



KANSAS CITY PUBLIC SCHOOL RETIREMENT SYSTEM



# Comprehensive Annual Financial Report

Fiscal Year Ended December 31, 2016



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# KCPSRS Board of Trustees

**Horace Coleman, Jr.**  
Board Chairperson  
Appointed by School Board

**Richard O. Brown**  
Elected by active members

**Mark Bedell, Ed.D.**  
District Superintendent  
Ex-officio

**Princeton Grayson**  
Elected by active members

**Joanne M. Collins**  
Treasurer  
Appointed by School Board

**Rogers Offield**  
Elected by active members

**Alexander P. Ellison**  
Vice-Chairperson  
Appointed by School Board

**Linda E. Watkins**  
Elected by active members

**Carl Evans**  
Appointed by School Board

**Beverly Pratt**  
Elected by retired members

**Debbie Siragusa**  
Appointed by Library District

**Curtis L. Rogers**  
Elected by retired members

## KCPSRS Staff

Christine Gierer, Executive Director

Lois Henderson, Retiree Services Coordinator

Erica Hill, Retirement Education Specialist

Jim Lewallen, Administrative Manager

Laura J. Oswald, Fiscal Accountant

Shannon McClain, Executive Assistant

Joe Schaefer, IT Manager



3100 Broadway, Suite 1211  
Kansas City, MO 64111  
816.472.5800

June 7, 2017

Dear Members,

It is my pleasure to submit the 2016 *Comprehensive Annual Financial Report* (CAFR) of the Kansas City Public School Retirement System (KCPSRS). This CAFR is a presentation of the financial results for KCPSRS for the fiscal year ended December 31, 2016. These financial results provide our members useful measurements for the evaluation of their retirement system and an update on changes that occurred during 2016.

### **Actuarial and Investment Information**

During 2016, Cavanaugh Macdonald completed a regularly scheduled *Five-Year Experience Study*. The experience study compared our actuarial assumptions, related to economics and demographics, to the actuarial experience of KCPSRS. The Board adopted changes to the actuarial assumptions and methods, which were recommended in the experience study.

The two most important assumption changes adopted by the Board of Trustees are mortality rates (improved life expectancies) and lower expected investment returns.

*Mortality* – People are living longer. Consequently, revised mortality assumptions will better project the length of time pension benefits are expected to be paid to current and future retirees and beneficiaries.

*Investment Returns* – Investment experts and actuaries expect lower investment returns for the long term. In recognition of these lower expectations, KCPSRS reduced the assumed rate of return for investments from 8% to 7.75%, effective with the January 1, 2017 valuation.

The System's actuary used data as of December 31, 2016 to prepare an actuarial valuation dated January 1, 2017. Information from the January 1, 2017 valuation report is presented in this CAFR. The funded ratio of valuation assets to liabilities of KCPSRS, which covers 8,223 members is 70%. More information is available in the Actuarial Section of this report.

Our investment portfolio produced a total return of 7.92% (gross) against the policy benchmark return of 8.03%. The investment performance was slightly less than our actuarial assumed rate of return of 8.0% (as of December 31, 2016). The newly adopted actuarial assumed rate of return of 7.75% is effective January 1, 2017.

More information regarding the investment performance and the investments professionals who provide services to KCPSRS can be found in the Investment Section of this report.

### **New Office Space**

KCPSRS staff moved into new leased office space in April 2016. The new office space offers covered parking for our visiting members, board members, and staff. The office has ample room for visiting members to meet with individual staff, a conference room for board meetings and ground floor conference rooms for group member education sessions.

### **Legislative Changes**

No changes to the plan provisions for KCPSRS were implemented during Fiscal Year 2016. The last legislative change to the plan provisions occurred in 2013 when increases to the contribution rate were authorized to commence in January of 2014 and a new plan for members hired on or after January 1, 2014 was implemented.

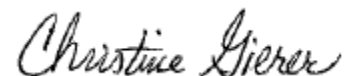
### **Acknowledgements**

The 2016 CAFR is a product of the combined efforts of KCPSRS staff and outside advisors functioning under the Board of Trustees' leadership. It is intended to provide complete and reliable information, comply with the legislative reporting requirements, and most importantly help our members learn more about the financial status of their retirement system.

I would like to thank our board members, our outside advisors and colleagues who have tirelessly given their time and expertise to support and advance the financial security of our members.

In closing, the Board of Trustees and staff look forward to serving your future needs, if you have any questions regarding this report or any aspect of KCPSRS, contact us at KCPSRS 3100 Broadway, Suite 1211, Kansas City, Missouri 64111 or call 819-472-5800 or visit our website [www.kcpsrs.org](http://www.kcpsrs.org).

Respectfully submitted,



Christine Gierer,  
Executive Director



3100 Broadway, Suite 1211  
Kansas City, MO 64111  
816.472.5800

June 7, 2017

Dear Members,

On behalf of the Board of Trustees, I am pleased to provide you with the KCPSRS *Comprehensive Annual Financial Report* for the fiscal year ending December 31, 2016. While the focus of this report is on information related to the financial status of your retirement system, it also highlights other occurrences during the year. The Financial Section is prepared in accordance with generally accepted accounting principles and includes financial statements, as attested to by the system's independent auditor. The auditor's letter is also found in this section.

During 2016 the board reviewed their mission and values and developed the KCPSRS mission statement and core values.

**Mission:** The Kansas City Public School Retirement System works to fulfill the expectation of a secure retirement for employees of Kansas City's School District, charter schools and Public Library.

**Core Values:**

In pursuit of our mission, our work is guided and informed by four core values.

- *Fiduciary Stewardship:* We are legally and ethically responsible to our members to safeguard the assets that provide for their future financial security.
- *Accountability:* Our principle obligation and concern is the security of member assets through efficient operations and prudent investment decisions.
- *Transparency:* We ensure openness in all aspects of governance and operations for our members and community.
- *Member Focused:* We strive to make all decisions in the best interest of our members. All of our work begins with the question, "Is it good for our members?"

As 2016 ended, the board experienced some turnover. On behalf of the board and staff, I would like to thank Alexander Ellison and Richard Brown for their hard work and dedication while serving as trustees. Mr. Ellison's term ended December 2016 and he was recognized for his 26-year tenure as a KCPSRS trustee school district appointee and for having served on several committees and as committee chairperson for many years. Brian Welch, CPA was appointed by the school board to replace Mr. Ellison and began his tenure on January 1, 2017. Mr. Brown who served on the board since 2014 as an active



member representative, resigned the board in December 2016. David Price, teacher at Troost Elementary, was appointed by the board of trustees in 2017 to complete Mr. Brown's term.

Two board members were elected and began their four-year terms on January 1<sup>st</sup> of 2017 - Roger Offield and Beverly Pratt, elected by active and retired members, respectively. We are pleased to have Dr. Mark Bedell, Superintendent of the Kanas City School District and resident in the District boundaries, join our board. It is important to remember trustees devote many hours fulfilling their fiduciary duties and serve with no remuneration.

I wish to thank the entire board for their contributions this year as well as the staff for their expertise and professionalism in the administration of the System. Lastly, I wish to express my gratitude to you, our members, for your dedication and commitment to serving our community.

In closing, the board of trustees and staff look forward to serving your future needs. If you have any question regarding this report or any aspect of KCPSRS, contact us at KCPSRS 3100 Broadway, Suite 1211, Kansas City, Missouri 64111 or call 819-472-5800 or visit our website [www.kcpsrs.org](http://www.kcpsrs.org).

Sincerely,

A handwritten signature in cursive script that reads "Horace Coleman".

Horace Coleman,  
Board of Trustees Chairperson

# Outside Professional Services

## **ACTUARY**

Cavanaugh Macdonald Consulting, LLC

## **AUDITORS**

CBIZ MHM, LLC

Mayer, Hoffman, McCann PC

## **INVESTMENT MANAGEMENT CONSULTANTS**

Segal Marco Advisors

## **LEGAL COUNSEL**

Seyferth, Blumenthal & Harris, LLC

Husch Blackwell, LLP

## **MASTER TRUSTEE/CUSTODIAN**

BNY Mellon

## **BANKING RELATIONSHIP**

Bank of America

## **INSURANCE**

Lockton Companies, Inc.

## **TECHNOLOGY CONSULTANTS**

Sagitec

GFI

## **LEGISLATIVE CONSULTANTS**

The Giddens Group

## **MEDICAL ADVISORS**

Dr. Danny K. Stanton with Hodges/Betts

Homecare, LLC Practice

Clay Platte Family Medicine Clinic

## **INVESTMENT ADVISORS**

AQR Capital Management

BlackRock

Brandywine Global

Investment Management, LLC

Brookfield Property Group

CBRE Clarion - VOYA

Clifton

Corbin Capital Partners

Denver Investments

Earnest Partners, LLC

Fisher Investments

JP Morgan Asset Management

Loomis Sayles

Mesirow Financial

Pantheon

Pugh Capital Management

Rhumblin Advisors

Rock Creek

StepStone Group

Wells Capital Management

Westfield Capital Management

Westport Capital Partners, LLC

# Financial Section

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## INDEPENDENT AUDITORS' REPORT

To the Board of Trustees  
Public School Retirement System of the School District of Kansas City, Missouri  
Kansas City, Missouri

### *Report on the Financial Statements*

We have audited the accompanying financial statements of the Public School Retirement System of the School District of Kansas City, Missouri (the "Retirement System"), which comprise the statements of fiduciary net position as of December 31, 2016 and 2015, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, which collectively comprise the 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 opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in Government Auditing Standards, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

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

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

### *Opinion*

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement System as of December 31, 2016 and 2015, and the changes in fiduciary net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.



Member of Kreston International – a global network of independent accounting firms

*Other Matters*

*Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the management’s discussion and analysis for the years ended December 31, 2016 and 2015 on pages 11 through 14 and supplementary information on pages 31 through 34 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.

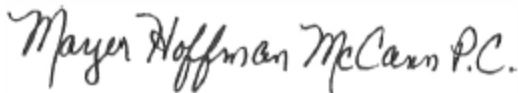
We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management’s responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits 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 audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the Retirement 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 underlying accounting and other records used to prepare the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

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



Kansas City, Missouri  
June 7, 2017

# Management’s Discussion and Analysis

The discussion and analysis of the Kansas City Public School Retirement financial statements provides an overview of its financial activities during the year ended December 31, 2016. Please read it in conjunction with more detailed financial statements, notes and required supplementary information which follows this section.

KCPSRS is the defined benefit plan for all regular, full-time employees of the Kansas City School District, Public Library, charter schools, and the System. The Plan was established by the Missouri General Assembly in 1944 and is administered by the KCPSRS Board of Trustees to provide retirement, disability and survivor benefits to its members.

## ***Overview of Financial Statements and Accompanying Information***

- The financial statements presented in this report are the Statements of Fiduciary Net Position as of December 31, 2016, and the Statements of Changes in Fiduciary Net Positions for the year ended December 31, 2016. These statements reflect resources available for the payment of benefits as of the year-end, and the sources and uses of those funds during the year.
- The notes to the financial statements are an integral part of the financial statements and provide facts and detailed information to assist the reader in understanding the statements. Information in the notes includes a description of the Plan, a summary of significant accounting policies, the method used to value investments, a summary of investments, and actuarial methods and assumptions.
- Schedules related to employer contributions and the funding of the Plan are included in the section entitled Required Supplementary Information.
- Other supplementary schedules consist of detailed information supporting administrative and investment expenses.

**Fiduciary Net Position**

	<b>December 31,</b>		<b>Percentage Change</b>
	<b>2016</b>	<b>2015</b>	
Receivables	12,069,103	12,175,210	-0.87%
Investments	618,133,183	622,054,307	-0.63%
Cash	2,401,367	2,469,527	-2.76%
Prepaid and other assets	45,865	36,491	25.69%
Property and equipment, net of accumulated depreciation	54,238	103,742	-47.72%
<b>Total assets</b>	<b><u>632,703,756</u></b>	<b><u>636,839,277</u></b>	<b>-0.65%</b>
Securities purchased	538,494	30,751	1651.14%
Accounts payable	590,186	583,179	1.20%
Accrued expenses	<u>132,463</u>	<u>115,841</u>	14.35%
<b>Total liabilities</b>	<b><u>1,261,143</u></b>	<b><u>729,771</u></b>	<b>72.81%</b>
<b>Net position restricted for pensions</b>	<b><u><u>631,442,613</u></u></b>	<b><u><u>636,109,506</u></u></b>	<b>-0.73%</b>

**Financial Analysis of Fiduciary Net Position**

**Assets** - Total assets KCPSRS were \$632.7 million as of December 31, 2016 and included receivables, investments and cash. A large percentage of total assets, 98% is represented by investments held to provide retirement, death, and disability benefits to members and their beneficiaries. Other assets, including cash, receivables from employee and employer contributions, receivables from investment-related transactions, prepaid assets, and property and equipment make up 2% of total assets. Total assets decreased \$4.1 million (-.65%) from prior year due to the decrease in investable assets of \$3.9 million (-.63%).

**Liabilities** – Total liabilities of KCPSRS were \$1.3 million as of December 31, 2016 and included payables for investment manager fees, payables from investment-related transactions, and accrued expenses. Total liabilities increased \$.5 million from prior year due to the increase in amounts due brokers for purchase of investments of \$.5 million.

**Net Position** – The fiduciary net position restricted for pensions of \$631.4 million as of December 31, 2016 is a slight decrease of \$4.7 (-.73%) from prior year.

