—
Other	202	—	—
Total	<u>1,417</u>	<u>97</u>	<u>1</u>

PLAN BENEFITS

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

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

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

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

Active members (except Police and Firemen, in cases of death as a result of an on-the-job accident for Public Employees, there is a \$50,000 lump-sum benefit and a monthly benefit payable to a spouse, minor children or dependent parents (in this order). Service-connected accidental death benefits are in addition to any life insurance benefit. There is a \$4,000 death benefit payable to the beneficiary(ies) when a retired member dies under any of the systems.

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 and the school employers. Annual increases in the employer contribution rates related to subsequent benefit enhancements are not subject to these limitations. The statutory cap increase over the prior year contribution rate is 1.2 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	10.77 %	10.81 % (1)
School Employee	16.03	10.81 (1)
Judges	21.36	21.36
Local Government Employee (2)	8.46	8.46
Police and Firemen (2)	19.03	19.03

- 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 2016 are 6.0 percent for Public Employees, 7.15 percent for Police and Firemen and 6.0 percent or 2.0 percent for Judges.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

BASIS OF ACCOUNTING

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

SHORT TERM INVESTMENTS

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

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. They are not required to meet SEC 2a-7 standards. More information is available in Note 5 – Fair Value Measurement.

METHOD USED TO VALUE INVESTMENTS

Investments are reported at fair value. Active, publicly traded securities are priced using industry standard methods consistent with the asset class being priced. Securities traded on a national or international securities exchange are valued at the last reported sales price at current exchange rates. The fair value of real estate investments is based on independent annual appraisals. Fair value of other securities is determined by the mean of the most recent bid and asked prices as obtained from dealers that make markets in such securities. Fair values of the limited partnership investments are based on valuations of the partnerships as reported by the general partner. Dividends are recorded on the ex-dividend date. Note 5 Fair Value Measurement includes additional information regarding the inputs used to determine fair value.

INVESTMENTS

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

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

- Establishes the structure of the Board of Trustees, defines the Trustees' responsibilities, imposing the prudent expert standard upon their actions with respect to managing the assets of the Retirement System.
- Requires that the assets be invested to preserve capital and solely to provide benefits to members and the members' beneficiaries.
- Limits the possible allocation of common stock to 60.0 percent of the total book value of the fund.
- Limits the possible allocation of total alternative investments to 15 percent of the total investment assets of the fund.
- The annual allowance for new alternative (non-publicly traded) investments is limited to 5.0 percent of the market value of the total investment assets of the fund as measured from the end of the preceding calendar year.
- Establishes limits on the structure of future investments in real estate or alternative investments.
- Requires that the Board develop investment policies and objectives to invest fund assets.
- Authorizes the Board to hire qualified professionals/firms to assist in investing the fund and requires that such professionals/firms obtain errors and omissions insurance coverage and fidelity bond insurance coverage.

- Authorizes the Board to pay for the services of retained professionals/firms at the rates fixed by the Board, excluding any reimbursement for expenses and subject to the provisions of the appropriations act.
- Provides for an annual audit and requires that the Board annually examine the investment program, specific investments and its policies and practices.

In fulfilling its responsibilities, the Board of Trustees has contracted with 24 investment management firms and a master global custodian. The Retirement System has six permissible investment categories: 1) equities 2) real estate 3) fixed-income securities 4) derivative products 5) cash equivalents 6) alternative investments.

The pension plan's policy in regard to the allocation of invested assets is established and may be amended by the Board of Trustees. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan. The following was Board of Trustee's adopted asset allocation policy as of June 30, 2017:

Asset Class	Interim Target Allocation
Domestic Equities	26.0 %
International Equities	24.0
Yield Driven (1)	8.0
Real Return (2)	11.0
Fixed	11.0
Short Term Investments	4.0
Real Estate	10.0
Alternatives	6.0
	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 System's target allocation is to have 24.0 percent of assets in dedicated international equities. At June, 30 2017, 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, 2017, the System's total foreign currency exposure was 45.9 percent hedged.

Equities are considered to be common or preferred corporate stocks; warrants or rights; preferred stock which is convertible into common stock; investment trusts; or participation in commingled (equity) funds managed by a bank, insurance company or other professional equity investment manager. These stocks are listed on well recognized or principal exchanges of the United States or foreign countries.

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

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

- There are at least two other sophisticated investors.
- The System's portion of an investment will not be more than 20 percent of the total investment.

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

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

RECEIVABLES

In addition to statutorily determined contractually required contributions, certain agencies also make payments through an additional component of their required employer contribution rate or annual installment payments, both options include interest at 8.0 percent per year, for the cost of service credits granted retroactively when the agency initially joined the Retirement System. As of June 30, 2017, the outstanding balance was \$5,606,138. These payments are due over various time periods up through December 31, 2032.

The 2016 Legislature passed Senate Bill 161, authorizing the delay of up to \$100 million in KPERS State/School contributions. The 2017 Legislature and the Governor approved Sub. for Sub. for HB 2052 which eliminated the funding to repay the delayed 2016 contributions. The amount set up as a long-term receivable in Fiscal Year 2016 has been written off in this report.

In addition, this bill authorized the delay of \$64.1 million in FY 2017 contributions. This amount has been set up as a long-term receivable. Repayment was authorized to be made in a series of twenty annual payments of \$6.4 million. Senate Sub. for HB 2002 authorized the first two annual payments for FY 2018 and FY 2019. The first payment of \$6.4 million was received by the Plan in July 2017. The long term receivable of \$64.1 million of Fiscal Year 2017 contributions is included in Contributions Receivable in the Statement of Fiduciary Net Position.

CAPITAL ASSETS

Furniture, fixtures and equipment are reported on the Statement of Fiduciary Net Position at historical cost, net of accumulated depreciation. These assets are depreciated on a straight-line basis over an average useful life of three to ten years with no salvage value. Accumulated depreciation on all System assets as of June 30, 2017, was \$17,240,532. In Fiscal Year 1999, the Retirement System purchased an office building and garage in Topeka, Kansas. Fifty percent of the floor space of the office building is used as the System's administrative headquarters and the remaining 50 percent is a real estate investment. The administrative portion of the building and garage are reported on the Statement of Fiduciary Net Position as a capital asset and are being depreciated. Accumulated depreciation on the administrative portion of the building and garage as of June 30, 2017, was \$2,881,990. The office building and garage are being depreciated over a period of 33 years on an accelerated method. At June 30, 2016, the carrying value of the System's administrative headquarters was \$736,167.

USE OF ESTIMATES

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

RISKS AND UNCERTAINTIES

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

FEDERAL INCOME TAX

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

NEW ACCOUNTING PRONOUNCEMENTS

KPERS adopted GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans other than Pension Plans* in FY 2017. As a result of the implementation, KPERS determined that the Death and Disability Plan is not administered through a qualifying trust, and accordingly, KPERS will no longer report a statement of fiduciary net position, a statement of changes in net position, notes to basic financial statements, and required supplementary information related to the Death and Disability Plan. Any assets accumulated in the trust are now considered to be assets of the applicable employers, and will be accounted for in an agency fund. In addition, due to this analysis, the Optional Life Insurance Plan was also reclassified as an agency fund. The net position restricted for pensions in the pensions fund was restated as of July 1, 2016 as follows:

Net Position Restricted for Pensions and Other Employee Trust Funds, As Reported	\$	17,256,593,498
Less:		
Accumulated Group Death and Disability Benefits Due to Employers		(63,959,333)
Accumulated Optional Life Insurance Premiums Due to Others		(201,794)
Net Position Restricted for Pensions	\$	<u>17,192,432,371</u>

KPERS adopted GASB Statement No. 82, *Pension Issues, an amendment of GASB Statements No. 67, No. 68, and No. 73* in Fiscal Year 2017. This Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements.

