JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT
January 6, 2022

The Joint Committee on Public Employee Retirement (JCPER) met on Thursday, January 6, 2022 at 9:00am in the Joint Committee Room (Room 117) in the State Capitol. Chair Pike called the meeting to order.

The first item on the agenda was roll call. JCPER members in attendance were: Representatives Paula Brown (70), Richard Brown (27), Hovis, Pike, and Reedy and Senators Beck, Moon and Rizzo. The following members were not present: Representative Bosley and Senators Bernskoetter, Koenig, and Williams. A quorum was established. Senator Moon arrived after the roll call.

Following roll call, the Chair turned the meeting over to Michael Ruff, Executive Director, to present the JCPER's annual watch list. The Director explained that the JCPER had been preparing a watch list in one form or another since 1987. The criterion for a defined benefit plan to be included on the watch list is having a funded ratio below 70% based on market value of assets. The Director explained that fewer plans were on the watch list this year compared to the previous year (10 plans versus 17 plans). Several plans had strong investment returns that pushed their funded ratio above 70%. In addition, another plan sponsor transferred its plan to LAGERS as a legacy plan. The Director provided an overview of each plan on the watch list. Rep. Richard Brown (27) asked about the current status of the Sheriffs' Retirement System and if it would be included on the watch list. The Director responded that Sheriffs' Retirement System is not on the watch list because it is over 70% funded but given the pending legal settlement of approximately $18 million and possible future experience, the plan might be included on the watch list in the future. The Director explained that the committee could modify the criteria for inclusion on the watch list. In 2016, the committee reviewed possible changes to the watch list but took no action.

The next agenda item was Personnel Matters. Representative Pike moved that the meeting be closed, and that all records and votes, to the extent permitted by law, pertaining to and/or resulting from this closed meeting be closed under Section 610.021, subdivision (3), RSMo, and under Section 610.021, subdivision (13), RSMo, for the purpose of personnel matters. Representative Paula Brown (70) seconded the motion. A roll call vote was taken. The following members voted in favor: Pike, Beck, Paula Brown (70), Richard Brown (27), Hovis, Moon and Reedy. The following members were not present for the vote: Bernskoetter, Bosley, Koenig, Rizzo, and Williams. By a vote of 7-0, the motion carried and the meeting was closed. The committee met in closed session.

The committee exited closed session and returned to open session.

The final order of business was Comments of the Chair. Chair

Pike announced that the JCPER would meet on January 19, 2022 at 9am in Room 117 for presentation of the JCPER annual report.

With no further business to be presented, the committee adjourned.

Michael Ruff
Executive Director

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JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

January 6, 2022
9am— Joint Committee Room (Room 117), State Capitol

AGENDA

Roll Call

Presentation of Annual Watch List

Personnel Matters

Comments of the Chair

A vote may be taken to close the meeting pursuant to section 610.021(3), RSMo and section 610.021(13), RSMo relating to personnel matters.

Rep. Pike, Chairman
Senator Koenig, Vice-Chairman
Senator Beck
Senator Bernskoetter
Senator Moon
Senator Rizzo
Senator Williams
Rep. Bosley
Rep. Brown 70
Rep. Brown 27
Rep. Hovis
Rep. Reedy

Accounting
Administration
Bill Room
Bulletin Board
Communications
Computer Information Systems
General Counsel - Cindy Kadlec
Oversight
Sec. of Senate - Adriane Crouse
Senate Research
Sergeant-at-arms

Amended 1

Joint Committee on Public Employee Retirement

Day: Thursday, January 6, 2022

Time: 9am

Place: Joint Committee Room-117

Amended 1: Please note time change of meeting. Meeting will now be held at 9am.

Presentation of annual watch list.

A vote may be taken to close the meeting pursuant to section 610.021(3), RSMo and section 610.021(13), RSMo relating to personnel matters.

Please note additional procedures will be in place due to the COVID-19 pandemic:

- All entrants to the capitol building may be required to submit to screening questions and physical screening.
- Members of the public must enter the building using the south entrance.
- Public seating will be socially distanced and therefore very limited.
- The committee meeting will be streamed. Links may be found at www.senate.mo.gov and www.house.mo.gov for the committee room

Executive Session

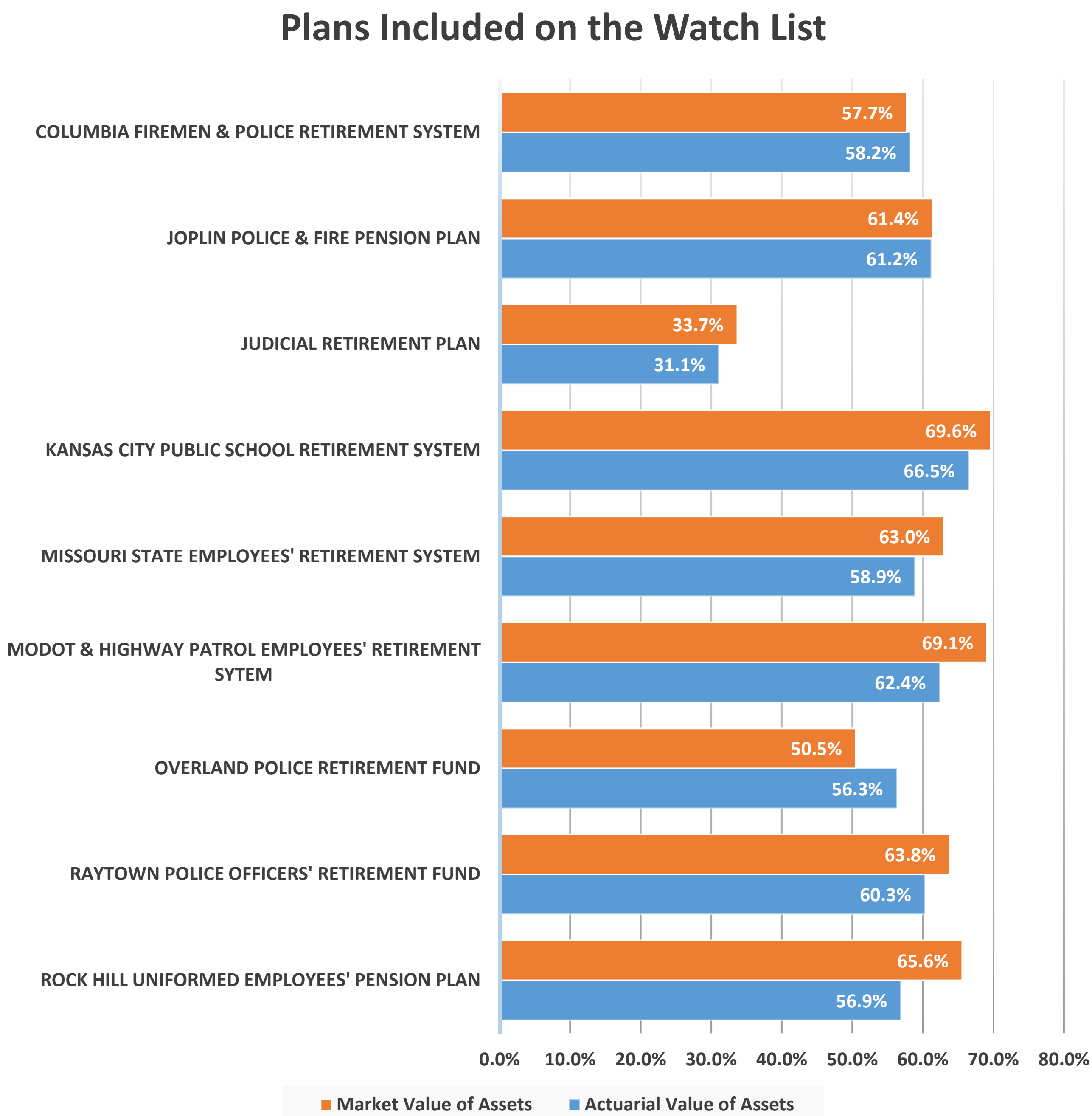
"For ADA accommodations, please contact (573) 751-4663 or (573) 751-3969 (TDD)."

JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

2021 ANNUAL WATCH LIST

Presented on January 6, 2022

Please Note: For purposes of the Watch List, the term “inactive” includes terminated vested, retired, surviving beneficiary, disabled members, and for some plans, terminated nonvested members who have not withdrawn employee contributions.

