



JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

**2021 ANNUAL REPORT
TO THE
MISSOURI
GENERAL ASSEMBLY**



STATE OF MISSOURI
JOINT COMMITTEE ON PUBLIC EMPLOYEE RETIREMENT

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February, 2021

Dear Colleague:

The Joint Committee on Public Employee Retirement (JCPER) respectfully submits its 2021 Annual Report for Plan Year 2019 to the General Assembly. This report is designed to comply with the requirements of Section 21.563, RSMo and includes data relating to Missouri's state and local public employee retirement systems. The JCPER hopes this information assists in the transparency of the financial and actuarial condition of Missouri's public employee retirement systems.

This report is the result of the combined efforts of the Joint Committee staff, the Senate's Computer Information Systems staff, and the Senate's Print Shop staff. The JCPER hopes the information contained in this report is helpful to members of the General Assembly in making legislative decisions relating to Missouri's public employee retirement systems.

As policymakers in Missouri and across the country continue to evaluate appropriate retirement benefit levels and work to maintain retirement security for public employees and benefit recipients in the midst of challenging , the JCPER will continue in its clearinghouse role for comprehensive public pension plan information. This role enables the JCPER to continue in its founding principles of facilitating transparency and providing assistance to the Missouri General Assembly and Missouri taxpayers.

Sincerely,

A handwritten signature in cursive script, reading "Patricia Pike".

Representative Patricia Pike
Chair

Foreword

This 2021 Annual Report is a compilation of statistics for the 126 state and local public employee retirement systems in the state of Missouri for plan year 2019.

In measuring the funded status and progress for each individual plan, the assets are stated using a market value, and if adopted by a plan, a “smoothed” or actuarial value of assets. Plan liabilities are stated using actuarial accrued liability. The JCPER staff obtained this information from the annual surveys, actuarial valuations, financial statements, and Comprehensive Annual Financial Reports for plan year 2019. Although the focus of the report is on plan year 2019, to avoid viewing one plan year in isolation, the report includes four years of data, where available, in the appendices to better provide for looking at a trend.

In the defined benefit plan section, the term “interest” under actuarial assumptions refers to the assumed rate of return for investments. The term “inactive” for membership includes terminated vested members, retired members, surviving beneficiary members, disabled members, and if applicable, terminated nonvested members who have not withdrawn employee contributions.

Note of Appreciation

The JCPER would like to thank the staff of Senate Computer Information Systems for their exceptional assistance in completing this annual report, the Senate Print Shop for printing this report, and each individual plan for its reporting and cooperation with JCPER staff.

**Joint Committee on Public Employee Retirement
100th General Assembly, Second Regular Session**



Rep. Pike,
Chair



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Brown



Rep. Richard
Brown



Rep.
Runions



Rep. Shull



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TABLE OF CONTENTS

	Page
TRANSMITTAL LETTER.....	1
EXECUTIVE SUMMARY.....	5
BACKGROUND & RESPONSIBILITIES	6-7
MISSOURI'S PERS AND TYPES OF PLANS	7-10
RETIREMENT PLAN MEMBERSHIP	11
RETIREMENT PLAN FUNDING & CONTRIBUTION RATES	12-16
ACTUARIAL ASSUMPTIONS/INVESTMENT REQUIREMENTS.....	16-20
PENSION REFORMS.....	21
NATIONAL ISSUES	21-22
STATE ISSUES.....	22-23
CONCLUSION.....	25
DEFINED BENEFIT PLANS.....	26
LEGACY PLANS.....	112
DEFINED CONTRIBUTION PLANS	117

Executive Summary: In 1983, the Missouri General Assembly established the JCPER as a central reporting entity for Missouri's public pension plans and to provide an analysis function for the General Assembly and Missouri taxpayers. The JCPER is statutorily required to annually compile and submit a report to the General Assembly. In the more than thirty years since collecting its first year of public pension plan data in 1984, the JCPER has served as a resource to the General Assembly. This 2021 annual report reflects pension plan data for plan year 2019.

- The total net assets for Missouri's public pension plans were approximately \$81.04 billion in plan year 2019, increasing by 3.5% from approximately \$78.25 billion in plan year 2018.
- Total plans reporting to the JCPER equaled 126 plans for plan year 2019. Of these, seventy-nine were defined benefit plans, thirty-seven were defined contribution, and ten were a combination of defined benefit and defined contribution.
- Total membership of Missouri's public pension plans was 651,116, an increase from 635,228 in 2018. Both active membership and inactive membership increased. The number of inactive members continued to exceed active members.
- Net investment income equaled approximately \$5.21 billion, a decrease from plan year 2018's net investment income of approximately \$5.72 billion.
- Of the 126 public pension plans in Missouri, sixteen are "statutory" plans meaning that the General Assembly has established the plan in state statute. Because the plan document is contained in state statute, future changes must be made by an act of the General Assembly unless authority has been granted to the plan's board of trustees. The remaining plans are governed locally by a plan sponsor. It is important to note that the statutory pension provisions in Chapter 105 apply to all public pension plans regardless of the sponsoring entities.

BACKGROUND OF THE JCPER

In 1983, during the First Regular Session of the 82nd General Assembly, Missouri lawmakers established the Joint Committee on Public Employee Retirement (JCPER). The General Assembly took this action in response to the growing concern regarding the fiscal integrity of Missouri's state and local public employee retirement systems. Previously, no centralized reporting agency existed that was charged with maintaining information regarding these public plans. This permanent pension review and oversight body consists of six senators and six representatives. Section 21.553, RSMo, mandates that the committee be bipartisan in nature by stating that "no political party shall be represented on the committee by more than three members from the Senate nor more than three members from the House." The JCPER is governed by provisions in both Chapters 21 and 105 of the Missouri Revised Statutes. Provisions in Chapter 105 apply to all state and local public employee retirement systems.

Responsibilities of the JCPER established by Chapter 21:

- Make a continuing study and analysis of all state and local government retirement systems;
- Devise a standard reporting system to obtain data on each public employee retirement system that will provide information on each system's financial and actuarial status at least biennially;
- Determine from its study and analysis the need for changes in statutory law;
- Make any other recommendations to the General Assembly necessary to provide adequate retirement benefits to state and local government employees within the ability of the taxpayers to support their future costs.

Provisions in Chapter 105 establish the following requirements for public retirement plans:

- Funds are to be held in trust and shall not be commingled with any other funds;
- Are considered fiduciaries and may invest according to the prudent person standard;
- Submit to the JCPER an actuarial cost statement prior to taking final action on a substantial proposed change in plan benefits;
- May participate in cooperative agreements providing portability of public employee retirement benefits;
- Perform an actuarial valuation at least biennially in compliance with recommended standards of the Governmental Accounting Standards Board (GASB);
- File proposed rules with the JCPER;
- For defined benefit plans, submit investment performance to the JCPER on a quarterly basis;
- Notify the JCPER within seven calendar days when a plan's governing board takes final action providing a cost-of-living increase or new or additional payments beyond plan provisions of the prior plan year;
- Establish a program of board member education for annual education of board members.

Activities of the JCPER:

During calendar year 2020, the JCPER engaged in the following activities:

- **PERS Annual Reporting.** The JCPER conducted an annual survey of Missouri's state and local public employee retirement systems for plan year 2019 and collected information for analysis, including asset

- values, liabilities, benefit levels, membership, asset allocation, advisors, composition of board of trustees, and fees for professional services such as actuary, investment custodian, investment consultants, and third party administrators. The JCPER reviewed this information, along with actuarial valuations and financial statements, and compiled it into the appendices to this report. It is the policy of the JCPER to examine multiple years of information rather than look at one year in isolation.
- **Assistance to the General Assembly.** The JCPER staff monitored thirty-nine retirement-related bills during the 2020 regular legislative session. The General Assembly passed three retirement-related bills. The Governor signed all three bills into law. (See State Legislation section.) JCPER staff also monitored one retirement-related bill during the First Extraordinary Session of 2020.
- **Actuarial cost statements.** The JCPER received and reviewed actuarial cost statements from five plans that made changes to their benefit program. JCPER staff contacted additional plans to inquire whether a particular benefit change constituted a “substantial proposed change” and would require the preparation of an actuarial cost statement.
- **Assistance to Local PERS.** The JCPER continues to provide assistance to local PERS throughout the state. This assistance may range from individual plan analysis, plan comparisons, and outlining statewide trends. The JCPER continues to advocate this very important function and encourages local PERS to contact it.
- **Internet Resource.** Information relating to the JCPER is available on the JCPER’s website, <https://jcper.org/>. Maintained by the Senate Computer Information Systems staff, the website provides access to information regarding the JCPER Annual Report and Annual Watch List, committee meetings, statutes governing the JCPER and public employee retirement systems, actuarial cost statements, a PERS directory, and current and historical state retirement legislation monitored by JCPER staff.

Statutory Governance of Missouri’s Public Pension Plans

Section 21.563, RSMo requires that the JCPER annual report “...include an analysis and statement of the manner in which statutory provisions relating to public employee retirement programs are being executed.” Multiple statutory provisions apply to Missouri’s state and local public employee retirement systems. Missouri statutes govern public pension plans in two ways. First, sixteen public pension plans are created by statute. Specific statutory provisions govern these plans’ boards of trustees, funding and investment requirements, and benefit structure. Second, statutes in Chapter 105 contain provisions that govern all Missouri public pension plans, including provisions relating to fiduciary responsibility, financial reporting, filing of administrative rules, time frame and public availability of actuarial cost statements for certain benefit changes, requirements for actuarial valuations and cost statements, and education requirements for board member education. Public pension plans are required to notify the JCPER of cost-of-living adjustments, and submit quarterly investment reporting to the JCPER, which reviews this information at its quarterly meetings.

Missouri’s Public Employee Retirement Systems

At the close of plan year 2019, 126 public pension plans reported to the JCPER.

The charts on the next page provide a breakdown of Missouri’s public retirement plans in terms of plan sponsors, showing the various public entity categories that sponsor public retirement plans. Plan sponsors include the state, municipalities, public hospitals, and political subdivisions, including public library districts, public safety entities, and public utility districts. Information for individual plans is included in the Appendices to this report.

For comparison purposes, information for two plan years is included to show the changes that have occurred from year to year regarding plan membership and asset levels.

Plan Year 2019

PERS	TOTAL # PLANS	ACTIVE MEM-BERS	NON-ACTIVE MEM-BERS	ASSETS
Municipalities	50	16,702	19,477	\$ 6,335,150,762
Fire Protection Districts	35	1,712	674	\$ 535,143,852
Hospitals & Health Centers	8	7,799	3,751	\$ 646,491,921
Statewide	7	111,022	118,947	\$19,412,686,738
Transit Authorities	5	2,330	2,229	\$ 293,991,337
Public Schools & Universities	6	168,074	181,768	\$52,283,867,649
Counties	3	5,106	7,557	\$ 1,047,633,428
Public Libraries	1	383	348	\$ 52,906,304
Drainage & Levee Districts	1	14	8	\$ 1,554,633
Public Water Supply Districts	3	37	5	\$ 5,353,984
Sewer Districts	1	1,014	976	\$ 309,166,309
Ambulance Districts	3	243	39	\$ 35,096,604
Other	3	785	116	\$ 86,812,098
TOTALS	126	315,221	335,895	\$81,045,855,619

The data listed for plan year 2019 shows an increase in both active and inactive members and an increase in overall asset values from plan year 2018.

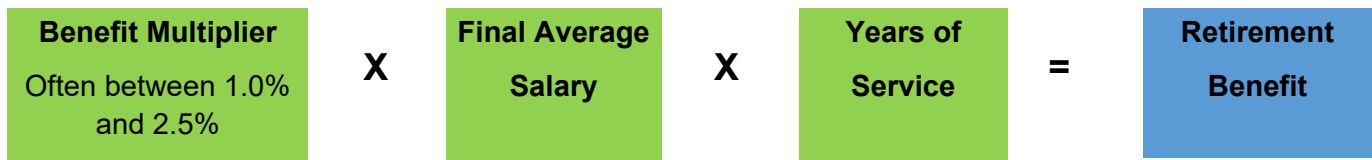
Plan Year 2018

PERS	TOTAL # PLANS	ACTIVE MEM-BERS	NON-ACTIVE MEMBERS	ASSETS
Municipalities	50	16,818	19,005	\$ 6,267,495,466
Fire Protection Districts	34	1,612	645	\$ 481,175,918
Hospitals & Health Centers	9	7,423	3,757	\$ 546,918,626
Statewide	7	110,505	114,185	\$ 18,880,696,041
Transit Authorities	5	2,391	2,144	\$ 282,246,681
Public Schools & Universities	6	165,393	175,220	\$ 50,431,629,714
Counties	3	5,005	7,268	\$ 932,771,688
Public Libraries	1	362	349	\$ 44,716,678
Drainage & Levee Districts	1	14	9	\$ 1,497,360
Public Water Supply Districts	3	43	2	\$ 5,300,523
Sewer Districts	1	944	989	\$ 269,130,031
Ambulance Districts	3	252	31	\$ 28,727,035
Other	3	756	106	\$ 79,087,706
TOTALS	126	311,518	323,710	\$ 78,251,393,467

Types of Public Employee Retirement Plans

Two common types of public sector retirement plans exist: Defined Benefit and Defined Contribution.

Defined Benefit (DB): The defined benefit plan is the most common type of plan covering Missouri public employees in seventy-nine of the 126 plans. A defined benefit plan is funded by employer contributions, and in some cases, employee contributions. Generally, defined benefit plans specify that a retirement benefit is based on years of creditable service and a final average salary calculation. Most plans calculate the average of a member's salary for three or five years prior to retirement. The most common benefit formula provides that a member will receive a certain percentage of his or her final average salary calculation, known as the benefit multiplier. Typical benefit multipliers range from 1.0% to 2.5%. The selection of a benefit multiplier is often influenced by whether plan members participate in Social Security.



Alternatively, a few Missouri defined benefit plans calculate the retirement benefit using a flat dollar amount for each year of service. In a defined benefit plan, a member's retirement benefit is payable for the member's lifetime. Depending on the option chosen and plan structure, the plan may also provide disability and/or survivor benefits. It is important to note that the employer bears the investment risk. This report focuses primarily on defined benefit plans.

Defined Contribution (DC): A defined contribution plan consists of employer and/or employee contributions into an individual account with the accumulated account balance available at retirement age including any investment gains or losses. With a defined contribution plan, no minimum benefit is guaranteed or specified for members.



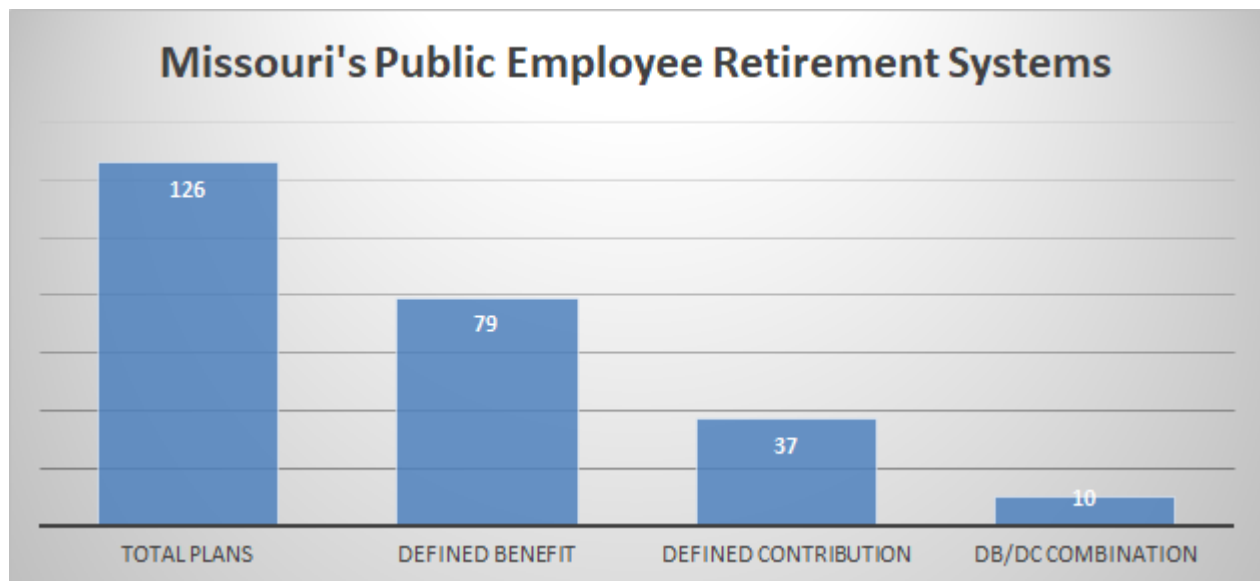
The employee bears the investment risk and is often responsible for making investment decisions. Investment options may include mutual funds, target date retirement funds, or stable value funds. For plan year 2019, thirty-seven defined contribution plans reported to the JCPER.

Hybrid Plan Design (DB/DC Combination): Some plan sponsors offer a retirement plan that incorporates both a DB and a DC component with a minimal lifetime defined benefit accompanied by an individual employee DC account. A hybrid plan design may allocate investment risk and contribution risk between the employer/plan sponsor and the employees.

Cash Balance Plan Design: Another plan type is a cash balance plan. In contrast to a defined benefit plan, a cash balance plan's promised benefit is in terms of a member's stated account balance. A member's benefit is based on employee contributions, employer pay credits, and an interest credit. However, unlike a defined contribution plan, the plan's funds are invested and managed by the retirement plan/investment manager. The employer/plan sponsor bears the investment risk. One Missouri public employee retirement system (North Kansas City Hospital) adopted a cash balance plan for certain members beginning in plan year 2019.

Other: Some plan sponsors have closed a defined benefit plan to new hires or frozen benefit accruals and established a defined contribution plan while maintaining the closed or frozen defined benefit plan.

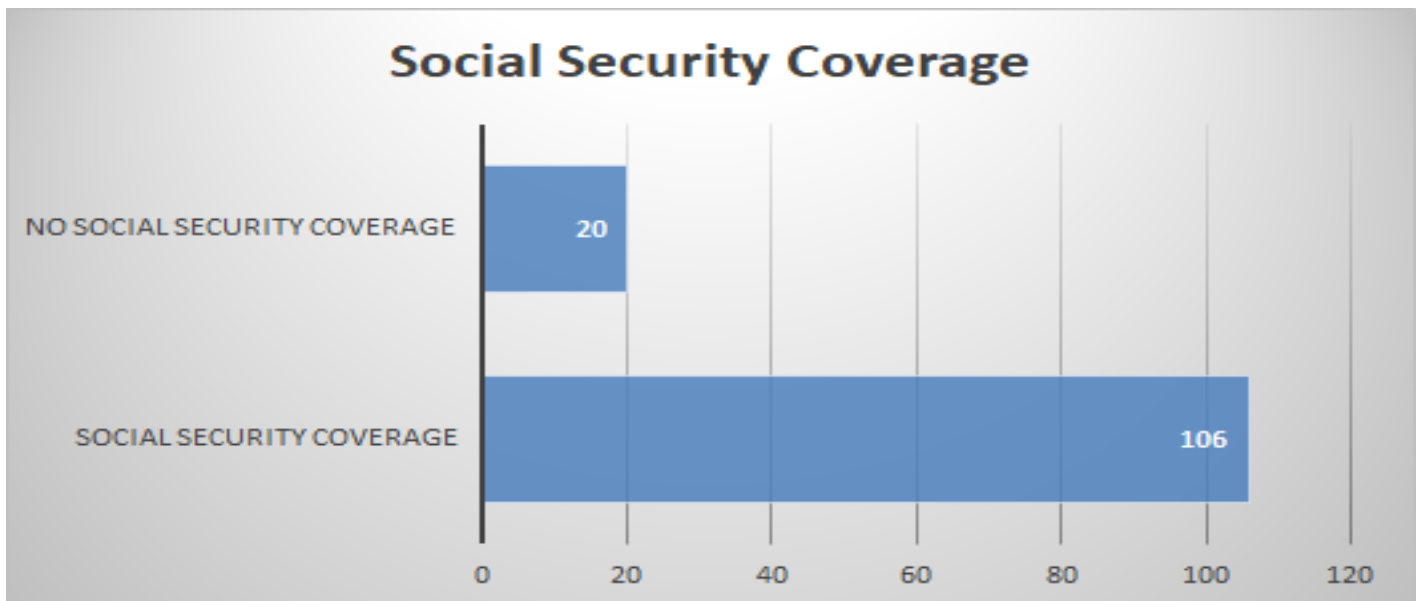
The chart below shows the number of plans by type in Missouri:



For plan year 2019, the number of defined contribution plans and DB/DC combination plans changed from plan year 2018. The number of combination plans increased from nine to ten because Wentzville Fire Protection adopted a hybrid plan design by establishing a defined benefit plan to operate in conjunction with its existing defined contribution plan. Eureka Fire Protection District closed its defined benefit plan and established a defined contribution plan for new employees; it began reporting the DC plan to the JCPER. Finally, the number of defined contribution plans has decreased because Cooper County Memorial Hospital was sold to a private entity and subsequently ceased operations.

Social Security Coverage

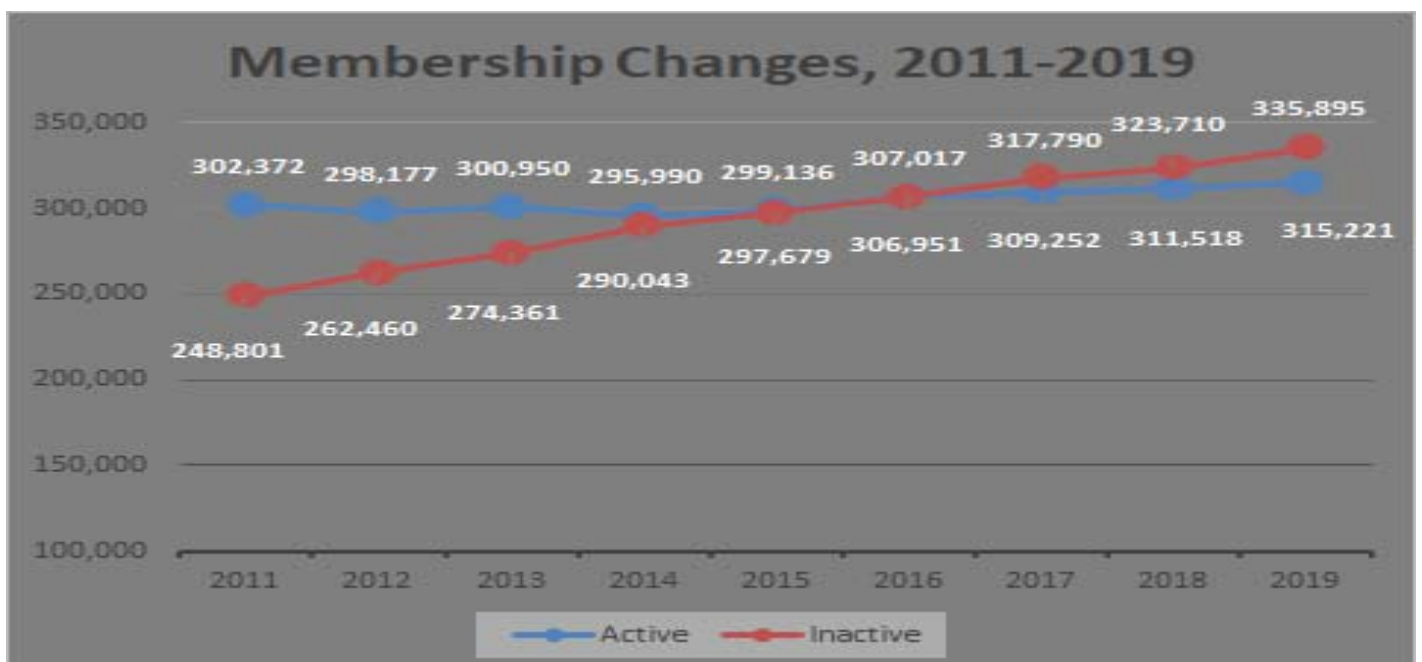
Social Security coverage is mandatory for the majority of Missouri's public employee retirement plans. Social Security coverage is established and governed by a Section 218 agreement between the employer political subdivision and the Social Security Administration. Plans whose members are not covered by Social Security generally provide a higher benefit formula and may have lower age and service requirements than a plan whose members are covered by Social Security. The chart at the top of the next page illustrates the Social Security coverage for Missouri's public plans.



Twenty plans are not covered by Social Security, including 84,428 active members and 69,810 inactive members. Eighteen of these plans are defined benefit and two are defined contribution.

Membership in Missouri's Public Employee Retirement Systems

In plan year 2019, total public plan membership in Missouri increased by 15,888 members from plan year 2018. This number of members is the highest for the past ten years. Both active and inactive membership increased from plan year 2018. Inactive membership continued to experience substantial growth, a trend beginning in 2010 and 2011. In plan year 2019, inactive membership increased by 12,185 members. Plan year 2019 was the third plan year in which the number of inactive members exceeded active members. It is interesting to note that when the JCPER first began reporting plan data, inactive members composed approximately 22% of total plan membership. In contrast, in plan year 2019, inactive members compose approximately 51.6% of total membership.



Funding of Missouri's Public Employee Retirement Systems

Defined benefit pension plans are composed of two primary sources of income and two primary expenditure categories, commonly referred to as the pension funding equation:



These categories must be adjusted if the income sources do not equal the expenditure categories long-term.

Contributory Plans and Non-Contributory Plans:

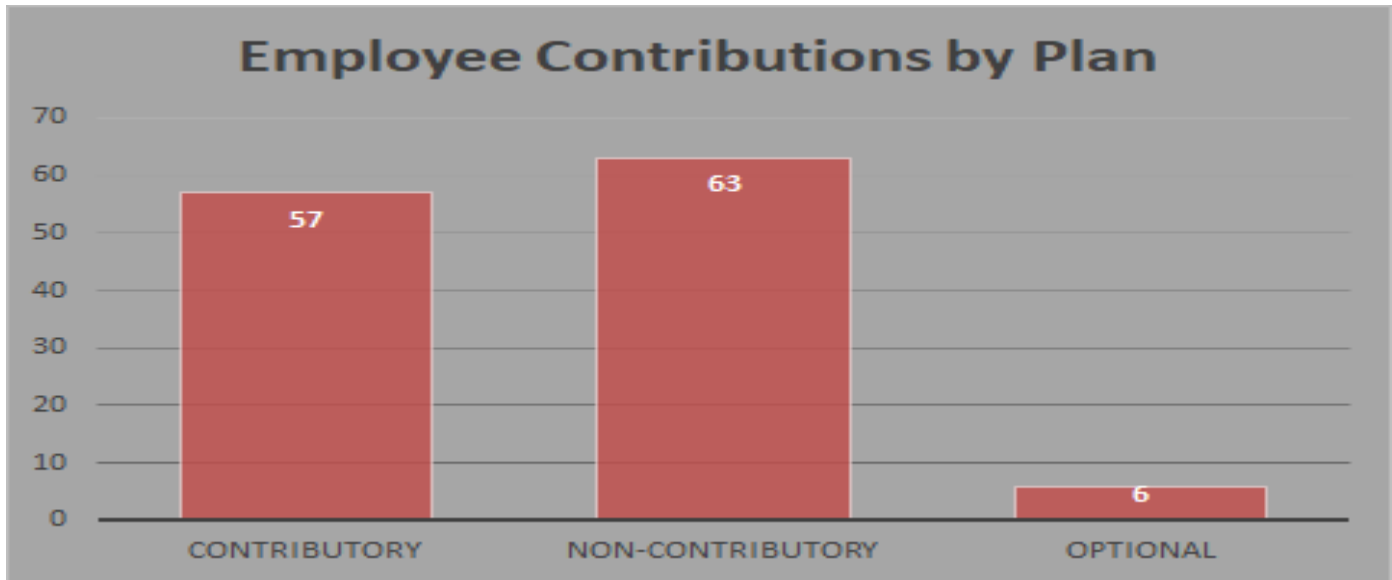
Contributory Plans: A contributory plan requires the employee to contribute a portion of earnings to the plan. The contribution rate varies by plan and is in addition to the employer's contribution. For plans whose members do not participate in Social Security, the contribution rate tends to be higher, in part because, as previously noted, the benefit level tends to be higher. The lowest employee contribution rate is 1%. Out of plans whose members do not participate in Social Security, the highest contribution rate is 18.08%. For plans whose members do participate in Social Security, the highest employee contribution rate is 9%. In addition, at least four plans require employee contributions that are calculated as flat dollar amounts per pay period rather than as a percent of compensation. Some defined contribution plans require employee contributions as well.

For purposes of this report, the College and University Retirement Plan (CURP), the Judicial Retirement System, Missouri State Employees' Retirement System (MOSERS), the MoDOT & Highway Patrol Employees' Retirement System (MPERS), Prosecuting Attorneys' and Circuit Attorneys' Retirement System (PACARS) and St. Louis County Employees Retirement Plan have been included as contributory even though some employees are required to contribute and some are not. Beginning in 2010, the General Assembly has passed legislation requiring employees hired on or after certain dates to contribute a percentage of pay to CURP, the Judicial Retirement System, MOSERS, MPERS and PACARS. St. Louis County requires employees hired on or after February 1, 2018 to contribute 4% to its plan.

Non-Contributory Plans: In a non-contributory plan, employees do not contribute. As a result, for a defined benefit plan, the employer is responsible for making the full contribution as determined by the plan's actuary. For defined contribution plans that are non-contributory, in many cases, the plan sponsor offers a deferred compensation plan into which its employees may defer their compensation for an additional retirement savings vehicle.

Optional: Six plans permit, but do not require, employee contributions: one defined benefit plan and five defined contribution plans. First, the Local Government Employees' Retirement System (LAGERS) permits each member political subdivision, as part of its benefit package election, to choose whether to require employees to contribute 4%. Some LAGERS-covered employers require employee contributions while others do not. Second, five defined contribution plans provide that employee contributions are optional. For some of these plans, an employer match is provided if the employee chooses to contribute. As a result, some employees choose to contribute while others do not.

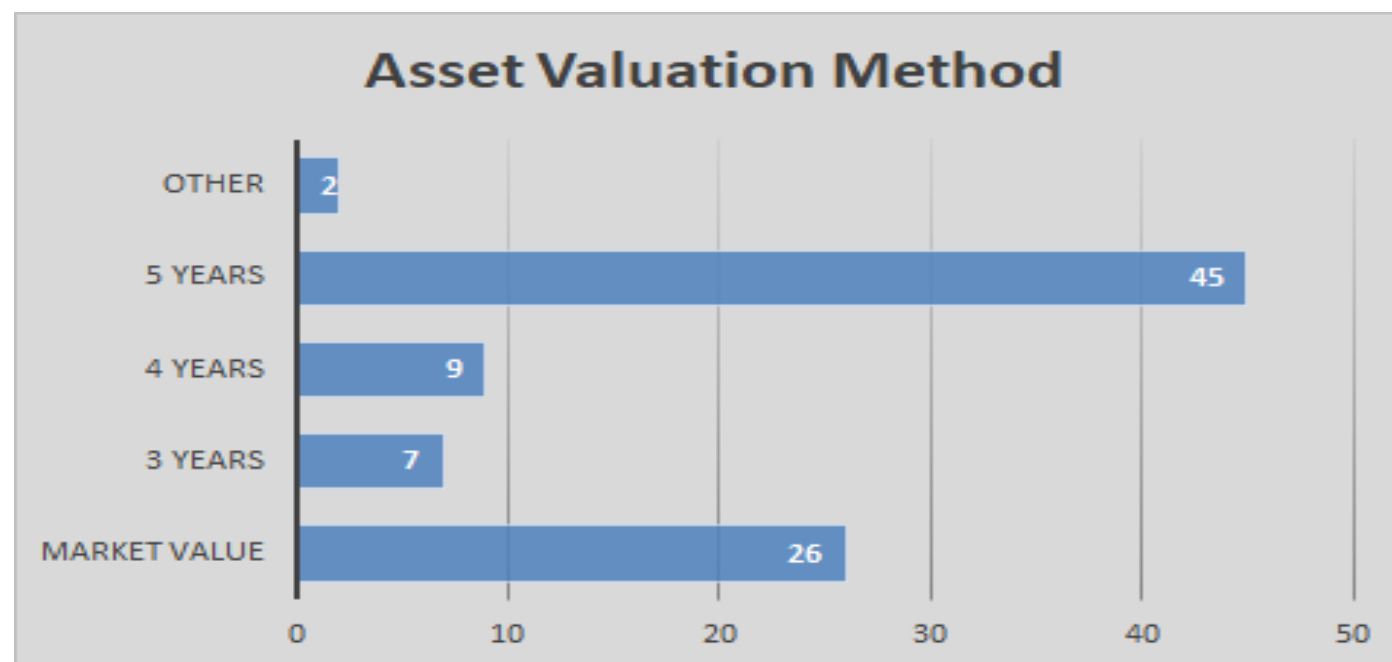
The chart below breaks down the plans in terms of employee contribution requirements.



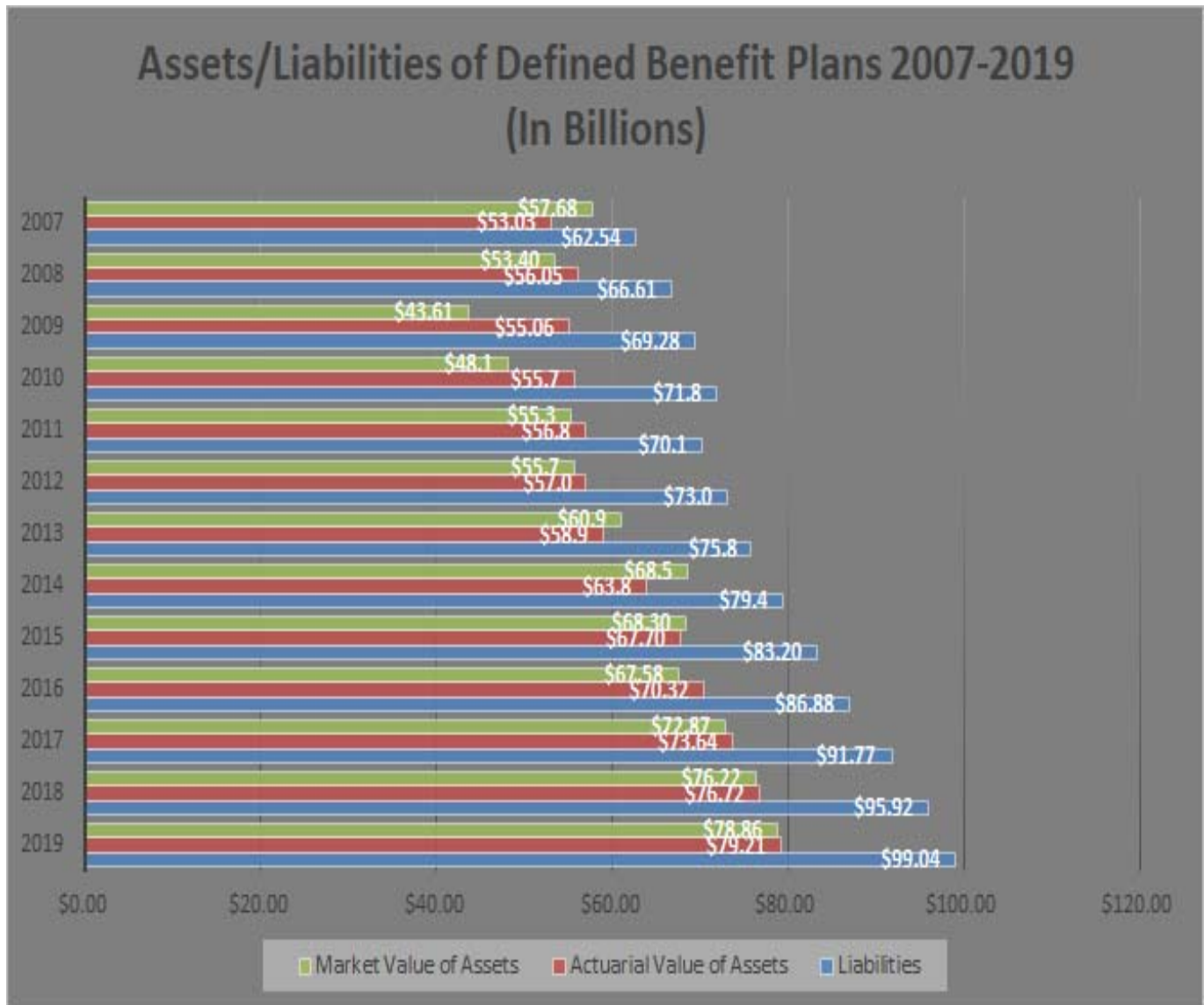
Assets & Liabilities:

To determine the ongoing nature of Missouri’s defined benefit plans, the JCPER must examine each plan’s assets and liabilities.

Valuation of Assets: Missouri’s defined benefit plans value their assets for funding purposes in one of two ways: market value or actuarial value. First, some plans value their assets at market value, or the true value of assets. Second, some plans use an asset smoothing process where investment gains and losses are recognized over a set period of time to mitigate the effect of investment market fluctuations. This smoothing of investment gains and losses may help to reduce volatility in asset values and the contribution rate. Due to a smoothing method, actuarial values may differ considerably from market values. The chart below lists the number of plans that use a particular asset valuation method. (For purposes of this report section, the four legacy plans are classified as using market value of assets.)



Trend of Assets & Liabilities of Defined Benefit Plans: Because of the long-term nature of most plans, a one-year snapshot is not particularly useful. As such, the JCPER maintains plan data that enables a trend analysis to be produced over a period of years. The chart below shows a recent history of the assets and liabilities of the defined benefit plans, beginning with values in 2007, immediately prior to the financial market downturn of 2008-2009. For plan year 2019, actuarial value of assets increased by approximately \$2.49 billion and liabilities increased by approximately \$3.12 billion. Market value of assets increased from plan year 2018 by approximately \$2.62 billion. In addition, this chart shows the decline in asset values experienced in 2008 and 2009 and the amount of time that passed before asset levels recovered to prior levels.

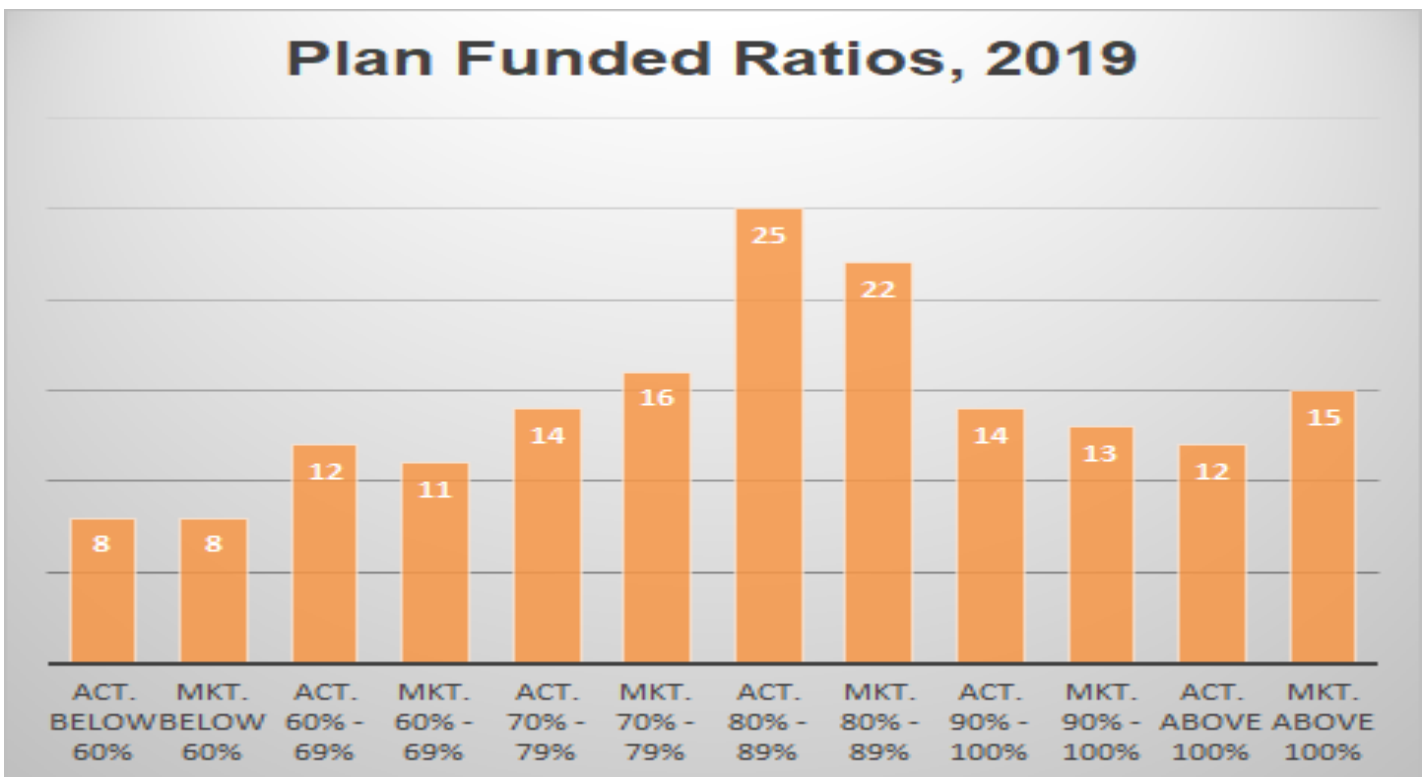


This chart also shows the difference between market value of assets and actuarial value of assets and the effectiveness of smoothing to mitigate volatility. For example, market value of assets decreased by approximately \$9.79 billion between plan years 2008 and 2009 in contrast to a decrease in the actuarial value of assets of approximately \$0.99 billion. Conversely, this chart also shows how the smoothing of investment gains may result in slower asset growth when compared to market value; for example, between plan year 2013 and plan year 2014, market value of assets increased by approximately \$7.6 billion whereas actuarial value of assets increased by approximately \$4.9 billion.

Funded Ratio: While many factors must be considered when analyzing a pension plan, one measurement tool is the plan's funded ratio. A funded ratio is a measurement of the plan's assets to liabilities. A plan's funded ratio is calculated in the following manner:

$$\begin{array}{|c|} \hline \text{Asset} \\ \hline \text{Value} \\ \hline \end{array} \div \begin{array}{|c|} \hline \text{Actuarial Accrued} \\ \hline \text{Liability} \\ \hline \end{array} = \begin{array}{|c|} \hline \text{Funded Ratio} \\ \hline \end{array}$$

A funded ratio may be calculated using either market value of assets or actuarial value of assets. Missouri statutes use a plan's funded ratio as a benchmark in three situations. First, section 105.685, RSMo requires a pension plan to have a funded ratio of 80%, based on actuarial value of assets, before adopting or implementing an additional benefit increase or cost-of-living adjustment which would increase the plan's actuarial accrued liability.¹ Second, section 105.684 requires any plan with a funded ratio of less than 60% to have the plan's actuary prepare an accelerated contribution schedule.² Third, section 105.683 uses a plan's funded ratio to determine whether a plan is deemed delinquent in contribution payments.³ In addition, the JCPER publishes an annual watch list that uses a funded ratio of less than 70%, based on market value of assets, as the threshold for inclusion. As shown in the chart below, due to some plans using a smoothing method for investment gains and losses, a funded ratio on an actuarial basis may differ considerably from a funded ratio on a market value basis.



Footnotes:

1. Mo. Ann. Stat. § 105.685 (West 2015).
2. Mo. Ann. Stat. § 105.684 (West 2015).
3. Mo. Ann. Stat. § 105.683 (West 2015).

The four “legacy plans” that are now administered by LAGERS are not included in the chart because they are no longer measured using a funded ratio. The median funded ratio on an actuarial basis is 81.8%. The median funded ratio on a market value basis is 82.4%. The average funded ratio on an actuarial basis is 83.05%. The average funded ratio on a market value basis is 83.71%. When examining Missouri Defined Benefit plans as a whole, the funded ratio in the aggregate is 79.6% on a market value basis compared to 79.4% in 2018. The aggregate funded ratio on an actuarial basis is 79.98% comparable to 79.98% in 2018.

Amortization of Unfunded Actuarial Accrued Liability (UAAL): When a pension plan has an actuarial accrued liability figure that exceeds its asset values, an unfunded actuarial accrued liability exists. Depending on the actuarial cost method used by the plan, the UAAL may be amortized over a time period as part of an overall plan to reduce, and eventually eliminate, the UAAL. In recent years, the JCPER has requested that each plan provide information relating to the type of amortization method. Plans reporting to the JCPER use one of three amortization approaches: an open period, a closed period, or a closed period with layers. For example, a plan may amortize its UAAL over a thirty year period. A plan using an open thirty year period would mean that the thirty year amortization period is reset every year to a new thirty year period. For an open policy, the UAAL is generally not expected to be fully amortized. In contrast, a closed period reduces the amortization period by one year annually until the UAAL is fully amortized, similar to a home mortgage. A layered approach uses an initial base of a period of years with each additional year’s gains or losses amortized separately over a period of years. For example, a plan might set up an initial base to be amortized over thirty years with each subsequent year’s investment gains or losses set up as a separate layer to be amortized over a period of twenty years.

Nine plans use the Aggregate cost method, under which an amortization period is not established because the cost method does not provide for an unfunded past service liability. Twelve plans use an open amortization period. Twenty-one plans use a closed amortization period. Thirty-five plans use a closed amortization period with additional layers. Larger plans are more likely to use a closed amortization period while the plans using an open amortization period tend to be smaller local plans.

Actuarial Assumptions: Because predicting the future is a difficult proposition, each plan’s actuary must provide recommendations of assumptions to be used and decided on by governing boards. These assumptions are key in determining the value of future liability, possible future behavior of plan participants, and as a result, plan contributions or costs. Generally, actuarial assumptions fall into two broad categories. First, economic assumptions are tied to financial “behavior.” Second, demographic assumptions are tied to plan member “behavior.” These assumptions assist in projecting future behaviors and benefit obligations.

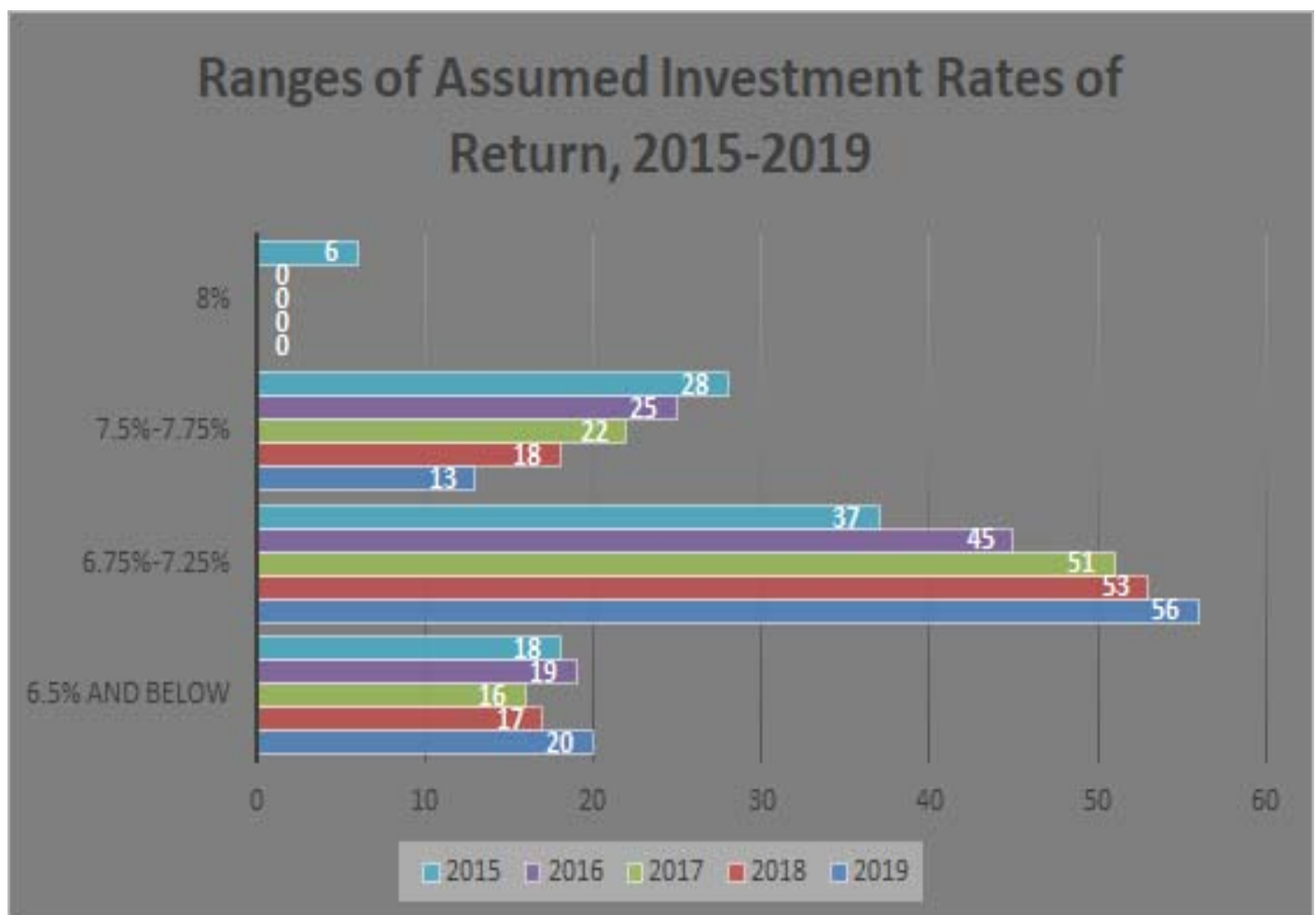
Primary Economic Assumptions include: Investment Rate of Return, Price Inflation, Salary Increases, Payroll Growth.

Primary Demographic Assumptions include: Mortality, Retirement Rate, Turnover/Withdrawal Rate

Investment Rate of Return: With the investment markets boom in the 1990s, many plan investment strategies were modified, and in some cases, plan investment rate of return assumptions were increased accordingly. However, investment markets have changed since the early 2000s, particularly after the financial downturn of 2008-2009. This change has resulted in many plans reevaluating capital market expectations and the reasonableness of their investment rate of return assumptions. In February 2021, the National

Association of State Retirement Administrators (NASRA) has described how low interest rates and inflation since the economic downturn of 2008-2009 has resulted in lower expectations for returns in most asset classes.⁴ As a result, many plans have reduced their assumptions for investment rate of return. Of 130 plans surveyed nationwide, NASRA found that 78% reduced their assumed rate of return since Fiscal Year 2017. In addition, all but five plans (96%) have reduced their assumed rate of return since fiscal year 2010; NASRA notes that the average assumption of the plans it surveyed has been reduced from 7.53% in fiscal year 2017 to 7.18% in fiscal year 2021. NASRA also describes the difficulty plans are encountering when setting an assumed rate of return because projections are showing lower investment returns in the near-term (five to ten years) versus the long-term (twenty to thirty years).

Missouri's plans continue to adjust the assumed rate of return. Since 2009, some pension plan governing boards have decreased the investment rate of return assumption. This trend of decreasing the assumption increased in plan years 2015—2017. Furthermore, by the close of plan year 2016, no Missouri plan was using an 8% investment rate of return assumption. By the end of plan year 2019, at least fifteen Missouri plans lowered the assumed rate of return. In plan year 2019, the investment rate of return assumption used by Missouri plans ranged from 4.75% to 7.75%. The median is 7.0%. The average is 6.86%. This chart shows the distribution of investment rate of return assumptions from plan year 2015 through plan year 2019. Please note that the values on the Y axis are ranges of numbers and do not denote an increase from the lower value to the higher value. This trend may continue. The JCPER is aware of at least two plans that have lowered



4 National Association of State Retirement Administrators, Issue Brief, "NASRA Issue Brief: Public Pension Plan Investment Return Assumption," February 2021, <https://www.nasra.org/files/Issue%20Briefs/NASRAInvReturnAssumptBrief.pdf>

the assumed rate of return at the end of the plan year and two other plans that have adopted a schedule to gradually decrease the assumed rate of return incrementally over a period of years.

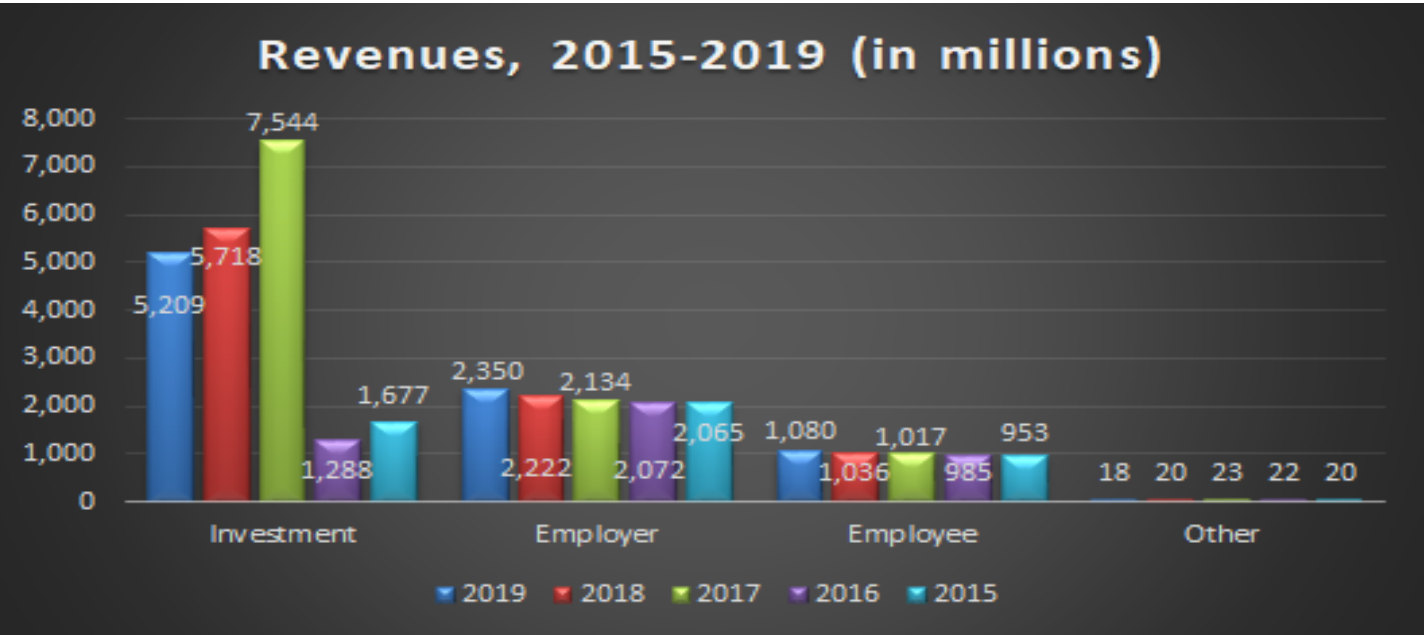
Mortality Tables: In 2019, the Society of Actuaries released the Pub-2010 Public Retirement Plans mortality tables. Pub-2010 is the first set of mortality tables based exclusively on public sector data. Furthermore, the Society prepared sets of the table specific to three job categories: teachers, public safety, and general employees. At least thirty-three Missouri public employee retirement systems have adopted Pub-2010 tables.

Contribution Rates: Public pension plans serve many purposes, which may include recruiting and retaining quality employees, being a part of a comprehensive compensation package, ensuring a dynamic and changing workforce, and facilitating retirement security. Inherently, the payment of benefits earned by membership is the primary obligation and purpose of a public pension plan. A plan’s ability to meet this obligation is necessarily correlated to receiving plan revenues and adhering to the previously noted pension funding equation. Plan revenues are comprised of employer/employee contributions and investment returns.

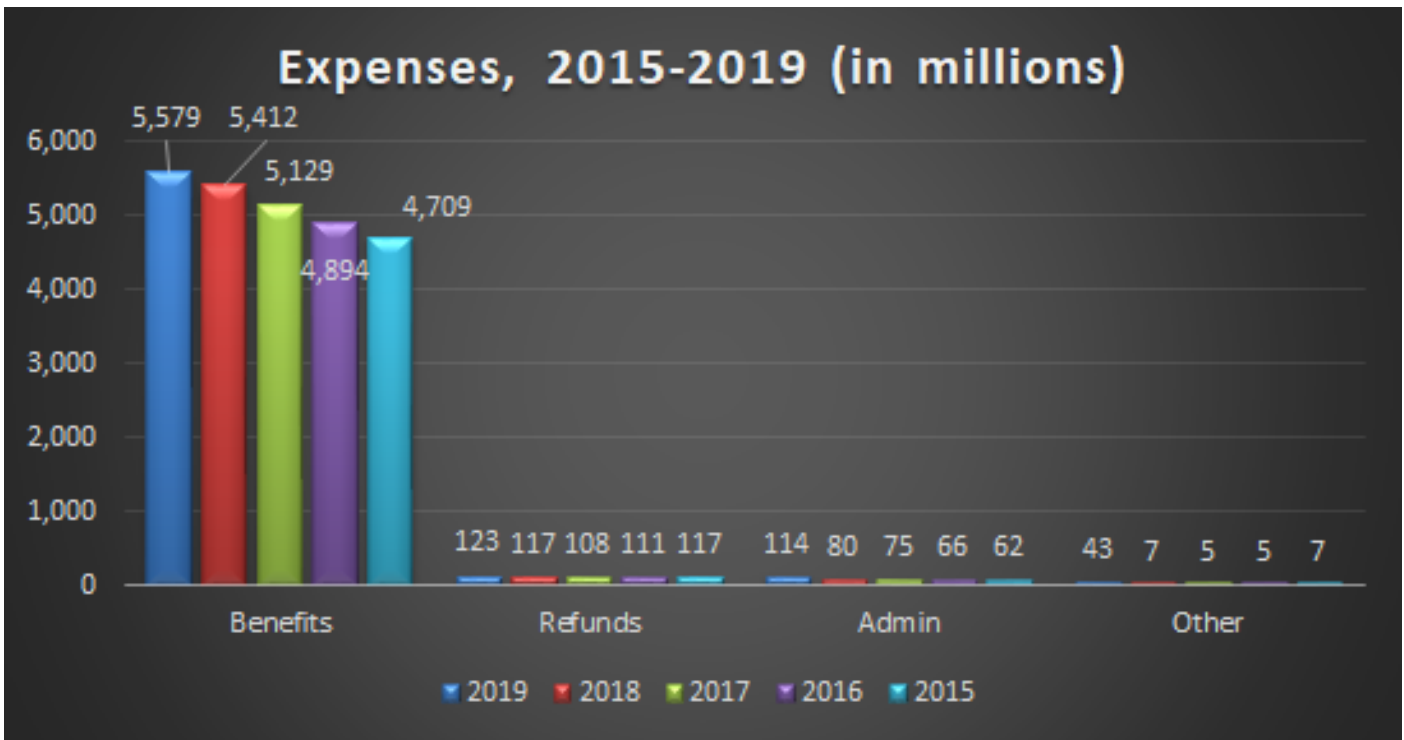
The investment market environment of the last decade has resulted in higher recommended contribution levels. In addition, as plan governing boards have modified plan assumptions in an effort to reflect the changing demographic and financial experience, plan contribution rates have been affected. Although public pension plans are viewed as long-term entities due to the perpetual nature of government, the necessity to meet annual budgetary requirements with increased plan contribution rates may be challenging for plan sponsors. In October 2009, the Government Finance Officers Association (GFOA) recommended that government employers contribute the full annual required contribution to assist in pension plan sustainability. In plan year 2019, approximately 74% of Missouri’s plans either met or exceeded the full contribution. Three plans were not required to make a contribution in plan year 2019.