GASB Statement No. 84, *Fiduciary Activities*. The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes. Retirement System management is evaluating this Statement. It is effective for the Retirement System in Fiscal Year 2020.

GASB Statement No. 85, *Omnibus 2017*. The objective of this Statement is to address practice issues that have been identified during implementation and application of other GASB Statements. Retirement System management is evaluating this Statement. It is effective for the Retirement System in Fiscal Year 2018.

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, 2017, the System's deposits with its disability administrator were \$181,201. 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, 2017, at fair value:

Investment Type	Fair Value
Domestic Equities	\$ 5,876,550,272
International Equities	4,111,025,326
Fixed Income:	
U.S. Government	1,999,732,859
U.S. Agencies	480,771,787
U.S. Corporate	1,909,132,005
Foreign Fixed Income	426,022,235
Short Term Investments	740,827,223
Real Estate:	
Partnerships	713,816,895
Commingled Funds	1,321,892,040
Separate Accounts	74,580,445
Alternatives/Private Equities	932,394,415
Total	\$ <u>18,586,745,502</u>

CUSTODIAL CREDIT RISK

The custodial credit risk for investments is the risk that, in the event of the failure of the custodial counterparty to a transaction, the System will not be able to recover the value of investments or collateral securities that are in the possession of the custodial bank. At June 30, 2017, the System had US Dollar and foreign currency balances at custodial banks with a net value of \$23.08 million. This is primarily foreign currency deposits facilitating international investments in the respective local markets. The System's deposits of \$12.2 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 percent or more of System assets other than U.S. Government (10.4 percent) and Agencies (3.0 percent). KPERS' investment policy does not prohibit holdings above 5 percent in the debt securities of U.S. government issuers. Government sponsored enterprises (GSEs, such as FNMA) are considered government issuers for the purpose of implementing KPERS investment policy.

FOREIGN CURRENCY RISK

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The System does not have a formal investment policy which limits its exposure to foreign currency risk. The following table presents the foreign currency risk by type of investment as of June 30, 2017.

USD Equivalent				
Equity	Fixed	Currency	Total	Percent
\$ 40,760,888	\$ 6,039,857	Australian Dollar	\$ 46,800,745	1.35 %
7,884,013	4,328,965	Brazil Real	12,212,978	0.35
499,094,550	180,371,503	British Pound Sterling	679,466,053	19.63
153,996,027	19,383,868	Canadian Dollar	173,379,895	5.01
65,212,909	1,458,752	Danish Krone	66,671,661	1.93
1,012,163,155	164,823,177	Euro Currency Unit	1,176,986,332	34.00
167,047,275	—	Hong Kong Dollar	167,047,275	4.83
7,706,604	3,419,279	Indonesian Rupiah	11,125,883	0.32
17,011,333	—	Israeli Sheqel	17,011,333	0.49
519,554,227	25,928,024	Japanese Yen	545,482,251	15.76
14,902,539	—	Mexican New Peso	14,902,539	0.43
11,915,070	8,740,047	New Zealand Dollar	20,655,117	0.60
41,029,050	—	Norwegian Krone	41,029,050	1.18
2,949	—	Polish Zloty	2,949	0.00
—	3,904,256	Russian Ruble	3,904,256	0.11
32,205,421	—	S African Comm Rand	32,205,421	0.93
49,708,216	—	Singapore Dollar	49,708,216	1.44
78,581,025	—	South Korean Won	78,581,025	2.27
68,762,008	6,133,960	Swedish Krona	74,895,968	2.16
166,097,462	—	Swiss Franc	166,097,462	4.80
68,289,103	—	Taiwan Dollar	68,289,103	1.97
9,692,144	—	Thailand Baht	9,692,144	0.28
3,898,652	882,085	Turkish New Lira	4,780,737	0.14
—	608,463	Uruguayan Peso	608,463	0.02
<u>\$ 3,035,514,620</u>	<u>\$ 426,022,236</u>		<u>\$ 3,461,536,856</u>	<u>100.00 %</u>

CREDIT RISK

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

In the following table, Short Term includes commercial paper, repurchase agreements and other short-term securities.

Agency securities are those implicitly guaranteed by the U.S. Government. U.S. Government securities are treasury securities and agencies explicitly guaranteed. Securities with a "not rated" quality rating are primarily bank loans, certificates of deposit and preferred stock. System assets as of June 30, 2017, subject to credit risk are shown with current credit ratings.

CREDIT RISK

Quality Rating	Short Term Investments	Corporate ⁽¹⁾	U.S. Government	Agency	Total
Not Rated	\$ 441,607,730	\$ 190,967,075	\$ —	\$ —	\$ 632,574,805
AAA	—	193,157,205	1,930,861,882	521,077	2,124,540,164
AA	31,822,764	333,837,236	68,870,977	469,785,034	904,316,011
A	82,003,793	204,923,540	—	5,829,798	292,757,131
A-1/P-1	66,083,172	58,188,449	—	—	124,271,621
BBB	119,309,764	671,284,919	—	3,732,165	794,326,848
BB	—	312,282,510	—	—	312,282,510
B	—	283,340,172	—	903,713	284,243,885
CCC	—	96,089,126	—	—	96,089,126
CC	—	5,332,073	—	—	5,332,073
C	—	1,233,240	—	—	1,233,240
D	—	2,853,736	—	—	2,853,736
Total	\$ <u>740,827,223</u>	\$ <u>2,353,489,281</u>	\$ <u>1,999,732,859</u>	\$ <u>480,771,787</u>	\$ <u>5,574,821,150</u>

Domestic and International Equities, Cash, Real Estate and Alternatives Not Included Above: \$ 13,011,924,352

Total Fair Value of Investment Securities: \$ 18,586,745,502

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

INTEREST RATE RISK

Effective Duration	Short Term Investments	Corporate ⁽¹⁾	U.S. Government	Agency	Total
0 - 1 Yr	\$ 740,827,223	\$ 259,977,195	\$ 238,964,047	\$ 143,467,177	\$ 1,383,235,642
1 - 3 Yrs	—	431,410,735	267,679,378	68,786,312	767,876,425
3 - 5 Yrs	—	500,965,060	266,632,040	182,925,597	950,522,697
5 - 10 Yrs	—	717,418,519	1,024,634,567	79,069,504	1,821,122,590
> 10 Yrs	—	443,717,772	201,822,827	6,523,197	652,063,796
Grand Total	\$ <u>740,827,223</u>	\$ <u>2,353,489,281</u>	\$ <u>1,999,732,859</u>	\$ <u>480,771,787</u>	\$ <u>5,574,821,150</u>

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

ANNUAL MONEY-WEIGHTED RATE OF RETURN

For the year ended June 30, 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, was 12.35 percent. This return was 0.33 percent for Fiscal Year 2016. 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, 2017.