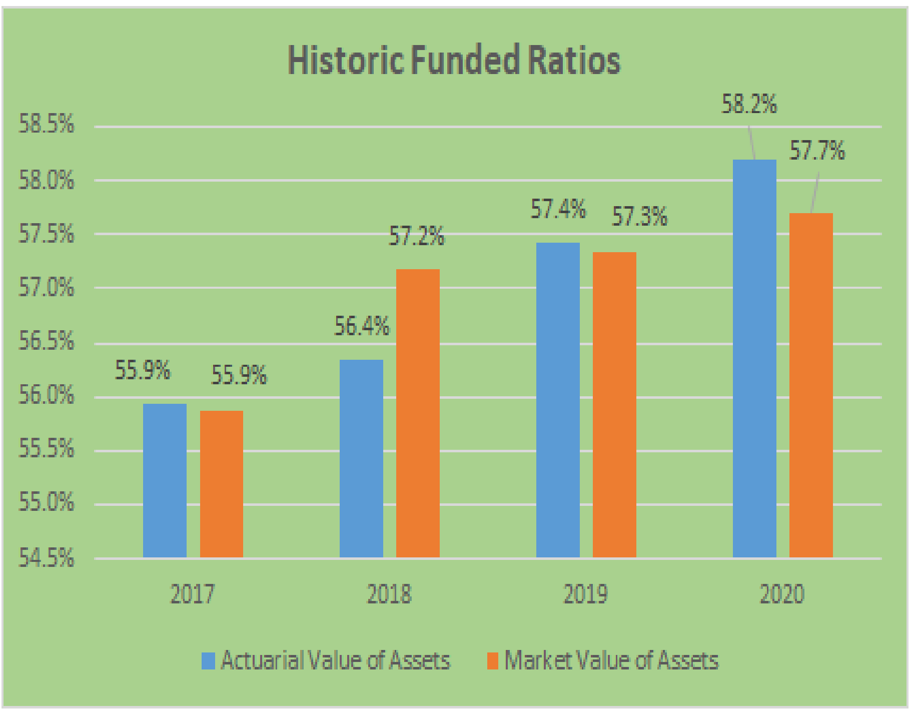


Plans Included on the Watch List
COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEM
57.7%
58.2%
JOPLIN POLICE & FIRE PENSION PLAN
61.4%
61.2%
JUDICIAL RETIREMENT PLAN
33.7%
31.1%
KANSAS CITY PUBLIC SCHOOL RETIREMENT SYSTEM
69.6%
66.5%
MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM
63.0%
58.9%
MODOT & HIGHWAY PATROL EMPLOYEES' RETIREMENT SYTEM
69.1%
62.4%
OVERLAND POLICE RETIREMENT FUND
50.5%
56.3%
RAYTOWN POLICE OFFICERS' RETIREMENT FUND
63.8%
60.3%
ROCK HILL UNIFORMED EMPLOYEES' PENSION PLAN
65.6%
56.9%
0.0% 10.0% 20.0% 30.0% 40.0% 50.0% 60.0% 70.0% 80.0%
Market Value of Assets
Actuarial Value of Assets

COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEMS

- The Fire and Police plans are commingled for investment purposes. For the year ended 9/30/20, the rate of return on investments equaled 6.8% (Market) & 7.4% (Actuarial) vs. 7% assumed.
- Upon recommendation of the actuary, the Board voted to move forward with a 5-year experience study.
- The employer continues to meet or exceed the ADC. The actuary notes that "For the continued well-being of the fund, the fund must receive contributions at least at the levels recommended in the actuarial valuation."
- In the past 10 years, the City has twice reset the amortization period. First, for the 2010 valuation, the City changed the amortization period from 17 years to 29 years. Second, for the 2016 valuation, the City changed the amortization period from 23 years to 30 years. As of the 9/30/20 valuation, 26 years remain. On page A-13 of the valuation, the actuary comments that "Periods above 17 to 23 years generally indicate that the UAAL payment is less than the interest in the UAAL. This situation is referred to as 'negative amortization.' Negative amortization is increasingly viewed as undesirable." On page A-9, the actuary expects that "in nominal dollars, the UAAL is expected to increase until the amortization period becomes approximately 21 years, at which point it would be expected to decline…"
- A new tier of provisions were passed for employees hired on or after October 1, 2012. These provisions include, but are not limited to, modified age and service requirements for retirement eligibility, modified benefit multiplier with no retiree COLA, fire member contribution reduced to 4% of pay, and automatic survivor benefit replaced with a survivor option at retirement with member's reduced benefit. The actuary notes that "the normal cost decreased as more active members came into the post October 1, 2012 benefit plan."
- Fire employees contribute 16.32% of pay (4% for those hired on/after 10/01/12) and do not participate in Social Security. Police employees contribute between 7.45% & 8.35% of pay (4.5% for those hired on/after 10/01/12) & do participate in Social Security.

FIREMEN'S RETIREMENT FUND



Year Ending 9/30,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2020	$5,965,276	$5,965,276	100%
2019	$5,306,842	$5,306, 842	100%
2018	$5,426,042	$5,426,042	100%
2017	$4,789,910	$4,789,910	100%
2016	$5,226,250	$5,226,250	100%

Fire as of 9/30/20

Market Value: $92,544,457

Actuarial Value: $93,249,926

Liabilities: $160,314,399

Membership:

Active: 137 **Inactive**: 166

Normal Retirement Formula:

3.5% of compensation for the first 20 years + 2% for the next 5 years. Max of 80% of compensation.

Hired on/after 10/1/12: 2.5% of compensation times years of service. No max benefit.

Normal Retirement Eligibility:

Age 65 or 20 years of service

Hired on/after 10/1/12: Age 55 with 1 year of service. Rule of 80.

COLA Annual Minimum: 2%

Social Security Coverage: No

Assumed Rate of Return: 7%

Wage Inflation: 3.25%

COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEMS (Continued)

POLICE RETIREMENT SYSTEM

Police as of 9/30/20

Market Value:	$58,608,812	**Membership**:		**Assumed Rate of Return**: 7%
Actuarial Value:	$59,055,588	**Active**:	160	**Salary**: 3.25%
Liabilities:	$105,079,386	**Inactive**:	213	**Social Security Coverage**: Yes

Normal Retirement Formula: 3% of Compensation for the first 20 years of service plus 2% of compensation for the next 5 years of service. Max: 70% of compensation with 25 years of service.

Hired on/after 10/1/12: 2% of compensation for the first 25 years of service plus 1.5% of compensation for each year over 25. Max of 57.5% of compensation.

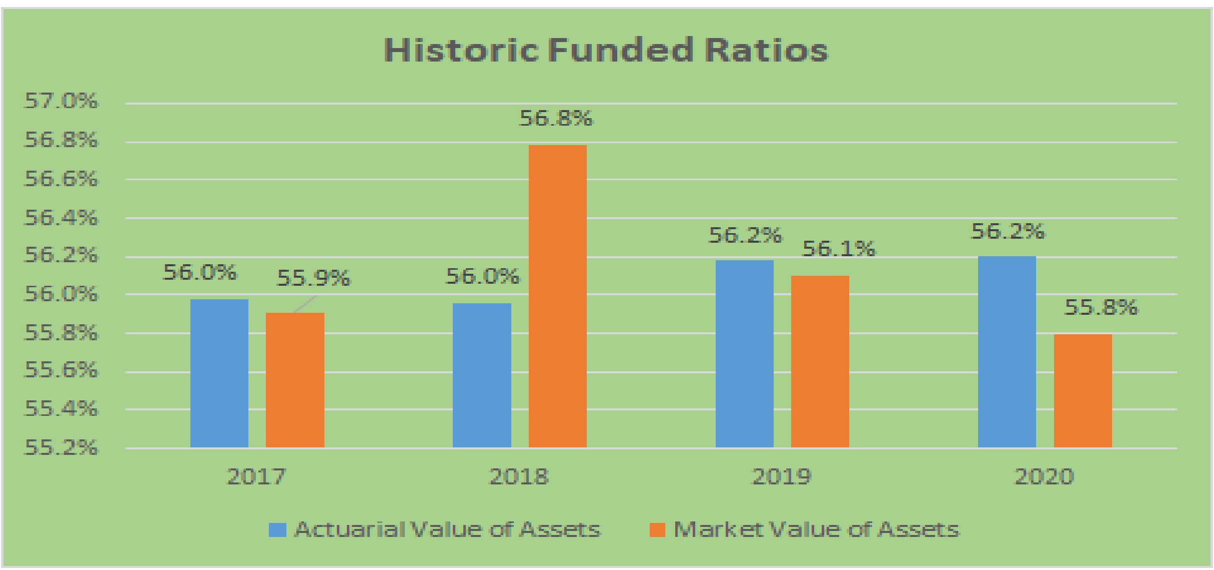
Normal Retirement Eligibility: 20 years of service or age 65. **Hired on/after 10/1/12**: 25 years of service or age 65.

COLA: Annual increase of 0.6%.