Revenues

Plan year 2019 aggregate employer contributions increased to approximately \$2.35 billion, an increase of



approximately \$128 million from plan year 2018's aggregate employer contributions of approximately \$2.22 billion. Aggregate employee contributions in plan year 2019 were approximately \$1.08 billion, an increase of approximately \$44.1 million from 2018's \$1.03 billion. Investment income was approximately \$5.21 billion, a decrease from 2018's investment income of approximately \$5.7 billion. This decrease, relative to plan year 2018, reflected the ongoing volatility of the investment markets in 2019.



Expenses: Expenses in plan year 2019 increased from plan year 2018 with benefit payments increasing by \$166 million from approximately \$5.41 billion in 2018 to approximately \$5.57 billion in 2019. Refunds of contributions increased to its highest amount of \$123 million. Other expenses increased from \$7 million to \$42.5 million but this increase requires explanation; \$33,479,875 of this amount consisted of transfers from one plan to another. St. Joseph Police transferred \$4,692,747 to LAGERS after the City closed the plan and transferred members and liabilities to LAGERS. Central County Fire and Rescue terminated its defined contribution plan and transferred \$28,787,128 to a defined benefit plan established effective 1/1/20. (This new DB plan will be included in next year's annual report.)

Investments & Asset Allocation

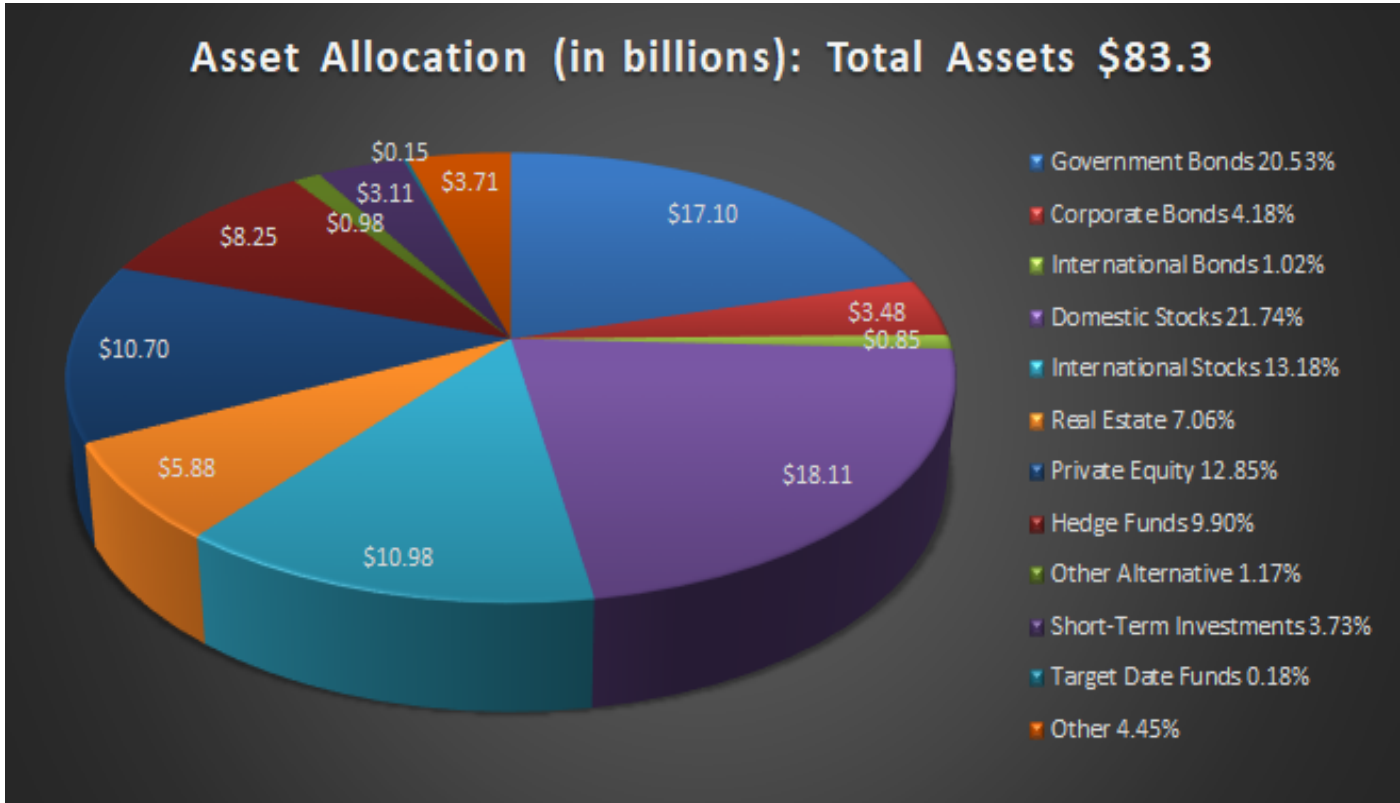
Statutory Investment Requirements: Chapter 105 of the Revised Statutes of Missouri governs Missouri's public pension plans, including provisions relating to plan investments and pension plan boards of trustees fiduciary responsibilities. Specifically, section 105.688 mandates the use of the Prudent Person Rule, which requires plan investment fiduciaries to "discharge his or her duties in the interest of the participants in the system and their beneficiaries and shall...act with the same care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with those matters would use in the conduct of a similar enterprise with similar aims..."⁵ In addition, this statute further requires plan investment fiduciaries to make "...investments for the purposes of providing benefits to participants and participants' beneficiaries, and of defraying reasonable expenses of investing the assets of the system..."⁶

⁵ Mo. Ann. Stat. § 105.688 (West 2015).

⁶ Mo. Ann. Stat. § 105.688 (West 2015).

Given that investment income is one of two sources of income in the pension funding equation, it is critical that fiduciaries develop and review investment policies, strategies, and asset allocation. Each plan board of trustees sets an investment policy based on the fiduciary standards previously mentioned.

Asset Allocation: Section 105.688 also requires that plan fiduciaries give appropriate consideration to the diversification of the investments of the system. The chart below shows aggregate plan year 2019 asset allocation used by Missouri’s PERS. The level of diversification and variety of asset classes often varies based on the size of the PERS; the larger PERS have opportunities to invest in alternative asset classes such as private equity, hedge funds, and commodities unlike smaller PERS. Smaller PERS are more likely to invest in mutual funds or exchange traded funds. Plan members in DC plans may have options to self-direct their investments with options such as mutual funds, target date funds, or stable value funds.



This is the second year that target date retirement funds have been included as a separate category in the JCPER annual survey and report. Used as investment options in some defined contribution plans, target date funds contain a mixture of equities and fixed income holdings based on an individual’s retirement date that adjusts the asset allocation based on risk the closer the individual is to retirement. The “Other” category includes some plan investments that do not fit under one of the other categories. Examples include mutual funds that contain exposure to more than one asset class, such as fixed income funds that include government and corporate bonds. The “Other Alternative” category may include commodities, timber, and infrastructure investments.

The total amount of assets identified in the asset allocation chart does not necessarily equal the aggregate market value of assets at the end of plan year 2019 due to different portfolio structures and investments.

Pension Reforms

Based on data analyzed from a survey of approximately 246 state and local government retirement plans between 2009 and 2014, the Center for State & Local Government Excellence found that 74% of state plans and 57% of large local plans have adopted pension reforms to address rising costs.⁷ In addition, a December 2018 report from NASRA found that the events of the economic recession of 2007-2009 resulted in nearly all states pursuing some form of pension reform.⁸ The NASRA report indicated that the number of changes was unprecedented and due to different state pension structures, budgets, costs, and legal frameworks, no single change or reform could apply to each situation. On the whole, the majority of pension reforms have included requiring greater employee contributions, reductions in cost of living adjustments, increasing employee age and service requirements, and in some cases, decreasing benefits. Additionally, some states increased the vesting requirement from five years to ten years. Missouri is no exception. Since 2009, at least thirty-two Missouri defined benefit plans have implemented structural changes in an effort to address cost containment concerns. Examples include reducing a benefit multiplier, reducing or eliminating a COLA, increasing employee contributions, increasing age and service requirements, and reducing the amount of employee contributions refunded upon retirement. Some plan sponsors have enacted a new benefit tier for employees hired on or after a certain date, often including some of the previously mentioned changes. Other plan sponsors have closed or frozen a defined benefit plan and either established a new defined contribution plan or joined Missouri LAGERS.

National Issues

Public pension issues continue to be highlighted across the country. The role of the federal government relative to pensions has been a source of discussion for many decades since the passage of the Employee Retirement Income Security Act (ERISA) in 1974. The issue of retirement plan availability continues to be discussed.

The SECURE Act (Setting Every Community Up for Retirement Act of 2019) was passed into law on December 20, 2019 as part of the Further Consolidation Appropriations Act, 2020. The bill became effective January 1, 2020. The SECURE Act made numerous changes impacting retirement plans. Key changes include, but are not limited to, the following areas:

- Makes changes to the laws governing multiple employer plans. The SECURE Act allows for the creation of “pooled employer plans” that are to be administered by a “pooled plan provider.” This change in law would permit smaller unrelated companies to band together under a centrally administered retirement plan with the potential for lower costs and fees. Applies to defined contribution plans only.
- IRAs: Repeals a restriction on contributions to traditional IRAs after age 70 1/2.

7 Jean-Pierre Aubry and Caroline V. Crawford, Issue Brief, “State and Local Pension Reform Since the Financial Crisis,” Center for State & Local Government Excellence, December 2016, <http://slge.org/wp-content/uploads/2016/12/State-and-Local-Pension-Reform-Since-the-Financial-Crisis.pdf>

8 Keith Brainard and Alex Brown, “Spotlight on Significant Reforms to State Retirement Systems,” National Association of State Retirement Administrators, December 2018, <https://www.nasra.org/files/Spotlight/Significant%20Reforms.pdf>

- **Required Minimum Distributions:** Increases the age at which a plan participant must take a required minimum distribution from age 70 ½ to age 72. Applies to retirement plans including but not limited to 401(k), 403(b), 457, and other defined contribution plans.
- **Distributions from certain plans after death:** Shortens the period of time during which certain beneficiaries of IRAs and defined contribution accounts must take distributions of inherited account balances. Establishes three different classes of beneficiary.
- **Annuity Options in DC Accounts:** Requires DC plans to provide estimates to participants of monthly income if a participant's account were to be annuitized.
- **Long-term Part-time Employee Participation in DC plans:** Requires employers to permit employees who have reached age 21 and work at least 500 hours for three consecutive years to participate in a 401(k) plan.

It is important to note that the federal SECURE ACT is different from legislation of the same name that has been filed in numerous state legislatures in recent years. In addition, the Bipartisan Miners Act of 2019 (included in the Further Consolidated Appropriations Act of 2020) decreased the age for in-service distributions for pension and government 457(b) plans from 62 and 70 ½ to 59 ½ for plan years beginning December 31, 2019.

Congress passed multiple pieces of legislation in spring 2020 to address events related to the coronavirus pandemic. The CARES Act (Coronavirus Aid, Relief, and Economic Security Act) contained numerous provisions related to the covid-19 pandemic including but not limited to employers, employees, and the nation's workforce, and at least two provisions relating to retirement plans.

The CARES Act permitted coronavirus-related distributions of up to \$100,000 from DC plans qualified under sections 401(a), 403(b), and 457. It waived withholding and a ten percent early withdrawal penalty. The withdrawal may be repaid over a subsequent three-year period without regard to contribution limits. Distributions must be made between January 1, 2020 and December 31, 2020. Distributions were limited to participants diagnosed, or whose spouse or dependent has been diagnosed by a test approved by CDC with Covid-19, participants who experienced adverse financial consequences as a result of being quarantined, furloughed, laid off, a reduction of work hours, an inability to work due to lack of child care, or a closing or reduction of hours by a business owned or operated by such a participant. The CARES Act also expanded the availability of plan loans during a 180-day period beginning March 27, 2020. The maximum loan amount was increased to the lesser of \$100,000 or 100% of the vested account balance. Repayment of loans is delayed for one year.

State Issues

As the First Regular Session of the Missouri 101st General Assembly convenes, legislators will face numerous topics, with budgetary issues likely being the most difficult. While the State appropriations process may not directly affect most of Missouri's public pension plans, a primary source of revenue for all plans is the Missouri taxpayer. This fundamental concept continues to be paramount when the General Assembly sets public policy. To monitor pension related legislation during the 2021 legislative session, weekly updates are posted to the JCPER's website: <https://jcper.org/weekly-pension-legislation/>

State Legislation: During the 2020 regular session, legislators introduced thirty-nine pension-related bills. At the end of session, three pension-related bills were truly agreed to and finally passed. The Governor signed all three into law.

SS/SCS/HB 1467 and HB 1934

- **Local Government Employees' Retirement System (LAGERS):** Permits each member political subdivision of LAGERS to elect an employee contribution rate of 2% or 6% in addition to the current options of 0% and 4%;
- **Missouri State Employees' Retirement System (MOSERS) and MODOT & Highway Patrol Employees' Retirement System (MPERS):** Allows members to remove former spouses as survivor beneficiaries upon divorce under certain circumstances and receive an adjusted annuity amount;
- **MOSERS and Judicial Retirement System:** Establishes a buyout program that permits terminated vested members of MOSERS employed in a position covered by the Judicial Retirement System to receive a lump sum payment equal to at least sixty percent of the present value of the member's deferred annuity in accordance with the Internal Revenue Code;
- **Public School Retirement System of Missouri (PSRS):** Provides that information pertaining to the salaries and benefits of the Executive Director and employees of the board of trustees will not be considered confidential information.

HCS/SCS/SB 599

- Multiple provisions relating to financial instruments;
- **Local Government Employees' Retirement System (LAGERS):** Permits each member political subdivision of LAGERS to elect an employee contribution rate of 2% or 6% in addition to the current options of 0% and 4%.

SCS/SB 739: Creates the "Anti-Discrimination Against Israel Act."

- Prohibits public entities from entering into certain contracts with companies unless the contract includes a written certification that the company is not engaged in, and agrees for the duration of the contract not to engage in a boycott of goods or services from Israel;
- Applies to the State of Missouri and political subdivisions, including boards and commissions and bodies politic and corporate of the state created by or in accordance with state law or regulations.

Actuarial Standard of Practice 51

In September 2017, the Actuarial Standards Board released a finalized version of ASOP 51 (Actuarial Standard of Practice) titled "Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Plan Contributions."⁹ ASOP 51 is binding on credentialed actuaries in the United States. It became effective for actuarial work product with a measurement date on or after November 1,

⁹ Actuarial Standards Board, "Actuarial Standard of Practice No. 51," September 2017, <http://www.actuarialstandardsboard.org/asops/assessment-disclosure-risk-associated-measuring-pension-obligations-determining-pension-plan-contributions-3/>

2018. The ASB developed ASOP 51 to help plan sponsors better understand and manage risk. ASOP 51 requires actuaries to identify risks that, in professional judgment, may reasonably be anticipated to affect the plan's future financial status. The ASOP lists examples of risks that include, but are not limited to, investment risk, asset/liability mismatch risk, interest rate risk, demographic risks, and contribution risk. In addition, actuaries are encouraged to calculate and disclose maturity measures as ratios, such as market value of assets to payroll, retired member liabilities to total plan liabilities, and duration of liabilities. As a result, those actuarial valuations with measurement dates of November 1, 2018 and later that were submitted to the JCPER for plan year 2018 contain ASOP 51 risk measure analysis.

Continued Implementation of House Bill 1443 (2016)

Calendar years 2017—2020 saw the implementation of House Bill 1443 (2016), which permits the LAGERS board of trustees to enter into an agreement with the board of trustees of a LAGERS-member political subdivision for LAGERS to assume the duties and responsibilities of operating a prior closed or frozen pension plan. In calendar year 2017, LAGERS assumed the operation of both Jefferson City Firemen's Retirement System and Jennings Police & Firemen's Retirement Fund. Both plans had been closed to new entrants for a number of years; plan sponsors had previously testified in legislative committee in favor of the legislation. On January 1, 2019, Antonia Fire Protection District transferred its frozen defined benefit plan to LAGERS under this provision of law. In June 2019, the City of Sedalia transferred its Police Retirement Fund to LAGERS. Plan sponsors continue to contact LAGERS and may consider transferring a prior closed or frozen pension plan to LAGERS.

Covid-19 and Recent Events After the End of Plan Year 2019

Although the primary focus of this report is plan year 2019 (including the information in the appendices), the events of calendar year 2020 and 2021 thus far relevant to and resulting from the coronavirus pandemic warrant inclusion and discussion in this report. Since the coronavirus was first identified in late calendar year 2019 and closures began occurring throughout the states in March 2020, nearly every level of government, private business, pension plan, and every one of us has been impacted in one way or another. Everyday life has been transformed with business closures, social distancing, mask wearing, higher rates of unemployment, and major modifications in daily activity. As of February 12, 2021, the Centers for Disease Control and Prevention reported approximately 448,000 deaths involving covid-19. Dramatic changes occurred in the investment markets and pension plan investment returns in calendar year 2020. Investment markets began declining in February 2020 and reached the bottom on March 23. When the JCPER reviewed quarterly investment returns for defined benefit plans as of March 31, 2020, returns ranged between 0 and -10%, a sharp contrast from largely positive returns as of December 31, 2019.

The Federal government has responded to the coronavirus by passing multiple rounds of federal stimulus, including but not limited to small business loan programs, mandatory paid sick leave for employees with coronavirus, funding for coronavirus testing, and two rounds of direct payments to individuals. The Federal Reserve has responded by decreasing interest rates to near zero and implementing a bond buying program. The Federal Reserve's lowering of interest rates may impact future capital market expectations.

However, beginning in the late spring and early summer of 2020, the investment markets have not only recovered from their lows in March 2020 but have continued to climb; the Dow Jones Industrial Average broke 30,000 for the first time in November 2020. Missouri's public pension plans have reported positive investment returns as of the end of December 2020 to the JCPER with some plans reporting returns in the low

double-digits. Despite these positive investment returns, much uncertainty remains in general and specifically relating to the investment markets, whether Congress will pass additional covid-19 relief legislation and aid, the state of the coronavirus, reopening of businesses, and revenues that state and local governments use to fund pension plans.

Conclusion

As these challenges for public pension plans and state and local governments continue to exist, the mission of the JCPER has never been more important. The existence of the JCPER was a direct response to the very public concerns of the stability of public pension plans in the early 1980s. Established in 1983, the JCPER continues to serve as the centralized reporting entity for Missouri's public pension plans. In light of the continued response to public plan experience, it is essential that the General Assembly insist on proper disclosure to ensure transparency of plan information.



DEFINED BENEFIT PLANS

**Data included
in this appendix reflects
PERS information from plan year 2019**

AFFTON FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 38 Inactive: 31

CONTRIBUTIONS:

Employer: \$1,562,739 Employee: \$259,348

BENEFITS:

Normal Retirement Formula:

1.7333% of compensation x years of creditable service

Maximum: 30 years of service

Temporary Benefit: Supplemental Benefit: \$500 monthly to Medicare eligibility

Normal Retirement Eligibility:

Age 60 with 5 years of service

Administrative assistants, secretaries or office managers: Age 65 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

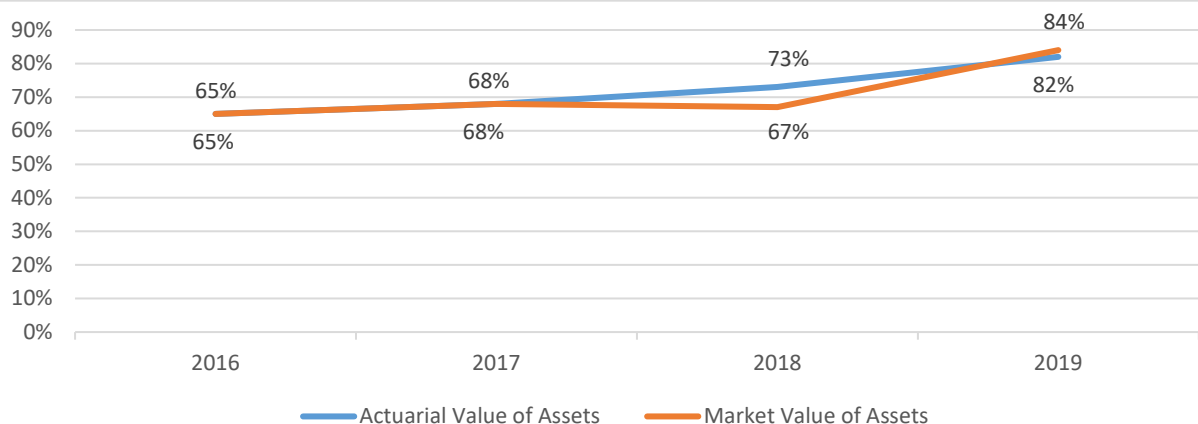
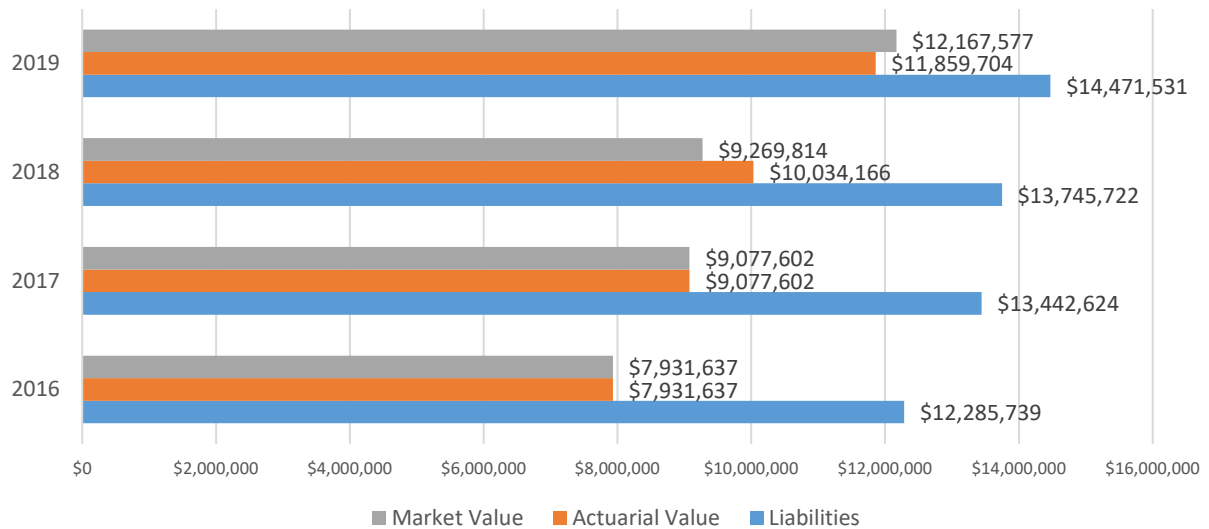
Mortality Table: PubS-2010 Public Safety with generational improvements from 2010 based on MP-2019

Vesting: Partial 3 years / Full 7 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: 2.5-6.5%



ARNOLD POLICE PENSION PLAN

MEMBERSHIP:

Active: 52 Inactive: 18

CONTRIBUTIONS:

Employer: \$417,960 Employee: \$296,055

BENEFITS:

Normal Retirement Formula:

2.5% of compensation x years of creditable service
Maximum: 75% of compensation

Normal Retirement Eligibility:

Age 55 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

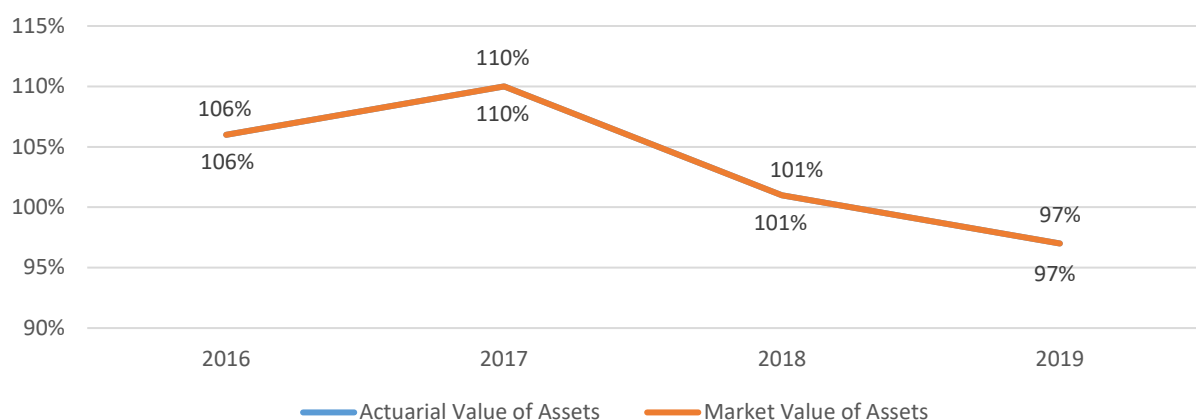
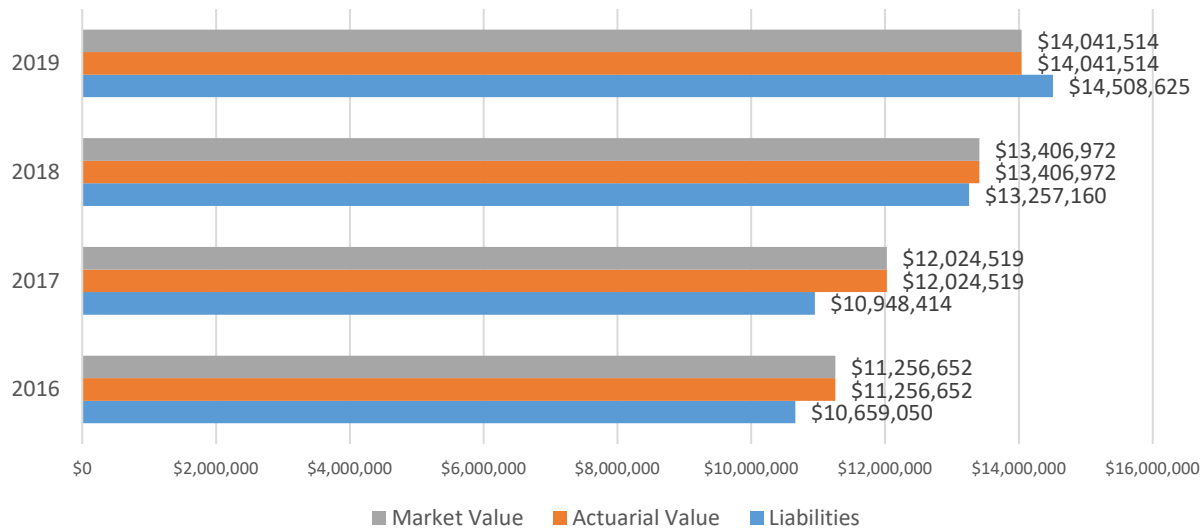
Mortality Table: Pub-2010 Public Safety with generational improvements Scale MP-2018

Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6% Salary: 4.5%



BERKELEY POLICE & FIRE PENSION FUND

MEMBERSHIP:

Active: 47 Inactive: 63

CONTRIBUTIONS:

Employer: \$599,545 Employee: \$147,986

BENEFITS:

Normal Retirement Formula:

For members with 20 or more years of service: 2.5% of compensation for the first 20 years of service + 1% for the next 5 years of service
Maximum: 55% of compensation

For members with less than 20 years of service: 2.5% of compensation for service earned before 1/1/17 + 2% of compensation for service earned after 12/31/16
Maximum: 55% of compensation

Normal Retirement Eligibility:

Age 55 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

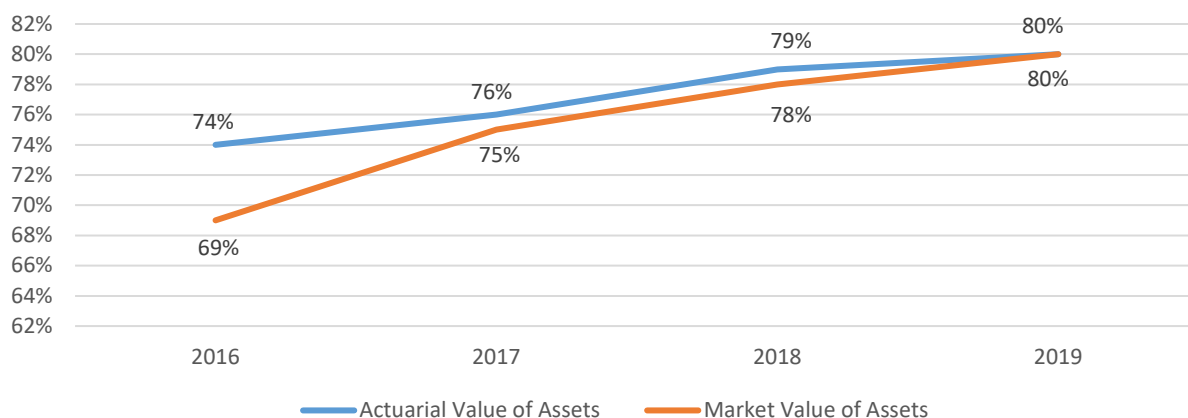
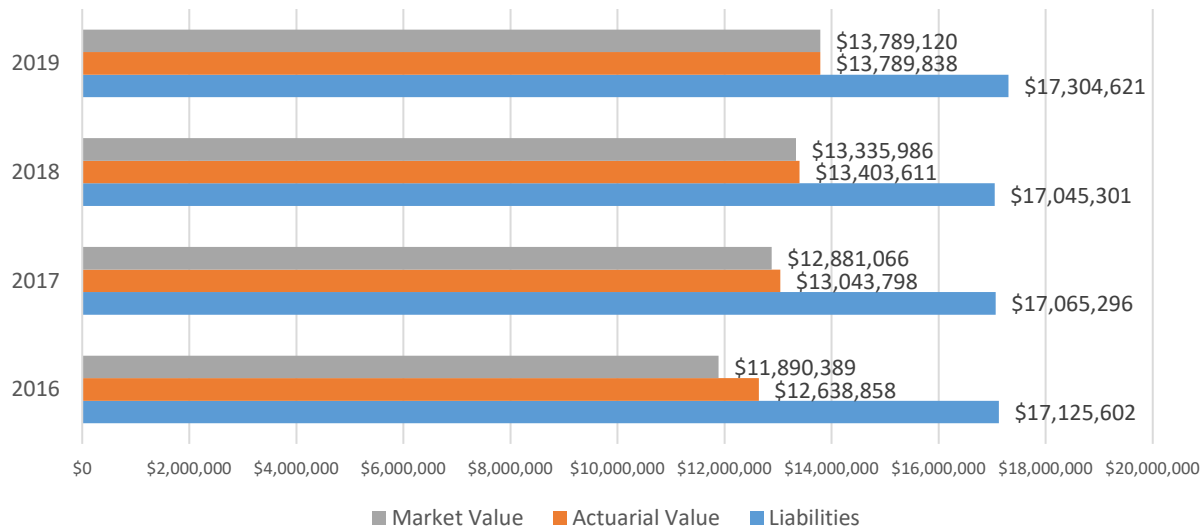
Mortality Table: RP-2000 with generational projection using Scale AA

Vesting: 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4%



BI-STATE DEVELOPMENT AGENCY DIVISION 788, A.T.U.

MEMBERSHIP:

Active: 1,420 Inactive: 1,372

CONTRIBUTIONS:

Employer: \$10,281,297 Employee: \$4,067,201

BENEFITS:

Normal Retirement Formula:

Monthly benefit of \$40 x years of Credited Service for those retiring with less than 25 years of Credited Service

Monthly benefit of \$55 x years of Credited Service for those retiring with 25 or more years of Credited Service

Normal Retirement Eligibility:

Age 65

Age 55 with 20 years of service

25 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

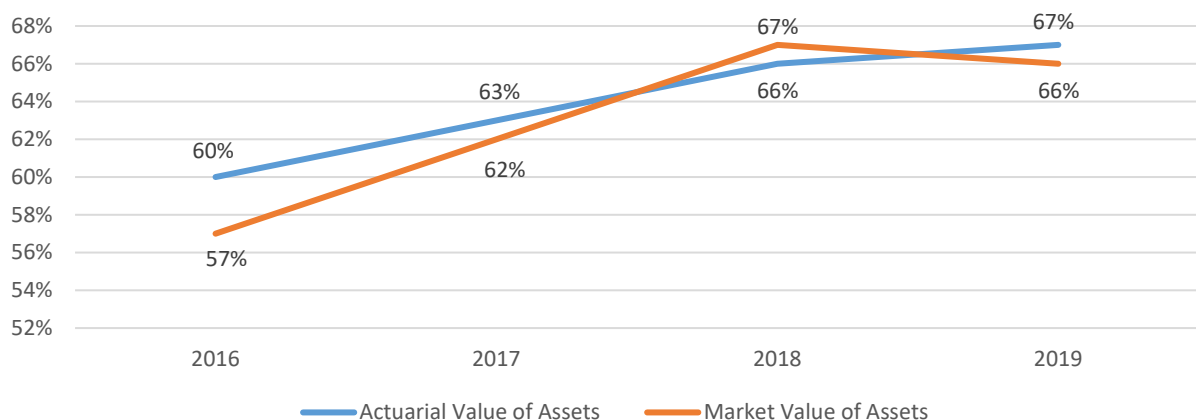
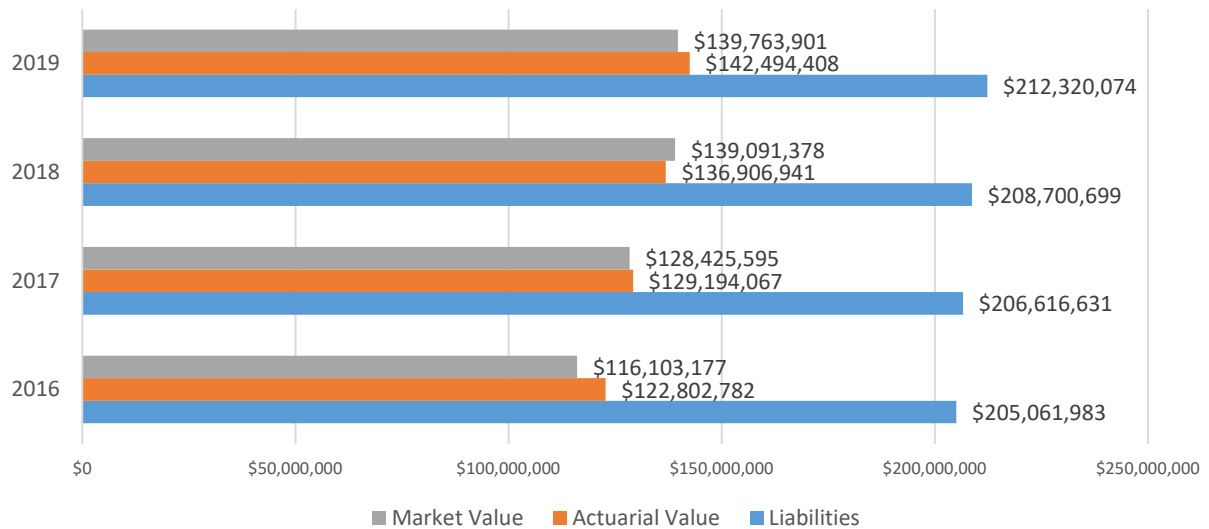
Mortality Table: RP-2014 Blue Collar adjustment with Scale BB

Vesting: 10 years

COLA: Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: N/A



BI-STATE DEVELOPMENT AGENCY LOCAL 2 I.B.E.W.

MEMBERSHIP:

Active: 42 Inactive: 28

CONTRIBUTIONS:

Employer: \$269,828 Employee: \$55,534

BENEFITS:

Normal Retirement Formula:

Monthly benefit of \$60 x years of credited service

Normal Retirement Eligibility:

25 years of service
Age 60 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 Blue Collar projected five years, Scale BB

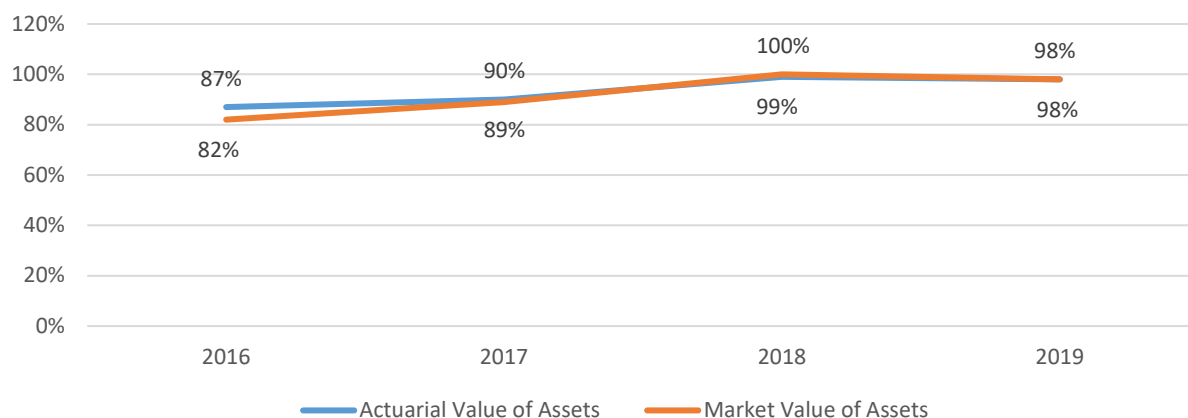
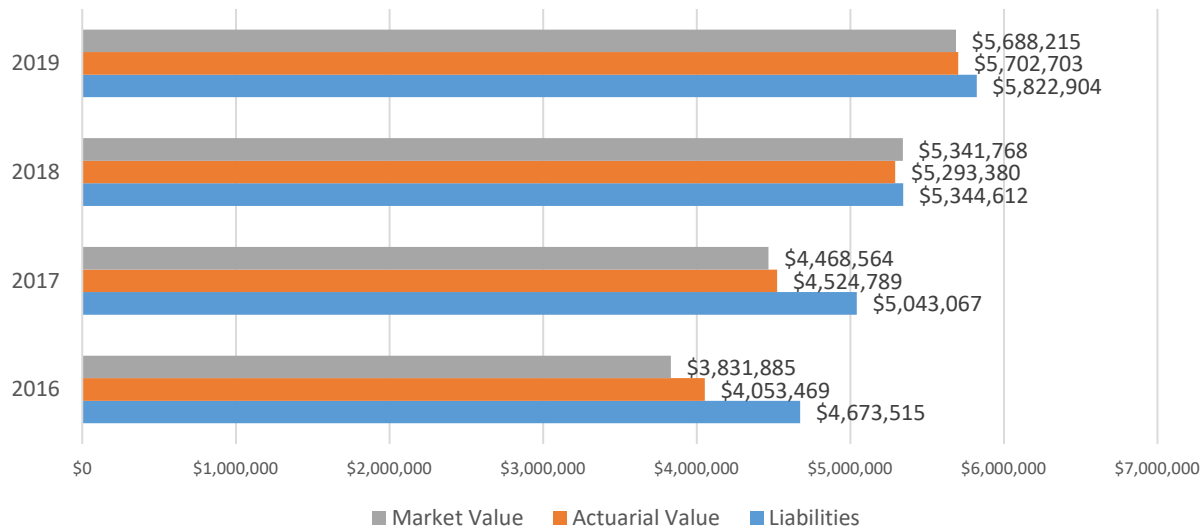
Vesting: 10 years

COLA: Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: N/A

Plan closed 1/1/14



BI-STATE DEVELOPMENT AGENCY SALARIED EMPLOYEES

MEMBERSHIP:

Active: 240 Inactive: 525

CONTRIBUTIONS:

Employer: \$7,000,000 Employee: \$464,944

BENEFITS:

Normal Retirement Formula:

1.5% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 60 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 Healthy Annuitant with White Collar Adjustment projected five years using Scale BB

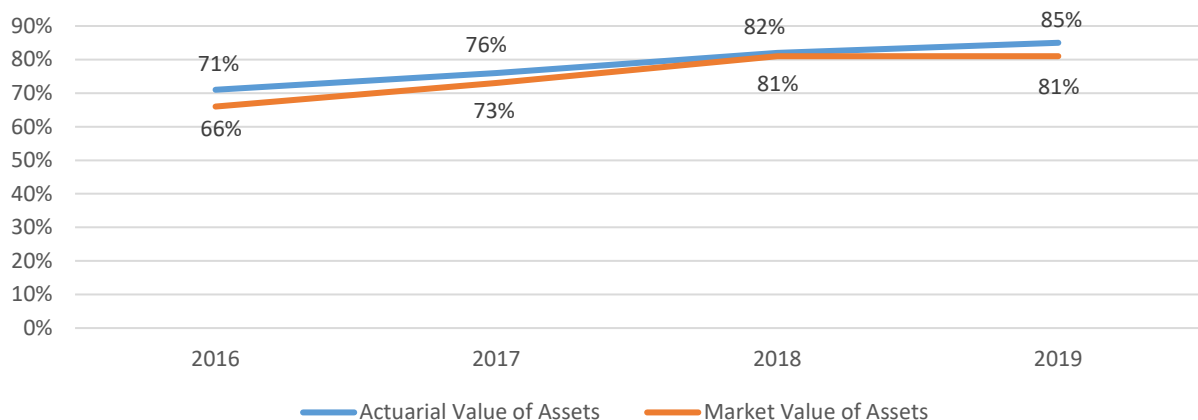
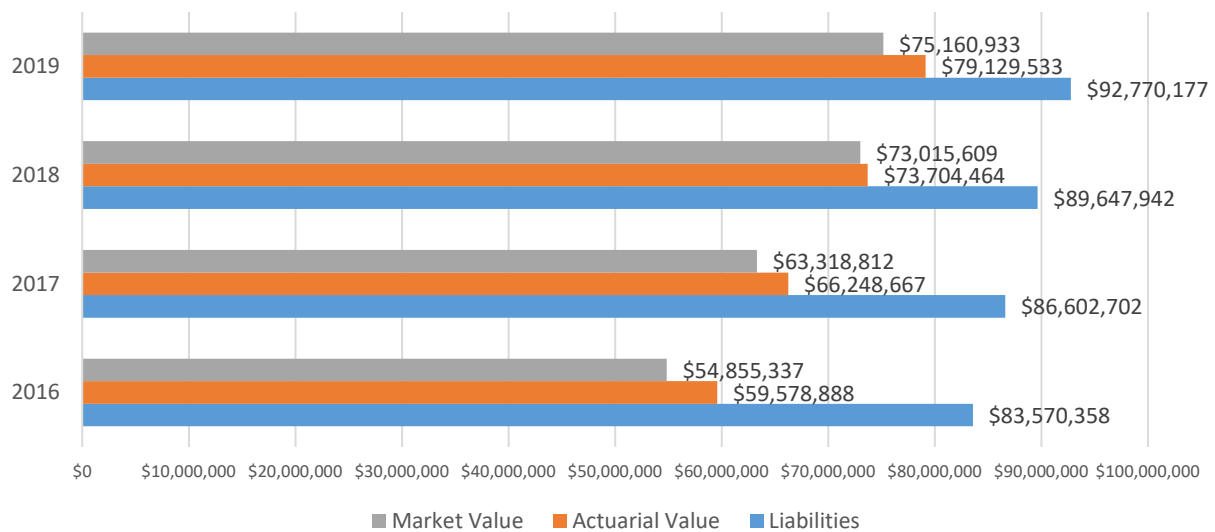
Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.5%

Plan closed to new participants effective 7/1/13



BLACK JACK FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 39 Inactive: 17

CONTRIBUTIONS:

Employer: \$955,207 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

Uniformed Employees: \$216 x years of credited service

Non-Uniformed Employees: \$161 x years of credited service

Temporary supplemental benefits payable until ages 62 and 65 for a closed group of retirees

Normal Retirement Eligibility:

The earlier of age 60 or 30 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

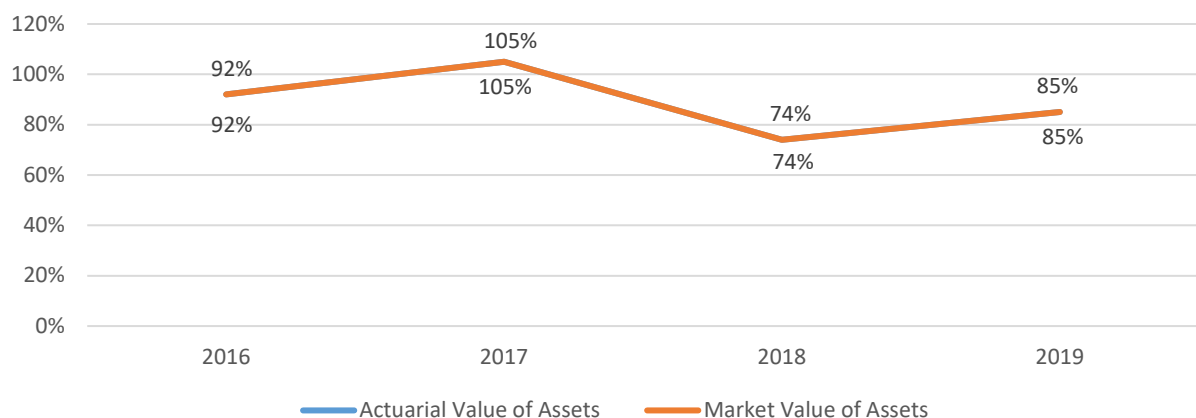
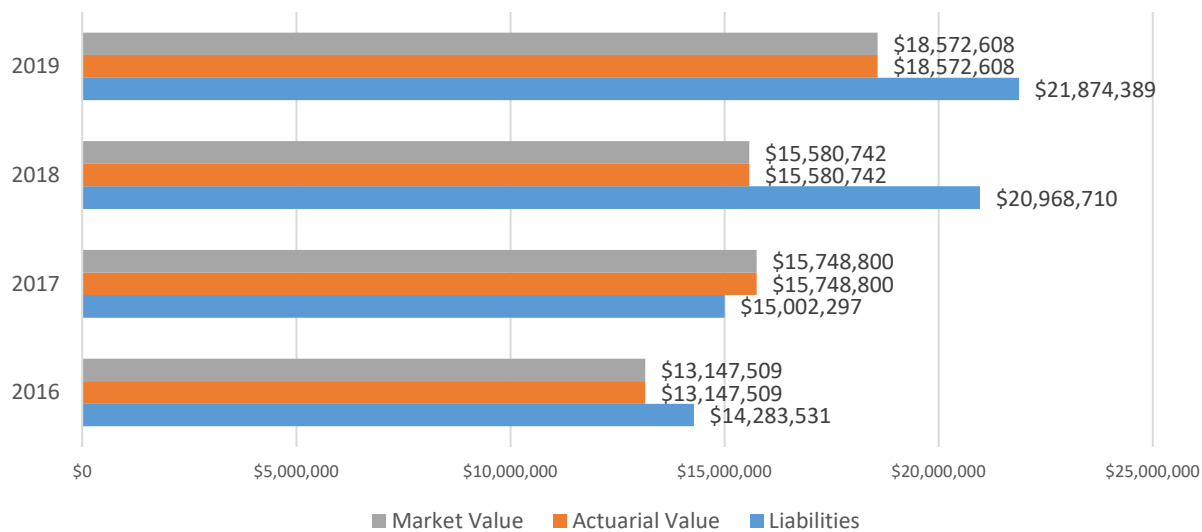
Mortality Table: PRI-2012 Blue Collar Mortality Table projected generationally with Scale MP-2019

Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.5%



BOTHWELL REGIONAL HEALTH CENTER RETIREMENT PLAN

MEMBERSHIP:

Active: 206 Inactive: 576

CONTRIBUTIONS:

Employer: \$1,407,293 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

1.2% of compensation x years of creditable service
1.35% for service prior to 10/01/98

Normal Retirement Eligibility:

Age 65 with 5 years of service
Rule of 85

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: PubG-2010 Mortality Table projected generationally with scale MP-2018

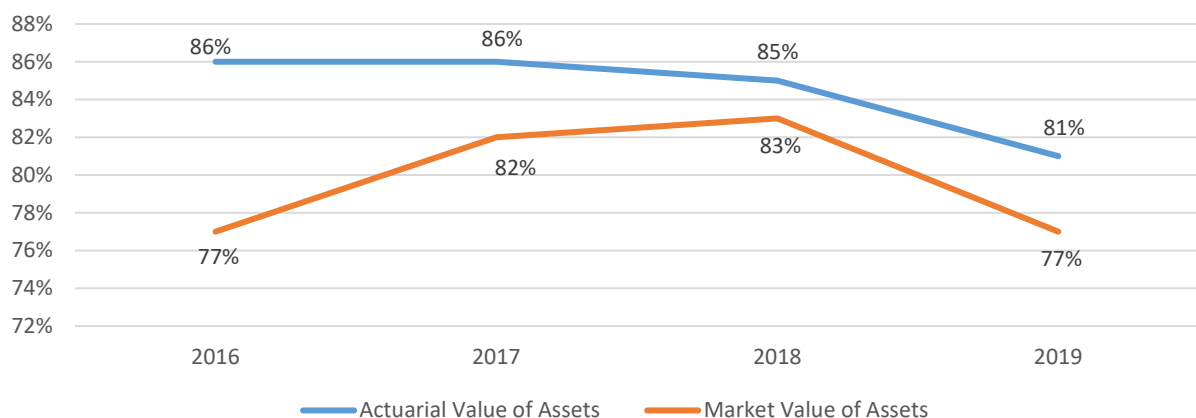
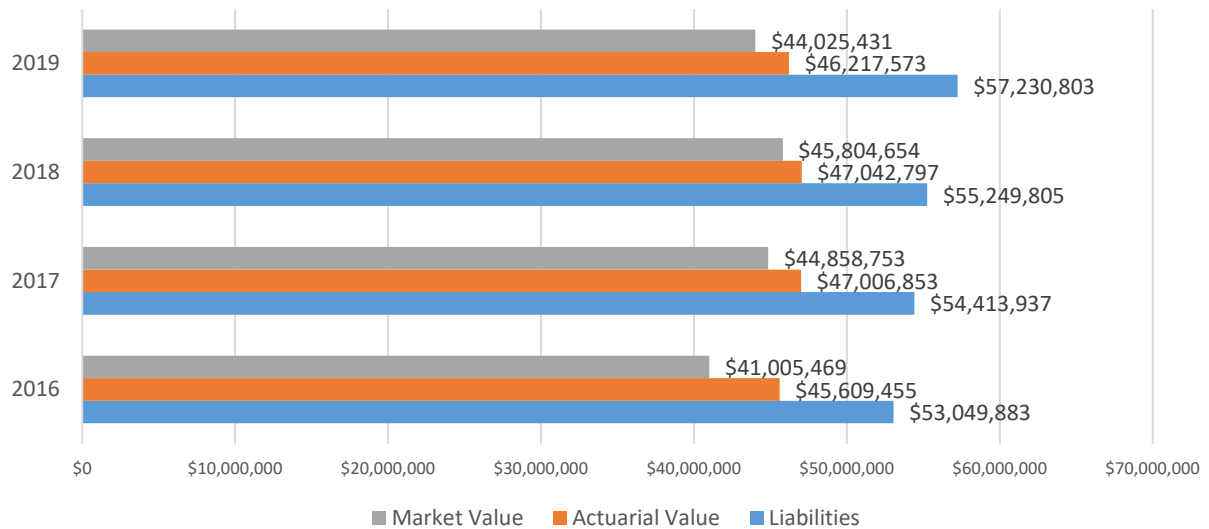
Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.75% Salary: 3%

Plan closed June 2006. Defined contribution plan for new employees. See corresponding information in Defined Contribution section.