INVESTMENT DERIVATIVE SUMMARY

	Asset Class ¹	Notional Value	Fair Value
Domestic Equity Futures	Domestic Equities	\$ 29,254,110	\$ —
Fixed Futures	Fixed	(172,268,629)	—
TBA Agency Bonds ²	Fixed	100,769,165	100,769,165
Foreign Currency Forwards	Fixed	4,279,312,425	(15,211,743)

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, 2017, at fair value:

INVESTMENT DERIVATIVE FAIR VALUES

	June 30, 2016	Increases	Decreases	June 30, 2017
Credit Default Swaps	\$ 659,844	\$ 97,902,144	\$ (98,561,988)	\$ —
TBA Agency Bonds	70,127,976	1,218,800,767	(1,188,159,578)	100,769,165
Foreign Currency Forwards	52,406,656	143,349,328	(210,967,727)	(15,211,743)
Options Purchased	467,500	853,289	(1,320,789)	—
	<u>\$ 123,661,976</u>	<u>\$ 1,460,905,528</u>	<u>\$ (1,499,010,082)</u>	<u>\$ 85,557,422</u>

FUTURES

Futures contracts are commitments for delayed delivery (liability) or receipt (asset) of securities in which the seller agrees to make delivery and the buyer agrees to take delivery at a specified future date, of a specified instrument, at a specified price. Market risk arises due to market price and interest rate fluctuations that may result in a decrease in the fair value of futures contracts. Futures contracts are traded on organized exchanges and require initial margin in the form of cash or marketable securities. Holders of futures contracts look to the exchange for performance under the contract. Accordingly, the credit risk due to nonperformance of counterparties to futures

contracts is minimal. Daily, the net change in the futures contract value is settled in cash with the exchanges, making the fair values always equal to zero after the daily margin flow. At the close of business June 30, 2017, the System had total net margins receivable the next day of \$301,965. Short-term investments in amounts necessary to settle the economic value of the futures contracts were held in the portfolio so that no leverage was employed in accordance with the Statement of Investment Policy. The daily margin flows effect cash assets held at broker. Realized gains/losses are recognized at contract maturity and included with underlying security type returns. Total gains of \$11.6 million were associated with futures for the year ending June 30, 2017.

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

The Retirement System utilizes two currency overlay managers to reduce, or partially hedge, the System's exposure to foreign currencies through the international equities portfolio. At June 30, 2017, the fair value of international equities was \$4.1 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, 2017:

INVESTMENT CURRENCY FORWARDS

	Notional Cost (USD)	Pending Foreign Exchange Receivables (USD)	Pending Foreign Exchange Payables (USD)	Fair Value June 30, 2017 (USD)
Australian Dollar	\$ 261,621,281	\$ 263,719,561	\$ (262,821,869)	\$ 897,692
Brazilian Real	2,271,306	2,261,888	(2,263,839)	(1,951)
Canadian Dollar	289,868,971	291,386,407	(294,952,585)	(3,566,178)
Swiss Franc	147,820,268	148,803,567	(149,373,351)	(569,784)
Danish Krone	30,881,592	30,900,659	(31,576,238)	(675,579)
Euro Currency	1,088,483,964	1,089,118,797	(1,102,570,223)	(13,451,426)
British Pound Sterling	1,114,070,520	1,114,943,382	(1,124,000,398)	(9,057,016)
Hong Kong Dollar	172,537,465	172,442,385	(172,209,225)	233,160
Israeli Sheqel	91,349,180	91,978,797	(91,444,410)	534,387
Japanese Yen	691,246,714	690,940,664	(680,987,736)	9,952,928
Norwegian Krone	99,017,093	99,443,105	(99,124,746)	318,359
New Zealand Dollar	163,542,745	164,854,029	(163,828,354)	1,025,675
Russian Ruble	655,512	655,512	(632,654)	22,858
Swedish Krona	90,958,880	91,909,627	(92,713,148)	(803,521)
Singapore Dollar	34,986,934	35,065,107	(35,136,454)	(71,347)
	\$ 4,279,312,425	\$ 4,288,423,487	\$ (4,303,635,230)	\$ (15,211,743)

Investment forwards counterparty exposure at June 30, 2017, is as follows:

INVESTMENT FORWARDS COUNTERPARTY EXPOSURE

Counterparty Name	Notional \$USD	Fair Value	Worst Long-Term Rating
Australia/New Zealand Bkg Grp	\$ 15,479,138	\$ (182,501)	AA-
Bank Of America, N.A.	7,435,387	(86,060)	BBB+
Barclays Bank Plc Wholesale	504,959,499	(1,066,422)	A-
BNP Paribas Sa	1,184,001	(542)	A
Citibank N.A.	160,757,252	2,673,290	A
Credit Agricole Cib	1,392,783	4,807	A
Deutsche Bank Ag	738,122,101	(4,807,386)	BBB+
Goldman Sachs International	37,030,279	108,458	BBB+
HSBC Bank Plc	606,340,617	(99,373)	A
HSBC Bank Usa	1,534,657	691	AA-
Income Repatriation Boston	698,432	(842)	NR
JPMorgan Chase Bank	505,003	(400)	A+
JPMorgan Chase Bank NA London	616,986,077	1,504,894	A+
Merrill Lynch International	95,855,501	(4,178,641)	BBB+
Morgan Stanley And Co. International Plc	3,488,328	(16)	BBB+
National Australia Bank Limited	283,542,477	(377,724)	AA-
Royal Bank Of Canada (Uk)	519,757,383	(5,869,026)	AA-
Societe Generale	6,896,294	42,147	A
State Street Bank And Trust	4,982,544	(9,893)	AA-
State Street Bank London	143,094,385	(970,307)	A
Toronto Dominion Bank	348,090,901	(611,393)	AA-
UBS Ag	30,905	(11)	A+
UBS Ag London	97,581,003	(1,279,247)	A+
Westpac Banking Corporation	83,567,478	(6,246)	AA-
	<u>\$ 4,279,312,425</u>	<u>\$ (15,211,743)</u>	

NOTE 5 – FAIR VALUE MEASUREMENT

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

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

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

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

The following table presents the Retirement System's recurring fair value measurements as of June 30, 2017.

INVESTMENTS AND DERIVATIVE INSTRUMENTS MEASURED AT FAIR VALUE

Fair Value Measurements Using:

	Total as of 6/30/2017	Quoted prices in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
<i>Investments by Fair Value Level</i>				
Debt Securities				
US Treasury	\$ 1,117,068,035	\$ —	\$ 1,117,068,035	\$ —
US Treasury Commingled	813,793,847	—	813,793,847	—
GNMA	68,870,977	—	68,870,977	—
US Agency	380,002,622	—	380,002,622	—
US Corporate, Municipalities	1,483,601,000	—	1,472,391,985	11,209,015
US Bank Loans	150,843,921	—	150,843,921	—
Yankees	274,687,084	—	274,687,084	—
International	426,022,235	—	426,022,235	—
Total Debt Securities	4,714,889,721	—	4,703,680,706	11,209,015
Equity Securities				
Domestic Common Stock	5,873,569,885	5,873,149,987	—	419,898
Domestic Preferred	2,980,387	2,980,387	—	—
International Common	2,977,839,005	2,971,188,576	—	6,650,429
International Commingled and ETF	1,117,831,667	1,117,831,667	—	—
International Preferred Stock	15,354,654	15,354,654	—	—
Total Equity Securities	9,987,575,598	9,980,505,271	—	7,070,327
Real Estate and Alternatives				
Separate Properties	72,728,691	—	—	72,728,691
Home Office Property, Rentable	1,851,754	—	—	1,851,754
Real Estate Partnership	6,241,241	—	—	6,241,241
Alternatives Distribution	244,886	—	—	244,886
Total Real Estate	81,066,572	—	—	81,066,572
Investments by Fair Value Level	\$ <u>14,783,531,891</u>	\$ <u>9,980,505,271</u>	\$ <u>4,703,680,706</u>	\$ <u>99,345,914</u>
<i>Derivatives by Fair Value</i>				
Swaps	—	—	—	—
Options	—	—	—	—
To-Be-Announced Agencies	100,769,165	—	100,769,165	—
Total Derivatives by Fair Value Level	100,769,165	—	100,769,165	—
Total Investments and Derivatives by Fair Value Level	\$ <u>\$14,884,301,056</u>	\$ <u>9,980,505,271</u>	\$ <u>4,804,449,871</u>	\$ <u>99,345,914</u>

