



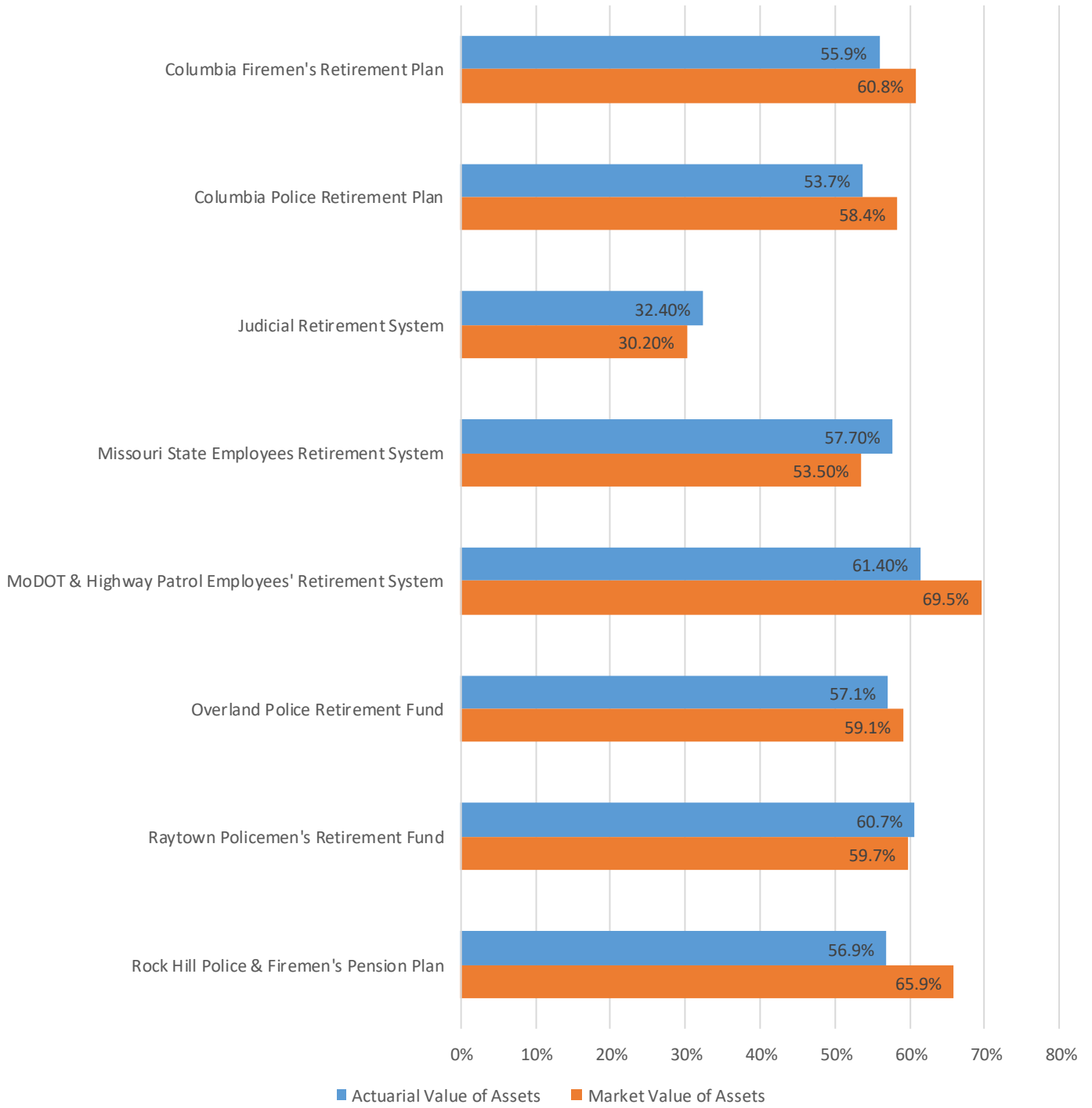
JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

2022 ANNUAL WATCH LIST

Presented on December 1, 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vested, retired, surviving beneficiary, disabled members, and for some plans, terminated nonvested members who have not withdrawn employee contributions.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