**Changes in Fiduciary Net Position**

	<b>Years Ended December 31,</b>		<b>Dollar Change</b>	<b>Percentage Change</b>
	<b>2016</b>	<b>2015</b>		
Contributions	32,808,515	29,145,161	3,663,354	12.57%
Net investment income (loss)	44,337,774	(10,025,518)	54,363,292	542.25%
<b>Total additions</b>	<b>77,146,289</b>	<b>19,119,643</b>	<b>58,026,646</b>	<b>303.49%</b>
Benefits paid	76,898,255	76,235,124	663,131	0.87%
Refunds of contributions	3,270,723	3,399,065	(128,342)	3.78%
Depreciation expense	92,179	250,979	(158,800)	63.27%
Administrative expenses	1,552,025	1,648,449	(96,424)	5.85%
<b>Total deductions</b>	<b>81,813,183</b>	<b>81,533,617</b>	<b>279,566</b>	<b>-0.34%</b>
<b>Decrease in net position</b>	<b>(4,666,894)</b>	<b>(62,413,974)</b>	<b>57,747,080</b>	<b>92.52%</b>
<b>Net position restricted for pensions, beginning of year</b>	<b>636,109,506</b>	<b>698,523,480</b>	<b>(62,413,974)</b>	<b>-8.94%</b>
<b>Net position restricted for pensions, end of year</b>	<b>631,442,613</b>	<b>636,109,506</b>	<b>(4,666,893)</b>	<b>-0.73%</b>

**Financial Analysis of Changes in Fiduciary Net Position**

Member contributions, employer contributions and investment income are additions to fiduciary net position. For the year 2016, both members and employers contributed at 9.0% of covered salary versus for the year 2015, both members and employers contributed at 8.5% of covered salary. Total contributions for the year 2016 shows an increase of \$3.7 million (12.57%) compared to 2015 due to the contribution rate increase of .5% for both members and employers and the growth of payroll during year 2016 compared to 2015.

Net Investment income of \$44.3 million is the result of positive investment performance. The portfolio’s investment rate of return for the year 2016 gross of fees was 7.92% with investment income of \$48.3 million and investment expenses of \$4.0 million. Investment related expenses include investment manager fees, investment advisor and custodial fees.

Total revenue increased \$58.0 million from prior year due to the increase in both contributions and net investment income.

Benefits paid to members, refund of member contributions and administrative expenses are the deductions from fiduciary net position. Benefits paid out exceeded contributions received by \$44 million, for fiscal year 2016. This excess of benefits paid relative to contributions received is characteristic of a mature pension plan such as KCPSRS. The administrative expenses for year 2016



were approximately .25% of assets and decreased by \$96,424 (-5.9%) from 2015. Total expenses showed a slight increase of \$.3 million from prior year.

***Request for information***

This report is intended to provide the Board of Trustees, the Retirement System’s members, and other interested parties a general overview of the Retirement System’s financial matters. If you have questions about this report or need additional information, contact us at:

KCPSRS  
3100 Broadway, Suite 1211  
Kansas City, MO 64111  
816.472.5800  
kcpsrs@kcpsrs.org  
www.kcpsrs.org

## Statements of Fiduciary Net Position

<b>ASSETS</b>	<b>2016</b>	<b>2015</b>
Receivables		
Plan members contributions	697,036	720,848
Employers' contributions	10,562,880	9,757,475
Due from brokers for securities sold	364,670	1,189,058
Accrued interest and dividends	444,517	507,828
	<u>12,069,103</u>	<u>12,175,210</u>
Investments, at fair value:		
Cash and short term investments	13,832,993	14,266,375
Commingled domestic fixed income	52,860,342	61,809,810
High yield fixed income	16,474,561	14,919,095
Global fixed income	28,214,068	27,554,505
Domestic equity	145,024,310	141,293,930
International equity	151,657,182	148,205,278
Pooled real estate funds	70,742,809	71,749,420
Alternative equity funds	91,321,786	94,206,030
Private equity funds	27,812,474	30,226,368
Commodities fund	20,192,658	17,823,497
	<u>618,133,183</u>	<u>622,054,307</u>
Other:		
Cash	2,401,367	2,469,527
Prepaid and other assets	45,865	36,491
Property and equipment, at cost, less accumulated depreciation	54,238	103,742
	<u>2,501,469</u>	<u>2,609,760</u>
<b>TOTAL ASSETS</b>	<u>632,703,755</u>	<u>636,839,276</u>
<b>LIABILITIES</b>		
Due to broker for securities purchased	538,494	30,751
Accounts payable	590,186	583,179
Accrued payroll expenses	132,463	115,841
<b>TOTAL LIABILITIES</b>	<u>1,261,143</u>	<u>729,771</u>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<u>631,442,613</u>	<u>636,109,506</u>

See Notes to the Financial Statements

**Statements of Changes in Net Position**

<b>ADDITIONS</b>	<u>2016</u>	<u>2015</u>
Contributions		
Plan members	16,528,188	14,645,901
Employers	<u>16,280,327</u>	<u>14,499,260</u>
Total contributions	32,808,515	29,145,161
Investment Income:		
Net realized and unrealized appreciation in fair value of investments	42,374,383	(12,410,080)
Interest	2,147,094	2,644,542
Dividends	<u>3,797,930</u>	<u>4,229,650</u>
	48,319,407	(5,535,888)
Less: Investment expenses	<u>3,981,633</u>	<u>4,489,630</u>
Net investment income	44,337,774	(10,025,518)
<b>TOTAL ADDITIONS</b>	<u>77,146,289</u>	<u>19,119,643</u>
<b>DEDUCTIONS</b>		
Benefits paid	76,898,255	76,235,124
Refunds of contributions	3,270,723	3,399,065
Depreciation expense	92,179	250,979
Administrative expenses	1,552,025	1,648,449
<b>TOTAL DEDUCTIONS</b>	<u>81,813,182</u>	<u>81,533,617</u>
<b>NET DECREASE IN NET POSITION</b>	(4,666,893)	(62,413,974)
<b>NET POSITION RESTRICTED FOR PENSION</b>		
Beginning of year	<u>636,109,506</u>	<u>698,523,480</u>
End of year	<u><u>631,442,613</u></u>	<u><u>636,109,506</u></u>

See Notes to the Financial Statements

**NOTES TO FINANCIAL STATEMENTS****( 1 ) Description of plan**

The following description of the Public School Retirement System of the School District of Kansas City, Missouri (the “Retirement System”) provides only general information. Participants should refer to the Missouri Revised Statutes regarding the Retirement System or the Summary Plan Description for a more complete description of the Retirement System’s provisions, which are available from the Retirement System’s administrator.

**General** - The Retirement System is a cost-sharing multiple-employer defined benefit pension plan (the “Plan”), which was established by the General Assembly of the State of Missouri and is exempt from the provisions of the Employee Retirement Income Security Act of 1974. The Board of Trustees of the Retirement System (“Board of Trustees”) administers and operates the Plan in accordance with the statutes of the State of Missouri. At December 31, 2016, participating employers consisted of the School District of Kansas City, Missouri; the Kansas City, Missouri Public Library District; the Retirement System; and the following charter schools: Academie LaFayette, Academy for Integrated Arts, Allen Village Charter School, Citizens of the World Charter School, Alta Vista Charter School, Benjamin Banneker Charter Academy, Brookside Charter School, Crossroads Academy of Kansas City, DeLaSalle Charter School, Della Lamb Elementary, Ewing Marion Kauffman School, Frontier School of Innovation, Genesis School, Inc., Gordon Parks Elementary, Hogan Preparatory Academy, Hope Leadership Academy, Kansas City Neighborhood Academy, KIPP Endeavor Academy, Lee A. Tolbert Community Academy, Pathway Academy, Scuola Vita Nuova, and University Academy.

**Eligibility** - All regular, full-time employees of the participating employers become members of the Plan as a condition of employment if they are in a position requiring at least 25 hours of work per week and nine calendar months per year. Employees who retire after June 30, 1999 and were hired after 1961, but before January 1, 2014 are members of Plan B. Employees hired after January 1, 2014 are members of Plan C. At January 1, 2016 and 2015, respectively, the Plan’s membership consisted of:

	<b>2016</b>	<b>2015</b>
Active plan members	3,574	3,493
Retirees and beneficiaries receiving benefits	4,049	4,011
Terminated plan members, vested entitled to but not yet receiving benefits	461	476
Terminated plan members, nonvested entitled to a refund of contributions plus accrued interest	2,279	2,124
Total plan membership	<u>10,363</u>	<u>10,104</u>

**Contributions** - Effective January 1, 2015, members of Plan B and C contributed at 8.5% of annual compensation, as defined. Effective January 1, 2016, members of Plan B and C contributed at 9% of annual compensation.

Effective January 1, 2015, employers contributed 8.5% of annual compensation, as defined. Effective January 1, 2016, employers contributed at 9% of annual compensation.

**Service** - Creditable service is membership service. This is service for which required contributions have been made. Members of Plan B are effectively limited to 30 years of creditable service, regardless of the number of years actually worked, unless the member earned more than 30 years prior to August 28, 1993. Members of Plan C are effectively limited to 34.25 years of creditable service, regardless of the number of years actually worked.

### **Compensation**

*Annual compensation* - Compensation in excess of the limitations set forth in Section 401(a)(17) of the Internal Revenue Code will be disregarded for purposes of determining contributions and benefits for members of Plan B and C. A member's annual compensation is the member's regular compensation.

*Average final compensation* - For members of Plan B and C, the average final compensation is the highest average compensation paid during any four consecutive years of creditable service.

### **Normal retirement**

*Eligibility* - A member of Plan B may retire (a) after the completion of five years of creditable service, provided such member has attained at least the age of 60 or (b) after the member has accumulated a minimum of 75 credits (effective August 28, 1998), where each year of creditable service plus a member's age equals 75 credits. A member of Plan C may retire (a) after the completion of five years of creditable service, provided such member has attained at least the age of 62 or (b) after the member has accumulated a minimum of 80 credits, where each year of creditable service plus a member's age equals 80 credits.

*Benefit* - For a member of Plan B, the normal monthly retirement benefit equals the product of one-twelfth of 2.00% (1.75% for members who retired prior to June 30, 1999) of the member's average final compensation and years of creditable service, subject to a maximum of 60% of their average final compensation. The normal monthly retirement benefit for a member of Plan B whose years of creditable service exceeded 34.25 years on August 28, 1993, shall equal the product of 1.75% and the member's years of creditable service on August 28, 1993. For a member of Plan C, the normal monthly retirement benefit equals the product of one-twelfth of 1.75% of the member's average final compensation and years of creditable service, subject to a maximum of 60% of their average final compensation.

*Minimum benefit* - Effective January 1, 1996, any member with at least ten years of service, but less than twenty years, is entitled to a minimum monthly retirement benefit equal to the sum of \$150 and \$15 for each full year of creditable service in excess of ten years or the actuarial equivalent if an option is elected. Any member with at least twenty years of creditable service at retirement is entitled to a minimum monthly retirement benefit of \$300 or the actuarial equivalent of \$300 if an option is elected. Beneficiaries of deceased members who retired with at least ten years of creditable service and elected one of the optional plans for payment of benefits may receive the actuarial equivalent of the minimum monthly retirement benefit available for the option chosen.

Under either Plan, if a member's accumulated contributions provide more than one-half of the member's monthly retirement benefit (under the actuarial assumptions adopted by the Board of Trustees), the member's benefit will be increased by this excess.

**Early retirement**

*Eligibility* - A member with at least five years of creditable service and a minimum age of fifty-five is eligible for early retirement. A Plan B member with at least 30 years of creditable service may retire at any time regardless of age. A Plan C member with at least 34.25 years of service may retire at any time regardless of age.

*Benefit* - A member eligible for early retirement will receive a reduced benefit, calculated as for normal retirement, which recognizes service and compensation to the actual retirement date. The reduction in benefit will provide a benefit which is actuarially equivalent to the normal retirement benefit that would be payable at the member's normal retirement date.

**Disability retirement**

*Eligibility* - A member with at least five years of creditable service who is certified to be totally incapacitated for performance of duty by the Medical Board (as designated by the Board of Trustees) is eligible for disability retirement.

*Benefit* - A disabled member will receive an unreduced benefit, calculated as for normal retirement, based on service and average final compensation at the actual retirement date. The minimum disability retirement allowance shall be the lesser of:

1. 25% of the person's average compensation; or
2. The member's service retirement allowance calculated based on the member's final average compensation and the maximum number of years of creditable service the member would have earned had the member remained an employee until attaining the age of 60.

**Termination benefits - vested**

*Eligibility* - A member who has at least five years of creditable service earns a vested interest in their accrued benefit, provided the member leaves their contributions in the Plan.

*Benefit* - The vested benefit is calculated as a normal retirement benefit based on a member's creditable service and average final compensation on the termination date. The benefit is payable, at minimum, on the member's normal retirement date.

**Termination benefits - non-vested**

If the member's termination is for reasons other than death or retirement, and if the member has not met the vesting or retirement requirements, only the member's contributions with interest will be refunded.

**Death benefit**

*Prior to retirement* - For a member who passes away while actively employed, the member's accumulated contributions with interest will be paid to the member's beneficiary. Certain beneficiaries of a member of Plan B or C have the option to receive a monthly retirement benefit or a refund of the member's contributions with interest. All beneficiaries are guaranteed to

receive at least the member's accumulated contributions at retirement, if a member passes away before electing an option.

*Post retirement* - The optional form of benefit payment selected under either Plan B or Plan C will determine what, if any, benefits are payable upon death after retirement.