INVESTMENTS MEASURED AT NET ASSET VALUE (NAV)

<i>Investments Measured at Net Asset Value (NAV)</i>		Unfunded Commitment	Transfer or Redemption Frequency	Transfer or Redemption Notice
Private Equity Partnerships	\$ 932,149,529	\$ 1,293,507,784	Quarterly	30 days
Real Estate Partnerships	707,575,654	179,328,218	Quarterly	30 days
Real Estate Core Funds	1,246,990,398	—	Quarterly	30 days
Real Estate Other Funds	74,901,642	—	Biannual	30 days
Total investments measured at NAV	2,961,617,223			

Short Term Investments Measured at Amortized Cost

STIF Funds	53,850,832
Money Market Investments	686,976,391
Total Measured at Amortized Cost	740,827,223
Total Investment Value	\$ <u>18,586,745,502</u>

EQUITY SECURITIES

Equity securities classified in Level 1 are priced by identical securities traded on an established exchange. All commingled fund values are the sum of their respective public market holdings and are leveled according to those inputs and not driven by the characteristic of the ownership. Level 3 equity securities are valued based on stale prices or other unobservable inputs.

DEBT SECURITIES

GNMA are those agencies explicitly guaranteed by the U.S. government. U.S. Corporate debt in Level 3 are those securities in inactive markets where prices have been determined to be stale or otherwise do not meet observable Level 2 criteria.

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

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

REAL ESTATE AND ALTERNATIVES MEASURED AT FAIR VALUE

The Retirement System wholly owns three separate properties including timber land and its home office. These are valued according to annual independent professional appraisals and can be sold at any time. Appraisals utilize comparable sales, inventory estimates and present values of cash flows to determine respective property valuations. There are no unfunded commitments for these properties. The home office property is 50 percent System occupied and 50 percent rentable space. This building was split into two units of account at purchase. The System's portion is included in capital assets. All but one of the System's real estate partnerships are included in the net asset value portion of this table. The real estate partnership shown at level 3 is valued at cost in its audited financial statements. Sale of this partnership would be on an inefficient secondary market that could result in value above or below that listed. Transfer to a buyer would be restricted to quarter end dates. No sale is contemplated. 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 \$4.3 million in outstanding currency forward contract payables and receivables at June 30, 2017. The net fluctuation in currency rates at that time decreased the unrealized fair value of those contracts by \$15,211,743. See Note 4 of these financial statements for more information on KPERS derivative investments.

INVESTMENTS MEASURED AT NET ASSET VALUE (NAV)

For seventy-two (72) private equity partnerships, thirty-two (32) real estate partnerships and three 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, 2016, financial reports with unmodified opinions, along with unaudited quarterly reports. Net asset values one quarter in arrears plus current quarter cash flows are used when recent information is not available. These partnerships are diversified across types and vintage years. The expected term of each partnership is between seven to ten years. Any sales of these would be on an inefficient secondary market that could result in values above or below those listed. Transfers to buyers is restricted to quarter end dates. No sales are contemplated.

Seven real estate core funds holding domestic properties are owned proportionately by investors. All fund properties have annual independent external appraisals and the fair value of each fund has been determined using the NAV per share or its 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. Real estate other funds are similar to the core funds except that there is a redemption lock up period through February 2020, followed by biannual redemptions. No 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. They are not required to meet SEC 2a-7 standards. There are no redemption restrictions and shares are typically redeemed at book-value of \$1 per share using amortized cost. Price per share may vary. Amortized cost is materially equivalent to fair value.

Money Market Investments are highly liquid debt instruments purchased within one year of maturity, including U.S. Treasury and Agency obligations. Asset-backed securities, derivatives and structured notes are not included in money market investments.

NOTE 6 – RESERVES

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

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

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

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

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

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

The balance of the System’s pension reserves and the net pension liability at June 30, 2017, were as follows:

Reserves	Balance	Net Pension Liability
Members Accumulated Contribution Reserve Retirement Benefit	\$ 6,008,633,568	\$ —
Accumulation Reserve Retirement Benefit	7,927,687,260	(9,128,629,062)
Payment Reserve	13,803,183,349	—
Expense Reserve	22,965,306	—
	\$ 27,762,469,483	(9,128,629,062)
Total Pension Reserves		\$ <u>18,633,840,421</u>

NOTE 7 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

The components of the net pension liability of the participating employers at June 30, 2017, were as follows:

	KPERS
State	\$ 4,425,279,846
School	14,717,364,378
Local	5,201,842,383
KP&F	3,232,946,675
Judges	185,036,201
Total Pension Liability	27,762,469,483
Fiduciary Net Position	18,633,840,421
Employers' Net Pension Liability	\$ 9,128,629,062
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	67.12%

ACTUARIAL ASSUMPTIONS

The total pension liability was determined by an actuarial valuation as of December 31, 2016, which was rolled forward to June 30, 2017, using the following actuarial assumptions, applied to all periods included in the measurement:

Actuarial cost method	Entry age normal
Remaining amortization period	Layered bases varying from 16 to 25 years
Inflation	2.75 percent
Salary increase	3.50 to 12.00 percent, including price inflation
Investment rate of return	7.75 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 actuarial assumptions used in the December 31, 2016, valuation were based on the results of an actuarial experience study conducted for the period January 1, 2013 through December 31, 2015. The experience study is dated November 18, 2016.

The actuarial assumption changes adopted by the System for all groups based on the experience study:

- Price inflation assumption lowered from 3.00 percent to 2.75 percent
- Investment return assumption was lowered from 8.00 percent to 7.75 percent
- General wage growth assumption was lowered from 4.00 percent to 3.50 percent
- Payroll growth assumption was lowered from 4.00 percent to 3.00 percent

In addition, the System adopted a new method for paying off the unfunded actuarial liability (UAL). Under the new method, the UAL is amortized using a "layered" approach, where the December 31, 2015 UAL serves as the initial (legacy) base and is amortized over the remaining amortization period of sixteen years. The change to the UAL as of December 31, 2016 that resulted from the assumption changes is amortized over a closed twenty-five year period. Any change to the UAL that results from actuarial experience is amortized over a closed twenty year period.

