



Kansas City Public School Retirement System

# Comprehensive Annual Financial Report

**For the Fiscal Year Ended December 31, 2018**

Prepared by the joint effort of the KCPSRS staff  
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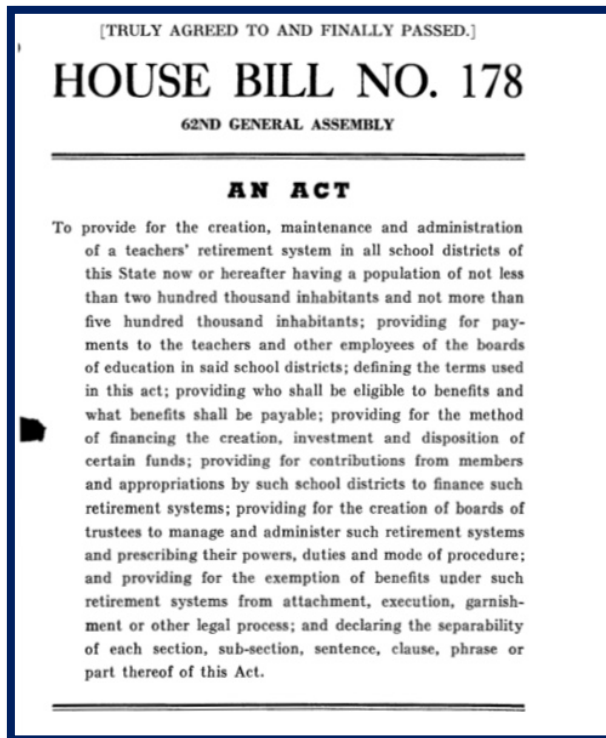
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# INTRODUCTORY SECTION



1907-1943

The Four-Decade Struggle

The Missouri state constitution in 1875 specifically prohibited the payment of retirement allowances to teachers by the state or by school districts. In 1907, the Missouri State Teachers Association declared itself in favor of teacher's pensions and began submitting constitutional amendments by initiative. Finally, an amendment passed to allow teacher pensions. The next step was to secure a legislative bill for a teacher retirement law.

Legislative bills failed to pass in 1937, 1939 and 1941, but in 1943, three separate but similar bills were passed, establishing retirements systems in Kansas City, St. Louis and St. Joseph. House Bill No. 178 of the 62<sup>nd</sup> Missouri General Assembly, created the retirement system of the Kansas City school district. In 1945, a law was enacted allowing public school teachers in the rest of the state to establish pension systems.

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# INTRODUCTORY SECTION

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June 6, 2019

Dear Members of the Kansas City Public School Retirement System,

We are pleased to submit the 2018 *Comprehensive Annual Financial Report* (CAFR) of the Kansas City Public School Retirement System (KCPSRS) for the fiscal year ended December 31, 2018. This report is intended to provide financial, investment, actuarial and statistical information in a single publication. KCPSRS management is responsible for the accuracy of the data, as well as the completeness and fairness of the presentation.

This year's CAFR recognizes KCPSRS 75<sup>th</sup> anniversary and, in tribute to this achievement, it features photos and stories reflecting on the historical events that lead to the creation of a pension system for teachers and other school and library staff and the developments throughout the years to keep the System updated, solid, and relevant through a constantly changing educational environment. *As KCPSRS celebrates its 75<sup>th</sup> year, in 2019, we remain focused on what is most important - the long-term security of the pension benefits we administer. We know our members rely on their KCPSRS benefit now and far into the future.*

In addition to providing information to our members concerning the financial condition of the System, this CAFR also meets the reporting requirements of state law as stipulated in Section 105.661 of the Revised Statutes of Missouri (RSMo). The report is posted on our website, [www.kcpsrs.org](http://www.kcpsrs.org) and printed copies are available upon request.

This letter of transmittal complements the financial statements and the *Management's Discussion and Analysis* section that begins on page 15 of this report.

### **Management Responsibility**

Responsibility for the preparation, the completeness and reliability of all information presented in this report, including all disclosures, rests with the management of KCPSRS. The financial statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP) within guidelines established by the Governmental Accounting Standards Board (GASB). To the best of our knowledge, the enclosed data is accurate in all material respects and fairly presents the System's financial position and operating results.

Management of the System is responsible for internal accounting controls, which are designed to provide reasonable but not absolute assurance the financial statements are free of any material misstatements and assets are safeguarded. The concept of reasonable assurance recognizes that the cost of internal controls should not exceed the benefit to be derived and the valuation of cost and benefit requires estimates and judgements by management.

Mayer Hoffman McCann, P.C. our independent external auditors, selected by the Board of Trustees, have conducted an audit of the basic financial statements in accordance with U.S. generally accepted auditing standards. This audit is described in the *Independent Auditors' Report* on page 13 in the *Financial Section*.

### **Major Initiatives**

With significant employer support, legislative language was introduced, in the Missouri General Assembly session beginning January 2, 2018, to revise the KCPSRS contribution rates. Senate Bill 892 which included language to change KCPSRS's contribution rate was ultimately approved by the House of Representatives and the Senate in May 2018 and later signed by the Governor with effective date of August 28, 2018.

The legislative changes increase the contribution rate of the employers by 1.5% on January 1, 2019 and again on January 1, 2020, and thereafter the legislation establishes guidelines to keep the System's contribution rate at the actuarial required contribution (ARC) rate. The increases of 3% through 2020 support the System in becoming financially stronger as continued payment of the ARC is one of the most important factors of funding a defined benefit plan.

### **Investment Information**

KCPSRS' investments generated a time-weighted net return of -5.4% for the fiscal year ended December 31, 2018, trailing its policy benchmark by 0.6%. Additional information regarding the investments and the asset allocation can be found in the *Investment Section* of this report.

### **Funding Status and Valuation Results**

Expressing the actuarial value of assets as a percentage of the actuarial accrued liability provides an indication of the System's funded status on an on-going basis. KCPSRS adopted this as the appropriate measure of the System's funded status for purposes of RSMo section 169.324.3(1)(a) in determining the potential for cost of living adjustments (COLAs). As of the actuarial valuation January 1, 2019, KCPSRS funded status is 66.2%, reflecting a slight decrease from in funding from the January 1, 2018 funded status of 69.2%. The changes in funded status are primarily due to an actuarial loss of \$26.5 million on assets (smoothing of five year investment gains and losses). Additional information on actuarial assumptions and funding can be found in the *Actuarial Section* of this report.

### **Award for Excellence in Financial Reporting**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to KCPSRS for its *Comprehensive Annual Financial Report (CAFR)* for the fiscal year ended December 31, 2017. This was the 2<sup>nd</sup> consecutive year that KCPSRS has achieved this prestigious award. To be awarded a Certificate of Achievement, a public entity must publish an easily readable and efficiently organized comprehensive annual financial report.



This report must satisfy both generally accepted accounting principles and applicable legal requirements.

The Certificate of Achievement is valid for a period of one year only. We believe our current CAFR continues to meet the Certificate of Achievement Program's requirements and we are submitting it to GFOA to determine its eligibility for another certificate.

This prestigious award recognizes KCPSRS for financial standards of excellence and is extremely gratifying to staff who work diligently throughout the year to carry out excellence and integrity in their work.

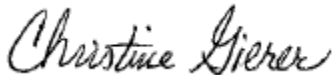
### **Acknowledgements**

We would like to express our thanks and gratitude to our consultants who have helped to produce this report and to provide complete and reliable information for making management decisions, complying with legal provisions and determining responsible stewardship of the assets contributed by members and their employers.

### **Conclusion**

*As KCPSRS celebrates its 75<sup>th</sup> year, in 2019, we remain focused on what is most important - the long-term security of the pension benefits we administer. It is our honor to work for you, our members. KCPSRS' 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



Laura Oswald, Associate Director



Government Finance Officers Association

**Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting**

Presented to

**Kansas City Public School  
Retirement System  
Missouri**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**December 31, 2017**

*Christopher P. Morrill*

Executive Director/CEO



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June 6, 2019

Dear Members,

On behalf of the Board of Trustees (Board), I am pleased to present KCPSRS' *Comprehensive Annual Financial Report* for the fiscal year ending December 31, 2018. This report provides information on the financial status of your retirement system while also highlighting changes that occurred during the year.

In May 2018 legislative changes were approved by the Missouri General Assembly which increase the employer contribution rate in 2019 and 2020 and then, at a minimum, set the total contribution rate at the actuarial required contribution rate each year. These changes will strengthen the System's financial position, enhancing the retirement security of all our members. I want to thank our participating employers who support the contribution changes, recognize the importance of a defined benefit retirement plan for their employees, and understand the importance of sustained funding at appropriate levels.

KCPSRS' investments generated a net return of -5.4% for fiscal year 2018, trailing the policy benchmark by 0.6%. Although this return is lower than those generated the past ten years, examples: 17.3% in 2017 and 8.0% in 2016, this reflects the volatility experienced by financial markets especially during the 4<sup>th</sup> quarter of 2018 which included some double-digit negative markets.

As we close the books on fiscal year 2018 and begin 2019, it is incumbent on us to recognize KCPSRS' 75<sup>th</sup> anniversary. State legislation establishing the System passed in 1943 and KCPSRS was officially established in January 1944. In recognition of the System's 75<sup>th</sup> anniversary much of KCPSRS' history has been highlighted in the pages separating each section of this report. I encourage you to take a moment to learn about the beginning of our retirement system and the beginning of our fund and investment program. We have come a long way since 1944 when the total assets of the fund were \$200,000 with a preponderance invested in fixed income securities issued of the U.S. Government. Today, 75 years later, I'm pleased to report your fund has assets totaling over \$600 million with diversified investments not only in fixed income; but public equity (stocks), real estate, and other alternative investments.

In closing, I wish to thank the entire Board and staff for continuing to maintain a high level of commitment to serving our membership. We look forward to serving you in the future.

Sincerely,

Horace Coleman, Board of Trustees Chairperson

## Our Mission



Photo Courtesy of Kansas City Public Schools.

**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.**

## Our 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 interests of our members. All of our work begins with the question, ***"Is it good for our members?"***

# KCPSRS Board of Trustees

As of December 31, 2018

**Horace Coleman, Jr.**

Board Chairperson  
Appointed by School Board

**Beverly Pratt**

Elected by retired members

**Curtis Rogers**

Vice-Chairperson  
Elected by retired members

**Debbie Siragusa**

Appointed by Library District

**Mark Bedell, Ed.D.**

District Superintendent  
Ex-Officio

**Lazona Stovall**

Appointed by Trustees to complete a  
term of an active member

**Joanne M. Collins**

Treasurer  
Appointed by School Board

**Boni Tolson**

Elected by active members

**Carl Evans**

Appointed by School Board

**Bakari Ukuu**

Elected by active members

**Roger Offield**

Elected by active members

**Brian Welch**

Appointed by School Board

## KCPSRS Staff

Christine Gierer, Executive Director

Jill Chaloupka, Executive Assistant

Erica Hill, Retirement Education Specialist

Jim Lewallen, Administrative Manager

Shannon McClain, Retiree Services Coordinator

Laura J. Oswald, Associate Director

Joe Schaefer, IT Manager

# Outside Professional Services

## **ACTUARY**

Cavanaugh Macdonald Consulting, LLC

## **AUDITORS**

Mayer Hoffman McCann PC

## **INVESTMENT MANAGEMENT CONSULTANTS**

Segal Marco Advisors

## **LEGAL COUNSEL**

Seyferth, Blumenthal & Harris, LLC  
Husch Blackwell, LLP

## **MASTER TRUSTEE/CUSTODIAN**

Bank of New York Mellon

## **BANKING RELATIONSHIP**

Bank of America

## **INSURANCE**

Lockton Companies, Inc.

## **TECHNOLOGY CONSULTANTS**

Sagitec  
GFI

## **LEGISLATIVE CONSULTANTS**

The Giddens Group

## **MEDICAL ADVISORS**

Clay Platte Family Medicine Clinic

## **INVESTMENT ADVISORS**

AQR Capital Management, LLC

Ares Management, LLC

BlackRock

Brandywine Global  
Investment Management, LLC

Brookfield Asset Management Inc

Corbin Capital Partners, L.P.

Earnest Partners

Fisher Investments

JP Morgan Investment Management

Landmark Partners

Loomis Sayles & Company, L.P.

Mesirow Financial Investment Management

Neuberger Berman Crossroads

Pantheon Ventures Inc

Pugh Capital Management

RhumbLine Advisers, L.P.

The Rock Creek Group, L.P.

Segall Bryant and Hamill

StepStone Group, LLC

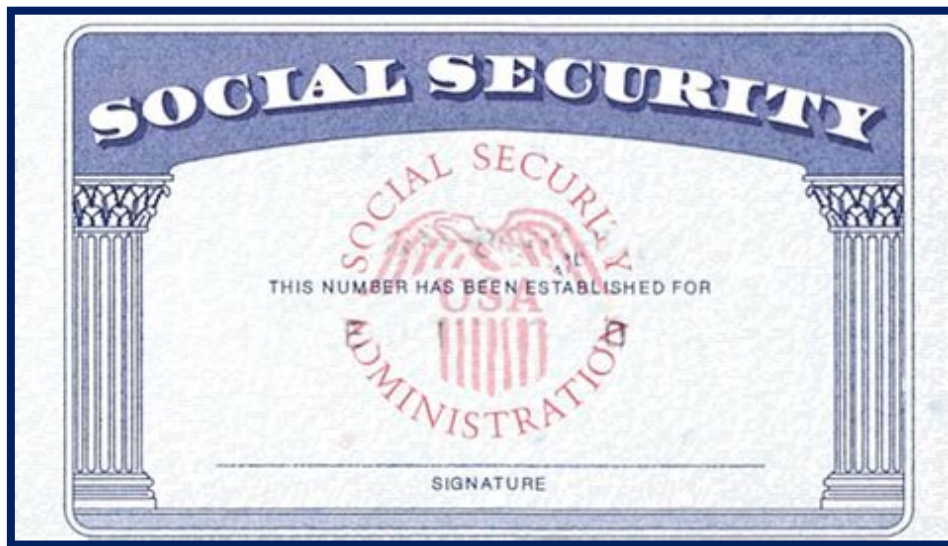
Wellington Trust Co.