Interest: 7%

Social Security: Yes

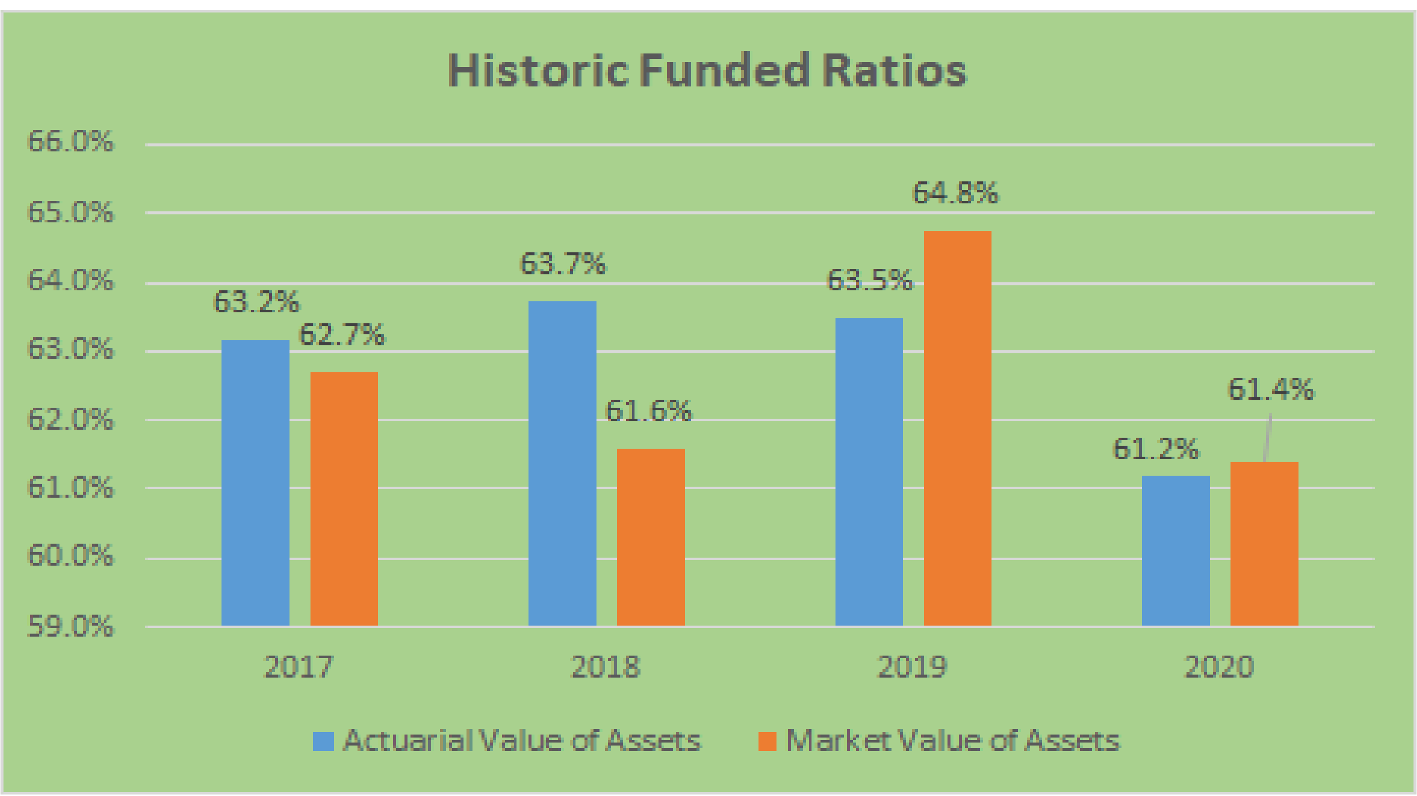
Wage Inflation: 3.25%



Year ending 9/30,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2020	$4,159,256	$4,159,256	100%
2019	$4,019,648	$4,019,648	100%
2018	$3,796,494	$3,796,494	100%
2017	$3,365,161	$3,365,161	100%
2016	$3,812,192	$3,812,192	100%

JOPLIN POLICE & FIRE PENSION PLAN

- Rate of return on investments equaled 5.9% (Market) & 5.8% (Actuarial) vs. 5.75% assumed.
- On 11/5/19, city voters adopted a one-half of one percent sales tax to provide additional funding. The tax will expire when the plan is 120% funded or in twelve years, whichever is earlier.
- In February 2020, the City closed the plan to new entrants. Members hired on/after 2/1/20 are enrolled in LAGERS. Members hired on/before 1/31/09 (Tier 1) remain in the closed Police & Fire Pension Plan. Members hired on/after 1/31/09 (Tier 2) had the option to remain in the closed plan or transfer to LAGERS. 128 of 131 eligible Tier 2 members chose to move to LAGERS.
- In June 2020, the actuary prepared a supplemental actuarial valuation and revised the actuarial assumptions and methods used by the plan due to the closure and membership changes.
- Lowered the assumed rate of return from 6.75% to 5.75%.
- Changed the actuarial cost method from Entry Age Normal to the Aggregate Cost Method. Under the Entry Age Normal Cost method, 17 years remained on the closed 30 year amor tization period. Under the Aggregate Cost method, the plan uses a ten year paydown period beginning in FY 21.
- Reset the actuarial value of assets from a five-year smoothed value to the market value of assets minus accumulated contributions of transferring members. In future valuations, five -year smoothing will be used.
- A new tier was implemented for those hired after 1/31/09 with provisions including normal retirement service of 25 years (from 20) and maximum benefit of 60% of compensation (from 65%).
- Employees hired on/before 1/31/09 contribute 18.08% of pay, which is refunded at retirement. Those hired after 1/31/09 contribute 10% of pay without refund upon retirement.



FY Ending 10/31,	RECOMMENDED CONTRIBUTION*	ACTUAL CONTRIBUTION*	PERCENT CONTRIBUTED
2022	$4,014,359	N/A	N/A
2021	$3,942,972 (revised as of 6/1/20 to reflect membership and actuarial changes)	N/A	N/A
2020	$2,921,839	$3,440,455	117.7%
2019	$2,814,812	$2,999,709	106.5%
2018	$2,706,972	$2,620,298	96.8%
2017	$2,657,867	$2,601,983	97.8%
2016	$2,708,565	$2,619,993	96.7%

*Contribution information is taken from Actuarial Valuation Report as of October 31, 2020, Page B-2, City Contributions: Historical Comparison

As of 10/31/20

Market Value: $44,114,367

Actuarial Value: $44,000,913

Liabilities: $71,868,819

Membership:

Active: 57

Inactive: 171

Tier 2 Members who transferred to LAGERS in 2020: 128 active, 1 terminated vested

Normal Retirement Formula:

Hired after 1/31/09: 2.2% of compensation for the first 25 years of service plus 1% for the next 5 years of service. Maximum 60% of compensation.

Hired on/before 1/31/09: 2.5% of compensation for the first 20 years plus 1% for each of the next 5 years. Maximum 65% of compensation.

Normal Retirement Eligibility:

Hired after 1/31/09: Age 60 or 25 YOS

Hired before 1/31/09: 20 YOS

Social Security Coverage: No

COLA: No COLA

Assumed rate of return: 5.75%

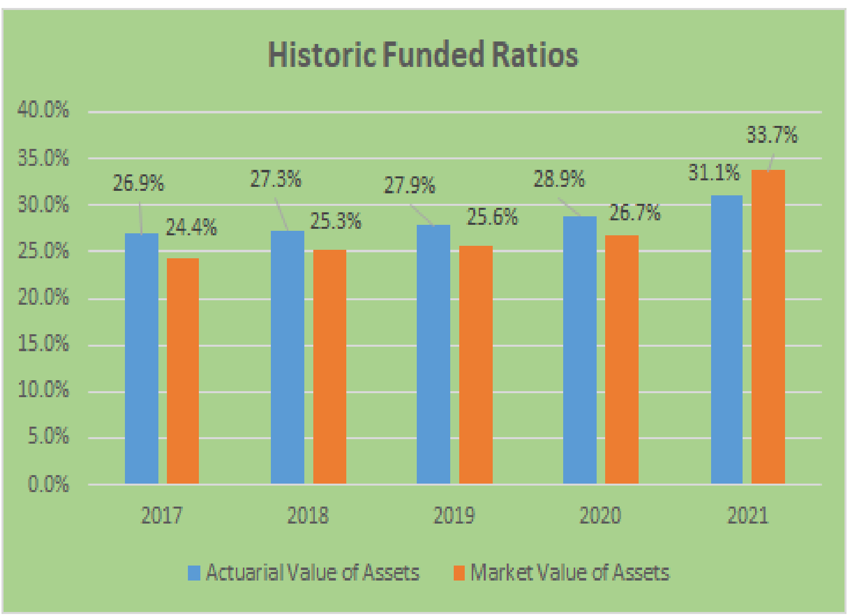
Salary: 2.5%

Hired on/after 2/1/20: Members are enrolled in the LAGERS L-11 program. 2.5% of compensation X years of service.

LAGERS Normal Retirement Eligibility for Police & Fire members: Age 55 with 5 years of service.