BRENTWOOD POLICE & FIREMEN'S RETIREMENT FUND

MEMBERSHIP:

Active: 49 Inactive: 46

CONTRIBUTIONS:

Employer: \$1,220,143 Employee: \$268,152

BENEFITS:

Normal Retirement Formula:

3.5% of compensation for the first 20 years of service + 1% for the next 10 years of service

Normal Retirement Eligibility:

Age 55 with 10 years of service

Social Security Coverage: No

Valuation of Assets: Market Value

Mortality Table: PRI-2012 Employee Blue Collar Table projected generationally with scale MP-2019

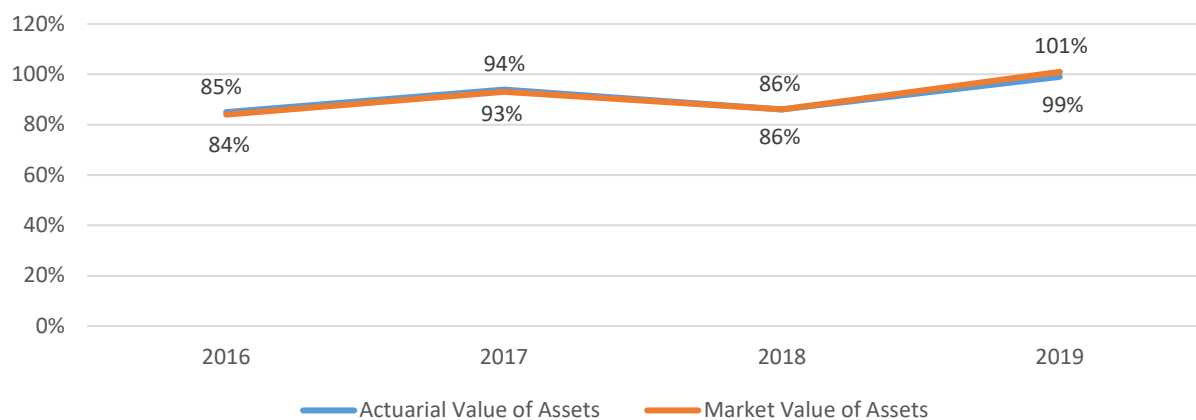
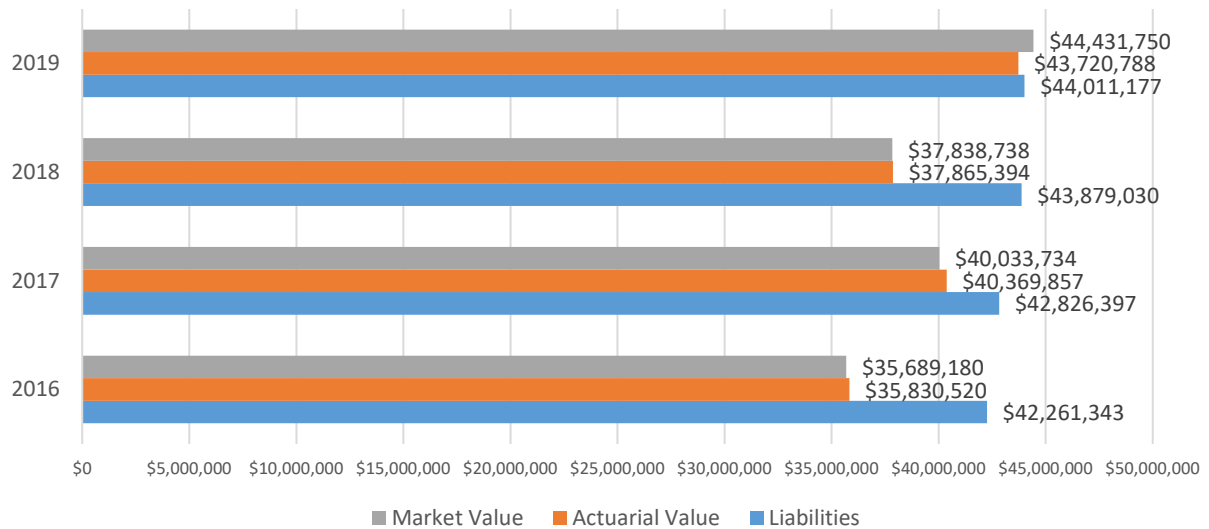
Vesting: 10 years

COLA: Annual Amount Maximum: 2%

Cap Total Max: 20%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.5%



BRIDGETON EMPLOYEES RETIREMENT PLAN

MEMBERSHIP:

Active: 71 Inactive: 180

CONTRIBUTIONS:

Employer: \$1,725,090 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 60 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 3 Years

Mortality Table: RP-2000 projected fully generationally using Scale BB

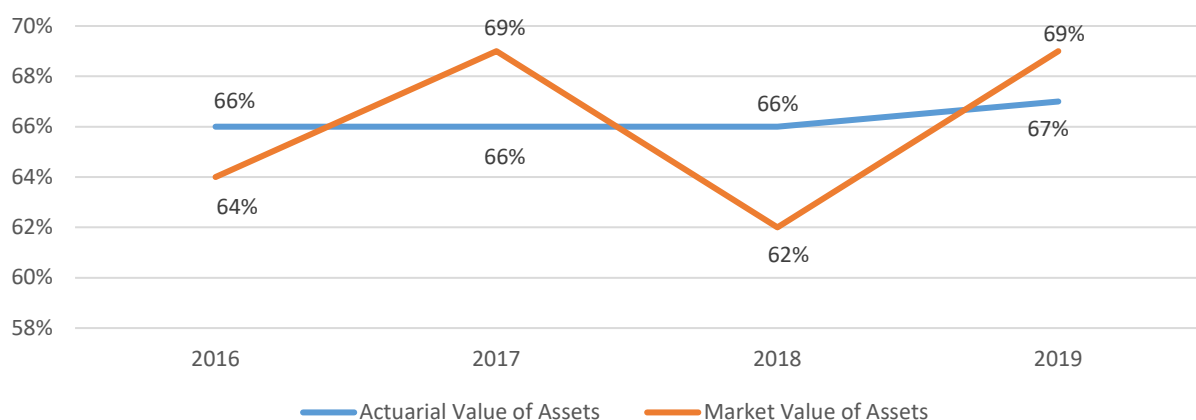
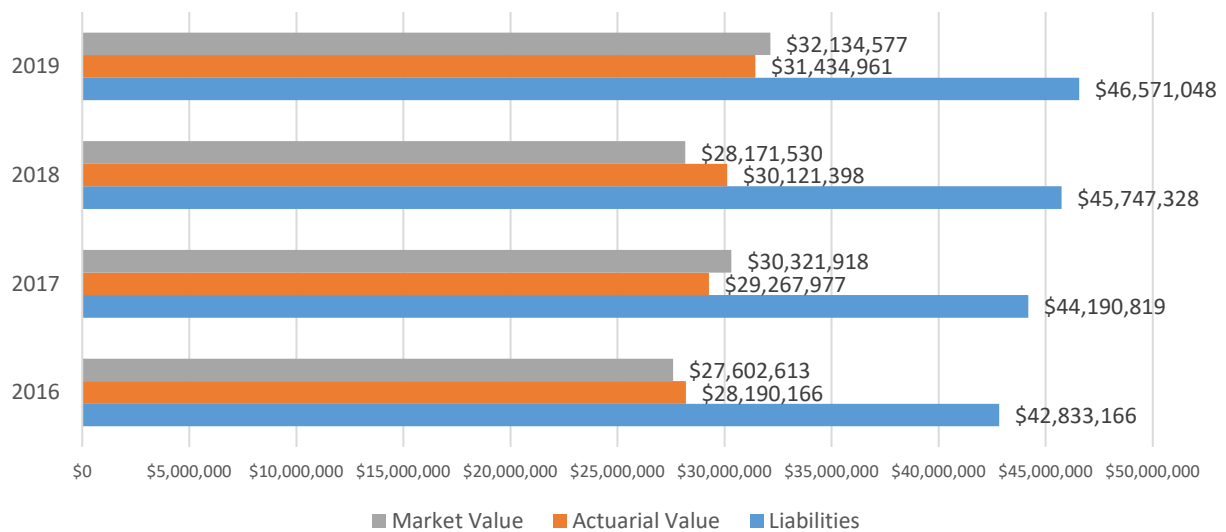
Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.5% Salary: 4%

Plan frozen to new entrants effective January 1, 2012



CARTHAGE POLICEMEN'S & FIREMEN'S PENSION PLAN

MEMBERSHIP:

Active: 49 Inactive: 61

CONTRIBUTIONS:

Employer: \$482,712 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2.5% of compensation for the first 20 years of service + 1% for the next 15 years of service

Normal Retirement Eligibility:

Age 55 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

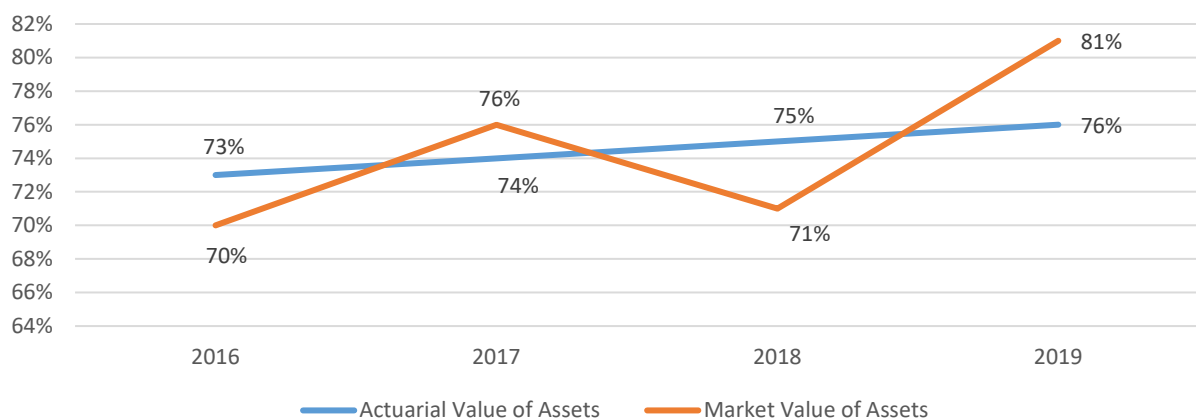
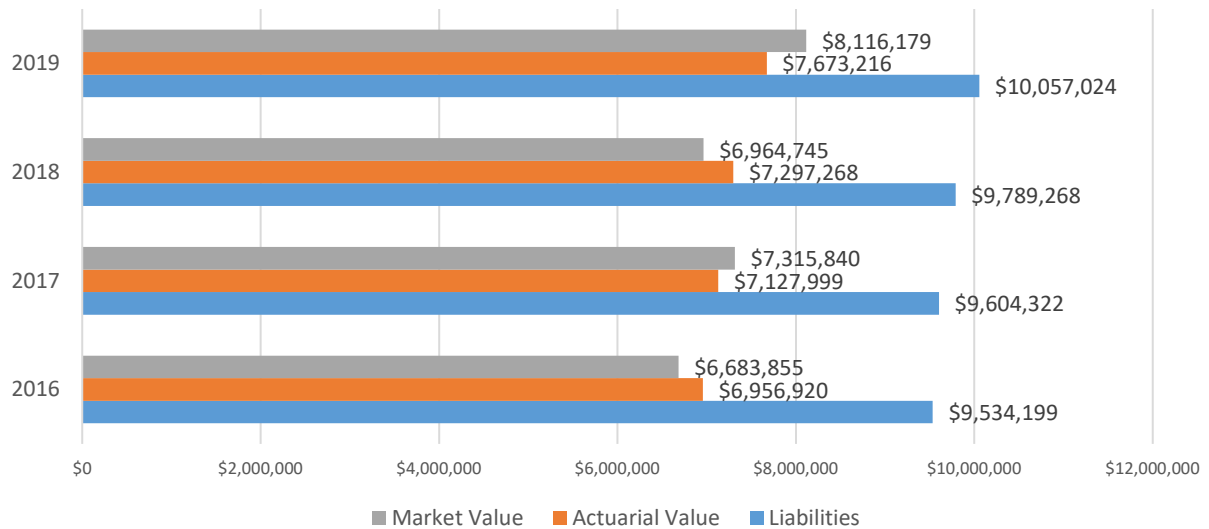
Mortality Table: PubS-2010 Mortality Table projected generationally with Scale MP-2019 adjusted to reflect the 2019 Social Security Intermediate Actuarial Assumptions

Vesting: Partial 5 years / Full 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%



CLAYTON NON-UNIFORMED EMPLOYEES PENSION PLAN

MEMBERSHIP:

Active: 88 Inactive: 112

CONTRIBUTIONS:

Employer: \$481,932 Employee: \$170,010

BENEFITS:

Normal Retirement Formula:

1.5% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 60 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: Assumed yield, 20% adjustment to market

Mortality Table: RP-2000 Combined Healthy generational projection Scale BB

Vesting: 5 years

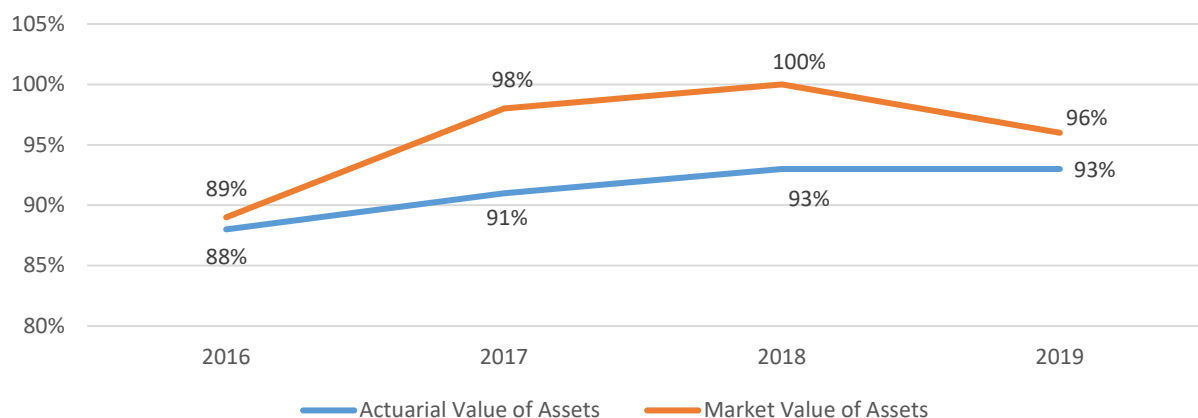
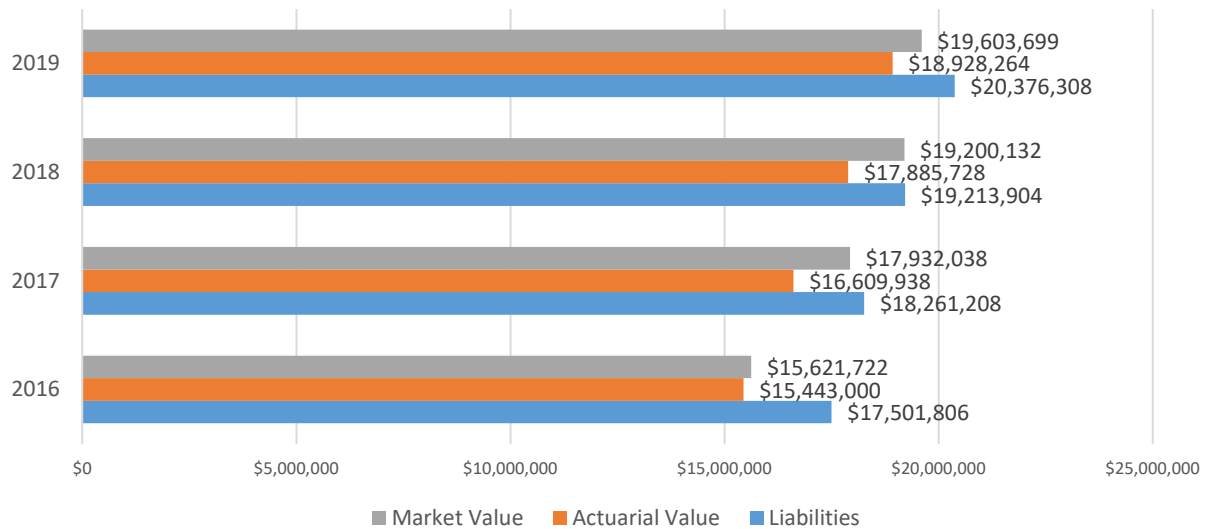
COLA: Annual Amount Maximum: 2%

Percent of CPI: 100%

Cap Total Maximum: 25%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4%



CLAYTON UNIFORMED EMPLOYEES PENSION PLAN

MEMBERSHIP:

Active: 88 Inactive: 80

CONTRIBUTIONS:

Employer: \$1,141,253 Employee: \$329,725

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service
Maximum: 60% of compensation

Normal Retirement Eligibility:

Age 55 with 10 years of service
Age 50 with 25 years of service
Age 65 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 3 Years

Mortality Table: RP-2000 Blue Collar with Scale BB on fully generational basis

Vesting: 10 years

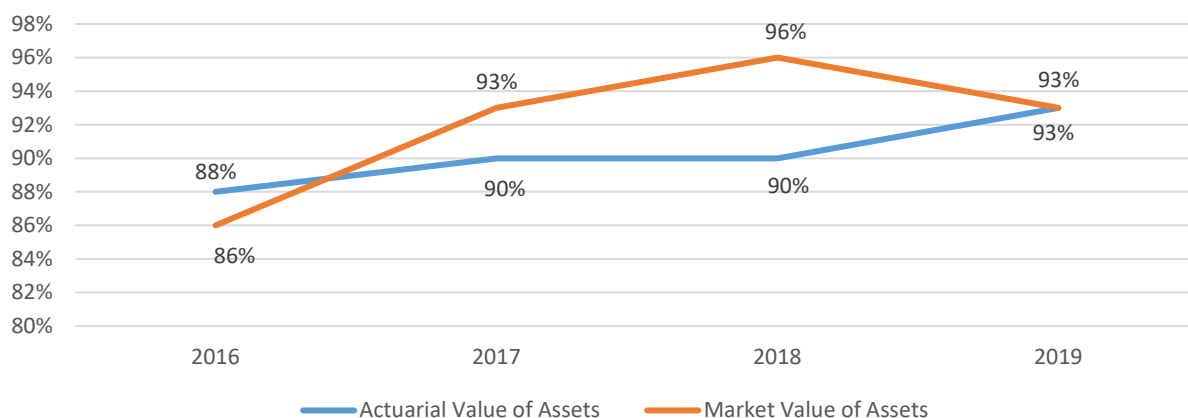
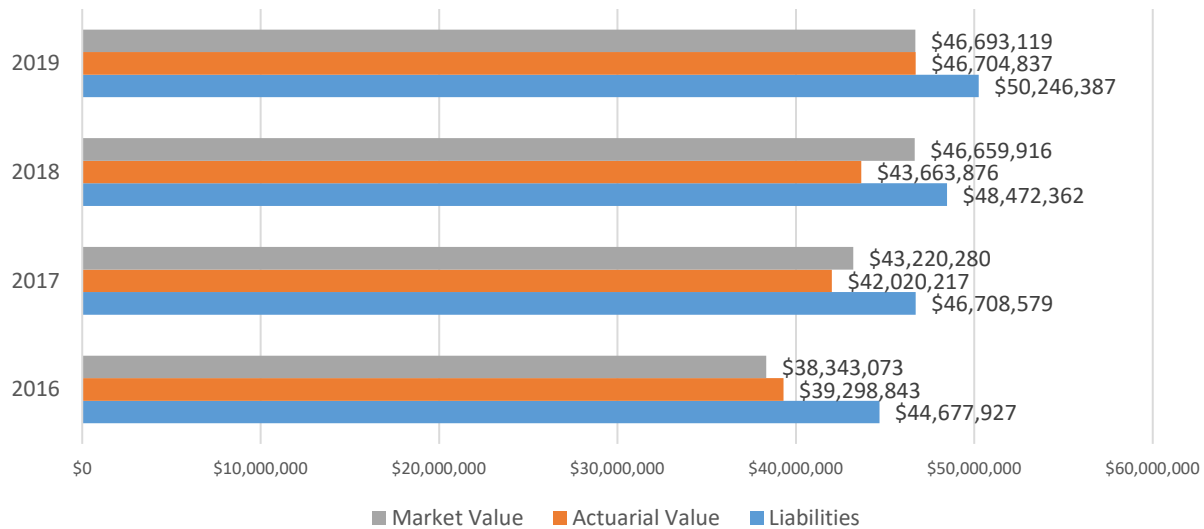
COLA: Annual Amount Maximum: 2%

Percent of CPI: 100%

Cap Total Maximum: 25%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%



COLUMBIA FIREMEN'S RETIREMENT PLAN

MEMBERSHIP:

Active: 137 Inactive: 164

CONTRIBUTIONS:

Employer: \$5,306,842 Employee: \$1,303,827

BENEFITS:

Normal Retirement Formula:

Tier 1: 3.5% of compensation for the first 20 years of service + 2% for the next 5 years of service

Maximum: 80% of compensation

Tier 2 (Hired on/after 10/1/12): 2.5% of compensation x years of service

No maximum benefit

Normal Retirement Eligibility:

Tier 1: Age 65 or 20 years of service

Tier 2 (Hired on/after 10/1/12): Age 55 with 1 year of service. Rule of 80.

Social Security Coverage: No

Valuation of Assets: 4 Years

Mortality Table: RP-2014 with Scale MP-2015

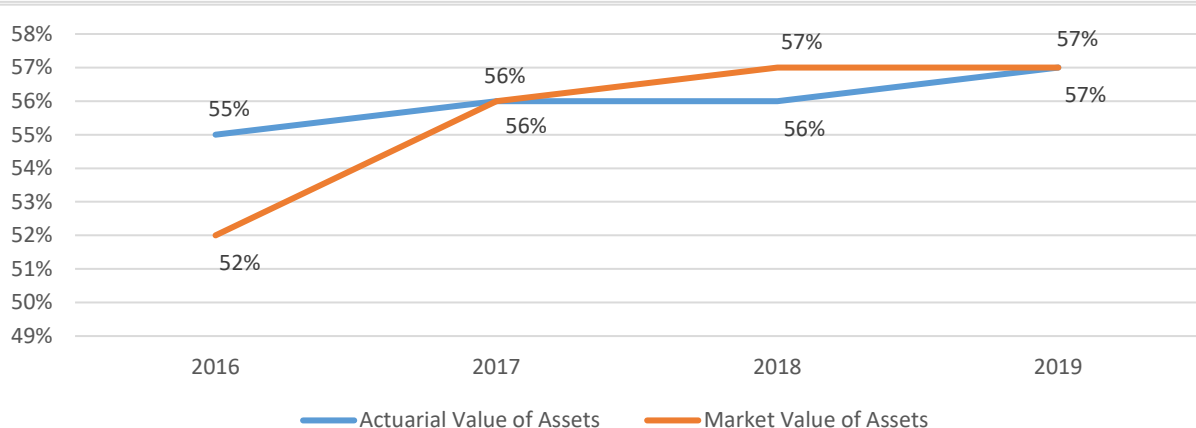
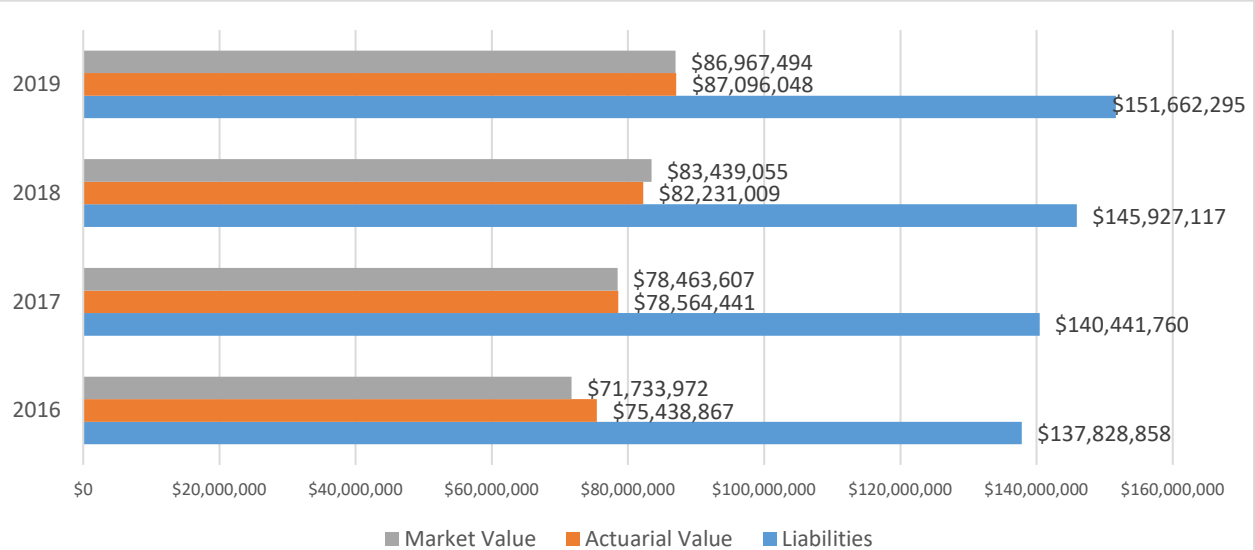
Vesting: 1 year

COLA: Annual Amount Minimum: 2%

ACTUARIAL ASSUMPTIONS:

Interest: 7%

Salary: 3.25%



COLUMBIA POLICE RETIREMENT PLAN

MEMBERSHIP:

Active: 157 Inactive: 204

CONTRIBUTIONS:

Employer: \$4,019,648 Employee: \$354,970

BENEFITS:

Normal Retirement Formula:

Tier 1: 3% of compensation for the first 20 years of service + 2% for the next 5 years of service

Maximum: 70% of compensation

Tier 2 (Hired on/after 10/1/12): 2% of compensation for the first 25 years of service + 1.5% for each year over 25

Maximum: 57.5% of compensation

Normal Retirement Eligibility:

Tier 1: Age 65 or 20 years of service

Tier 2 (Hired on/after 10/1/12): Age 65 or 25 years of service

Social Security Coverage: Yes

Valuation of Assets: 4 Years

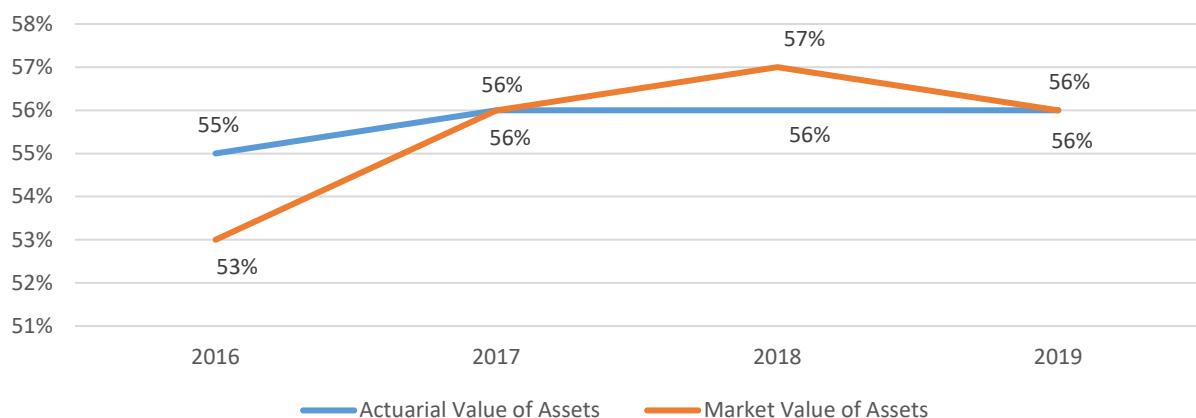
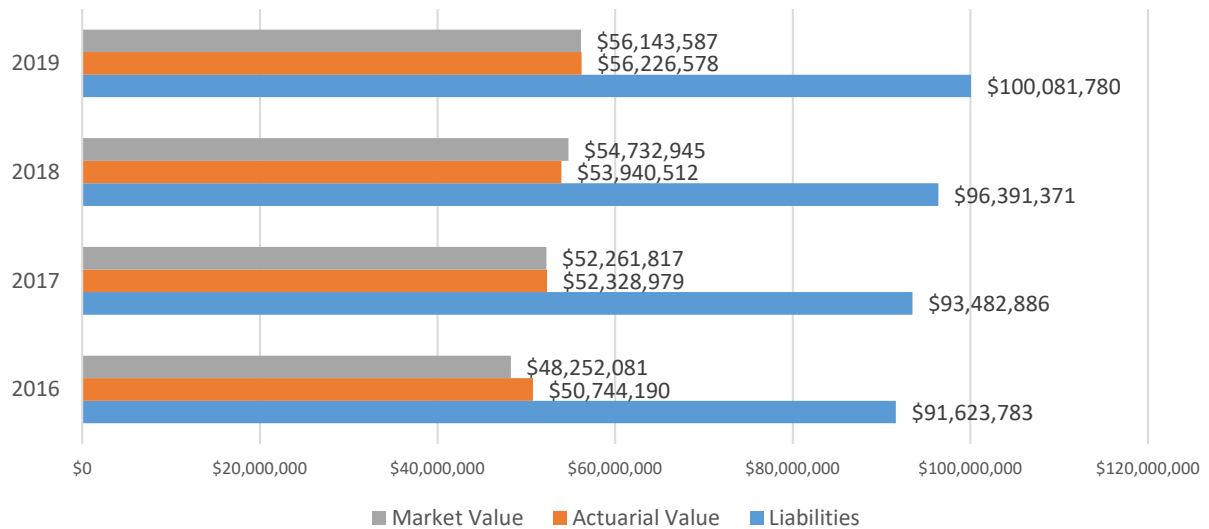
Mortality Table: RP-2014 with Scale MP-2015

Vesting: 1 year

COLA: Annual Amount Minimum: 0.6%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.25%



COMMUNITY FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 63 Inactive: 24

CONTRIBUTIONS:

Employer: \$1,288,540 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

60% of compensation
or the actuarial equivalent of the participant's prior DC account balance

Normal Retirement Eligibility:

Age 62
Age 60 with 20 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

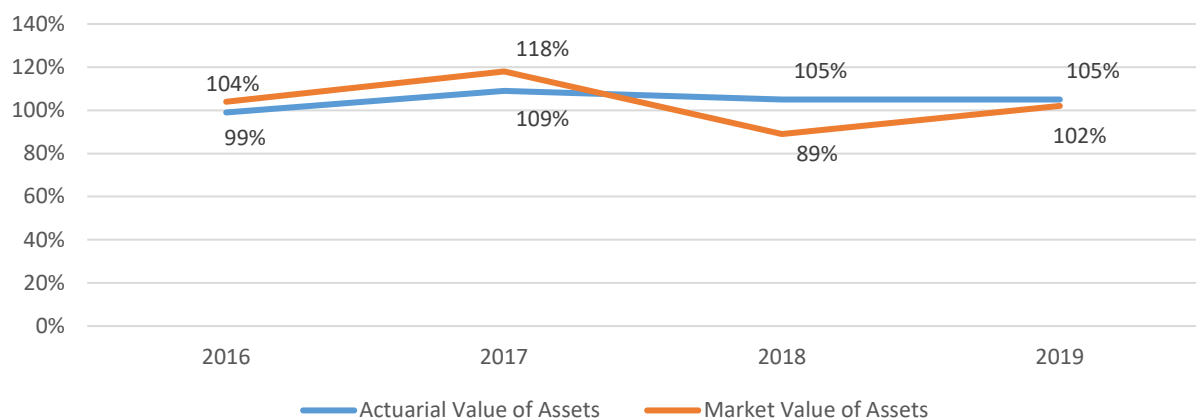
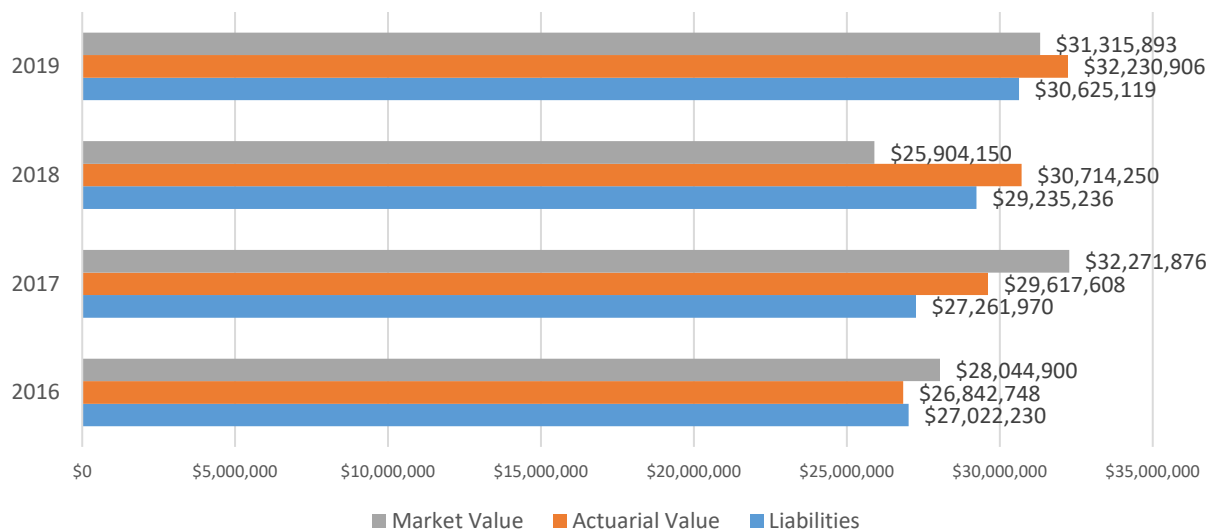
Mortality Table: PubS-2010 Mortality Table with generational improvements from 2010 based on Scale MP-2019

Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4%



COUNTY EMPLOYEES' RETIREMENT FUND

MEMBERSHIP:

Active: 11,879 Inactive: 8,001

CONTRIBUTIONS:

Employer: \$31,109,986 Employee: \$16,215,231

BENEFITS:

Normal Retirement Formula:

\$29 x years of credited service

Greater of Flat Dollar formula, Target Replacement Ratio formula-Social Security offset, or Prior Plan formula

Normal Retirement Eligibility:

Age 62 with 8 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: Pub-2010 General Annuitant Below Median Table, Scale MP-2018

Vesting: 8 years

COLA: Annual Amount Maximum: 1%

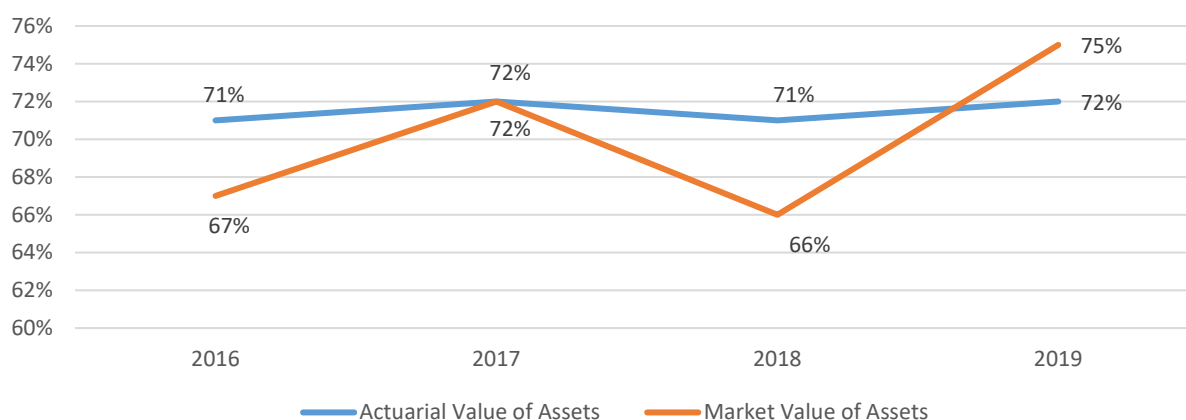
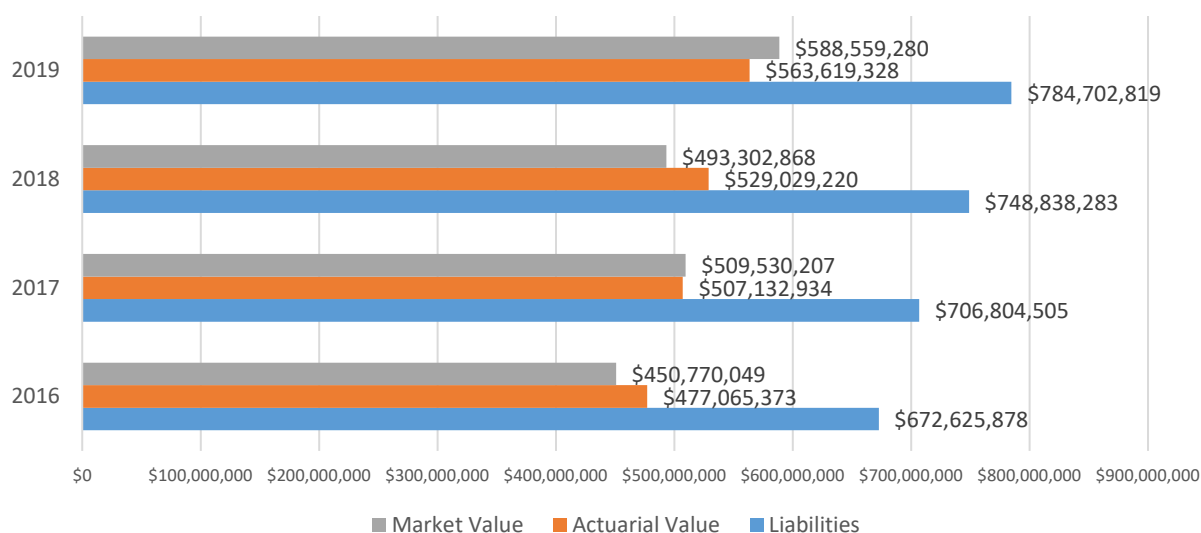
Percent of CPI: 100%

Cap Total Maximum: 50%

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: 2.7%

Defined Contribution Plan: See corresponding information in Defined Contribution Section



CREVE COEUR EMPLOYEES RETIREMENT PLAN

MEMBERSHIP:

Active: 36 Inactive: 110

CONTRIBUTIONS:

Employer: \$1,307,755 Employee: \$86,614

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service
or 1.7% of compensation x years of service plus 3% Employer Contribution to DC Plan (if the member elected to join the DC Plan*)
Maximum: 30 years of service

Normal Retirement Eligibility:

Age 65 with 8 years of service
Rule of 85
Uniformed: Age 55 with 8 years of service

Social Security Coverage: Yes

Valuation of Assets: 3 Years

Mortality Table: RP-2000 Combined Healthy, 70% Blue Collar adjustment, Generational projection, scale BB

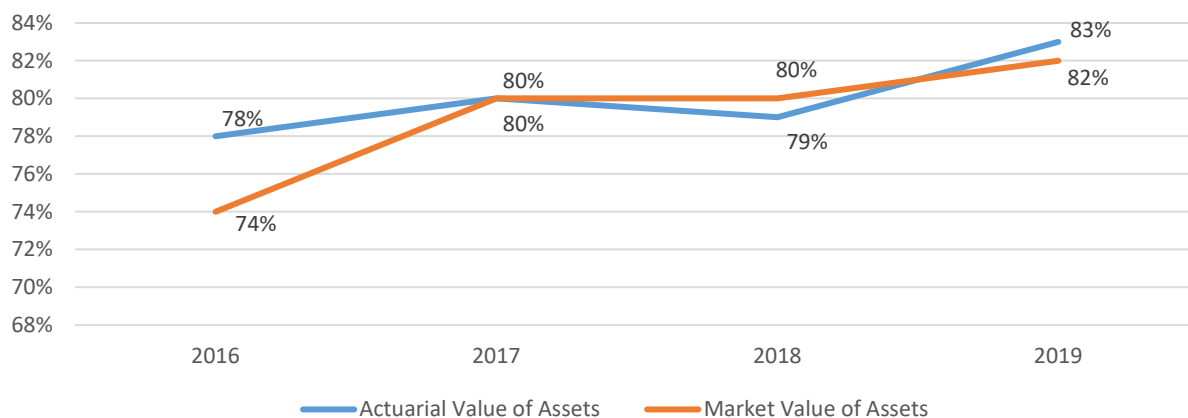
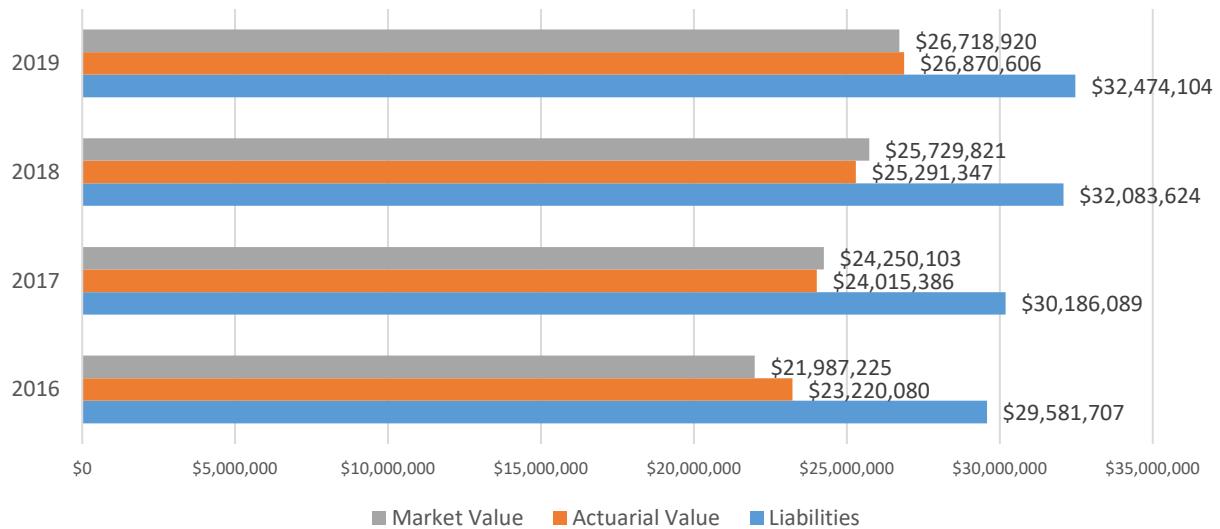
Vesting: 8 years

COLA: Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 6.75% Salary: 4%

Plan closed June 2006. No employees hired after 5/23/06 may enter the plan. Joined LAGERS 8/1/17. All employees hired since June 2006 are enrolled in LAGERS. *Defined Contribution plan terminated 8/1/17 and assets disbursed.*



CREVE COEUR FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 56 Inactive: 39

CONTRIBUTIONS:

Employer: \$1,600,000 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

70% of compensation offset by 50% of primary Social Security Benefits
Also offset by actuarial equivalent of monthly defined contribution benefit

Normal Retirement Eligibility:

Age 55 with 20 years of service
Hired after 7/1/95: Age 55 with 25 years of service

Social Security Coverage: Yes

Valuation of Assets: 3 Years

Mortality Table: Pub-2010 Public Safety generational projection Scale MP-2019

Vesting: 20 years

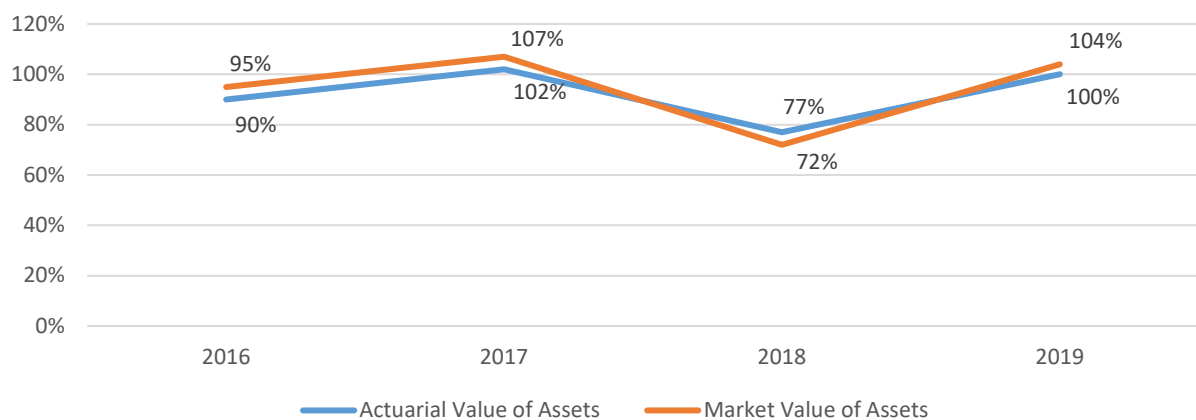
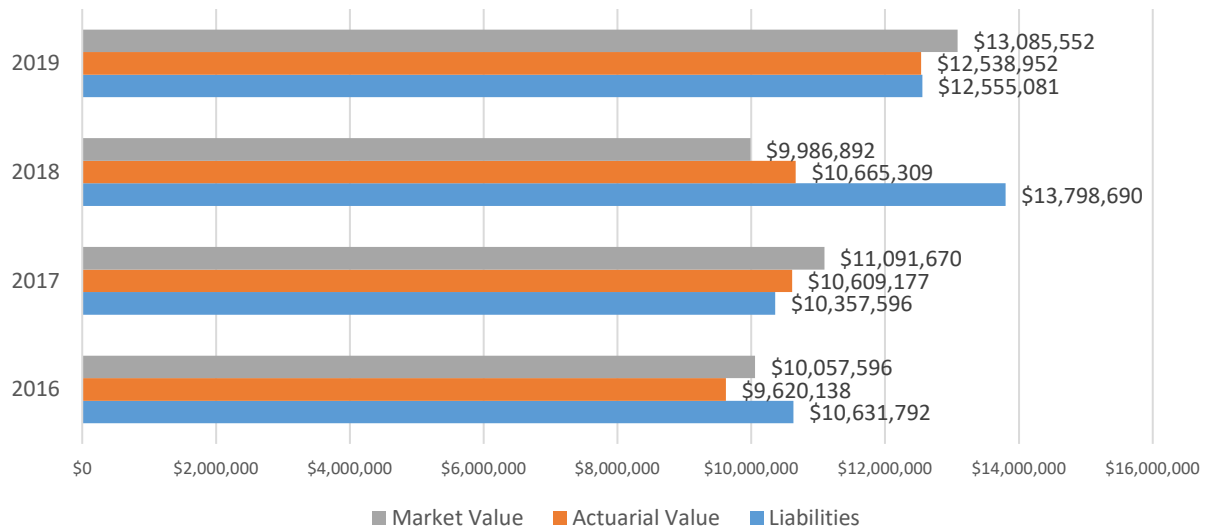
25 years if hired after 7/1/95

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6.3% Salary: 4%

Defined Contribution Plan: See corresponding information in Defined Contribution section



EUREKA FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 34 Inactive: 33

CONTRIBUTIONS:

Employer: \$445,000 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

Service earned prior to 1/1/14: 2.5% of compensation x years of creditable service

Service earned on/after 1/1/14: 2% of compensation x years of service

Maximum: 30 years of service

Normal Retirement Eligibility:

Age 55 with 5 years of service

Hired on/after June 11, 2013: Age 55 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: 4 Years

Mortality Table: PRI-2012 Employee Table with Scale MP-2019

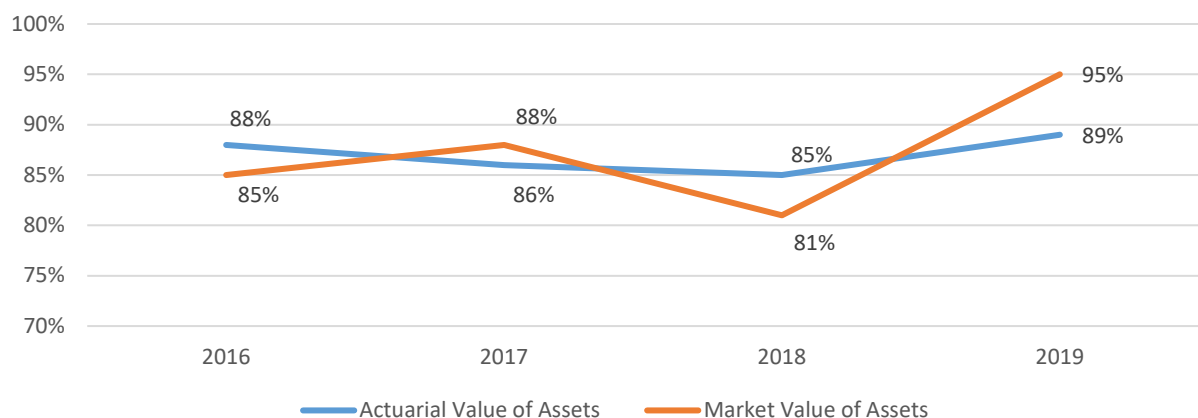
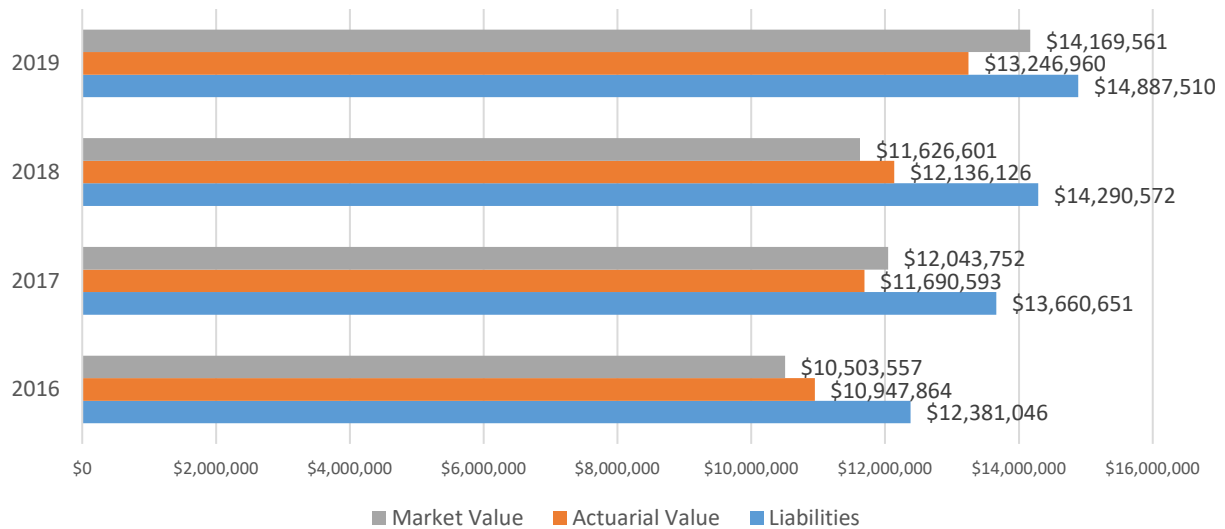
Vesting: 5 years; 10 years if hired on/after June 11, 2013

COLA: Ad hoc

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.5%

Plan closed to new entrants 1/1/18. New hires are enrolled in a defined contribution plan. See corresponding information in Defined Contribution section.



FENTON FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 56 Inactive: 35

CONTRIBUTIONS:

Employer: \$1,496,547 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2.5% of compensation x years of creditable service

Maximum: 30 years of service

Employees hired prior to 3/1/06: 3% of compensation x years of service + supplemental benefit from ages 55-65 of \$13 x years of service

Normal Retirement Eligibility:

Age 55 with 15 years of service

Non-first responders hired after 1/1/17: age 62 with 15 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

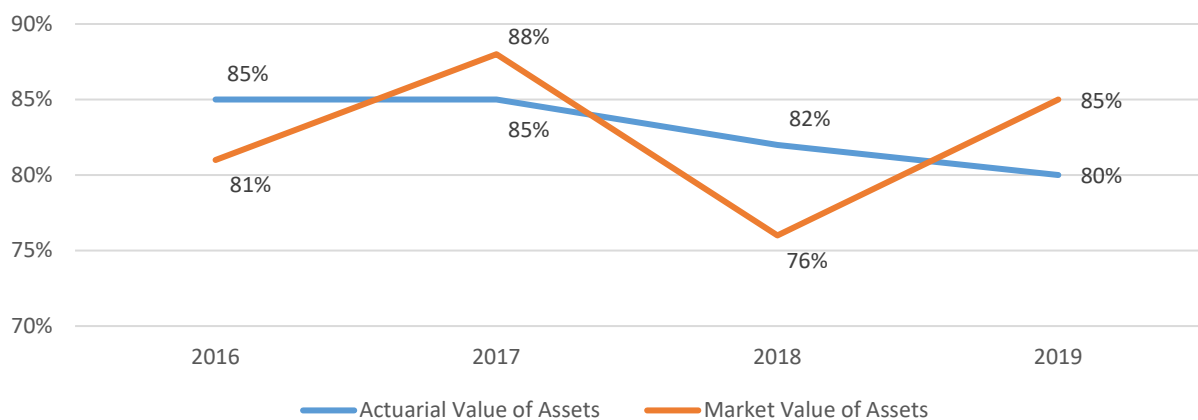
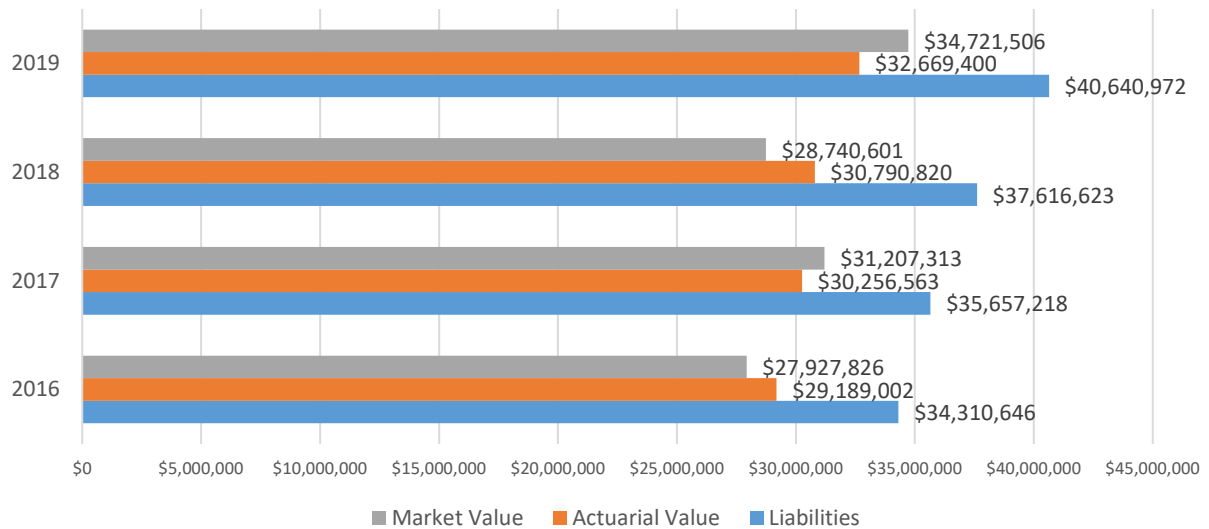
Mortality Table: Pub-2010 Public Retirement Plans General Mortality Table weighted by Headcount projected by MP-2019

Vesting: Partial 10 years / Full 15 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: 3.75%



FERGUSON PENSION PLAN

MEMBERSHIP:

Active: 105 Inactive: 143

CONTRIBUTIONS:

Employer: \$336,116 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

1.75% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 60 with 8 years of service
Rule of 82.5 with minimum age of 55

Social Security Coverage: Yes

Valuation of Assets: 5 Years

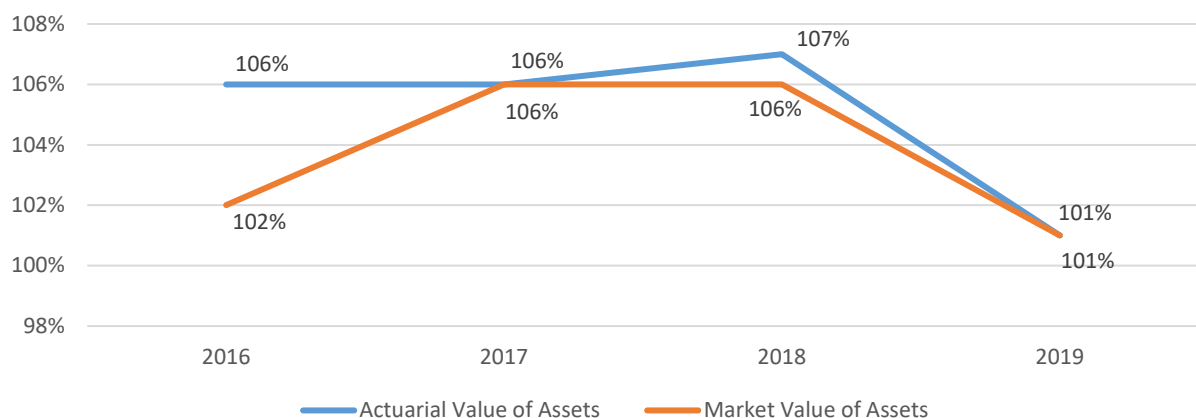
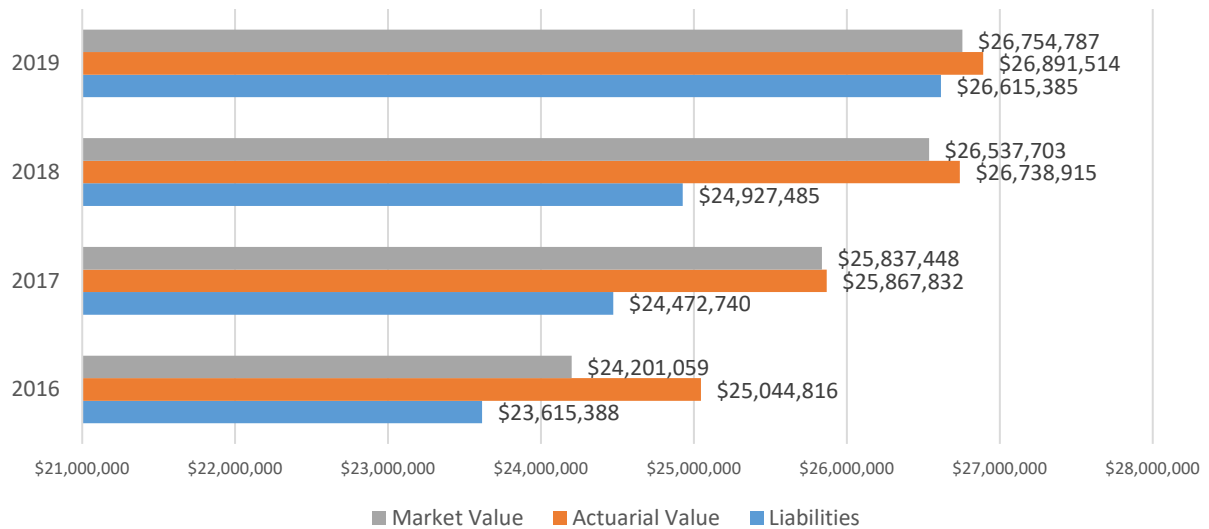
Mortality Table: Pub-2010 General Mortality Tables (Below Median), generational projection, Scale SSA18

Vesting: 8 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: 2.75%



FIREFIGHTERS' RETIREMENT PLAN OF ST. LOUIS CITY

MEMBERSHIP:

Active: 609 Inactive: 110

CONTRIBUTIONS:

Employer: \$8,995,725 Employee: \$3,294,992

BENEFITS:

Normal Retirement Formula:

2% of compensation for the first 25 years of service + 2.5% (5% for grandfathered participants) of compensation in excess of 25 years of service
Maximum benefit: 75%

Normal Retirement Eligibility:

Age 55 with 20 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

Mortality Table: RP-2014 Blue Collar Generational projection adjusted to 2006, scale MP-2017

Vesting: Partial 10 years / Full 20 years

COLA: Annual Amount Minimum: 1.5%

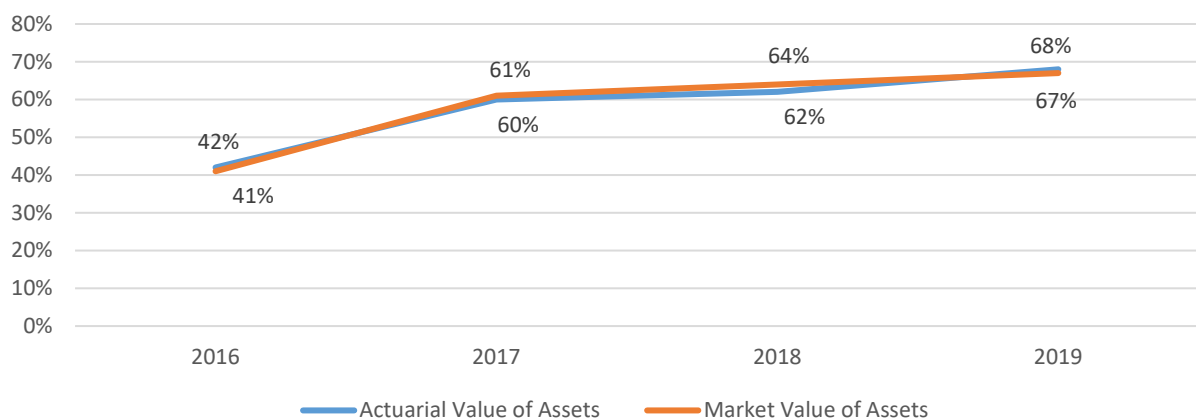
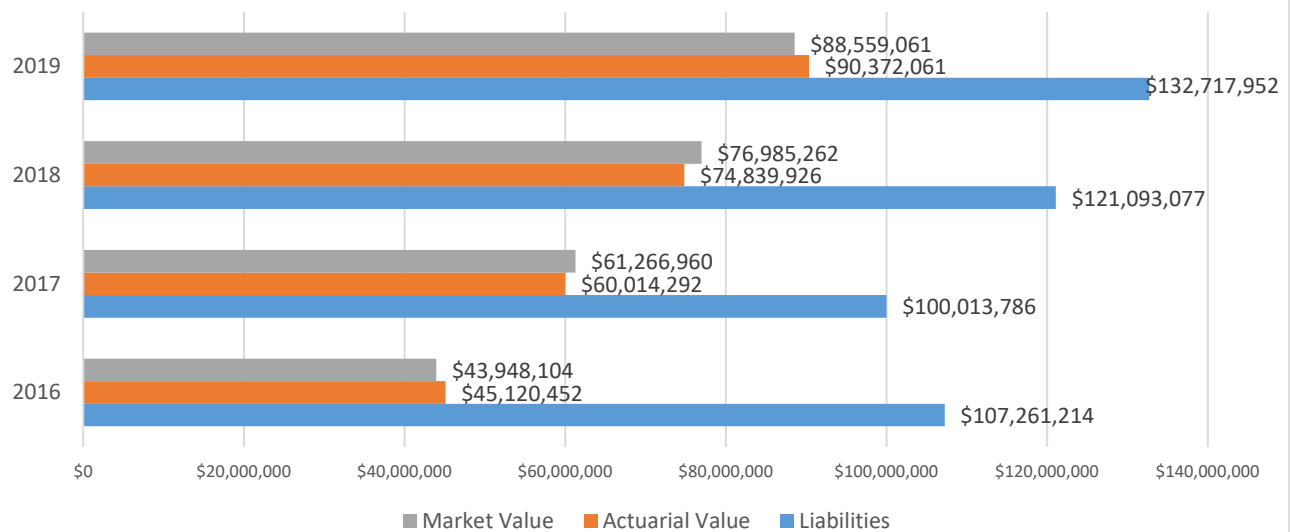
Annual Amount Maximum: 5%