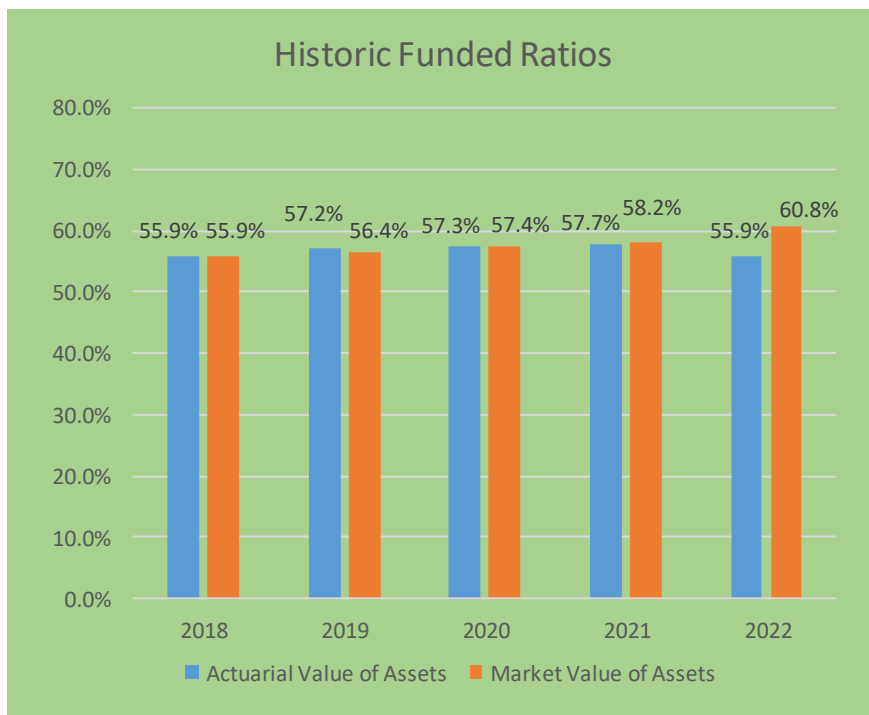


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COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEMS

- The Fire and Police plans are commingled for investment purposes. For the year ended 9/30/21, the rate of return on investments equaled 20.6% (Market) & 10.0% (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 9/30/21 valuation, 25 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
2021	\$6,619,098	\$6,619,098	100%
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%

Fire as of 9/30/21

Market Value: \$111,488,771
Actuarial Value: \$102,437,949
Liabilities: \$183,366,739

Membership:
Active: 139 **Inactive:** 171

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: 6.25%
Wage Inflation: 3.25%

COLUMBIA FIREMEN & POLICE RETIREMENT SYSTEMS (Continued)

POLICE RETIREMENT SYSTEM

Police as of 9/30/21

Market Value:	\$68,834,830	Membership:	Assumed Rate of Return: 7%
Actuarial Value:	\$63,246,718	Active: 154	Salary: 3.25%
Liabilities:	\$117,804,643	Inactive: 217	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.

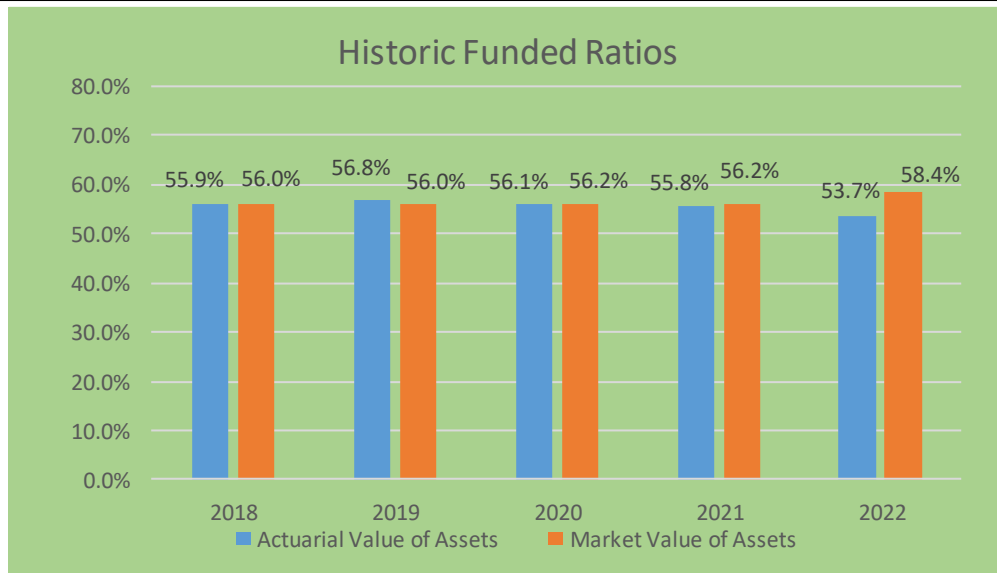
Normal Retirement Eligibility: 20 years of service or age 65. **Hired on/after 10/1/12:** 25 years of service or age 65.