JUDICIAL RETIREMENT PLAN

- For the year ending 6/30/21, investment return equaled 26.4% (Market) and 8.0% (Actuarial) vs. 6.95% assumed.
- The actuary completed a five-year experience study for the period 7/1/15—6/30/20. The Board adopted changes to actuarial assumptions and methods including, but not limited to: changing the individual salary increase assumption from age-based to 3%, updating mortality tables to Pub-2010 General Employees with a 75% generational projection, updating retirement and termination assumptions, eliminating the disability assumption, and modifying the length of future layers used to amortize actuarial gains/losses from 30 years to 25 years.
- Effective 6/30/18, modified the asset smoothing method from an open five-year period to a closed five-year period. Existing unrecognized investment experience as of 6/30/18 will be recognized over a closed seven-year transition period beginning 6/30/18.
- New tier provisions were passed in 2010 requiring increased age and service requirements as well as employee contributions of 4% for judges serving for the first time on or after 1/01/11.
- The number of active members covered by the 2011 tier increased from 235 in the prior year's valuation to 252. The percentage of judges covered by the 2011 tier increased from 56% to 60%. As more judges begin serving under the 2011 tier, normal cost will decrease.
- Prior to 1998, the plan was funded on a pay-as-you-go basis so no pre-funding occurred. When funding on an actuarial basis began, the funded ratio was at 0%.



FY Ending 6/30,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2021	$39,996,509	$39,996,509	100%
2020	$39,174,515	$39,174,515	100%
2019	$38,604,668	$38,604,668	100%
2018	$36,892,203	$36,892,203	100%
2017	$32,670,710	$34,246,826	104.8%

As of 6/30/21

Market Value: $211,081,342

Actuarial Value: $194,988,153

Liabilities: $626,284,219

Membership:

Active: 418 **Inactive**: 634

Normal Retirement Formula:

50% of compensation. Less than service requirement=pro-rated benefit based on service

Normal Retirement Eligibility:

Age 62 with 12 years of service

Age 60 with 15 years of service

Age 55 with 20 years of service

Serving for the first time on/after 1/1/11:

Age 67 with 12 years of service

Age 62 with 20 years of service

Social Security Coverage: Yes

COLA: Annual max 5%, 80% CPI

Assumed rate of return: 6.95%

Salary: 3%

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December 17, 2021

Mr. Michael Ruff, Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101

Dear Michael:

Thank you for the opportunity to respond to the inclusion of the Judicial Retirement Plan (Judicial Plan) on the annual "Watch List" of the Joint Committee on Public Employee Retirement (JCPER). We would like to offer the following information for the Committee's review.

As you are aware, the Judicial Plan was operated on a pay-as-you-go basis prior to 1998 when the law was changed to require that the plan be funded on an actuarial basis. The funded status of the Judicial Plan was approximately 0% in 1999 and has increased to the June 30, 2021 funded ratio of 31.1%.

In June 2018, the MOSERS Board of Trustees adopted a funding policy to incrementally reduce the Judicial plan investment rate of return assumption. This policy incrementally reduced MOSERS investment rate of return assumption from 7.5% to the current investment rate of return assumption of 6.95%.

This board-adopted funding policy is intended to more closely align the fund's investment return assumption with capital market expectations. While public pension funds across the state and nation are re-evaluating the appropriate level of an investment return assumption to reduce the long-term investment risk, such reduction often requires an increased Employer Contribution Rate to the plan and results in a decreased Funded Ratio. The information contained in the June 30, 2021 annual actuarial valuation (see below) illustrates how a change in the investment return assumption rate can affect the plan's Employer Contribution Rate and Funded Ratio.

JUDICIAL PLAN SENSITIVITY ANALYSIS

Investment Return Assumption	**5.95%**	**6.45%**	**6.95%**	**7.45%**	**7.95%**
Total Employer Contribution (% of pay)	66.45%	63.19%	60.17%	57.35%	54.72%
Total Employer Contribution ($ in millions)	$44.1	$41.9	$39.9	$38.1	$36.3
Actuarial Value of Assets	$195.0	$195.0	$195.0	$195.0	$195.0
Actuarial Accrued Liability	$688.9	$656.3	$626.3	$598.5	$572.7
Funded Ratio	28.3%	29.7%	31.1%	32.6%	34.0%

2010 Pension Reform

As you are aware, the General Assembly passed pension reform relative to judges in the 2010 special session. This reform was implemented as the "Judicial Plan 2011" for judges serving for the first time on or after January 1, 2011. As included in the June 30, 2021 annual actuarial valuation, the ongoing annual cost of the **Judicial Plan 2011** (known as the "Employer Normal Cost") is 16.47% of pay, compared to the **pre-**

2011 annual cost of 20.72% of pay. Approximately 60% of the 418 Judicial Plan active employees are Judicial Plan 2011 members.

Judicial Plan **Actuarial Valuation Results as of 06/30/21**	**Percents of Payroll**		
	Pre 01/01/11 Hires	**Post 01/01/11 Hires**	**Weighted Average**
Normal Cost	20.72%	20.47%	20.57%
Less **Member** Contributions	0.00%	4.00%	2.42%
Employer Normal Cost	20.72%	16.47%	18.15%
Unfunded Actuarial Accrued Liabilities (UAAL) (level % of payroll amortization with layered bases)			42.02%
Total FY23 Computed Employer Contribution Rate			60.17%
Estimated Employer Contribution ($ in Millions)			$39.9

We hope this information is helpful to the JCPER as it conducts its proceedings. If you have any questions or we can provide additional information, please do not hesitate to contact our office.

Sincerely,

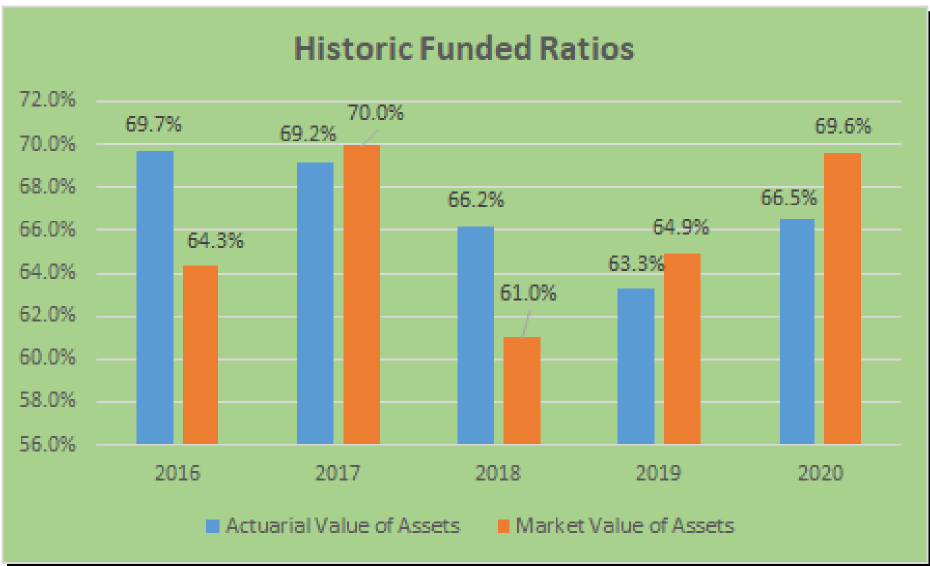
Ronda Stegmann

Ronda Stegmann
Executive Director

cc: MOSERS Board of Trustees

KANSAS CITY PUBLIC SCHOOL RETIREMENT SYSTEM

- For the year ending 12/31/20, net rate of return on investments equaled 11.9% (Market) and 9.2% (Actuarial) versus 7.5% assumed.
- The system's actuary completed a four-year experience study for the period ended 12/31/19. The board lowered the assumed rate of return from 7.5% to 7.25%, lowered the inflation assumption from 2.75% to 2.25%, updated mortality tables to Pub-2010, and adjusted other economic and demographic assumptions. The net impact was a decrease of 0.49% in the recommended contribution rate.
- In 2018, the General Assembly passed SB 892 that, in part, increased the employer contribution rate from 9% to 10.5% in 2019 and then to 12% on 1/1/20. Beginning 7/1/21, a statutory formula is used to determine the employer contribution rate and depending on valuation results, whether future employee contribution rates may be lowered from the current 9%. The actuary writes "the change to determine the employer contribution rate based on the actuarial contribution rate is expected to improve the funded status of the System over time and provide a more sustainable path toward full funding."
- FY20 was the first year since 2011 in which the actual contribution rate (21%) exceeded the actuarial contribution rate (20.8%).
- Effective with the 1/1/17 valuation, the board of trustees changed the amortization policy for payment of UAAL from an open 30 to a layered approach: initial UAAL as of 1/1/17 is amortized over a closed 30-year period with subsequent pieces amortized over closed 20-year periods.
- The General Assembly passed legislation in 2013 that established a new tier for employees hired on or after 1/1/2014. New hires receive a 1.75% benefit multiplier (instead of 2%) and have increased age and service requirements to age 62 & 5 years of service or rule of 80 (versus age 60 & 5 YOS or rule of 75).