Cap Total Maximum: 25%

COLA varies based on years of service and entry date to the plan

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: 2.75%



FLORISSANT EMPLOYEES PENSION PLAN

MEMBERSHIP:

Active: 8 Inactive: 36

CONTRIBUTIONS:

Employer: \$464,000 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 60 with 10 years of service

Rule of 85

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: RP-2014 Healthy Employee Table Scale MP-2019

Vesting: Partial 5 years / Full 15 years

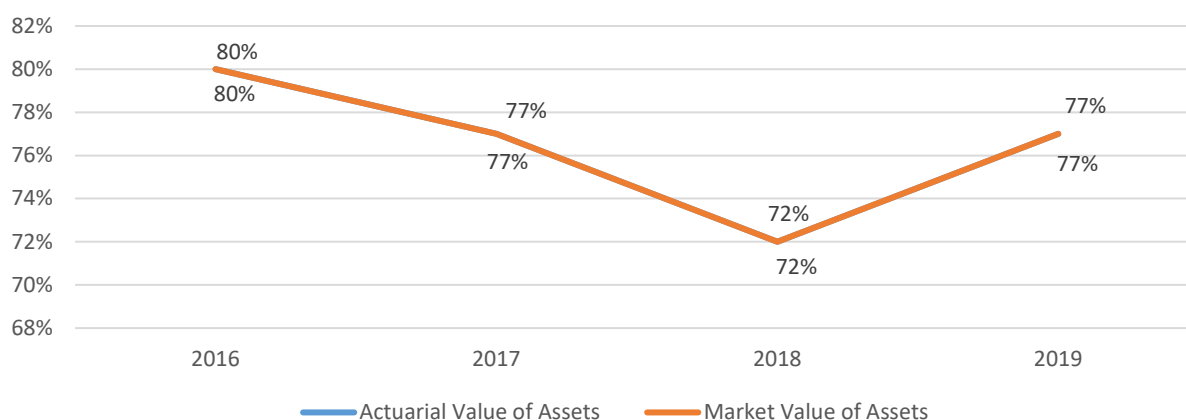
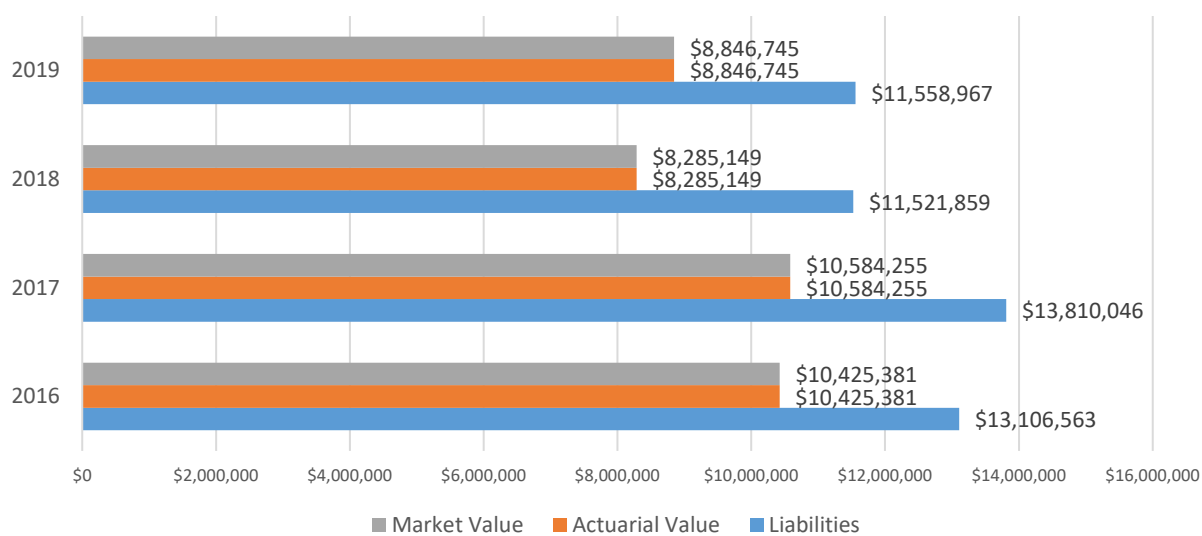
COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6% Salary: 3%

Plan closed December 2000

Defined contribution plan: See corresponding information in Defined Contribution Section



FLORISSANT VALLEY FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 64 Inactive: 26

CONTRIBUTIONS:

Employer: \$3,078,762 Employee: \$57,093

BENEFITS:

Normal Retirement Formula:

2.5% of compensation x years of creditable service
Maximum: 30 years of service. Limited to 75% of average monthly earnings

Normal Retirement Eligibility:

Age 60 or 30 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

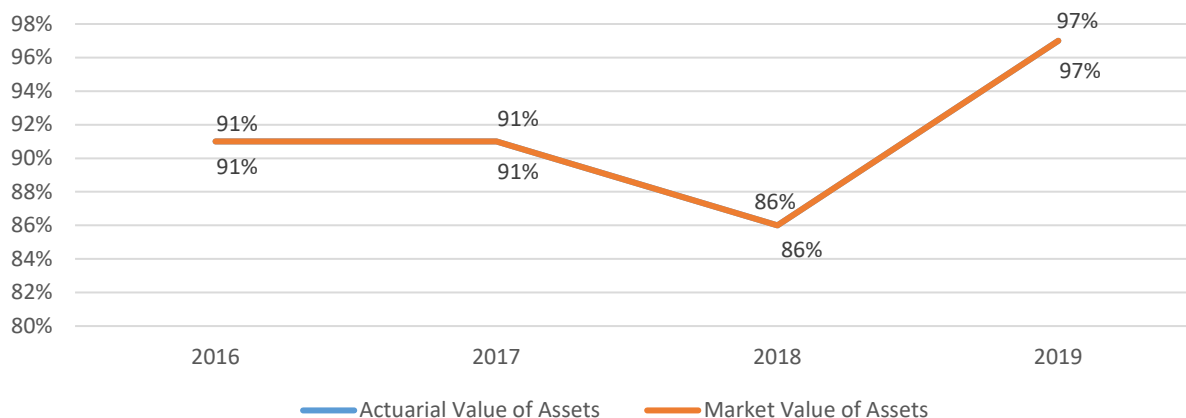
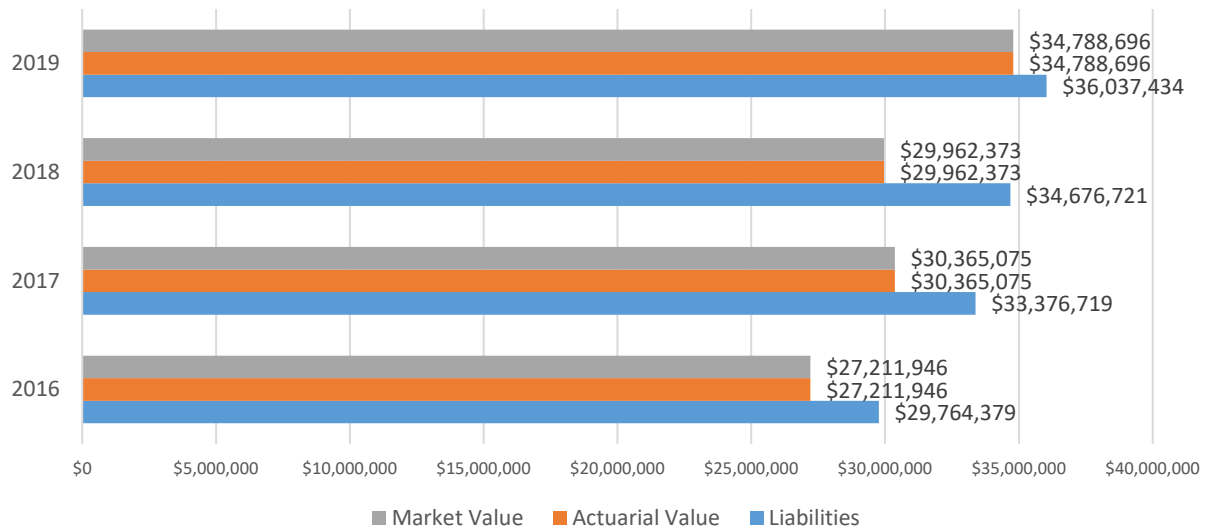
Mortality Table: PRI-2012 Employee & Annuitant tables for Males & Females projected generationally from 2012 using Scale MP-2019

Vesting: Partial 10 years / Full 15 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: 1.9%



MEMBERSHIP:

Active: 22 Inactive: 21

CONTRIBUTIONS:

Employer: \$385,226 Employee: \$51,452

BENEFITS:

Normal Retirement Formula:

50% of compensation for the first 20 years of service + 1% for each year of service in excess of 20

Normal Retirement Eligibility:

Age 55 with 15 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

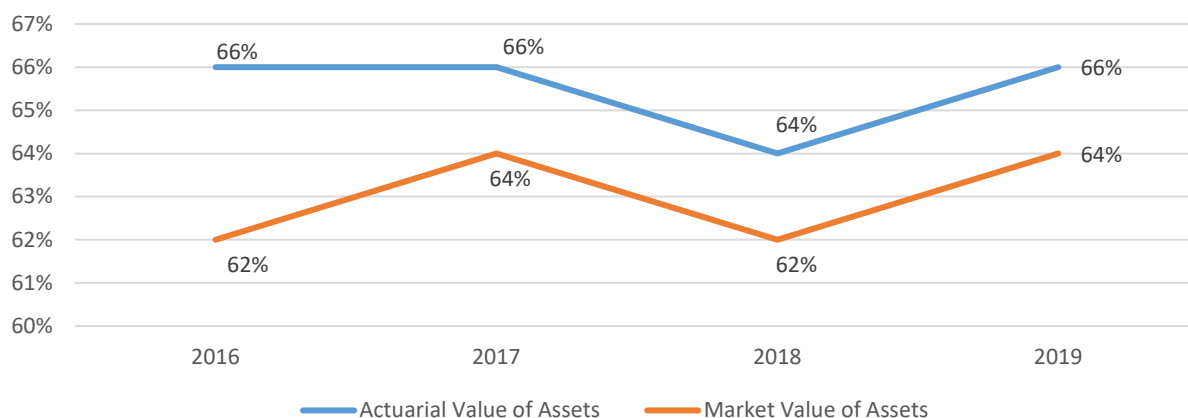
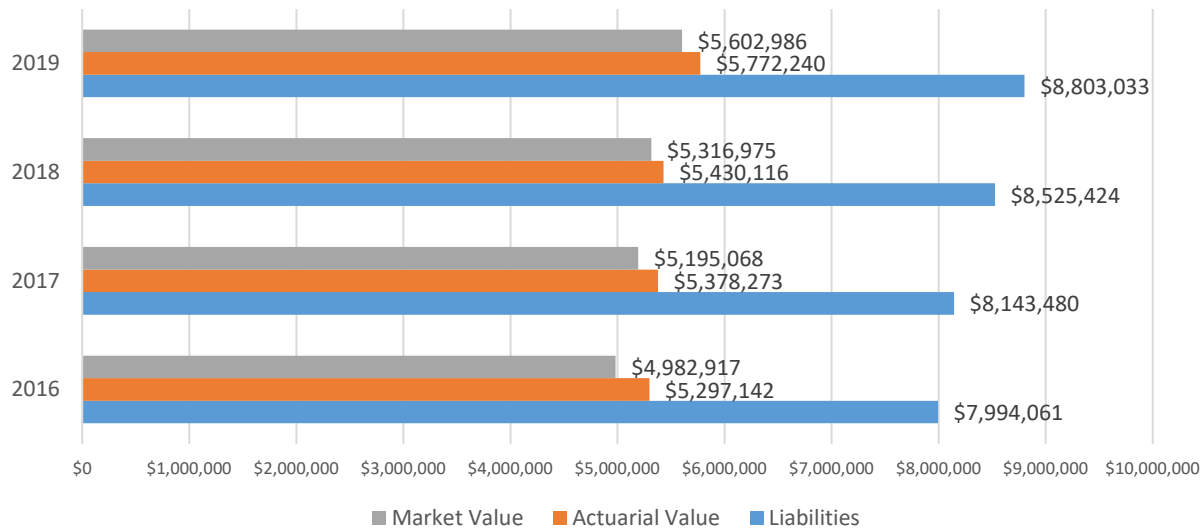
Mortality Table: Pub-2010 Public Retirement Plans Safety Classification Scale MP-2018

Vesting: Partial 5 years / Full 15 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%



HANNIBAL POLICE & FIRE RETIREMENT PLAN

MEMBERSHIP:

Active: 77 Inactive: 70

CONTRIBUTIONS:

Employer: \$1,364,514* Employee: \$536,720

BENEFITS:

Normal Retirement Formula:

65% of compensation for the first 25 years of service + 1% for each of the next 5 years of service
Maximum: 70% of compensation

Normal Retirement Eligibility:

25 years of service
Hired on/after 7/1/07: 25 years of service with a minimum age of 55 before receiving a benefit

Social Security Coverage: No

Valuation of Assets: Market Value

Mortality Table: RP-2014 Blue Collar tables at 2006, generational projection, with scale MP-2018

Vesting: Partial 12 years / Full 20 years

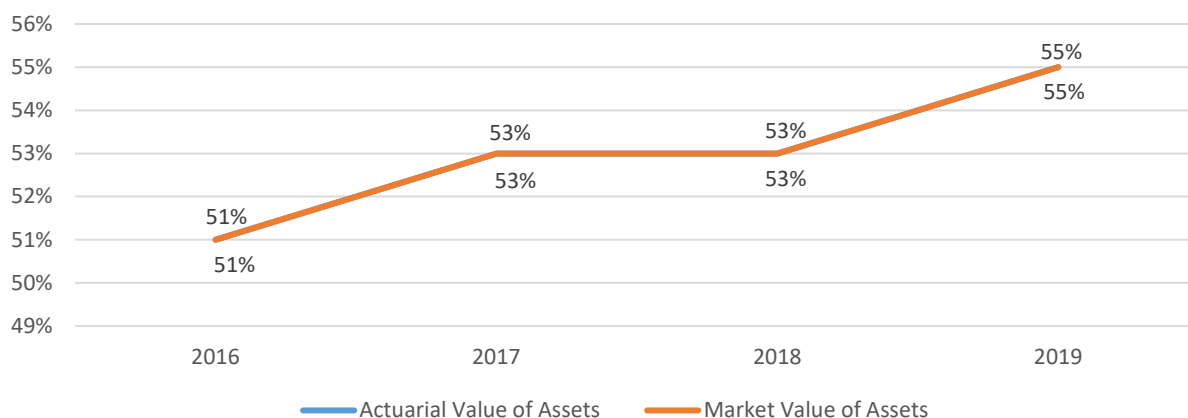
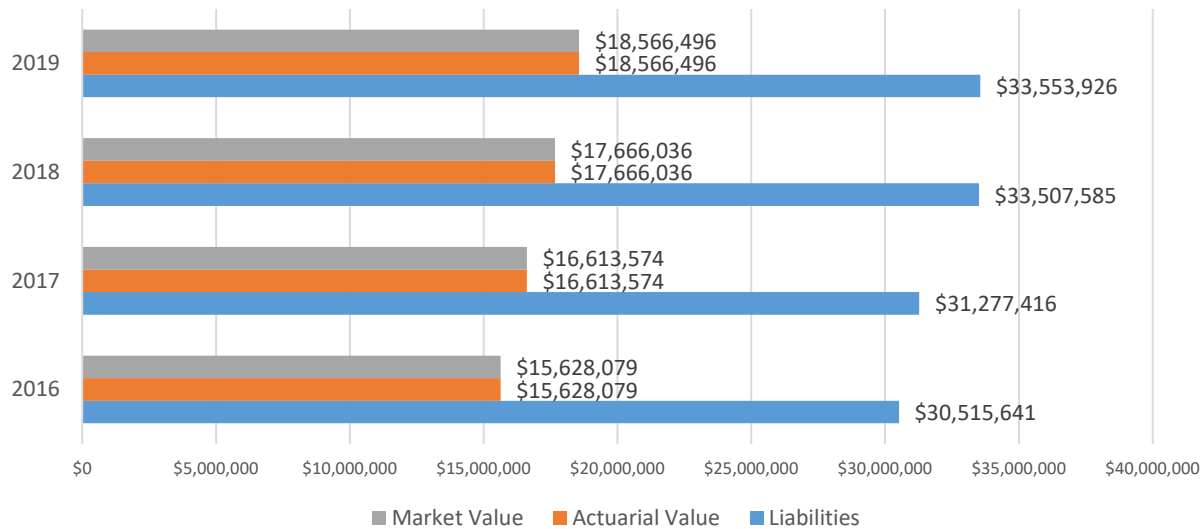
COLA: Ad hoc

Annual Amount Maximum: 3%
No COLA if below 50% funded

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%

*Employer contributions includes tax receipts of \$371,667



HAZELWOOD CITY COUNCIL MEMBERS RETIREMENT PLAN

MEMBERSHIP:

Active: 9 Inactive: 7

CONTRIBUTIONS:

Employer: \$9,079 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:
\$10 x years of credited service

Normal Retirement Eligibility:
Age 60 with 6 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: RP-2000 Combined Healthy Mortality Table with 70% Blue Collar Adjustment, Generational projection, Scale BB

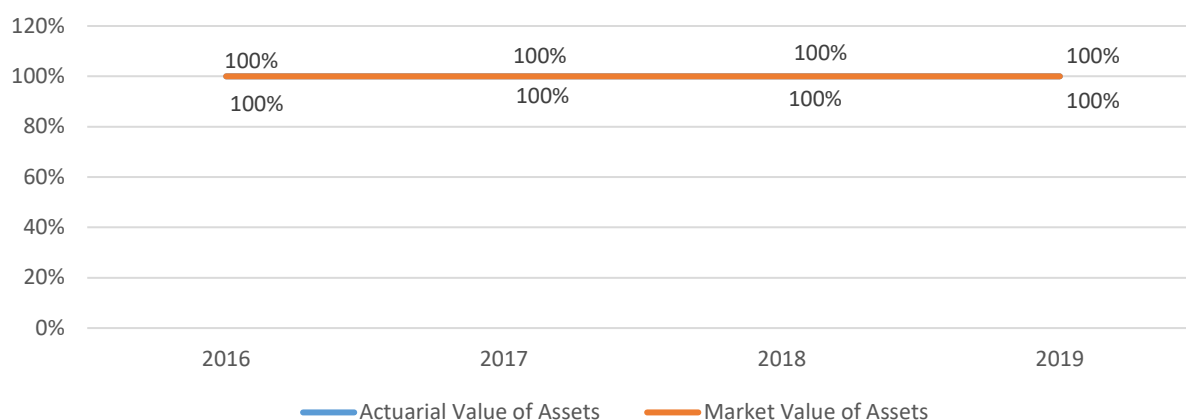
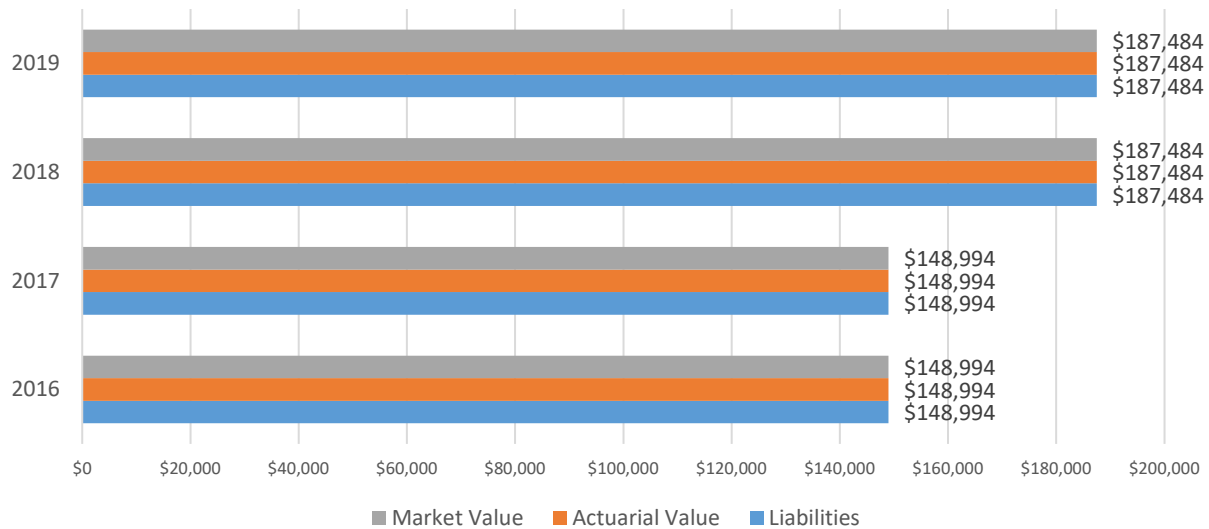
Vesting: 6 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.5% Salary: N/A

Plan performs actuarial valuation biennially



HAZELWOOD RETIREMENT PLAN

MEMBERSHIP:

Active: 178 Inactive: 153

CONTRIBUTIONS:

Employer: \$1,407,634 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service
Maximum: 30 years of service

Normal Retirement Eligibility:

The later of age 60 or 25 years of service
Rule of 85 with age 55

Social Security Coverage: Yes

Valuation of Assets: 5 years

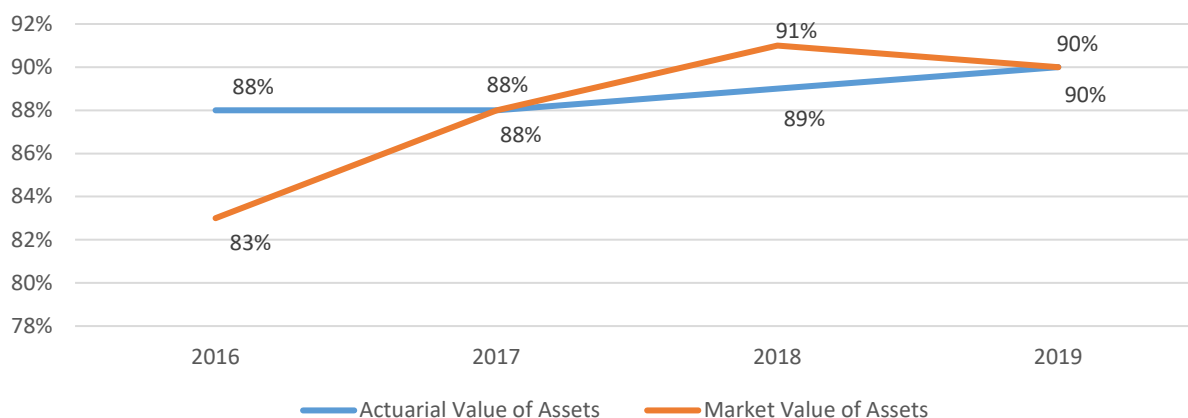
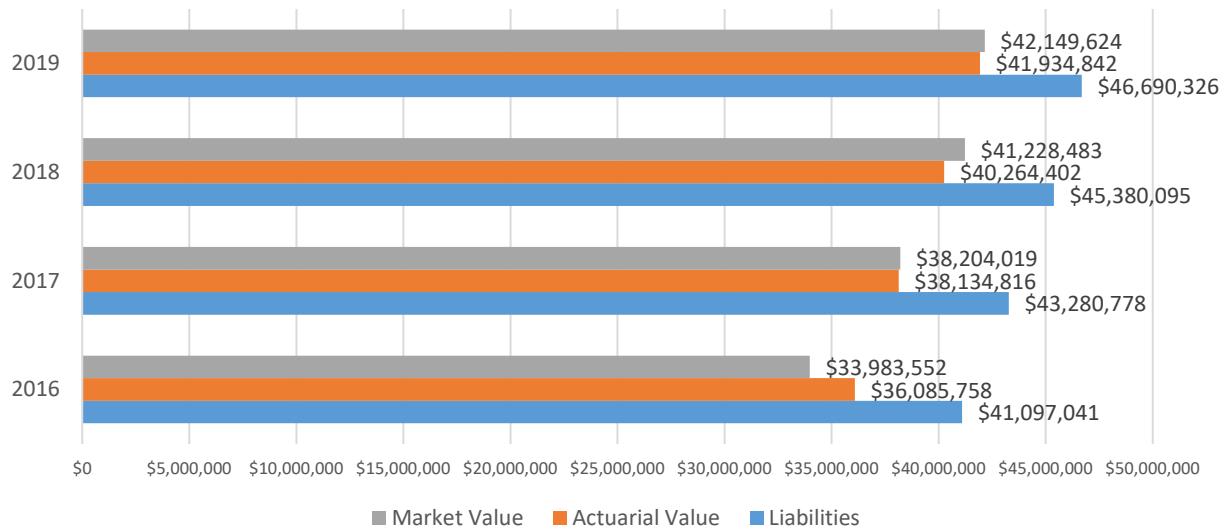
Mortality Table: Pub-2010 weighted 70% and 30% to Public Safety & General Employees, Generational projection, Buck-modified Scale MP-2018

Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.5% Salary: 4.5%



HIGH RIDGE FIRE PROTECTION DISTRICT PENSION PLAN

MEMBERSHIP:

Active: 37 Inactive: 16

CONTRIBUTIONS:

Employer: \$325,113 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

\$100 per month x years of service. Maximum: 50 years of service

Normal Retirement Eligibility:

Age 55 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

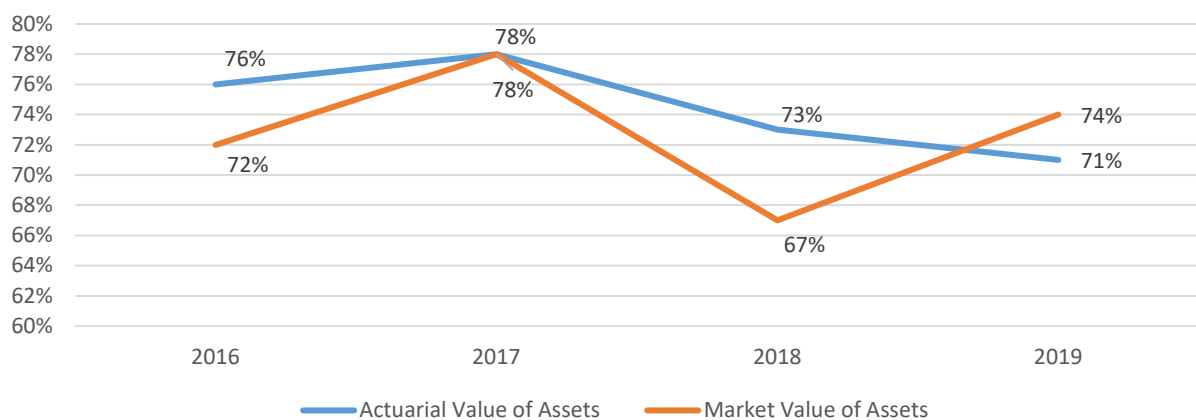
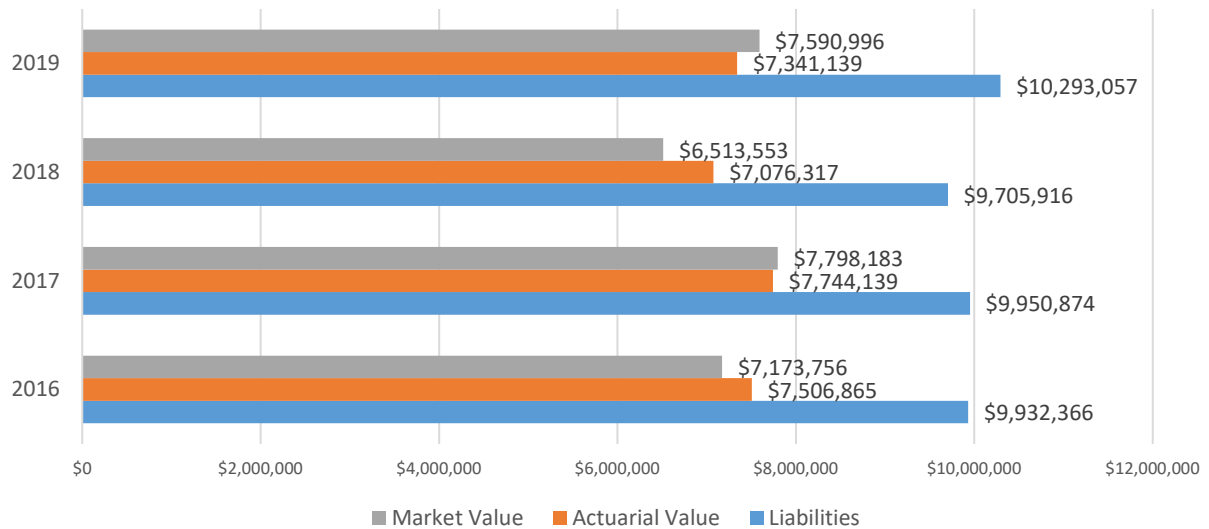
Mortality Table: PubS-2010 Public Safety Mortality with generational improvements from 2010 using Scale MP-2019

Vesting: 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: N/A



JACKSON COUNTY EMPLOYEES PENSION PLAN

MEMBERSHIP:

Active: 1,258 Inactive: 2,558

CONTRIBUTIONS:

Employer: \$9,383,418 Employee: \$25,909*

BENEFITS:

Normal Retirement Formula:

1.5% of compensation x years of creditable service

Elected officials: 4.167% x final average salary for the first 12 years + 5% for years 12 - 16

Service credit accrual stops after 16 years for elected officials

Normal Retirement Eligibility:

Age 65 with 5 years of service

Rule of 80 at age 55

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 adjusted back to 2006 using Scale MP-2014 and projected forward with Scale MP-2016 on a generational basis

Vesting: 5 years

COLA: Ad hoc

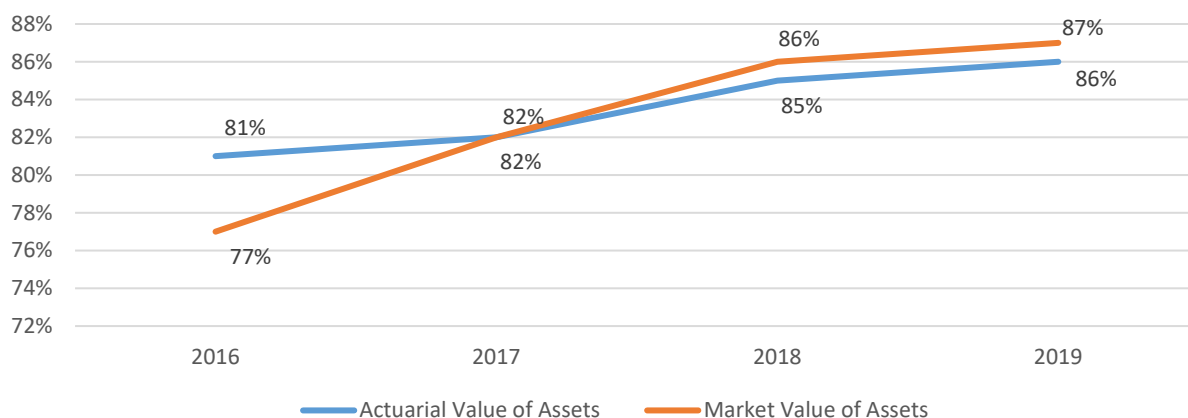
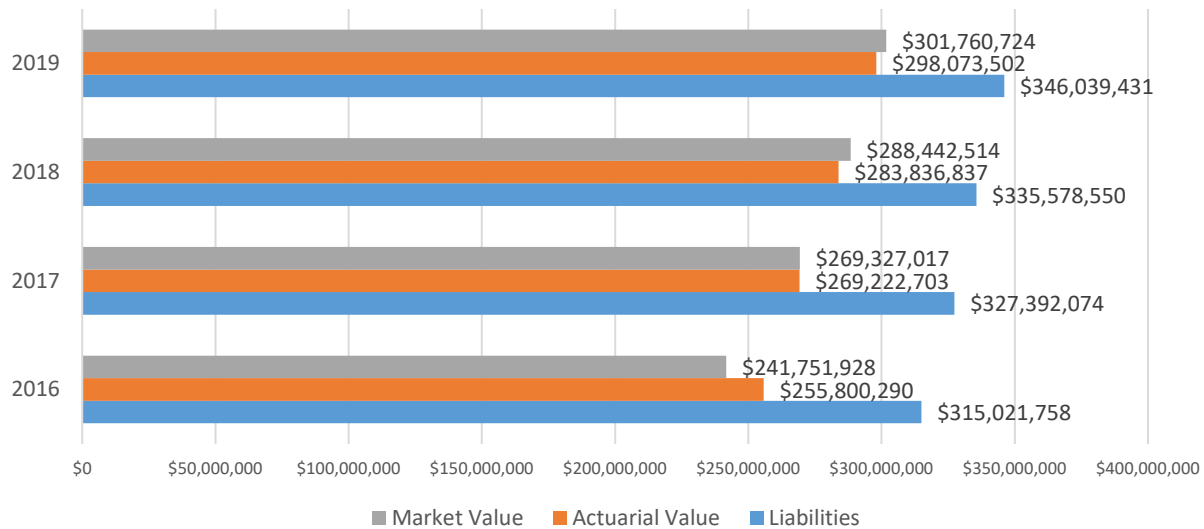
Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:

Interest: 6.75%

Salary: 2.75%

Employee contributions are from elected officials only. Other employees do not contribute to the plan.



JOPLIN POLICE & FIRE PENSION PLAN

MEMBERSHIP:

Active: 192 Inactive: 166

CONTRIBUTIONS:

Employer: \$2,999,709 Employee: \$1,307,243

BENEFITS:

Normal Retirement Formula:

Tier 1 (hired before 1/31/09): 2.5% of compensation for the first 20 years of service + 1% for the next 5 years of service

Maximum: 65% of compensation

Tier 2 (hired on/after 1/31/09): 2.2% percent of compensation for the first 25 years of service + 1% for the next 5 years of service

Maximum: 60% of compensation

Normal Retirement Eligibility:

Tier 1 (hired before 1/31/09): 20 years of service

Tier 2 (hired on/after 1/31/09): Age 60 or 25 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

Mortality Table: RP-2014 adjusted for mortality improvement to 2017 and 2006 for men and women

Vesting: 25 years

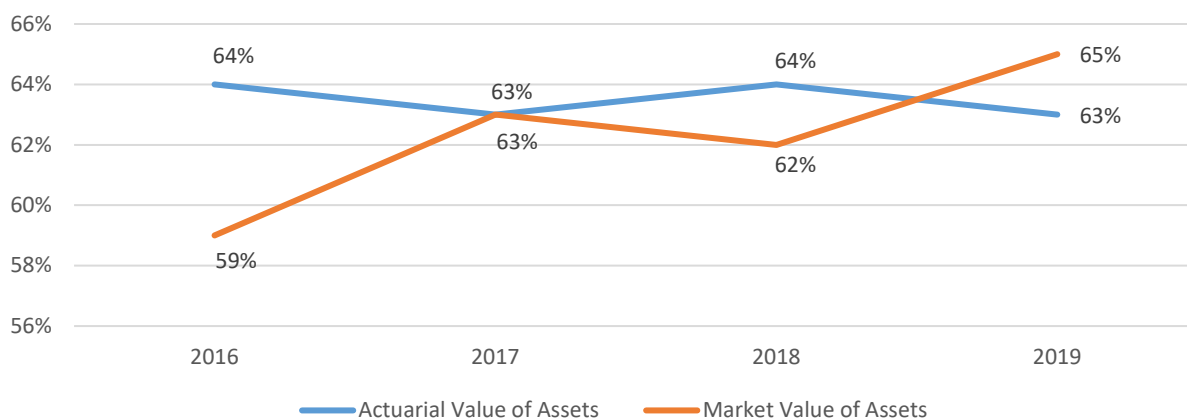
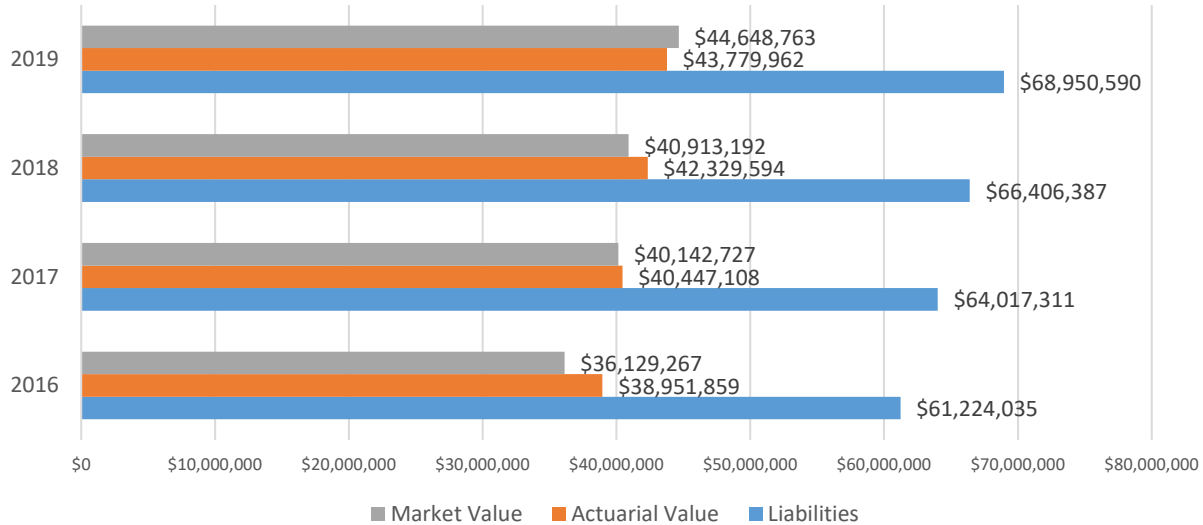
COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6.75%

Salary: 2.5%

Plan closed effective 2/1/20. New hires are enrolled in LAGERS. Tier 1 members remained in the closed plan. Tier 2 members had the option to remain in the closed plan or transfer to LAGERS. 128/131 eligible Tier 2 members elected to transfer to LAGERS.



JUDICIAL RETIREMENT SYSTEM

MEMBERSHIP:

Active: 414 Inactive: 621

CONTRIBUTIONS:

Employer: \$38,604,668 Employee: \$1,138,101

BENEFITS:

Normal Retirement Formula:

More than 12 years of service: 50% of compensation
Less than 12 years of service: 4.17% of compensation x years of service

Normal Retirement Eligibility:

Tier 1: Age 62 with 12 years of service
Age 60 with 15 years of service
Age 55 with 20 years of service
Tier 2 (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

Valuation of Assets: 5 Years (7 years for deferred investment experience as of 6/30/2018)

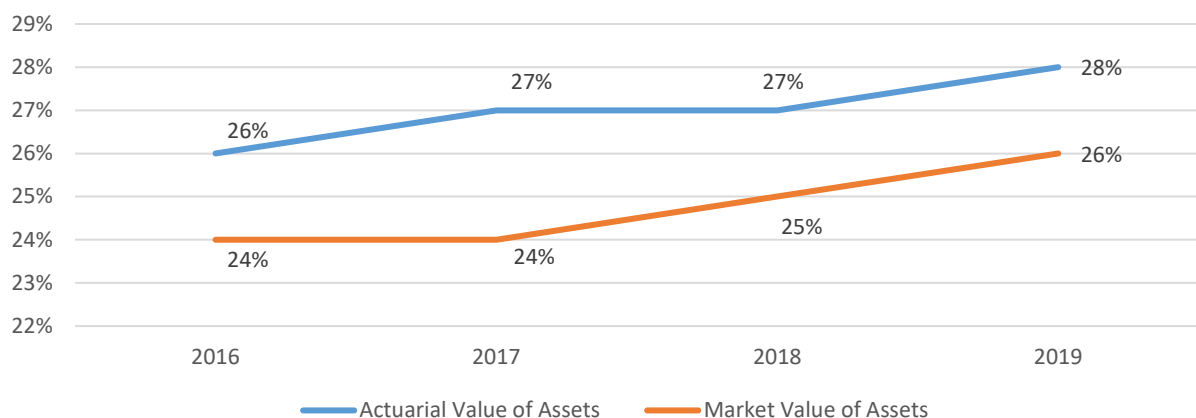
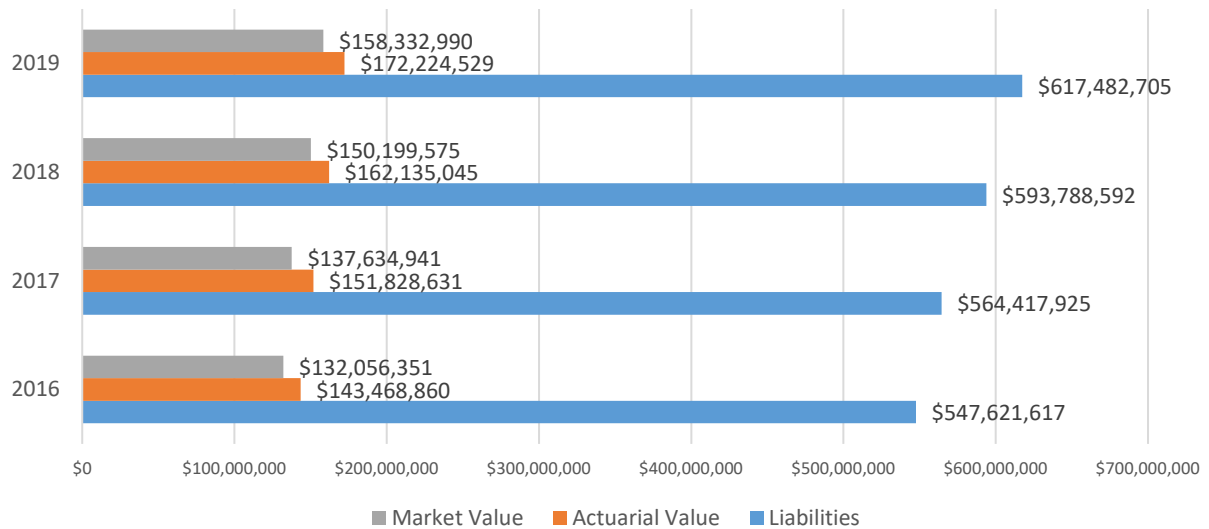
Mortality Table: RP-2014 Healthy projected from 2006 to 2026 Scale MP-2015

Vesting: Immediate upon employment

COLA: Annual Amount Maximum: 5%
Percent of CPI: 80%

ACTUARIAL ASSUMPTIONS:

Interest: 7.1% Salary: 2.6%



KANSAS CITY AREA TRANSPORTATION AUTHORITY SALARIED EMPLOYEES PENSION PLAN

MEMBERSHIP:

Active: 118 Inactive: 70

CONTRIBUTIONS:

Employer: \$1,264,022 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

1.45% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 65 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

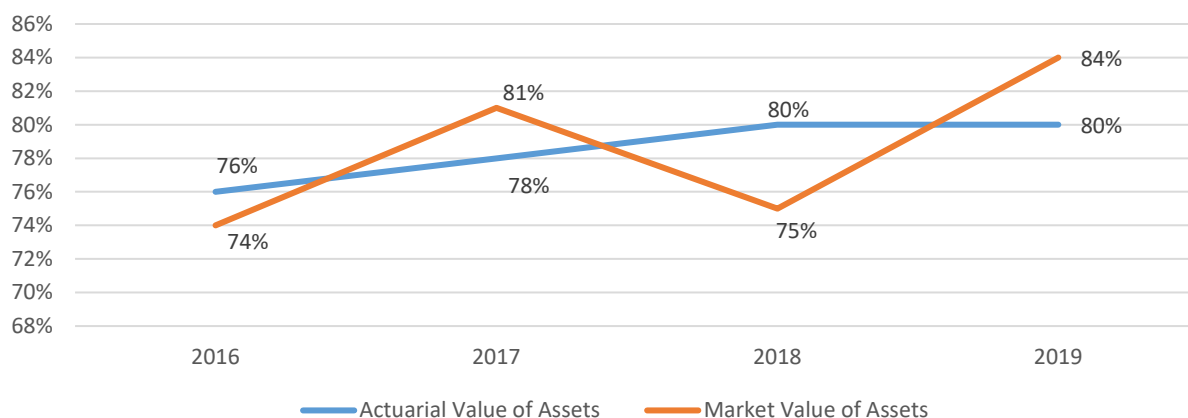
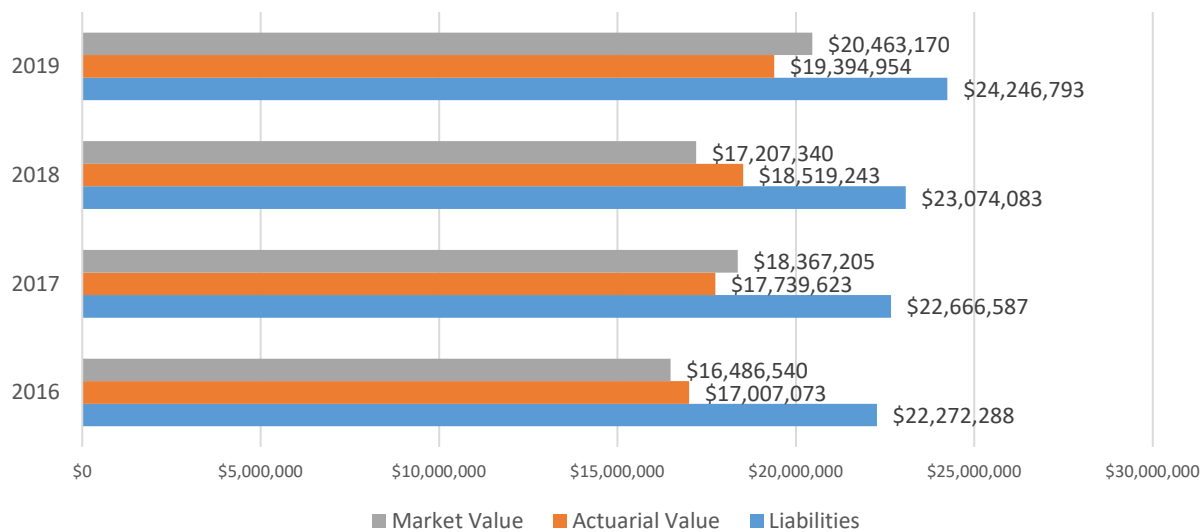
Mortality Table: PubG-2010 Mortality Table projected generationally with 75% of Scale MP-2019

Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4%



KANSAS CITY AREA TRANSPORTATION AUTHORITY UNION EMPLOYEES PENSION PLAN

MEMBERSHIP:

Active: 510 Inactive: 234

CONTRIBUTIONS:

Employer: \$2,663,317 Employee: \$1,233,911

BENEFITS:

Normal Retirement Formula:

1.28% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 62 with 10 years of service

Age 60 with 30 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

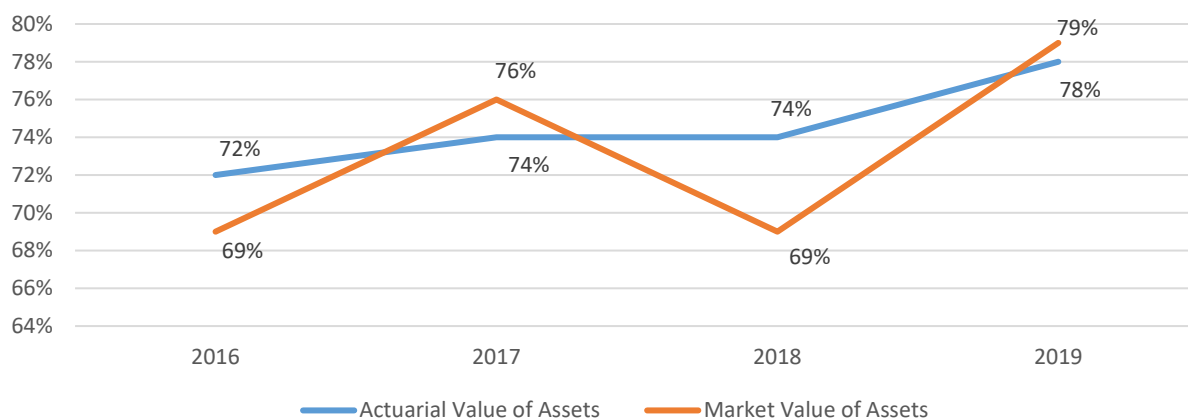
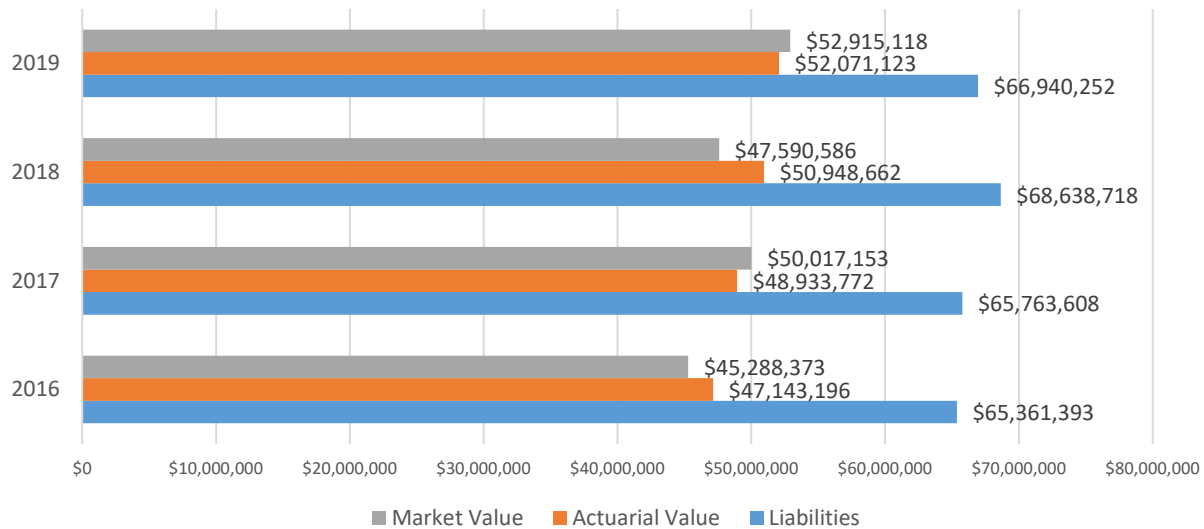
Mortality Table: PubG-2010 Mortality Table projected generationally with 75% of Scale MP-2019

Vesting: 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.25%



KANSAS CITY CIVILIAN POLICE EMPLOYEES' RETIREMENT SYSTEM

MEMBERSHIP:

Active: 543 Inactive: 328

CONTRIBUTIONS:

Employer: \$4,778,854 Employee: \$1,415,677

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Supplemental Benefit: \$160 per month with 15 years of service

Normal Retirement Eligibility:

Tier 1: Later of age 65 or 10 years of service

Rule of 80

Tier 2 (hired on/after 8/28/13): Later of age 67 or 20 years of service

Rule of 85

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2000 Healthy projected to 2017 with Scale AA

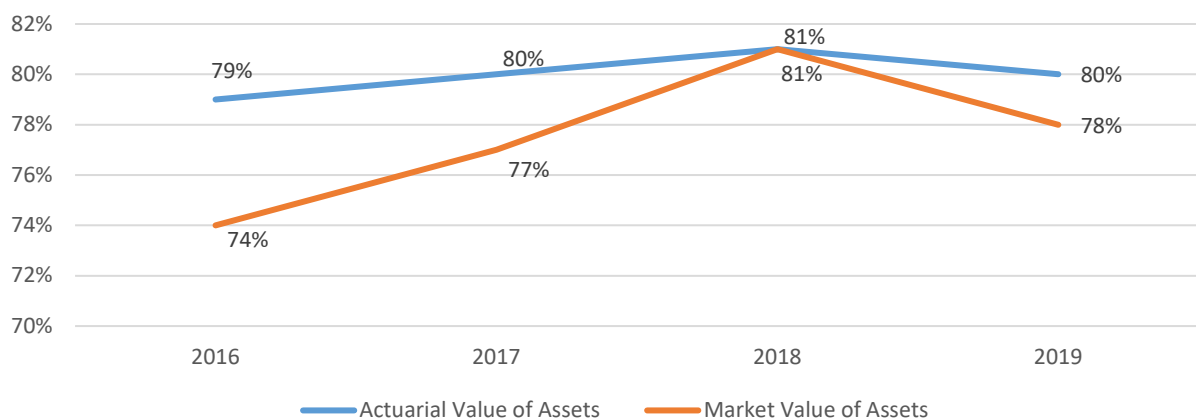
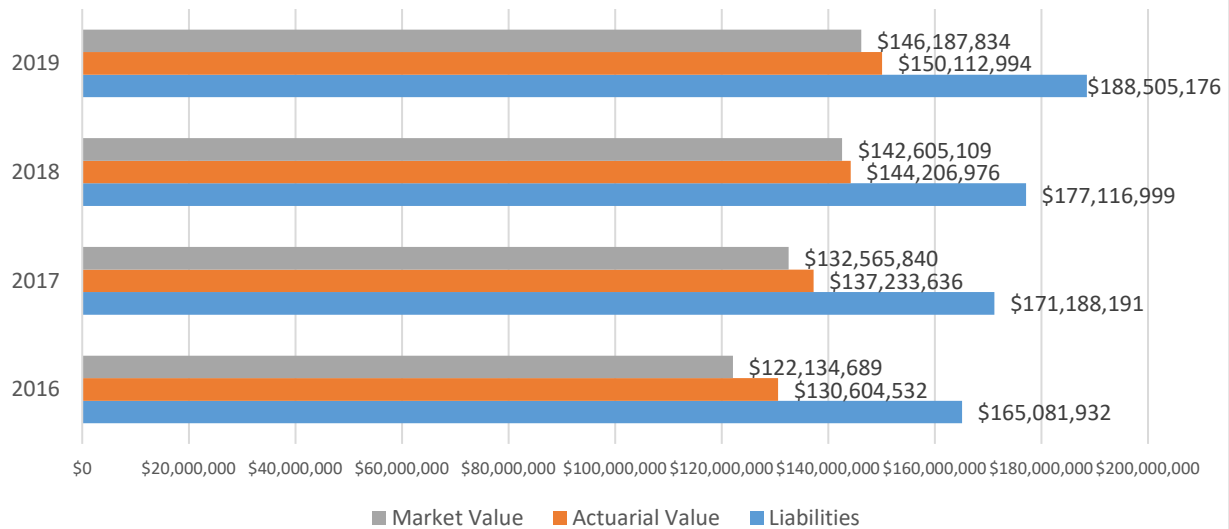
Vesting: 5 years

COLA: Ad hoc

Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:

Interest: 7.45% Salary: 3%



KANSAS CITY EMPLOYEES' RETIREMENT SYSTEM

MEMBERSHIP:

Active: 3,163 Inactive: 2,718

CONTRIBUTIONS:

Employer: \$26,032,072 Employee: \$8,514,325

BENEFITS:

Normal Retirement Formula:

Hired before 4/20/14: General Employees: 2% of compensation x years of creditable service

Single 2.22%. Married May Elect 2.22% & Forfeit Survivor Benefits. Maximum: 70% of compensation

Judges/Elected Officials: 2.22% of compensation received by then serving judges/officials in same office 24 months preceding annuity x YOS

Hired on/after 4/20/14: 1.75% x years of service. Maximum: 70% of compensation. Minimum monthly benefit of \$400 with 10 YOS (both tiers)

Normal Retirement Eligibility:

Hired before 4/20/14: Age 65 with 5 years of service

Age 60 with 10 years of service

Age 55 with 25 years of service. Rule of 80

Judges/Elected Officials: Later of age 60 or expiration of term with 1 elective term

Hired on/after 4/24/14: Age 67 with 10 years of service, age 62 with 10 years of service, Rule of 85