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 November 18, 2016, 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
Global Equities	47.0 %	6.85 %
Fixed Income	13.0	1.25
Yield Driven	8.0	6.55
Real Return	11.0	1.71
Real Estate	11.0	5.05
Alternatives	8.0	9.85
Short-term Investments	2.0	(0.25)

DISCOUNT RATE

The discount rate used to measure the total pension liability was 7.75 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% for fiscal year 2014, 1.0% for fiscal year 2015, 1.1% for fiscal year 2016 and 1.2% for fiscal year 2017.

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 FY 2015 of 11.27% was reduced to 8.65% for the last half of FY 2015 as part of the Governor's allotment. That same session, SB 228 recertified statutory rates for the State/School group to 10.91% for FY 2016 and 10.81% for FY 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 FY 2016. Concurrently, 2016 House Sub for SB 249 provided that the delayed contributions would be repaid in full, with interest at 8%, by June 30, 2018. However, legislation passed by the 2017 Legislature removed the repayment provision. In addition, 2017 S Sub for Sub HB 2052 delayed \$64 million in FY 2017 contributions, to be repaid over 20 years in level dollar installments. The first year payment of \$6.4 million was paid in full at the beginning of FY 2018, and appropriations for FY 2018 are intended to fully fund the State/School group statutory contribution rate of 12.01% 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% in the State/School contributions for FY 2019. Like the FY 2017 reduction, it is to be paid back over a 20-year period, beginning in FY 2020. Therefore, both reductions will be accounted for as long-term receivables by the System.

Based on employer contribution history as described above, it is a reasonable estimate that the State/School group's contribution rate may not be certified at the statutory rate. It has been assumed that 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 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 of the Retirement System calculated using the discount rate of 7.75 percent, as well as what the Retirement Systems' net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower 6.75 percent or 1-percentage-point higher 8.75 percent than the current rate:

	1% Decrease (6.75%)	Current Discount Rate (7.75%)	1% Increase (8.75%)
Net Pension Liability	\$ 12,415,167,080	\$ 9,128,629,062	\$ 6,358,184,235

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, 2017, 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

Subsequent events have been evaluated through November 1, 2017, which is the date the financial statements were available to be issued.

REQUIRED SUPPLEMENTARY INFORMATION – RETIREMENT PLAN

SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY

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

Total Pension Liability:	2017	2016	2015	2014
Service Cost	\$ 570,703	\$ 571,263	\$ 571,944	\$ 572,291
Interest	2,046,674	1,985,329	1,926,405	1,866,797
Changes of Benefit Terms	713	—	1,467	—
Differences Between Expected and Actual Experience	(154,326)	(133,493)	(135,542)	(216,248)
Changes of Assumptions	574,844	—	(53,014)	—
Benefit Payments, Including Refunds of Member Contributions	(1,686,676)	(1,627,032)	(1,524,380)	(1,432,846)
Net Change in Total Pension Liability	1,351,932	796,067	786,880	789,994
Total Pension Liability – Beginning	26,410,538	25,614,471	24,827,591	24,037,597
Total Pension Liability – Ending (A)	27,762,469	26,410,538	25,614,471	24,827,591
Plan Fiduciary Net Position:				
Contributions – Employer	761,610	739,184	690,564	701,818
Contributions – Member	414,538	404,856	382,058	332,163
Contributions – Non-Employer(2)	—	1,000,000	—	—
Total Net Investment Income	2,060,925	49,171	561,174	2,553,843
Other Miscellaneous Income	(97,873)	2,904	1,076	242
Benefit Payments, Including Refunds Of Member Contributions	(1,686,676)	(1,627,032)	(1,524,380)	(1,432,846)
Administrative Expenses	(11,116)	(12,172)	(10,768)	(9,636)
Net Change in Plan Fiduciary Net Position	1,441,408	556,911	99,724	2,145,584
Plan Fiduciary Net Position – Beginning	17,192,432	16,635,521	16,535,797	14,390,213
Plan Fiduciary Net Position – Ending (B)	18,633,840	17,192,432	16,635,521	16,535,797
Retirement System's Net Pension Liability (A) - (B)	\$ <u>9,128,629</u>	\$ <u>9,218,106</u>	\$ <u>8,978,950</u>	\$ <u>8,291,794</u>

See accompanying independent auditors' report.

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

(2) Pension Obligation Bond proceeds 2015H received in Fiscal Year 2016.

(3) Numbers may not add due to rounding.

SCHEDULE OF EMPLOYERS' NET PENSION LIABILITY
For the last four fiscal years (\$ in Thousands)

	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	<u>\$ 9,128,629</u>	<u>\$ 9,218,106</u>	<u>\$ 8,978,950</u>	<u>\$ 8,291,794</u>
Plan fiduciary net position as a percentage of the total pension liability	67.12%	65.10%	64.95%	66.60%
Covered-employee payroll	\$ 6,715,593	\$ 6,388,450	\$ 6,635,196	\$ 6,424,739
Employers' net pension liability as a percentage of covered-employee payroll	135.93%	144.29%	135.32%	129.06%

See accompanying independent auditors' report.

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

SCHEDULE OF EMPLOYERS' CONTRIBUTIONS
Last 10 Fiscal Years (\$ in Thousands)

	2017	2016	2015	2014	2013
Actuarially determined contribution	\$ \$ 920,789	\$ 891,638	\$ 908,019	\$ 842,286	\$ 825,197
Contributions in relation to the actuarially determined contribution	745,021	721,313	676,173	668,811	617,925
Contribution deficiency (excess)	<u>\$ 175,768</u>	<u>\$ 170,325</u>	<u>\$ 231,846</u>	<u>\$ 173,475</u>	<u>\$ 207,272</u>
Covered-employee payroll	\$ \$ 6,715,593	\$ 6,388,450	\$ 6,635,196	\$ 6,424,739	\$ 6,523,850
Contributions as a percentage of covered-employee payroll	11.09%	11.29%	10.19%	10.41%	9.47%

	2012	2011	2010	2009	2008
Actuarially determined contribution	\$ 843,362	\$ 709,964	\$ 682,062	\$ 660,834	\$ 607,662
Contributions in relation to the actuarially determined contribution	568,015	525,727	492,006	449,236	395,752
Contribution deficiency (excess)	<u>\$ 275,347</u>	<u>\$ 184,237</u>	<u>\$ 190,056</u>	<u>\$ 211,598</u>	<u>\$ 211,910</u>
Covered-employee payroll	\$ 6,541,464	\$ 6,483,143	\$ 6,527,400	\$ 6,403,432	\$ 6,226,754
Contributions as a percentage of covered-employee payroll	8.68%	8.11%	7.54%	7.02%	6.36%

See accompanying independent auditors' report.

SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

Annual money-weighted rate of return, net of investment expense	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
	12.35%	0.33%	3.58%	18.10%	13.87%	0.67%	22.56%	14.96%	(20.08) %	(4.58) %

See accompanying independent auditors' report.