Option 1 - The retiree's beneficiary will receive, for life, the same level of monthly retirement benefit. In the event that the retiree's beneficiary predeceases the retiree, the retiree's monthly retirement benefit will be adjusted to the amount it would have been, had the retiree not elected Option 1.

Option 2 - The retiree's beneficiary will receive, for life, a monthly retirement benefit equal to one-half the retiree's benefit. In the event the retiree's beneficiary predeceases the retiree, the retiree's monthly benefit will be adjusted to the amount it would have been, had the retiree not elected Option 2.

Option 3 - No benefits are payable to the retiree's estate or any beneficiary. Retirement benefits payable under this option will be actuarially increased from the normal formula.

If the death of any retiree who has not elected an option occurs before they have received total benefits at least as large as their accumulated contributions, the difference shall be paid to the deceased's beneficiary, if living, or to their estate.

**Benefit increase adjustments** - The Board of Trustees shall determine annually whether or not the Retirement System can provide an increase in benefits for those retirees who, as of January 1 preceding the date of such increase, have been retired at least one year (three years prior to January 1, 2002). Any increase also applies to optional retirement allowances paid to a retiree's beneficiary. Before any increases are made, the following requirements must be satisfied:

1. The Retirement System funded ratio as of January 1<sup>st</sup> of the preceding year of the proposed increase must be at least 100% after adjusting for the effect of the proposed increase. The funded ratio is the ratio of assets to the pension benefit obligation.
2. The actuarially required contribution rate, after adjusting for the effect of the proposed increase, may not exceed the statutory contribution rate.
3. The actuary must certify that the proposed increase will not impair the actuarial soundness of the Retirement System.

In accordance with the Benefit Increase Adjustments Policy, if an increase is permissible, the amount of the increase will be equal to the lesser of 3% or the percentage increase in the CPI for the preceding year, subject to a cumulative increase of 100% subsequent to December 31, 2000.

The Board of Trustees reserves the right, at its sole discretion, not to award any Benefit Increase Adjustment or other supplements for any year, even if the statutory requirements for an increase are satisfied, or to provide increases in greater or lesser amounts than prescribed by this policy. For the years ended December 31, 2016 and 2015 there was no Benefit Increase Adjustment or an extra check issued to eligible retirees.

**Administration of the Retirement System** - The Board of Trustees (the “Board”) is responsible for the general administration and proper operation of the Retirement System. The Board consists of twelve members: four members appointed by the Board of Education, one member appointed by the Board of Trustees of the Library District, four members elected by and from the members of the Retirement System, two members elected by and from the retirees of the Retirement System, and the Superintendent of Schools of the School District of Kansas City, Missouri. The Board hires an Executive Director to manage the day-to-day operations and implement strategic plans as set by the Board.

**Administrative expenses** - All expenses of the Retirement System are paid by the Plan. Fees related to the administration of Plan are included in administrative expenses. Investment related expenses are included in net appreciation of fair value of investments.

**( 2 ) Summary of significant accounting policies**

**Basis of accounting** - The financial statements of the Retirement System are prepared on the accrual method of accounting. Plan member and employer contributions are recognized in the period in which the contributions are due. Based on an agreement with the State of Missouri, the School District of Kansas City, Missouri and the Kansas City, Missouri Public Library District pay the employer portions of their retirement payment one year in arrears. These amounts are included in the financial statements as contributions receivable. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

**Implementation of Governmental Accounting Standards Board (“GASB”) Statement No. 72 – GASB No. 72, *Fair Value Measurement and Application*, was implemented during 2016. GASB Statement No. 72 addresses accounting and reporting issues related to fair value measurements. The Statement requires disclosure to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. Although the Statement should be applied retrospectively, the Board has determined restatement of the prior period is not practical. The implementation of GASB Statement No. 72 had no effect on the Retirement System’s net position.**

**Use of estimates** - The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect reported amounts of assets and liabilities and changes therein, and disclosures of contingent assets and liabilities. Accordingly, actual results may differ from those estimates.

**Property and equipment** - Property and equipment are carried at cost. Purchases are depreciated over their estimated useful lives by use of the straight-line method. The useful lives for the purpose of computing depreciation are:

Building and improvements	40 years
Equipment	7 years
Software	5 years

**Investment valuation and income recognition** - The net unrealized appreciation or depreciation in the fair value of investments for the period reflects the net increase or decrease in the fair value



of the investments, on an aggregate basis, between the beginning and the end of the reporting period. The net realized gain or loss on sale of investments is the difference between the proceeds received and the cost of the investment sold. The net realized gains and losses have been combined with the net unrealized appreciation and depreciation for purposes of this report.

Purchases and sales of securities are recorded on a trade-date basis. Investment income (loss) is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

The Retirement System’s policy in regard to the allocation of invested assets is established and may be amended by the Board of Trustees. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the pension plan. The following was the Retirement System Board’s adopted asset allocation policy as of December 31, 2016:

Asset Class	Target Allocation
US Equity	22.50 %
Developed Equity	15.00 %
Emerging Market Equity	10.00 %
Core Fixed Income	10.00 %
High Yield	2.50 %
Global Fixed Income	5.00 %
MACS	7.50 %
Private Equity	5.00 %
Hedge Funds - Equity Long/Short	4.50 %
Hedge Funds of Funds	3.00 %
Commodities	5.00 %
Real Estate	10.00 %
<b>Total</b>	<b>100.00 %</b>

**Rate of return** - For the years ended December 31, 2016 and 2015, the annual money-weighted return on the Retirement System’s investments, net of investment expense was 7.39% and - 1.20%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

**Concentration risk** - As of December 31, 2016 and 2015, the Retirement System has the following concentrations defined as investments (other than those issued or guaranteed by the U.S. government in any one organization) that represent 5% or more of the Retirement System’s net position.

	December 31,	
	2016	2015
Rhumblin S&P 500 Pooled Index Fund	\$ 67,259,581	\$ 71,567,167
Georgetown Fund Managed by Rock Creek	33,491,017	40,255,530
Rhumblin S&P Mid-Cap 400 Index Fund	40,203,896	38,460,350
AQR Global Risk Premium Fund	36,967,974	33,454,399
Earnest Partners Emerging Market Fund	32,867,196	*
* Not applicable, investment amount is below 5%.		

**Custodial credit risk** - Custodial credit risk is when, in the event a financial institution or counterparty fails, the Retirement System would not be able to recover the value of deposits, investments or collateral securities that are in the possession of an outside party. All investments are held in the Retirement System’s name and are not subject to creditors of the custodial financial institution.

**Currency risk** - Currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. All investments held by the Retirement System at December 31, 2016 were in United States currency.

**Credit risk** - Credit risk is the risk that an issuer or other counterparty to a debt investment will not fulfill its obligations. The Retirement System’s investment policies require that any investment manager have at least 80% of holdings in issues rated A or higher by both Standard & Poor’s Corporation and Moody’s Investors Service or their equivalents. Each portfolio is required to maintain a reasonable risk level relative to its benchmark. The Retirement System’s assets as of December 31, 2016 subject to credit risk are shown with current credit ratings below:

U.S. Government	\$ 24,802,444	46.9%
AAA	8,867,873	16.8%
AA	3,522,192	6.7%
A	6,948,541	13.1%
BAA	8,719,292	16.5%
	<u>\$ 52,860,342</u>	<u>100.0%</u>

**Interest rate risk** - Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. The Retirement System’s assets subject to interest rate risk are shown below grouped by effective duration ranges:

Security Description	Current Market Value	Investment Maturities (in years)			
		Less Than 1	1 - 5	6 - 10	Greater Than 10
U.S. Government	\$ 27,377,464	\$ -	\$ 3,582,878	\$ 4,583,895	\$ 19,210,691
Corporate Bonds--United States	25,482,878	-	4,583,664	9,370,188	11,529,026
	<u>\$ 52,860,342</u>	<u>\$ -</u>	<u>\$ 8,166,542</u>	<u>\$ 13,954,083</u>	<u>\$ 30,739,717</u>

**(3) Fair value measurements**

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are described below:

- |         |   |
|---------|---|
| Level 1 | Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the Plan has the ability to access.   |
| Level 2 | Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets and liabilities in inactive markets; inputs other than quoted market prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data by correlation or other means. If the asset or liability has a specified (contractual) term, the Level 2 input must be observable for substantially the full term of the asset or liability. |
| Level 3 | Inputs to the valuation methodology are unobservable and significant to the fair value measurement.   |

The asset or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Following is a description of the valuation methodologies used for assets measured at fair value.

In instances where inputs used to measure fair value fall into different levels in the fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest-level input that is significant to the valuation.

Debt and equity securities classified in Level 1 are valued using prices quoted in active markets for those securities.

Debt securities classified in Level 2 are valued using either a bid evaluation or a matrix pricing technique. Bid evaluations may include market quotations, yields, maturities, call features, and ratings. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Level 2 debt securities have nonproprietary information that is readily available to market participants, from multiple independent sources, which are known to be actively involved in the market.

Investment Type	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
Common stocks	\$ 126,302,355	\$ -	\$ -	\$ 126,302,355
Real estate investment trusts	2,684,369	-	-	2,684,369
<b>Total equity investments</b>	<b>128,986,724</b>	<b>-</b>	<b>-</b>	<b>128,986,724</b>
U.S. Treasuries	8,665,034	-	-	8,665,034
Agencies	-	15,959,551	-	15,959,551
Collateralized mortgage-backed securities	-	1,096,213	-	1,096,213
Corporate bonds	-	17,007,275	-	17,007,275
Corporate asset-backed securities	-	4,568,012	-	4,568,012
Corporate collateralized mortgage obligations	-	3,533,019	-	3,533,019
Corporate collateralized obligations	-	374,572	-	374,572
State and local obligations	-	1,656,666	-	1,656,666
<b>Total fixed income investments</b>	<b>8,665,034</b>	<b>44,195,308</b>	<b>-</b>	<b>52,860,342</b>
<b>Total investments by fair value level</b>	<b>\$ 137,651,758</b>	<b>\$ 44,195,308</b>	<b>\$ -</b>	<b>\$ 181,847,066</b>
<b>Investments measured at NAV<sup>(a)</sup></b>				<b>422,453,124</b>
<b>Investments measured at amortized cost<sup>(a)</sup></b>				<b>13,832,993</b>
<b>Total investments measured at fair value</b>				<b>\$ 618,133,183</b>

(a) Certain investments that were measured at net asset value per share (or its equivalent) have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the line items presented in the statements of net assets available for benefits.

The valuation method for investments measured at the net asset value per share, or equivalent, is presented in the table below.

Investment Type	Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Cash equivalents (4)	\$ 13,832,993	\$ -	N/A	N/A
Equity commingled funds				
Developed markets (1)	107,463,477	-	Twice a Month	2 days
Emerging markets (1)	60,231,292	-	Daily/Weekly	2 days
Fixed-income comingled funds				
High yield fixed income (1)	16,474,561	-	Daily	2 days
International fixed income (1)	28,214,068	-	Daily	2 days
Hedge fund of funds commingled funds (1)	54,353,812	-	Quarterly	90 - 100 days
Private equity funds (2)	27,812,474	3,463,000	Not Eligible	N/A
Global real estate investment trusts (1)	7,030,949	-	Monthly	15 days
Commodities (1)	20,192,658	-	Monthly	5 days
Global tactical asset allocation commingled funds (1)	36,967,974	-	Monthly	15 days
Real estate commingled fund (3)	29,187,752	-	Quarterly	45 - 60 Days
Real estate (3)	34,524,107	1,300,000	Not Eligible	N/A
<b>Investments measured at the NAV</b>	<b>\$ 436,286,117</b>			

- (1) Consists of two domestic equity funds, two international emerging market equity funds, two fixed income funds and two hedge fund of funds, one global tactical asset allocation fund, one commodities fund, and one global real estate securities trust fund, that are considered commingled in nature. Each are valued at the net asset value of the units held at the end of the period based upon the fair value of the underlying investments.
- (2) KCPSRS’ private equity portfolio consists of 165 active partnerships within the funds-of-funds investments, which invests primarily in buyout funds, with exposure to venture capital, special situations, growth equity and supplemented by secondary and co-investment opportunities. The fair values of the funds-to-funds have been determined using net assets valued one quarter in arrears plus current quarter cash flows. These funds are not eligible for redemption. Distributions are received as underlying investments within the funds are liquidated, which on average can occur over the span of the next 1 to 7 years.
- (3) For real estate and real estate commingled funds, investments generally valued using one or a combination of the following accepted valuation approaches: market, cost or income. For three of the real estate funds, generally annual appraisals are performed by an independent third-party each year, minimum every three years. For two of the real estate funds, the inputs and assumptions utilized to estimate future cash flows are based upon the manager’s evaluation of the economy, capital markets, market trends, operating results, and other factors, including judgments regarding occupancy rates, rental rates, inflation rates, and capitalization rates utilized to estimate the projected cash flows at disposition and discount rates. All portfolios have audited financials completed at fiscal year-end.
- (4) The EB Temporary Investment Fund of The Bank of New York Mellon (the “Fund”) values its investments on the basis of amortized cost which approximates market value for the Fund as a whole. The amortized cost method involves valuing a security at cost on the date of purchase and thereafter at a constant dollar amortization to maturity of the difference between the principal amount due at maturity and the initial cost of the security. The use of amortized cost is subject to compliance with the Fund’s amortized cost procedures as specified under The Bank of New York Mellon Employee Benefit Collective Investment Fund Plan.