Year ending 12/31,	RECOMMENDED CONTRIBUTION* (In thousands)	ACTUAL CONTRIBUTION* (In thousands)	PERCENT CONTRIBUTED
2020	$25,342	$25,772	101%
2019	$22,144	$21,489	97%
2018	$19,125	$17,528	92%
2017	$18,074	$16,927	94%
2016	$20,224	$16,280	80%

*See Schedule of Employers' Contributions, Financial Statements for the Years Ended December 31, 2020 and 2019, page 26

As of 1/1/21

Market Value: $694,237,740

Actuarial Value: $663,210,594

Liabilities: $997,587,405

Membership:

Active: 4,108 Inactive: 7,210*

Normal Retirement Formula:

2% of compensation times years of service. **Hired on/after 1/1/14:** 1.75% of compensation times YOS.

Normal Retirement Eligibility:

Age 60 with 5 years of service or Rule of 75. **Hired on/after 1/1/14:** Age 62 with 5 years of service or Rule of 80.

Social Security Coverage: Yes

COLA: Ad hoc. Annual max 3%

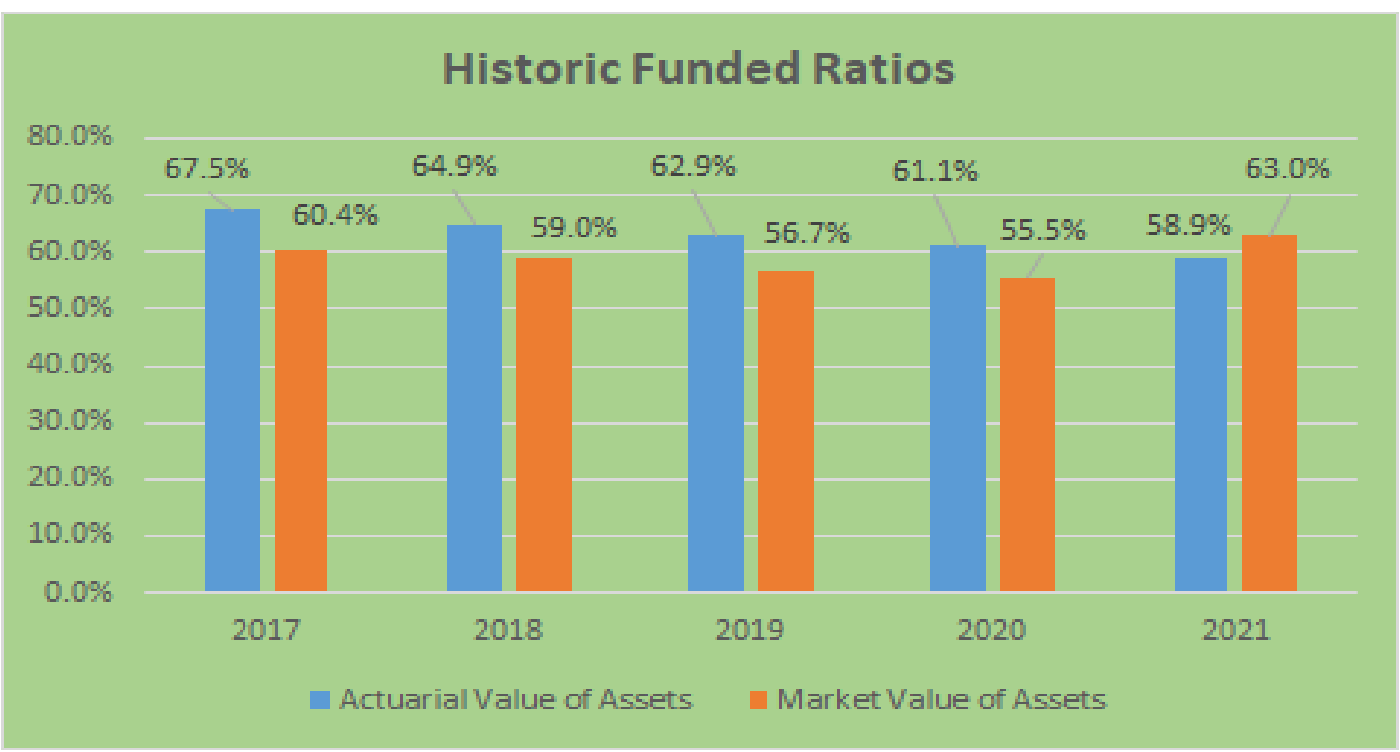
Assumed Rate of Return: 7.25%

Wage Inflation: 2.85%

*2,590 inactives are terminated non-vested and will not receive a benefit.

MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM

- For the year ending June 30, 2021, rate of return on investments equaled 26.4% (market) and 7.3% (actuarial) vs. 6.95% assumed.
- The actuary completed a five-year experience study for the period 7/1/15—6/30/20. The board adopted changes to actuarial assumptions and methods including, but not limited to: increasing the individual salary increase assumption to partially reflect higher merit salary increases, updating mortality tables to Pub-2010 General Employees with a 75% generational projection, updating the retirement and termination assumptions, and modifying the length of future layers used to amortize actuarial gains/losses from 30 years to 25 years.
- The employer contribution rate as a percent of payroll increased from 23.51% for FY22 to 26.33% for FY23.
- One factor that affected the actuarially determined contribution rate was a decline in active membership of 6.9% from 45,999 as of 6/30/20 to 42,829 as of 6/30/21. This decrease resulted in covered payroll remaining relatively flat from the prior year. Active membership has declined about 23% over 17 years from 55,914 actives in 2004 to 42,829 in 2021.
- In 2018, the Board adopted a new investment portfolio asset allocation with a planned 36 month transition period. The board completed the transition ten months ahead of schedule in February 2021.
- Effective 6/30/18, the Board modified the asset smoothing method from an open five-year period to a closed five-year period. Existing unrecognized investment experience as of 6/30/18 will be recognized over a closed seven-year transition period beginning 6/30/18.
- New tier provisions were passed in 2010 requiring increased age and service requirements, as well as employee contributions of 4% for employees hired for the first time on or after 01/01/11. The number of active members covered by the 2011 tier decreased from 23,075 (6/30/20) to 22,369 (6/30/21) but the percentage of members covered by MSEP 2011 increased from 50% to 52%. The actuary writes that "Because the benefit structure is different for MSEP 2011 members...the ongoing cost of the System declines as a larger percentage of active members are covered by MSEP 2011."



Year Ending 6/30	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2021	$463,293,368	$463,293,368	100%
2020	$436,895,653	$436,895,653	100%
2019	$394,150,042	$394,150,042	100%
2018	$379,557,962	$379,557,962	100%
2017	$322,772,697	$335,217,422	104%

The actuary writes that the "actuarial assumptions have been changed eight times in the last ten years, resulting in an ultimate reduction in the investment return assumption from 8.5% in the 2011 valuation to 6.95% in the 2020 valuation." In addition, the unfunded portion of the actuarial accrued liability has increased during this time. These changes in assumptions have had the general effect of decreasing the plan's funded ratio.

As of 6/30/21

Market Value: $9,519,930,080

Actuarial Value: $8,909,251,051

Liabilities: $15,110,646,537

Active Members: 42,829

Inactive Members: 95,599

Normal Retirement Formula:

MSEP 2000: 1.7% of compensation times years of service plus 0.8% to age 62 (temp benefit under Rule of 80 or Rule of 90 for the 2011 Tier).