Social Security Coverage: Yes

Valuation of Assets: 4 years

Mortality Table: RP-2000 generational projection with modified Scale MP-2015

Vesting: Hired before 4/20/14: 5 years. Hired on/after 4/20/14: 10 years

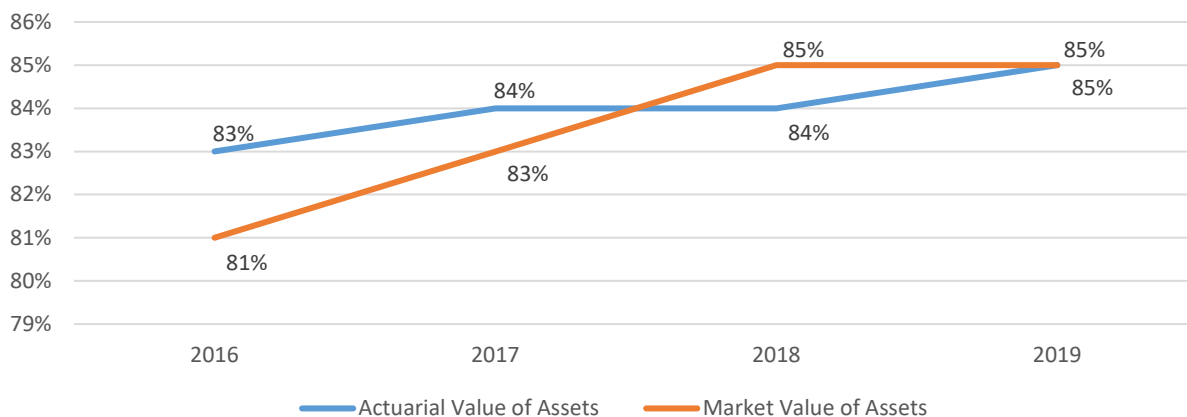
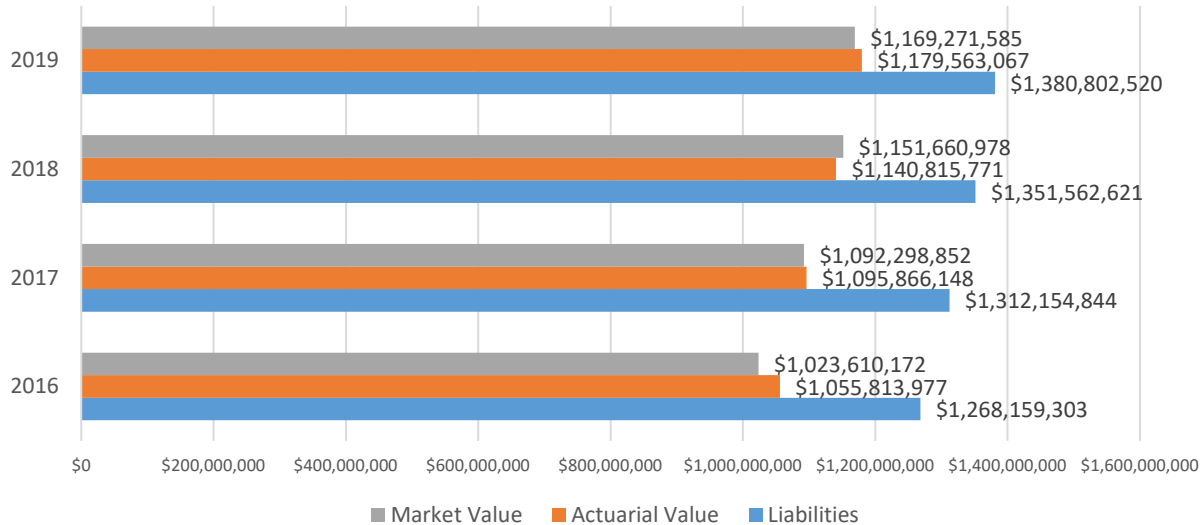
COLA: Annual Amount Maximum: 3% (hired before 4/20/14)

2.5% (hired on/after 4/20/14). Only payable if funded ratio is equal to or greater than 80%

ACTUARIAL ASSUMPTIONS:

Interest: 7.5%

Salary: 3.75%



KANSAS CITY FIREFIGHTERS' PENSION SYSTEM

MEMBERSHIP:

Active: 993 Inactive: 940

CONTRIBUTIONS:

Employer: \$20,015,327 Employee: \$7,785,106

BENEFITS:

Normal Retirement Formula:

2.5% of compensation x years of creditable service
Maximum: 80% of compensation
Minimum monthly benefit of \$600

Normal Retirement Eligibility:

Tier 1 (hired before 4/20/14): 25 years of service
Tier 2 (hired on/after 4/20/14): 27 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

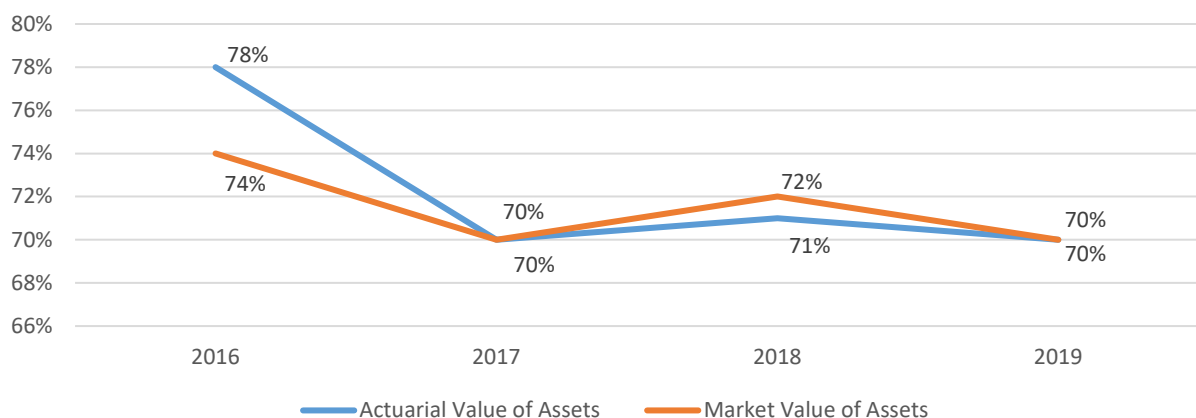
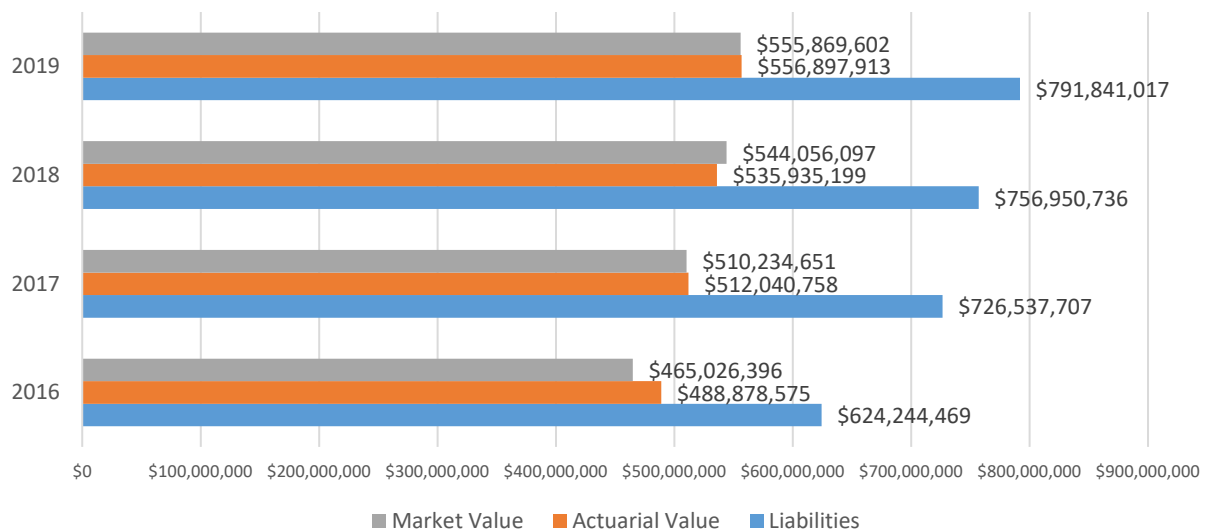
Mortality Table: RP-2000 Combined, Modified Scale MP-2015, Generational Projection

Vesting: 10 years

COLA: Annual Amount Maximum: 3% (hired before 4/20/14)
2.5% (hired on/after 4/20/14). Only payable if funded ratio is equal to or greater than 80%

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: 3%



KANSAS CITY POLICE RETIREMENT SYSTEM

MEMBERSHIP:

Active: 1,279 Inactive: 1,407

CONTRIBUTIONS:

Employer: \$32,280,943 Employee: \$11,412,617

BENEFITS:

Normal Retirement Formula:

Tier 1 (retiring before 8/28/13): 2.5% of compensation x years of creditable service. Maximum: 75% of compensation

Tier 1: Supplemental Benefit of \$420 per month

Tier 2 (retiring on/after 8/28/13): 2.5% of compensation x years of creditable service. Benefit frozen at 32 years of service. Maximum: 80% of compensation. Tier 2: Supplemental Benefit of \$200 per month

Normal Retirement Eligibility:

Tier 1 (hired before 8/28/13): Age 60 with 10 years of service
25 years of service

Tier 2 (hired on/after 8/28/13): Age 60 with 15 years of service
27 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

Mortality Table: RP-2000 Scale AA

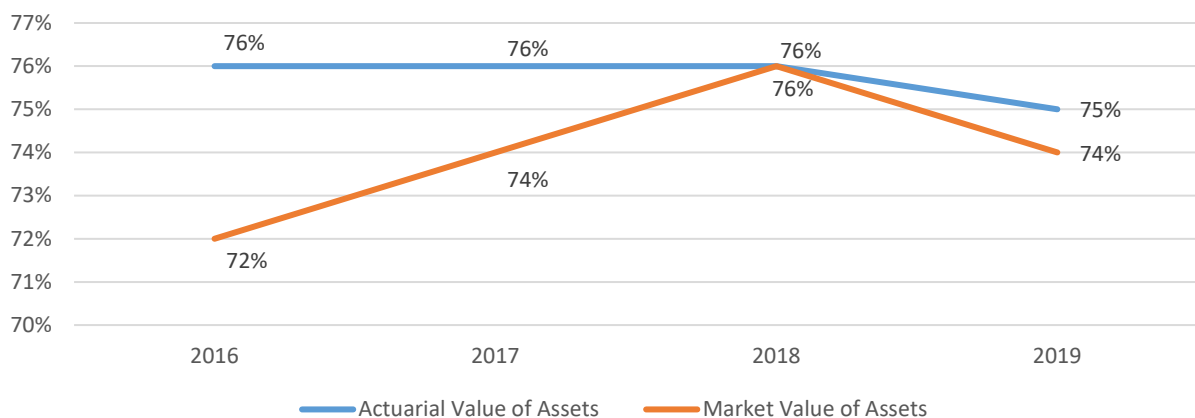
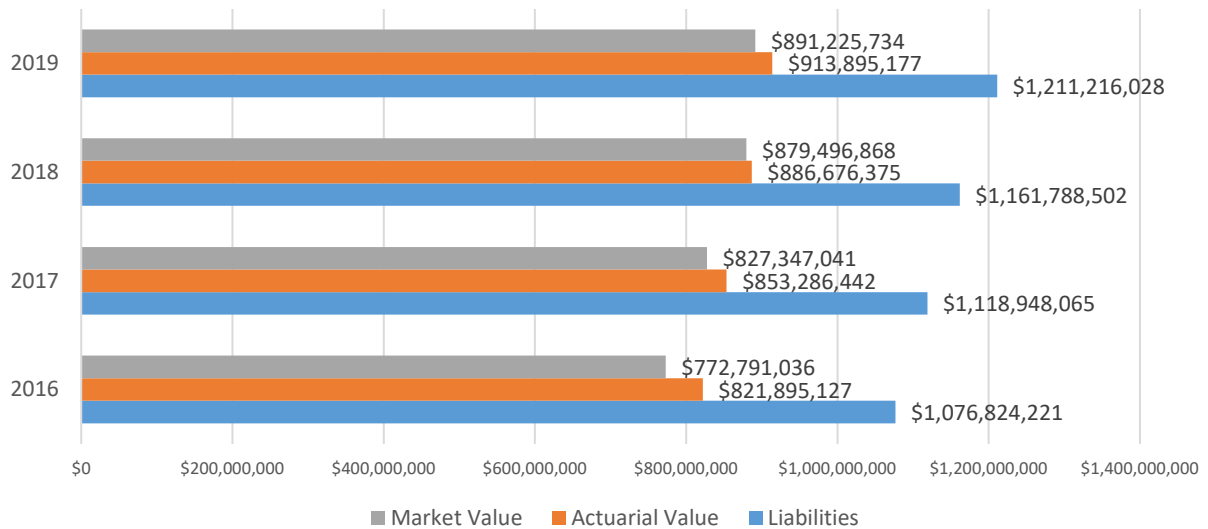
Vesting: 15 years

COLA: Ad hoc

Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:

Interest: 7.45% Salary: 3%



KANSAS CITY PUBLIC SCHOOL RETIREMENT SYSTEM

MEMBERSHIP:

Active: 4,074 Inactive: 7,305

CONTRIBUTIONS:

Employer: \$21,488,838 Employee: \$18,524,657

BENEFITS:

Normal Retirement Formula:

Tier 1: 2% of compensation x years of creditable service
Tier 2 (members hired on/after 1/1/14): 1.75% of compensation x years of creditable service
Maximum: 60% of compensation

Normal Retirement Eligibility:

Tier 1: Age 60 with 5 years of service
Rule of 75
Tier 2 (members hired on/after 1/1/14): Age 62 with 5 years of service
Rule of 80

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 Blue Collar Table, Scale MP-2016

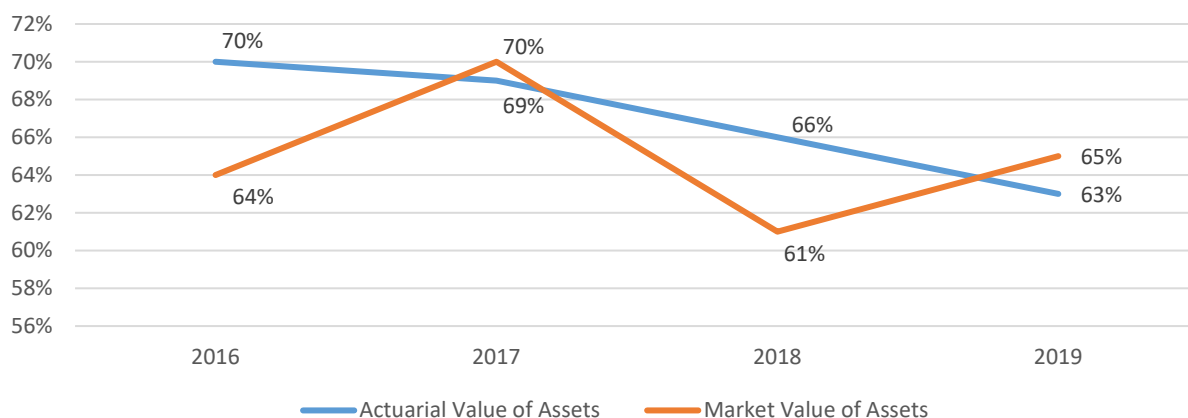
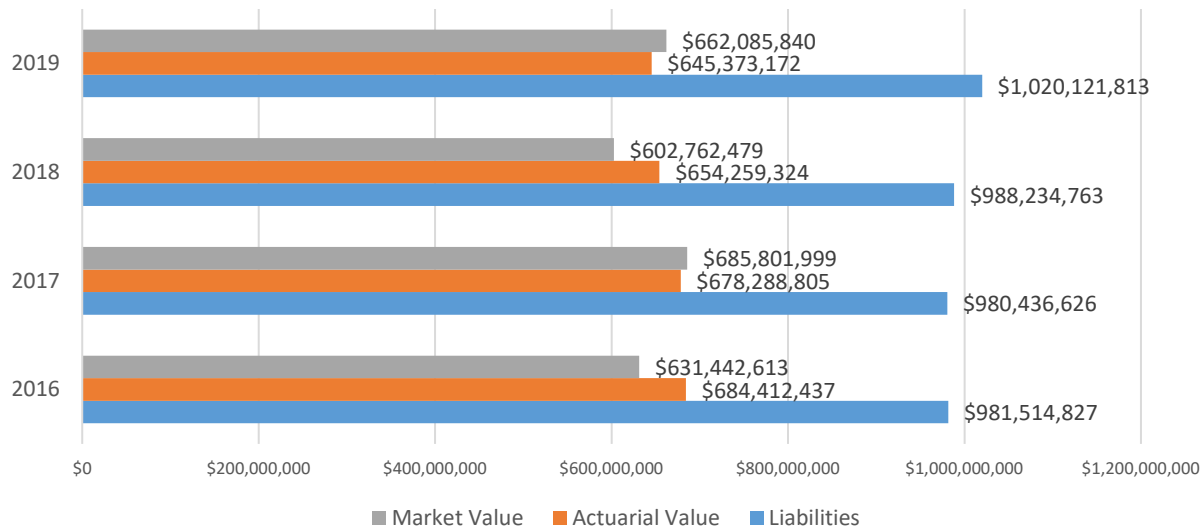
Vesting: 5 years

COLA: Ad hoc

Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:

Interest: 7.5% Salary: 5%



LADUE NON-UNIFORMED EMPLOYEES RETIREMENT PLAN

MEMBERSHIP:

Active: 29 Inactive: 28

CONTRIBUTIONS:

Employer: \$218,921 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

1.5% of compensation x years of creditable service
Maximum: 35 years of service

Normal Retirement Eligibility:

Age 62 with 10 years of service
Age 60 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 projected generationally using scale MP-2019

Vesting: 5 years

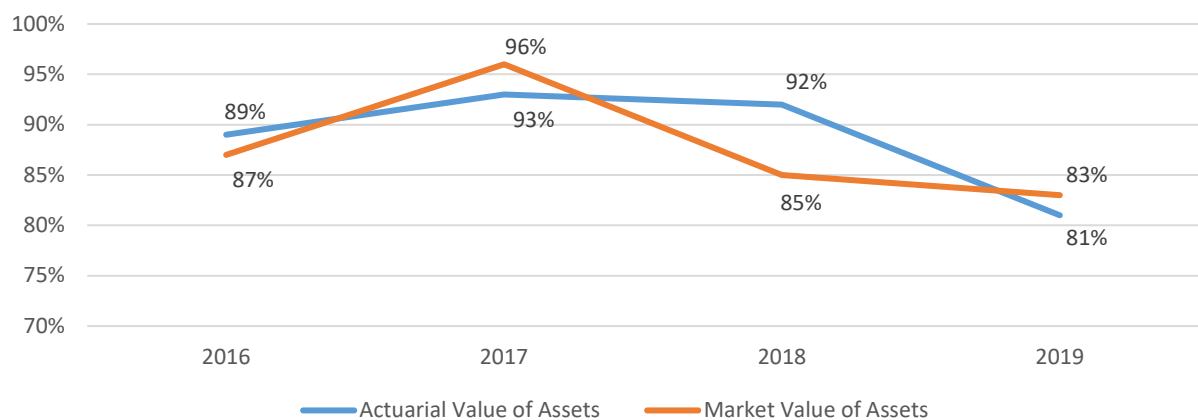
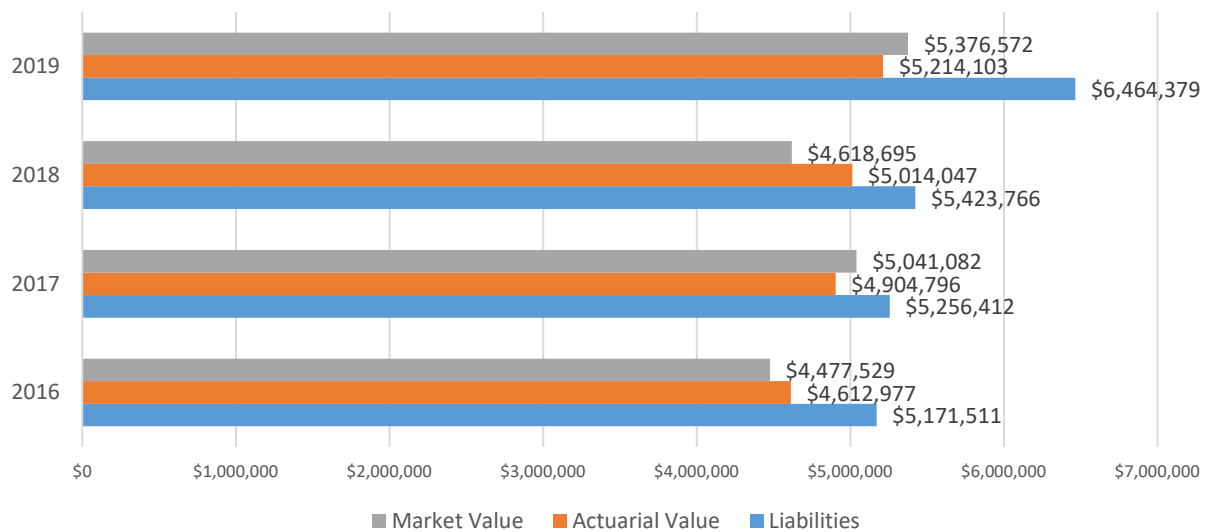
COLA: Annual Amount Maximum: 2%

Percent of CPI: 100% (but no adjustment if CPI is less than 1%)

Cap Total Maximum: 20%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.5%



LADUE POLICE & FIRE PENSION PLAN

MEMBERSHIP:

Active: 59 Inactive: 72

CONTRIBUTIONS:

Employer: \$1,834,700 Employee: \$324,694

BENEFITS:

Normal Retirement Formula:

Hired prior to 1/1/13: 2% of compensation for the first 20 years of service + 2.5% for the next 10 years of service
Maximum: 65% of compensation

Hired on/after 1/1/13: 2% of compensation up to 30 years of service
Maximum: 60% for participants hired on or after January 1, 2013

Normal Retirement Eligibility:

Age 55 with 10 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

Mortality Table: RP-2014 projected generationally using scale MP-2019

Vesting: 10 years

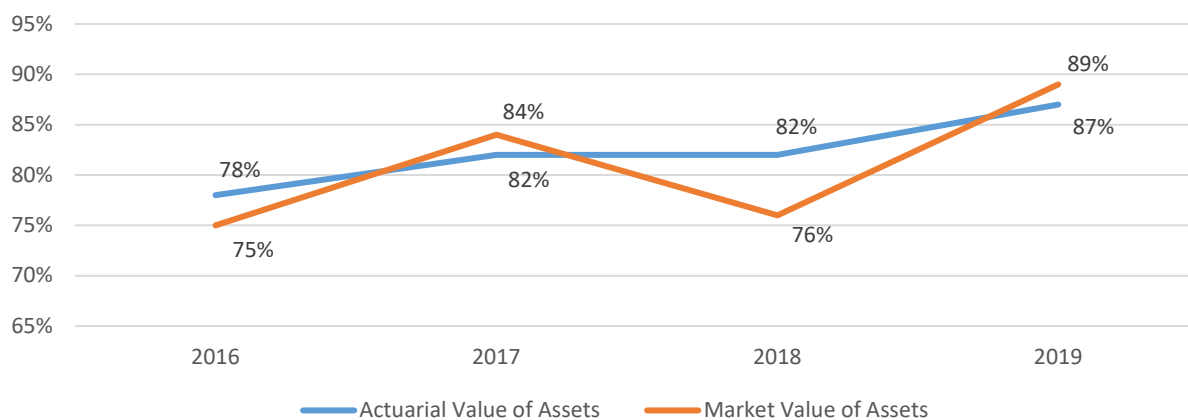
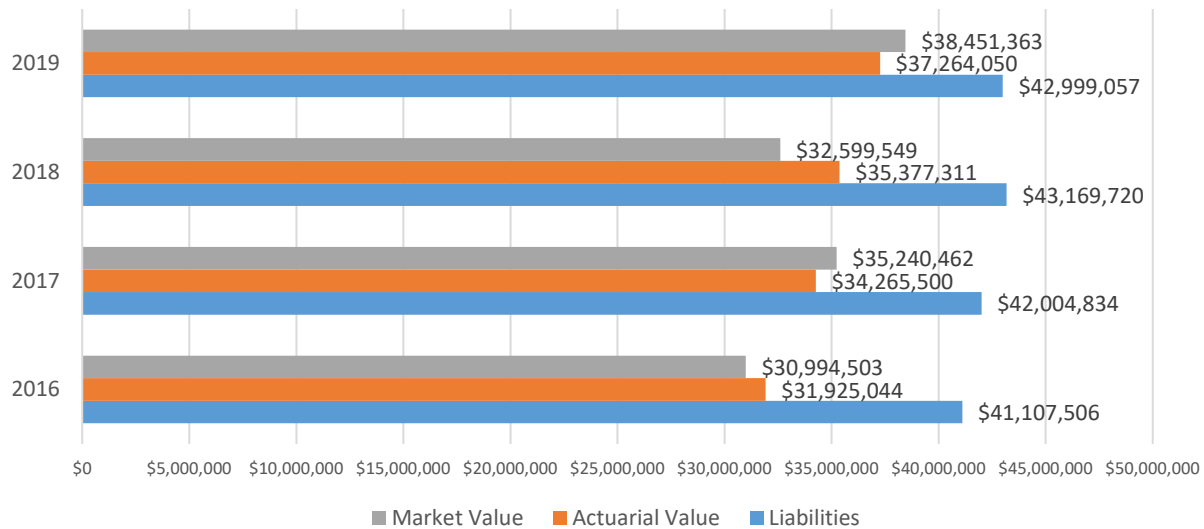
COLA: Annual Amount Maximum: 2%

Percent of CPI: 100% (but no adjustment if CPI is less than 1%)

Cap Total Max: 20%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.5%



LAGERS STAFF RETIREMENT PLAN

MEMBERSHIP:

Active: 34 Inactive: 11

CONTRIBUTIONS:

Employer: \$2,110,653 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 60 with 5 years of service

Rule of 80

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 adjusted to 2006

Vesting: 5 years

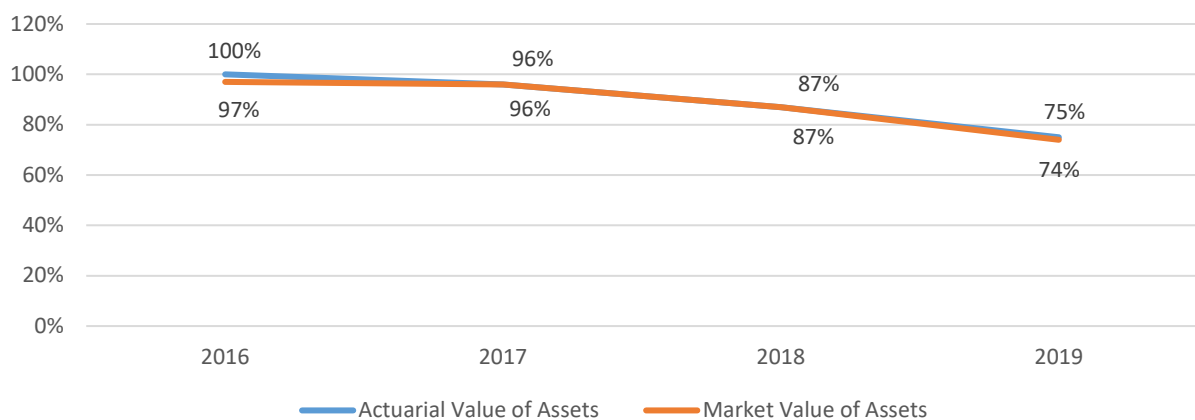
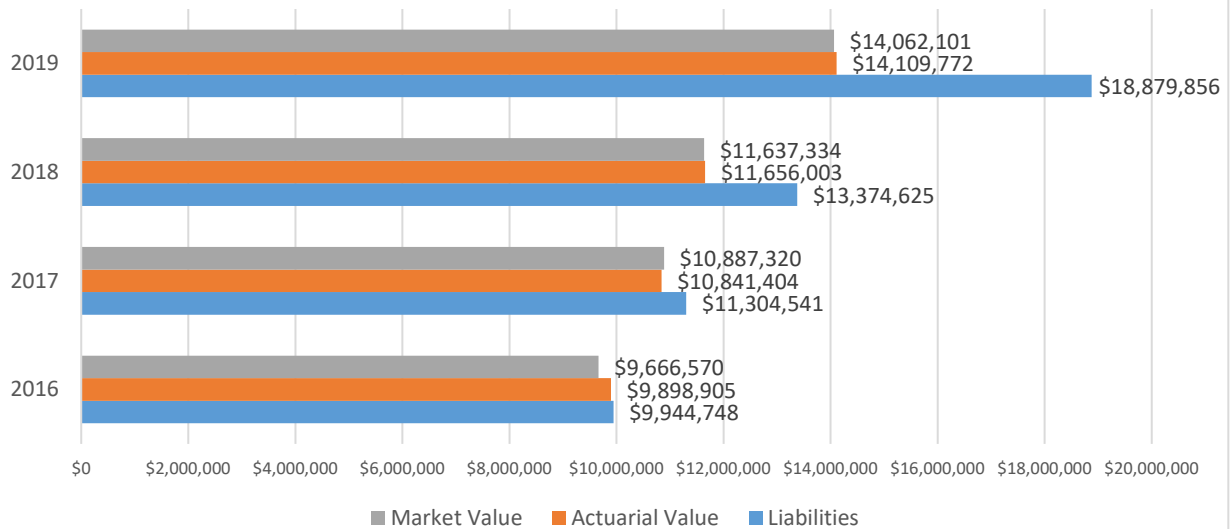
COLA: Annual Amount Maximum: 4%

Percent of CPI: 100%

ACTUARIAL ASSUMPTIONS:

Interest: 5.5%

Salary: 3.25%



LITTLE RIVER DRAINAGE DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 14 Inactive: 8

CONTRIBUTIONS:

Employer: \$50,000 Employee: \$20,257

BENEFITS:

Normal Retirement Formula:

1% of compensation x years of creditable service
Minimum benefit of \$100 per month

Normal Retirement Eligibility:

Age 65 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

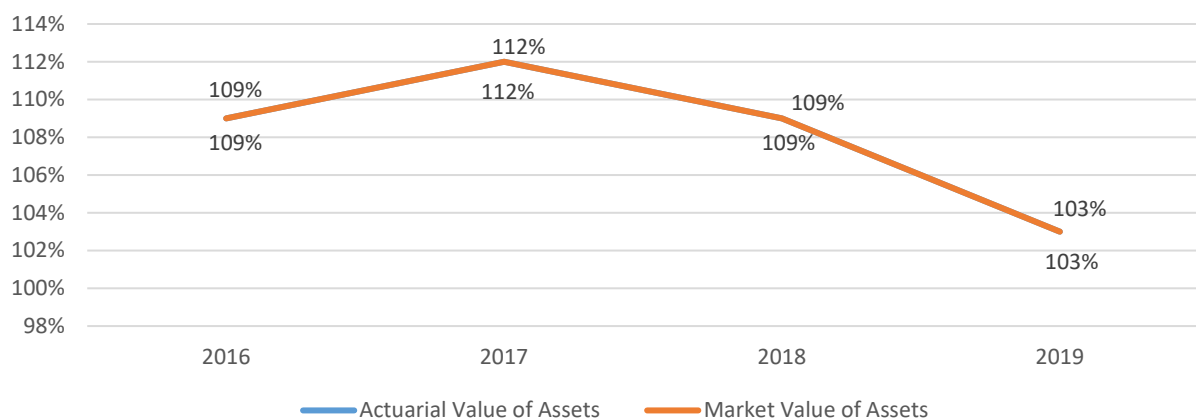
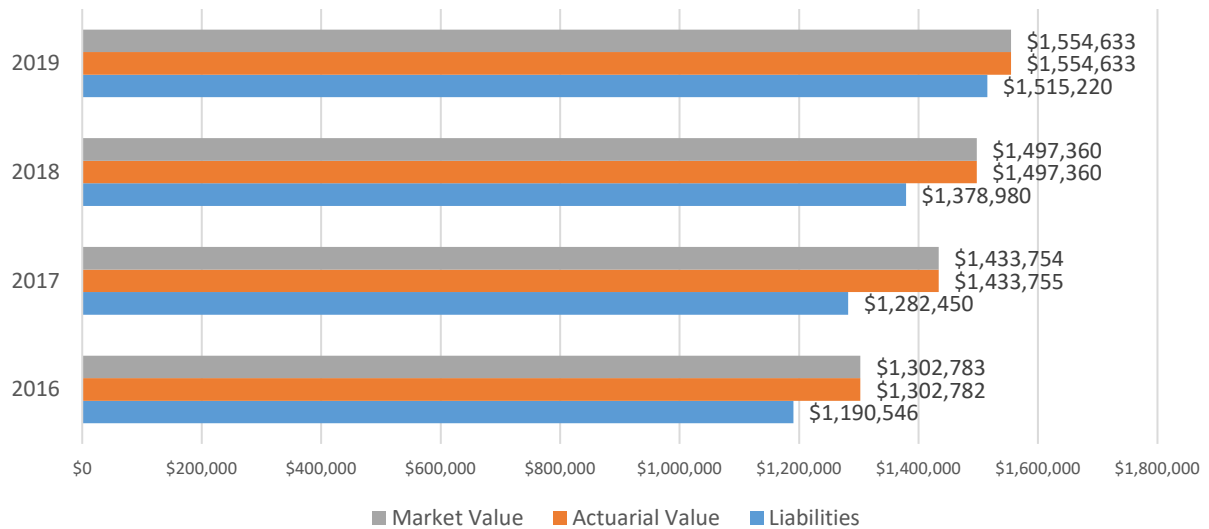
Mortality Table: IRS 417(e) Applicable for 2019

Vesting: Immediate upon employment

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 5% Salary: 3.5%



LOCAL GOVERNMENT EMPLOYEES RETIREMENT SYSTEM (LAGERS)

MEMBERSHIP:

Active: 35,130 Inactive: 32,465

CONTRIBUTIONS:

Employer: \$226,206,112 Employee: \$25,340,904

BENEFITS:

Normal Retirement Formula:

Several Optional Benefit Programs: 1%, 1.25%, 1.5%, 1.75%, 2%, Non-Social Security 2.5%

Normal Retirement Eligibility:

Age 60 with 5 years of service
Uniformed (public safety): Age 55 with 5 years of service
Optional Rule of 80 for employer election

Certain employers have the option to designate emergency telecommunicators, jailors and emergency medical service personnel as public safety members (Effective 8/28/19. See SB 17, 2019.)

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 Healthy Annuitant

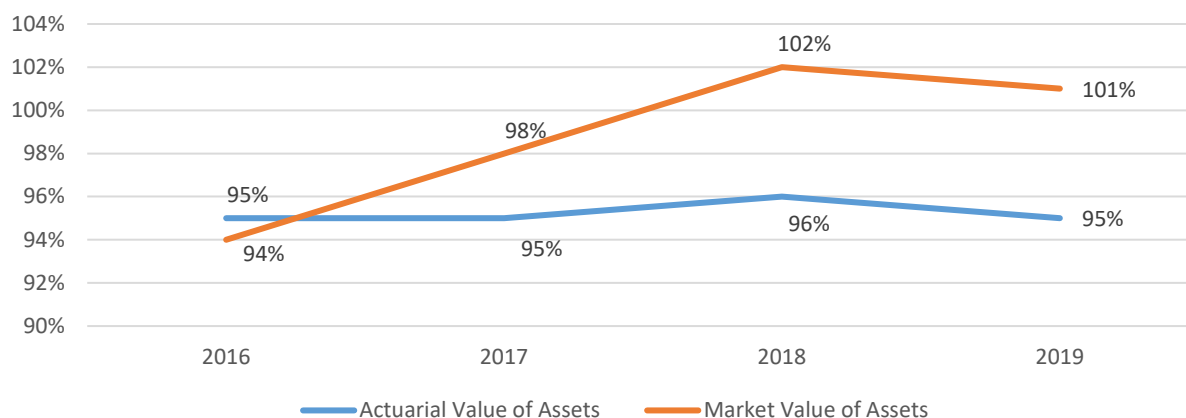
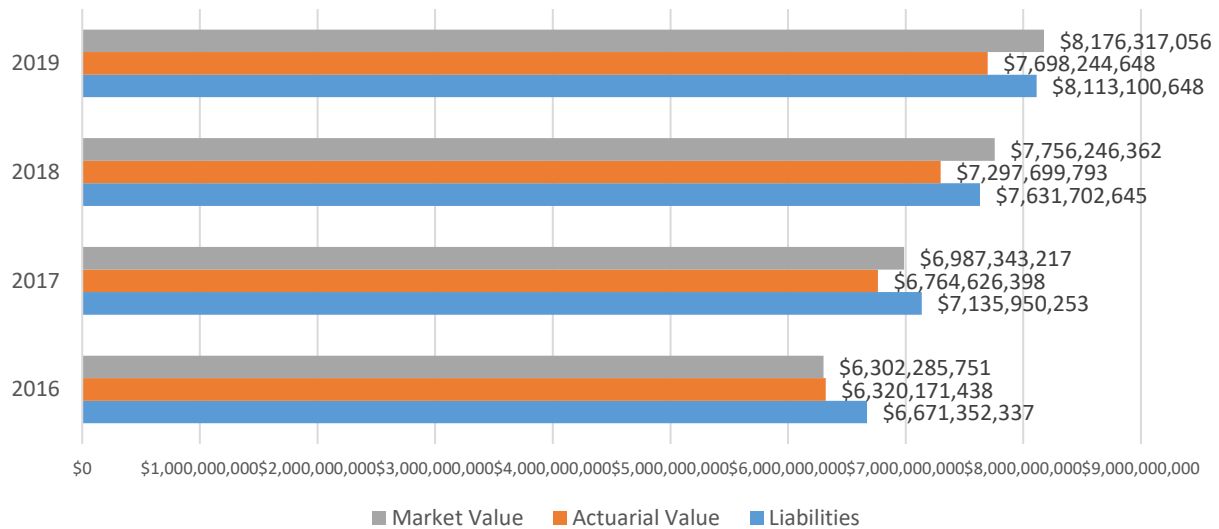
Vesting: 5 years

COLA: Annual Amount Maximum: 4%

Percent of CPI: 100%

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: 3.25%



MAPLEWOOD POLICE & FIRE RETIREMENT FUND

MEMBERSHIP:

Active: 0 Inactive: 21

CONTRIBUTIONS:

Employer: \$554,242 Employee: \$147,363

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service
Maximum: 60% of compensation

Normal Retirement Eligibility:

20 years of service
Age 55 with 10 years of service

Social Security Coverage: No

Valuation of Assets: Market Value

Mortality Table: Pub-2010 Public Retirement Plans Safety Classification Mortality Table, Scale MP-2018

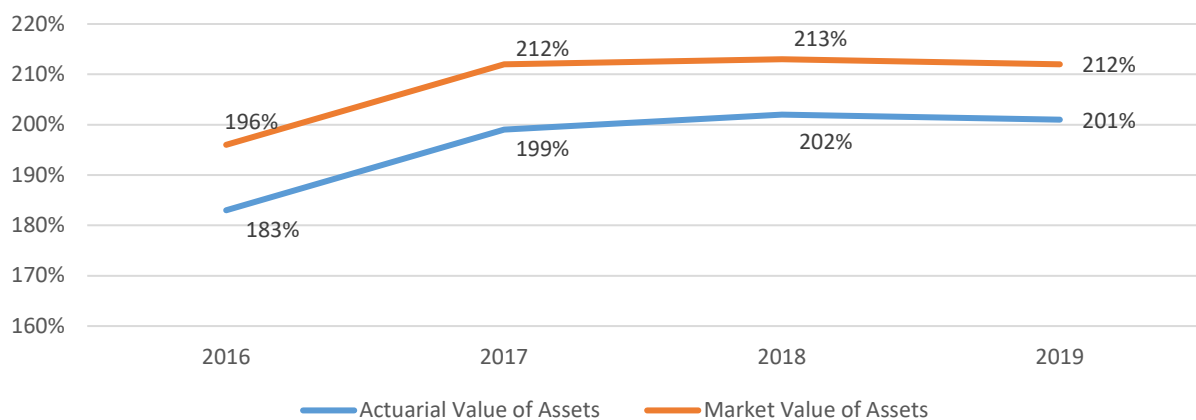
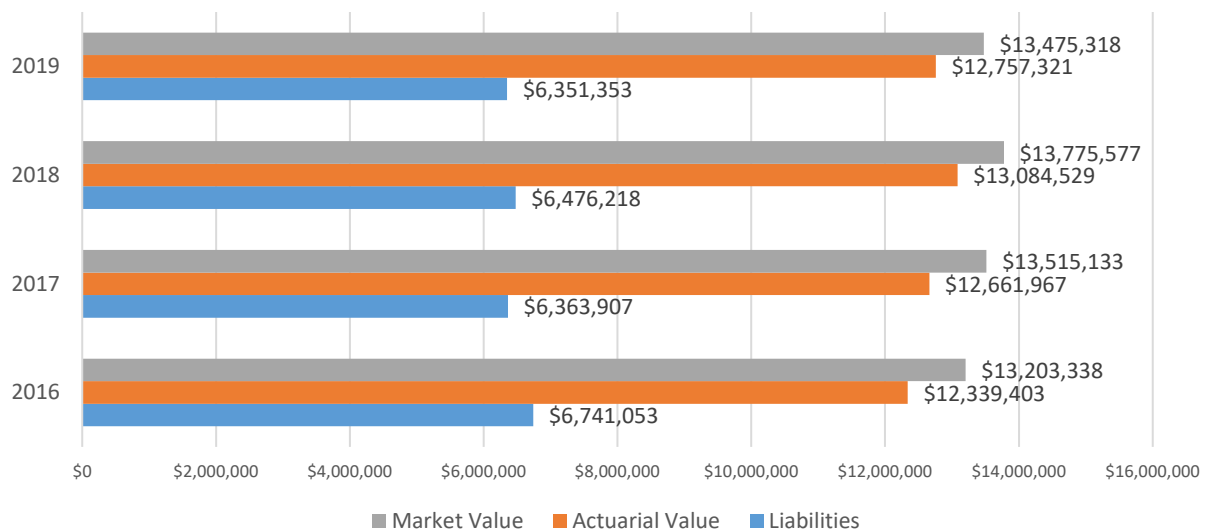
Vesting: 20 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: N/A

Plan closed December 2010. All active personnel transferred to LAGERS effective 1/1/11.



MEHLVILLE FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 0 Inactive: 24

CONTRIBUTIONS:

Employer: \$907,000 Employee: \$0

BENEFITS:

Normal Retirement Formula:

2.625% of compensation for each of the first 27 years of service + 1% for each additional year. Maximum: 75% of compensation
Temporary Benefit: Supplemental Benefit: \$500 per month from age 58 until Social Security eligibility

Normal Retirement Eligibility:

Age 58 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: RP-2014 Healthy Lives generational projection from 2006, scale MP-2018

Vesting: 5 years

COLA: Ad hoc

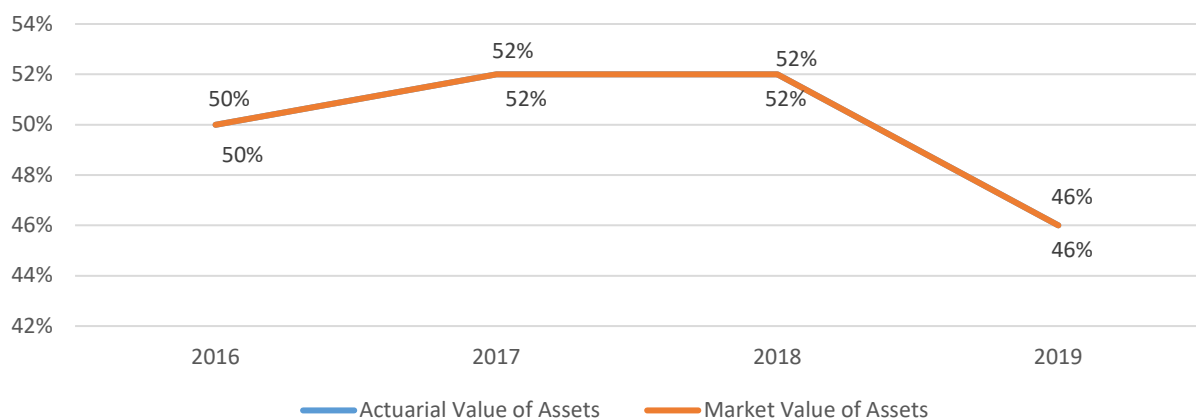
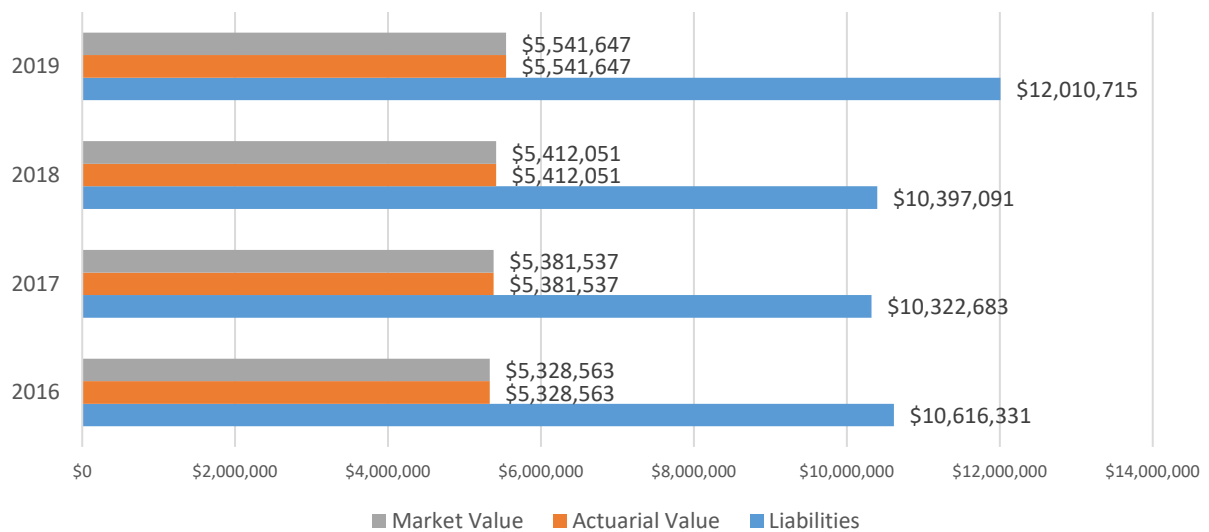
Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:

Interest: 5% Salary: N/A

Defined benefit plan frozen effective 3/31/06. The IRS approved the plan's termination in a determination letter dated 6/11/10.

Defined contribution plan: See corresponding information in Defined Contribution section



METRO NORTH FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 15 Inactive: 6

CONTRIBUTIONS:

Employer: \$242,167 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:
\$200 x years of credited service

Normal Retirement Eligibility:
Age 60 with 8 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: PRI-2012 Blue Collar Annuitant Table, Scale MP-19

Vesting: 8 years

COLA: Annual Amount Maximum: 1%

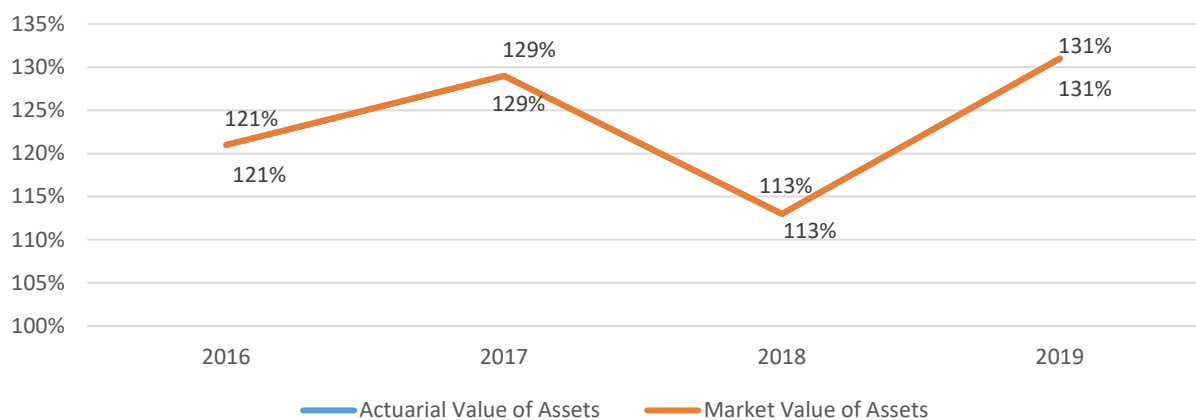
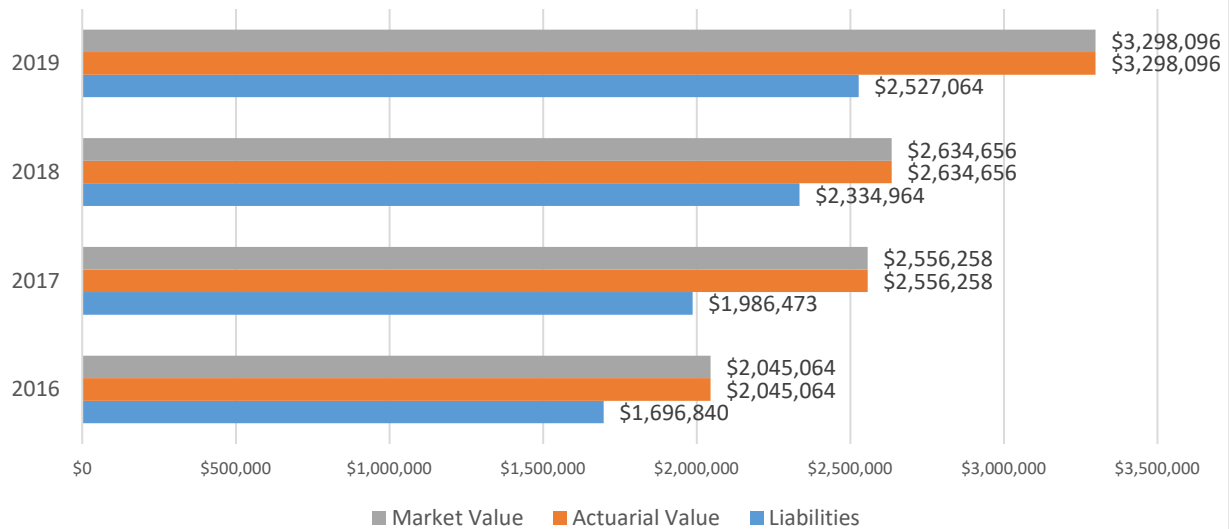
Percent of CPI: 100%

Cap Total Maximum: 10%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4.5%

Defined Contribution Plan: See corresponding information in Defined Contribution section.



METRO WEST FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 100 Inactive: 81

CONTRIBUTIONS:

Employer: \$2,038,952 Employee: \$525,482

BENEFITS:

Normal Retirement Formula:

2.5% of compensation x years of creditable service
3% for benefits accrued up to 12/31/06
Maximum: 34 years of service

Normal Retirement Eligibility:

Age 55 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

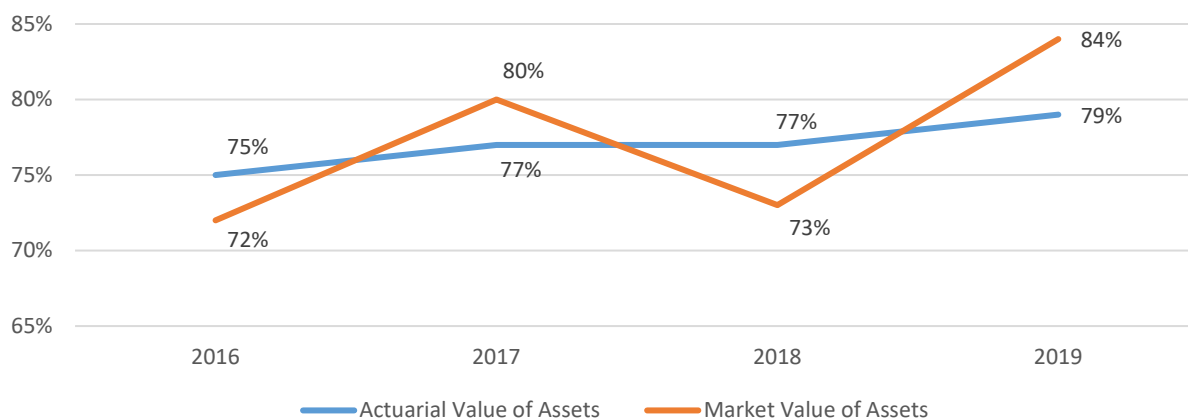
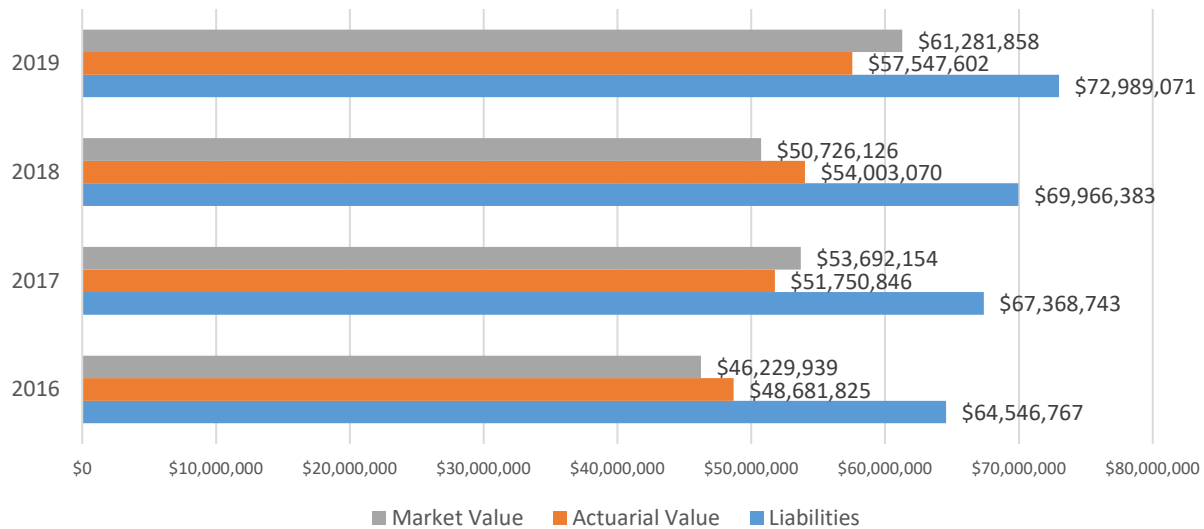
Mortality Table: Public Safety 2010 Bottom Quartile tables, generational projection, scale MP-2019

Vesting: 5 Years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3%



METROPOLITAN ST. LOUIS SEWER DISTRICT EMPLOYEES PENSION PLAN

MEMBERSHIP:

Active: 493 Inactive: 951

CONTRIBUTIONS:

Employer: \$12,740,406 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

1.7% of compensation x years of service + 0.4% of compensation above covered earnings x years of service
Maximum: 35 years of service

Normal Retirement Eligibility:

Age 65 with 5 years of service
Rule of 75 and Rule of 80

Social Security Coverage: Yes

Valuation of Assets: 3 Years

Mortality Table: Pub-2010 General Amount-Weighted Mortality Tables with generational projection from 2010 using scale MP-2019

Vesting: 5 years

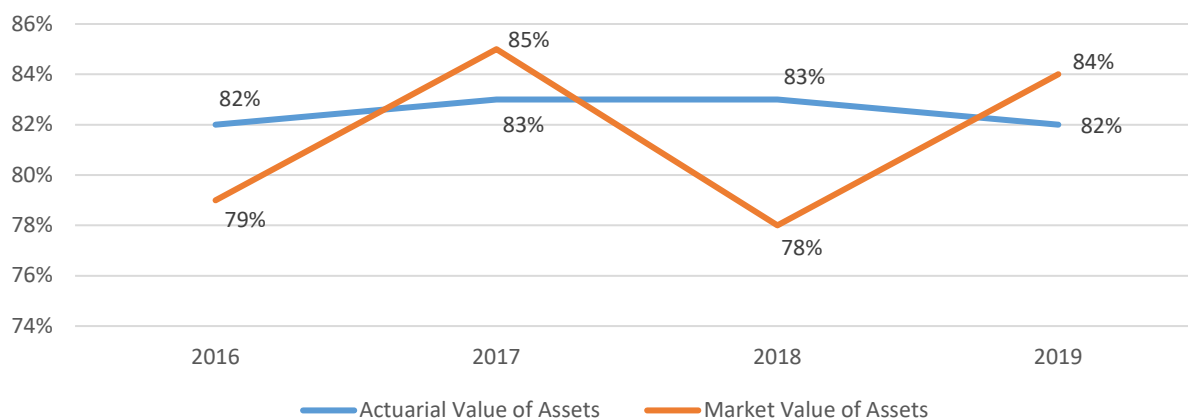
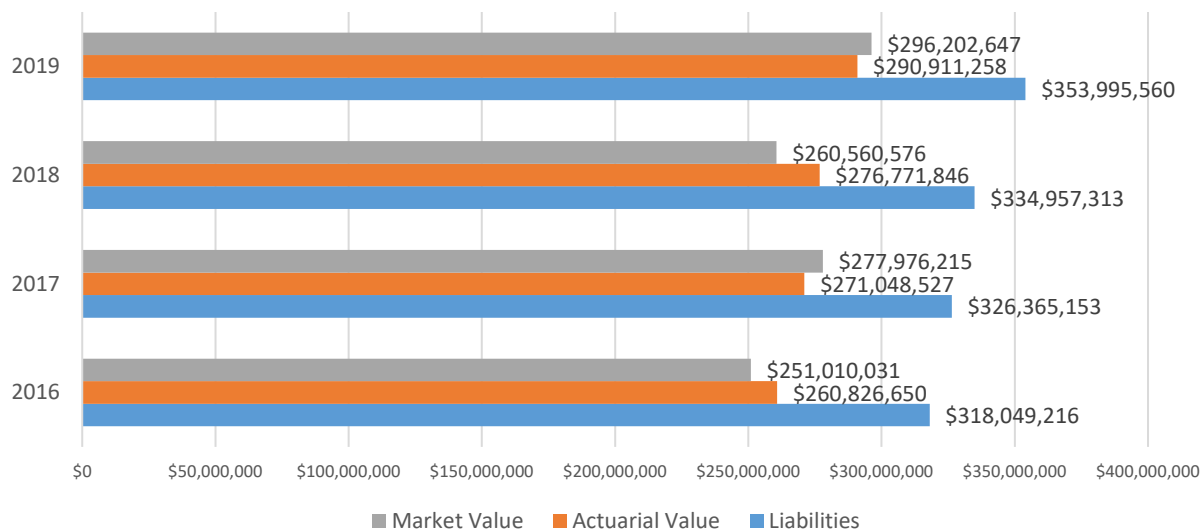
COLA: The lesser of 3% or \$50/month

Cap Total Maximum: Lesser of 45% or \$750 per month

ACTUARIAL ASSUMPTIONS:

Interest: 6.75% Salary: 4.25%

Defined benefit plan closed 1/1/11. Defined contribution plan. See corresponding information in Defined Contribution section.