**( 4 ) Property and equipment**

Property and equipment consisted of the following at December 31, 2016 and 2015:

		<b>December 31,</b>	
		<b>2016</b>	<b>2015</b>
Cost			
Equipment		\$ 42,675	\$ -
Software		2,223,908	2,223,908
Total cost		2,266,583	2,223,908
Less: accumulated depreciation		(2,212,345)	(2,120,166)
Net property and equipment		<u>\$ 54,238</u>	<u>\$ 103,742</u>

Depreciation expense for the years ended December 31, 2016 and 2015 was \$92,179 and \$250,979, respectively.

In December 2011, the Retirement System exercised its “right of first refusal” on the sale of the adjoining property. Simultaneously with the purchase, the Retirement System sold the property to an unrelated buyer in the amount of \$265,000. There was no gain on the sale of this property.

In April 2014, the Retirement System obtained an appraisal of their building and determined that the carrying value exceeded the fair value of the building; therefore, it was determined that the building value was impaired. An impairment loss of \$1,349,121 was recorded for the year ended December 31, 2014 to reduce the carrying amount of the building down to the fair value amount of \$770,000.

In October 2014, the Retirement System agreed to list the building for sale on the real estate market with intentions of selling the building within the next year. As a result, the net book value of the building at December 31, 2014 was categorized as an asset held for sale on the statement of fiduciary net position. In December 2015, the Retirement System sold their building and recognized a gain on the sale of the building of \$14,964. In April of 2016 relocated their office facility to a leased facility.

**( 5 ) Funding policy**

The Missouri Revised Statutes Sections 169.350.4 and 169.291.16 specify that for 2014 and each subsequent year, the employee contribution rate and the employer contribution rate shall be the same percentage of compensation, each not less than 7.5% of compensation not more than 9% compensation. Within this permitted range, the rate may be changed (increased or decreased) in increments of 0.5% each year. The objective is that the combined employee and employer contribution will be the amount actuarially required to cover the normal cost and amortize the unfunded accrued actuarial liability over a period that does not exceed 30 years from the date of valuation. The rate for each calendar year shall be certified by the Board of Trustees to the employers at least six months prior to the date such rate is to be effective.

**( 6 ) Net pension liability**

The components of the net pension liability of participating entities at December 31, 2016 and 2015, were as follows:

	<b>2016</b>	<b>2015</b>
Total pension liability	\$ 900,947,927	\$ 896,798,027
Less: plan fiduciary net position	631,442,613	636,109,506
Net pension liability	<u>\$ 269,505,314</u>	<u>\$ 260,688,521</u>
Plan fiduciary net position as a percentage of total pension liability	70.09%	70.93%

**Actuarial information** - The Retirement System engages an independent actuarial firm to perform an annual actuarial valuation. The information displayed below presents the funded status as of the most recent actuarial valuation.

Actuarial Valuation Date	Actuarial Value of Assets A	Actuarial Accrued Liability B	Unfunded Actuarial Accrued Liability (UAAL) B-A	Funded Ratio A/B	Covered Payroll C	UAAL as a Percentage of Covered Payroll (B-A)/C
1/1/2015	\$ 712,390,611	\$ 891,543,036	\$ 179,152,425	79.91%	\$ 170,845,124	104.86%
1/1/2016	\$ 694,641,248	\$ 895,230,295	\$ 200,589,047	77.59%	\$ 179,013,516	112.05%

The actuarial assumptions used for the most recent valuations are as follows:

Valuation Date	January 1, 2016 and 2015
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar, Open Period
Remaining Amortization Period	30 years
Asset Valuation Method	5-year Smoothed Market Value
Actuarial Assumptions:	
Investment Rate of Return	8.00%, including inflation
Projected Salary Increases	5.00%, including inflation
Inflation	3.00% (2016) and 3.50% (2015)

Pre-retirement mortality rates were based on RP-2000 Healthy Non-Annuitant projected 15 years from the valuation date using Scale AA. Post-retirement mortality rates were based on RP-2000 Healthy Annuitant Table Annuitant projected 7 years from the valuation date using Scale AA. Disability mortality rates were based on RP-2000 Disabled Table for Males and Females.

The long-term expected rate of return on pension plan investments is reviewed as part of the regular experience study prepared by the Retirement System. Several factors are considered in evaluating the long-term rate of return assumption, including long-term historical data, estimates inherent in current market data, and an analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation), along with estimates of variability and correlations for each asset class, were developed by the Retirement System’s investment consultant. These ranges are combined to produce the 10-year long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the Retirement System’s target asset allocation as of December 31, 2016 (see the discussion of the pension plan’s investment policy) are summarized in the following table:

Asset Class	10-Year Long-term Expected Real Rate of Return
US Equity	5.3 %
Developed Equity	5.7 %
Emerging Market Equity	7.1 %
Core Fixed Income	2.0 %
High Yield	4.0 %
Global Fixed Income	1.1 %
MACS	4.7 %
Private Equity	8.7 %
Hedge Funds - Equity Long/Short	4.8 %
Hedge Funds of Funds	3.7 %
Commodities	2.8 %
Real Estate	4.6 %

**Discount Rate** - The discount rate used to measure the total pension liability was 8%. The projection of cash flows used to determine the discount rate assumed that contributions from the Plan members will be made at the current contribution rate and that contributions from employers will be made at contractually required rates, actuarially determined. Based on those assumptions, the Plan’s fiduciary net position was projected to be available to make all projected future benefit payments of current Plan members. Therefore, the long-term expected rate of return on Plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

**Sensitivity of the Net Pension Liability to Changes in the Discount Rate** - The following presents the net pension liability of participating entities calculated using the discount rate of 8%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7%) or 1-percentage-point higher (9%) than the current rate:

	Discount Rate	Participating entities' net pension liability
1% decrease	7.0%	351,329,071
Current discount rate	8.0%	269,505,314
1% increase	9.0%	199,173,702

**(7) Operating lease**

The Retirement System entered into an office lease agreement commencing December 2015 and expiring March 2016. Amounts paid relating to this lease were \$3,700. The Retirement System also entered into an office lease agreement commencing on April of 2016 and expiring on February 2026.



Minimum rent payments under non-cancellable operating leases which extend for periods greater than one year are as follows:

Years Ending December 31,		
	2017	\$ 65,098
	2018	66,306
	2019	68,043
	2020	69,857
	2021	71,672
	Thereafter	291,675
	<b>Total</b>	<b>\$ 632,651</b>

**( 8 ) Tax status**

The Retirement System is exempt from federal income tax under Section 501 of the Internal Revenue Code.

**( 9 ) Risks and uncertainties**

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risk. 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 statements of plan net assets.

Plan contributions are made and the actuarial present value of accumulated plan benefits are reported based on certain assumptions pertaining to interest rates, inflation rates and employee demographics, all of which are subject to change. Due to uncertainties inherent in the estimation and assumption process, it is at least reasonably possible that changes in these estimates and assumptions in the near term would be material to the financial statements.

Changes in the discount rate and investment returns can have a significant effect on the funded status of the Plan. Management continues to monitor these changes and the potential impact on the future pension plan funding requirements and related expenses.

**( 10 ) Subsequent events**

The Retirement System has evaluated subsequent events through June 7, 2017, which is the date the financial statements were available to be issued. No significant matters were identified for disclosure during this evaluation.

<b>SCHEDULES OF CHANGES IN NET PENSION LIABILITY</b>			
<b>(\$ IN THOUSANDS)</b>			
	<b>2016</b>	<b>2015</b>	<b>2014</b>
<b>Total Pension Liability</b>			
Service cost	\$ 17,413	\$ 16,690	\$ 15,418
Interest	68,599	67,219	66,956
Benefit term changes	(64)	-	-
Differences between expected and actual experience	(2,897)	12,010	-
Assumption Changes	1,268	1,224	-
Benefit payments, including member refunds	(80,169)	(79,634)	(78,536)
<b>Net change in total pension liability</b>	<b>4,150</b>	<b>17,509</b>	<b>3,838</b>
Total pension liability - beginning	896,798	879,289	875,451
Total pension liability - ending	<u>\$ 900,948</u>	<u>\$ 896,798</u>	<u>\$ 879,289</u>
<b>Plan Fiduciary Net Position</b>			
Contributions:			
Employer	\$ 16,280	\$ 14,499	\$ 13,288
Employee	16,528	14,646	13,358
Net investment income (loss)	44,338	(10,025)	25,937
Benefit payments, including member refunds	(80,169)	(79,634)	(78,536)
Administrative expenses	(1,552)	(1,648)	(1,548)
Other	(92)	(251)	(529)
<b>Net change in plan fiduciary net position</b>	<b>(4,667)</b>	<b>(62,413)</b>	<b>(28,030)</b>
Plan fiduciary net position - beginning	636,110	698,523	726,553
Plan fiduciary net position - ending	631,443	636,110	698,523
Net pension liability - ending	<u>\$ 269,505</u>	<u>\$ 260,688</u>	<u>\$ 180,766</u>
Plan fiduciary net position as a percentage of the total pension liability	70.09%	70.93%	79.44%
Covered payroll	\$ 180,893	\$ 170,580	\$ 166,102
Employers' Net Pension Liability as a percentage of covered payroll	148.99%	152.82%	108.83%

Note to Schedule:

This schedule is intended to show 10-year trend. Additional years will be reported as they become available.

**Schedules of Net Pension Liability**  
(\$ in thousands)

Year Ended	Total Pension Liability (TPL) (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (NPL) (a-b)	Plan Fiduciary Net Position as a % of TPL (b/a)	Covered Employee Payroll (c)	Employers' NPL as a % of Covered Payroll ((b-a)/c)
12/31/2016	\$ 900,948	\$ 631,443	\$ 269,505	70.09%	\$ 180,893	148.99%
12/31/2015	\$ 896,798	\$ 636,110	\$ 260,688	70.93%	\$ 170,580	152.82%
12/31/2014	\$ 879,289	\$ 698,523	\$ 180,766	79.44%	\$ 166,102	108.83%

**Schedules of Employers' Contributions**  
(\$ in thousands)

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined employer contribution	\$ 20,224	\$ 18,856	\$ 19,401	\$ 20,995	\$ 16,373	\$ 11,398	\$ 7,084	\$ 3,818	\$ 3,934	\$ 11,603
Actual employer contributions	16,280	14,492	13,288	12,094	11,370	11,973	13,282	27,657	15,613	15,055
Annual contribution deficiency (excess)	\$ 3,944	\$ 4,364	\$ 6,113	\$ 8,901	\$ 5,003	\$ (575)	\$ (6,198)	\$ (23,839)	\$ (11,679)	\$ (3,452)
Covered-employee payroll*	\$ 180,893	\$ 170,492	\$ 166,102	\$ 161,253	\$ 151,603	\$ 159,637	\$ 177,093	\$ 206,384	\$ 208,173	\$ 200,739
Actual contributions as a percentage of covered-employee payroll*	9.00%	8.50%	8.00%	7.50%	7.50%	7.50%	7.50%	13.40%	7.50%	7.50%

\*Covered-employee payroll based upon the pensionable payroll reported to the Plan and excludes additional compensation amounts that may need to be reported by the employer.

**Schedules of Investment Returns**

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Annual money-weighted rate of return, net of investment expense	7.39%	-1.20%	3.49%	12.66%	13.20%	0.64%	13.35%	15.93%	-23.70%	6.55%

Note to Schedule:  
Net return percentages are estimates.

**Notes to Required Supplementary Information  
For the Year Ended December 31, 2016**

*Changes of benefit terms.* The following changes to the plan provisions were reflected in the valuation performed as of January 1, 2016 are listed below:

Under legislation passed in 2013, the Board may adjust the member and employer contribution rate each year by no more than 0.50% each. The contribution rate can fluctuate between 7.5% and 9.0%. The Board increased the contribution rate for both members and employers to 8.0% of pay, effective January 1, 2014, 8.5% of pay, effective January 1, 2015 and 9% effective January 1, 2016.

In addition, legislation in 2013 created a new set of plan provisions for members hired after December 31, 2013, referred to as Plan C. The key differences between Plan B and Plan C are a lower benefit multiplier (1.75% instead of 2.00%) and different requirements for unreduced benefits (age 62 or Rule of 80 rather than age 60 or Rule of 75). These changes are effective for those hired on or after January 1, 2014.

*Changes of assumptions.* New early retirement factors were adopted by the Board in June 2015 to replace the prior factors, which were based upon outdated assumptions. The new factors are being used for the first time in the January 1, 2016 valuation report.