Wells Capital Partners, LLC

Westfield Capital Management Company, L.P.

Westport Capital Partners, LLC

# FINANCIAL SECTION



1954-1956

Changes in the System: Social Security

In 1954 the Retirement Board of Trustees commissioned a research study to analyze methods to improve benefits for retiring employees of the Kansas City school district. In February 1955, a majority of employees voted to adopt Social Security to complement their retirement system benefits and authorized employee payroll deductions for the Social Security tax.

In 1956, the Board of Education authorized a funding allocation of the amount necessary to pay the district's portion of the Social Security tax back to January 1955.

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# FINANCIAL SECTION

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## INDEPENDENT AUDITOR’S 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, 2018 and 2017, and the related statements of changes in fiduciary net position for the years then ended, and the related notes to the financial statements, as listed in the table of contents.

### ***Management’s Responsibility for the Financial Statements***

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

### ***Auditors’ Responsibility***

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

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

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

### ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Retirement System as of December 31, 2018 and 2017, 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 and the schedules of changes in net pension liability and related ratios, employer contributions, and investment returns, as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management’s responses to our inquiries, the basic financial statements, and other knowledge we obtained during our 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 6, 2019

# Management’s Discussion and Analysis

The discussion and analysis of the Kansas City Public School Retirement System financial statements provides an overview of its financial activities during the years ended December 31, 2018 and 2017. Please read it in conjunction with the transmittal letter and more detailed financial statements, notes, and required supplementary information on pages 36-38 of this report.

KCPSRS is the defined benefit plan for all regular, full-time employees of the Kansas City School District, the Kansas City Public Library, the Charter Schools located within the boundaries of the Kansas City School District and the Retirement System. The Plan was established by the Missouri General Assembly, commenced 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, 2018 and 2017, and the Statements of Changes in Fiduciary Net Positions for the years ended December 31, 2018 and 2017. 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

	December 31,			Percentage Change From 2017 to 2018	Percentage Change From 2016 to 2017
	2018	2017	2016		
Receivables	\$ 1,101,115	\$ 11,680,121	\$ 12,069,103	-90.57%	-3.22%
Investments	600,954,128	672,509,851	618,133,183	-10.64%	8.80%
Cash	1,877,215	2,259,107	2,401,367	-16.90%	-5.92%
Prepaid and other assets	44,631	45,403	45,865	-1.70%	-1.01%
Property and equipment, net of accumulated depreciation	27,707	38,383	54,238	-27.81%	-29.23%
<b>Total assets</b>	<b>604,004,796</b>	<b>686,532,865</b>	<b>632,703,756</b>	<b>-12.02%</b>	<b>8.51%</b>
Securities purchased	610,736	0	538,494	100.00%	-100.00%
Accounts payable	533,053	599,450	590,186	-11.08%	1.57%
Accrued expenses	98,528	131,416	132,463	-25.03%	-0.79%
<b>Total liabilities</b>	<b>1,242,317</b>	<b>730,866</b>	<b>1,261,143</b>	<b>69.98%</b>	<b>-42.05%</b>
<b>Net position restricted for pensions</b>	<b>\$ 602,762,479</b>	<b>\$ 685,801,999</b>	<b>\$ 631,442,613</b>	<b>-12.11%</b>	<b>8.61%</b>

### Financial Analysis of Fiduciary Net Position

As of December 31, 2018, KCPSRS held \$602.8 million in trust on behalf of about 11,326 active, inactive and retired members. This represented a \$83.0 million decrease in net position from the previous fiscal year-end. In fiscal 2017, KCPSRS experienced a \$54.4 million increase in net position from the previous fiscal year-end.

**Assets** - Total assets of KCPSRS were \$ 604.0 million as of December 31, 2018 and \$686.5 million as of December 31, 2017 and included receivables, investments and cash. A large percentage of total assets, 99.5% fiscal 2018 and 98.0% fiscal 2017 is represented by investments held to provide retirement, disability and survivor benefits to its members. Other assets, including cash, receivables from employee and employer contributions, receivables from investment-related transactions, prepaid assets, and property and equipment make up .5% fiscal 2018 and 2.0% fiscal 2017 of total assets. Total assets decreased \$82.5 million (-12.0%) from the previous fiscal year-end primarily attributable to unfavorable investment market conditions as evidenced by the decrease in investable assets of \$71.6 million (-10.6%). Receivables also decreased \$10.6 million (-90.6%). The decrease in receivables of \$10.6 million (-90.6%) was the result of both the Kansas City School District and the Kansas City Public Library beginning during 2018 to pay their employer contributions each month rather than one year in arrears which was previously allowed by state statutes. In fiscal 2017, total assets increased \$53.8 million (8.5%) from the previous fiscal year-end largely due to the increase in investable assets of \$54.4 million (8.8%).

**Liabilities** – Total liabilities of KCPSRS were \$1.2 million as of December 31, 2018 and \$.7 million as of December 31, 2017 and included payables for investment manager fees, payables from investment-related transactions, and accrued expenses. Total liabilities increased \$.5 million from previous fiscal year-end due to the increase in amounts due brokers for purchase of investments of \$.6 million. In fiscal 2017, total liabilities decreased \$.5 million from the previous fiscal year-end due to the decrease in amounts due brokers for purchase of investments of \$.5 million.

**Net Position** – The fiduciary net position restricted for pensions decreased 12.1% from prior fiscal year, ending at \$602.8 million as of December 31, 2018. The fiduciary net position restricted for pensions increased 8.6% during fiscal 2017, ending at \$685.8 million as of December 31, 2017.

## Changes in Fiduciary Net Position

	Years Ended December 31,			Percentage Change From 2017 to 2018	Percentage Change From 2016 to 2017
	2018	2017	2016		
Contributions	\$ 35,146,999	\$ 33,890,913	\$ 32,808,515	3.71%	3.30%
Net investment income (loss)	(33,250,915)	103,767,715	44,337,774	-132.04%	134.04%
<b>Total additions</b>	<b>1,896,084</b>	<b>137,658,628</b>	<b>77,146,289</b>	<b>-98.62%</b>	<b>78.44%</b>
Benefits paid	79,333,689	78,181,575	76,898,255	1.47%	1.67%
Refunds of contributions	4,084,837	3,581,147	3,270,723	14.07%	9.49%
Depreciation expense	17,150	15,855	92,179	8.17%	-82.80%
Administrative expenses	1,499,928	1,520,665	1,552,025	-1.36%	-2.02%
<b>Total deductions</b>	<b>84,935,604</b>	<b>83,299,242</b>	<b>81,813,182</b>	<b>1.96%</b>	<b>1.82%</b>
<b>Net increase (decrease)</b>	<b>(83,039,520)</b>	<b>54,359,386</b>	<b>(4,666,893)</b>	<b>-252.76%</b>	<b>1264.79%</b>
<b>Net position restricted for pensions, beginning of year</b>	<b>685,801,999</b>	<b>631,442,613</b>	<b>636,109,506</b>	<b>8.61%</b>	<b>-0.73%</b>
<b>Net position restricted for pensions, end of year</b>	<b>\$ 602,762,479</b>	<b>\$ 685,801,999</b>	<b>\$ 631,442,613</b>	<b>-12.11%</b>	<b>8.61%</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 2018, 2017 and 2016, both members and employers contributed at 9.0% of covered salary. Total contributions for fiscal 2018 shows an increase of \$1.3 million (3.7%), fiscal 2017 shows an increase of \$1.1 million (3.3%) due to the growth of payroll compared to previous year-end.

The portfolio’s investment rate of return gross of fees for the current and preceding two fiscal years were -4.96%, 17.83% and 8.61%, respectively. Investment loss for fiscal 2018 of \$28.5 million and investment expenses of \$4.8 million, investment income for fiscal 2017 of \$108.2 million and investment expenses of \$4.4 million and investment income for fiscal 2016 of \$48.3 million and investment expenses of \$4.0 million are primarily the result of these market returns. Investment related expenses include investment manager fees, investment advisor and custodial fees.

Total additions to fiduciary net position as of December 31, 2018 decreased \$135.8 million from previous fiscal year-end and as of December 31, 2017 increased \$60.5 million from previous fiscal year-end primarily attributable to investment market returns during those periods, as evidenced by KCPSRS’ negative investment return in 2018 and positive investment return in 2017.

Benefits paid to members, refunds of member contributions, and administrative expenses are the deductions from fiduciary net position. Benefits paid out exceeded contributions received by \$44.2 million for fiscal year 2018 and by \$44.3 million for fiscal year 2017. This excess of benefits paid relative to contributions received is characteristic of a mature pension plan such as KCPSRS. The administrative expenses for year 2018 were approximately .25% and for year 2017 were approximately .22% of assets, respectively.

Total deductions from fiduciary net position as of December 31, 2018 increased \$1.6 million (1.9%) from previous fiscal year-end and for fiscal year 2017, deductions from fiduciary net position showed an increase of \$1.5 million (1.8%) from previous fiscal year-end due to increases in both benefits paid and refunds of contributions during the each year.

***Request for information***

This report is intended to provide the Board of Trustees, the System’s membership, and other interested parties a general overview of the System’s financial matters. Questions about this report or requests for additional financial information should be directed to KCPSRS at 3100 Broadway, Suite 1211, Kansas City, MO 64111, or by email to [kcpsrs@kcpsrs.org](mailto:kcpsrs@kcpsrs.org).

## Statements of Fiduciary Net Position

December 31, 2018 and 2017

<b>ASSETS</b>	<b>2018</b>	<b>2017</b>
Receivables:		
Plan member contributions	\$ 211,283	\$ 685,624
Employers' contributions	211,283	10,537,802
Due from brokers for securities sold	170,533	0
Accrued interest and dividends	508,016	456,695
	<u>1,101,115</u>	<u>11,680,121</u>
Investments, at fair value:		
Cash and short term investments	24,796,954	20,365,076
Commingled domestic fixed income	61,188,366	54,913,727
High yield fixed income	17,469,725	17,979,851
Global fixed income	30,098,964	31,604,923
Domestic equity	141,290,033	164,878,025
International equity	136,723,420	190,814,088
Pooled real estate funds	59,819,417	55,885,706
Alternative equity funds	98,610,742	89,533,199
Private equity funds	30,956,507	25,437,896
Commodities fund	0	21,097,360
	<u>600,954,128</u>	<u>672,509,851</u>
Other:		
Cash	1,877,215	2,259,107
Prepaid and other assets	44,631	45,403
Property and equipment, at cost, less accumulated depreciation	27,707	38,383
	<u>1,949,553</u>	<u>2,342,893</u>
<b>TOTAL ASSETS</b>	<u>604,004,796</u>	<u>686,532,865</u>
<b>LIABILITIES</b>		
Due to broker for securities purchased	610,736	0
Accounts payable	533,053	599,450
Accrued payroll expenses	98,528	131,416
	<u>1,242,317</u>	<u>730,866</u>
<b>TOTAL LIABILITIES</b>	<u>1,242,317</u>	<u>730,866</u>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<u>\$ 602,762,479</u>	<u>\$ 685,801,999</u>

See Notes to the Financial Statements

## Statements of Changes in Fiduciary Net Position

Years ended December 31, 2018 and 2017

	<u>2018</u>	<u>2017</u>
<b>ADDITIONS</b>		
Contributions:		
Plan members	\$ 17,619,145	\$ 16,964,351
Employers	17,527,854	16,926,562
Total contributions	<u>35,146,999</u>	<u>33,890,913</u>
Investment Income:		
Net realized and unrealized appreciation in fair value of investments	(35,336,449)	102,069,468
Interest	2,051,158	2,316,875
Dividends	4,798,596	3,767,884
	<u>(28,486,695)</u>	<u>108,154,227</u>
Less: Investment expenses	4,764,220	4,386,512
Net investment income	<u>(33,250,915)</u>	<u>103,767,715</u>
<b>TOTAL ADDITIONS</b>	<u>1,896,084</u>	<u>137,658,628</u>
<b>DEDUCTIONS</b>		
Benefits paid	79,333,689	78,181,575
Refunds of contributions	4,084,837	3,581,147
Depreciation expense	17,150	15,855
Administrative expenses	1,499,928	1,520,665
<b>TOTAL DEDUCTIONS</b>	<u>84,935,604</u>	<u>83,299,242</u>
<b>NET INCREASE (DECREASE) IN NET POSITION</b>	(83,039,520)	54,359,386
<b>NET POSITION RESTRICTED FOR PENSION</b>		
Beginning of year	<u>685,801,999</u>	<u>631,442,613</u>
End of year	<u>\$ 602,762,479</u>	<u>\$ 685,801,999</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, 2018, 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: Académie LaFayette, Academy for Integrated Arts, Allen Village Charter School, Brookside Charter School, Citizens of the World Kansas City, Crossroads Charter Schools, DeLaSalle Charter School, Ewing Marion Kauffman School, Frontier Schools, Genesis School, Inc., Gordon Parks Elementary, Guadalupe Center Schools, Hogan Preparatory Academy, Hope Leadership Academy, Kansas City International 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, 2018 and 2017, respectively, the Plan's membership consisted of:

	<u>2018</u>	<u>2017</u>
Active plan members	3,760	3,701
Retirees and beneficiaries receiving benefits	4,112	4,032
Terminated plan members, vested entitled to but not yet receiving benefits	522	490
Terminated plan members, nonvested entitled to a refund of contributions plus accrued interest	<u>2,449</u>	<u>2,298</u>
Total plan membership	<u><u>10,843</u></u>	<u><u>10,521</u></u>

**Contributions** - For the years beginning January 1, 2018 and 2017, members were required to contribute 9% of their annual covered salary. Employers were required to match the contributions made by their employees.