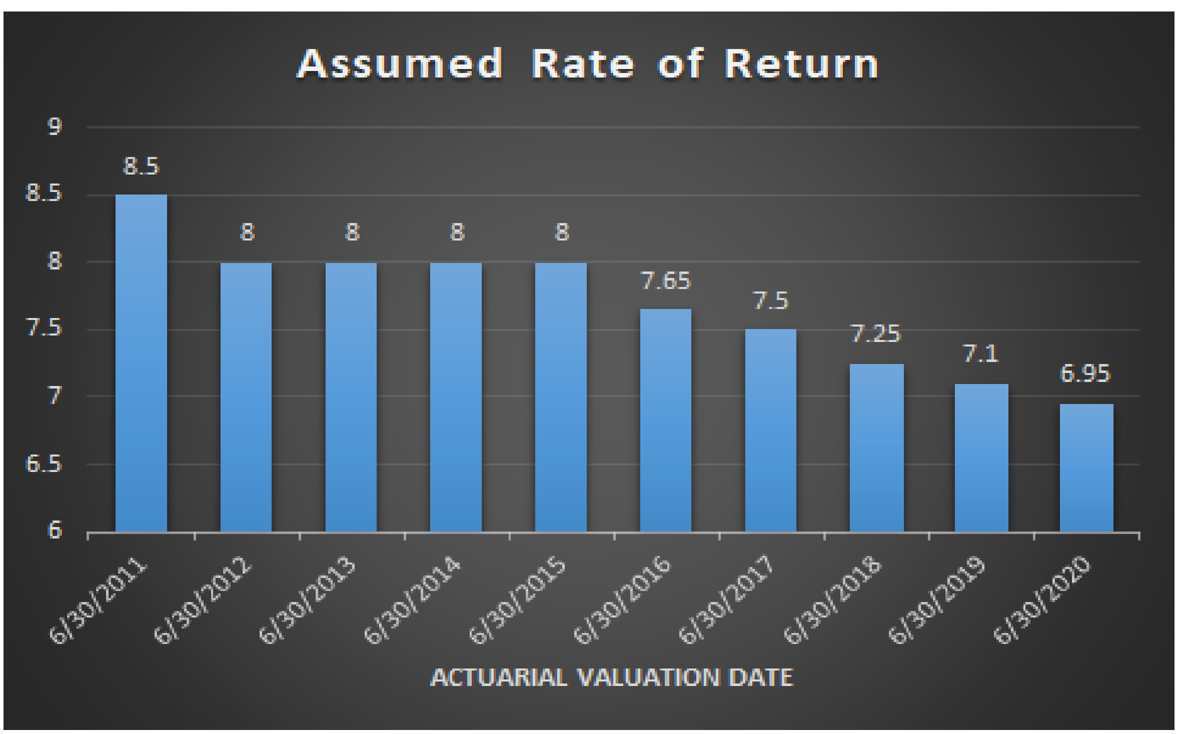
Normal Retirement Eligibility: Age 62 with 5 years of service or Rule of 80. 2011 Tier: Age 67 with 5 years of service or Rule of 90 with minimum age of 55.

Social Security Coverage: Yes

COLA: Annual Max 5%, 80% of CPI

Assumed Rate of Return: 6.95%

Salary: 2.5%



MOSERS
MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM

PO Box 209, Jefferson City, MO 65102-0209
(573) 632-6100 or (800) 827-1063
Fax (573) 632-6103 | *www.mosers.org*

December 17, 2021

Mr. Michael Ruff, Executive Director
Joint Committee on Public Employee Retirement
State Capitol, Room 219-A
Jefferson City, MO 65101

Dear Michael:

Thank you for the opportunity to respond to the inclusion of the Missouri State Employees' Retirement System (MOSERS) on the annual "Watch List" of the Joint Committee on Public Employee Retirement (JCPER). We would like to offer the following information for the Committee's review.

In June 2018, the MOSERS Board of Trustees adopted a funding policy to incrementally reduce MOSERS' investment rate of return (ROR) assumption to more closely align the fund's investment ROR assumption with capital market expectations. This policy reduced MOSERS investment rate of return assumption from 7.5% to the current investment rate of return assumption of 6.95%. For context, below is the ROR assumption in the June 30, 2011 actuarial valuation and in the most recent June 30, 2021 actuarial valuation.

Actuarial Valuation Date	**ROR Assumption**	**ROR Assumption (without Inflation Assumption)**
June 30, 2011	8.5%	5.30%
June 30, 2021	6.95%	4.70%

While public pension funds across the state and nation are re-evaluating the appropriate level of an investment ROR assumption to reduce the long-term investment risk, such reduction often requires an <u>increased</u> Employer Contribution Rate to the plan and results in a <u>decreased</u> Funded Ratio. The information contained in the June 30, 2021 annual actuarial valuation (see below) illustrates how a change in the investment return assumption rate can significantly affect the plan's Employer Contribution Rate and Funded Ratio.

MOSERS SENSITIVITY ANALYSIS

Investment Return Assumption	**5.95%**	**6.45%**	**6.95%**	**7.45%**	**7.95%**
Total Employer Contribution (% of pay)	32.31%	29.23%	26.33%	23.59%	20.97%
Total Employer Contribution ($ in millions)	$678.3	$613.6	$552.7	$495.2	$440.2
Actuarial Value of Assets	$8,909.3	$8,909.3	$8,909.3	$8,909.3	$8,909.3
Actuarial Accrued Liability	$16,888.8	$15,958.6	$15,110.6	$14,335.8	$13,626.1
Funded Ratio	52.8%	55.8%	59.0%	62.1%	65.4%

2010 Pension Reform

As you are aware, the General Assembly passed pension reform relative to state employees in the 2010 special session. This reform was implemented as the "MSEP 2011" for state employees hired for the first time on or after January 1, 2011. As included in the June 30, 2021 annual actuarial valuation, the ongoing annual cost of the **MSEP 2011** (known as the "Employer Normal Cost") is 4.43% of pay, compared to the **pre-2011** annual cost of 9.19% of pay. Approximately 52% of the 42,829 MOSERS' active member population are MSEP 2011 members.

Actuarial Valuation Results as of 06/30/21	**Percents of Payroll**		
	MSEP & MSEP 2000	**MSEP 2011**	**Weighted Average**
Normal Cost	9.19%	8.43%	8.83%
Less **Member** Contributions	0.00%	4.00%	1.88%
Employer Normal Cost	9.19%	4.43%	6.95%
Unfunded Actuarial Accrued Liabilities (UAAL) (level % of payrol amortization w layered bases)			19.38%
Total FY23 Computed Employer Contribution Rate			26.33%
Estimated Employer Contribution ($ in Millions)			$552.7

As outlined in the information provided by the JCPER staff, the MOSERS Board of Trustees conducted a 5-year actuarial experience study in 2021. After much discussion, the Board approved the resulting recommendations of MOSERS external actuarial firm. As the table below outlines, the increase in the annual employer contribution rate is largely attributable to the actuarial adjustments resulting from the experience study.

FY22 Employer Rate	**23.51% of payroll**	
Change to Actuarial Assumptions	1.90%	Experience study resulted in new assumptions for improved mortality (longer life expectancy), adjustments to expected individual salary increases and future patterns of termination and retirement.
Asset (Gain)/Loss	-0.11%	FY21 investment return 26.4% smoothed over 5 years
Liability (Gain)/Loss	0.45%	Individual salary increases of 6.9%
Projected Payroll Lower than Expected	0.69%	Total payroll is expected to grow but decreased in FY21
Change in Normal Cost Rate	-0.06%	Cost, as a % of payroll for 1 year of service, declines as closed plan members retire and new MSEP 2011 members are hired.
Change in Effective Member Contribution Rate	-0.10%	More active members in MSEP 2011 who are making 4% contributions
Other Experience	0.05%	Other miscellaneous factors, i.e., 1-year lag between valuation date and effective date
FY23 Employer Rate	**26.33% of payroll**	

We hope this information is helpful to the JCPER as it conducts its proceedings. If you have any questions or we can provide additional information, please do not hesitate to contact our office.

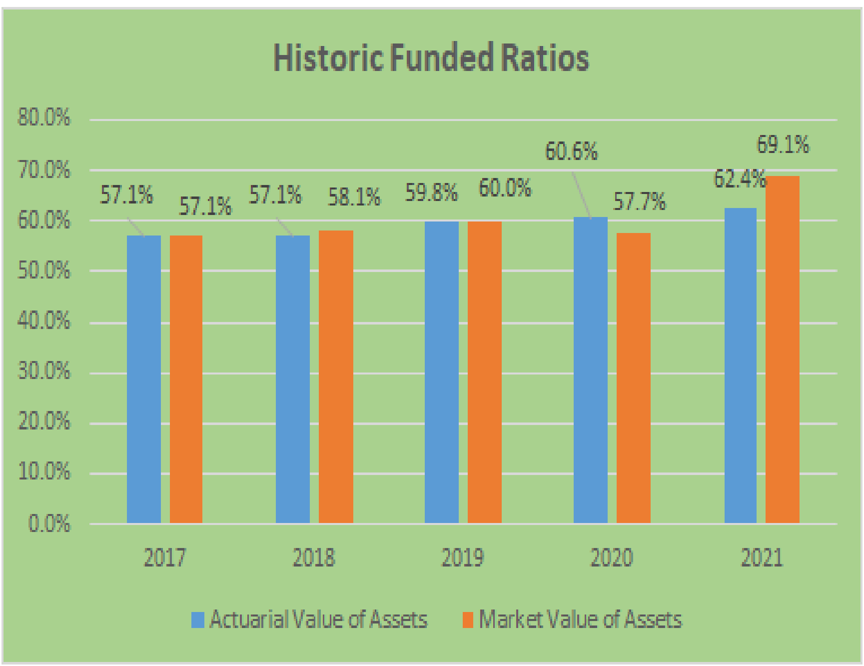
Sincerely,

Ronda Stegmann
Executive Director

cc: MOSERS Board of Trustees

MoDOT & HIGHWAY PATROL EMPLOYEES' RETIREMENT SYSTEM (MPERS)