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION JUNE 30, 2017

NOTE 1 – METHOD AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY DETERMINED CONTRIBUTIONS

The actuarially determined contribution rates in the schedule of the Retirement System's contributions are calculated as of June 30, two years prior to the end of the 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	12/31/2016	12/31/2016	12/31/2016
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 16-25 years	Layered bases 16-25 years	Layered bases 16-25 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 For fiscal year ended June 30, 2017

Kansas Public Employees Retirement System		
State / School Contributions		
Members	\$268,802,239	
Employers	497,175,352	
Total State / School Contributions		\$765,977,591
Local Contributions		
Members	106,999,605	
Employers	157,183,834	
Total Local Contributions		264,183,439
Total Contributions KPERs		\$ 1,030,161,030
Kansas Police and Firemen's System		
State Contributions		
Members	3,652,308	
Employers	10,166,096	
Total State Contributions		13,818,404
Local Contributions		
Members	33,417,281	
Employers	90,950,247	
Total Local Contributions		124,367,528
Total Contributions KP&F		138,185,932
Kansas Retirement System for Judges		
State Contributions		
Members	1,666,224	
Employers	6,134,532	
Total State Contributions		7,800,756
Total Contributions – Judges		7,800,756
Grand Total All Contributions		\$ 1,176,147,718

SCHEDULE OF ADMINISTRATIVE EXPENSES
For Year Ended June 30, 2017

Salaries and Wages \$ 6,631,146

Professional Services

Actuarial	\$	383,926
Audit		137,500
Data Processing		1,191,644
Legal		79,518
Other Professional Services		1,043,725
Total Professional Services		2,836,313

Communication

Postage		345,676
Printing		159,806
Telephone		163,014
Total Communication		668,496

Building Administration

Building Management		70,287
Janitorial Service		38,644
Real Estate Taxes		59,323
Utilities		49,244
Total Building Administration		217,498

Miscellaneous

Dues and Subscriptions		17,183
Repair and Maintenance		66,173
Office and Equipment Rent		13,118
Supplies		68,328
Temporary Services		9,418
Travel		85,428
Other Miscellaneous		302,750
Depreciation		200,321
Total Miscellaneous		762,719

Total Administrative Expenses \$ 11,116,172

SCHEDULE OF INVESTMENT INCOME BY ASSET CLASS
For Fiscal Year Ending June 30, 2017

Asset Classification	Interest, Dividends and Other Transactions	Gains and Losses	Total
Marketable Equity Securities			
Domestic Equities	\$ 132,967,902	\$ 921,107,777	\$ 1,054,075,679
International Equities	63,097,472	661,165,746	724,263,218
Subtotal Marketable Equities	196,065,374	1,582,273,523	1,778,338,897
Marketable Fixed Income Securities			
Government	35,498,897	(83,940,304)	(48,441,407)
Corporate	81,665,011	15,503,155	97,168,166
Subtotal Marketable Fixed	117,163,908	(68,437,149)	48,726,759
Temporary Investments	7,860,689	994,531	8,855,220
Total Marketable Securities	321,089,971	1,514,830,905	1,835,920,876
Real Estate	91,728,610	69,752,824	161,481,434
Alternative Investments	13,394,069	124,002,194	137,396,263
Total Real Estate and Alternative Investments	105,122,679	193,755,018	298,877,697
	\$ <u>426,212,650</u>	\$ <u>1,708,585,923</u>	\$ <u>2,134,798,573</u>

Manager and Custodian Fees and Expenses

Investment Manager Fees	(24,037,527)
Custodian Fees & Expenses	(1,067,540)
Investment Legal & Consulting Expenses	(2,080,260)
Partnership Management Fees & Expenses	(44,690,833)
Investment Operations Expenses	(1,996,936)
Total Investment Fees and Expenses	<u>(73,873,096)</u>

Net Investment Income \$ 2,060,925,477

SCHEDULE OF INVESTMENT MANAGEMENT FEES AND EXPENSES
For the Fiscal Year Ended June 30, 2017

Domestic Equity Managers		
Advisory Research	\$	1,448,946
BlackRock		267,827
Loomis, Sayles & Co.		101,254
Mellon Capital Management		207,300
Systematic Financial Management		78,278
Voya		122,509
Subtotal Domestic Equity Managers	\$	2,226,114
International Equity Managers		
Baillie Gifford International		2,639,806
Barings International		221,317
JP Morgan International		2,954,342
Lazard Asset Management		1,802,201
Morgan Stanley Asset Management		3,169
State Street International		509,392
Templeton International		2,355,640
Wellington International		335,950
Subtotal International Equity Managers		10,821,817
Fixed Income Managers		
BlackRock		1,279,592
Loomis, Sayles & Co.		1,168,315
MacKay Shields		1,284,808
Templeton		685,610
T. Rowe Price		1,005,755
Western Asset Management Co.		992,209
Subtotal Fixed Income Managers		6,416,289
Currency Overlay and Securitization Managers		
Adrian Lee & Partners		1,154,139
Pareto Partners		1,507,107
Russell Overlay		81,479
Subtotal Currency Overlay and Securitization Managers		2,742,725
Real Estate and REIT Investment Managers		
AEW Capital Management		80,006
Brookfield Redding		672,023
CenterSquare		619,563
Subtotal Real Estate & REIT Managers		1,371,592
Cash Equivalent Manager		
Payden & Rygel Investment Counsel		458,990
Subtotal Cash Management		458,990
Total Investment Management Fees		24,037,527
Other Fees and Expenses		
Custodian Fees and Other Expenses		1,067,540
Consultant Fees		1,948,698
Legal Expenses		131,562
Investment Operations		1,996,936
Partnership Management Fees and Expenses		44,690,833
Subtotal Other Fees and Expenses		49,835,569
Total	\$	73,873,096

Combining Statement of Changes in Assets and Liabilities — Agency Funds

	Balance as of June 30, 2016		Additions		Deletions		Balance as of June 30, 2017
Optional Group Life Insurance							
Assets:							
Cash	\$ 157,652	\$	6,219,815	\$	6,204,223	\$	173,244
Receivables:							
Due from Local/State Governments	66,160		105,489		128,623		43,026
Total Assets	223,812		6,325,304		6,332,846		216,270
Liabilities:							
Accounts Payable	22,019		6,350,259		6,364,783		7,495
Funds Held for Others	201,794		6,124,981		6,118,000		208,775
Total Liabilities	\$ 223,813	\$	12,475,240	\$	12,482,783	\$	216,270
Group Death & Disability Benefits							
Assets:							
Cash and Cash Equivalents	\$ 35,545	\$	51,937,759	\$	51,602,291	\$	371,013
Deposits with Insurance Carrier	49,368		484,010		352,177		181,201
Total Cash and Cash Equivalents	84,913		52,421,769		51,954,468		552,214
Receivables:							
Due from Local/State Government	126,636		173,952		262,635		37,953
Sale of Investment Securities	25,097		53,328		61,687		16,738
Total Receivables	151,733		227,280		324,322		54,691
Investments at Fair Value:							
Short Term	63,883,515		—		36,935,928		26,947,587
Total Investments	63,883,515		—		36,935,928		26,947,587
Total Assets	64,120,161		52,649,049		89,214,718		27,554,492
Liabilities:							
Accounts Payable	160,828		69,076,071		65,159,089		4,077,810
Funds Held for Others	63,959,333		252,537		40,735,188		23,476,682
Total Liabilities	\$ 64,120,161	\$	69,328,608	\$	105,894,277	\$	27,554,492
Total-Agency Fund							
Assets:							
Cash and Cash Equivalents	\$ 193,197	\$	58,157,574	\$	57,806,514	\$	544,257
Deposits with Insurance Carrier	49,368		484,010		352,177		181,201
Total Cash and Cash Equivalents	242,565		58,641,584		58,158,691		725,458
Receivables:							
Due from Others	192,796		279,441		391,258		80,979
Sale of Investment Securities	25,097		53,328		61,687		16,738
Total Receivables	217,893		332,769		452,945		97,717
Investments at Fair Value:							
Short Term	63,883,515		—		36,935,928		26,947,587
Total Investments	63,883,515		—		36,935,928		26,947,587
Total Assets	64,343,973		58,974,353		95,547,564		27,770,762
Liabilities:							
Accounts Payable	182,847		75,426,329		71,523,872		4,085,304
Funds Held for Others	64,161,127		6,377,519		46,853,188		23,685,458
Total Liabilities	\$ 64,343,974	\$	81,803,848	\$	118,377,060	\$	27,770,762