COLA: Annual increase of 0.6%.

Interest: 7%

Social Security: Yes

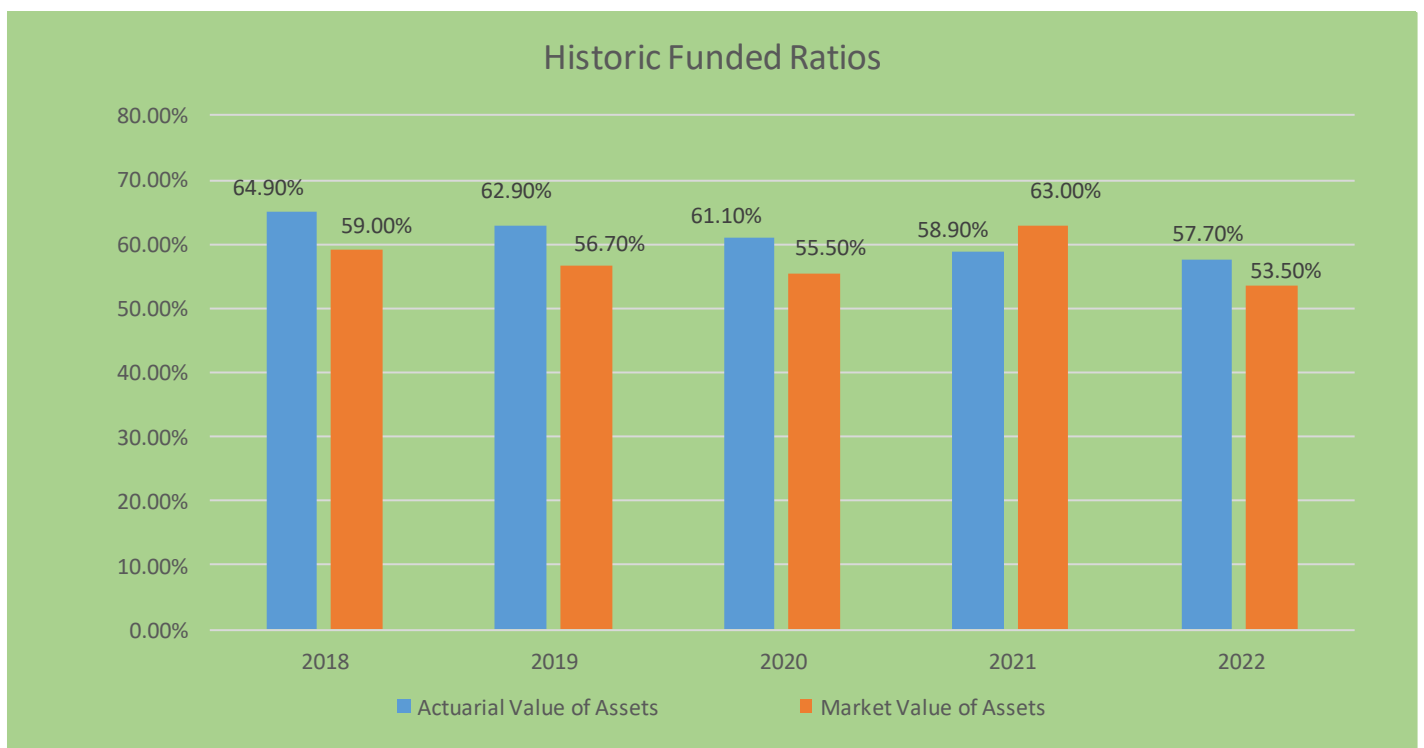
Wage Inflation: 3.25%



Year ending 9/30,	<u>RECOMMENDED CONTRIBUTION</u>	<u>ACTUAL CONTRIBUTION</u>	<u>PERCENT CONTRIBUTED</u>
2021	\$4,280,243	\$4,280,243	100%
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%

MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM

- For the year ending June 30, 2021, rate of return on investments equaled –9.0% (market) and 5.1% (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 growth 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 26.33% for FY23 to 27.26% for FY24.
- One factor that affected the actuarially determined contribution rate was a decline in active membership of 2.9% from 42,829 as of 6/30/21 to 41,595 as of 6/30/22. This decrease resulted in covered payroll remaining relatively flat from the prior year. Active membership has declined about 26% over 18 years from 55,914 actives in 2004 to 41,595 in 2022.
- 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 increased from 22,369 (6/30/21) to 23,304 (6/30/22) and the percentage of members covered by MSEP 2011 increased from 52% to 56%. 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	<u>RECOMMENDED CONTRIBUTION</u>	<u>ACTUAL CONTRIBUTION</u>	<u>PERCENT CONTRIBUTED</u>
2022	\$471,302,256	\$471,302,256	100%
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%

As of 6/30/22

Market Value: \$9,519,930,080
Actuarial Value: \$8,894,328,756
Liabilities: \$15,408,995,032

Active Members: 41,595
Inactive Members: 100,244

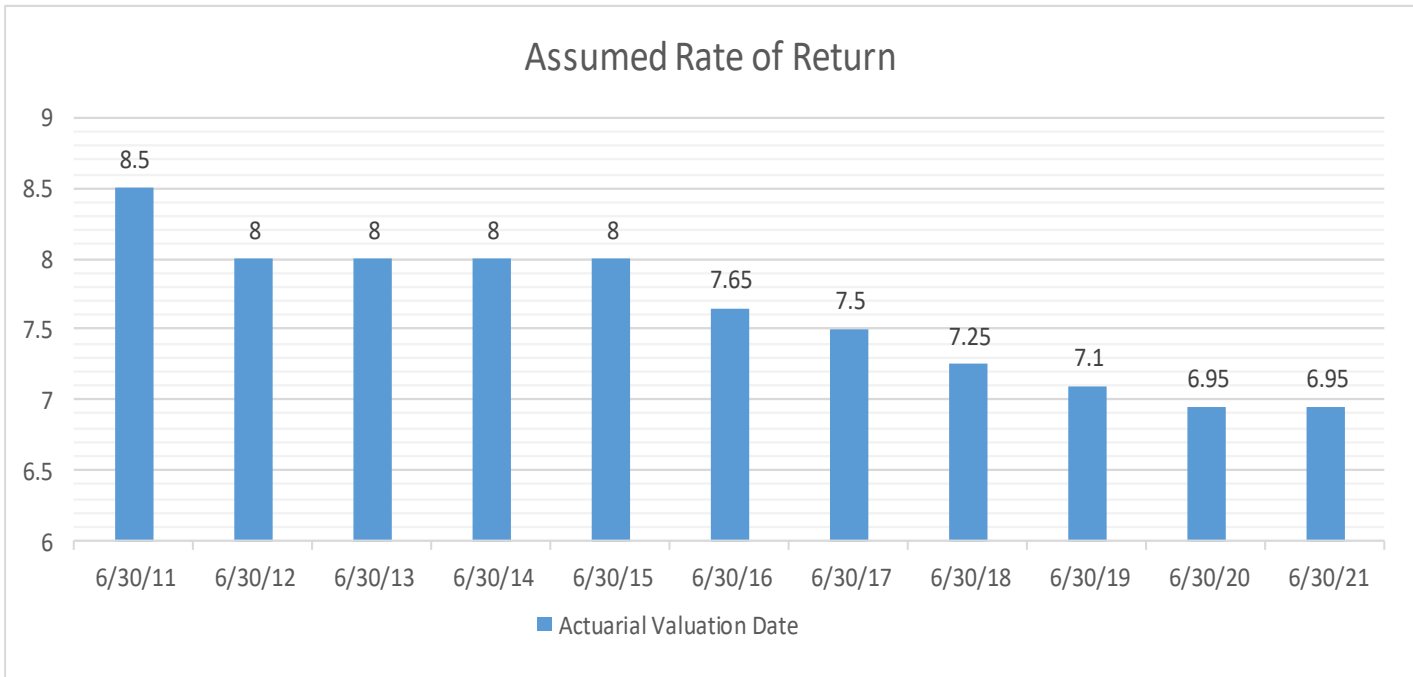
Normal Retirement Formula:
MSEP 2000: 1.7% of compensation times years of service plus 0.8% to age 62 (temp benefit under Rule of 80 or Rule of 90 for the 2011 Tier).