- Rate of return on investments equaled 29.99% (Market) and 11.71% (Actuarial) vs. 7% assumed as of 6/30/21.
- The Board of Trustees' actuary performed a review of economic assumptions (between experience studies) and lowered the assumed rate of return for investments from 7% to 6.5%. The next experience study is scheduled to be performed after the 6/30/22 actuarial valuation. Completed a 5-year experience study for the period July 1, 2012 to June 30, 2017 after which the Board adjusted both economic and demographic assumptions.
- The Board retained a governance consultant, which completed a review of board governance policies. The consultant recommended changes; the system is in the process of implementing them.
- The actuary continues to recommend that economic assumptions be reviewed annually in light of changes in actuarial standards and changes in forecasts of future economic conditions.
- New tier provisions were passed in 2010 requiring increased age and service requirements and an employee contribution rate of 4% of pay for employees hired for the first time on or after 01/01/11. As of 6/30/21, 3,280 active members were covered under the 2011 tier (an increase from 3,131 as of 6/30/20).
- In 2009, the actuary presented a temporary accelerated amortization schedule in accordance with section 105.684. As of 6/30/21 valuation, the plan uses a closed 3-year amortization period for unfunded retiree liabilities and a closed 18-year amortization period for the remaining unfunded liabilities (for the plan year beginning 7/1/22). The Board will likely begin reviewing alternate amortization scenarios.
- In September 2014, the Board established a "rate stabilization reserve fund" from experience gains to attempt to maintain the employer contribution rate at or close to its current level (58% of covered payroll).



Year Ending June 30,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2022	$219,156,203 estimated	N/A	N/A
2021	$208,212,848	$208,212,848	100%
2020	$210,871,852	$210,871,852	100%
2019	$210,166,927	$210,166,927	100%
2018	$204,955,180	$204,955,180	100%
2017	$206,562,924	$206,562,924	100%

As of 6/30/21

Market Value: $3,003,925,228

Actuarial Value: $2,711,272,503

Liabilities: $4,344,072,912

Membership:

Active: 7,219 Inactive: 11,368

Normal Retirement Formula:

Year 2000 Plan: 1.7% of compensation times years of service plus 0.8% to age 62 (temporary benefit under rule of 80 or rule of 90 for the 2011 Tier)

Normal Retirement Eligibility:

Age 62 with 5 years of service or rule of 80. Uniformed Patrol: Mandatory retirement at age 60. Rule of 80 with minimum age of 48.

Hired for the first time on/after 1/1/11: Age 67 with 5 years of service or Rule of 90 (age 55). Uniformed Patrol: Age 55 with 5 years of service. Mandatory retirement at age 60.

Social Security Coverage: Yes

COLA: Annual Max 5%; 80% of CPI

Assumed rate of return: 6.5%

Wage Inflation: 3%

From:	Scott Simon
To:	Michael Ruff
Subject:	RE: JCPER Watch List
Date:	Wednesday, December 8, 2021 10:33:24 AM
Attachments:	image001.png image002.png image004.png

Michael, Only one comment, the following bullet point strikes me as incomplete.

- The Board retained a governance consultant, which completed a review of board governance policies. The consultant recommended changes; the system is in the process of implementing them.

I would suggest something like the following instead.

- The Board retained a governance consultant, which completed a review of board governance policies. The consultant largely affirmed these policies as robust and best/prevailing practices. The consultant did offer recommendations to further improve these policies; the system is in the process of implementing them.

ss

MPERS

Scott L Simon **I** *Executive Director*
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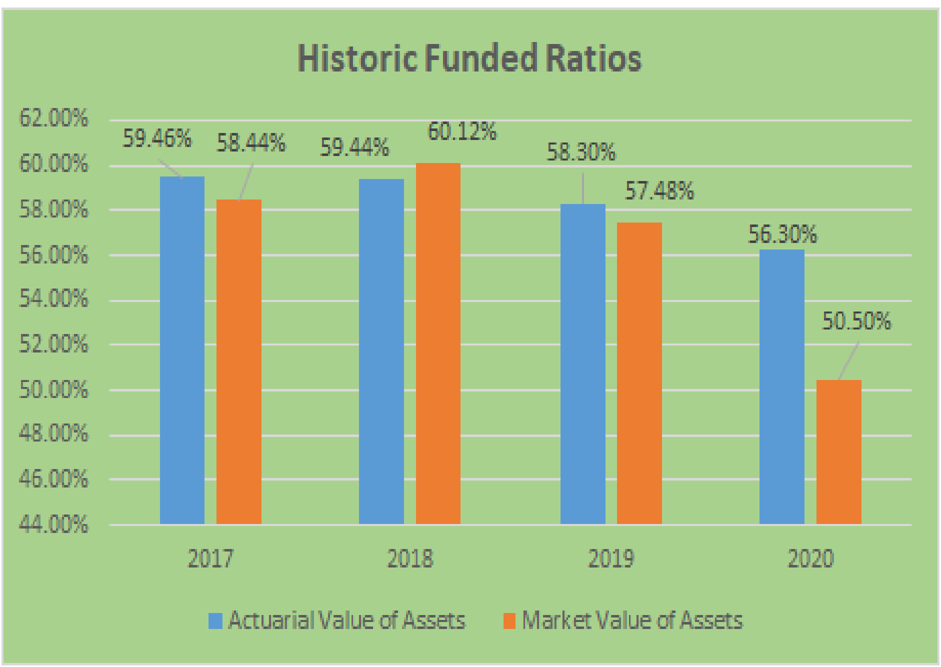
OVERLAND POLICE RETIREMENT FUND

- Rate of return on investments equaled –5.9% (Market) and 3.2% (Actuarial) vs. 7% assumed.
- Updated mortality tables to Pub-2010 Safety.
- In November 2020, the City Council increased employee contributions for lieutenants and captains to 8.5%. As part of the collective bargaining agreement approved in November 2018, the employee contribution rate for sergeants, corporals and police officers is now 9.4%.
- The City Council adopted three changes to the plan in 2017: increased employee contributions from 5% to 7.5%, phased out a retroactive COLA for certain members, and changed the refund of employee contributions upon retirement provision so employee contributions made after April 1, 2017 will not be refunded upon retirement.
- The employer contribution was supported by a tax levy of $0.12 that had been insufficient to meet the ADC since 2008. In August 2017, the voters approved a tax levy increase. The current City tax rates are $0.24 residential, $0.36 commercial, $0.367 personal. The actuary writes “These were recently increased...but are still below the actuarially determined rate.” The actuarially determined tax rate increased from $0.478 as of 4/1/19 to $0.514 as of 4/20/20.
- The City made multiple changes to actuarial assumptions in 2014 based on the results of a five-year experience study, including lowering the assumed rate of return from 7.5 to 7.0 and updating mortality tables.
- The plan smooths investment gains and losses over five years.



Year Ending 3/31,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2021	$1,284,482	N/A	N/A
2020	$1,203,306	$712,577	N/A
2019	$1,117,425	$680,159	61%
2018	$1,091,236	$553,559	51%
2017	$1,136,068	$233,363	21%
2016	$1,085,072	$242,311	22%

As of 4/1/20

Market Value: $11,728,374

Actuarial Value: $13,080,285

Liabilities: $23,229,731

Membership:

Active: 42 Inactive: 43

Normal Retirement Formula:

2.5% of compensation for the first 20 years of service plus 1.5% of compensation for each of the next 10 years of service.

Normal Retirement Eligibility:

20 years of service or Age 62 with 18 years of service or SSA full retirement age with 5 years of service.