*Method and assumptions used in calculations of actuarially determined contributions.* The system is funded with fixed contribution rates for members and employers. The actuarially determined contributions in the Schedule of Employer Contributions are calculated as of the beginning of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine the employer Actuarially Determined Contribution reported in the most recent actuarial valuation (January 1, 2016):

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Dollar, Open Period
Remaining Amortization Period	30 years
Asset Valuation Method	5-year Smoothed Market Value
Investment Rate of Return	8.00%, including inflation
Projected Salary Increases	5.00%, including inflation
Inflation	3.00%

**Schedule of Expenses**

For the Period Ending December 31, 2016 and 2015

<b>Investment Expenses</b>	<b>2016</b>	<b>2015</b>
Bank custodial fees and expenses	94,038	108,262
Financial consultation	205,000	205,000
Financial management expenses	3,682,596	4,176,369
<b>Total</b>	<b><u>3,981,633</u></b>	<b><u>4,489,630</u></b>
<b>Administrative Expenses</b>		
Salaries and payroll taxes	566,502	551,540
Fringe Benefits	112,280	89,882
Legal fees	41,709	70,647
Audit fees	42,211	51,512
Actuarial fees	67,900	55,265
Legislative consultation	45,000	45,000
Other professional services	9,654	79,304
Board meetings	2,211	1,754
Board election	10,522	4,519
Travel and education expense	61,995	60,614
Membership dues	5,190	3,961
Printing and office expense	50,277	33,952
Postage and equipment	17,423	14,613
Payroll processing	8,817	8,447
Bank fees	15,121	14,739
Computer software support	325,500	325,500
Computer expense	34,058	29,495
Insurance	45,876	44,963
Lease space rental	55,651	0
Relocation expense	23,167	0
Building operations	10,962	162,741
<b>Total</b>	<b><u>1,552,025</u></b>	<b><u>1,648,449</u></b>

# Investment Section

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May 18, 2017


Board of Trustees  
The Public School Retirement System of the  
School District of Kansas City, Missouri  
3100 Broadway, Suite 1211  
Kansas City, MO 64111

Dear Trustees:

World equity markets were positive in 2016 and equities closed out the year strong in the 4<sup>th</sup> quarter. The volatility in the markets especially the international markets was pronounced making it one of the most difficult years for active management with the majority of active managers lagging their benchmarks. The Russell 3000 Index gained 12.74% for the 2016 period while the MSCI EAFE Index only produced a 1.00% return for the year. The year 2016 was an eventful one on the international stage, as the political dramas around the globe took center stage. The first half saw the Philippine presidential election and Brexit, while much of the second half was dominated by U.S. Election concerns and in the fourth quarter featuring the surprising victory of Donald Trump. Emerging markets did well in 2016 despite a large pull back in the fourth quarter due to uncertainty around U.S. trade, currency effects, and the prospect of tighter USD liquidity. US and International fixed income markets returned very modest returns and were drawn down significantly in the fourth quarter of 2016 when the Fed raised rates. Commodities were up 11.57% for the 2016 period, with strong gains in the fourth quarter in Livestock, Industrial Metals, and Energy. Hedge Fund of Funds produced very modest gains in 2016 returning only 0.7% for the year. Both private equity and real estate markets had strong returns in 2016.

The KCPSRS portfolio is valued at \$618 million as of December 31, 2016. These assets are allocated between various asset classes based off the System's investment policy. This asset allocation was developed to provide a diversified, optimal portfolio to achieve the Pension Fund's long-term investment objectives and risk objectives. The Pension Fund is invested in U.S. Equities, International Equities, Fixed Income, Real Estate, Commodities, Hedge Fund of Funds, GTAA, and Private Equity. As of year end 2016, the Fund's trailing 1-year return is 7.92%, which was in line with its Policy Index return of 8.03%. The trailing 5-year return ending 12/31/16 is also in line with the Policy Index returning 7.25% vs. 7.37% for the Index.

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May 18, 2017  
Board of Trustees KCPSRS  
Page 2

The KCPSRS continues to change and evolve with the markets. Over the years, asset classes have been added and managers have been changed to optimize the Pension Fund's investment line-up and asset allocation. In 2016, the Board conducted a small cap growth search to replace the existing small cap growth manager and hired Westfield Capital for this allocation. In addition, the Board voted for Segal Marco to complete an Asset Liability Study of the program to be completed in the first quarter of 2017. Segal Marco Advisors started collecting this data at the end of 2016 to prepare for the study. This forward-looking approach has allowed the Fund to evolve over time with the markets.

We will work with the System on an Asset Liability Study to assess not only the asset aspects of the portfolio but also the liability concerns. Upon completion of this study, we shall recommend a new asset allocation to further enhance the Pension Fund. In the next year, Segal Marco will continue to work with the System to achieve both their long-term and short-term objectives through asset allocation, educational sessions, policy development, manager monitoring and new manager selection.

Segal Marco Advisors enjoys our relationship with KCPSRS and looks forward to continuing to support your good work and serve as an extensive of your staff.

Sincerely yours,



Rosemary E. Guillette  
Senior Consultant



# Investment Policy Summary

Pursuant to investment fiduciary duties provided in Revised Missouri Statutes section 105.688, the KCPSRS Board of Trustees established the system's investment program, with overall objectives, asset allocation, and operating guidelines. To achieve a balanced program, every two years, the board shall conduct a review of its investment strategy and plan liability structure to evaluate the potential consequences of alternative investment strategies on the long term financial wellbeing of the system. The investment policy shall consider the current and expected financial condition of the system, the expected long term capital market outlook, and the system's risk tolerance. The policy shall consider the potential impact on pension costs of alternative asset allocation policies, the existing and projected liability structure of the pension plan, and other issues affecting governance of the system.

## Investment Objectives

The total fund objective is to equal or exceed over rolling 3-5 year periods the following performance objectives:

- Inflation, as measured by the Consumer Price Index, + 4% to ensure that real asset growth maintains pace with real pay growth and cost of living adjustments, primary determinants of benefits and, therefore, pension costs.
- The system's actuarial interest rate assumption of 8.0% to avoid an actuarial loss which would increase future years' contributions.
- A policy index that measures the value added through active management calculated by weighting the appropriate capital market indices per the established asset allocation.

## Roles and Responsibilities

### *Board of Trustees*

The board bears the ultimate fiduciary responsibility for the investment of the system assets. Members of the board must adhere to state law and prudent standards of diligence with respect to their duties as investment fiduciaries. In so doing, the members of the board and its advisors, as investment fiduciaries, shall discharge their duties in the sole interest of the plan participants and their beneficiaries and shall act with the same care, skill, prudence, and diligence that a prudent person acting in a similar capacity and familiar with these matters would use in the conduct of a similar enterprise with similar aims. To accomplish this, the board utilizes staff, as well as investment and actuarial consultants to provide expert assistance.

### *Investment Asset Consultant*

The investment consultant is hired by and serves at the pleasure of the board. The investment consultant shall assist the board in the development, implementation, and monitoring of investment policy on behalf of the System. Specifically, the investment consultant shall be responsible for the following functions:

- Development and periodic revision, as needed at least annually, of investment guidelines and objectives. This undertaking shall be conducted in conjunction with the board, internal staff and other professional advisors as appropriate.

- Review and identification of qualified investment manager candidates based on the consultant’s asset allocation studies and professional judgment.
- Investment performance monitoring.
- Efficiency reviews, including, but not limited to, assessment of the system’s custodian relationship(s) and related functions, such as securities lending, commission recapture programs and other related matters.
- Special studies and projects as may periodically be determined by the board to be appropriate for the governance of the investment activities of the system.
- Education of board members and staff in areas of investment strategy as needed to assist them in governance of the system’s portfolio.

*Executive Director*

The executive director is appointed by and serves at the pleasure of the board. Under the authority delegated by the board, the executive director is responsible for the administration and management of the system consistent with policies set by the board. Specific to the investment program, the executive director is responsible for implementing the board’s investment directives and management of the relationship with outside advisors and asset managers.

*Investment Managers*

In the implementation of the investment program, the board hires and utilizes investment managers who have demonstrated expertise with specific asset classes and investment styles. Each manager shall operate under a set of guidelines specific to the strategic role its portfolio is to fulfill in the overall investment structure. The investment managers are monitored and judged per benchmarks which reflect the objectives and characteristics of the strategic role their portfolio is to fulfill.

# Asset Allocation

Determining the system’s asset allocation is regarded as one of the most important decisions of the investment program. The Board with advice from the external investment consultant, has developed an asset allocation with appropriate benchmarks that is designed to achieve the long-term required return objectives of the system, given risk constraints and liquidity needs.

The Board has adopted the following strategic asset allocation policy and permissible ranges for each asset class, including an annual target for each category as provided by the investment consultant.

Asset Class	Policy Benchmark	Target Allocation %	Allocation Range %
Domestic	Russell 3000	22.5	
Large Cap Core			8.0 - 13.0
Mid Cap Core			4.0 - 8.0
Small Cap Growth & Value			4.0 - 8.0
International Developed	MSCI (EAFE)	15.0	10.0 - 20.0
Emerging Mkts	MSCI EM	10.0	5.0 - 15.0
<b>Equity Total</b>		<b>47.5</b>	
Domestic Fixed Income-Core	Barclays Cap Agg	10.0	5.0 - 15.0
High Yield	Barclays Cap HY	2.5	1.5 - 3.5
International Fixed Income	Citigroup World Gvt	5.0	3.5 – 7.5
<b>Fixed Income Total</b>		<b>17.5</b>	
Private Equity	S&P 500 + 5%	5.0	3.5 – 7.5
GTTA	91 Day T-Bill + 5%	7.5	5.0 – 10.0
Hedge Fund of Funds	91 Day T-Bill + 5%	7.5	5.0 – 10.0
Commodities	50% DJ UBS Com/ 50% S&P 500 GSCI	5.0	3.5 – 7.5
Real Estate	NCREIF RE	10.0	5.0 – 15.0
<b>Alternatives Total</b>		<b>35.0</b>	

# Investment Results

## Annualized Returns as of December 31, 2016

Asset Class	1 Year	3 Year	5 Year	10 Year
Total Fund	7.92%	3.56%	7.25%	4.37%
Total Fund Composite Index*	8.03%	3.65%	7.37%	4.86%
Domestic equity	15.91%	8.08%	14.33%	6.79%
Russell 3000	12.74%	8.43%	14.67%	7.07%
Intl. developed equity	0.82%	-1.34%	6.87%	1.59%
MSCI EAFE (net)	1.00%	-1.60%	6.53%	0.75%
Emerging mkt. equity	12.67%	-1.49%	n/a	n/a
MSCI EM (net)	11.19%	-2.55%	1.28%	1.84%
Core fixed income	2.78%	n/a	n/a	n/a
Bloomberg Barclay US Agg	4.26%	1.70%	1.72%	4.31%
Intl. fixed income	2.39%	n/a	n/a	n/a
Citigroup World Govt. Bond	1.60%	-0.84%	-0.99%	2.99%
High yield fixed income	14.07%	4.25%	8.43%	n/a
Blomberg Barclay US High Yield	17.13%	4.67%	7.36%	7.55%
Private equity	1.51%	7.88%	10.96%	7.01%
S&P 500 + 5%	17.56%	14.32%	20.39%	12.29%
GTTA	10.91%	3.02%	n/a	n/a
90-day T-Bill + 5%	5.27%	5.11%	5.09%	5.81%
Hedge fund of funds	0.23%	2.69%	6.15%	n/a
90-day T-Bill + 5%	5.27%	5.11%	5.09%	5.81%
Real estate	10.18%	15.30%	14.11%	4.08%
NCREIF	7.97%	11.02%	10.92%	6.93%
Commodities	13.63%	-14.10%	n/a	n/a
50% DJ UBS Com./50% S&P 500 GSCI	11.67%	-15.94%	-10.96%	-6.71%

# Largest Assets Held

As of December 31, 2016

## Public Equity Portfolio:

### Top Ten Holdings

The top ten holdings within the public equity portfolio (domestic and international combined) listed below does not include the fair value of units held in commingled fund investments. A complete listing of the holdings, including commingled fund holdings, is available upon request.

Ten Largest Equity Holdings	Market Value
ASML Holding NV	3,716,961.60
Canadian National Railway Co	2,749,920.00
WPP PLC	2,689,038.00
Dassault Systems Sa	2,664,754.60
SAP AG Systeme Anwendungen	2,571,292.50
Bayer AG	2,559,057.05
Fanuc Corp	2,391,201.75
Daimler AG	2,381,349.60
Anheuser-Busch InBev SA/NV	2,375,036.00
Novo Nordisk A/S	2,264,917.60

## Fixed-Income Portfolio:

### Top Ten Holdings

The top ten holdings within the consolidated fixed-income portfolio (core-plus and credit opportunities combined) listed below does not include the fair value of units held in commingled fund investments. A complete listing of the holdings, including commingled fund holdings, is available upon request.