EXPENSES BY TYPE (1)
Last Ten Fiscal Years

Fiscal Year	<u>Refund of Contributions</u>				Administration (Retirement)	Uncollectible Pension Contributions(2)	Total
	Benefits	Separations	Death				
2008	\$ 954,093,592	\$ 43,197,593	\$ 5,275,097	\$ 9,253,050	\$ —	\$ 1,011,819,332	
2009	1,009,177,354	38,156,001	5,773,422	11,085,498	—	1,064,192,275	
2010	1,069,165,206	37,214,954	6,147,736	10,158,398	—	1,122,686,294	
2011	1,156,823,960	43,579,892	5,984,123	9,261,260	—	1,215,649,235	
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	

(1) Schedule has been restated to remove Optional Group Life Insurance and Death and Disability Group Insurance expenses.



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

Board of Trustees
Kansas Public Employees Retirement System
Topeka, Kansas

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Kansas Public Employees Retirement System (the System) as of and for the year ended June 30, 2017, and the related notes to the financial statements, which collectively comprise the System's basic financial statements, and have issued our report thereon dated November 1, 2017.

Internal Control Over Financial Reporting

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

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

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

Compliance and Other Matters

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

Purpose of this Report

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

A handwritten signature in black ink that reads "CliftonLarsonAllen LLP". The signature is written in a cursive, flowing style.

CliftonLarsonAllen LLP

Denver, Colorado
November 1, 2017



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Board of Trustees
Kansas Public Employees Retirement System
Topeka, Kansas

We have audited the financial statements of the Kansas Public Employees Retirement System (the System) as of and for the year ended June 30, 2017, and have issued our report thereon dated November 1, 2017. We have previously communicated to you information about our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. Professional standards also require that we communicate to you the following information related to our audit.

Significant audit findings

Qualitative aspects of accounting practices

Accounting policies

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the System are described in Note 2 to the financial statements.

We noted no transactions entered into by the System during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

- Management's estimate of the market values for investments in private equity funds and real estate are estimated by adjusting the most recent market values reported for known cash activity such as capital calls, distributions and management fees, as well as adjustments to audited financial statements of the funds. These adjustments are made in consultation with a third party investment consultant. We evaluated the key factors and assumptions used to develop the market values for investments in determining that They are reasonable in relation to the financial statements taken as a whole.
- Management's estimate of the total pension liability is based on a third party actuarial valuation. We evaluated the key factors and assumptions used to develop the total pension liability in determining that it is reasonable in relation to the financial statements taken as a whole.

Financial statement disclosures

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. There were no particularly sensitive financial statement disclosures.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties encountered in performing the audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Uncorrected misstatements

Professional standards require us to accumulate all misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management did not identify and we did not notify them of any uncorrected financial statement misstatements.

Corrected misstatements

Management did not identify and we did not notify them of any financial statement misstatements detected as a result of audit procedures.

Disagreements with management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. No such disagreements arose during our audit.

Management representations

We have requested certain representations from management that are included in the attached management representation letter dated November 1, 2017.

Management consultations with other independent accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the System's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. We were informed by management that there were consultations with other accountants in relation to the presentation of agency funds included in the statement of fiduciary net position.

Other audit findings or issues

The following describes findings or issues arising from the audit that are, in our professional judgment, significant and relevant to your oversight of the financial reporting process:

- Although targeted vulnerability assessments have been performed, a complete vulnerability assessment and an external penetration test have not been performed since 2012. We recommend that management review such assessments and procure these services in order to ensure security measures are up to date and that infrastructure and firewalls are secure in regards to external penetration.

Significant issues discussed with management prior to engagement

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to engagement as the System's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our engagement.

Other information in documents containing audited financial statements

With respect to the required supplementary information (RSI) accompanying the financial statements, we made certain inquiries of management about the methods of preparing the RSI, including whether the RSI has been measured and presented in accordance with prescribed guidelines, whether the methods of measurement and preparation have been changed from the prior period and the reasons for any such changes, and whether there were any significant assumptions or interpretations underlying the measurement or presentation of the RSI. We compared the RSI for consistency with management's responses to the foregoing inquiries, the basic financial statements, and other knowledge obtained during the audit of the basic financial statements. Because these limited procedures do not provide sufficient evidence, we did not express an opinion or provide any assurance on the RSI.

With respect to the other supplementary information (collectively, the supplementary information) accompanying the financial statements, on which we were engaged to report in relation to the financial statements as a whole, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period or the reasons for such changes, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves. We have issued our report thereon dated November 1, 2017.

The other supplementary information accompanying the financial statements, which is the responsibility of management, was prepared for purposes of additional analysis and is not a required part of the financial statements. Such information was not subjected to the auditing procedures applied in the audit of the financial statements, and, accordingly, we did not express an opinion or provide any assurance on it.

Our auditors' opinion, the audited financial statements, and the notes to financial statements should only be used in their entirety. Inclusion of the audited financial statements in a document you prepare, such as an annual report, should be done only with our prior approval and review of the document.

This communication is intended solely for the information and use of the Board of Trustees and management of the Kansas Public Employees Retirement System and is not intended to be, and should not be, used by anyone other than these specified parties.



CliftonLarsonAllen LLP

Denver, Colorado
November 1, 2017



November 1, 2017

CliftonLarsonAllen LLP
8390 E. Crescent Parkway, Suite 600
Greenwood Village, CO 80111

This representation letter is provided in connection with your audit of the financial statements of the Kansas Public Employees Retirement System (the System), which comprise the statement of the Plan net position as of June 30, 2017, and the changes in the Plan net position for the year then ended, and the related notes to the financial statements, for the purpose of expressing opinions on whether the financial statements are presented fairly, in all material respects, in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP).

Certain representations in this letter are described as being limited to matters that are material. Items are considered material, regardless of size, if they involve an omission or misstatement of accounting information that, in light of surrounding circumstances, makes it probable that the judgment of a reasonable person relying on the information would be changed or influenced by the omission or misstatement.

We confirm, to the best of our knowledge and belief, as of November 1, 2017, the following representations made to you during your audit of the financial statements as of and for the year ended June 30, 2017.

Financial Statements

- We have fulfilled our responsibilities, as set out in the terms of the engagement letter dated February 15, 2017, for the preparation and fair presentation of the financial statements in accordance with U.S. GAAP. The financial statements include all properly classified funds and other financial information of the primary government and all component units required by generally accepted accounting principles to be included in the financial reporting entity.
- We acknowledge and have fulfilled our responsibility for 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.
- We acknowledge our responsibility for the design, implementation, and maintenance of internal control to prevent and detect fraud.