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

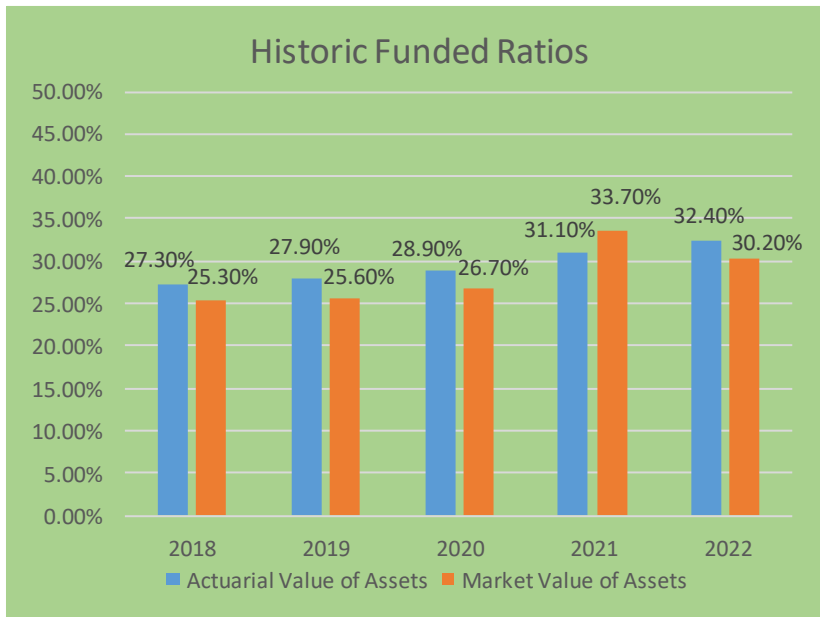
Assumed Rate of Return: 6.95%
Salary: 2.5%

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.



JUDICIAL RETIREMENT PLAN

- For the year ending 6/30/21, investment return equaled -9.0% (Market) and 5.6% (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 252 in the prior year's valuation to 263. The percentage of judges covered by the 2011 tier increased from 60% to 63%. 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%.

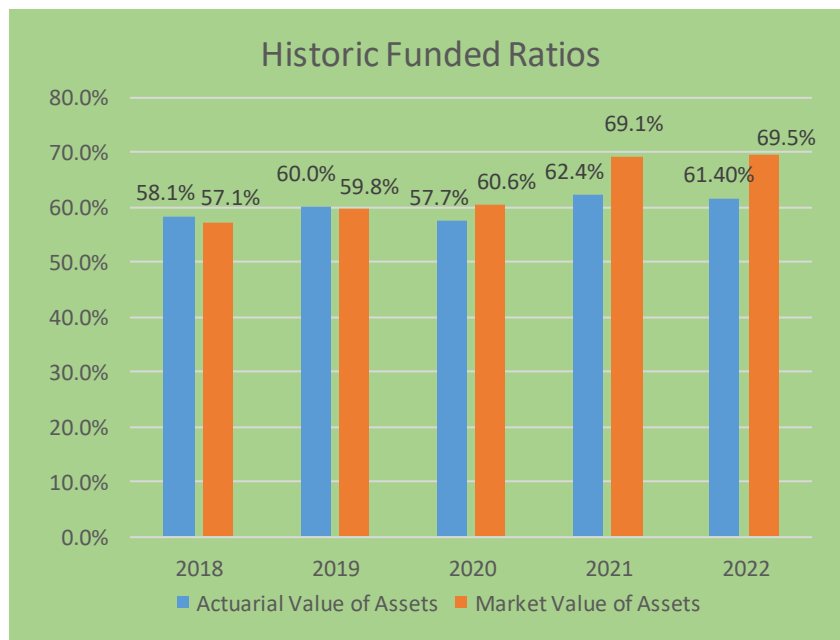


As of 6/30/22	
Market Value:	\$211,081,342
Actuarial Value:	\$194,988,153
Liabilities:	\$630,043,013
Membership:	
Active:	415
Inactive:	623
Normal Retirement Formula:	
50% of compensation. Less than service requirement=pro-rated benefit based on service	
Normal Retirement Eligibility:	
Age 62 with 12 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%	

FY End-ing 6/30,	<u>RECOMMENDED CONTRIBUTION</u>	<u>ACTUAL CONTRIBUTION</u>	<u>PERCENT CONTRIBUTED</u>
2022	\$39,228,848	\$39,228,848	100%
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%

MoDOT & HIGHWAY PATROL EMPLOYEES' RETIREMENT SYSTEM (MPERS)

- Rate of return on investments equaled 3.9% (Market) and 10.21% (Actuarial) vs. 7% assumed as of 6/30/22.
- 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 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 6/30/22, 3,331 active members were covered under the 2011 tier (an increase from 3,280 as of 6/30/21).
- In 2009, the actuary presented a temporary accelerated amortization schedule in accordance with section 105.684. As of 6/30/22 valuation, the plan uses a closed 2-year amortization period for unfunded retiree liabilities and a closed 13-year amortization period for the remaining unfunded liabilities (for the plan year beginning 7/1/23).
- 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).