Social Security Coverage: Yes

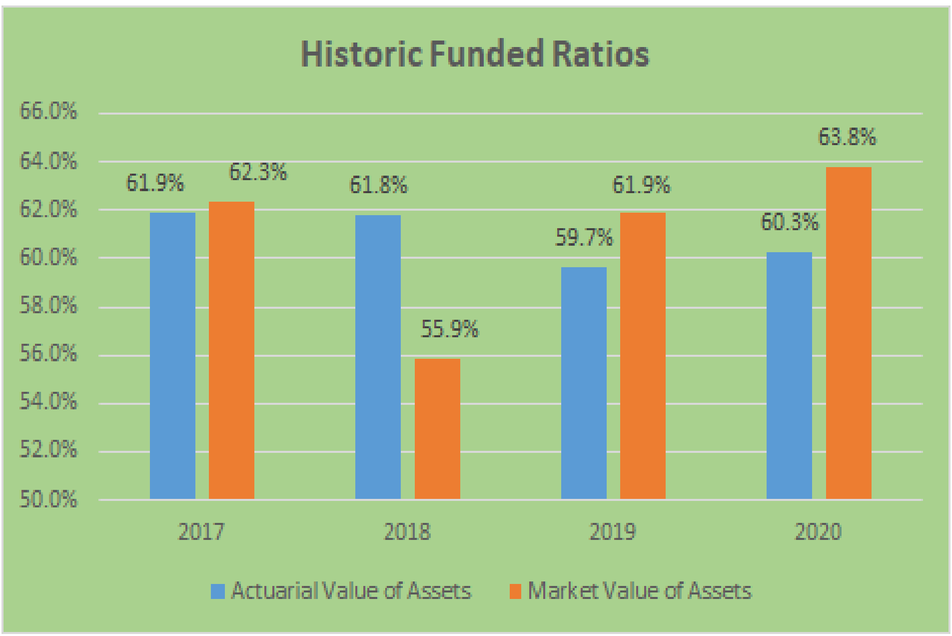
COLA: Annual Max 3%; 60% of CPI

Assumed Rate of Return: 7%

Salary: 3.5%

RAYTOWN POLICE OFFICERS' RETIREMENT FUND

- Rate of return on investments equaled 11.1% (market) and 9.26% (actuarial) vs. 7.5% assumed.
- Updated mortality tables with the most recent projection scale.
- The actuary writes that "The funded status slightly improved compared to the prior valuation, due to the asset gains...The asset gains experienced in 2020 will be recognized in the four succeeding valuations and along with the City's policy to contribute the recommended contribution will allow the funded status to gradually improve."
- Effective with the 1/1/16 valuation, the plan implemented five year smoothing of investment gains and losses. This is designed to reduce volatility of market returns and produce more stability in contribution rates.
- The plan utilizes a closed 30-year period for amortization of unfunded actuarial accrued liabilities that began 1/1/14.
- An employee contribution of 3% of pay was ceased in 2000 when the Plan was 101% funded.
- The Plan was frozen as of December 31, 2013 with members moving to LAGERS.



Year ended 12/31,	RECOMMENDED CONTRIBUTION*	ACTUAL CONTRIBUTION*	PERCENT CONTRIBUTED
2021	$648,688	N/A	N/A
2020	$635,147	$635,147	100%
2019	$590,127	$590,127	100%
2018	$593,459	$593,459	100%
2017	$608,134	$608,134	100%

* Contribution history taken from January 1, 2021 Valuation, Page 19, Ten-Year Schedule of Contributions.

As of 1/1/21

Market Value: $11,014,885

Actuarial Value: $10,405,546

Liabilities: $17,261,198

Membership:

Active: 13 **Inactive**: 69

Normal Retirement Formula:

2.5% of compensation for the first 20 years of service plus 1% for each of the next 10 years of service. Benefits frozen as of 12/31/13.

Normal Retirement Eligibility:

Age 55 with 20 years of service

Social Security Coverage: Yes

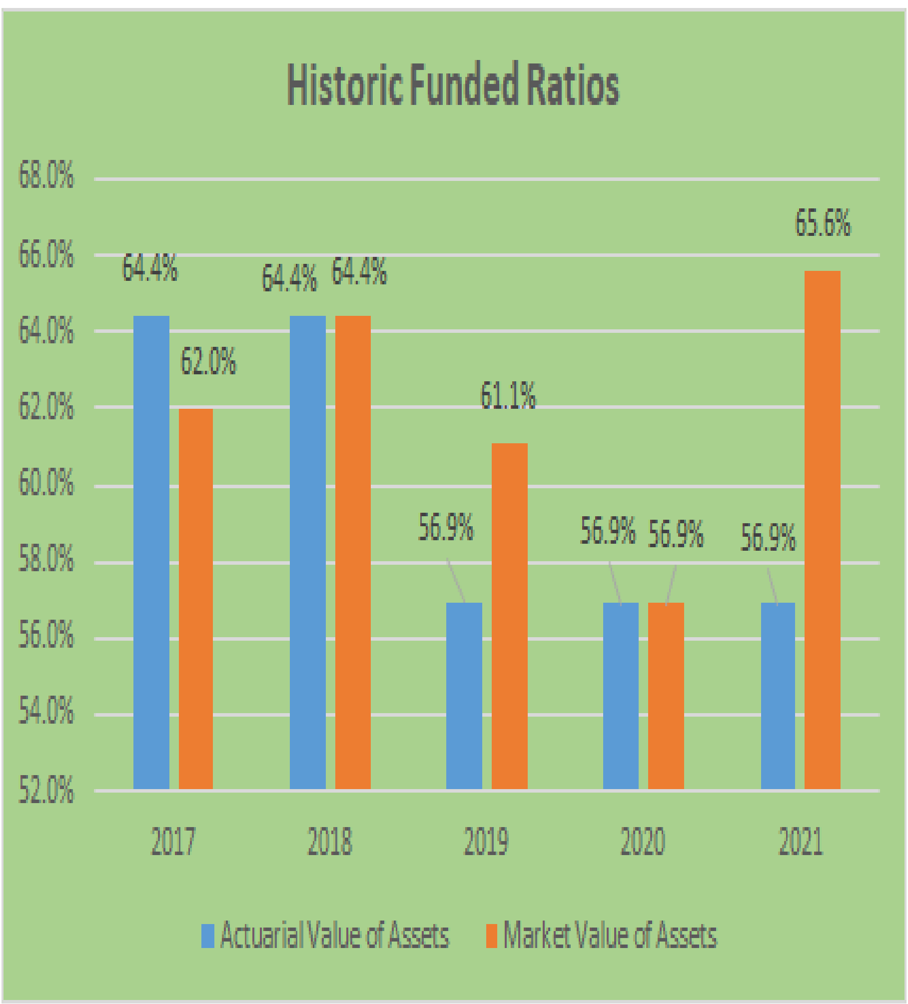
COLA: No COLA

Assumed Rate of Return: 7.5%

Salary: 4%

ROCK HILL UNIFORMED EMPLOYEES' PENSION PLAN

- For the fiscal year ended 3/31/21, the rate of return on investments equaled 39.14% (market) compared to 5.5% assumed.
- The voters approved a ballot measure at the April 2021 election for a $0.23 property tax dedicated to pensions. The City has estimated that the dedicated pension tax will bring in approximately $335,000 annually. The funds are expected to be sufficient to fund the Uniformed Employees' Plan upon transfer to LAGERS and to fund the existing LAGERS benefit programs.
- The City is working with LAGERS to transfer this Plan to LAGERS as a "legacy plan" under section 70.621, RSMo, on February 1, 2022.
- As of the May 1, 2020 actuarial valuation, the assumed rate of return was lowered from 6.4% to 5.5%. Updated mortality tables.
- The employer has not met the actuarially determined contribution since 2008. The City's 3/31/21 Annual Report, page 44, notes that "As of March 31, 2021, the City did not have a formal contribution policy. Annual contributions made to the Plan over the last five years averaged 53% of the Actuarial Required Contribution (ARC). Based on the actuary's recommendation, the City will research a contribution policy that better reflects the facts that the Plan is frozen and the number of active participants is declining."



As of 3/31/21 & 5/1/20

Market Value:	$2,196,510*
Actuarial Value:	$1,904,181*
Liabilities:	$3,344,141*

Membership:

Active: 7 **Inactive**: 18

Normal Retirement Formula:

40% or 50% of compensation, reduced by 1/20 for each year less than 20, plus temporary benefit. Percentage based on age and years of service as of 4/30/03.

Normal Retirement Eligibility: Age 60 with 20 years of service.

Social Security Coverage: Yes

COLA: No COLA

Assumed Rate of Return: 5.5%

Salary: N/A

The City has an actuarial valuation performed every other year. Market value of assets is found in the City's Annual Report for the year ended 3/31/21, page 64. The actuarial value of assets and the liabilities are from the 5/1/20 actuarial valuation, page 2.

Year Ending March 31,	RECOMMENDED CONTRIBUTION	ACTUAL CONTRIBUTION	PERCENT CONTRIBUTED
2022	$295,393*	N/A	N/A
2021	$295,393	$0	0%
2020	$178,339	$125,000	70%
2019	$178,339	$150,000	84%
2018	$212,536	$150,000	71%
2017	$212,536	$150,000	71%

- This plan was closed to new hires in May 2003. Benefit accruals were frozen as of 5/1/11.
- All active participants as well as new hires are members of LAGERS as of September 2007. The City had previously considered transferring the administration and trustee service for the plan to LAGERS under section 70.621 but in fiscal year 2019, the Board of Aldermen held off on the transfer due to the downturn in market performance.
- Contribution history is found in the City's Annual Financial Report for Fiscal Year Ended March 31, 2021, Page 65, Schedule of Contributions.
- *The Recommended Contribution for the Fiscal year ended March 31, 2022 is from the May 1, 2020 Actuarial Valuation, Page 2 and includes interest to end of year.