During 2018, the Missouri General Assembly passed legislation that increased the employer contribution rate to 10.50% of annual covered salary effective January 1, 2019, and then to 12.00% of annual covered salary effective January 1, 2020. Beginning July 1, 2021, the employer contribution rate will be the greater of (1) the actuarial retired contribution rate less the member contribution rate, or (2) 12.00% of annual covered salary, until the Retirement System is fully funded. Once the Retirement System is fully funded, the employer contribution rate may - increase or decrease, in subsequent years, depending on valuation results and the employee contribution rate may decrease from 9% depending on valuation results. However, such changes are subject to statutory limitations.

**(1) Description of plan (continued)**

**Contributions (continued)** – The contribution rate is set each year by the Board of Trustees of the Kansas City Public School Retirement System upon the recommendation of the Retirement System’s actuary within the contribution restrictions of RSMo Section 169.350 subsections 5 and 6.

**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.

**(1) Description of plan (continued)****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.

*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 a benefit calculated as for normal retirement, based on creditable service and average final compensation at the actual disability retirement date, or the minimum disability benefit whichever is greater. The minimum disability retirement benefit shall be the lesser of:

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

**(1) Description of plan (continued)****Death benefit (continued)**

*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 designated survivor will receive, for life, the same level of monthly retirement benefit. In the event that the retiree's designated survivor 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 designated survivor will receive, for life, a monthly retirement benefit equal to one-half the retiree's benefit. In the event the retiree's designated survivor 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 and interest, 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 1st 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, 2018 and 2017 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 policies as set by the Board.

**(1) Description of plan (continued)**

**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 (depreciation) 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. Beginning in 2018, the School District of Kansas City, Missouri and the Kansas City, Missouri Public Library District began paying their employer portions of their retirement payment each month rather than one year in arrears. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan.

The Retirement System's financial statements, notes to the financial statements, and required supplementary information were prepared in conformity with Governmental Accounting Standards Board ("GASB") Statement No.67, *Financial Reporting for Pension Plans*, as amended. GASB No. 67 addresses accounting and financial reporting requirements for pension plans. Significant requirements include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosures regarding the pension liability, the sensitivity of the net pension liability to the discount rate and extensive investment activity disclosures.

**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:

Equipment	7 years
Software	5 years

**Investment valuation and income recognition** - The net unrealized appreciation (depreciation) in the fair value of investments for the period reflects the net increase 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 is recorded on the accrual basis. Dividends are recorded on the ex-dividend date.

**Rate of return** - For the years ended December 31, 2018 and 2017, the annual time-weighted return on the Retirement System's investments, net of investment expense was -5.40% and 17.29%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

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

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. In 2017, an asset liability study was completed at the request of the Board. This study identified new optimal portfolio mixes with new asset classes for the Board's consideration. The Board chose a new asset allocation mix that is expected to increase their long-term return slightly while lowering the overall risk of the portfolio. The table below illustrates the Retirement System's Board of Trustees approved asset allocation as of December 31, 2018.

<u>Asset Class</u>	<u>2018 Target Allocation</u>
US Equity	22.50 %
International Developed Equity	12.00 %
Real Estate	12.00 %
Multi-Asset Class	10.50 %
International Emerging Equity	10.00 %
Core Fixed Income	10.00 %
Private Equity	7.50 %
Hedge Funds of Funds	5.00 %
International Fixed Income	5.00 %
Commodities	3.00 %
High Yield	2.50 %
Total	<u>100.00 %</u>

**Concentration risk** - As of December 31, 2018 and 2017, 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.

	<u>December 31</u>	
	<u>2018</u>	<u>2017</u>
Rhumblin S&P 500 Pooled Index Fund	\$ 65,552,721	\$ 79,649,292
Rhumblin S&P Mid-Cap 400 Index Fund	38,604,636	43,413,903
AQR Global Risk Premium Fund	37,191,409	42,911,304
Earnest Partners Emerging Market Fund	33,649,273	44,671,822
Wells Capital Emerging Market Fund	*	37,489,154

\*Not applicable, investment amount is below 5%.

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

**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, 2018 and 2017 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 90% of holdings in issues rated BBB 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, 2018 and 2017 subject to credit risk are shown with current credit ratings below:

	December 31, 2018		Quality Rating			
	Fair Value	%	AAA/Aaa	AA/Aa	A/A	BBB/Baa
U.S. Treasuries	\$ 17,146,660	28.0%	\$ 17,146,660	\$ -	\$ -	\$ -
U.S. Government Agencies	18,424,029	30.1%	18,424,029	-	-	-
Corporate Bonds	24,937,874	40.8%	8,204,502	-	5,233,828	11,499,544
Municipals	679,803	1.1%	204,234	475,569	-	-
	<u>\$ 61,188,366</u>	<u>100.0%</u>	<u>\$ 43,979,425</u>	<u>\$ 475,569</u>	<u>\$ 5,233,828</u>	<u>\$ 11,499,544</u>

	December 31, 2017		Quality Rating			
	Fair Value	%	AAA/Aaa	AA/Aa	A/A	BBB/Baa
U.S. Treasuries	\$ 9,275,992	15.2%	\$ 9,275,992	\$ -	\$ -	\$ -
U.S. Government Agencies	14,498,140	23.7%	14,498,140	-	-	-
Corporate Bonds	29,579,129	48.3%	8,795,113	799,060	4,702,789	15,282,167
Municipals	1,560,465	2.6%	735,591	499,656	325,209	-
	<u>\$ 54,913,727</u>	<u>100.0%</u>	<u>\$ 33,304,836</u>	<u>\$ 1,298,716</u>	<u>\$ 5,028,008</u>	<u>\$ 15,282,167</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 as of December 31, 2018 and 2017 subject to interest rate risk are shown below grouped by effective duration ranges:

Security Description	December 31, 2018 Fair Value	Investment Maturities (in years)			
		Less Than 1	1 - 5	6 - 10	Greater Than 10
U.S. Treasury & Government Agencies	\$ 35,570,689	\$ 495,330	\$ 7,272,492	\$ 5,605,523	\$ 22,197,344
Municipals	679,803	-	-	-	679,803
Corporate Bonds – United States	24,937,874	478,094	13,035,699	5,397,962	6,026,120
	<u>\$ 61,188,366</u>	<u>\$ 973,424</u>	<u>\$ 20,308,191</u>	<u>\$ 11,003,485</u>	<u>\$ 28,903,267</u>

Security Description	December 31, 2017 Fair Value	Investment Maturities (in years)			
		Less Than 1	1 - 5	6 - 10	Greater Than 10
U.S. Treasury & Government Agencies	\$ 23,774,133	\$ 719,487	\$ 4,668,849	\$ 2,704,157	\$ 15,681,639
Municipals	1,560,465	57,886	789,409	-	713,170
Corporate Bonds – United States	29,579,129	-	9,884,110	10,211,371	9,483,648
	<u>\$ 54,913,727</u>	<u>\$ 777,374</u>	<u>\$ 15,342,368</u>	<u>\$ 12,915,528</u>	<u>\$ 25,878,457</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.



(3) **Fair value measurements (continued)**

Fair Value Measurements as of December 31, 2018				
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	\$ 108,523,615	\$ -	\$ -	\$ 108,523,615
Real estate investment trusts	2,160,723	-	-	2,160,723
<b>Total equity investments</b>	<b>110,684,338</b>	<b>-</b>	<b>-</b>	<b>110,684,338</b>
U.S. Treasuries	17,146,660	-	-	17,146,660
U.S. Government Agencies	-	18,424,029	-	18,424,029
Collateralized mortgage-backed securities	-	2,571,242	-	2,571,242
Corporate bonds	-	16,733,372	-	16,733,372
Corporate asset-backed securities	-	5,633,260	-	5,633,160
Municipals	-	679,803	-	679,803
<b>Total fixed income investments</b>	<b>17,146,660</b>	<b>44,041,706</b>	<b>-</b>	<b>61,188,366</b>
<b>Total investments by fair value level</b>	<b>\$ 127,830,998</b>	<b>\$ 44,041,706</b>	<b>\$ -</b>	<b>\$ 171,872,704</b>
<b>Investments measured at NAV practical expedient<sup>(a)</sup></b>				<b>404,284,470</b>
<b>Investments measured at amortized cost<sup>(b)</sup></b>				<b>24,796,954</b>
<b>Total investments measured at fair value</b>				<b>\$ 600,954,128</b>

Fair Value Measurements as of December 31, 2017				
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	\$ 148,432,022	\$ -	\$ -	\$ 148,432,022
Real estate investment trusts	2,035,854	-	-	2,035,854
<b>Total equity investments</b>	<b>150,467,876</b>	<b>-</b>	<b>-</b>	<b>150,467,876</b>
U.S. Treasuries	9,275,992	-	-	9,275,992
U.S. Government Agencies	-	13,876,921	-	13,876,921
Collateralized mortgage-backed securities	-	4,522,409	-	4,522,409
Corporate bonds	-	20,761,212	-	20,761,212
Corporate asset-backed securities	-	5,272,715	-	5,272,715
Non-agency collateralized mortgage obligations	-	433,422	-	433,422
Municipals	-	771,056	-	771,056
<b>Total fixed income investments</b>	<b>9,275,992</b>	<b>45,637,735</b>	<b>-</b>	<b>54,913,727</b>
<b>Total investments by fair value level</b>	<b>\$ 159,743,868</b>	<b>\$ 45,637,735</b>	<b>\$ -</b>	<b>\$ 205,381,603</b>
<b>Investments measured at NAV<sup>(a)</sup></b>				<b>446,763,172</b>
<b>Investments measured at amortized cost<sup>(b)</sup></b>				<b>20,365,076</b>
<b>Total investments measured at fair value</b>				<b>\$ 672,509,851</b>

(a) Certain investments that were measured at net asset value (“NAV”) per share (or its equivalent) practical expedient 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.

**(3) Fair value measurements (continued)**

- (b) 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 fair 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.

The valuation method for investments measured at the net asset value per share, or equivalent, as of December 31, 2018 and 2017 are presented in the tables below.

Investment Type	December 31, 2018 Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Equity commingled funds				
Developed markets (1)	104,157,358	-	Daily	2 days
Emerging markets (1)	63,171,758	-	Daily/Weekly	2 days
Fixed-income comingled funds				
High yield fixed income (1)	17,469,725	-	Daily	2 days
International fixed income (1)	30,098,964	-	Daily	10 days
Hedge fund of funds commingled funds (1)	34,545,430	-	Quarterly	90 - 100 days
Private equity funds (2)	30,956,507	47,765,185	Not Eligible	N/A
Multi-asset class commingled funds (1)	64,065,312	-	Monthly	15 days
Real estate commingled fund (3)	24,533,680	-	Quarterly	45 - 60 days
Real estate (3)	35,285,736	14,951,568	Not Eligible	N/A
Investments measured at the NAV practical expedient	\$ 404,284,470			

Investment Type	December 31, 2017 Fair Value	Unfunded Commitments	Redemption Frequency (If Currently Eligible)	Redemption Notice Period
Equity commingled funds				
Developed markets (1)	123,063,195	-	Twice a Month	2 days
Emerging markets (1)	82,161,043	-	Daily/Weekly	2 days
Fixed-income comingled funds				
High yield fixed income (1)	17,979,851	-	Daily	2 days
International fixed income (1)	31,604,923	-	Daily	2 days
Hedge fund of funds commingled funds (1)	46,621,895	-	Quarterly	90 - 100 days
Private equity funds (2)	25,437,896	2,919,000	Not Eligible	N/A
Commodities (1)	21,097,360	-	Monthly	5 days
Global tactical asset allocation comingled funds (1)	42,911,304	-	Monthly	15 days
Real estate commingled fund (3)	22,889,287	-	Quarterly	45 - 60 days
Real estate (3)	32,996,418	1,767,144	Not Eligible	N/A
Investments measured at the NAV practical expedient	\$ 446,763,172			

- (1) Consists of two domestic equity funds, two international emerging market equity funds, two fixed income funds and two hedge fund of funds, two multi-asset class funds 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.

**(3) Fair value measurements (continued)**

- (2) The Retirement System’s private equity portfolio consists of 285 active partnerships with 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 fund-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 contribution of the following accepted valuation approaches: market, cost or income. For four of the real estate funds, generally annual appraisals are performed by an independent third-party each year, minimum every three years. For four of the real estate funds, the inputs and assumptions utilized to estimate future cash flows are based upon the manger'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) Property and equipment**

Property and equipment consisted of the following at December 31, 2018 and 2017:

	<b>December 31,</b>	
	<b>2018</b>	<b>2017</b>
Cost		
Equipment	\$ 42,675	\$ 42,675
Software	2,230,382	2,223,908
Total cost	2,273,057	2,266,583
Less: accumulated depreciation	(2,245,350)	(2,228,200)
Net property and equipment	<u>\$ 27,707</u>	<u>\$ 38,383</u>

Depreciation expense for the years ended December 31, 2018 and 2017 was \$17,150 and \$15,855, respectively.

**(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. Effective January 1, 2019, the 2018 Missouri General Assembly passed a bill that increased the employer contribution rate (see Notes 1 and 10).

(6) **Net pension liability**

The components of the net pension liability of participating entities at December 31, 2018 and 2017, were as follows:

	<u>2018</u>	<u>2017</u>
Total pension liability	\$ 1,002,969,710	\$ 989,536,742
Less: plan fiduciary net position	<u>602,762,479</u>	<u>685,801,999</u>
Net pension liability	<u>\$ 400,207,231</u>	<u>\$ 303,734,743</u>
Plan fiduciary net position as a percentage of total pension liability	60.10%	69.31%

**Actuarial information** - The Retirement System engages an independent actuarial firm to perform an annual actuarial valuation. The total pension liability was determined by an actuarial valuation as of January 1, 2018, which was rolled forward to December 31, 2018. The actuarial assumptions used for the most recent valuations are as follows:

Valuation Date	January 1, 2018 and 2017
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay, Closed Period
Remaining Amortization Period	29 years (2018), 30 years (2017)
Asset Valuation Method	5-year Smoothed Fair Value
Actuarial Assumptions:	
Investment Rate of Return	7.75%, including inflation
Projected Salary Increases	5.00%, including inflation
Inflation	2.75%
Mortality:	Pre-retirement mortality rates were based on RP-2014 Healthy Non-Annuitant Blue Collar Table with a one-year setback for females, projected 15 years from the valuation date using Scale MP-2016. Post-retirement mortality rates were based on RP-2014 Healthy Annuitant Blue Collar Table with a one-year setback for females, projected 7 years from the valuation date using Scale MP-2016. Disability mortality rates were based on RP-2014 Disabled Table for Males and Females.