MID-COUNTY FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 19 Inactive: 4

CONTRIBUTIONS:

Employer: \$125,000 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

Monthly benefit of \$55 x years of credited service
Maximum: 20 years of Credited Service

Normal Retirement Eligibility:

Age 55 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: PRI-2012 Blue Collar Annuitant Table for Males & Females projected generationally with Scale MP-2019

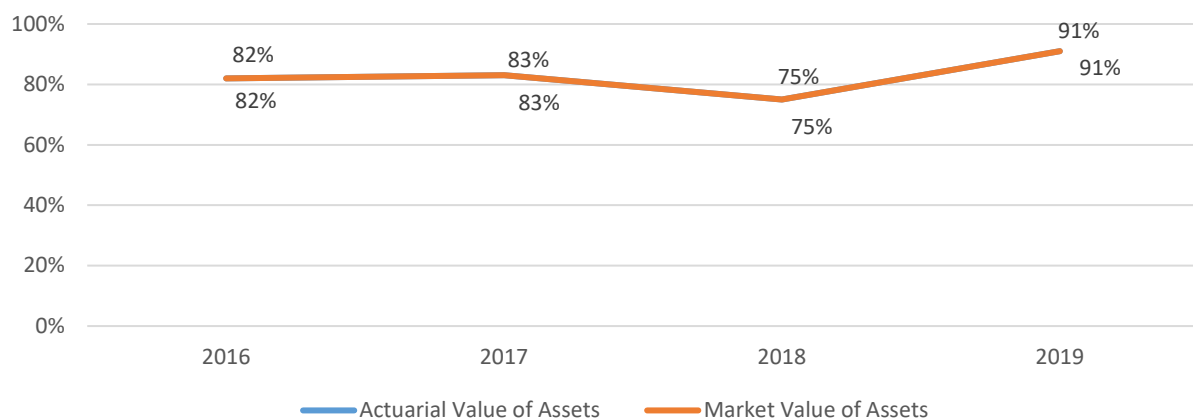
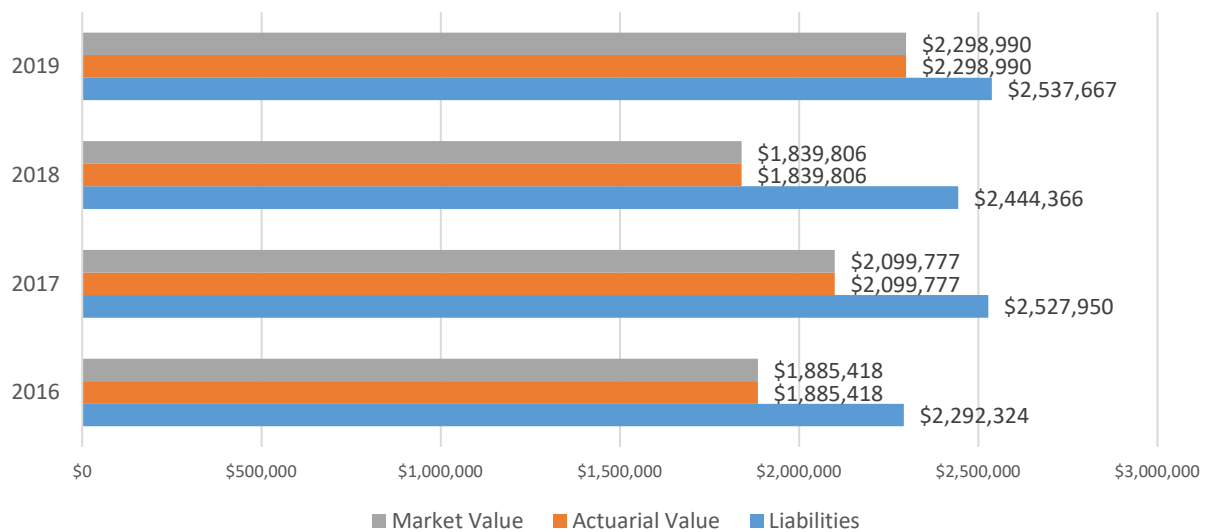
Vesting: Partial 5 years / Full 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 6% Salary: 4.5%

Defined contribution plan. See corresponding information in Defined Contribution section.



MISSOURI HIGHER EDUCATION LOAN AUTHORITY PENSION PLAN

MEMBERSHIP:

Active: 402 Inactive: 43

CONTRIBUTIONS:

Employer: \$2,894,470 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2.5% of compensation x years of creditable service
1.5% of compensation x years of creditable service (non-salaried members)

Normal Retirement Eligibility:

Age 60 with 15 years of service
Age 65 with 5 years of service
Rule of 80 minimum age of 50
Employees hired after 6/30/17: Rule of 85 with a minimum age of 55

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: PubG-2010 mortality table with Scale MP-2018

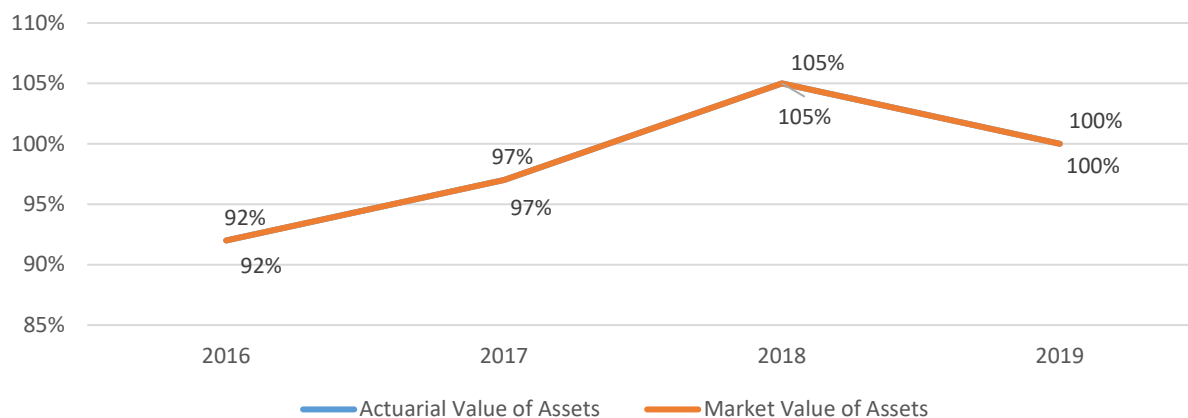
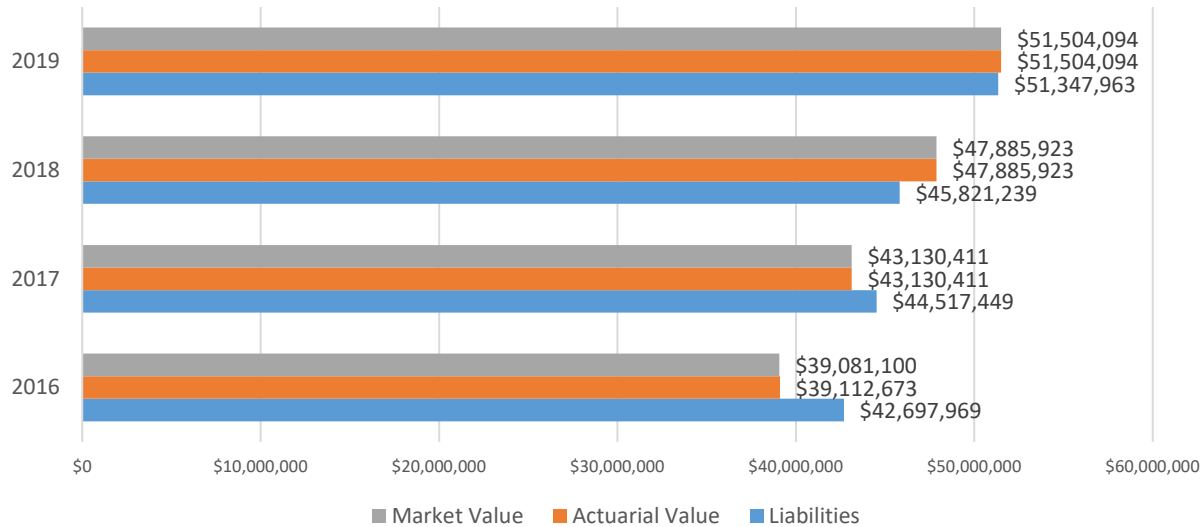
Vesting: 5 years

COLA: Annual Amount Maximum: 5%
Percent of CPI: 80%

ACTUARIAL ASSUMPTIONS:

Interest: 6.75% Salary: 4.5%

Defined contribution plan: See corresponding information in Defined Contribution section.



MISSOURI STATE EMPLOYEES' RETIREMENT SYSTEM

MEMBERSHIP:

Active: 46,864 Inactive: 66,394

CONTRIBUTIONS:

Employer: \$394,150,042 Employee: \$31,286,632

BENEFITS:

Normal Retirement Formula:

1.7% of compensation x years of creditable service
Plus 0.8% Temporary Benefit to Age 62 under Rule of 80 (Year 2000 Plan) or Rule of 90 (2011 Tier)
MSEP (closed plan): 1.6% of compensation x years of service

Normal Retirement Eligibility:

Age 62 with 5 years of service
Rule of 80 at age 48
Hired for the first time on/after 1/1/11 (2011 Tier): Age 67 with 5 years of service
Rule of 90 at minimum age of 55 years

Social Security Coverage: Yes

Valuation of Assets: 5 Years (7 years for deferred investment experience as of 6/30/2018)

Mortality Table: RP-2014 Scale MP-2015

Vesting: 5 years

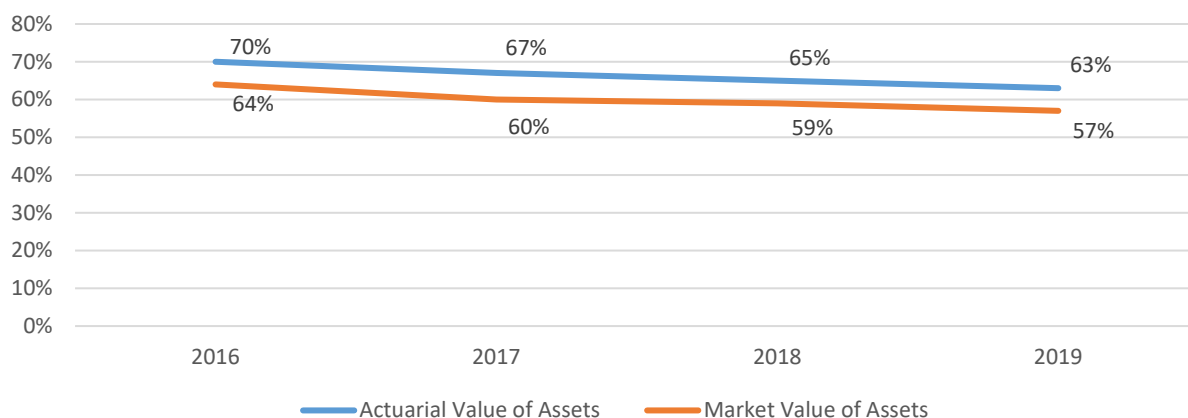
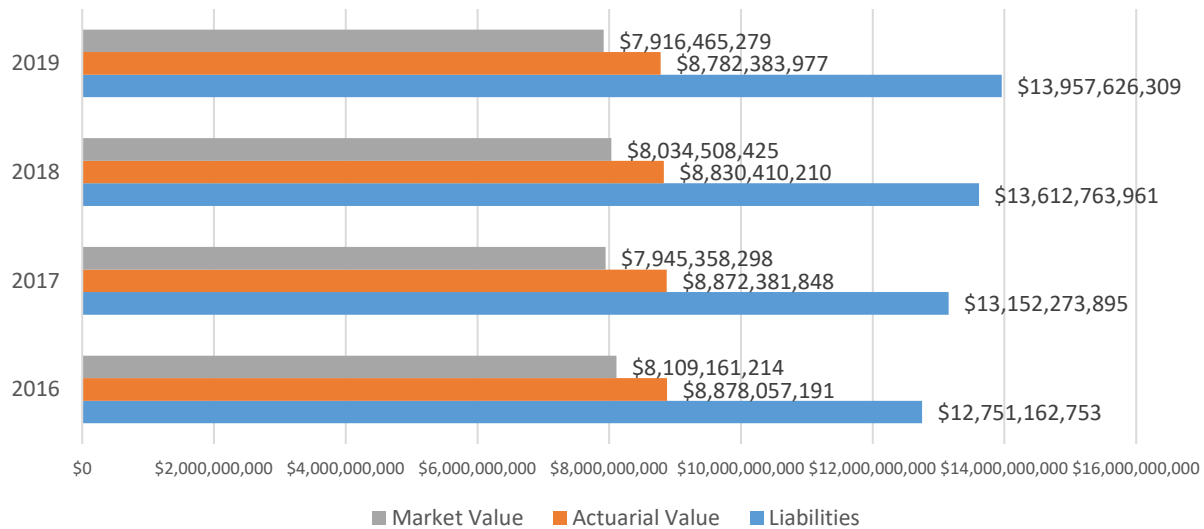
COLA: Annual Amount Maximum: 5%

Percent of CPI: 80%

ACTUARIAL ASSUMPTIONS:

Interest: 7.1%

Salary: 2.6%



MODOT & HIGHWAY PATROL EMPLOYEES' RETIREMENT SYSTEM (MPERS)

MEMBERSHIP:

Active: 7,416 Inactive: 11,137

CONTRIBUTIONS:

Employer: \$210,166,927 Employee: \$4,449,428

BENEFITS:

Normal Retirement Formula:

1.7% of compensation x years of creditable service

Plus 0.8% Temporary Benefit to Age 62 under Rule of 80 (Year 2000 Plan) or Rule of 90 (2011 Tier)

Closed Plan: 1.6% of compensation x years of creditable service. Uniformed Patrol receive an additional 1/3 monthly base benefit

Normal Retirement Eligibility:

Age 62 with 5 years of service. Rule of 80

Uniformed Patrol: Mandatory retirement age of 60

Hired for the first time on/after 1/11/11 (2011 Tier): Age 67 with 5 years of service. Rule of 90 at a minimum age of 55

Uniformed Patrol: Mandatory retirement age of 60

Social Security Coverage: Yes

Valuation of Assets: 3 Years

Mortality Table: RP-2014 Healthy Annuitant Mortality Tables projected to 2022 using Scale MP-2017

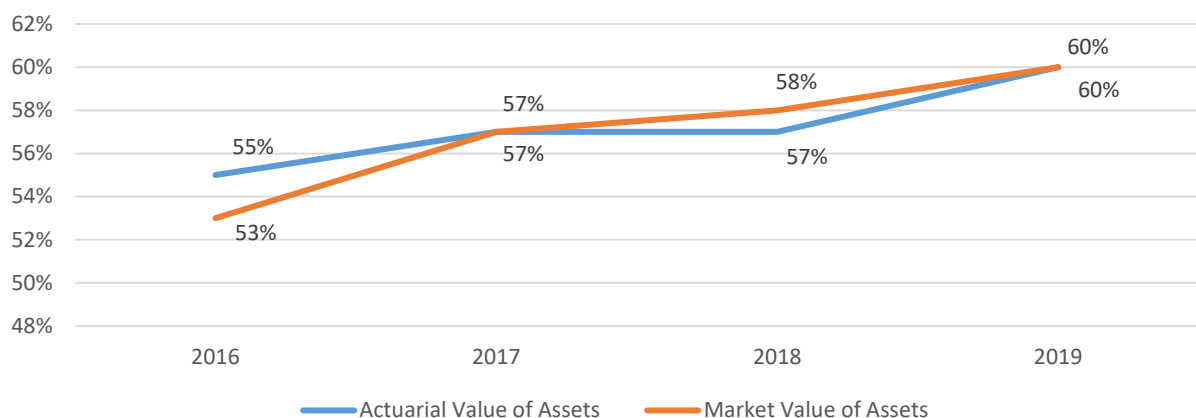
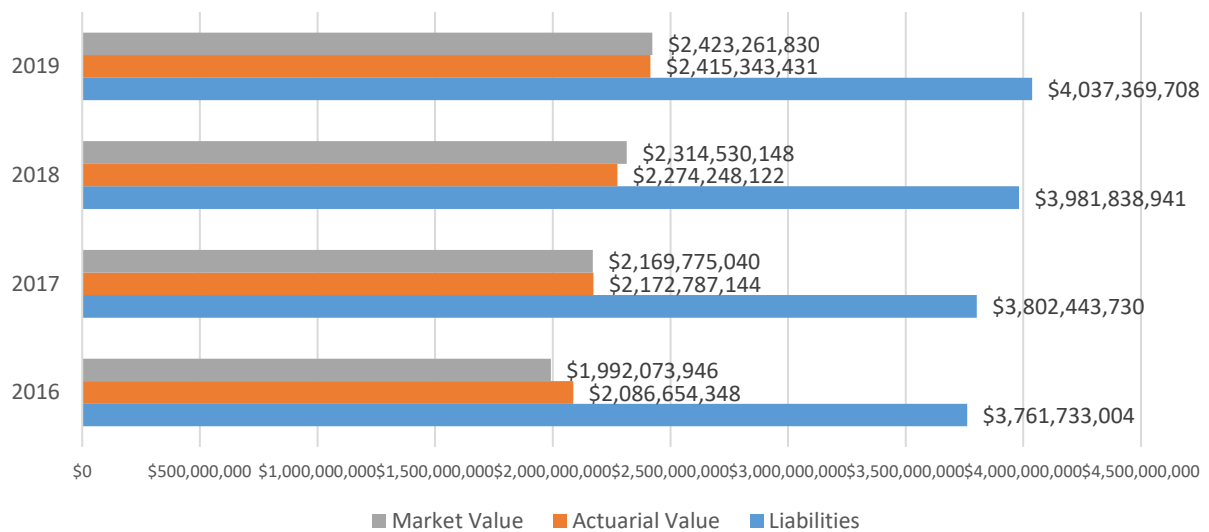
Vesting: 5 years

COLA: Annual Amount Maximum: 5% Percent of CPI: 80%

ACTUARIAL ASSUMPTIONS:

Interest: 7%

Salary: 3%



NORTH KANSAS CITY HOSPITAL RETIREMENT PLAN

MEMBERSHIP:

Active: 2,883 Inactive: 1,700

CONTRIBUTIONS:

Employer: \$30,288,779 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

Grandfathered Participant: traditional annuity benefit. Hired prior to 1/1/05 and was either over age 50 or had 15 years of service at 5/1/19: 1.35% of compensation not in excess of the integration level & 2% above it

Transition Participant: traditional annuity benefit for service until 4/30/19 and cash balance for service thereafter

Hired prior to 1/1/05 but was neither over age 50 nor had 15 YOS at 5/1/19: Traditional annuity benefit for service up to 4/30/19: 1.35% of compensation not in excess of the integration level & 2% above it. Cash balance account established for the period subsequent to 5/1/19.

Hired on/after 1/1/05 but prior to May 1, 2019: traditional annuity benefit for service through 4/30/19: 0.9% of compensation not in excess of the integration level & 1.4% above it. Cash balance account established for the period subsequent to 5/1/19.

Cash Balance Participant (became an active participant on/after 5/1/19): benefit under cash balance account based on compensation and years of service after 5/1/19.

Normal Retirement Eligibility:

Age 65 with 3 years of service

Social Security Coverage: Yes

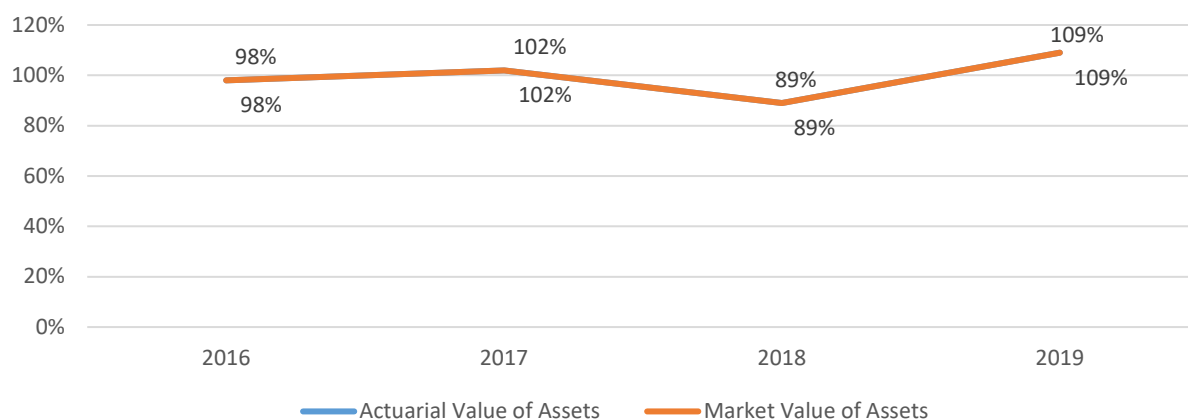
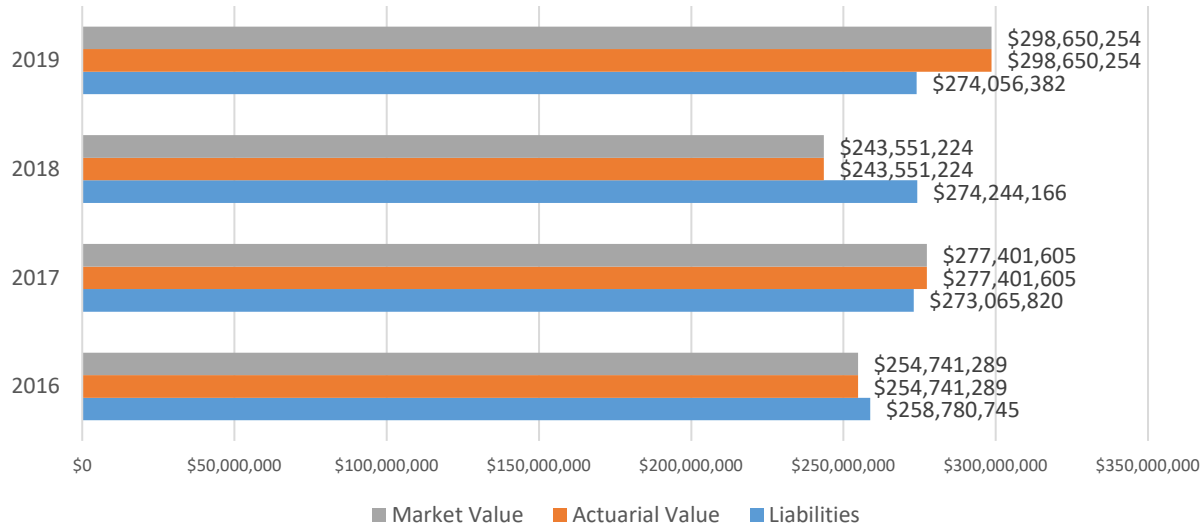
Valuation of Assets: Market Value

Mortality Table: PRI-2012 Employee Tables with the Retiree and Contingent Survivor Tables for annuitants projected forward, Scale MP-2019

Vesting: 3 years **COLA:** No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: 2.5%



NORTH KANSAS CITY POLICEMEN'S & FIREMEN'S RETIREMENT FUND

MEMBERSHIP:

Active: 95 Inactive: 89

CONTRIBUTIONS:

Employer: \$1,126,830 Employee: \$178,117

BENEFITS:

Normal Retirement Formula:

2.5% of compensation for the first 20 years of service + 1% for the next 10 years of service
Maximum: 30 years of service

Normal Retirement Eligibility:

Age 55 with 10 years of service
Mandatory retirement at age 65

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: Public Safety 2010 tables for employees and annuitants projected generationally using scale MP-2018

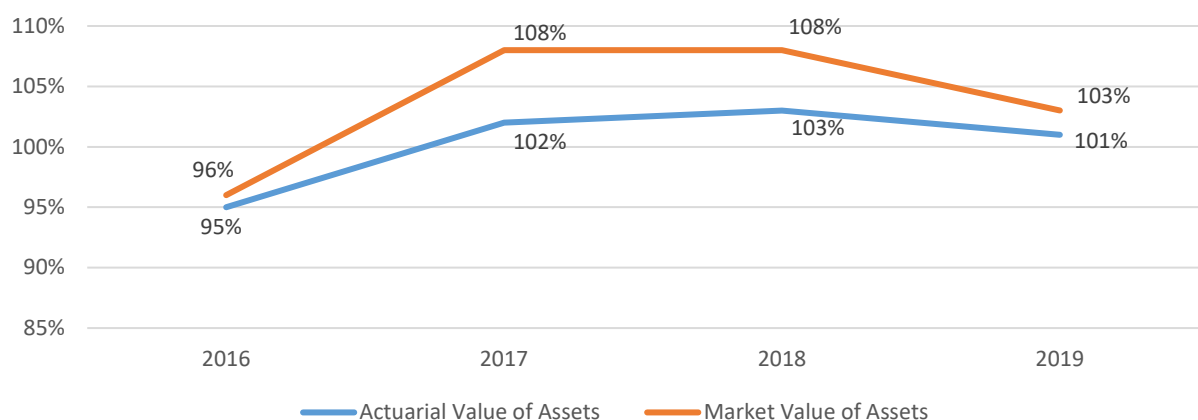
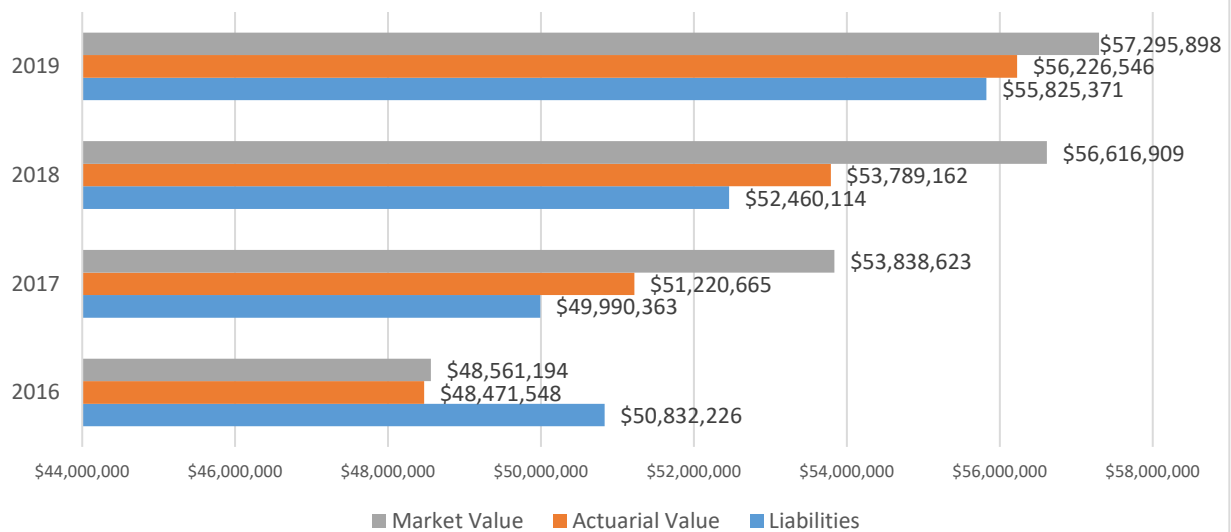
Vesting: 10 years

COLA: Annual Amount Minimum: 1%

Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: 4%



OLIVETTE SALARIED EMPLOYEES' RETIREMENT PLAN

MEMBERSHIP:

Active: 50 Inactive: 88

CONTRIBUTIONS:

Employer: \$544,000 Employee: \$204,383

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 58 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: PRI-2012 Blue Collar Mortality Tables with Scale MP-2019

Vesting: 5 years

COLA: Ad hoc

Annual Amount Maximum: 2%

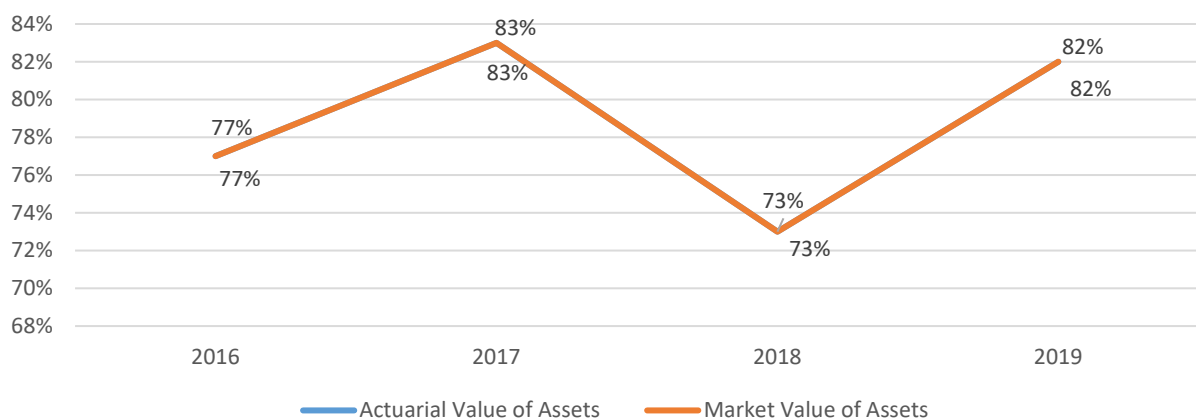
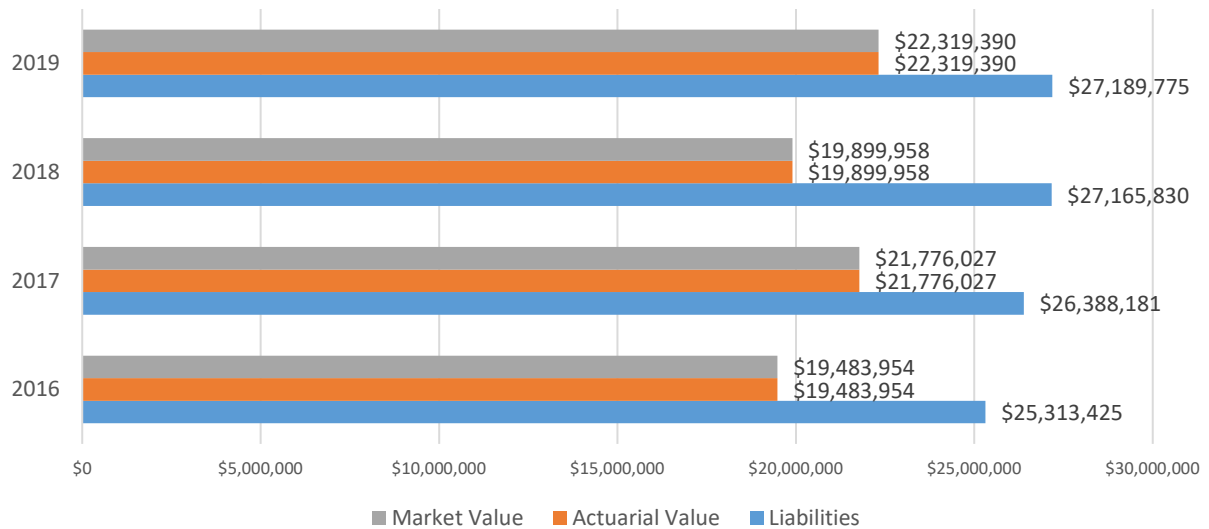
Cap Total Maximum: 25%

Retirements after 1/1/10 receive no COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7%

Salary: 4%



OVERLAND NON-UNIFORMED EMPLOYEES' PENSION FUND

MEMBERSHIP:

Active: 51 Inactive: 56

CONTRIBUTIONS:

Employer: \$528,924 Employee: \$126,398

BENEFITS:

Normal Retirement Formula:

2.25% of compensation x years of creditable service
Maximum: 60% of compensation

Normal Retirement Eligibility:

Age 58 with 5 years of service
25 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2000 projected generationally using scale AA

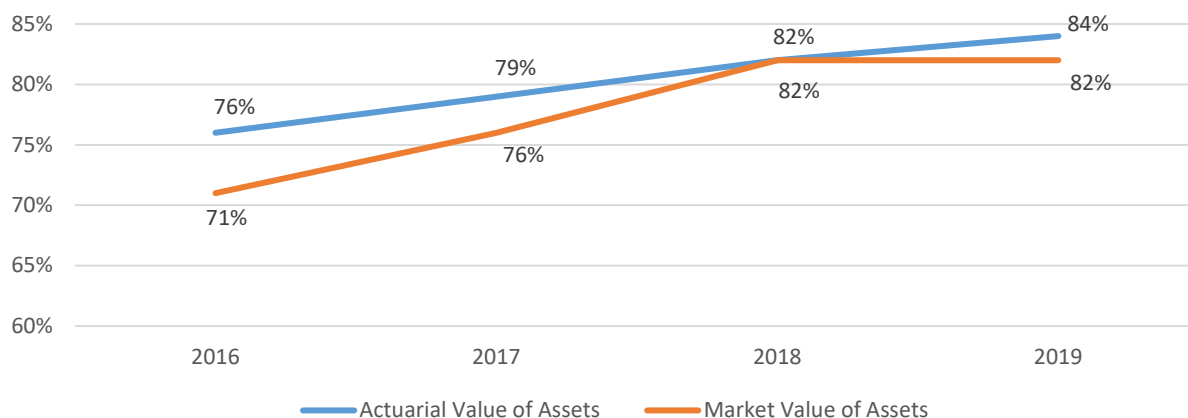
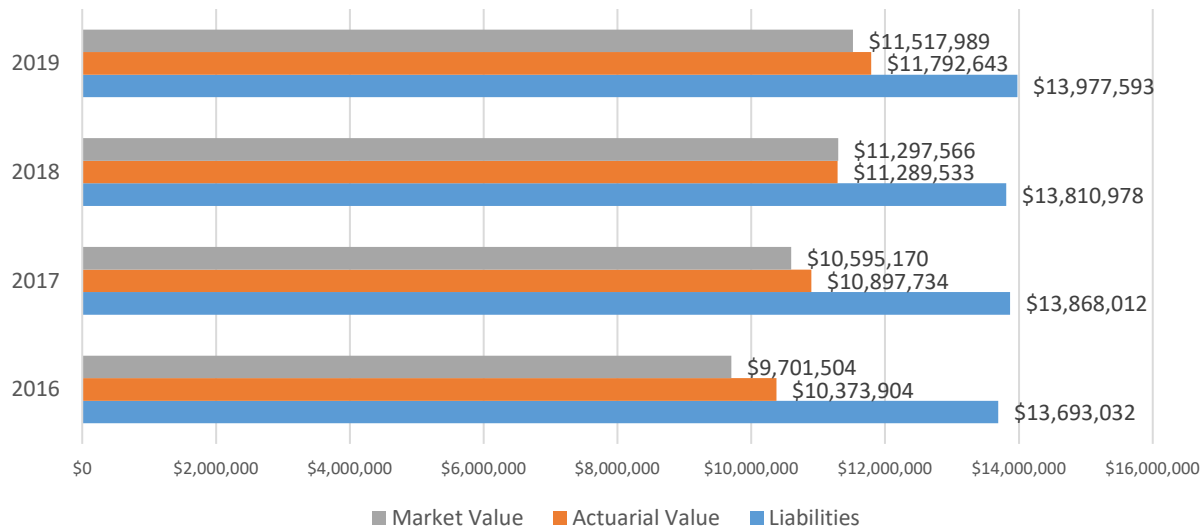
Vesting: Partial 5 years / Full 15 years

COLA: Annual Amount Maximum: 3%

Percent of CPI: 60%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%



OVERLAND POLICE RETIREMENT FUND

MEMBERSHIP:

Active: 42 Inactive: 42

CONTRIBUTIONS:

Employer: \$680,159 Employee: \$198,154

BENEFITS:

Normal Retirement Formula:

2.5% of compensation for the first 20 years of service + 1.5% for the next 10 years of service

Normal Retirement Eligibility:

20 years of service
Age 62 with 18 years of service
Age 65 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2000 projected generationally using scale AA

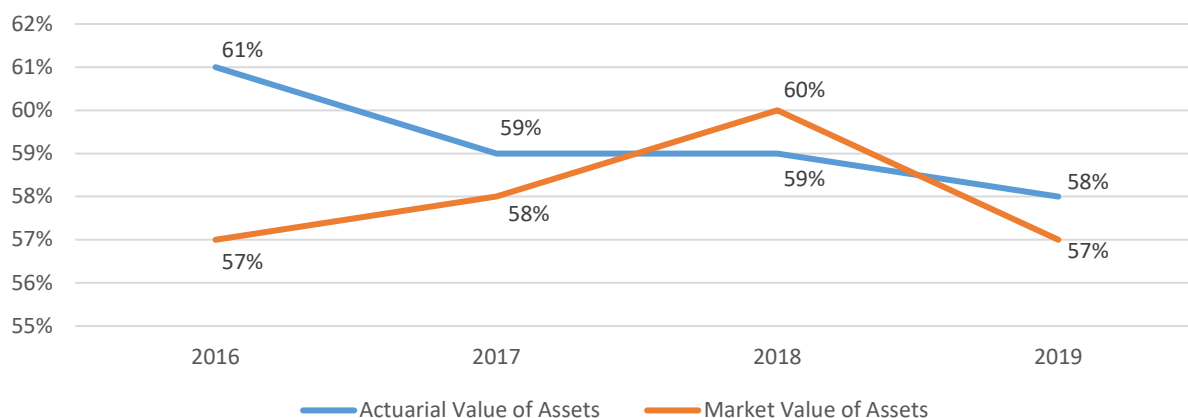
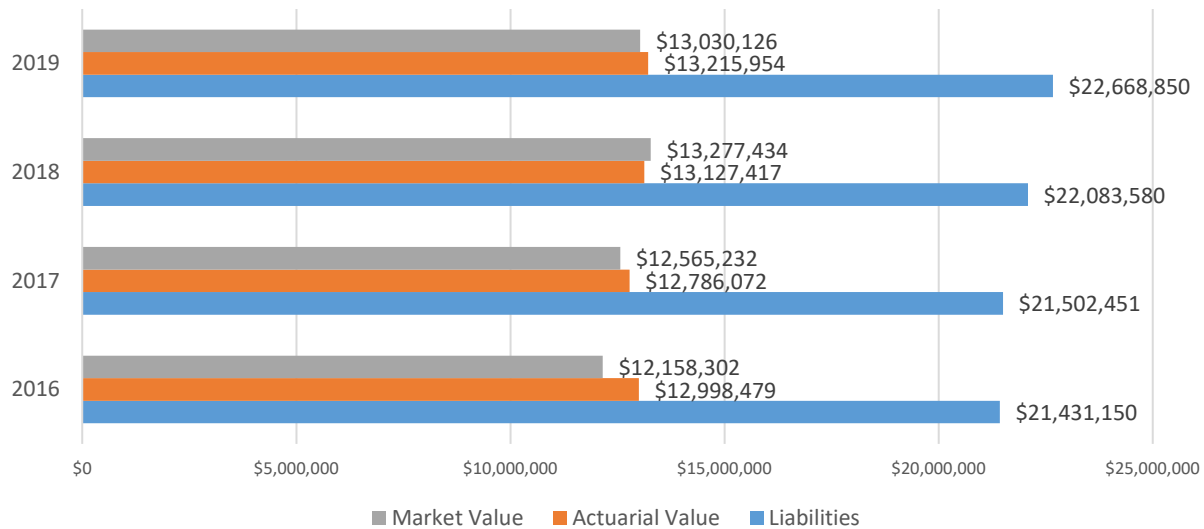
Vesting: Partial 15 years / Full 20 years

COLA: Annual Amount Maximum: 3%

Percent of CPI: 60%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%



PATTONVILLE FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 59 Inactive: 44

CONTRIBUTIONS:

Employer: \$1,500,000 Employee: \$123,122

BENEFITS:

Normal Retirement Formula:

50% of compensation

50% of average monthly compensation reduced for service less than 20 years (if hired before 11/26/07) or reduced for service less than 25 years (if hired after 11/26/07)

Supplemental bridge benefit from age 55 to age 62: 20% of compensation

Normal Retirement Eligibility:

Uniformed: Age 55 with 5 years of service for those hired before 1/1/13 and born before 1/1/63

Uniformed: Age 57 with 5 years of service

Non-Uniformed: Age 62 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

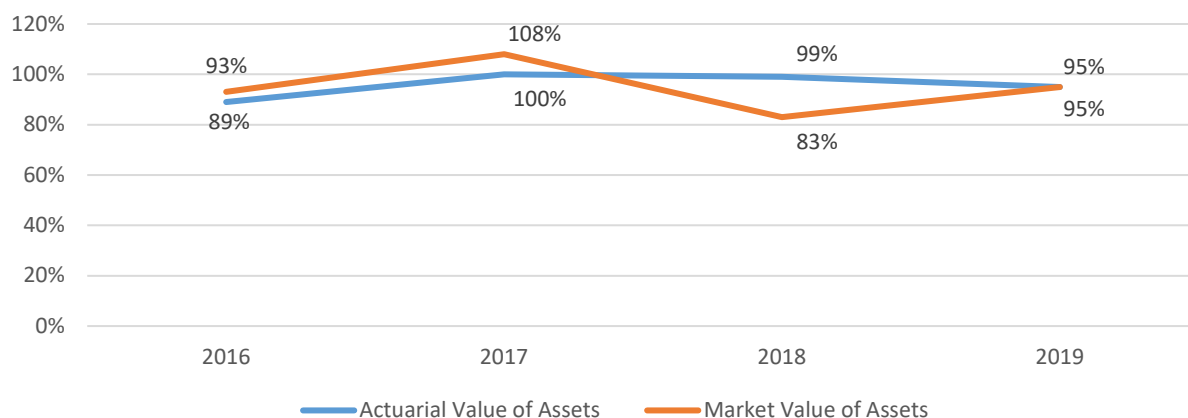
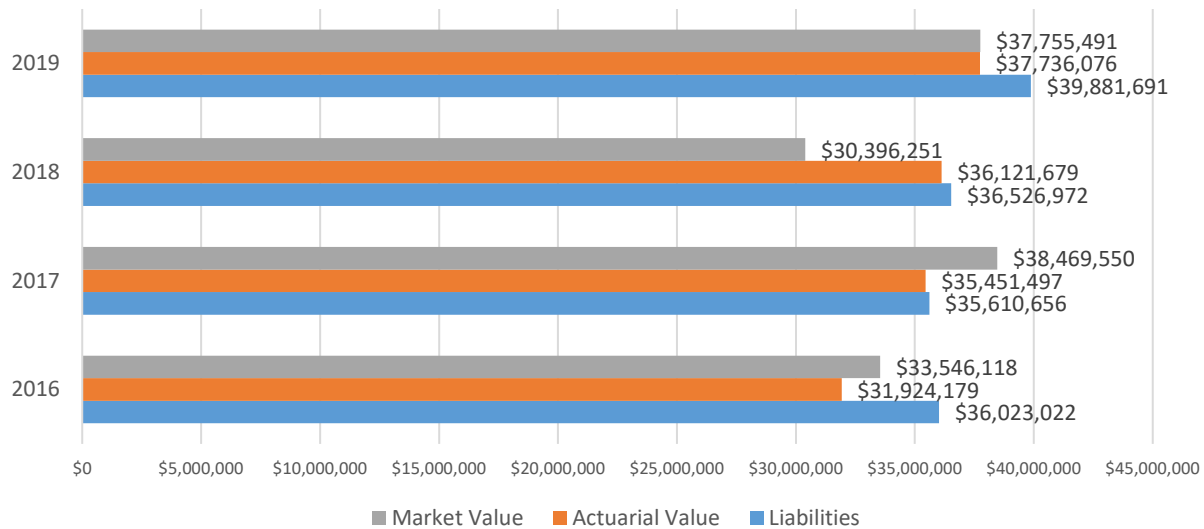
Mortality Table: PubS-2010 Mortality Table with Scale MP-2019

Vesting: Partial 5 years / Full 10 years

COLA: Annual Amount Minimum: 1%
Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: 2.5%



POPLAR BLUFF POLICE & FIRE PENSION PLAN

MEMBERSHIP:

Active: 76 Inactive: 75

CONTRIBUTIONS:

Employer: \$257,476 Employee: \$196,174

BENEFITS:

Normal Retirement Formula:

2% of compensation for the first 20 years of service + 1.5% for each additional year of service
Maximum: \$1,650 per month

Normal Retirement Eligibility:

Later of Age 55 or 5 years of service

Social Security Coverage: No

Valuation of Assets: 4 Years

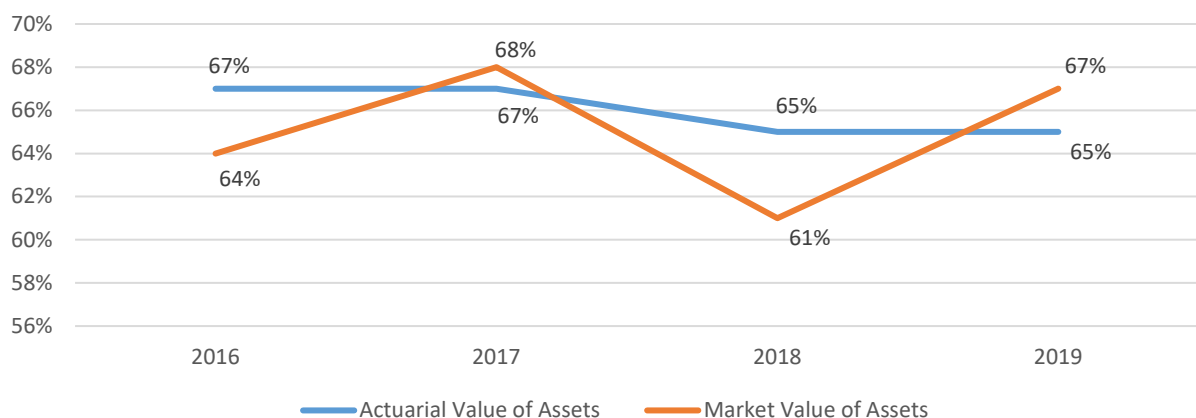
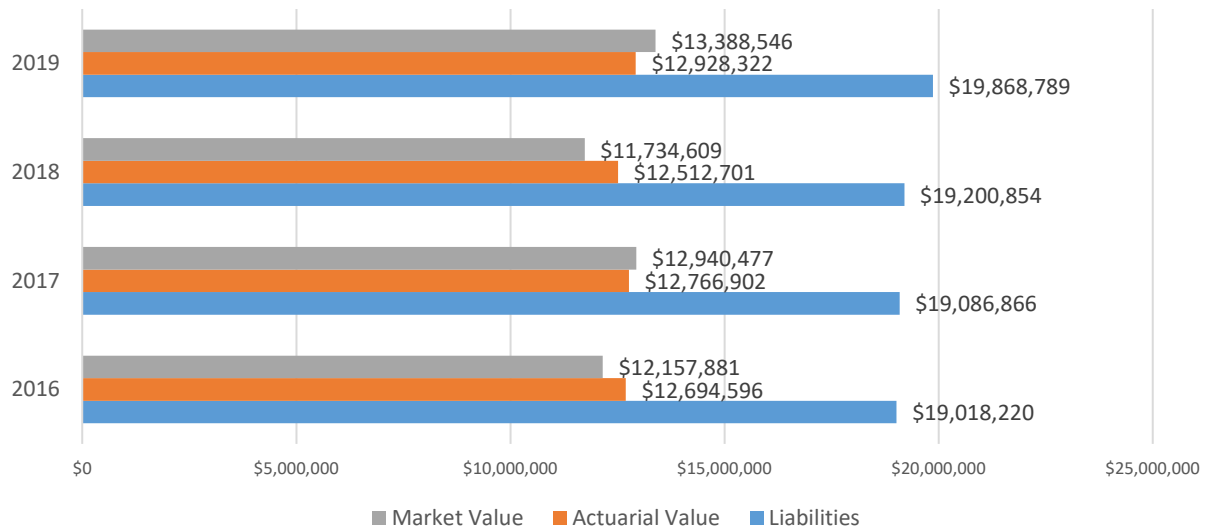
Mortality Table: IRS Prescribed Mortality-Generational Annuitant

Vesting: Partial 5 years / Full 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 5.25% Salary: 3%



PROSECUTING ATTORNEYS' & CIRCUIT ATTORNEYS' RETIREMENT SYSTEM

MEMBERSHIP:

Active: 115 Inactive: 127

CONTRIBUTIONS:

Employer: \$1,929,092 Employee: \$84,298

BENEFITS:

Normal Retirement Formula:

1st & 2nd Class Counties & St. Louis City: 50% of Final Average Salary
 3rd & 4th Class Counties: 12 - 20 years of service = \$105 x each 2 year period
 3rd & 4th Class Counties: 20+ years of service = \$130 x each 2 year period

Normal Retirement Eligibility:

Age 62 with 12 years of service
 Hired on/after 1/1/19: Age 65 with 12 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: PubG-2010, generational, scale MP-2018

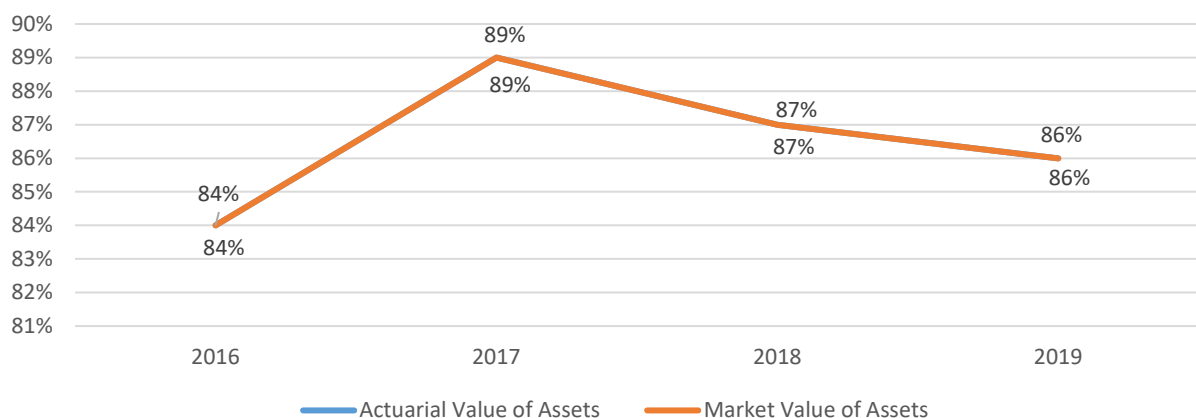
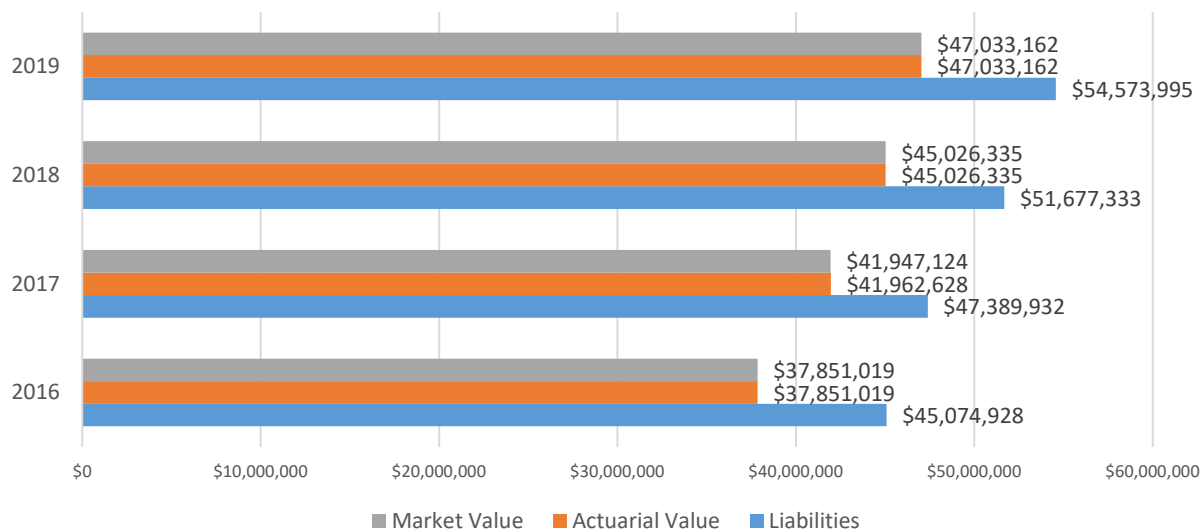
Vesting: 12 years

COLA: Annual Amount Maximum: 2%

Cap Total Max: 50%

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%



PUBLIC EDUCATION EMPLOYEES' RETIREMENT SYSTEM (PEERS)

MEMBERSHIP:

Active: 49,345 Inactive: 68,968

CONTRIBUTIONS:

Employer: \$120,042,046 Employee: \$126,609,105

BENEFITS:

Normal Retirement Formula:

1.61% of compensation x years of creditable service

Rule of 80 and 30 & Out: Temporary benefit of 0.8% of compensation x years of service to Social Security eligibility

Normal Retirement Eligibility:

Age 60 with 5 years of service

Rule of 80

Age 55 with 25 years of service

30 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table (Retiree Mortality): RP-2006 Total Dataset Mortality Tables with plan specific experience adjustments with static projection to 2028 using 2014 SSA Improvement Scale

Vesting: 5 years

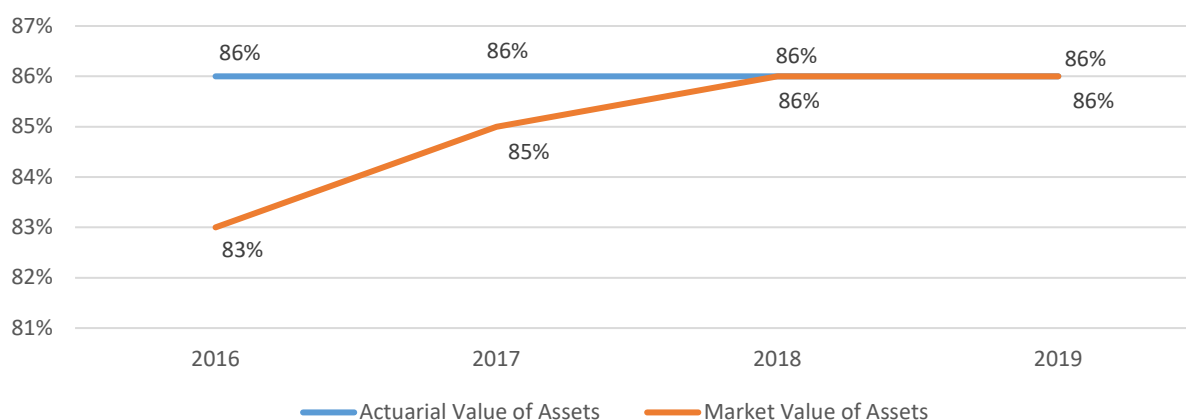
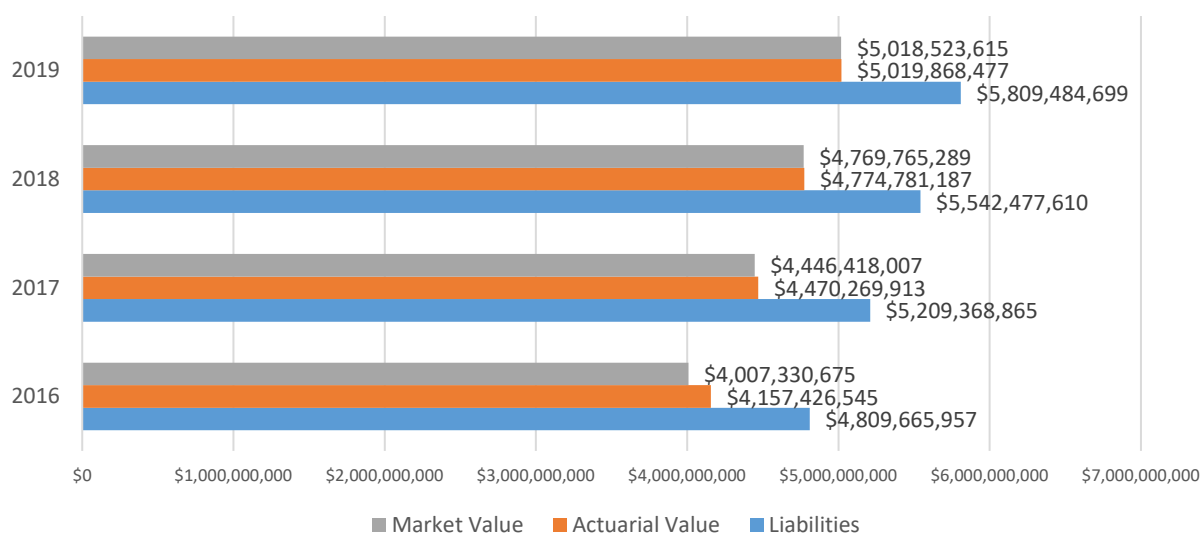
COLA: Annual Amount Maximum: 5%

Cap Total Max: 80%

ACTUARIAL ASSUMPTIONS:

Interest: 7.5%

Salary: 3.25%



PUBLIC SCHOOL RETIREMENT SYSTEM (PSRS)

MEMBERSHIP:

Active: 78,863 Inactive: 81,147

CONTRIBUTIONS:

Employer: \$712,545,096 Employee: \$747,402,726

BENEFITS:

Normal Retirement Formula:

2.5% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 60 with 5 years of service

Rule of 80

30 years of service

Age 55 with 25 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

Mortality Table (Retiree Mortality): RP-2006 White Collar Mortality Tables with plan specific experience adjustments and static projection to 2028 using 2014 SSA improvement scale

Vesting: 5 years

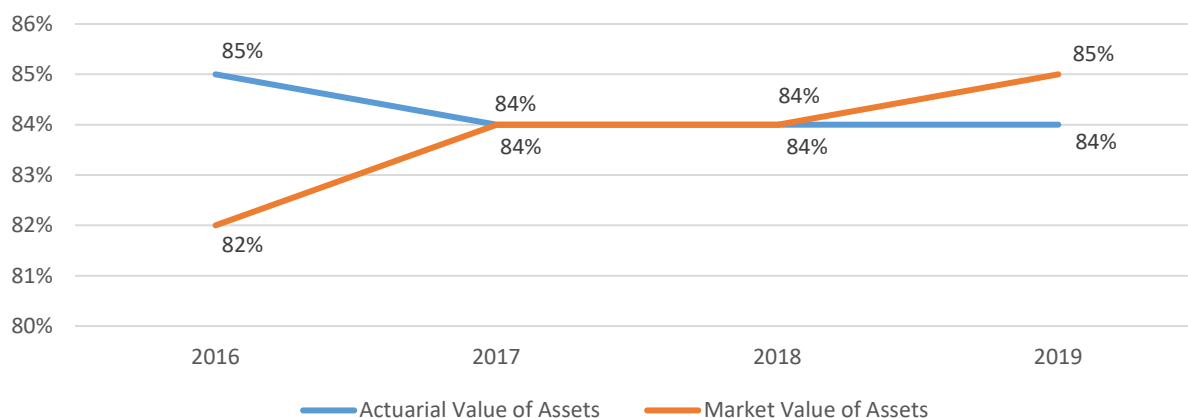
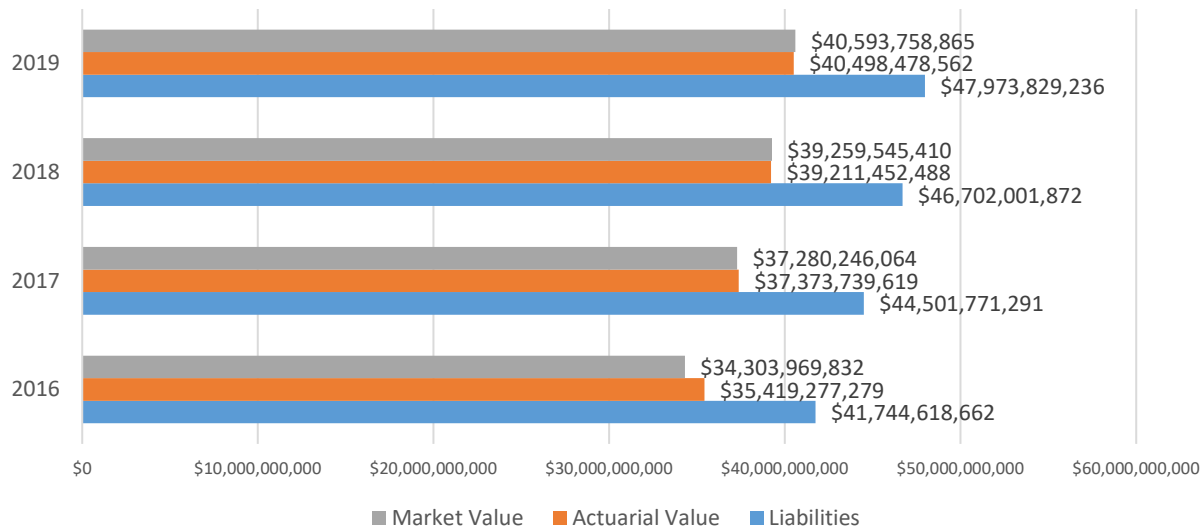
COLA: Annual Amount Maximum: 5%

Cap Total Max: 80%

ACTUARIAL ASSUMPTIONS:

Interest: 7.5%

Salary: 2.75%



RAYTOWN POLICEMEN'S RETIREMENT FUND

MEMBERSHIP:

Active: 15 Inactive: 67

CONTRIBUTIONS:

Employer: \$590,127 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2.5% of compensation for the first 20 years of service + 1% for the next 10 years of service

Normal Retirement Eligibility:

Age 55 with 20 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 years

Mortality Table: Public Safety 2010 mortality tables with generational improvements using Scale MP-2019

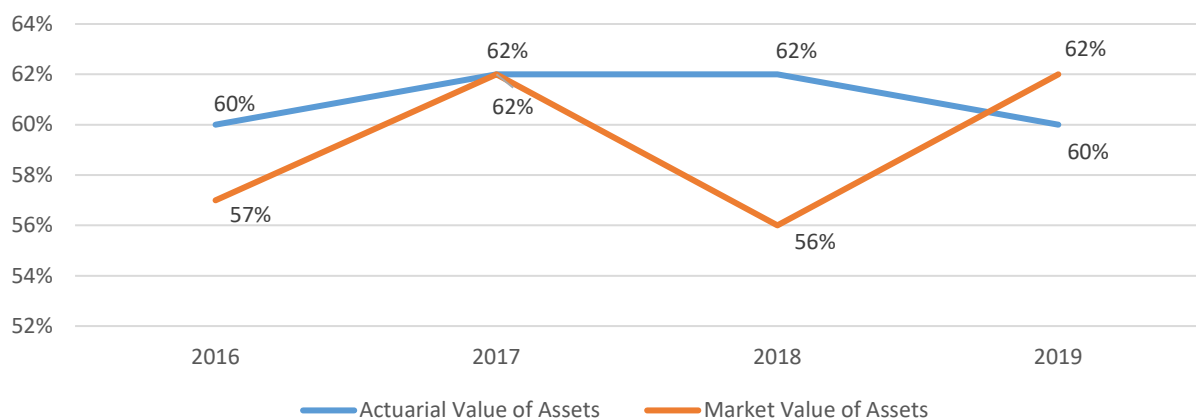
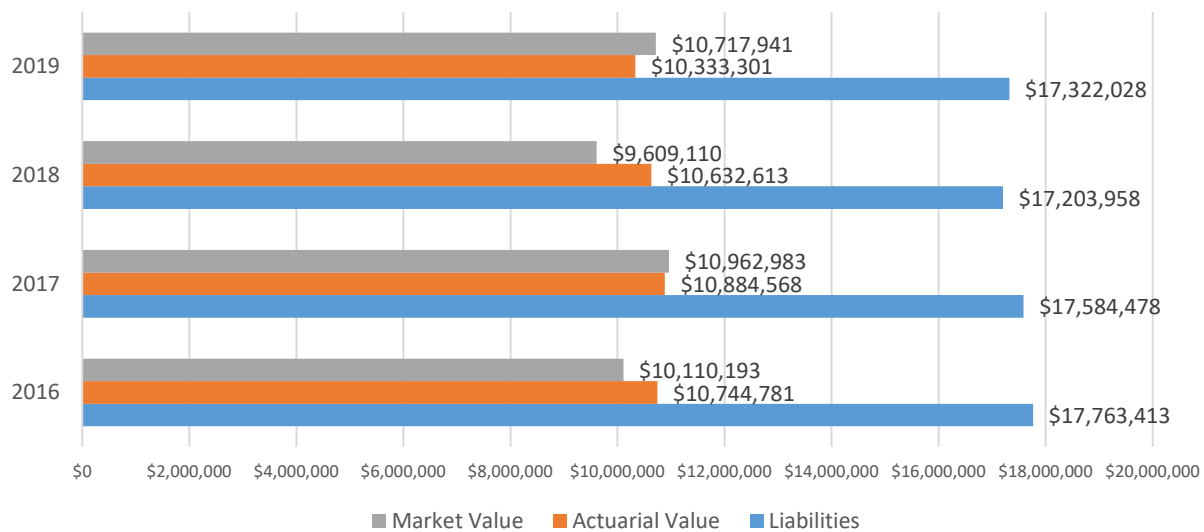
Vesting: 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.5% Salary: 4%

Plan frozen effective 12/31/13. Current and new employees are members of LAGERS.