As of 6/30/22

Market Value: \$3,067,193,086

Actuarial Value: \$2,711,272,503

Liabilities: \$4,410,685,047

Membership:
Active: 6,874 Inactive: 11,673

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

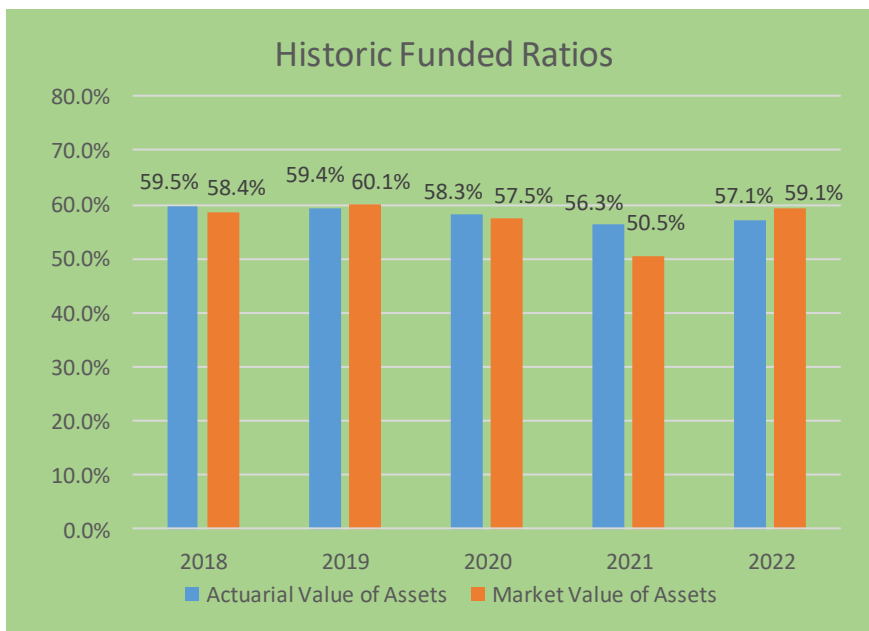
Assumed rate of return: 6.5%

Wage Inflation: 3%

Year Ending June 30,	<u>RECOMMENDED CONTRIBUTION</u>	<u>ACTUAL CONTRIBUTION</u>	<u>PERCENT CONTRIBUTED</u>
2023	\$219,156,203 estimated	N/A	N/A
2022	\$212,711,117	\$212,711,117	100%
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%

OVERLAND POLICE RETIREMENT FUND

- Rate of return on investments equaled 37.1% (Market) and 9.7% (Actuarial) vs. 6.75% 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 \$0.20 residential, \$0.33 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 \$0.514 as of 4/20/20 to \$0.495 as of 4/1/21.
- 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 again lower to 6.75 in 2021 as well as updating mortality tables.



Year Ending 3/31,	<u>RECOMMENDED CONTRIBUTION</u>	<u>ACTUAL CONTRIBUTION</u>	<u>PERCENT CONTRIBUTED</u>
2021	\$1,232,850	\$683,592	55%
2020	\$1,203,306	\$712,577	59%
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 4/1/21