**(7) Net pension liability (continued)**

The actuarial assumptions used in the January 1, 2018 and 2017 valuation were adopted by the Board from the results of an actuarial experience study covering the five-year period ended December 31, 2015 (dated October 3, 2016).

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, 2018 (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
Private Equity	11.5 %
International Emerging Equity	9.9 %
International Developed Equity	7.5 %
US Equity	6.8 %
High Yield	5.0 %
Real Estate	4.6 %
Commodities	4.3 %
Global Tactical Asset Allocation	4.2 %
Hedge Funds of Funds	3.8 %
Core Fixed Income	1.8 %

(6) **Net pension liability** (continued)

**Discount Rate** - The discount rate used to measure the total pension liability as of December 31, 2018 and 2017 was 7.57% and 7.75%, respectively. 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 represents the net pension liability of participating entities as of December 31, 2018 and 2017, calculated using the discount rate assumption, as well as what the net pension liability would be if it were calculated using a discount rate that is one percentage point lower or one percentage point higher than the current assumption

	<u>1% Decrease</u>	<u>Current Assumption</u>	<u>1% Increase</u>
<b>December 31, 2017</b>	6.75%	7.75%	8.75%
	\$ 401,049,071	\$ 303,734,744	\$ 221,067,453
<b>December 31, 2018</b>	6.57%	7.57%	8.57%
	\$ 499,599,319	\$ 400,207,231	\$ 316,062,190

(7) **Operating lease**

The Retirement System 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:

<u>Years Ending December 31,</u>			
2019		\$	73,036
2020			73,011
2021			74,823
2022			75,125
2023			75,125
Thereafter			153,576
Total		\$	<u>524,696</u>

(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 6, 2019, which is the date the financial statements were available to be issued and noted the following item for disclosure:

The 2018 Missouri General Assembly passed a bill that increased the employer contribution rate to 10.50% of pay, effective January 1, 2019, and then to 12% of pay, effective January 1, 2020. Beginning July 1, 2021, the employer contribution rate will be the greater of (1) the actuarial required contribution rate less the member contribution rate, or (2) 12.00% of pay, until the Retirement System is fully funded. Once the Retirement System is fully funded, the employer contribution rate may increase or decrease, in subsequent years, depending on valuation results and the employee contribution rate may decrease from 9% depending on valuation results. However, such changes are subject to statutory limitations. These changes to the contribution rate are expected to improve the funding status of the Retirement System in the future.

## Schedules of Changes in Net Pension Liability

(\$ in thousands)

	2018	2017	2016	2015	2014
<b>Total Pension Liability</b>					
Service Cost	\$ 16,983	\$ 18,683	\$ 17,413	\$ 16,690	\$ 15,418
Interest	73,517	68,868	68,599	67,219	66,956
Benefit term changes	-	-	(64)	-	-
Differences between expected and actual experience	(11,652)	4,918	(2,897)	12,00	-
Assumption Changes	18,004	77,882	1,268	1,224	-
Benefit Payments, including member refunds	(83,419)	(81,763)	(80,169)	(79,634)	(78,536)
Net change in total pension liability	13,433	88,588	4,150	17,509	3,838
Total pension liability - beginning	989,536	900,948	896,798	879,289	875,451
Total pension liability - ending	<u>\$ 1,002,989</u>	<u>\$ 989,536</u>	<u>\$ 900,948</u>	<u>\$ 896,798</u>	<u>\$ 879,289</u>
<b>Plan Fiduciary Net Position</b>					
Contributions					
Employer	\$ 17,528	\$ 16,927	\$ 15,280	\$ 14,499	\$ 13,288
Employee	17,619	16,984	16,528	14,646	13,358
Net investment income (loss)	(33,251)	103,768	44,338	(10,025)	25,937
Benefit Payments, including member refunds	(83,419)	(81,763)	(80,169)	(79,634)	(78,536)
Administrative expenses	(1,500)	(1,521)	(1,552)	(1,648)	(1,548)
Other	(17)	(16)	(92)	(251)	(529)
Net change in plan fiduciary net position	(83,040)	54,359	(4,667)	(62,413)	(28,030)
Plan fiduciary net position - beginning	685,802	631,443	636,110	698,523	726,553
Plan fiduciary net position - ending	602,762	685,802	631,443	636,110	698,523
Plan pension liability - ending	<u>\$ 400,207</u>	<u>\$ 303,734</u>	<u>\$ 269,505</u>	<u>\$ 260,688</u>	<u>\$ 180,766</u>
Plan fiduciary net position as a percentage of the total pension liability	60.10%	69.31%	70.09%	70.93%	79.44%
Covered payroll	\$ 194,754	\$ 188,073	\$ 180,893	\$ 170,580	\$ 166,102
Employers' Net Pension Liability as a percentage of covered payroll	205.49%	161.50%	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)	Plan Fiduciary Net Position	Net Pension Liability (NPL)	Plan Fiduciary Net Position as a % of TPL	Covered Employee Payroll	Employers' NPL as a % of Covered Payroll
	(a)	(b)	(a-b)	(b/a)	(c)	((b-a)/c)
12/31/2018	\$ 1,002,969	\$ 602,762	\$ 400,207	60.10%	\$ 194,754	205.49%
12/31/2017	\$ 989,536	\$ 685,802	\$ 303,734	69.31%	\$ 188,073	161.50%
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	\$ 180,786	79.44%	\$ 166,102	108.83%

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

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Actuarially determined employer contribution	\$ 19,125	\$ 18,074	\$ 20,224	\$ 18,856	\$ 19,401	\$ 20,995	\$ 16,373	\$ 11,398	\$ 7,084	\$ 3,818
Actual employer contributions	<u>17,528</u>	<u>16,927</u>	<u>19,280</u>	<u>14,492</u>	<u>13,288</u>	<u>12,094</u>	<u>11,370</u>	<u>11,943</u>	<u>13,282</u>	<u>27,657</u>
Annual contribution deficiency (excess)	<u>\$ 1,597</u>	<u>\$ 1,147</u>	<u>\$ 3,944</u>	<u>\$ 4,364</u>	<u>\$ 6,113</u>	<u>\$ 8,901</u>	<u>\$ 5,003</u>	<u>\$ (575)</u>	<u>\$ (6,198)</u>	<u>\$ (23,839)</u>
Covered-employee payroll*	\$ 194,754	\$ 188,073	\$ 180,893	\$ 170,492	\$ 166,102	\$ 161,253	\$ 151,603	\$ 159,637	\$ 177,093	\$ 206,384
Actual contributions as a percentage of covered-employee payroll*	9.00%	9.00%	9.00%	8.50%	8.00%	7.50%	7.50%	7.50%	7.50%	13.40%

\*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

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Annual money-weighted rate of return, net of investment expense	-5.40%	17.29%	8.07%	-1.45%	3.64%	12.43%	12.96%	0.64%	13.35%	15.93%

**Notes to Required Supplementary Information  
For the Year Ended December 31, 2018**

*Changes of benefit terms.* The following change to the plan provisions was reflected in the valuation performed as of January 1, 2018:

The 2018 Missouri General Assembly passed a bill that changed the Retirement System’s contribution policy beginning January 1, 2019 with respect to employers covered by the Retirement System. In accordance with the new legislation, the employer contribution rate will increase to 10.50% of pay effective January 1, 2019 and 12.00% of pay effective January 1, 2020. Beginning July 1, 2021, the employer contribution rate will be the greater of (1) the actuarial required contribution rate, as determined in the valuation prepared for the prior calendar year, less the member contribution rate, or (2) 12.00% of pay, until the Retirement System is fully funded. Once the Retirement System is fully funded, the employer contribution rate may increase or decrease in subsequent years, depending on the valuation results and the employee contribution rate may decrease from 9.00% depending on valuation results. However, such changes are subject to statutory limitations.

*Changes of assumptions.* In 2018, the non-disabled mortality tables were updated to reflect an additional year of mortality improvements.

*Method and assumptions used in calculations of actuarially determined contributions.* The Retirement 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, 2018):

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay, Closed Period
Remaining Amortization Period	29 years (2018), 30 years (2017)
Asset Valuation Method	5-year Smoothed Fair Value
Investment Rate of Return	7.75%, including inflation
Projected Salary Increases	5.00%, including inflation
Inflation	2.75%

## Schedule of Expenses

For the Period Ending December 31, 2018 and 2017

<b>Investment Expenses</b>	<b>2018</b>	<b>2017</b>
Bank custodial fees and expenses	\$ 98,331	\$ 93,735
Financial consultation	202,206	235,000
Financial management expenses	<u>3,784,544</u>	<u>4,057,777</u>
Total	<u><u>4,085,081</u></u>	<u><u>4,386,512</u></u>
<b>Administrative Expenses</b>		
Salaries and payroll taxes	584,397	584,357
Fringe Benefits	107,627	119,947
Legal fees	24,260	50,935
Audit fees	47,954	45,718
Actuarial fees	57,624	57,800
Legislative consultation	45,000	45,000
Other professional services	17,659	4,666
Board meetings	458	991
Board election	10,000	6,689
Travel and education expense	62,467	53,305
Membership dues	3,962	4,135
Printing and office expense	33,296	40,985
Postage and equipment	12,979	12,642
Payroll processing	2,460	3,066
Bank fees	21,053	16,531
Computer software support	325,500	325,500
Computer expense	29,129	36,588
Insurance	47,467	46,964
Lease space rental	<u>66,637</u>	<u>64,846</u>
Total	<u><u>\$1,499,928</u></u>	<u><u>\$1,520,665</u></u>

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# INVESTMENT SECTION



1961 - current

## Changes in the System: Mix of Investments

Initially, assets of the System were invested solely in fixed income securities issued by the federal government. The investment program has evolved over the years to incorporate investment diversification:

- 1961 – 1% was invested in industrial bonds of private corporations
- 1965 – 87% fixed income securities; 8% industrial bonds; 5% corporate stocks (equity)
- 1974 – 75% fixed income; 25% public corporate equity and notes
- 1994 – 63% equity (including international); 35% fixed income (including both government and corporate); 2% real estate
- 2007 – 64.5% equity (public and private); 30.5% fixed income; 5% real estate
- 2018– 55% equity (public and private); 17.5% fixed income; 12% real estate; 7.5% multi-asset class strategies; 8% alternatives

Photo: Students at the Longfellow Elementary School around 1960. Courtesy Kansas City Public Schools.

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# Investment Section

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May 28, 2019

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:

The year 2018 was an eventful one both domestically and on the international stage. Notable macro events, such as U.S. Federal Reserve (Fed) tightening, unresolved tariff dispute between the U.S. and China, general trade disagreements and tensions, Brexit concerns, Italian politics, slowing growth in China, and weak GDP growth in the Eurozone, negatively affected market sentiment.

World equity markets were negative in 2018 with emerging market equities having the worst year with losses of over 8% (as measured by the MSCI World net index). The U.S. equity markets were positive through the 3<sup>rd</sup> quarter of 2018 and only posted losses in the 4<sup>th</sup> quarter period, ending the year at -5.2% (as measured by the Russell 3000 index) outpacing the international equity markets at -13.8% (as measured by the MSCI EAFE index) for the year. Concerns about a slowing economy, weaker earnings growth, and rising interest rates weighed heavily on returns.

In the U.S., the Fed raised rates four times in 2018. This tightening caused the short end of the yield curve to rise over 1% in 2018 with long rates remaining relatively unchanged. The fixed income market in the U.S. posted a 0.01% return (as measured by Bloomberg Barclays U.S. Aggregate index) for the year. Government yields across developed markets fell and the Euro and British pound depreciated relative to the U.S. dollar while the Japanese yen appreciated. In emerging countries, currency depreciation was particularly pronounced in commodity exporting countries like Russia, as well as in Mexico and Colombia.

Although less negative than equity markets, hedge fund of funds also produced losses in 2018 returning -3.9% (as measured by HFRI FOF Composite) for the year. Both private equity and real estate markets were the winners in 2018 with positive strong returns. Private equity posted positive returns of over 7% (Thomas Reuters Private Equity as of 2<sup>nd</sup> Qtr. due to later quarters not available) with real estate posting returns in excess of 8% (NFI-ODCE index) for 2018. Private equity fund performance has been strong across all recent vintage years.

KCPSRS was valued at \$601.8 million as of December 31, 2018. The total portfolio (Fund) asset allocation was developed to provide a diversified, optimal portfolio to achieve the System's long-term investment and risk objectives. The asset allocation includes investments in U.S. equities, international equities, fixed income, international fixed income, real estate, hedge fund of funds, MACS (multi-asset class strategies), and private equity. As of the end of December, the Fund's trailing 1-year net return was -5.4%, which lagged its policy index return of -4.8%. The 2018 returns were helped significantly by investments in real estate and private equity which provided returns of over 9%, and 16%, respectively.

**Investment Solutions.** Offices in the United States, Canada and Europe. Member of The Segal Group

 **GIRA** Founding Member of the Global Investment Research Alliance

The trailing 3-year return, for the period ending December 31, 2018, outpaced its benchmark returning 6.2% vs. the 6.1% for the policy index. The trailing 5-year return, for period ending December 31, 2018, slightly lagged its benchmark returning 4.1% vs. the 4.2% for the policy index.