- All significant plan amendments, adopted during the period or subsequent to the date of the financial statements, and their effects on benefits and financial status have been disclosed in the financial statements.
- We have identified all accounting estimates that could be material to the financial statements, including the key factors and significant assumptions used in making those estimates, and we believe the estimates (including those measured at fair value) and the significant assumptions used in making those accounting estimates are reasonable.
- Significant estimates have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP. Significant estimates are estimates at the financial statement date that could change materially within the next year.
- Related party relationships and transactions have been appropriately accounted for and disclosed in accordance with the requirements of U.S. GAAP.
- No events, including instances of noncompliance, have occurred subsequent to the financial statement date and through the date of this letter that would require adjustment to, or disclosure in, the financial statements.
- We have not identified or been notified of any uncorrected financial statement misstatements.
- We are not aware of any pending or threatened litigation, claims, or assessments or unasserted claims or assessments that are required to be accrued or disclosed in the financial statements in accordance with U.S. GAAP.
- Guarantees, whether written or oral, under which the System is contingently liable, if any, have been properly recorded or disclosed in accordance with U.S. GAAP.
- Arrangements with financial institutions involving repurchase, reverse repurchase, or securities lending agreements, compensating balances, or other arrangements involving restrictions on cash balances and line-of-credit or similar arrangements, have been properly recorded or disclosed in the financial statements.
- Receivables recorded in the financial statements represent valid claims against debtors for transactions arising on or before the financial statement date and have been reduced to their estimated net realizable value.
- The methods and significant assumptions used to determine fair values of financial instruments are as follows: Adjustments are made to the most recent market values reported by the funds. These adjustments are made by estimates from investment managers as to market values at year-end, including known cash activity such as capital calls, distributions and management fees, as well as adjustments to audited financial statements of the funds. The methods and significant assumptions used result in a measure of fair value appropriate for financial statement measurement and disclosure purposes.

- We have no plans or intentions that may materially affect the carrying value or classification of assets, liabilities, or equity.
- Capital assets have been evaluated for impairment as a result of significant and unexpected decline in service utility. Impairment loss and insurance recoveries have been properly recorded.
- With respect to actuarial assumptions and valuations:
 - The Kansas Public Employees Retirement System agrees with the actuarial methods and assumptions used by the actuary for funding purposes and for determining the total pension liability and has no knowledge or belief that would make such methods or assumptions inappropriate in the circumstances. We did not give any, nor cause any, instructions to be given to the Kansas Public Employees Retirement System's actuary with respect to values or amounts derived, and we are not aware of any matters that have impacted the independence or objectivity of the Kansas Public Employees Retirement System's actuary.
 - There were no omissions from the participant data provided to the actuary for the purpose of determining the total pension liability and other actuarially determined amounts in the financial statements.
 - There have been no changes in the actuarial methods or assumptions used in calculating the amounts recorded or disclosed in the financial statements. There have been no changes in plan provisions between the actuarial valuation date and the date of this letter.

Information Provided

- We have provided you with:
 - Access to all information, of which we are aware, that is relevant to the preparation and fair presentation of the financial statements such as records, documentation, and other matters.
 - Additional information that you have requested from us for the purpose of the audit.
 - Unrestricted access to persons within the System from whom you determined it necessary to obtain audit evidence.
 - Complete minutes of the meetings of the governing board and related committees, or summaries of actions of recent meetings for which minutes have not yet been prepared.
 - All actuarial reports prepared for the plan during the year.
 - Access to all audit or relevant monitoring reports, if any, received from funding sources.

- All material transactions have been recorded in the accounting records and are reflected in the financial statements.
- We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
- We have no knowledge of any fraud or suspected fraud that affects the System and involves:
 - Management;
 - Employees who have significant roles in internal control; or
 - Others when the fraud could have a material effect on the financial statements.
- We have no knowledge of any allegations of fraud, or suspected fraud, affecting the System's financial statements communicated by employees, former employees, regulators, or others.
- We have no knowledge of any instances of noncompliance or suspected noncompliance with laws and regulations and provisions of contracts, or abuse whose effects should be considered when preparing financial statements.
- The effects of all known actual or possible litigation, claims, and assessments have been accounted for and disclosed in accordance with U.S. GAAP.
- There are no other material liabilities or gain or loss contingencies that are required to be accrued or disclosed in accordance with U.S. GAAP.
- We have disclosed to you the identity of the System's related parties and all the related party relationships and transactions of which we are aware.
- We have a process to track the status of audit findings and recommendations.
- We have identified to you any previous audits, attestation engagements, and other studies related to the audit objectives and whether related recommendations have been implemented.
- We have provided our views on reported findings, conclusions, and recommendations, as well as our planned corrective actions, for the report.
- We are responsible for compliance with the laws, regulations, and provisions of contracts applicable to Kansas Public Employees Retirement System, and we have identified and disclosed to you all laws, regulations, and provisions of contracts that we believe have a direct and material effect on the determination of financial statement amounts or other financial data significant to the audit objectives, including legal and contractual provisions for reporting specific activities in separate funds.

- There are no violations or possible violations of budget ordinances, laws and regulations (including those pertaining to adopting, approving, and amending budgets), provisions of contracts, or any debt covenants whose effects should be considered for disclosure in the financial statements, or as a basis for recording a loss contingency, or for reporting on noncompliance.
- The System has complied with all aspects of contractual agreements that would have a material effect on the financial statements in the event of noncompliance.
- We have followed all applicable laws and regulations in adopting, approving, and amending budgets.
- Investments, derivative instruments, and land and other real estate are properly valued.
- The values of non-readily marketable investments represent good faith estimates of fair value. The methods and significant assumptions used result in a measure of fair value appropriate for financial measurement and disclosure purposes.
- Provisions for uncollectible receivables have been properly identified and recorded.
- Expenses have been appropriately classified in or allocated to functions and programs in the statement of activities, and allocations have been made on a reasonable basis.
- Revenues are appropriately classified in the statement of activities within program revenues, general revenues, contributions to term or permanent endowments, or contributions to permanent fund principal.
- Interfund, internal, and intra-entity activity and balances have been appropriately classified and reported.
- Deposits and investment securities and derivative instruments are properly classified as to risk and are properly valued and disclosed.
- Capital assets, including infrastructure and intangible assets, are properly capitalized, reported, and, if applicable, depreciated.
- We have obtained the service auditor's report from our service organization. We have reviewed such report, including the complementary user controls. We have implemented the relevant user controls, and they were in operation for the year ended June 30, 2017.
- We acknowledge our responsibility for the required supplementary information (RSI). The RSI is measured and presented within prescribed guidelines and the methods of measurement and presentation have not changed from those used in the prior period. We have disclosed to you any significant assumptions and interpretations underlying the measurement and presentation of the RSI.

- We acknowledge our responsibility for presenting the other supplementary information in accordance with U.S. GAAP, and we believe the supplementary information, including its form and content, is fairly presented in accordance with U.S. GAAP. The methods of measurement and presentation of the supplementary information have not changed from those used in the prior period, and we have disclosed to you any significant assumptions or interpretations underlying the measurement and presentation of the supplementary information. If the supplementary information is not presented with the audited financial statements, we will make the audited financial statements readily available to the intended users of the supplementary information no later than the date we issue the supplementary information and the auditors' report thereon.

Signature: Alan D. Conroy Title: Executive Director

Signature: Judith McNeal Title: Chief Fiscal Officer