Ten Largest Bond Holdings	Market Value
US Treasury Notes 2.125% Due 2021	2,280,046.20
US Treasury Notes 1.000% Due 2017	1,512,355.60
FHLMC POOL #G0-8525 3.000% Due 2043	1,480,464.89
FHLMC POOL #Q2-2877 4.000% Due 2043	1,297,534.55
FNMA POOL #0AO5472 3.500% Due 2042	1,123,408.27
US Treasury Bond 3.000% Due 2045	1,070,330.80
US Treasury Bond 3.125% Due 2043	1,068,968.20
FHLMC POOL #G0-7559 4.000% Due 2043	947,354.29
GNMA II POOL #0005017 4.500% Due 2041	829,049.74
FNMA GTD REMIC P/T 12-M2 A2 2.717 % Due 2022	735,920.30

# Investment Summary

For the year ending December 31, 2017

Investment Manager	Date Hired	Investment Class	Portfolio Market Value as of 12/31/16	% of Total Fund Fair Value
Rhumblin Advisors	December 2007	Large Cap Core Equities	67,259,581	10.9%
Rhumblin Advisors	June 2003	Mid Cap Core Equities	40,203,896	6.5%
Denver Investments	April 2008	Small Cap Value Equities	21,926,820	3.5%
Westfield Capital Management	July 2016	Small Cap Growth Equities	16,980,396	2.7%
Fisher Investments	August 2002	International Developed Equities	91,924,000	14.9%
Earnest Partners, LLC	June 2002	International Emerging Market Equities	32,867,196	5.3%
Wells Capital Management	August 2012	International Emerging Market Equities	27,364,096	4.4%
Pugh Capital Management	March 2014	Core Fixed Income	53,352,288	8.6%
Loomis Sayles	October 2011	High Yield Bonds	16,474,819	2.7%
Brandywine Global	June 2015	International Fixed Income	28,236,009	4.6%
BlackRock	January 1994	Core Real Estate	12,753,685	2.1%
JP Morgan Asset Management	February 2007	Real Estate	16,434,068	2.7%
Brookfield Property Group	May 2012	Real Estate	28,064,874	4.5%
Voya Clarion	January 2013	REIT	7,030,949	1.1%
Mesirow Financial	January 2014	Real Estate	4,552,278	0.7%
Westport Capital Partners, LLC	May 2013	Real Estate	1,934,454	0.3%
Parametric Clifton	May 2012	Commodities	20,192,658	3.3%
Rock Creek	August 2008	Long/Short Equity Hedge Fund of	33,491,017	5.4%
Cobin Investor Services	December 2011	Funds	20,862,795	3.4%
AQR Capital Management	December 2012	GTAA	36,967,974	6.0%
StepStone Group	May 2006	Private Equity	14,172,212	2.3%
Pantheon VI	July 2004	Private Equity	7,172,657	1.2%
Pantheon IX	March 2011	Private Equity	6,467,605	1.0%
Cash			11,717,547	1.9%
		<b>Total</b>	<b>618,403,876</b>	<b>100%</b>

# Investment Fees

For the year ending December 31, 2017

<b>Investment Manager</b>	<b>Management Fee</b>
Rhumblin Advisors	51,402
Denver Investments	141,530
Westfield Capital Management	95,343
Fred Alger	48,434
Fisher Investments	599,215
Earnest Partners, LLC	316,113
Wells Capital Management	251,395
Pugh Capital Management	146,666
Loomis Sayles	77,228
Brandywine Global	132,666
BlackRock	130,666
JP Morgan Asset Management	340,958
Brookfield Property Group	240,739
Voya Clarion	54,532
Mesirow Financial	53,363
Westport Capital Partners, LLC	74,575
Parametric Clifton	56,051
Rock Creek	341,572
Cobin Investor Services	202,009
AQR Capital Management	143,240
StepStone Group	52,609
Pantheon VI	89,504
Pantheon IX	60,000
<b>Total</b>	<b>3,699,811</b>

# Actuarial Section

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**Cavanaugh Macdonald**  
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*The experience and dedication you deserve*

July 6, 2017

The Board of Trustees  
Public School Retirement System of the School District of Kansas City, Missouri  
3100 Broadway, Suite 1211  
Kansas City, MO 64111

Dear Members of the Board:

In accordance with your request, we have completed an actuarial valuation of the Public School Retirement System of the School District of Kansas City, Missouri as of January 1, 2017. The major findings of the valuation are contained in this report, including the actuarial required contribution rate for the 2017 plan year. As a result of the most recent experience study dated October 3, 2016, there have been changes to both the actuarial assumptions and actuarial methods since the prior valuation. No changes have been made to the plan provisions.

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purposes of determining the actuarial contribution rates for funding the System. The calculations in the enclosed report have been made on a basis consistent with our understanding of the System’s funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes. For example, actuarial computations for purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standards No. 67 and No. 68 are provided in separate reports.

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Offices in Englewood, CO • Kennesaw, GA • Bellevue, NE



Board of Trustees  
July 6, 2017  
Page 2

The consultants who worked on this assignment are pension actuaries. CMC’s advice is not intended to be a substitute for qualified legal or accounting counsel.

This is to certify that the independent consulting actuaries are members of the American Academy of Actuaries and have experience in performing valuations for public retirement plans, that the valuation was prepared in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement plan and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System. The Board of Trustees has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix C.

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

Sincerely,

A handwritten signature in blue ink that reads 'Patrice Beckham' in a cursive script.

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

A handwritten signature in blue ink that reads 'Bryan K. Hoge' in a cursive script.

Bryan K. Hoge, FSA, EA, FCA, MAAA  
Senior Actuary

# SUMMARY OF ACTUARIAL ASSUMPTIONS AND METHODS

## ACTUARIAL COST METHOD

The actuarial cost method is a procedure for allocating the actuarial present value of pension benefits and expenses to time periods. The method used for the valuation is known as the Entry Age Normal actuarial cost method, and have the following characteristics:

- (i) The annual normal costs for each individual active member are sufficient to accumulate the value of the member's pension at time of retirement.
- (ii) Each annual normal cost is a constant percentage of the member's year-by-year projected covered compensation.

The Entry Age Normal actuarial cost method allocates the actuarial present value of each member's projected benefits on a level basis over the member's assumed pensionable compensation rates between the entry age of the member and the assumed exit ages.

The portion of the actuarial present value allocated to the valuation year is called the normal cost. The portion of the actuarial present value not provided for by the actuarial present value of future normal costs is called actuarial accrued liability. Deducting actuarial assets from the actuarial accrued liability determines the unfunded actuarial accrued liability or (surplus). Effective with the January 1, 2017 valuation, the existing UAAL is amortized over a closed 30-year period and subsequent pieces of UAAL, determined each year in the valuation process, will be amortized over a closed 20-year period. The amortization payments on each of the UAAL bases will be determined on a level percentage of payroll basis.

## CALCULATION OF THE ACTUARIAL VALUE OF ASSETS

The actuarial value of assets is based on a five-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return.

## ACTUARIAL ASSUMPTIONS

System contribution requirements and actuarial present values are calculated by applying assumptions to the benefit provisions and membership information of the System, using the actuarial cost method.

In making a valuation, the monetary effect of each assumption is calculated for as long as a presently covered person survives – a period of time which can be as long as a century.

Actual experience of the System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experiences. The result is a continual series of adjustments (usually small) to the computed contribution rate.

**Long-term Rate of Return:** (net of administrative expenses): 7.75% per year, compounded annually (2.75% long-term price inflation and a 5.00% real rate of return).

**Price Inflation:** 2.75%

**General Wage Growth (Wage Inflation):** 3.50%

**Payroll Growth Assumption:** 3.00% per year

**Interest Crediting Rate on Member Accounts:** 3.25% per year.

**Salary Increase Rates:** 5.00% per year.

**Mortality Table:** This assumption is used to measure the probabilities of members dying and the probabilities of each pension payment being made after retirement.

Healthy Retirees

And Beneficiaries: RP-2014 Healthy Annuitant Blue Collar Table with a one-year setback for females, projected 7 years from valuation date using Scale MP-2016

Disabled Retirees: RP-2014 Disabled Table for Males and Females

Active Members: RP-2014 Healthy Non-Annuitant Blue Collar Table with a one-year setback for females, projected 15 years from valuation date using Scale MP-2016

**Rates of Retirement:** These rates are used to measure the probability of eligible members retiring under the regular retirement provisions.

Retirements occur at rates based on the actual experience of the retirement system. The age-related rates used are shown in the tables below. The first year of normal retirement eligibility is the earlier of age 60 and 5 years of creditable service or 75 credits for Plan B members, and the earlier of age 62 and 5 years of creditable service or 80 credits for Plan C members.

Retirement Rates When Eligible for Unreduced Benefits		
Age	First Eligible Rate	Ultimate Rate
45 – 54	10%	12%
55 – 61	20	12
62	30	25
63	20	15
64	30	15
65 – 69	30	25
70 – 74	50	40
75	100	100

Retirement Rates When Eligible for Reduced Benefits	
Age	Rate
55 – 59	8%

Terminated vested members are assumed to begin receiving their benefits upon reaching age 60 if they participated in Plan B, and age 62 if they participated in Plan C.

**Rates of Separation from Active Membership:** This assumption measures the probabilities of a member terminating employment. The rates do not apply to members who are eligible to retire. Rates vary by service. Sample rates are as follows:

Years	Rate
<1	27%
1	25
5	17
10	8
15+	3

**Forfeiture of Vested Benefits:** Participants terminating in vested status are given the option of taking a refund of their accumulated participant contributions (and thereby forfeiting the employer-provided benefit) or deferring their vested benefit. Active members who terminate in the future with a vested benefit are assumed to take a deferred vested annuity, unless a refund of contributions and interest is greater than the actuarial present value of their vested deferred benefit.

**Future Benefit Increases or Additional Benefits:** When funding is adequate, the Board may authorize cost of living adjustments (COLAs), as noted in the summary of plan provisions. In the past, the Board has also sometimes granted an additional monthly payment to retirees (13th check.) This valuation assumes that no future COLAs and no future 13th checks will be awarded.

**MISCELLANEOUS AND TECHNICAL ASSUMPTIONS**

**Marriage Assumption:** All participants are assumed to be married for purposes of death benefits. In each case, the male was assumed to be 4 years older than the female.

**Decrement Timing:** Decrements of all types are assumed to occur mid-year.

**Other:** The turnover decrement does not operate during retirement eligibility.

**Missing Gender:** Records that are missing a gender are assumed to be female if the record belongs to a member, and male if the record belongs to a beneficiary.

## Membership Profile as of January 1

	2017	2016	2015	2014	2013
<b>Active Members</b>	3,701	3,574	3,493	3,501	3,396
Average Age	43.5	44.0	44.4	44.5	44.9
Average Years of Service	8.1	8.1	8.3	8.5	9.0
<b>Inactive Vested</b>	490	461	476	560	526
Average Age	50.5	50.5	50.2	51.6	51.1
Average Estimated Benefit	\$671	\$689			
<b>Retirees, Disabled and Survivors</b>	4,032	4,049	4,011	3,885	3,859
Average Age	72.2	72.0	71.7	71.7	71.5
Average Monthly Benefit	\$1,589	\$1,580	\$1,574	\$1,569	\$1,562

## Active Member Valuation Data

Valuation January 1	Active Members	Annual Payroll	Annual Average Pay	% Increase in Average Pay
2008	4,862	\$202,311,837	\$41,611	(0.64%)
2009	4,648	\$205,326,108	\$44,175	6.16%
2010	4,336	\$194,474,437	\$44,851	1.53%
2011	3,490	\$162,417,257	\$46,538	3.76%
2012	3,284	\$155,893,016	\$47,470	2.00%
2013	3,396	\$157,303,005	\$46,320	(2.42%)
2014	3,501	\$157,014,537	\$44,848	(3.18%)
2015	3,493	\$170,845,124	\$48,911	9.06%
2016	3,574	\$179,013,516	\$50,088	2.41%
2017	3,701	\$194,132,739	\$52,454	4.72%

## Retirants and Beneficiaries Added to and Removed from Rolls

Year Ended December 31	Added to Rolls		Removed from Rolls		Rolls End of Year		% Increase in Annual Benefits	Average Annual Benefits
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual Benefits		
2012	138	\$1,939,048	108	\$1,485,934	3,859	\$72,356,163		\$18,750
2013	148	\$2,480,646	95	\$1,690,031	3,885	\$73,146,778	1.09%	\$18,828
2014	257	\$4,763,445	131	\$2,173,699	4,011	\$75,736,524	3.54%	\$18,882
2015	159	\$2,949,800	122	\$1,900,088	4,049	\$76,786,236	1.39%	\$18,964
2016	151	\$2,791,834	167	\$2,697,334	4,032	\$76,880,736	0.12%	\$19,068

## Short-Term Solvency Test

In a system that has been following the discipline of level percent of payroll financing, the liabilities for active participant accumulated contributions (liability 1) and the liabilities for future benefits to retirees, beneficiaries, and inactive participants (liability 2) will be fully covered by assets if all assumptions are met. In addition, the liabilities for service already rendered by active participants (liability 3) are normally partially covered by the remainder of the present assets. Generally, if the system has been using level percent of payroll financing, the funded portion of liability 3 will increase over time. The schedule below illustrates the history of the liabilities of the system and is indicative of the system following the discipline of level percent of compensation funding.

Valuation January 1	Active Participants'	Retirees,	Active	Valuation Assets	Percent Covered By Valuation Assets		
	Accumulated Contributions (1)	Beneficiaries and Inactive Participants (2)	Participants (Employer Financed) (3)		(1)	(2)	(3)
2008	\$140,844,707	\$492,273,102	\$156,840,245	\$854,123,580	100%	100%	141%
2009	\$140,096,771	\$503,450,518	\$161,075,791	\$832,609,879	100%	100%	117%
2010	\$139,860,248	\$524,692,426	\$154,981,717	\$814,536,473	100%	100%	97%
2011	\$110,538,745	\$611,806,997	\$121,886,748	\$786,297,998	100%	100%	52%
2012	\$99,513,420	\$654,828,752	\$119,944,326	\$742,279,611	100%	98%	0%
2013	\$100,767,726	\$653,949,421	\$113,946,236	\$697,028,072	100%	91%	0%
2014	\$98,272,633	\$660,003,861	\$117,174,620	\$710,828,744	100%	93%	0%
2015	\$98,966,336	\$674,794,654	\$117,782,046	\$712,390,611	100%	91%	0%
2016	\$101,173,695	\$677,295,366	\$116,761,234	\$694,641,248	100%	88%	0%
2017	\$105,887,868	\$717,052,296	\$158,574,663	\$684,412,437	100%	81%	0%

## Analysis of Financial Experience

	(\$ in Millions)
<b>Unfunded Actuarial Accrued Liability, January 1, 2016</b>	200.6
- Expected decrease from amortization method	(1.8)
- Actual versus actuarial contributions	3.9
- Investment experience	16.6
- Liability experience	4.5
- Assumption changes	76.0
- Other experience	(2.7)
<b>Unfunded Actuarial Accrued Liability, January 1, 2017</b>	297.1

## Funding Progress

Analysis of the dollar amounts of actuarial value of assets, actuarial accrued liability, or unfunded actuarial accrued liability in isolation can be misleading. Expressing the actuarial value of assets as a percentage of the actuarial accrued liability provides one indication of the System's funded status on an on-going concern basis. Analysis of this percentage over time indicates whether the System is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the System's funding. The unfunded actuarial accrued liability and annual covered payroll are both affected by inflation. Expressing the unfunded actuarial accrued liability as a percentage of covered payroll approximately adjusts for the effects of inflation and aids analysis of the progress being made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the System's funding.