KCPSRS' investment program continues to change and evolve. In 2017, Segal Marco Advisors completed an Asset Liability Study. The Board chose a new asset allocation mix out of this process which was expected to slightly increase the long-term return while lowering the overall risk of the portfolio. The exposures to MACS, real estate, and private equity will increase with the continued implementation of the new asset mix.

During 2018, Segal Marco, working with the KCPSRS Board, completed multiple asset manager searches toward implementation of the asset allocation mix adopted in 2017. The process included Segal Marco conducting a real estate search, private equity secondary and fund of funds search, and a MACS search. Segal Marco provided finalists, representing top talent in each of these areas, to the KCPSRS Board. The Board interviewed candidates and hired four new investment managers and reaffirmed their relationship with two of their existing real estate firms by committing to two new products. All six of these new investments were funded in 2018. The Parametric commodity product held by KCPSRS was closed in November 2018 and the cash proceeds were placed in the cash account to be used for benefit payments and capital calls. Throughout 2018, Segal Marco provided educational training to the Board on understanding risk, commodities investing, and MACS investing. Over the years, KCPSRS has revised its asset allocation mix, added asset classes and made investment manager changes to continue to optimize the Fund's risk return profile. This forward-looking approach has allowed the Fund to evolve over time with the markets and achieve strong performance.

In 2019, Segal Marco will continue to support KCPSRS to achieve both long-term and short-term objectives through continued implementation of the asset allocation mix, providing investment educational sessions, investment policy development, manager monitoring, and new manager selection and on-boarding.

Segal Marco enjoys our relationship with KCPSRS and looks forward to continuing to be supportive of your good work and serve as an extension of your staff.

We want to take this opportunity to congratulate the System on their 75<sup>th</sup> Anniversary. This is a major accomplishment that deserves much recognition and accolades. This System is the sole support to many retirees and their families along with being a wonderful benefit to offer new teachers, schools and library staff. We are proud to be a small part of this System and its many accomplishments. We look forward to continuing to serve KCPSRS and your many members for years to come.

Sincerely yours,



Rosemary E. Guillette  
Vice President



# Investment Policy Summary

Pursuant to investment fiduciary duties provided in Revised Missouri Statutes section 105.688, the KCPSRS Board of Trustees (Board) established the system's investment program, with overall objectives, asset allocation, and operating guidelines. The purpose of the System is to provide retirement and certain other benefits to participants and their beneficiaries. With respect to this purpose, the board develops a long-term plan to preserve the long-term corpus of the Fund and to maximize the rate of return within prudent risk parameters to meet, when combined with employee and employer contributions, will meet or exceed the benefit and administration funding requirements of the plan over time. The investment horizon of the Fund is long-term.

To achieve a balanced program, every five years, the Board conducts 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. An asset allocation review will be conducted annually with an updated investment policy developed at least every two years.

## Investment Objectives

The total fund objective is to generate a rate of return equaling or exceeding, over rolling 3- and 5-year periods the following performance objectives:

- A required rate of return, net of expenses, equaling the real rate objective of 5.0% (actuarial assumed rate 7.75% less actuarial assumed inflation 2.75%) plus current inflation, as measured by the Consumer Price Index, 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 7.75% 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 policies and management of the relationship with outside advisors and investment 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**

The primary means by which capital preservation is to be achieved is through diversification of the Fund's investments across various asset classes. 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, develops 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. In October 2017, after review of the asset liability analysis the Board adopted new asset allocation targets and policy benchmarks. However, in recognition of the time needed to implement the revisions, the effective date of the new allocation policy was set as first quarter of 2018. During 2018 the asset allocation policy and permissible ranges for each asset class, were as follows:

Asset Class	Policy Benchmark	Target Allocation %	Allocation Range %
Domestic:		22.5	
<i>Large Cap Core</i>	<i>S&amp;P 500</i>	10.5	8.0 - 13.0
<i>Mid Cap Core</i>	<i>S&amp;P 400</i>	6.0	4.0 - 8.0
<i>Small Cap Growth &amp; Value</i>	<i>Russell 2000</i>	6.0	4.0 - 8.0
International Developed	MSCI (EAFE)	12.0	10.0 - 20.0
Emerging Mkts	MSCI EM	10.0	5.0 - 15.0
<b>Public Equity Total</b>	<b>Blended Equity Policy</b>	<b>47.5%</b>	
Domestic Core	Barclays Cap Agg	10.0	5.0 - 15.0
High Yield	Barclays Cap HY	2.5	1.5 - 3.5
International/ EMD	FTSE World Govt	5.0	2.0 – 8.0
<b>Fixed Income Total</b>	<b>Blended Fixed Income Policy</b>	<b>17.5%</b>	
Private Equity	S&P 500	7.5	5.5 – 9.5
Multi-Asset Class Strategies (MACS)	60% MSCI World 40% WGBI Index	10.5	5.5 – 15.5
Hedge Fund of Funds	91 Day T-Bill + 5%	5.0	2.0 – 8.0
Commodities	50% DJ UBS Com/ 50% S&P 500 GSCI	3.0	2.0 – 4.0
Real Estate:		12.0	7.0 – 17.0
<i>Core Real Estate</i>	<i>NCREIF ODCE</i>	6.0	4.0-8.0
<i>Value Add/Opportunistic</i>	<i>NCREIF NPI</i>	6.0	4.0-8.0
<b>Alternatives Total</b>	<b>Blended Alternatives Policy</b>	<b>35.0%</b>	

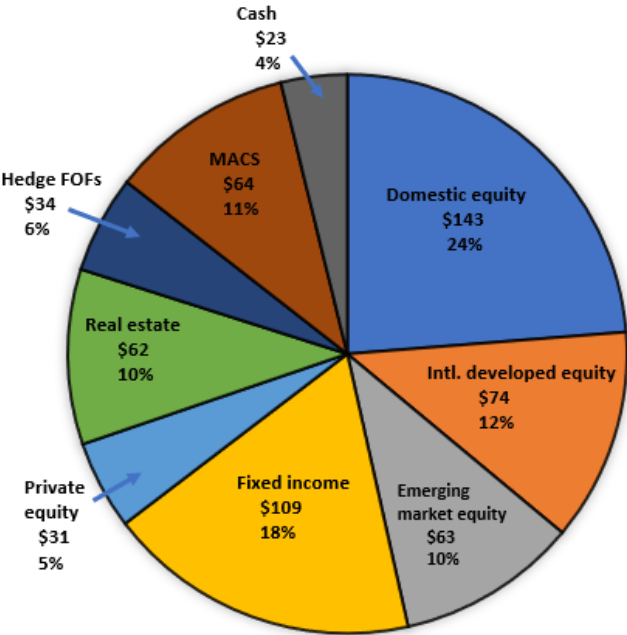
# Total Fund Review

As of December 31, 2018, the KCPSRS investment portfolio had a fair value of \$601.8 million. KCPSRS’ investments generated a time-weighted return of -5.4%, net of fees, for the fiscal year ended December 31, 2018.

## Diversification

Asset allocation is a process designed to construct an optimal long-term asset mix that achieves specific investment objectives. The investment policy reflects the System’s asset allocation policy as designed to meet the investment objectives. The chart below illustrates the actual allocation to each asset class, as of December 31, 2018.

**SUMMARY OF INVESTMENTS BY MAJOR ASSET CLASS**  
(Fair Values in Millions as of December 31, 2018)



## Investment Performance vs. Benchmarks

The total fund return, net of investment fees, underperformed the 1-year policy benchmark by 0.6%. Returns for the total fund versus the policy benchmark, composed of market indexes with weightings reflective of KCPSRS’ asset allocation targets are displayed in the bar chart.

**Total Fund Return (net of Investment fees) vs. Benchmark Returns**



**Asset Class Performance (net) Versus Policy Benchmarks**

Asset Class	Annualized Returns* (%)		
	1-Year	3-Year	5-Year
Total Fund	-5.40	6.24	4.14
Policy Benchmark**	-4.79	6.06	4.22
Domestic Equity	-8.48	7.42	6.13
Blended Domestic Equity policy***	-8.25	7.81	7.22
Intl Developed Equity	-15.49	1.50	-0.34
MSCI EAFE (net)	--13.79	2.87	0.53
Emerging Market Equity	-15.36	8.86	1.65
MSCI EM (net)	-14.58	9.25	1.65
Fixed Income	-2.35	2.75	1.72
Blended Fixed Income Policy****	-0.50	3.00	2.24
Hedge Fund of Funds	-2.54	2.19	2.89
90 Day T-Bill + 5 %	6.97	6.04	5.64
Multi-Asset Class Strategies	-8.99	5.29	2.69
60% MSCI World & 40% WGBI	-5.08	5.38	3.54
Private Equity	16.66	12.75	11.97
S&P 500	-4.38	9.26	8.49
Real Estate	14.4	15.82	15.74
Blended Real Estate policy*****	7.48	7.82	9.93

\*All the returns are time-weighted returns, net of fees.

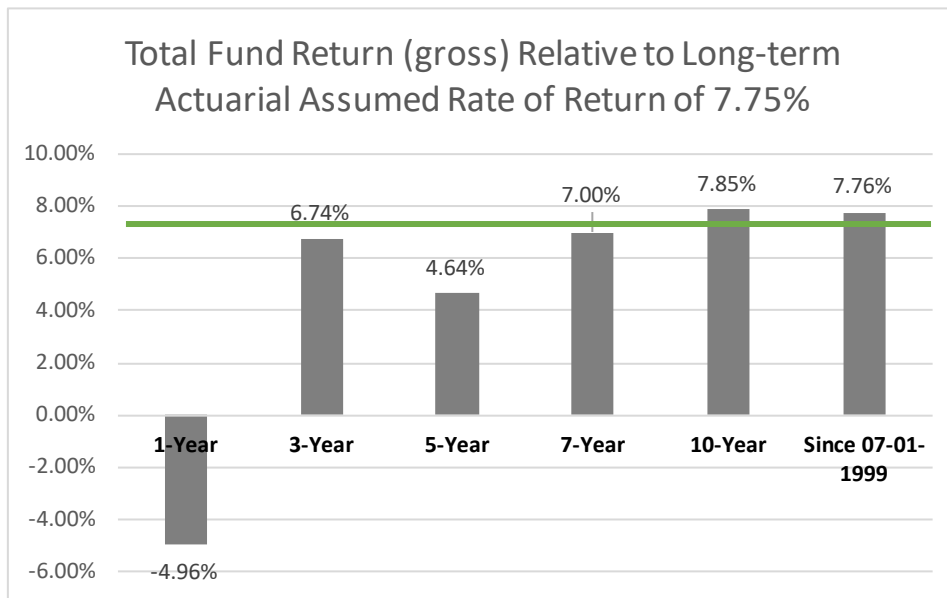
\*\* The total fund policy benchmark as of December 31, 2018 consisted of 18% S&P 500, 6% S&P 400, 6% Russell 2000, 6.3 MSCI World, 12% MSCI EAFE, 10% MSCI EM, 10% Bloomberg Barclays U.S. Aggregate, 9.2% FTSE World Government Bond, 2.5% Bloomberg Barclays U.S. High Yield 2% Issuer Cap, 5% 90 Day T-Bill + 5%, 6% NCREIF ODCE, 6% NCREIF NPI, 1.5% Bloomberg Commodity , and 1.5% S&P 500 GSCI.

\*\*\* As of December 31, 2018, the blended domestic equity policy consisted of 46.67% S&P 500, 26.67% S&P 400, and 26.67% Russell 2000.

\*\*\*\* As of December 31, 2018, the blended fixed income policy consisted of 57.14% Barclays Capital Agg. Bond, 28.57% FTSE World Govt. Bond, and 14.29% Bloomberg Barclays U.S., High Yield - 2% Issuer cap.

\*\*\*\*\* As of December 31, 2018, the blended real estate policy consisted of 50% NCREIF ODCE and 50% NCREIF NPI.

**Investment Performance vs. Actuarial Assumed Rate of Return**



# Largest Assets Held

As of December 31, 2018

## 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 Public Equity Holdings	Fair Value
ASML Holding NV	\$ 2,717,714
LVMH Moet Hennessy Louis Vuitton	2,554,800
Taiwan Semiconductor	2,369,669
Softbank Group Corp	2,443,721
Tencent Holdings LTD	2,325,238
SAP AG Systeme Anwendungen	2,168,323
CSL LTD	2,125,297
Safran SA	1,940,167
Novo Nordisk A/S	1,895,735
Novartis AG	1,725,415

## 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 Fixed Income Holdings	Fair Value
GNMA II Pool #0MA5331 4.500% Due 2048	\$ 1,442,024
US Treasury Note 2.125% Due 2021	1,391,667
US Treasury Note 2.000% Due 2023	1,367,811
US Treasury Note 2.750% Due 2028	1,316,760
FHLMC POOL #G0-8525 3.000% Due 2043	1,163,183
US Treasury Bond 2.250% Due 2046	1,089,679
US Treasury Bond 3.125% Due 2043	1,086,343
FNMA POOL #C9-1981 3.000% Due 2038	1,080,576
US Treasury Note 1.625% Due 2022	1,057,518
US Treasury Note 2.500% Due 2024	1,023,114