Market Value: \$15,333,624

Actuarial Value: \$13,080,285

Liabilities: \$25,946,468

Membership:
Active: 44 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

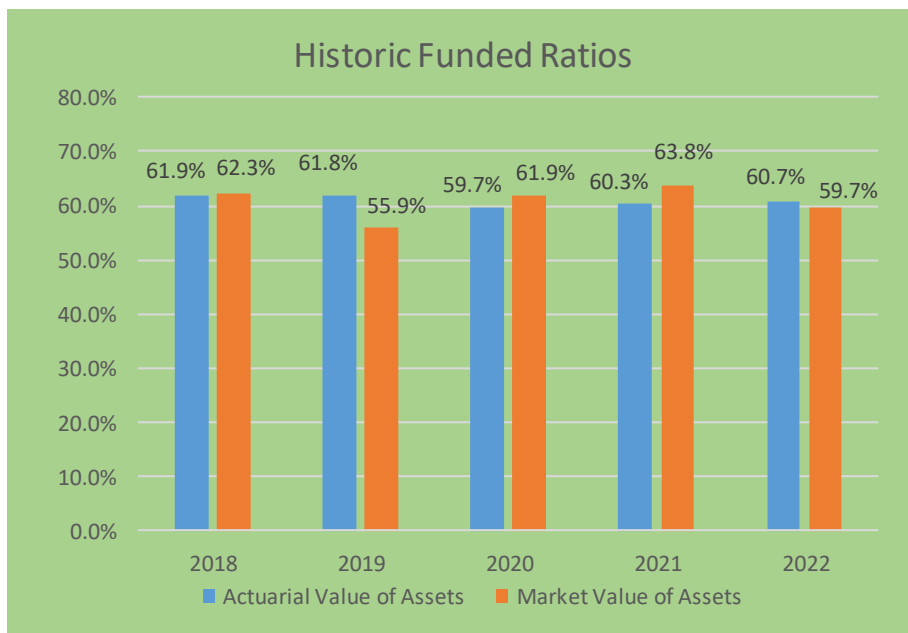
COLA: Annual Max 3%; 60% of CPI

Assumed Rate of Return: 6.75%

Salary: 3.5%

RAYTOWN POLICE OFFICERS' RETIREMENT FUND

- Rate of return on investments equaled 15.29% (market) and 11.26% (actuarial) vs. 7.0% 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 2021 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,	<u>RECOMMENDED CONTRIBUTION*</u>	<u>ACTUAL CONTRIBUTION*</u>	<u>PERCENT CONTRIBUTED</u>
2021	\$648,688	\$648,688	100%
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, 2022 Valuation, Page 19, Ten-Year Schedule of Contributions.

As of 1/1/22

Market Value: \$11,807,379
Actuarial Value: \$10,702,133
Liabilities: \$17,940,481

Membership:
Active: 13 **Inactive:** 68

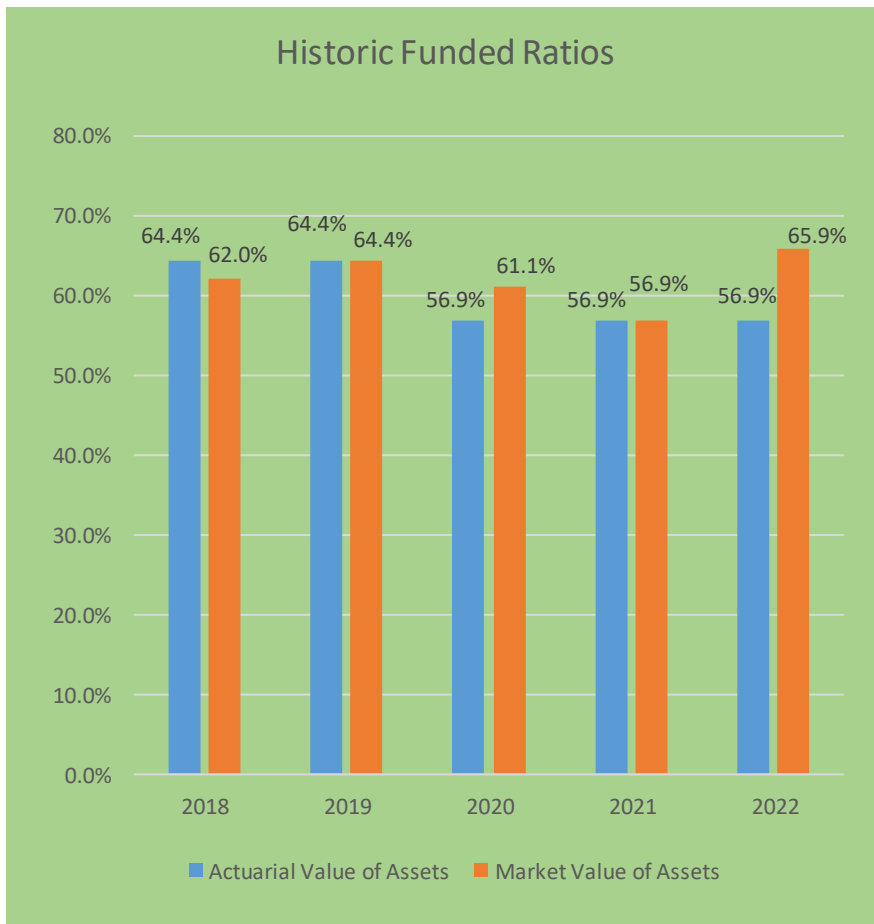
Normal Retirement Formula:
 2.5% of compensation for the first 20 years of service plus 1% for each of the next 10 years of service. Benefits frozen as of 12/31/13.