RICHMOND HEIGHTS POLICE & FIRE RETIREMENT PLAN

MEMBERSHIP:

Active: 61 Inactive: 41

CONTRIBUTIONS:

Employer: \$1,029,915 Employee: \$140,830

BENEFITS:

Normal Retirement Formula:
70% of compensation

Normal Retirement Eligibility:
Age 60 or 30 years of service

Social Security Coverage: Yes

Valuation of Assets: 4 Years

Mortality Table: RP-2014 Blue Collar Healthy Scale MP-2014 Generational Projection

Vesting: 15 years

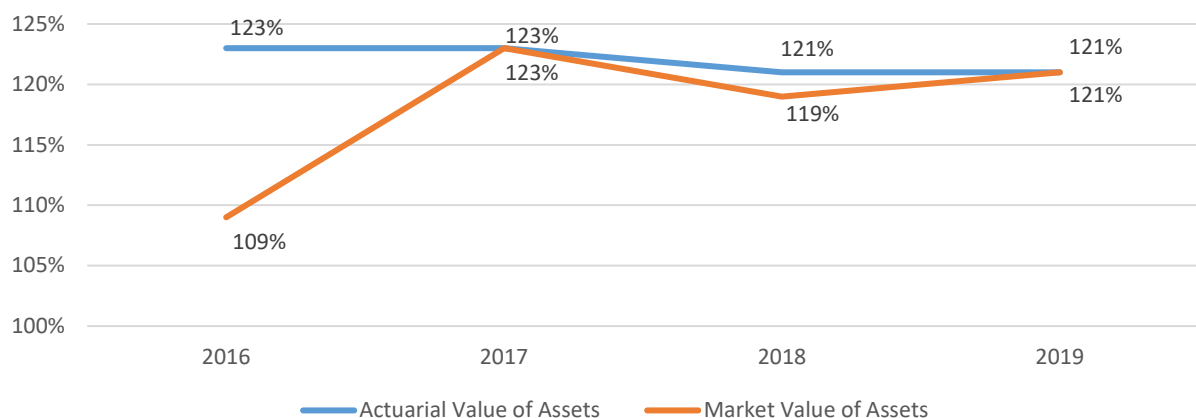
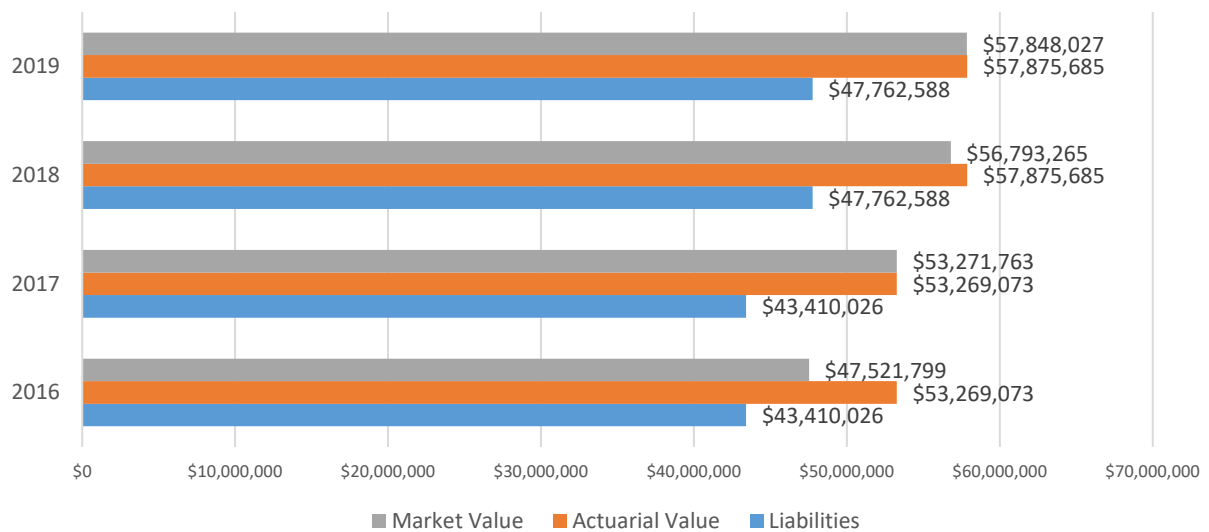
COLA: Ad Hoc

Cap Total Maximum: Based on increase in base pay of actives until retiree reaches full Social Security age

ACTUARIAL ASSUMPTIONS:

Interest: 6% Salary: 4%

Plan performs actuarial valuation biennially



ROCK COMMUNITY FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 68 Inactive: 29

CONTRIBUTIONS:

Employer: \$937,570 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Temporary Benefit: \$500 per month to Medicare eligibility

Normal Retirement Eligibility:

Age 60 with 5 years of service

Age 55 with 30 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 years

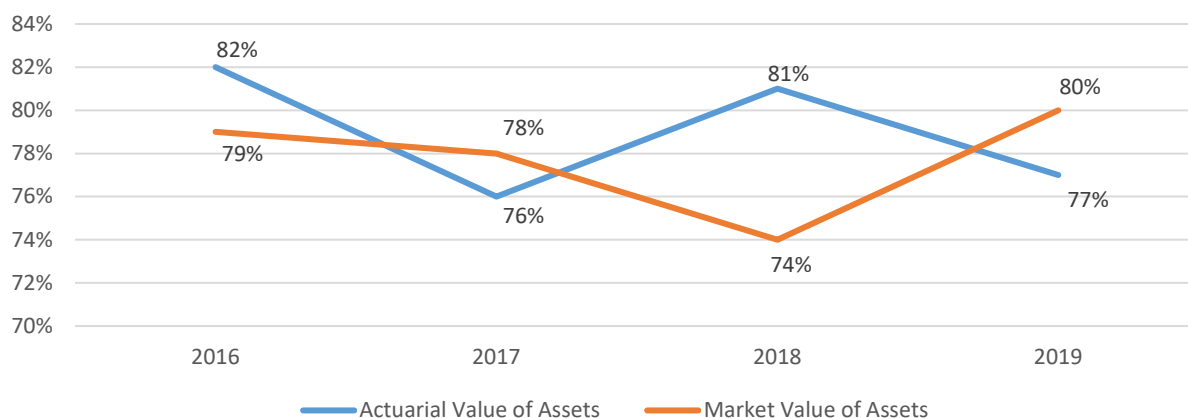
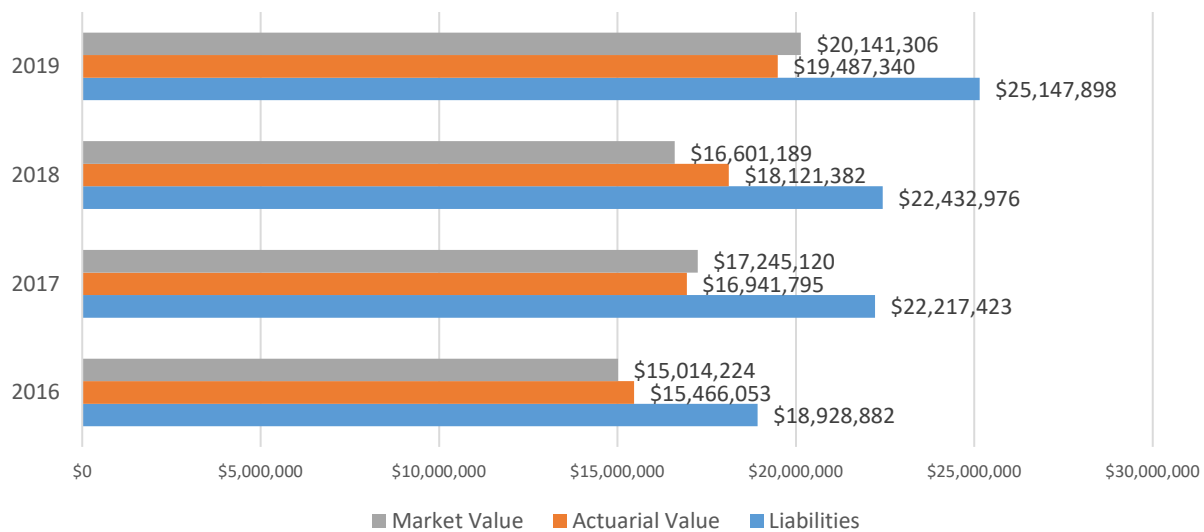
Mortality Table: PubS-2010 Mortality Table with generational improvements based on Scale MP-2019

Vesting: 7 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3%



ROCK HILL POLICE & FIREMEN'S PENSION PLAN

MEMBERSHIP:

Active: 7 Inactive: 18

CONTRIBUTIONS:

Employer: \$150,000 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

40% or 50% of compensation, reduced by 1/20 per final years of service below 20 years, full 40% or 50% if greater than 20 years of service
Percentage based on age and years of service as of 4/30/2003

Normal Retirement Eligibility:

Age 60 with 20 years of service
Mandatory retirement at age 70

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: Pub-2010 Public Safety Mortality Table projected generationally with Scale MP-2019

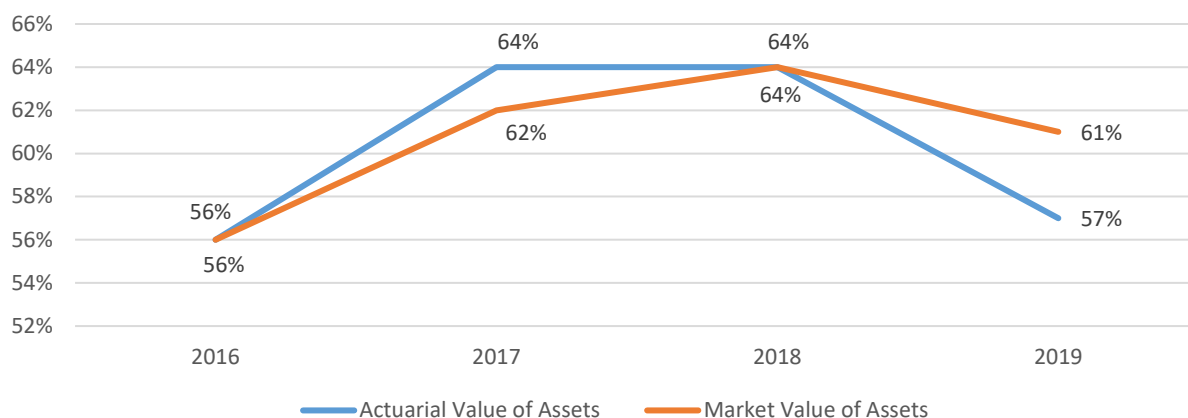
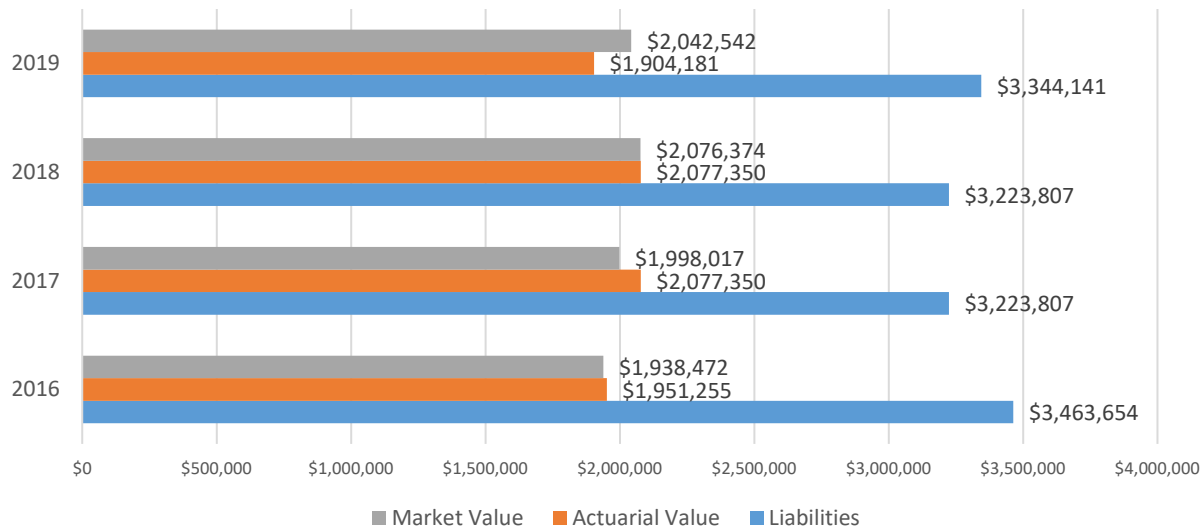
Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTION:

Interest: 5.5%

Plan closed effective October 2003. Plan frozen effective May 1, 2011. Employees are members of LAGERS. Plan performs actuarial valuation biennially.



SALINE VALLEY FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 33 Inactive: 19

CONTRIBUTIONS:

Employer: \$226,692 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

\$110 per month x years of credited service

Maximum: 36 years of service

Supplemental Benefit of \$500 per month from age 60-65

Normal Retirement Eligibility:

Age 60 with 7 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

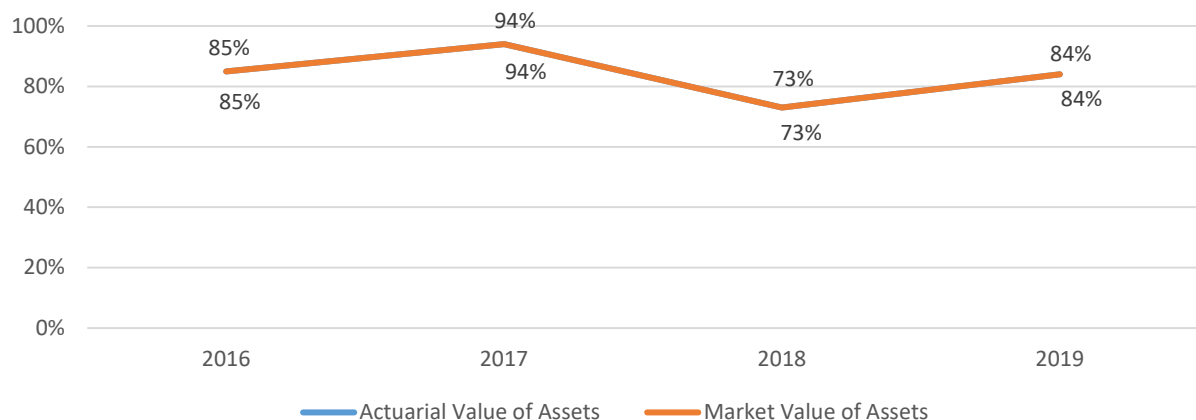
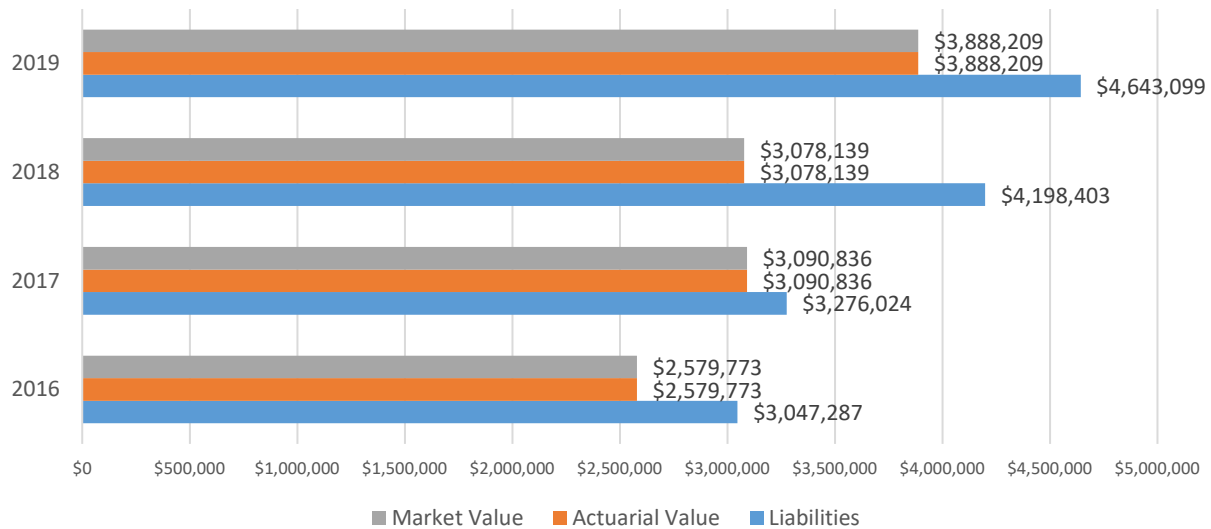
Mortality Table: Pub-2010 Public Safety Mortality Table with generational improvements using Scale MP-2019

Vesting: Partial 3 years / Full 7 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: N/A



SEDALIA FIREMEN'S RETIREMENT FUND

MEMBERSHIP:

Active: 40 Inactive: 51

CONTRIBUTIONS:

Employer: \$367,813 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

50% of Indexed Earnings Base (IEB). IEB = \$57,796 (effective 4/1/19)

Normal Retirement Eligibility:

Age 55 with 22 years of service

Social Security Coverage: No

Valuation of Assets: Market Value

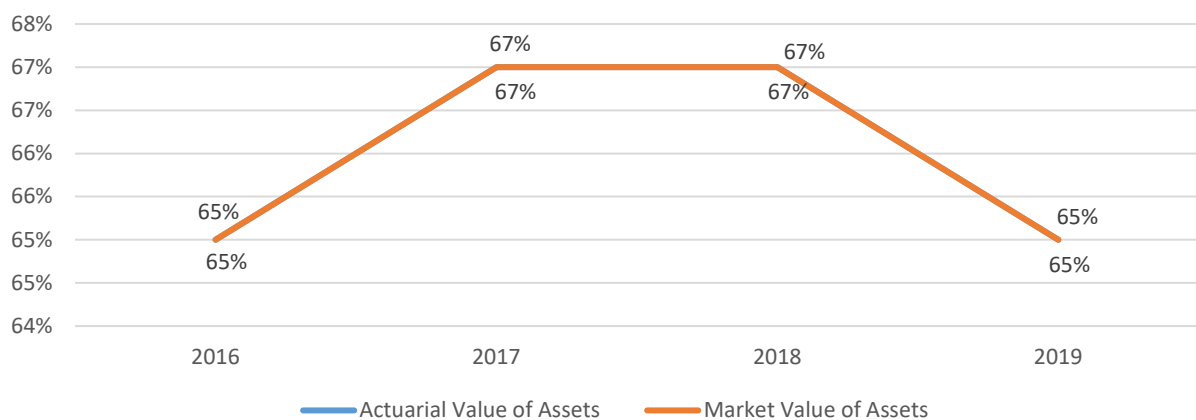
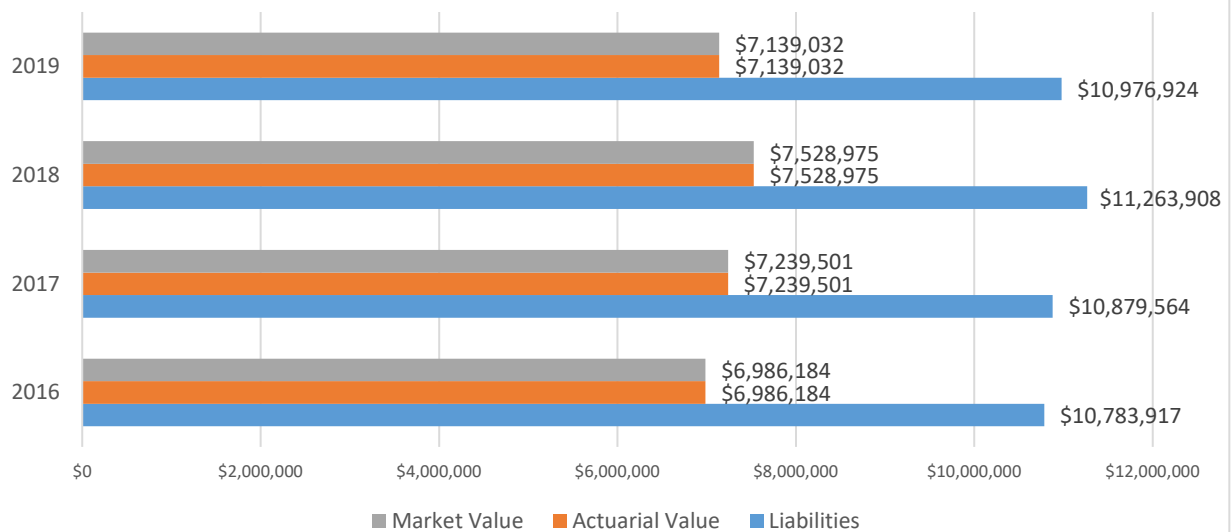
Mortality Table: RP-2014 at 2006, Blue Collar, Generational, Scale MP-2018

Vesting: Partial 1 year / Full 10 years

COLA: Annual Amount Maximum: 3%
Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3%



SHERIFFS' RETIREMENT SYSTEM

MEMBERSHIP:

Active: 114 Inactive: 202

CONTRIBUTIONS:

Employer: \$2,139,149 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Maximum: 75% of final average compensation

Plus monthly supplement not to exceed \$450. 2019 supplement = \$450

Normal Retirement Eligibility:

Age 55 with 12 years of service

Age 62 with 8 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: PubS-2010, generational projection, Scale MP-2019

Vesting: 8 years

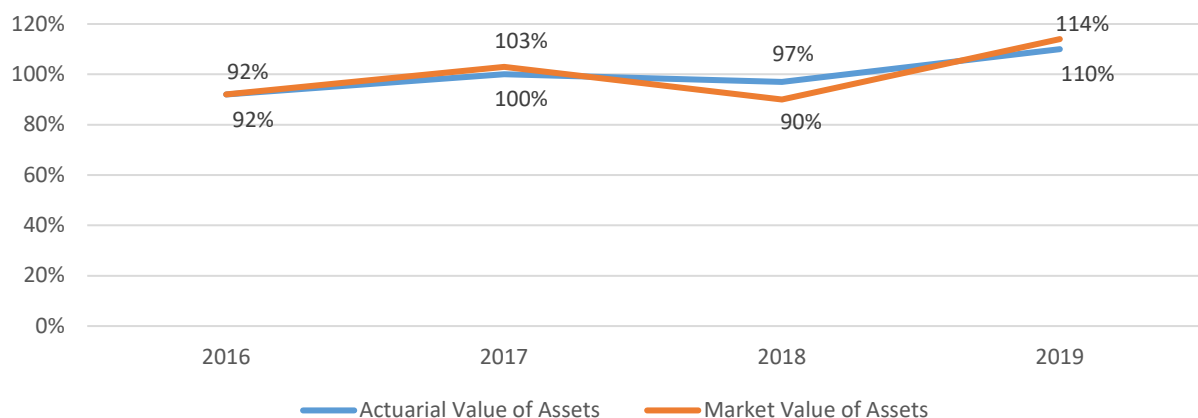
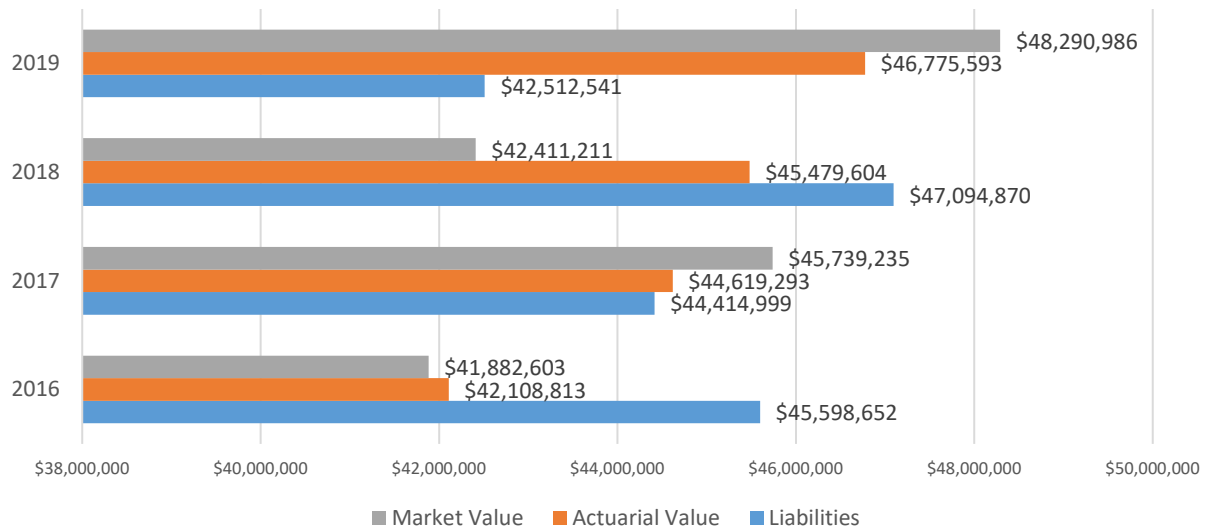
COLA: Annual Amount Maximum: 5%

Percent of CPI: 100%

ACTUARIAL ASSUMPTIONS:

Interest: 7%

Salary: 2.75%



SPRINGFIELD POLICE & FIRE RETIREMENT FUND

MEMBERSHIP:

Active: 215 Inactive: 610

CONTRIBUTIONS:

Employer: \$40,029,560 Employee: \$2,874,030

BENEFITS:

Normal Retirement Formula:

2.8% of compensation x years of creditable service
Maximum: 70% of compensation

Normal Retirement Eligibility:

Age 50 with 20 years of service
Mandatory retirement at age 60 with 20 years of service
Age 60
25 years of service

Social Security Coverage: No

Valuation of Assets: 4 Years

Mortality Table: Pub-2010 Safety Amount-Weighted Mortality Tables with Generational Projection from 2010 using 70% of Scale MP-2018

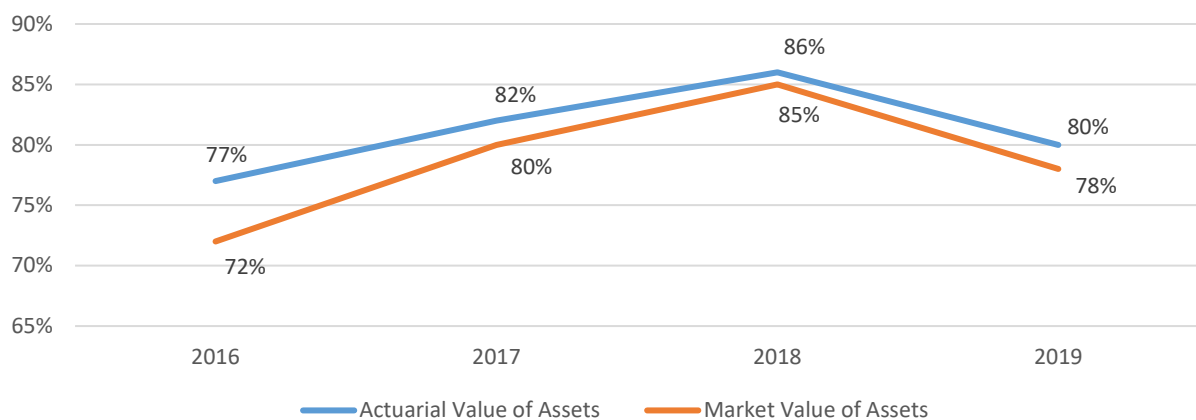
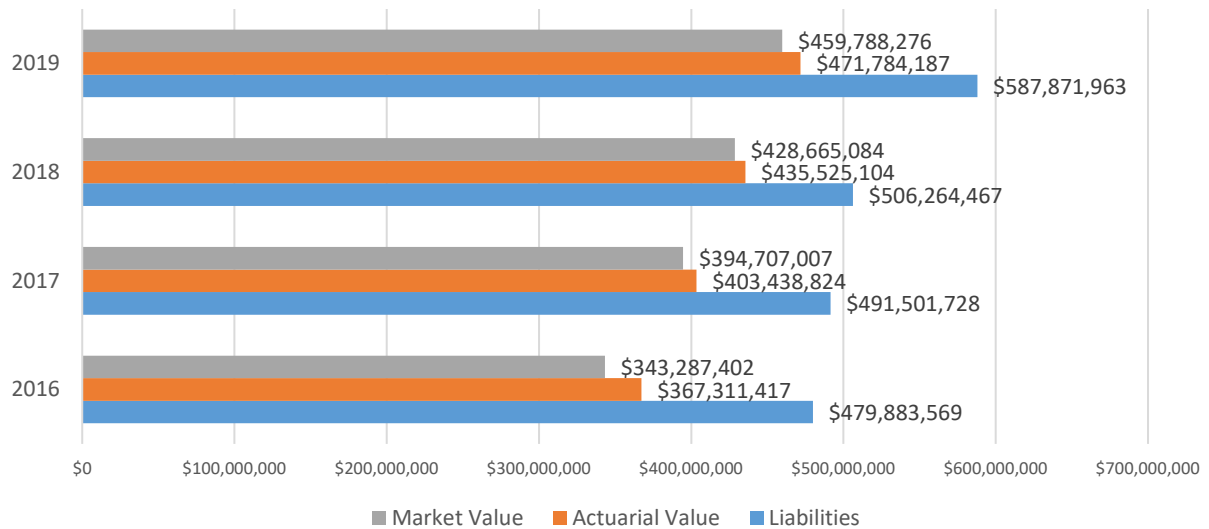
Vesting: 5 years

COLA: Annual Amount Maximum: 3%

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: varies

Plan closed 1/31/10. Active members hired after 6/1/06 and new hires participate in LAGERS.



ST. JOSEPH POLICEMEN'S PENSION FUND

MEMBERSHIP:

Active: 0 Inactive: 112

CONTRIBUTIONS:

Employer: \$368,889 Employee: \$43,667

BENEFITS:

Normal Retirement Formula:

40% of compensation for the first 20 years of service + 2% for each of the next 15 years of service
Maximum: 70% of compensation

Normal Retirement Eligibility:

20 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

Mortality Table: Public Safety 2010 Below Median Income Tables projected with generational improvements from 2010 with Scale MP-2019

Vesting: 20 years

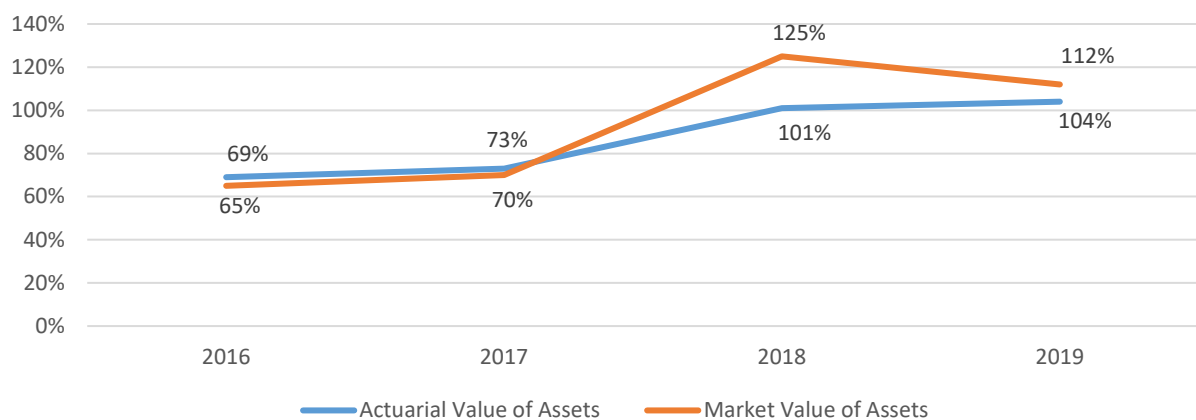
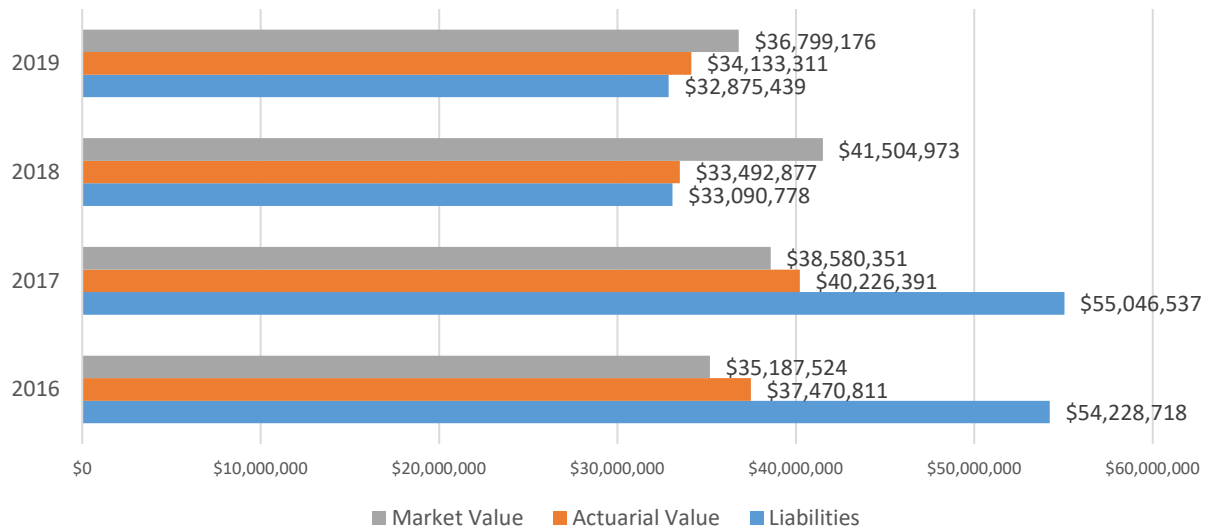
COLA: Annual Amount Maximum: 4%

Percent of CPI: 50%

ACTUARIAL ASSUMPTIONS:

Interest: 7.1% Salary: N/A

Plan closed effective 8/20/18. Active employees and new hires participate in LAGERS. The City transferred all active member plan liabilities and approximately \$4.6 million in assets to LAGERS on October 11, 2018.



ST. LOUIS COUNTY EMPLOYEES' RETIREMENT PLAN

MEMBERSHIP:

Active: 3,826 Inactive: 4,991

CONTRIBUTIONS:

Employer: \$43,173,263 Employee: \$993,780

BENEFITS:

Normal Retirement Formula:

Civilian Employees: 1.5% of compensation x years of service + \$15 per month x years of service

Civilian Employees hired on/after 2/1/18: 1.3% of compensation x years of service + \$15 per month x years of service

Police Employees: 1.6% of compensation x years of service + \$30 per month x years of service to age 65 then \$5 per month x years of service

Police employees hired on/after 2/1/18: 1.4% of compensation x years of service + \$30 per month x years of service to age 65 then \$5 per month x years of service

Normal Retirement Eligibility:

Civilian Employees: Age 65 with 3 years of service. Rule of 80.

Civilian Employees hired on/after 2/1/18: Age 67 with 3 years of service. Rule of 85.

Police Employees: Age 60 with 10 years of service. Age 65 with 3 years of service. Rule of 80.

Police Employees hired on/after 2/1/18: Age 60 with 10 years of service. Age 65 with 3 years of service. Rule of 85.

Social Security Coverage: Yes

Valuation of Assets: 4 Years

Mortality Table: Civilian: blend of 85% PubG-2010 and 15% PubS-2010. Police: 100% PubS-2010. Both: projected from 2010, generational, Scale MP-2019

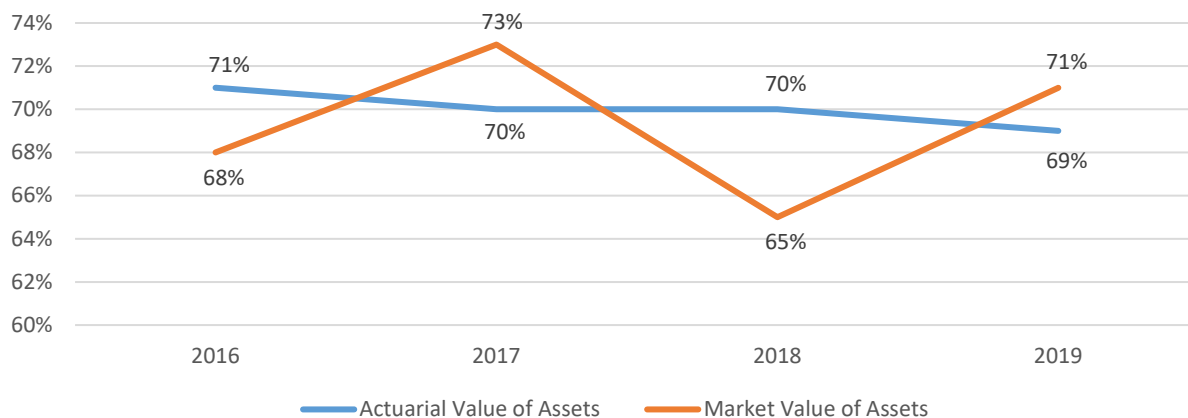
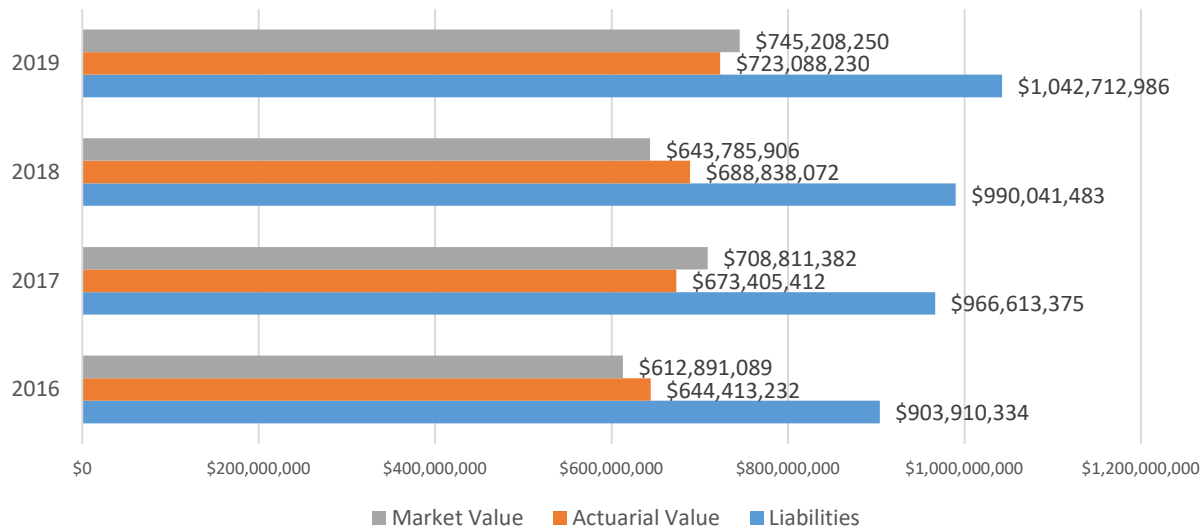
Vesting: Hired before 2/1/18: 5 years. Hired on/after 2/1/18: 7 years

COLA: Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 7.5%

Salary: Police: 3.25%, Civilian: 3.75%



ST. LOUIS COUNTY LIBRARY DISTRICT EMPLOYEES' PENSION PLAN

MEMBERSHIP:

Active: 383 Inactive: 348

CONTRIBUTIONS:

Employer: \$2,360,562 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

1.6% of compensation x years of creditable service

Normal Retirement Eligibility:

Age 65 with 5 years of service

Rule of 80 (Effective 1/1/19)

Social Security Coverage: Yes

Valuation of Assets: 4 Years

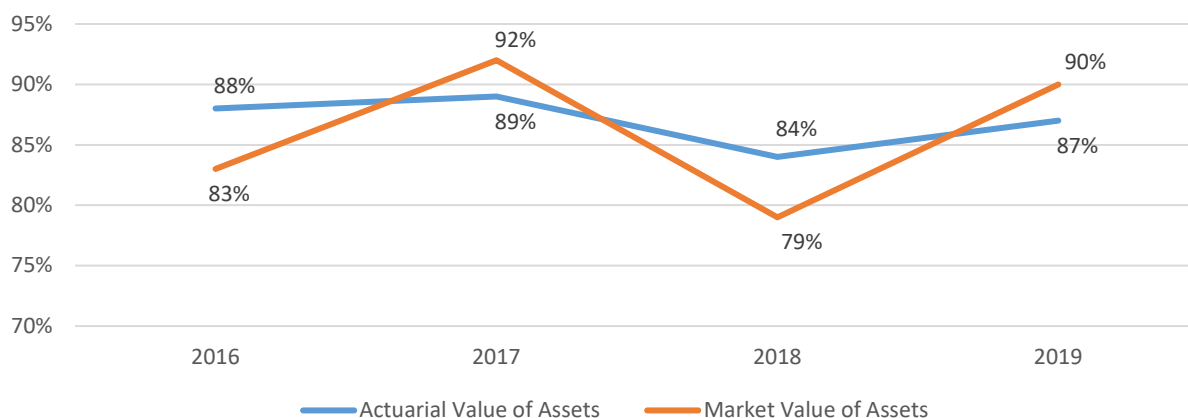
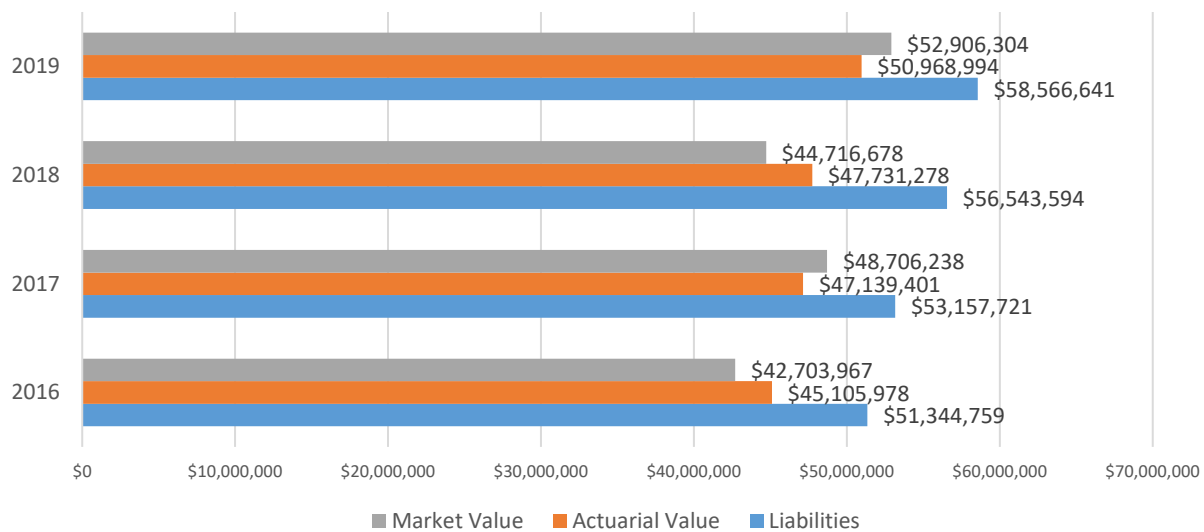
Mortality Table: RP-2014 fully generational basis using scale MP-2015

Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 3.5%



ST. LOUIS EMPLOYEES' RETIREMENT SYSTEM

MEMBERSHIP:

Active: 5,144 Inactive: 7,343

CONTRIBUTIONS:

Employer: \$29,629,568 Employee: \$147,584

BENEFITS:

Normal Retirement Formula:

1.3% of compensation below \$80,532 per year + 2.05% of compensation above \$80,532 per year x years of credited service
Minimum benefit of \$200 per month for retirees with 12 or more years of creditable service

Normal Retirement Eligibility:

Age 65 with 5 years of service
Rule of 85

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2000 Healthy Mortality with 3 year set forward, generational projection Scale AA

Vesting: 5 years

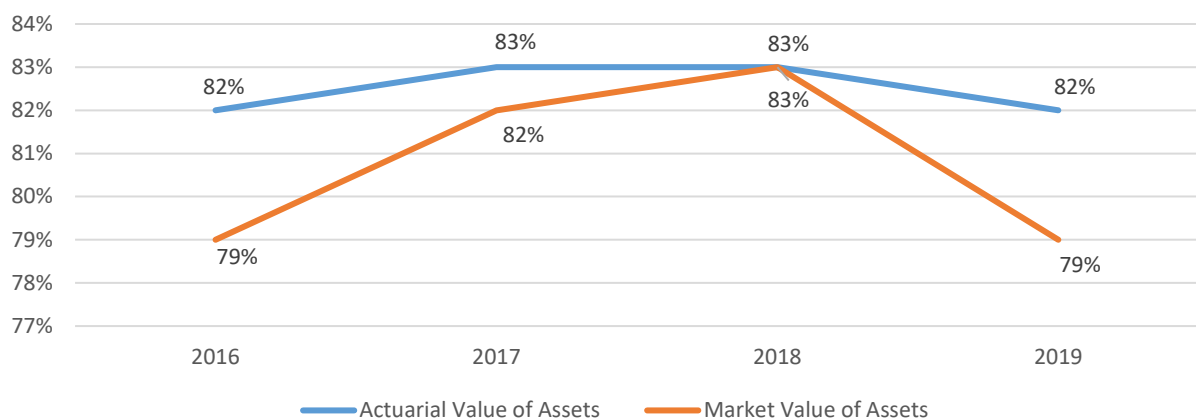
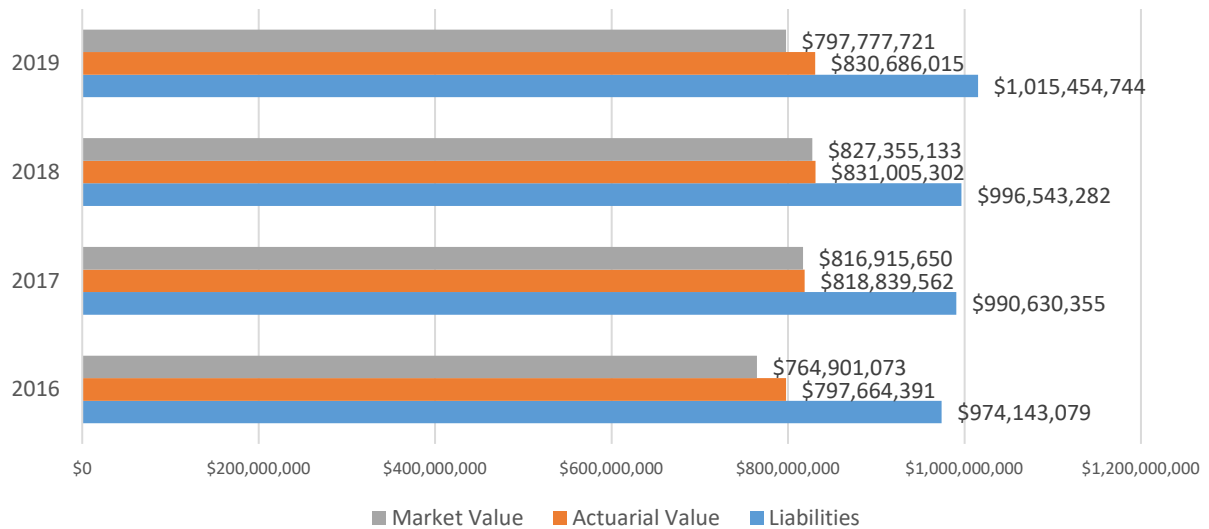
COLA: Annual Amount Maximum: 3.125%

Percent of CPI: 100%

Cap Total Maximum: 25%

ACTUARIAL ASSUMPTIONS:

Interest: 7.5% Salary: 3%



ST. LOUIS FIREMEN'S RETIREMENT SYSTEM

MEMBERSHIP:

Active: 415 Inactive: 966

CONTRIBUTIONS:

Employer: \$0 Employee: \$0

BENEFITS:

Normal Retirement Formula:

40% of compensation for the first 20 years of service + 2% for each of the next 5 years of service + 5% for each year over 25 years
Maximum: 30 Years

Normal Retirement Eligibility:

20 years of service

Social Security Coverage: No

Valuation of Assets: 3 Years

Mortality Table: Pub-2010 Public Safety, Sex distinct, Scale MP-2019

Vesting: 20 years

COLA: Annual Amount Minimum: 1.5%

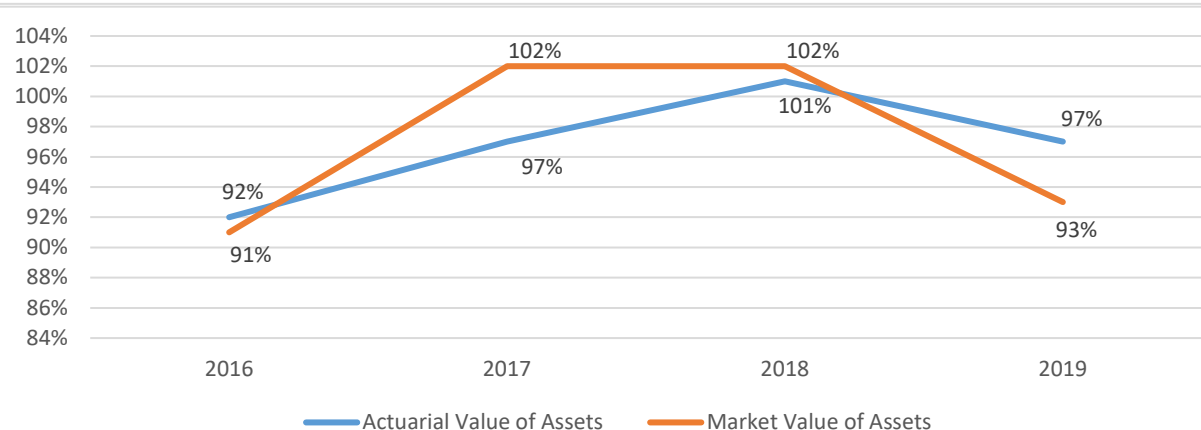
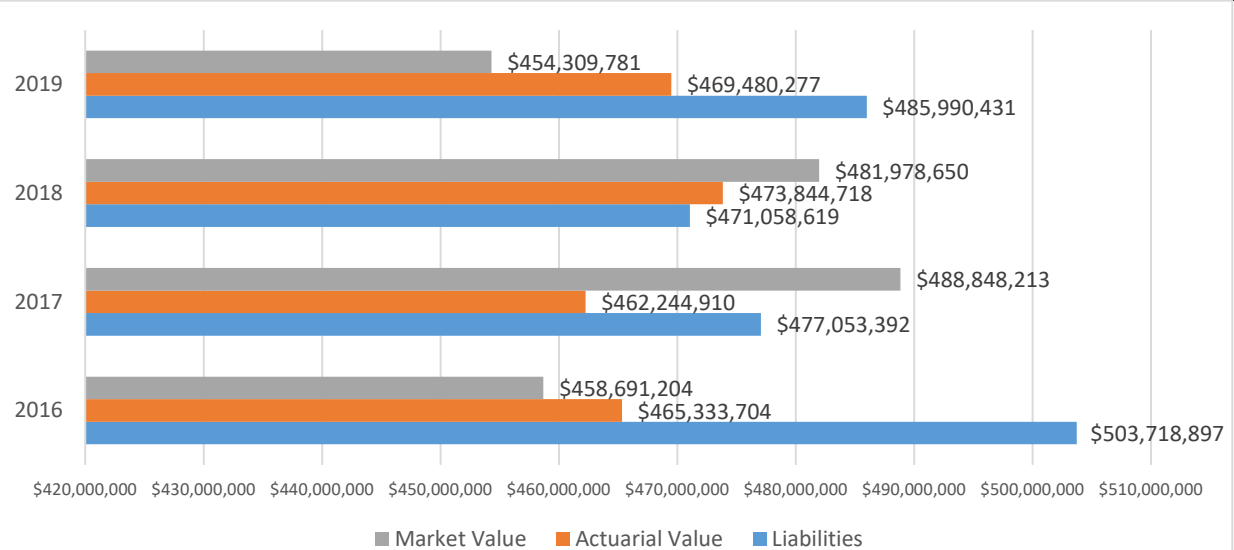
Annual Amount Maximum: 5%

Cap Total Maximum: 25%

ACTUARIAL ASSUMPTIONS:

Interest: 6.75% Salary: 2.75%

Plan frozen as of 2/1/13. Employees hired after 2/1/13 are members of the Firefighters' Retirement Plan of St. Louis City.