# Investment Summary

For the year ending December 31, 2018

Investment Manager	Date Hired	Investment Class	Portfolio Fair Value as of 12/31/18	% of Total
Rhumblin Advisors	December 2007	Domestic Large Cap Core Equities	\$ 65,552,721	10.9%
Rhumblin Advisors	June 2003	Domestic Mid Cap Core Equities	38,604,636	6.4%
Segall Bryant and Hamill	April 2008	Domestic Small Cap Value Equities	19,043,972	3.2%
Westfield Capital Management	July 2016	Domestic Small Cap Growth Equities	19,267,712	3.2%
Fisher Investments	August 2002	International Developed Equities	74,052,161	12.3%
Earnest Partners, LLC	June 2002	Emerging Market Equities	33,649,273	5.6%
Wells Capital Management	August 2012	Emerging Market Equities	29,522,485	4.9%
Pugh Capital Management	March 2014	Core Fixed Income	61,539,911	10.2%
Loomis Sayles	October 2011	High Yield Bonds	17,469,725	2.9%
Brandywine Global	June 2015	International Fixed Income	30,098,964	5.0%
BlackRock	January 1994	Core Real Estate	11,617,448	1.9%
JP Morgan Asset Management	February 2007	Real Estate	13,032,408	2.2%
Brookfield Property Group	May 2012	Real Estate	19,875,430	3.3%
Mesirow Financial Value Fund II	January 2014	Real Estate	5,230,389	0.9%
Mesirow Financial Value Fund III	March 2018	Real Estate	2,524,094	0.4%
Westport Capital Partners, LLC	May 2013	Real Estate	4,999,776	0.8%
Westport Capital Partners, LLC Fund II	June 2018	Real Estate	1,666,042	0.3%
Ares US Real Estate Fund IX	July 2018	Real Estate	990,006	0.2%
Rock Creek	August 2008	Long/Short Equity	16,224,678	2.7%
Corbin Investor Services	December 2011	Hedge Fund of Funds	18,320,752	3.0%
AQR Capital Management	December 2012	Multi Asset Class Strategy	37,191,409	6.2%
Wellington Management	April 2018	Multi Asset Class Strategy	26,873,903	4.5%
StepStone Group	May 2006	Private Equity	11,612,317	1.9%
Pantheon VI	July 2004	Private Equity	4,029,060	0.7%
Pantheon IX	March 2011	Private Equity	7,538,705	1.3%
NB Crossroads Fund XXII	April 2018	Private Equity	7,626,862	1.3%
Landmark Equity Partners XVI	December 2018	Private Equity	149,563	0.0%
Cash			22,717,539	3.8%
		Total	\$ 601,021,941	100%

# Investment Fees

For the year ending December 31, 2018

Investment Managers	Investment Fee	Performance Fee
Rhumblin Advisors	\$ 54,679	\$ -
Segall Bryant & Hammill	161,711	
Westfield Capital Management	223,977	
Fisher Investments	577,989	
Earnest Partners, LLC	390,392	
Wells Capital Management	319,769	
Pugh Capital Management	140,932	
Loomis Sayles	90,056	
Brandywine Global	139,585	
BlackRock	76,264	
JP Morgan Asset Management	200,759	
Brookfield Property Group	215,415	
Mesirow Financial	208,890	
Westport Capital Partners, LLC	72,367	
Ares Management, LLC	64,486	
Parametric Clifton	59,685	
Rock Creek	160,673	6,731
Corbin Investor Services	213,237	9,573
AQR Capital Management	159,682	
Wellington Management	139,868	
StepStone Group	48,354	
Pantheon	132,500	
NB Alternatives Advisors	55,611	
Landmark Partners	559,041	
<b>Total</b>	<b>\$ 4,465,922</b>	<b>\$ 16,303</b>

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# ACTUARIAL SECTION



1960 - 1990

## New Plan Design Offered

A new plan design (Plan B) was offered to members. Plan B provided new provisions:

- Eliminated the cap on annual compensation
- Survivor option offered
- Retirement eligibility was age 65
- Early retirement offered at age 60 with 5 years or age 55 with 30 years

In 1961, 83% of the current members became Plan B and 20% remained in Plan A. Over the years, additional changes were incorporated into Plan B, including retirement eligibility lowered to age 60 with 5 years of service or 75 points (age plus years of service).

In 1988, the public library was established as an independent taxing authority, separating from the district, however the library employees remained retirement system members.

Photo: The C.A. Franklin School, February 1968. Courtesy Kansas City Public Library Missouri Valley Special Collections.

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# ACTUARIAL SECTION

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

June 6, 2019

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:

The basic financial objective of the Public School Retirement System of the School District of Kansas City, Missouri is to establish and receive contributions which:

- when expressed in terms of percentages of active member payroll will remain approximately level from generation to generation, and
- when combined with present assets and future investment return will be sufficient to meet the financial obligations of the Public School Retirement System of the School District of Kansas City, Missouri to present and future retirees and beneficiaries.

The financial objective is addressed by actuarial funding valuations that are prepared annually as of January 1. The valuation process develops contribution rates that are sufficient to fund the plan’s current cost (i.e. the costs assigned by the valuation method to the year of service about to be rendered), as well as to fund the unfunded actuarial accrued liability, as a level percent of active member payroll. The unfunded actuarial accrued liability as of January 1, 2018 is amortized over a closed 30-year period and subsequent changes to the UAAL are amortized over closed 20-year periods. The most recent valuation was completed based upon member data, asset data, and plan provisions as of January 1, 2019.

The plan administrative staff provides the actuary with data for the annual actuarial valuation. The actuary relies on the data after reviewing it for reasonableness and year to year consistency. The actuary summarizes and tabulates the member data in order to analyze longer term trends. The plan’s external auditor also audits the actuarial membership data annually.

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For funding valuation purposes, an asset smoothing method is used to develop the actuarial value of assets. The difference between the actual return on the fair (market) value of assets and the expected return, based on the investment return assumption, is recognized equally over five years.

Actuarial valuations for funding the System are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. These assumptions are adopted by the Board, after considering the advice of the actuary and other professionals. In our opinion, the assumptions and the methods comply with the requirements of applicable Actuarial Standards of Practice. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the actuarial contribution rates as needed. The January 1, 2019 actuarial valuation reflects the actuarial assumptions and methods included in the experience study covering the five year period from January 1, 2011 to December 31, 2015, as adopted by the Board based on advice of the actuary.

The unfunded actuarial accrued liability (UAAL) increased from the last valuation by \$31.8 million. There was an actuarial loss of \$26.5 million on assets and a small actuarial gain of \$0.4 million on liability experience. The largest source of gain on the liability experience was from salary increases that were smaller than expected, based on the actuarial assumptions.

Legislation passed in 2013 modified the set of plan provisions applicable 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 more stringent requirements for unreduced benefits (age 62 or Rule of 80 rather than age 60 or Rule of 75). As of January 1, 2019, there are 2,264 active Plan C members in the System out of a total of 3,898, about 58%.

The System is 66% funded as of January 1, 2019, based on the actuarial value of assets. The impact of the new benefit structure on the System’s funding will evolve gradually over time as current members (covered by Plan B) leave covered employment and are replaced with new members who are covered by Plan C.

Cavanaugh Macdonald also prepared actuarial computations as of December 31, 2018 for purposes of fulfilling financial accounting requirements for the System under Governmental Accounting Standards Board (GASB) Statement No. 67, the results are presented in a separate report dated May 20, 2019. The assumptions used in the funding valuation report were also used in the GASB 67 report, except for the use of a 7.57% discount rate for the GASB 67 calculation of the Total Pension Liability. The lower discount rate reflects a depletion date in the projection of fiduciary net position, based on the requirements of GASB 67. In addition, the entry age normal actuarial cost method, which is required to be used under GASB 67, is also used in the funding valuation report. The actuarial assumptions and methods used in both the funding and the GASB 67 valuation meet the parameters set by the applicable Actuarial Standards of Practice (ASOPs), as issued by the Actuarial Standards Board, and generally accepted accounting principles (GAAP) applicable in the United States of America as promulgated by the Governmental Accounting Standards Board.

Board of Trustees  
June 6, 2019  
Page 3



The actuary prepared, or assisted in preparing, the following supporting information for the Comprehensive Annual Financial Report:

**Financial Section**

- Total Pension Liability
- Net Pension Liability
- Sensitivity Analysis
- Schedule of Changes in the Net Pension Liability
- Schedule of Employer Contributions

**Actuarial Section**

- Summary of Assumptions and Methods
  - Actuarial Cost Method and Asset Valuation Method
  - Investment Return, Salary Increase, and Payroll Growth
  - Probabilities of Age & Service Retirement
  - Probabilities of Separation from Active Employment Before Age & Service Retirement
  - Probabilities of Death, Before and After Retirement
- Short-Term Solvency Test
- Membership Data
- Analysis of Financial Experience
- Schedule of Funding Progress
- Computed and Actual Employer Contributions

Respectfully submitted,

CAVANAUGH MACDONALD CONSULTING, LLC

*Patrice Beckham*

Patrice A. Beckham, FSA, FCA, EA, MAAA  
Principal and Consulting 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 on that date is amortized over a closed 30-year period and subsequent pieces of UAAL, arising from actuarial gains and losses each year, 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. The Market Value of assets on the valuation date is reduced by the sum of the following:

- I. 80% of the return to be spread during the first year preceding the valuation date,
- II. 60% of the return to be spread during the second year preceding the valuation date,
- III. 40% of the return to be spread during the third year preceding the valuation date,
- IV. 20% of the return to be spread during the fourth year preceding the valuation date.

## 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.

The principal areas of risk which require assumptions about future activities of the System are:

- (i) Long-term rates of investment return to be generated by the assets of the System
- (ii) Patterns of pay increases to members
- (iii) Rates of mortality among members, retirees and beneficiaries

- (iv) Rates of withdrawal of active members
- (v) Rates of disability among active members
- (vi) The age patterns of actual retirements

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.

From time to time, one of more of the assumptions are modified to reflect experience trends (but not random or temporary year-to-year fluctuations).

**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:** Members terminating in vested status are given the option of taking a refund of their accumulated member 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.



**Rates of Disability:** This assumption measures the probabilities of a member becoming disabled.

Sample Ages	% of Active Members Becoming Disabled During Next Year
25	0.025%
30	0.050
35	0.050
40	0.050
45	0.075
50	0.125
55	0.200
60	0.250

Disability probabilities vary by age, however, not all ages are shown above.

**Active Member Group Size:** Assumed to remain constant.

**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 members 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.

**CHANGES FROM THE PRIOR VALUATION**

There have been no changes to the actuarial assumptions or methods since the prior valuation.

Membership Profile as of January 1							
	2019	2018	2017	2016	2015	2014	2013
<b>Active Members</b>	3,898	3,760	3,701	3,574	3,493	3,501	3,396
Average Age	42.7	42.8	43.5	44.0	44.4	44.5	44.9
Average Years of Service	7.2	7.5	8.1	8.1	8.3	8.5	9.0
<b>Inactive Vested</b>	531	522	490	461	476	560	526
Average Age	48.6	49.8	50.5	50.5	50.2	51.6	51.1
Average Estimated Monthly Benefit	\$647	\$678	\$671	\$689			
<b>Retirees, Disabled and Survivors</b>	4,113	4,112	4,032	4,049	4,011	3,885	3,859
Average Age	72.5	72.3	72.2	72.0	71.7	71.7	71.5
Average Monthly Benefit	\$1,625	\$1,607	\$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
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%
2018	3,760	196,277,971	52,202	(0.48%)
2019	3,898	203,310,599	52,158	(0.08%)

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	\$ 1,148,934	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	76,786,235	1.39%	18,964
2016	151	2,791,834	167	2,697,334	4,032	76,880,736	0.12%	19,068
2017	215	4,456,931	135	2,040,515	4,112	79,297,152	3.14%	19,284
2018	153	2,992,593	152	2,161,017	4,113	80,128,728	1.05%	19,482

## 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' Accumulated Contribution (1)	Retirees, Beneficiaries and Inactive Participants (2)	Active Participants (Employer Financed) (3)	Valuation Assets	Percent Covered By Valuation Assets		
					(1)	(2)	(3)
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	158,574,660	684,412,437	100%	81%	0%
2018	103,069,314	739,004,732	138,362,580	678,288,805	100%	78%	0%
2019	106,618,062	744,459,772	137,156,929	654,259,324	100%	74%	0%

### Analysis of Financial Experience

(Millions)

<b>Unfunded Actuarial Accrued Liability, January 1, 2018</b>	\$	302.1
- Expected increase from amortization method		3.7
- Actual versus actuarial contributions		1.7
- Investment experience		26.5
- Liability experience		(0.4)
- Other experience		0.4
<b>Unfunded Actuarial Accrued Liability, January 1, 2019</b>	\$	334.0

## 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]
1/1/2010	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%
1/1/2018	678,288,805	980,436,626	302,147,821	69.2%	196,277,971	153.9%
1/1/2019	654,259,324	988,234,763	333,975,439	66.2%	203,310,599	164.3%

### Historical Contribution Rates

Actuarial Valuation Date	Actuarial Contribution Rate	Actual Contribution Rate	Contribution Shortfall/(Margin)
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%
1/1/2018	18.82%	18.00%	0.82%
1/1/2019	19.82%	19.50%	0.32%

# Summary Plan Description

## Effective Date

January 1, 1944, most recently amended in 2018.

## 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 Kansas City Public Library District, the Retirement System and the Charter Schools located within the boundaries of the Kansas City District become members 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 member 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 member's annual compensation level will be the regular compensation shown on the employer's 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: Members 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: Members 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 members who retired prior to June 30, 1999) of the member's average final compensation multiplied by years of creditable service, subject to a maximum of 60% of average final compensation. Any member 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 member'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 member’s average final compensation multiplied by years of creditable service, subject to a maximum of 60% of average final compensation.

**Minimum benefit**

Effective January 1, 1996, any member with at least 10 years of creditable service, but less than 20 years is entitled to a minimum benefit of \$150 per month, plus 15 for each year of creditable service in excess of 10 years, or the actuarial equivalent if an option was elected. Any member with at least 20 years of creditable service at retirement is entitled to a minimum benefit of \$300 per month, or the actuarial equivalent of \$300 if an option was elected. Beneficiaries of deceased members who retired with at least 10 years of creditable service and elected one of the optional plans for payment of benefits may receive the actuarial equivalent of the minimum benefit available for the option chosen.

**Early retirement**

**Eligibility**

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

**Benefit**

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

**Vested termination benefits****Eligibility**

A member who has at least five years of creditable service earns a vested interest in his or her accrued benefit, provided the member 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 member'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 member who dies before retirement and was either an active employer or any inactive vested member who met the other requirements (age or points) for either normal or early retirement, the member's designated beneficiary is entitled to receive either (a) the member's accumulated contributions and interest, or if the designated beneficiary is the member's spouse, dependent child or dependent parent, (b) a monthly retirement benefit calculated under Option 1 as if the deceased member had at least ten years of creditable service at time of death. If the beneficiary is a child, the optional monthly benefit is payable until the beneficiary reaches age nineteen.