Actuarial Valuation Date	Actuarial Value of Assets (AVA) (a)	Actuarial Accrued Liabilities (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as Percent of Covered Payroll [(b - a) / c]
1/1/2008	\$854,123,580	\$781,284,025	(\$72,839,554)	109.3%	\$202,311,837	(36.0%)
1/1/2009	\$832,609,879	\$804,623,080	(\$27,986,799)	103.5%	\$205,326,108	(13.6%)
1/1/2010	\$814,536,473	\$819,534,391	\$4,997,918	99.4%	\$194,474,437	2.6%
1/1/2011	\$786,297,998	\$844,232,490	\$57,934,492	93.1%	\$162,417,257	35.7%
1/1/2012	\$742,279,611	\$874,286,498	\$132,006,887	84.9%	\$155,893,016	84.7%
1/1/2013	\$697,028,072	\$868,663,383	\$171,635,311	80.2%	\$157,303,005	109.1%
1/1/2014	\$710,828,744	\$875,451,114	\$164,622,370	81.2%	\$157,014,537	104.8%
1/1/2015	\$712,390,611	\$891,543,036	\$179,152,425	79.9%	\$170,845,124	104.9%
1/1/2016	\$694,641,248	\$895,230,295	\$200,589,047	77.6%	\$179,013,516	112.1%
1/1/2017	\$684,412,437	\$981,514,827	\$297,102,390	69.7%	\$194,132,739	153.0%

## Historical Contribution Rates

Actuarial Valuation Date	Actuarial Contribution Rate	Actual Contribution Rate	Contribution Shortfall/(Margin)
1/1/2008	9.39%	15.00%	(5.61%)
1/1/2009	9.35%	15.00%	(5.65%)
1/1/2010	11.50%	15.00%	(3.50%)
1/1/2011	14.64%	15.00%	(0.36%)
1/1/2012	18.30%	15.00%	3.30%
1/1/2013	20.52%	15.00%	5.52%
1/1/2014	19.68%	16.00%	3.68%
1/1/2015	19.56%	17.00%	2.56%
1/1/2016	20.18%	18.00%	2.18%
1/1/2017	18.61%	18.00%	0.61%



# Summary Plan Description

## **Effective Date**

January 1, 1944, most recently amended in 2013.

## **Plan Type**

Plan B applies to anyone who retires on or after June 30, 1999 and was hired prior to January 1, 2014. Plan C applies to members hired on or after January 1, 2014. All members with Plan A benefits have terminated or retired.

## **Eligibility for coverage**

All regular, full-time employees of the School District of Kansas City, Missouri, the library district, the retirement system and employees of charter schools become participants as a condition of employment. Regular employment means working at least five hours per day, five days per week, nine months per year. Temporary and part-time employees are excluded.

## **Service**

Creditable service is participant service, which is service for which required contributions have been made. There is no cap on creditable service. Prior to 1990, creditable service could not exceed 35 years. The Plan B maximum retirement benefit is 60% of Average final compensation, which will be reached upon attainment of 30 years of service. The Plan C maximum retirement benefit is 60% of Average final compensation, which will be reached upon attainment of 34.25 years of service.

## **Annual compensation**

A participant's annual compensation level will be the regular compensation shown on the salary and wage schedules, excluding extra pay, overtime pay, or any pay not on the schedule.

## **Average final compensation**

The average final compensation is the highest average annual compensation paid during any four consecutive years of service.

## **Normal retirement**

### **Eligibility**

Plan B: Participants may retire after (a) the completion of five years of creditable service and the attainment of age 60, or (b) having a total of at least 75 credits, with each year of creditable service and year of age, both prorated for fractional years, equal to one credit.

Plan C: Participants may retire after (a) the completion of five years of creditable service and the attainment of age 62, or (b) having a total of at least 80 credits, with each year of creditable service and year of age, both prorated for fractional years, equal to one credit.

### **Benefit**

Plan B: The normal retirement benefit payable monthly equals one twelfth of 2.00% (1.75% for participants who retired prior to June 30, 1999) of the participant's average final compensation multiplied by years of creditable service, subject to a maximum of 60% of average final compensation. Any participant whose years of creditable service exceed 34.25

years on August 28, 1993 shall have a maximum greater than 60%, which shall be equal to 1.75% times the participant’s years of creditable service on August 28, 1993.

Plan C: The normal retirement benefit payable monthly equals one twelfth of 1.75% of the participant’s average final compensation multiplied by years of creditable service, subject to a maximum of 60% of average final compensation.

**Early retirement**

**Eligibility**

Participants may retire at any time after the completion of five years of creditable service and the attainment of age 55.

**Benefit**

Plan B: A participant eligible for early retirement will receive a reduced benefit, with the reduction based on the number of months preceding eligibility for a normal retirement benefit. The reduction factors are as follows:

Age	Reduction Factor
59	0.91042
58	0.82985
57	0.75727
56	0.69175
55	0.63251

Plan C: A participant eligible for early retirement will receive a reduced benefit, with the reduction based on the number of months preceding eligibility for a normal retirement benefit. The reduction factors are as follows:

Age	Reduction Factor
61	0.90799
60	0.82558
59	0.75162
58	0.68511
57	0.62518
56	0.57109
55	0.52219

**Disability retirement**

**Eligibility**

A participant with at least five years of creditable service who is certified to be totally incapacitated for performance of duty by the Medical Board is eligible for a disability retirement.

**Benefit**

A disabled participant will receive an unreduced benefit, calculated as for normal retirement, based on service and average final compensation at actual retirement date. The minimum disability retirement benefit will be the lesser of (a) 25% of the participant’s average final compensation, or (b) the participant’s service retirement allowance calculated on the participant’s average final compensation and the maximum number of years of creditable service the participant would have earned had the participant remained an employee until age 60. Disability benefits are payable immediately.

### **Vested termination benefits**

#### **Eligibility**

A participant who has at least five years of creditable service earns a vested interest in his or her accrued benefit, provided the participant leaves his or her contributions in the System.

#### **Benefit**

The vested benefit is calculated as a normal retirement benefit based on service and average final compensation at date of termination and is payable at minimum normal retirement date.

### **Non-vested benefits**

#### **Benefit**

If the participant's termination is for reasons other than death or retirement and if the participant has not met the vesting or retirement requirements, the participant's contributions with interest will be refunded.

### **Death Benefit**

#### **Prior to retirement**

For a participant who dies before retirement, the participant's designated beneficiary may be entitled to receive a monthly retirement benefit if (a) the participant was an active employee, or (b) the participant was a terminated vested member who met the age requirements for either normal or early retirement. If the designated beneficiary is the participant's spouse, a dependent child under age 19, or the dependent parent, the beneficiary qualifies to have the option of selecting a monthly benefit under Option 1 with immediate commencement, or receiving a refund of contributions accumulated with interest. If the deceased participant was an actively contributing member and the qualified beneficiary elects Option 1, such benefit shall be calculated as if the deceased participant had at least ten years of creditable service at the time of death. If the beneficiary is a child, the benefit is only payable until age nineteen.

For a terminated vested participant who dies before retirement and has not met the age requirements for retirement, the participant's accumulated contributions with interest will be paid to the participant's designated beneficiary.

#### **Postretirement**

The optional form of benefit payment selected will determine what, if any, benefits are payable upon death after retirement. Participants are guaranteed to receive at least their accumulated contributions at retirement, if they die before electing an option.

### **Normal form of benefit payments**

The normal form of benefit payment is the normal retirement benefit amount paid monthly for the life of the participant. If the participant should die before receiving payments totaling the amount of their contributions to the plan, the designated beneficiary shall receive a lump sum payment of the remaining amount.

### **Optional forms of benefit payments**

Participants may elect from the following optional forms of benefit payment:

**Option 1** - provides a reduced retirement benefit that will continue on to a designated beneficiary. Upon a retiree's death, the retiree's designated beneficiary will receive for life, the same level of

monthly retirement benefit. In the event the retiree's designated beneficiary predeceases the retiree, the retiree's monthly retirement benefit will be adjusted to the amount that would have been paid in the normal form of payment.

**Option 2** - provides a reduced retirement benefit that will continue on to a designated beneficiary. Upon a retiree's death, the retiree's designated beneficiary will receive for life, a monthly benefit equal to one-half of the retiree's monthly retirement benefit. In the event the retiree's designated beneficiary predeceases the retiree, the retiree's monthly retirement benefit will be adjusted to the amount that would have been paid in the normal form of payment.

**Option 3** - provides that upon a retiree's death, no benefits are payable to the retiree's estate or any beneficiary. Retirement benefits payable under this option will be actuarially increased from the normal form.

### **Cost-of-living allowances**

The Board of Trustees shall determine annually whether or not the system can provide an increase in benefits for those retirees who, as of the January 1 preceding the date of such increase, have been retired at least one year. Any such increase also applies to optional retirement allowances paid to a retiree's beneficiary. The Board makes its determination as follows:

1. The actuary recommends to the Board what portion of the investment return is available for increases and the amount available to be paid on the first day of the 14<sup>th</sup> month following the end of the valuation year. The actuary's recommendation is subject to the following safeguards:
  - a. The System's funded ratio as of the January 1<sup>st</sup> of the preceding year of the proposed increase must be at least 100% after adjusting for the effect of proposed increase. The funded ratio is the ratio of assets to the pension benefit obligation.
  - b. The actuarially required contribution rate, after adjusting for the effect of the proposed increase, may not exceed the statutory contribution rate.
  - c. The actuary must certify that the proposed increase will not impair the actuarial soundness of the System.
2. The Board reviews the actuary's recommendation and shall, in their discretion, determine if an increase may be granted. In accordance with Board policy, if an increase is permissible, the amount of the increase will be equal to the lesser of 3% or the percentage increase in the CPI for the preceding year, subject to a cumulative increase of 100% subsequent to December 31, 2000.
3. This provision does not guarantee an annual increase to any retired participant.

### **Administration of the retirement system**

The Board of Trustees is responsible for the general administration and proper operation of the retirement system. The Board consists of 12 members – four member appointed by the Board of Education, one member appointed by the Board of Trustees of the library district, four members elected by and from the participants of the retirement system, two members elected by and from the retirees of the retirement system, and the Superintendent of Schools of the School District of Kansas City, Missouri. Administrative expenses are paid out of the general reserve fund.

**Employee contributions**

Contributions for Employees are as follows:

- Effective January 1, 2016, participants contribute 9.00%
- Effective January 1, 2015, participants contributed 8.50%
- Effective January 1, 2014, participants contributed 8.00%
- Effective January 1, 1999, participants contributed 7.50%
- Prior to January 1, 1999, participants contributed 5.90%
- Prior to 1990, participants contributed 5.00% of earnable annual compensation plus 2.00% of earnable compensation in excess of \$6,500, the contribution earning base.

**Employer contributions**

The employers of participants contribute at the fixed rate of covered compensation as follows:

- Effective January 1, 2016, 9.00%
- Effective January 1, 2015, 8.50%
- Effective January 1, 2014, 8.00%
- Effective January 1, 1999, 7.50%
- Effective July 1, 1996, 5.99%
- Effective July 1, 1995, 3.99%
- Effective July 1, 1993, 1.99%
- Prior to July 1, 1993, employer contributions were actuarially determined.

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# Statistical Summary

## **Plan Membership**

Membership in the pension trust administered by KCPSRS increased by 158. Active Plan B members decreased by 311 and Plan C members increased by 438, for a net total active member increase of 127. Retired members and their beneficiaries decreased by 17 and terminated-vested members increased by 29. Membership data for the last 5 years as of January 1, 2017, can be found on page 63. The charts on page 64 detail the number of benefit recipients by type and monthly benefit amount. The location of benefit recipients, showing the majority remain in the Greater Kansas City area, is depicted on page 65.

## **Pension Funding**

The charts on page 62 show a comparison of assets and liabilities of the system over time. At January 1, 2017, KCPSRS was actuarially 69.7% pre-funded a 7.9% decrease from January 1, 2016. The decrease, in part, is reflective of new actuarial investment assumptions and updated mortality assumptions, adopted after the 2011 – 2015 experience analysis.