Normal Retirement Eligibility:
 Age 55 with 20 years of service

Social Security Coverage: Yes
COLA: No COLA
Assumed Rate of Return: 7.0%
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: \$2,135,440*

Liabilities: \$3,344,141*

Membership:
Active: 7 **Inactive:** 17

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 End- ing March 31,	<u>RECOMMENDED CONTRIBUTION</u>	<u>ACTUAL CONTRIBUTION</u>	<u>PERCENT CONTRIBUTED</u>
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%

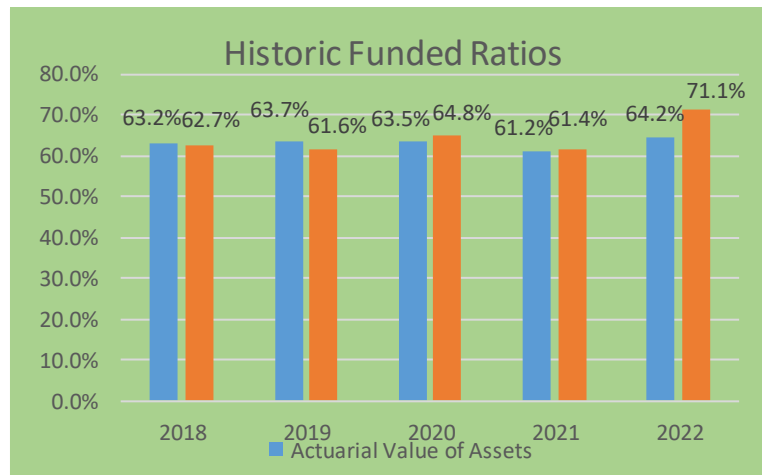
- This plan was closed to new hires in May 2003. Benefit accruals were frozen as of 5/1/11.
- All active participants as well as new hires are members of LAGERS as of September 2007. The City had previously considered transferring the administration and trustee service for the plan to LAGERS under section 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.

Highlights

These plans have dropped off the watch list as they have acquired a funded ratio above 70.0% on a market value basis.

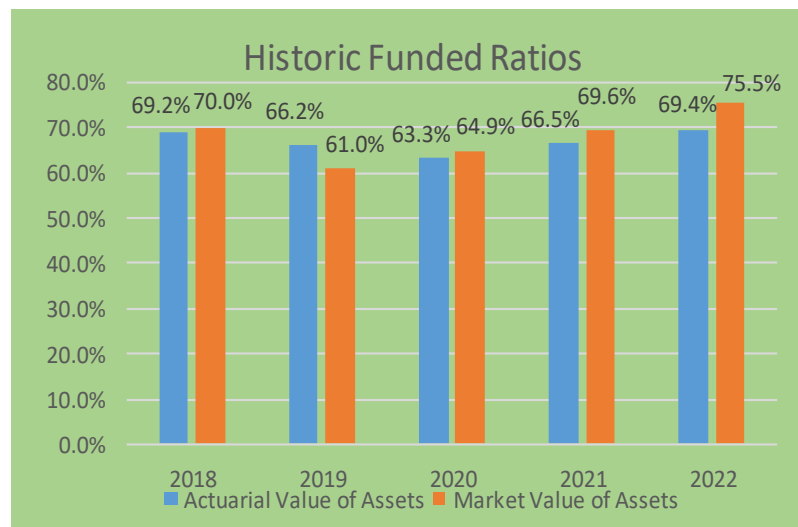
Joplin Police & Fire Pension Plan

Per the actuary “Actuarial experience was favorable for the year ended October 31, 2021, resulting in a modest experience gain of \$77,799. The gain was primarily due to investment returns greater than assumed and was offset by salary increases greater than assumed. The market value rate of return on plan assets this year was 20.3%. The actuarial value rate of return on assets used to determine the contribution requirements and funded ratio for this valuation was 8.7% versus 5.75% expected.”



Kansas City Public School Retirement System

Per the actuary valuation “As of January 1, 2022 the System had total assets of \$753.5 million when measured on a market value basis, an increase of over \$59 million from the January 1, 2021 value of \$694.2 million.”



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