For an inactive vested member who dies before retirement and has not met the other (age or points) requirements for retirement, the member's accumulated contributions and interest will be payable to the member's designated beneficiary.

All members are guaranteed to have their designated beneficiaries receive at least their accumulated contributions and interest, upon the member's death.

**Postretirement**

The benefit payment selected by the retiree will determine what, if any, benefits are payable upon death after retirement.

**Normal form of benefit payments**

The normal form of benefit payment is the normal retirement benefit amount paid monthly for the life of the member. If the member 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**

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

**Option 1**

Option 1 provides a reduced retirement benefit that will continue on to a designated survivor. Upon a retiree’s death, the retiree’s designated survivor will receive for life, the same level of monthly retirement benefit. In the event the retiree’s designated survivor 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**

Option 2 provides a reduced retirement benefit that will continue on to a designated survivor. Upon a retiree’s death, the retiree’s designated survivor 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 survivor 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**

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.

Each of the above options produces benefits which are actuarially equivalent to the normal form of benefit which is a monthly annuity payable for the lifetime of the retiree.

**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 survivor. 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 member.

#### **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 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 actives and terminated vested 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. Administrative expenses are paid out of the general reserve fund.

#### **Employee contributions**

Contributions for Employees are as follows:

- Effective July 1, 2021, if the System is at least 100% funded, the members contribute the lesser of (a) 9.00% or (b) one-half of the actuarial required contribution rate. If the System is less than 100% funded, the members contribute 9.00%
- Effective January 1, 2016, members contribute 9.00%
- Effective January 1, 2015, members contributed 8.50%
- Effective January 1, 2014, members contributed 8.00%
- Effective January 1, 1999, members contributed 7.50%
- Prior to January 1, 1999, members contributed 5.90%
- Prior to 1990, members contributed 5.00% of earnable annual compensation plus 2.00% of earnable compensation in excess of \$6,500, the contribution earning base.

#### **Employer contributions**

Effective July 1, 2021, and for each subsequent twelve-month period beginning July 1 of each year, the employer contribution rate shall be the greater of (1) the actuarial required contribution rate, as determined in the valuation prepared for the prior calendar year, less the member contribution rate, or (2) 12.00 % of pay, until the system is fully funded. Once the System is fully funded, the employer contribution rate may increase or decrease in subsequent years, depending on the actuarial contribution rate developed in the annual actuarial valuation and the applicable employee contribution rate. Effective July 1, 2021, the employer contribution rate shall not increase by more than 1.00% or decrease by more than 0.50% from the corresponding rate in effect immediately before such increase or decrease. An exception to the limitation on the magnitude of employer rate increases and decreases exists only when the system is fully funded and the total actuarial required contribution rate for employer and employee rate falls below 18%.

Prior to July 1, 2021, the employers of members contribute at the fixed rate of covered compensation as follows;

- Effective January 1, 2020, 12.00%
- Effective January 1, 2019, 10.50%
- 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.

#### **Changes from the Prior Valuation**

The 2018 Missouri General Assembly passed a bill that changed the contribution policy beginning January 1, 2019 with respect to employers covered by the System. In accordance with the new legislation, the employer contribution rate increased to 10.50% of pay effective January 1, 2019 and will increase to 12.00 % of pay effective January 1, 2020. Beginning July 1, 2021, the employer contribution rate will be the greater of (1) the actuarial required contribution rate, as determined in the valuation prepared for the prior calendar year, less the member contribution rate, or (2) 12.00% of pay, until the System is fully funded. Once the System is fully fund, the employer contribution rate may increase or decrease in subsequent years, depending on the valuation results and the employee contribution rate may decrease from 9.00% depending on valuation results. However, such changes are subject to statutory limitation. These changes to employer contributions are expected to improve the funding status of the System in the future.

# STATISTICAL SECTION



## 1990's - Current

### Plan revisions & Charter Schools Become Part of the System

In 1990, Plan B was revised again to allow vested (5 years of service) members, who terminated employment before retirement age, to leave funds in System for later retirement.

In 1998, Missouri Legislature passed a charter school law allowing public charter schools in Kansas City and St. Louis. In 1999, 18 charter schools became members of KCPSRS. Today, 41% of KCPSRS active members are charter school employees.

Plan C, which raised the normal retirement age to 62 or 80 points (age plus years of service) was implemented in 2014 for all members hired on or after January 1, 2014.

Photo: Students at Brookside Charter School. Courtesy Brookside Charter School.

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# STATISTICAL SECTION

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# Statistical Summary

## Objectives

The objective of the Statistical section is to provide the detail and historical context needed for a thorough assessment and understanding of KCPSRS' financial condition. Data in this section are presented in multiple-year format to show previous and emerging trends.

## Contents

The schedules on pages 74-75 show financial trend information that assists users in understanding and assessing how KCPSRS financial position has changed over time. The financial trend schedules presented are:

- Changes in Fiduciary Net Position
- Deductions from Fiduciary Net Position for Benefits and Refunds
- Change in Contributions by Employers

Demographic and operating information begins on pages 76-80. This information is intended to assist users in understanding the environment in which KCPSRS operates and to provide information that facilitates comparisons of financial statement information over time. The demographic and operating information presented are:

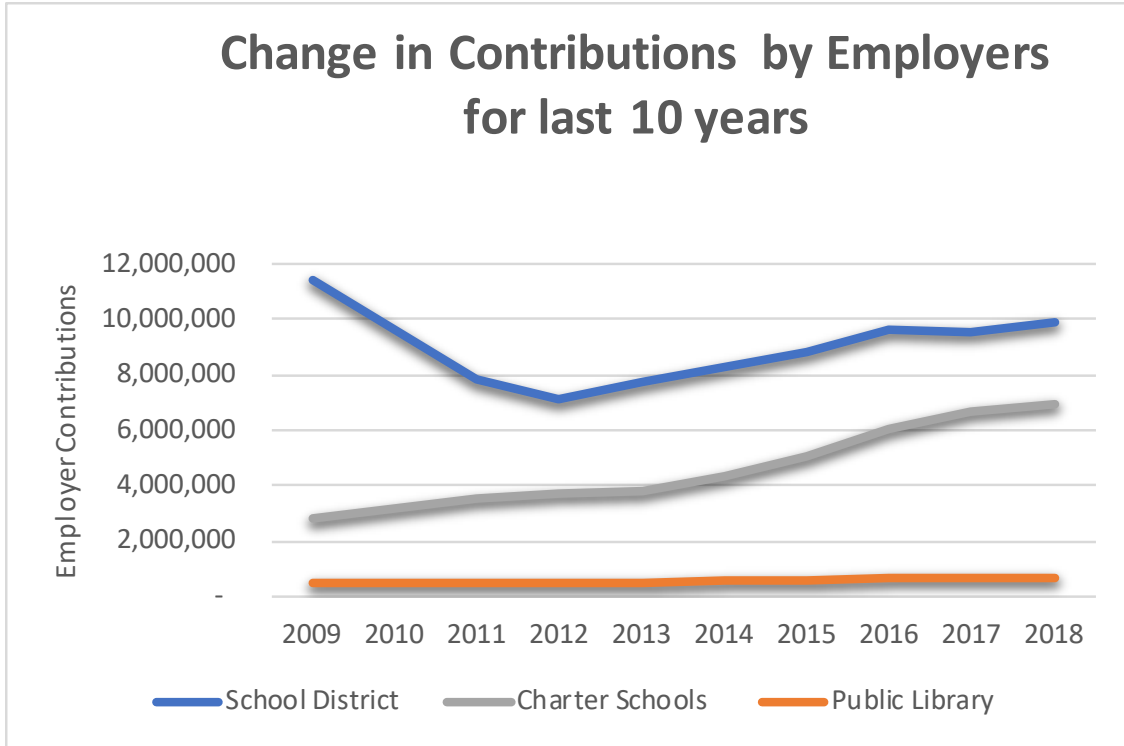
- Actuarial Funded Ratio
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- Average Monthly Benefits Amounts by Service Years
- Distribution of Benefit Recipients

**Changes in Fiduciary Net Position – Last 10 Years**

Fiscal Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Additions:</b>										
Member Contributions	\$ 14,995,429.00	\$ 13,813,561.00	\$ 12,082,175.00	\$ 11,577,924.00	\$ 12,310,320	\$ 13,358,180	\$ 14,645,901	\$ 16,280,327	\$ 16,964,351	\$ 17,619,145
Employer Contributions	27,656,639.00	13,281,191.00	11,972,752.00	11,370,252.00	12,093,945	13,288,142	14,499,260	16,528,188	16,926,562	17,527,854
Net Investment Income	91,191,550.00	82,266,344.00	5,502,704.00	76,761,126.00	78,598,783	25,936,419	(10,025,518)	44,337,774	103,767,714	(33,250,915)
<b>Total Additions to</b>										
<b>Plan Net Positions</b>	133,843,618.00	109,361,096.00	29,557,631.00	99,709,302.00	103,003,048	52,582,741	19,119,643	77,146,289	137,658,627	1,896,085
<b>Deductions:</b>										
Benefits	59,226,394.00	64,613,420.00	70,411,893.00	72,426,711.00	73,844,481	75,298,737	76,235,124	76,898,255	78,181,575	79,333,689
Refunds	4,016,669.00	6,709,964.00	5,721,334.00	4,386,983.00	3,567,693	3,236,645	3,399,065	3,270,723	3,581,147	4,084,837
Depreciation Expense	82,356.00	363,455.00	443,060.00	522,930.00	524,163	528,860	250,979	92,179	15,855	17,150
Administrative	1,230,470.00	1,324,789.00	1,283,444.00	1,336,764.00	1,479,931	1,548,320	1,648,449	1,552,025	1,520,665	1,499,928
<b>Total Deductions from</b>										
<b>Plan Net Position</b>	64,555,889.00	73,011,628.00	77,859,731.00	78,673,388.00	79,416,268	80,612,562	81,533,617	81,813,182	83,299,242	84,935,604
<b>Change in Net Position</b>	\$ 69,287,729.00	\$ 36,349,468.00	\$ (48,302,100.00)	\$ 21,035,914.00	\$ 23,586,780	\$ (28,029,821)	\$ (62,413,974)	\$ (4,666,893)	\$ 54,359,385	\$ (83,039,520)

**Deductions from Plan Net Position for Benefit and Refunds**

Fiscal Year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>Total Benefits</b>	\$ 59,231,920	\$ 64,638,721	\$ 70,411,892	\$ 72,426,711	\$ 73,844,481	\$ 75,298,738	\$ 76,235,124	\$ 76,898,255	\$ 78,181,575	\$ 79,333,689
<b>Total Refunds</b>	\$ 4,016,669	\$ 6,712,465	\$ 5,721,334	\$ 4,386,983	\$ 3,567,693	\$ 3,236,645	\$ 3,399,065	\$ 3,270,723	\$ 3,581,147	\$ 4,084,837

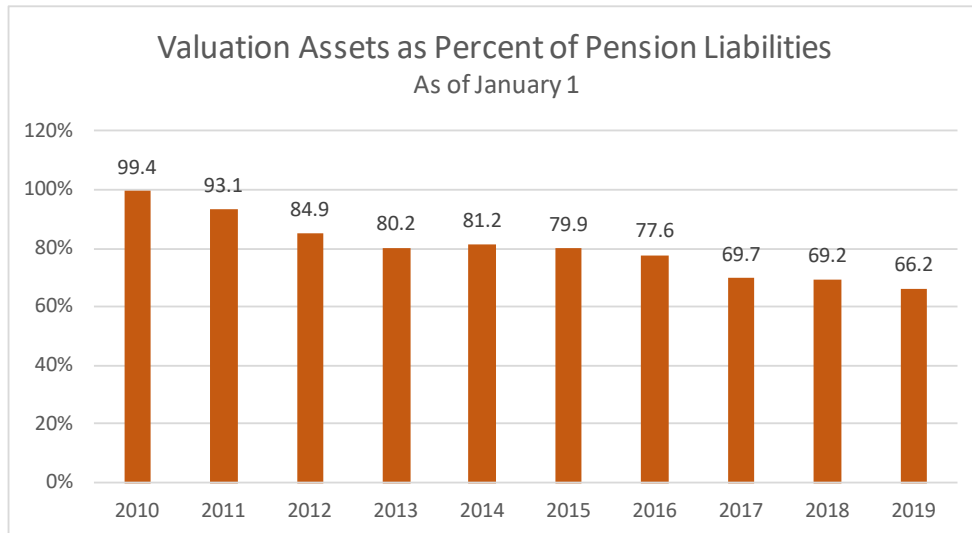
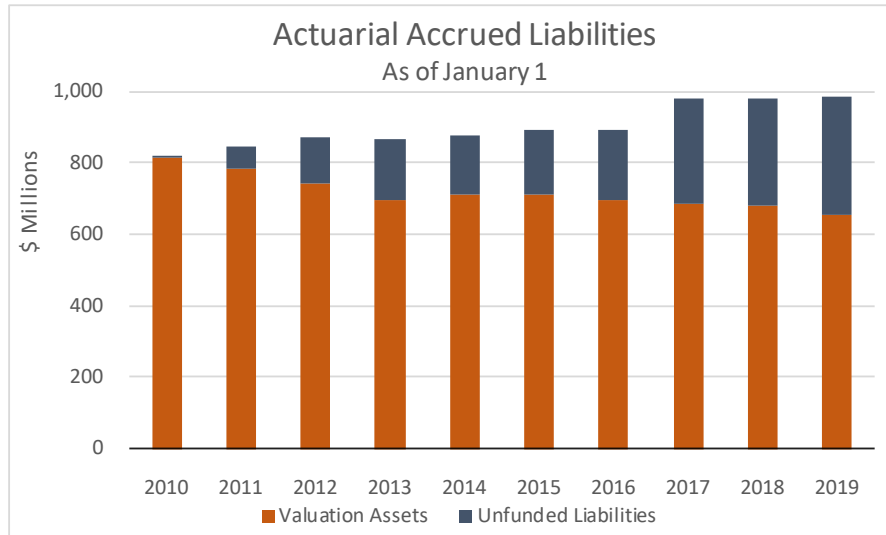