## Changes in Plan Net Position – Last 10 Fiscal Years

Fiscal Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Additions:</b>										
Member Contributions	15,055,452	15,888,234	14,995,429	13,813,561	12,082,175	11,577,924	12,310,320	13,358,180	14,645,901	16,280,327
Employer Contributions	15,365,235	15,612,996	27,656,639	13,281,191	11,972,752	11,370,252	12,093,945	13,288,142	14,499,260	16,528,188
Net Investment Income	51,596,802	(195,311,930)	91,191,550	82,266,344	5,502,704	76,761,126	78,598,783	25,936,419	(10,025,518)	44,337,774
<b>Total Additions to Plan Net Positions</b>	<b>82,017,489</b>	<b>(163,810,700)</b>	<b>133,843,618</b>	<b>109,361,096</b>	<b>29,557,631</b>	<b>99,709,302</b>	<b>103,003,048</b>	<b>52,582,741</b>	<b>19,119,643</b>	<b>77,146,289</b>
<b>Deductions:</b>										
Benefits	55,534,728	59,334,054	59,226,394	64,613,420	70,411,893	72,426,711	73,844,481	75,298,737	76,235,124	76,898,255
Refunds	4,254,521	4,536,201	4,016,669	6,709,964	5,721,334	4,386,983	3,567,693	3,236,645	3,399,065	3,270,723
Depreciation Expense	0	83,446	82,356	363,455	443,060	522,930	524,163	528,860	250,979	92,179
Administrative	1,304,588	1,311,275	1,230,470	1,324,789	1,283,444	1,336,764	1,479,931	1,548,320	1,648,449	1,552,025
<b>Total Deductions from Plan Net Position</b>	<b>61,093,837</b>	<b>65,264,976</b>	<b>64,555,889</b>	<b>73,011,628</b>	<b>77,859,731</b>	<b>78,673,388</b>	<b>79,416,268</b>	<b>80,612,562</b>	<b>81,533,617</b>	<b>81,813,182</b>
<b>Change in Net Position</b>	<b>\$ 20,923,652</b>	<b>\$ (229,075,676)</b>	<b>\$ - \$ 69,287,729</b>	<b>\$ 36,349,468</b>	<b>\$ (48,302,100)</b>	<b>\$ - \$ 21,035,914</b>	<b>\$ 23,586,780</b>	<b>\$ - \$ (28,029,821)</b>	<b>\$ (62,413,974)</b>	<b>\$ (4,666,893)</b>

## Deductions from Plan Net Position for Benefit and Refunds

Fiscal Year	2012	2013	2014	2015	2016
<b>Total Benefits</b>	<b>72,426,711</b>	<b>73,844,481</b>	<b>75,298,738</b>	<b>76,235,124</b>	<b>76,898,255</b>
<b>Total Refunds</b>	<b>4,386,983</b>	<b>3,567,693</b>	<b>3,236,645</b>	<b>3,399,065</b>	<b>3,270,723</b>

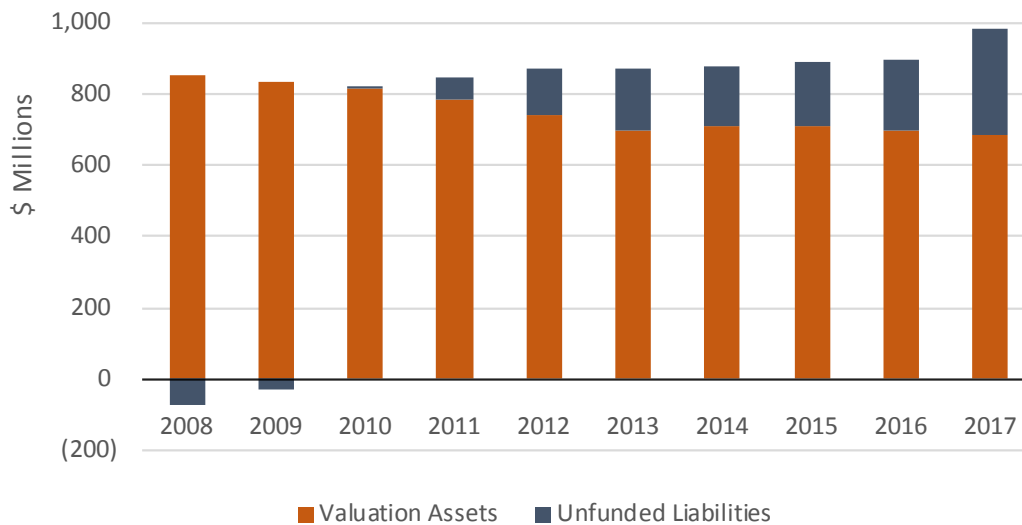


## Valuation Assets vs Pension Liabilities

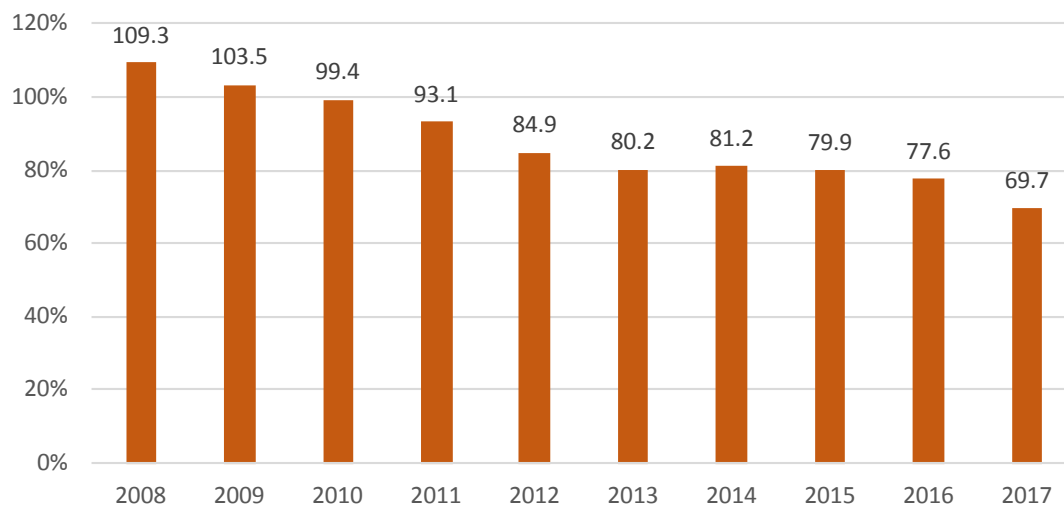
Valuation January 1	Dollars in Millions			Funded Ratios
	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	
2008	854.12	(72.84)	781.28	109.3%
2009	832.61	(27.99)	804.62	103.5%
2010	814.54	5.00	819.53	99.4%
2011	786.30	57.93	844.23	93.1%
2012	742.28	132.01	874.29	84.9%
2013	697.03	171.64	868.66	80.2%
2014	710.83	164.62	875.45	81.2%
2015	712.39	179.15	891.54	79.9%
2016	694.64	200.59	895.23	77.6%
2017	684.41	297.10	981.51	69.7%

Note: Numbers may not add due to rounding.

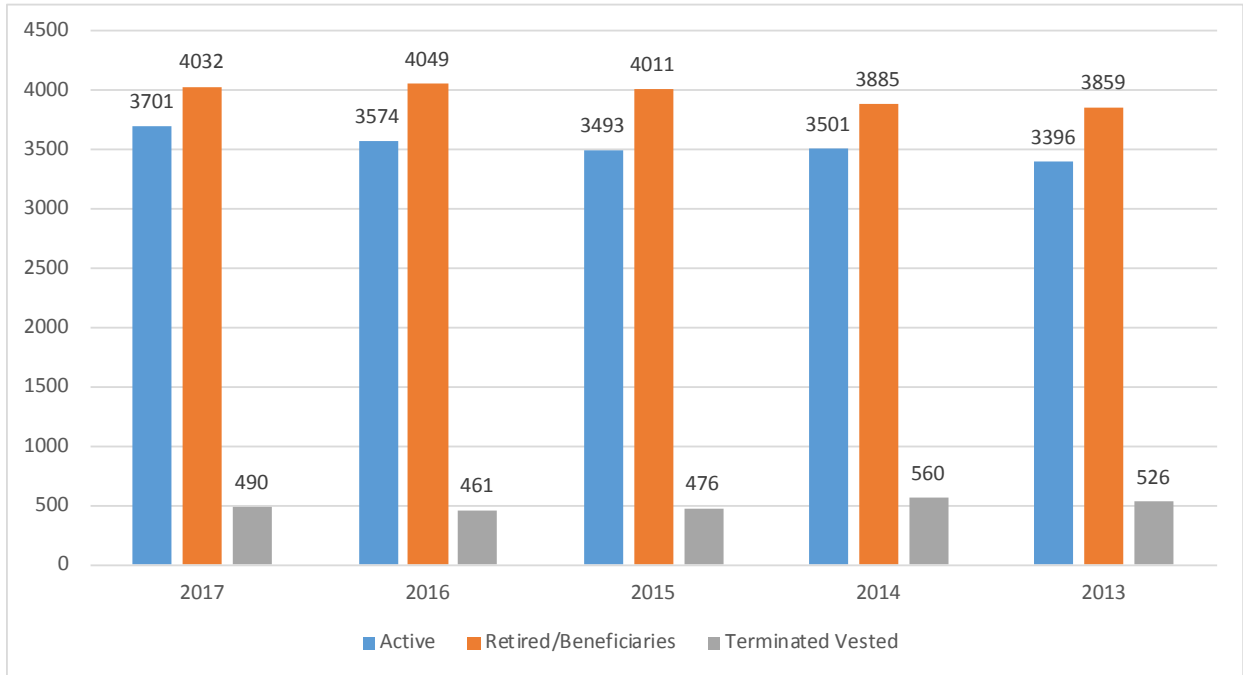
## Actuarial Accrued Liabilities



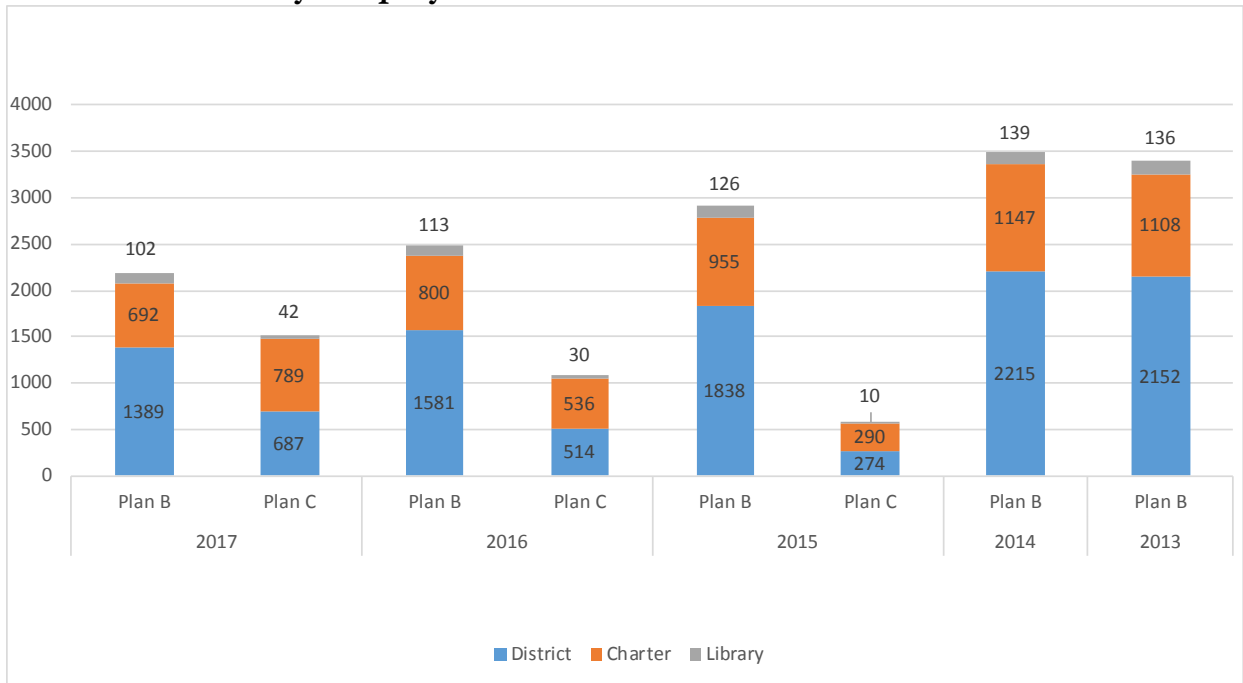
## Valuation Assets as Percents of Pension Liabilities



### Membership in Retirement Plan



### Active Members by Employer and Plan



## Retired Members by Type of Benefit

Amount of Monthly Benefits	Total Monthly Benefits	Total Number of Recipients	Type of Benefit			
			Retired	Surviving Spouses	Surviving Children	Disability
\$1 to 500	207,616	627	566	43	3	15
501 to 1,000	614,362	830	737	56	1	36
.001 to 1,500	781,294	631	550	52	3	26
501 to 2,000	911,141	519	482	29	1	7
.001 to 2,500	1,354,374	601	583	12	1	5
501 to 3,000	1,294,069	475	466	9	-	-
.001 to 3,500	680,812	211	211	-	-	-
501 to 4,000	242,666	65	65	-	-	-
.001 to 4,500	226,455	54	53	1	-	-
501 to 5,000	56,377	12	12	-	-	-
Over 5,000	37,561	7	7	-	-	-

## Average Monthly Benefit Amounts by Service Years

Members Retiring During	Years of Credited Service						All Members	
	<5	5-10	10-15	15-20	20-25	25-30		30+
<b>Fiscal Year Ending 01/01/2014</b>								
Average monthly benefit	\$1,669	\$566	\$827	\$1,428	\$2,091	\$2,218	\$2,662	\$1,399
Number of retirees	5	32	28	19	22	22	6	134
<b>Fiscal Year Ending 01/01/2015</b>								
Average monthly benefit	\$343	\$563	\$879	\$1,656	\$2,120	\$2,591	\$2,985	\$1,516
Number of retirees	3	37	44	25	36	25	10	180
<b>Fiscal Year Ending 01/01/2016</b>								
Average monthly benefit	\$436	\$625	\$977	\$1,403	\$2,174	\$2,678	\$3,414	\$1,579
Number of retirees	9	23	39	17	21	27	9	145
<b>Fiscal Year Ending 01/01/2017</b>								
Average monthly benefit	\$478	\$493	\$1,019	\$1,415	\$2,036	\$2,568	\$2,740	\$1,570
Number of retirees	4	26	24	17	22	24	12	129

### Distribution of Benefit Recipients by Location