Changes in Contributions by Employers for last 10 years										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>School District</b>	\$ 11,382,658	\$ 9,593,610	\$ 7,878,152	\$ 7,719,216	\$ 7,719,216	\$ 8,324,500	\$ 8,786,297	\$ 9,586,293	\$ 9,578,553	\$ 9,878,602
<b>Charter Schools</b>	\$ 2,846,669	\$ 3,170,694	\$ 3,554,946	\$ 3,381,254	\$ 3,831,254	\$ 4,375,968	\$ 4,375,968	\$ 6,012,583	\$ 6,659,632	\$ 6,955,232
<b>Public Library</b>	\$ 508,896	\$ 486,466	\$ 507,553	\$ 508,693	\$ 508,693	\$ 550,376	\$ 587,212	\$ 636,430	\$ 641,867	\$ 647,906

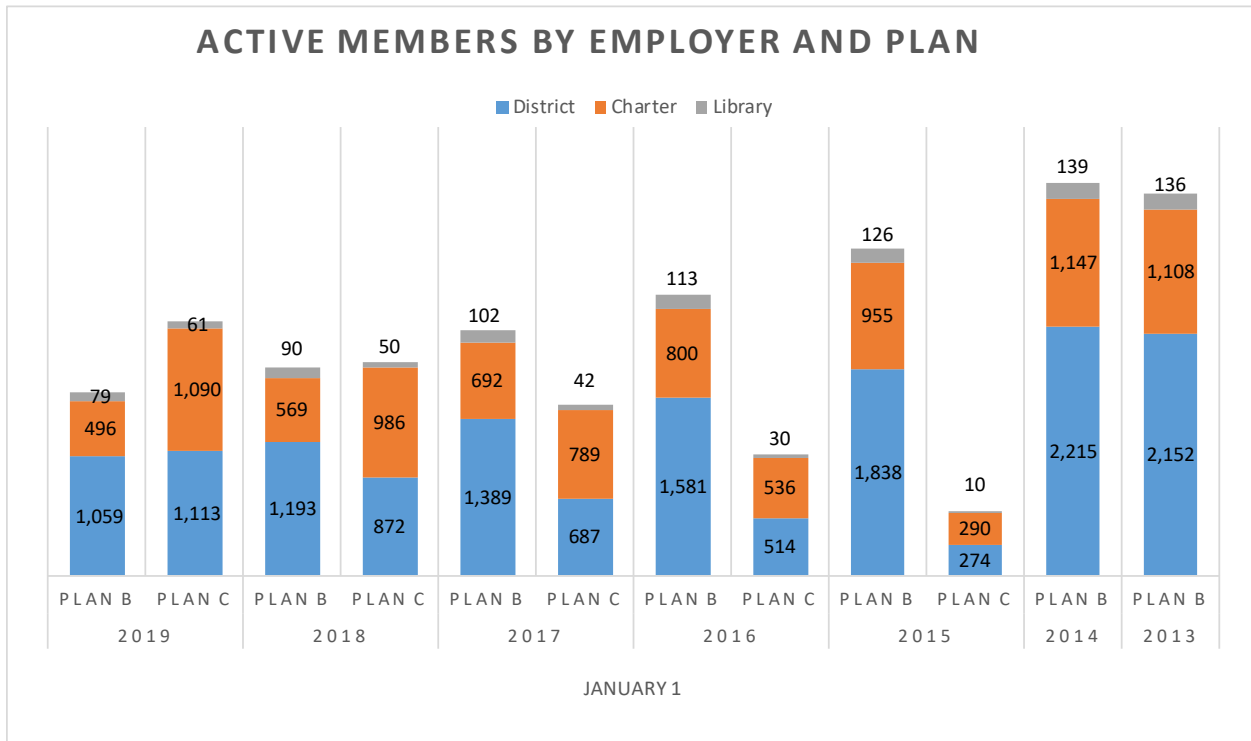
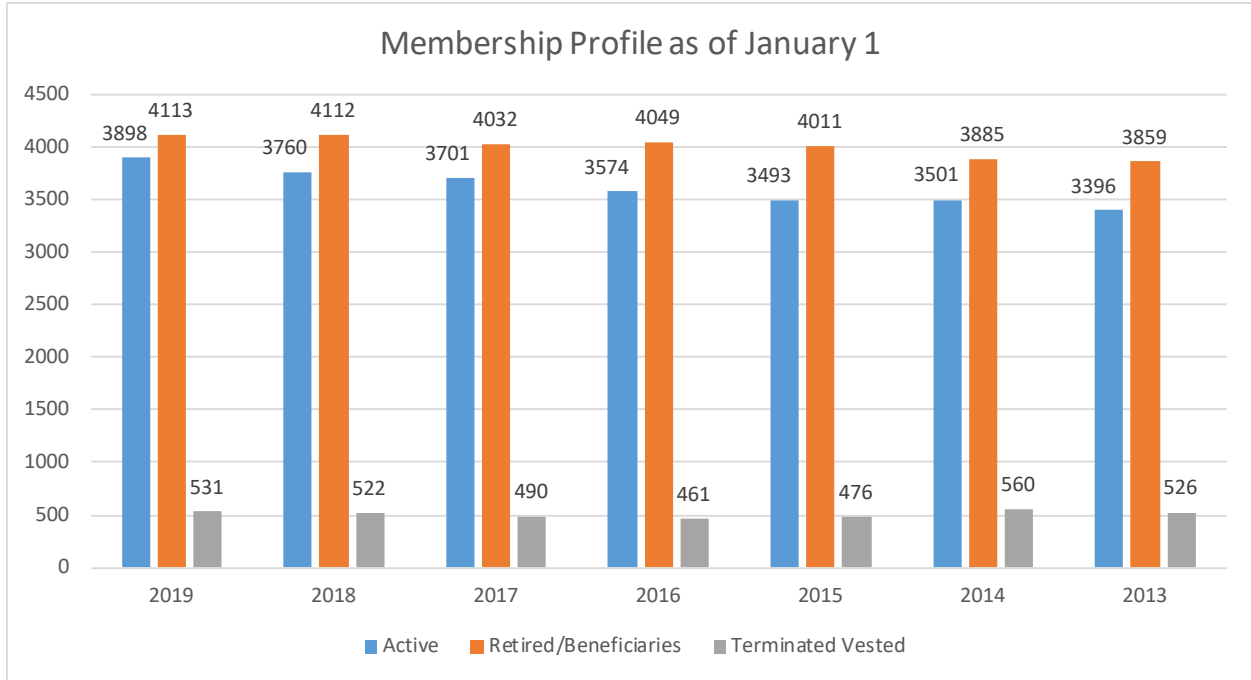
**Valuation Assets vs Pension Liabilities**

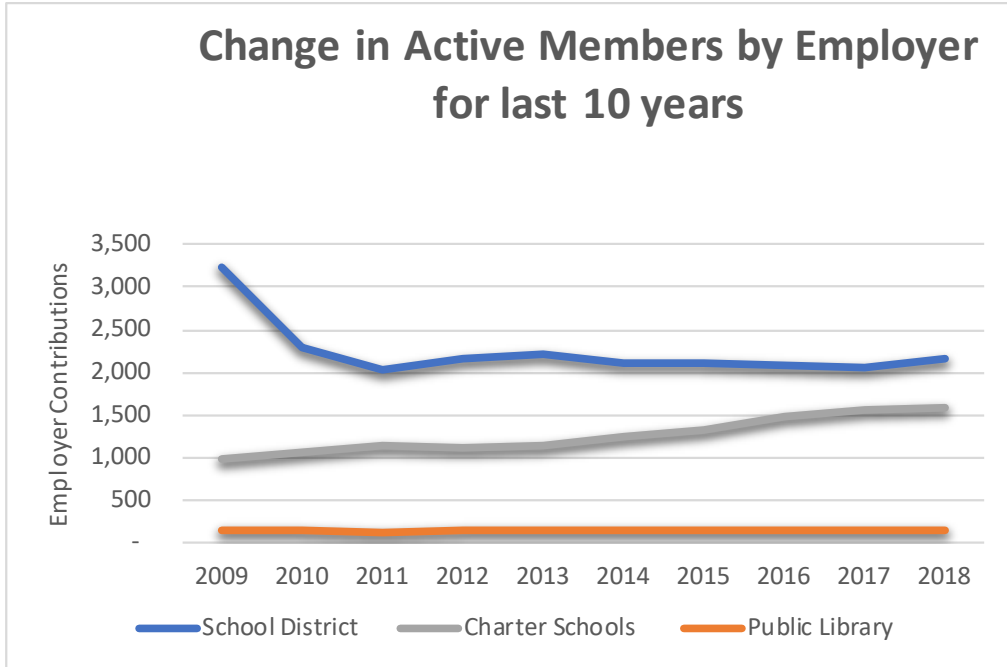
Valuation January 1	Dollars in Millions			Funded Ratios
	Valuation Assets	Unfunded Liabilities	Accrued Liabilities	
2010	814.54	5.00	819.53	99.4%
2011	786.30	57.93	844.23	93.1%
2012	742.28	132.01	874.29	84.9%
2013	697.03	171.64	868.66	80.2%
2014	710.83	164.62	875.45	81.2%
2015	712.39	179.15	891.54	79.9%
2016	694.64	200.59	895.23	77.6%
2017	684.41	297.10	981.51	69.7%
2018	678.29	302.15	980.44	69.2%
2019	654.26	333.98	988.23	66.2%

Note: Numbers may not add due to rounding.









Changes in Active Members by Employer for last 10 years										
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
<b>School District</b>	3,222	2,296	2,022	2,152	2,215	2,112	2,095	2,076	2,065	2,172
<b>Charter Schools</b>	973	1,061	1,133	1,108	1,147	1,245	1,336	1,481	1,555	1,586
<b>Public Library</b>	141	133	129	136	139	136	143	144	140	140

**Participating Employers  
2018 Employer Contribution Total**

	<b>Total Contribution</b>	<b>% of Total</b>
<b>Kansas City Public Schools</b>	\$ 9,924,716	56.6%
<b>Kansas City Public Library</b>	647,906	3.7%
 <b>Charter Schools</b>		
Frontier Schools	918,812	5.2%
University Academy	612,581	3.5%
Guadalupe Centers Schools	584,411	3.1%
Hogan Preparatory Academy	549,141	3.1%
Ewing Marion Kauffman School	548,970	2.7%
Académie Lafayette	466,254	2.4%
Crossroads Charter Schools	422,869	2.3%
Kansas City International Academy	399,602	2.3%
Brookside Charter School	395,229	2.3%
KIPP Endeavor Academy	315,883	1.8%
Allen Village Charter	283,653	1.6%
Lee A. Tolbert Community Academy	249,182	1.4%
Genesis Schools, Inc.	175,599	1.0%
Scoula Vita Nuova	167,453	1.0%
Gordon Parks Elementary	144,071	0.8%
Kansas City Neighborhood Academy	141,182	0.8%
Pathway Academy	126,558	0.7%
Citizens of the World Kansas City	123,344	0.7%
DeLaSalle Charter School	93,278	0.5%
Academy for Integrated Arts	90,414	0.5%
Benjamin Banneker Charter Academy	87,743	0.5%
Hope Leadership Academy	59,004	0.3%
<b>Total Charter Schools</b>	<b>6,955,232</b>	<b>39.7%</b>
<b>Total Contributions</b>	<b>\$ 17,527,854</b>	<b>100.0%</b>

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	\$ 203,634	609	547	46	2	14
501 to 1,000	622,788	838	748	58	1	31
1,001 to 1,500	798,070	643	565	51	3	24
1,501 to 2,000	926,347	528	493	28	2	5
2,001 to 2,500	1,345,712	597	577	14	1	5
2,501 to 3,000	1,363,314	500	492	8	-	-
3,001 to 3,500	762,399	236	235	1	-	-
3,501 to 4,000	319,261	86	85	1	-	-
4,001 to 4,500	217,956	52	51	1	-	-
4,501 to 5,000	74,892	16	16	-	-	-
Over 5,000	43,021	8	8	-	-	-

Average Monthly Benefit Amounts (New Retirees)

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
<b>Fiscal Year Ending 01/01/2018</b>								
Average monthly benefit	\$549	\$611	\$935	\$1,490	\$2,435	\$2,786	\$3,087	\$1,792
Number of retirees	11	32	31	30	33	35	24	196
<b>Fiscal Year Ending 01/01/2019</b>								
Average monthly benefit	\$730	\$701	\$961	\$1,818	\$2,245	\$2,643	\$2,928	\$1,684
Number of retirees	2	35	22	27	16	18	18	138

# In 2018, as well as through the years...

KCPSRS has played an important role in supporting and sustaining the greater Kansas City area.



**\$67 million** benefits paid in the Greater KC area in 2018

The economic advantages of pensions go beyond retirement benefits.

Last year, KCPSRS paid over \$67 million in benefits to Greater Kansas City residents. This has a positive impact on the whole area, not just for our retirees.

Retirees use their KCPSRS benefits to buy goods and services in the Kansas City community. This spending ripples through the local economy, as one person’s spending becomes another person’s income, creating a multiplier effect. The result is a significant and positive economic impact for many Kansas City residents.

A recent study conducted by the National Institute on Retirement Security found that each \$1.00 paid out in pension benefits supported \$1.43 in total economic activity in Missouri. Researchers found that reliable pension income can be especially important not only in providing retirees with peace of mind, but also by stabilizing local economies during economic downturns.

**82%** of KCPSRS Retirees reside in Greater Kansas City

**\$19,500** average annual benefit of KCPSRS Retirees

**The benefits of KCPSRS go beyond helping our members, it is good for greater Kansas City!**