ST. LOUIS POLICE RETIREMENT SYSTEM

MEMBERSHIP:

Active: 1,195 Inactive: 2,008

CONTRIBUTIONS:

Employer: \$35,970,630 Employee: \$5,110,119

BENEFITS:

Normal Retirement Formula:

2% of compensation for the first 25 years of service + 4% for the next 5 years of service
Plus 5% for all service after 30 years
Maximum: 75% of compensation

Normal Retirement Eligibility:

Age 55 or 20 years of service
Mandatory retirement age of 65

Social Security Coverage: No

Valuation of Assets: 5 Years

Mortality Table: RP-2014 Blue Collar projected generationally with Scale MP-2015

Vesting: 20 years

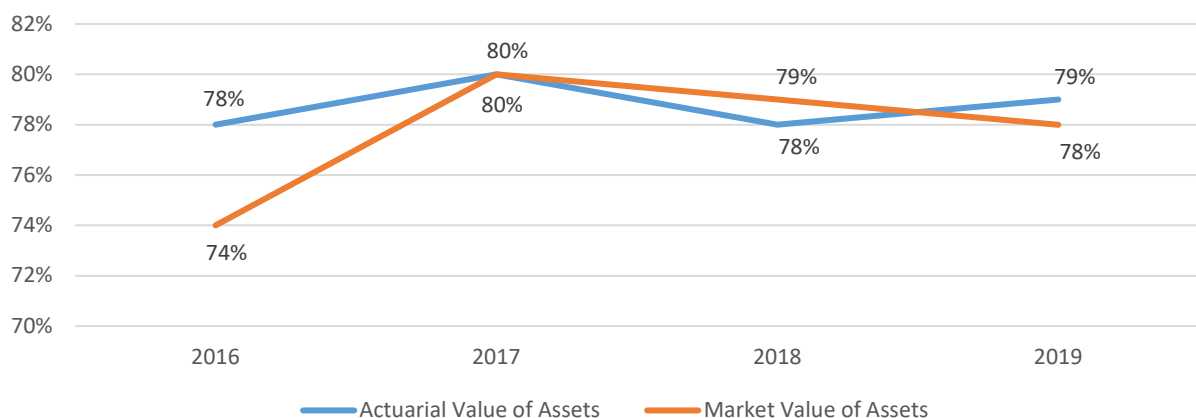
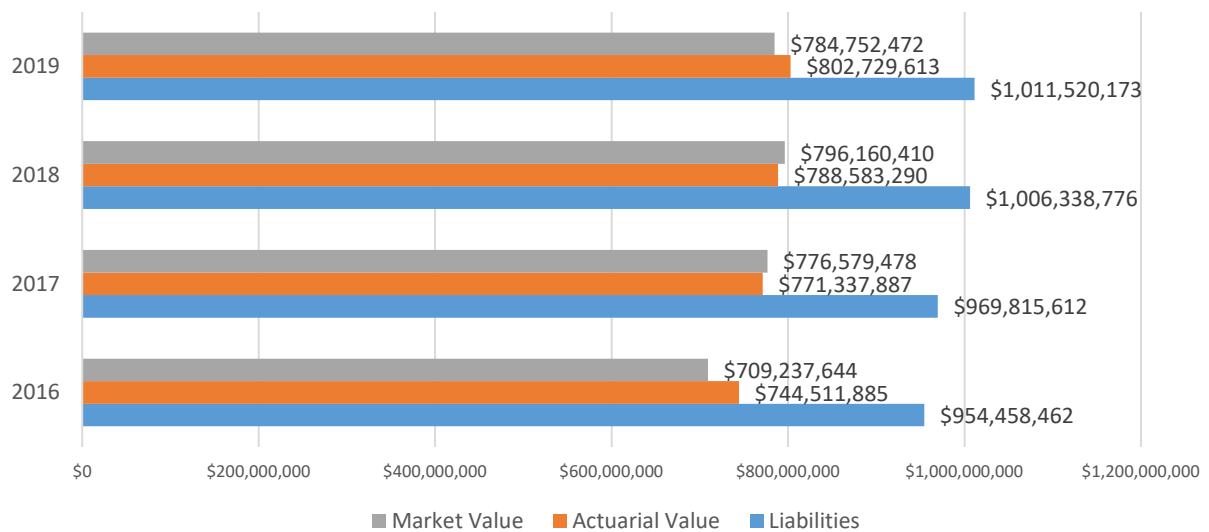
COLA: Annual Amount Maximum: 3%

Percent of CPI: 100%

Cap Total Max: 30%

ACTUARIAL ASSUMPTIONS:

Interest: 7.5% **Salary:** 3% to 6%



ST. LOUIS PUBLIC SCHOOL RETIREMENT SYSTEM

MEMBERSHIP:

Active: 5,108 Inactive: 7,751

CONTRIBUTIONS:

Employer: \$43,902,706 Employee: \$17,019,685

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service

Maximum Benefit: 60% of average final compensation

Members hired for the first time on/after 1/1/18: 1.75% of compensation x years of creditable service. See SB 62 (2017)*

Normal Retirement Eligibility:

Age 65

Rule of 85. Changed to Rule of 80 on 8/28/17. See SB 62 (2017)*

Social Security Coverage: Yes

Valuation of Assets: Assumed Yield Method

Mortality Table: RP-2014 Generational Scale MP-2015

Vesting: 5 years

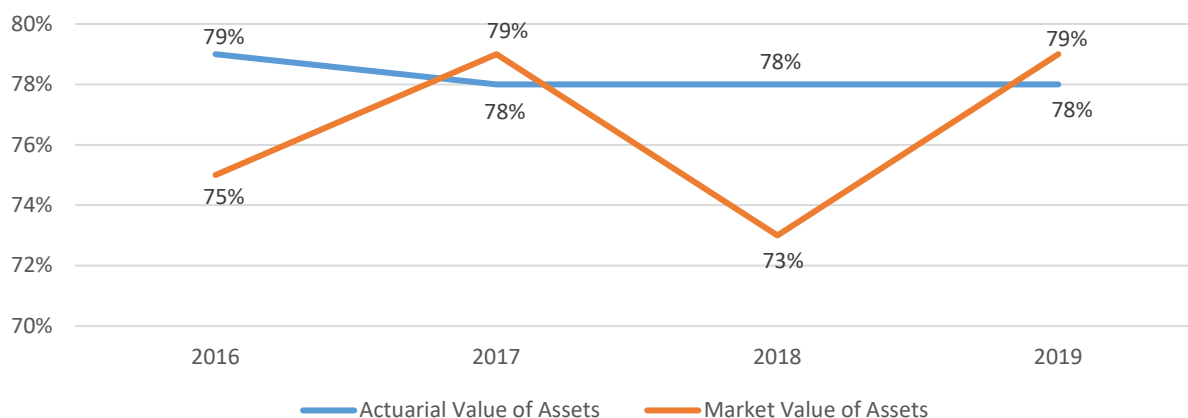
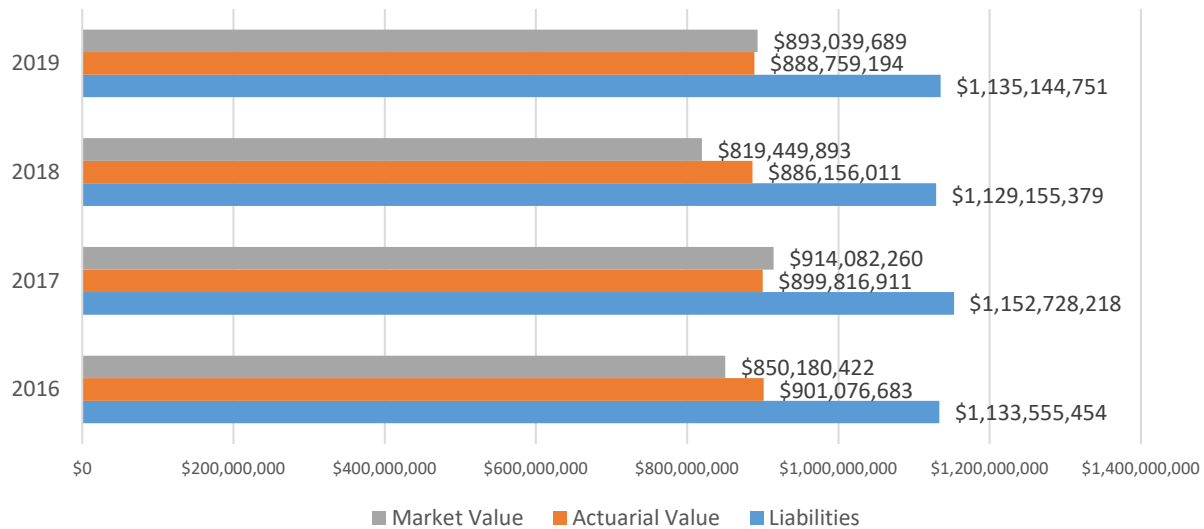
COLA: Ad Hoc (when authorized by the board of trustees or the board of education)

ACTUARIAL ASSUMPTIONS:

Interest: 7.5%

Salary: 5% for the first 5 years then 3.5%

*SB 62 (2017) changed the benefit program and the calculation of the actuarially determined contribution rate. The system filed a lawsuit challenging these changes. The court ruled against the system. The system appealed to the Missouri Court of Appeals, Eastern District, which affirmed the Circuit Court's decision. On 11/24/20, the Missouri Supreme Court denied the system's application for transfer.



UNIVERSITY CITY NON-UNIFORMED EMPLOYEES' RETIREMENT PLAN

MEMBERSHIP:

Active: 150 Inactive: 89

CONTRIBUTIONS:

Employer: \$880,000 Employee: \$225,193

BENEFITS:

Normal Retirement Formula:

1.6% of compensation x years of creditable service
Plus 0.5% above \$47,000
Maximum: 35 years of service

Normal Retirement Eligibility:

Age 62 with 30 years of service
Age 65 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

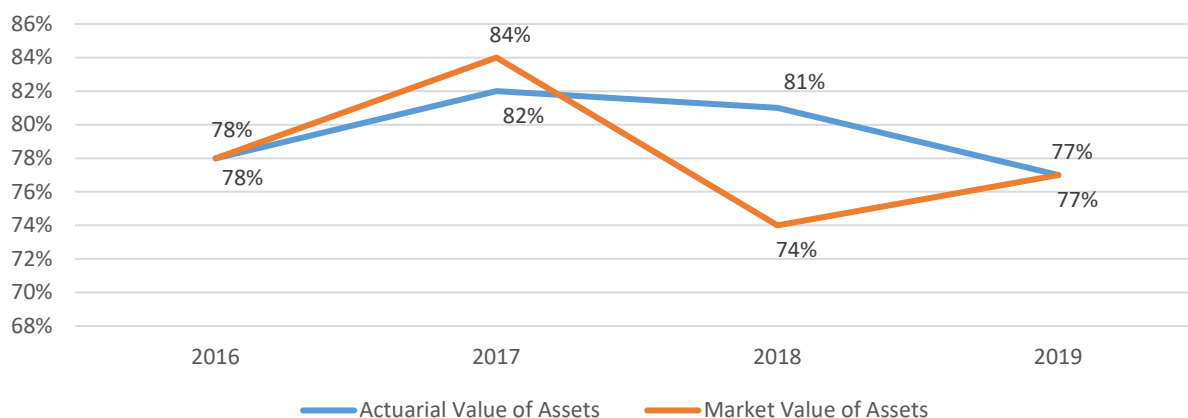
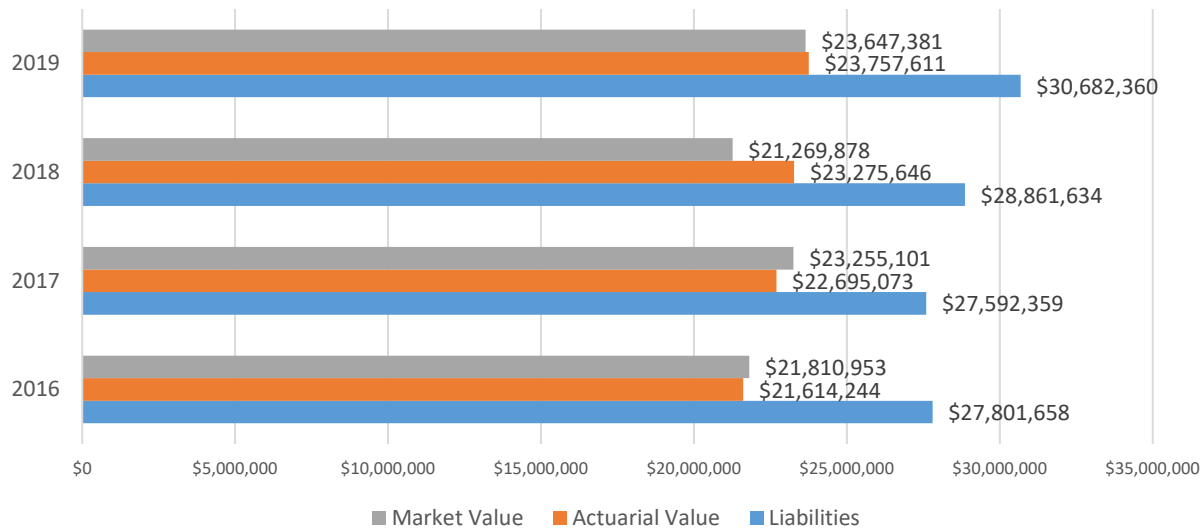
Mortality Table: Pub-2010 General Amount-Weighted Mortality Tables projected generationally with Scale MP-2019

Vesting: 10 years

COLA: Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: 3%



UNIVERSITY CITY POLICE & FIRE RETIREMENT FUND

MEMBERSHIP:

Active: 95 Inactive: 109

CONTRIBUTIONS:

Employer: \$992,162 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

65% of compensation for the first 25 years of service + 1% for each of the next 5 years of service
Maximum: 70% of compensation

Normal Retirement Eligibility:

Age 50 with 25 years of service

Social Security Coverage: No

Valuation of Assets: 5 Years

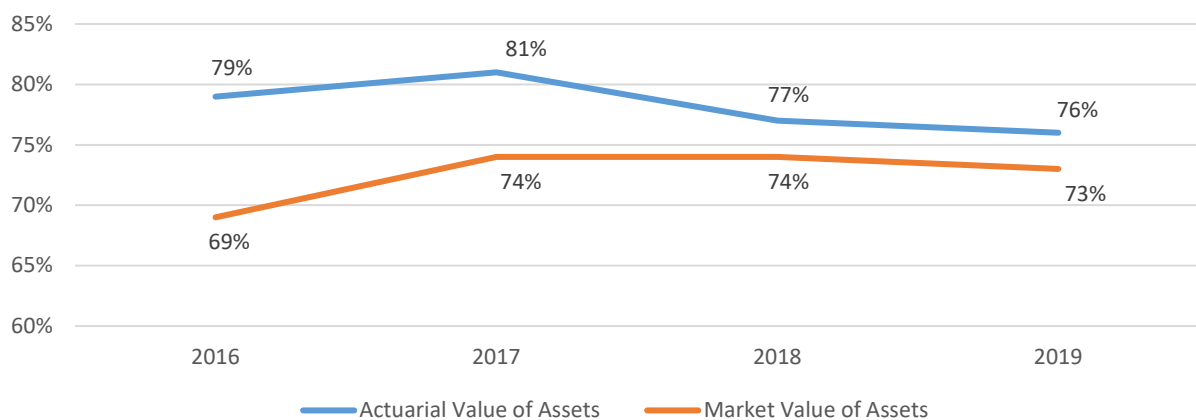
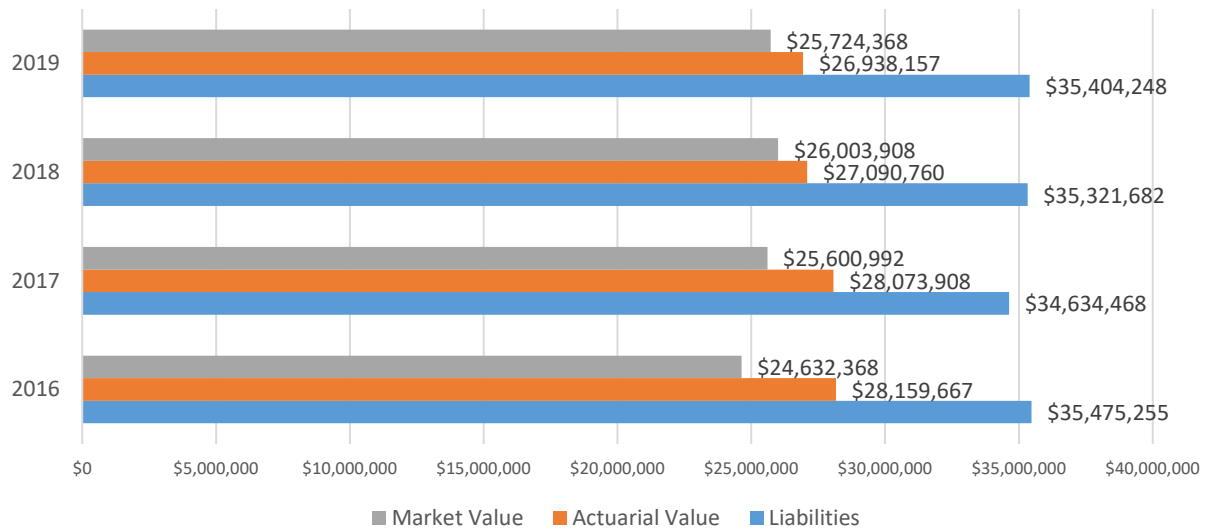
Mortality Table: Pub-2010 Public Safety Mortality Table generational projection Scale MP-2019

Vesting: 10 years

COLA: Ad Hoc

ACTUARIAL ASSUMPTIONS:

Interest: 6.5% Salary: 3%



UNIVERSITY OF MISSOURI RETIREMENT, DISABILITY & DEATH BENEFIT PLAN

MEMBERSHIP:

Active: 18,352 Inactive: 15,901

CONTRIBUTIONS:

Employer: \$117,423,003 Employee: \$16,206,779

BENEFITS:

Normal Retirement Formula:

2.2% of compensation x years of creditable service

Employees hired for the first time on/after 10/01/12 and until 9/30/19: 1% of compensation x years of creditable service (plus DC account)

Normal Retirement Eligibility:

Age 65 with 5 years of service

Age 62 with 25 years of service

Social Security Coverage: Yes

Valuation of Assets: 5 Years

Mortality Table: RP-2014 projected on a generational basis, Scale MP-2017

Vesting: 5 years

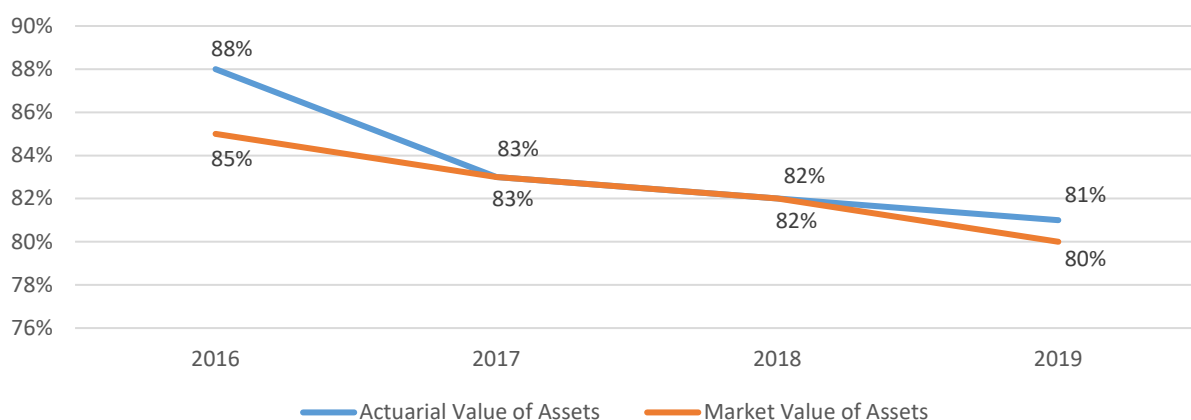
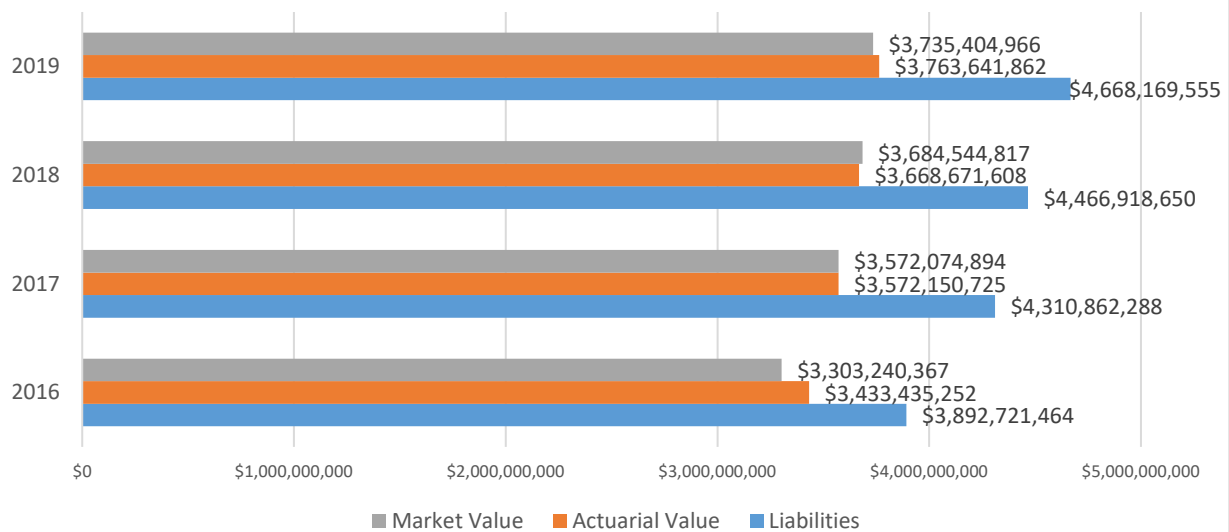
COLA: Ad hoc

ACTUARIAL ASSUMPTIONS:

Interest: 7.2%

Salary: 2.2%

Hybrid/Defined Contribution account for employees hired for the first time on/after 10/1/12 and until 9/30/19. See Defined Contribution section. Plan closed effective 10/1/19. New hires and returning hires are enrolled in a defined contribution plan.



VALLEY PARK FIRE PROTECTION DISTRICT RETIREMENT PLAN

MEMBERSHIP:

Active: 28 Inactive: 16

CONTRIBUTIONS:

Employer: \$321,710 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service
Maximum: 30 years of service

Normal Retirement Eligibility:

Age 55 with 5 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

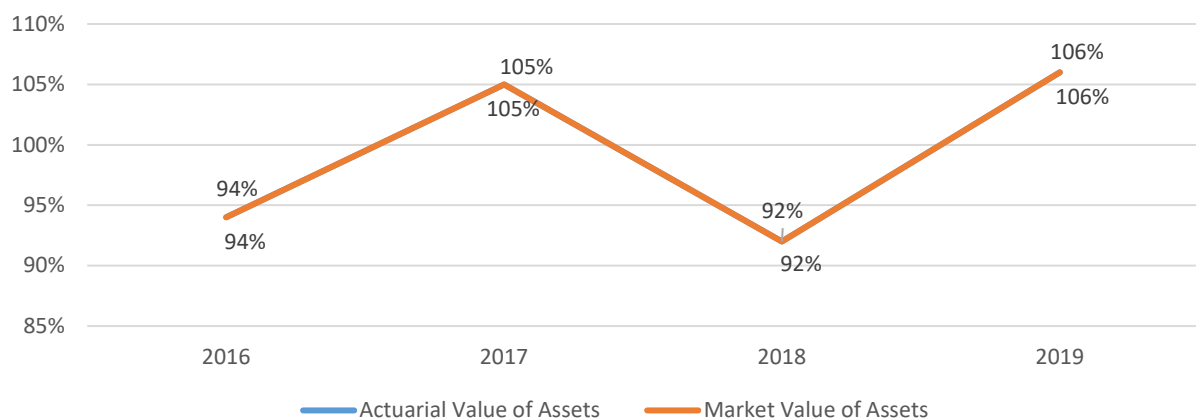
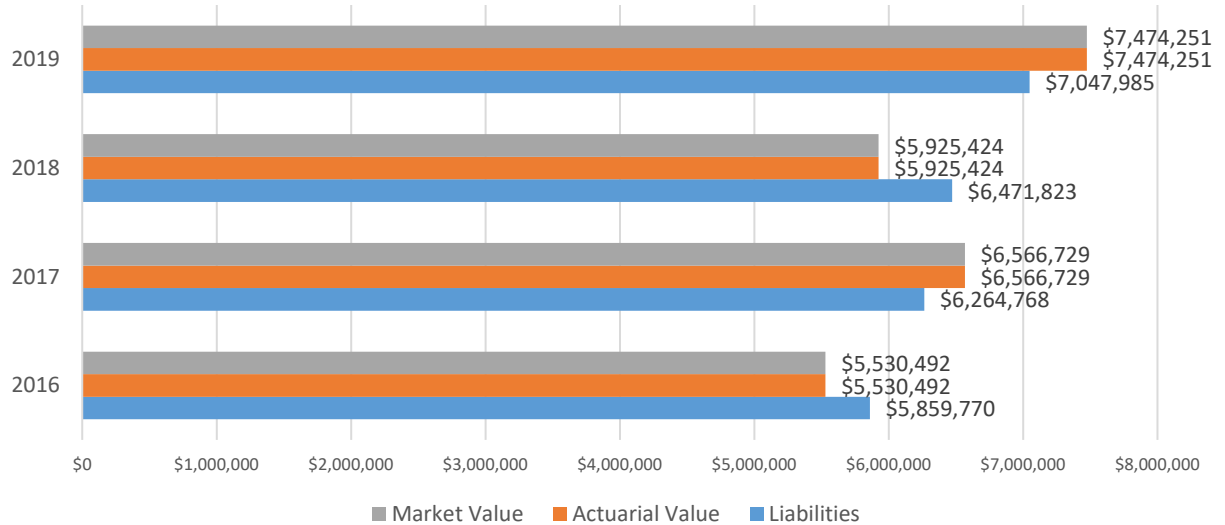
Mortality Table: RP-2000 Scale AA

Vesting: 5 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7% Salary: 4%



WARRENTON FIRE PROTECTION DISTRICT LENGTH OF SERVICE AWARDS PROGRAM

MEMBERSHIP:
Active: 12 Inactive: 32

CONTRIBUTIONS:
Employer: \$16,256 Employee: Non-Contributory

BENEFITS:
Normal Retirement Formula:
\$10 per month x years of service; \$200 per month maximum; Life Annuity Guaranteed for 10 Years
Cannot exceed 20 years of service

Normal Retirement Eligibility:
Age 65 with 1 year of service

Social Security Coverage: Yes

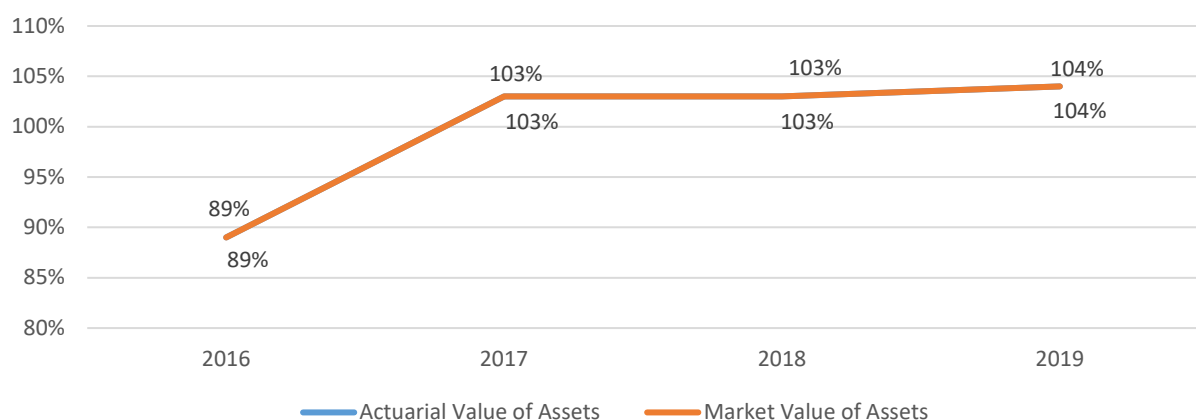
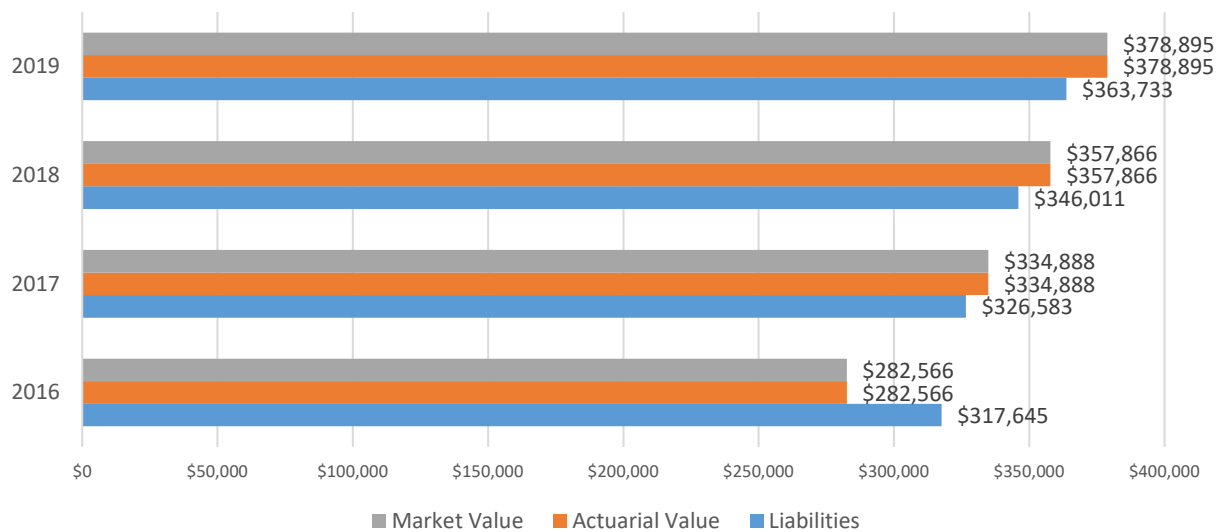
Valuation of Assets: Market Value

Mortality Table: RP-2000

Vesting: 4 years

COLA: No COLA

ACTUARIAL ASSUMPTION:
Interest: 4.75%



WENTZVILLE FIRE PROTECTION DISTRICT PENSION PLAN

MEMBERSHIP:

Active: 60 Inactive: 0

CONTRIBUTIONS:

Employer: \$4,000,000 Employee: Non-Contributory

BENEFITS:

Normal Retirement Formula:

1.5% of compensation x years of creditable service

Normal Retirement Eligibility:

First Responders: Age 60 with 10 years of service
Non-First Responders: Age 62 with 10 years of service

Social Security Coverage: Yes

Valuation of Assets: Market Value

Mortality Table: Public-2010 Public Safety Mortality with generational improvements from 2010 using Scale MP-19

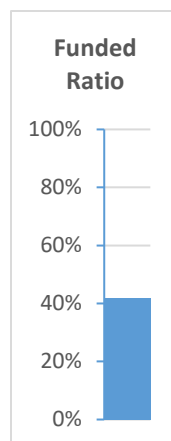
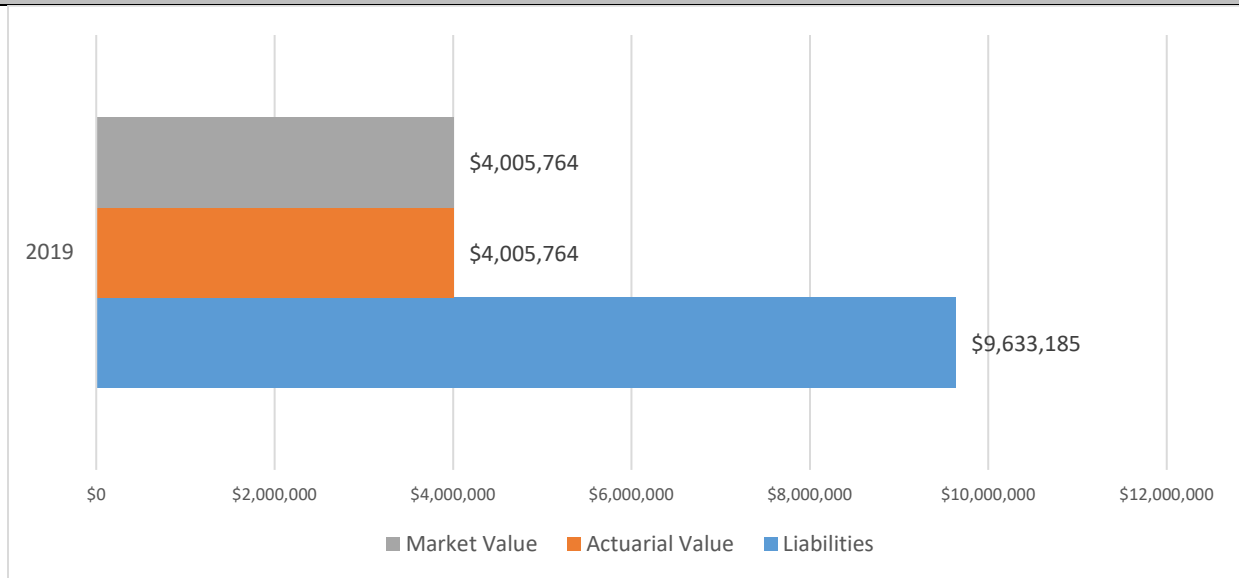
Vesting: 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 5% Salary: 3%

FPD established the DB plan effective 1/1/19. The FPD continues to operate its defined contribution plan in conjunction with the new DB plan. See corresponding information in the Defined Contribution Section.





LEGACY PLANS

The plans contained in this section are defined benefit plans that the original sponsoring entity has transferred to the Missouri Local Government Employees' Retirement System (LAGERS) under an agreement pursuant to section 70.621, RSMo. LAGERS has assumed the duties and responsibilities of operating these plans while the sponsoring entities remain responsible for funding them.

ANTONIA FIRE PROTECTION DISTRICT PENSION PLAN

MEMBERSHIP:

Active: 0 Inactive: 20

BENEFITS:

Normal Retirement Formula:

2.25% of compensation for the first 24 years of service + 1% for the next 6 years of service Formula frozen 1/1/09

Normal Retirement

Eligibility: Age 55

Social Security Coverage: Yes

Mortality Table: RP-2014 Healthy Annuitant

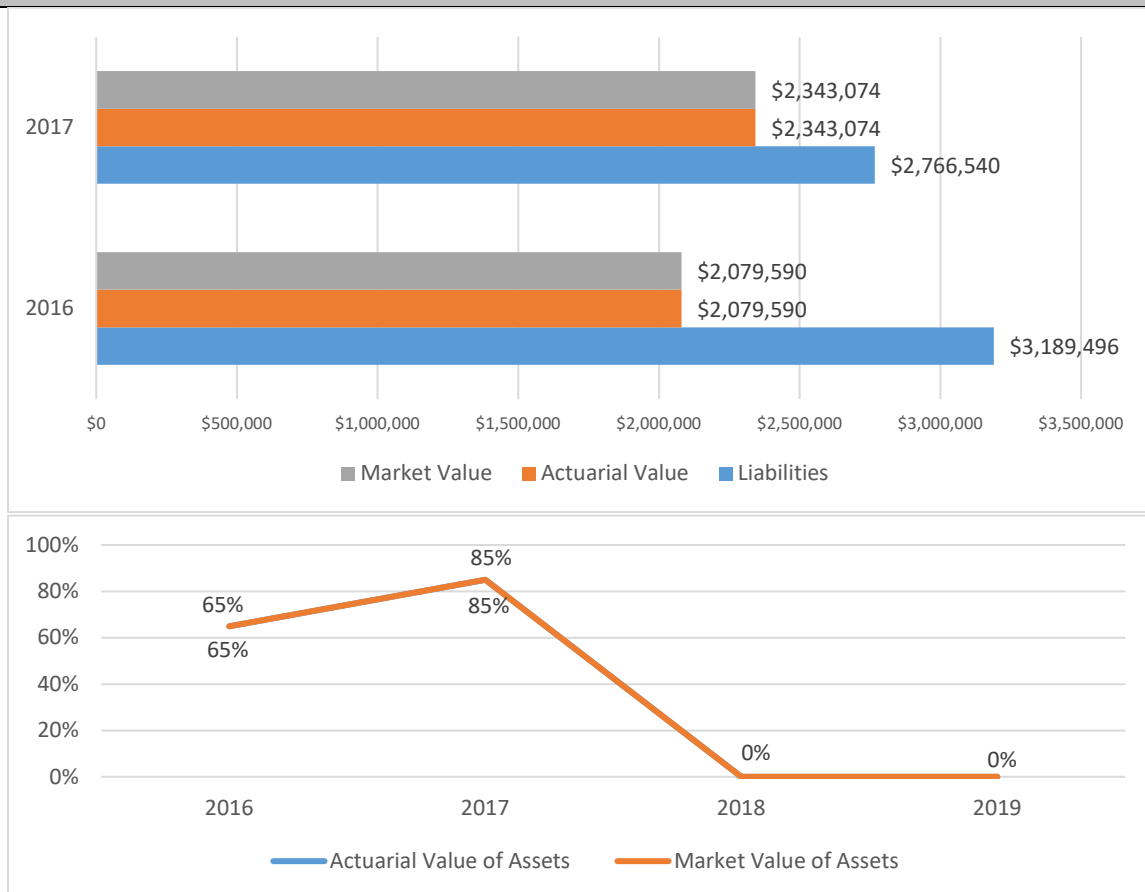
Vesting: Partial 4 years / Full 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: N/A

Plan frozen effective 1/1/09. The FPD joined LAGERS in 2012. Effective 1/1/19, LAGERS assumed administration of the plan under section 70.621, RSMo. The FPD transferred assets to LAGERS and began making monthly payments to LAGERS beginning in March 2019. The projected contribution end date is February 2034. The charts below show the status of the plan prior to the transfer to LAGERS.



*** Data for years 2018 & 2019 are not included due to all assets being transferred to LAGERS.

JEFFERSON CITY FIREMEN'S RETIREMENT SYSTEM

MEMBERSHIP:

Active: 0 Inactive: 52

BENEFITS:

Normal Retirement Formula:

60% of compensation
2.5% of compensation x years of creditable service
Maximum: 85% of compensation

Normal Retirement Eligibility:

Age 55 with 24 years of service
Rule of 80

Valuation of Assets: Market Value

Mortality Table: RP-2014 Healthy Annuitant

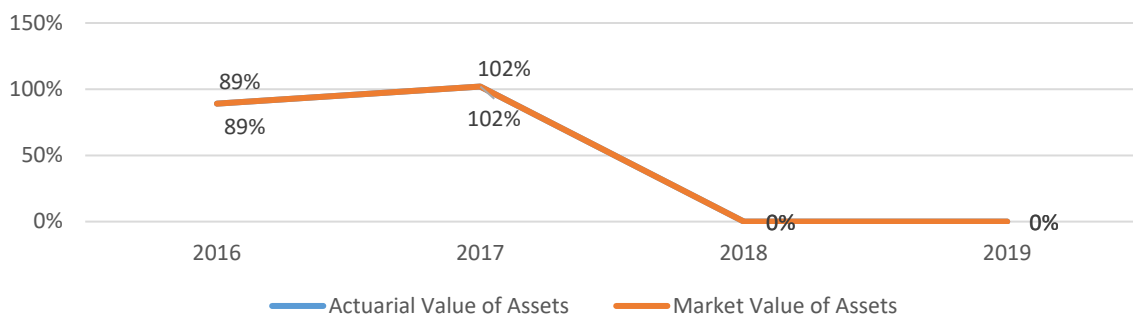
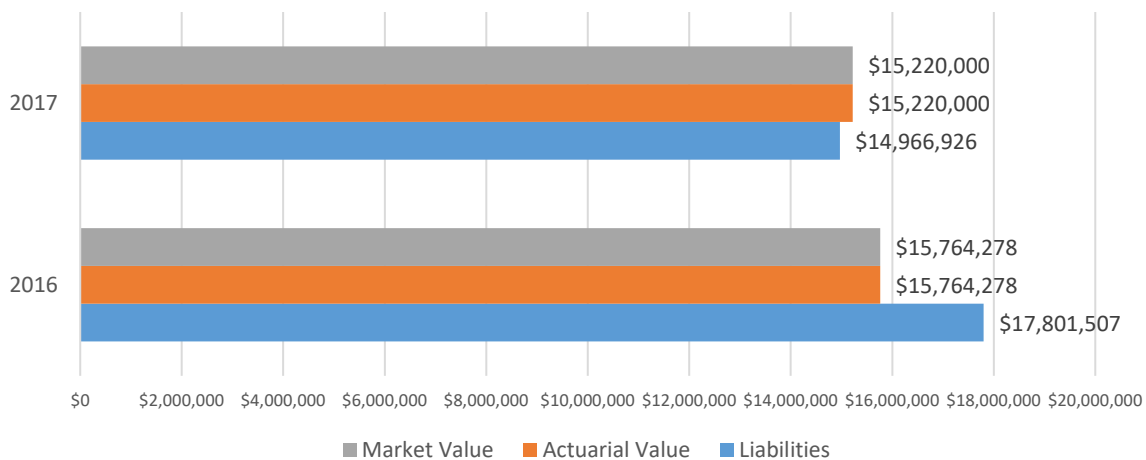
Vesting: 10 years

COLA: Annual amount: 2%

ACTUARIAL ASSUMPTION:

Interest: 7.25%

Plan closed effective December 2008. Active members were moved to LAGERS. The City transferred administration of the plan to LAGERS on 7/1/17 under section 70.621, RSMo. The plan was deemed by LAGERS to have sufficient assets to cover its liabilities. No additional contributions have been required. The charts below show the status of the plan prior to the transfer to LAGERS.



*** Data for years 2018 & 2019 are not included due to all assets being transferred to LAGERS.

JENNINGS POLICE & FIREMEN'S RETIREMENT FUND

MEMBERSHIP:

Active: 0 Inactive: 36

BENEFITS:

Normal Retirement Formula:

2.25% of compensation x years of creditable service
Maximum: 50% of compensation

Normal Retirement Eligibility:

Age 55 with 20 years of service
Age 65 with 15 years of service

Social Security Coverage: Yes

Mortality Table: RP-2014

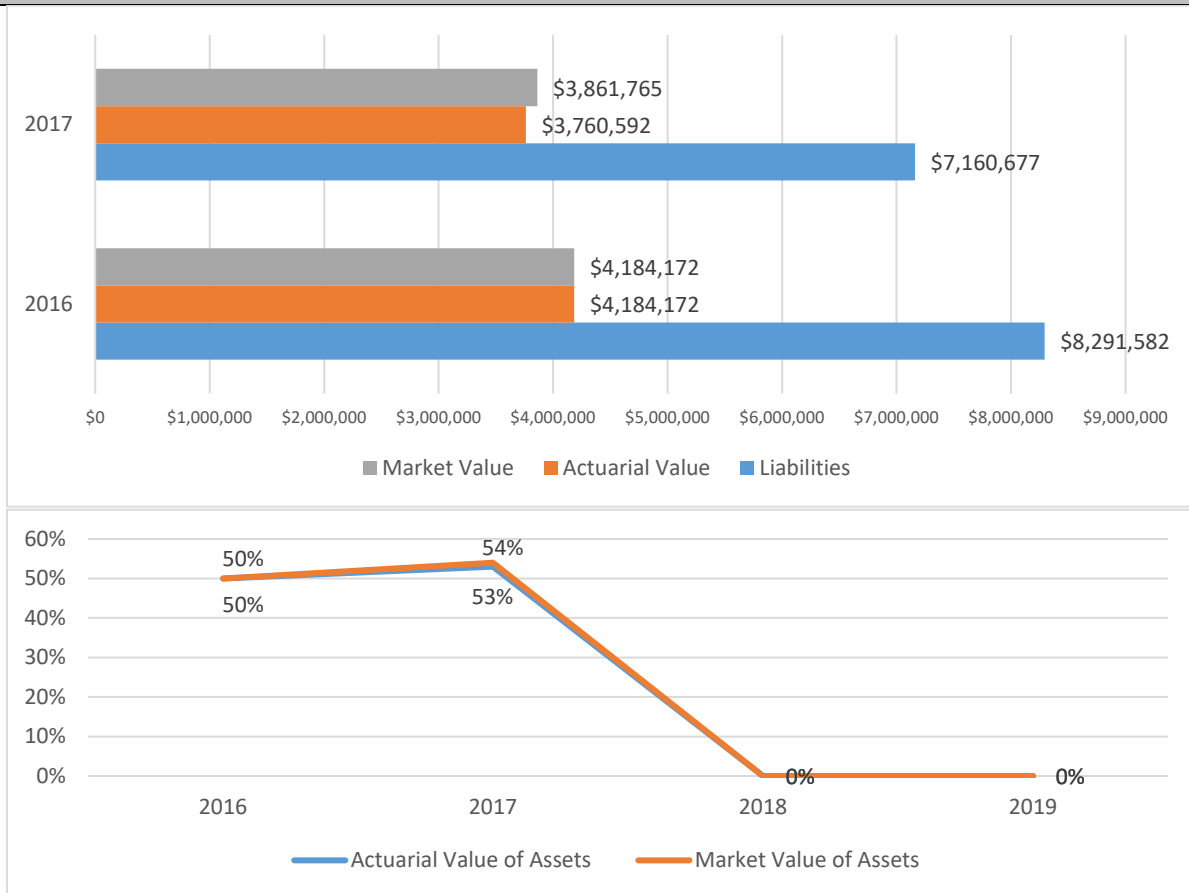
Vesting: 10 years

COLA: No COLA

ACTUARIAL ASSUMPTIONS:

Interest: 7.25%

Plan closed effective 4/1/87. New hires joined LAGERS. On 6/7/17, the City's pension board approved an agreement to transfer the plan to LAGERS under section 70.621, RSMo. As of December 2017, the City transferred the plan's assets to LAGERS and terminated the plan. Beginning in January 2018, the City pays a monthly contribution to LAGERS. The projected contribution end date is December 2032. The charts below show the status of the plan prior to the transfer to LAGERS.



*** Data for years 2018 & 2019 are not included due to all assets being transferred to LAGERS.

SEDALIA POLICE RETIREMENT FUND

MEMBERSHIP:

Active: 0 Inactive: 72

BENEFITS:

Normal Retirement Formula:

2% of compensation x years of creditable service
Maximum: 30 years. Minimum benefit of \$885/month for hires prior to 08/01/1989

Normal Retirement Eligibility:

Age 52 with 15 years of service

Social Security Coverage: Yes

Mortality Table: RP-2014

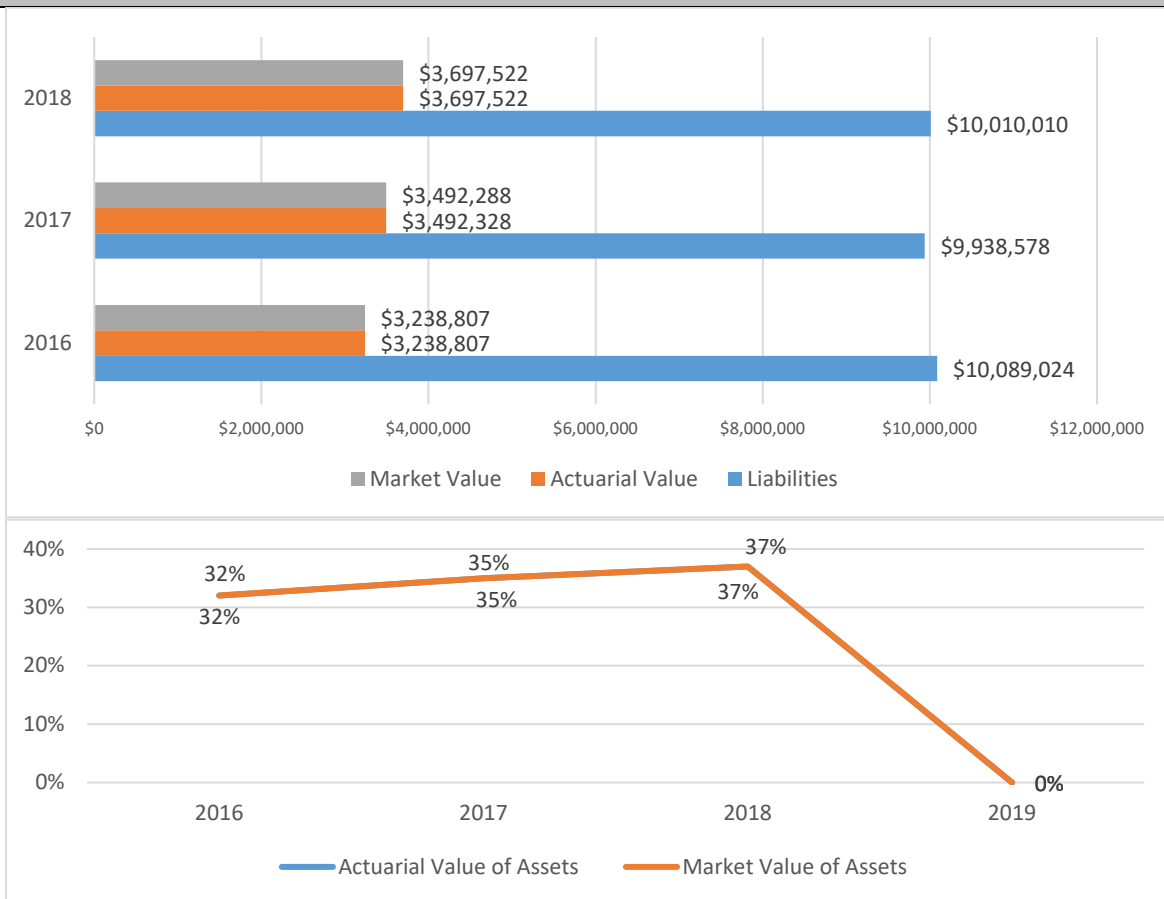
Vesting: Partial 5 years / Full 15 years

COLA: Annual Amount Maximum: 2%

ACTUARIAL ASSUMPTIONS:

Interest: 7.25% Salary: n/a

The City froze the plan effective 4/1/10. All active participants were moved to LAGERS. Effective June 1, 2019, the City transferred the administration of the plan to LAGERS under section 70.621, RSMo. The City began making monthly payments to LAGERS in July 2019. The projected contribution end date is June 2034.



*** Data for the year 2019 is not included due to all assets being transferred to LAGERS.

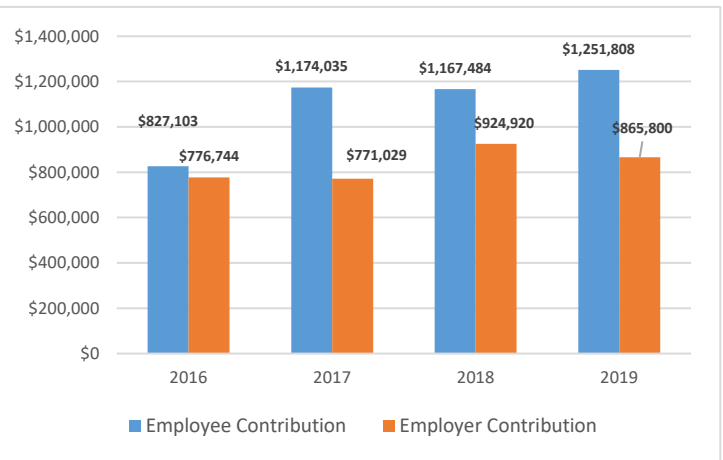
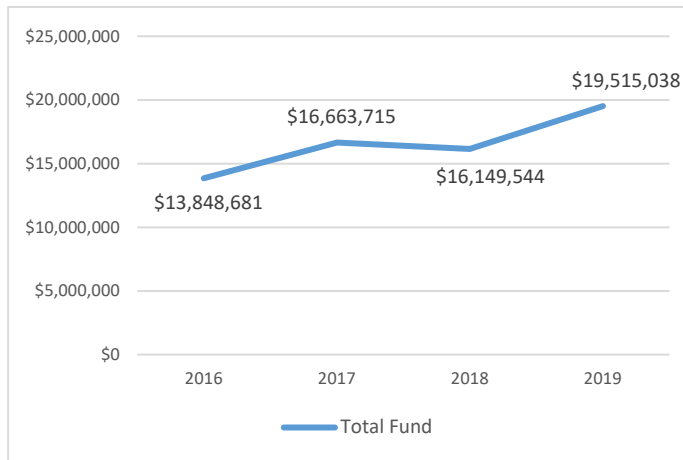


DEFINED CONTRIBUTION PLANS

**Data included
in this appendix reflects
PERS information from plan year 2019**

For purposes of this report, the membership numbers noted for each plan refer to actives only.

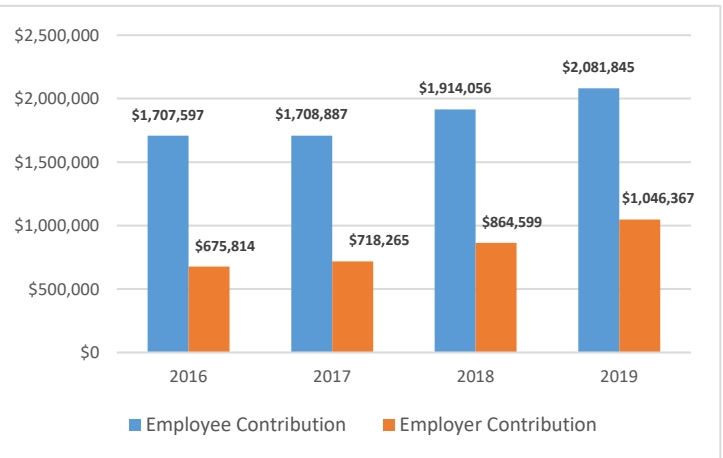
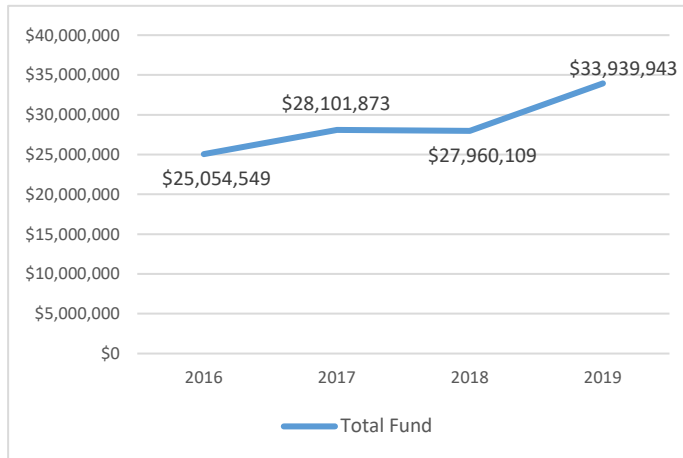
BATES COUNTY MEMORIAL HOSPITAL EMPLOYEES PROFIT SHARING PLAN



Active Members: 222 Vesting: 5 years

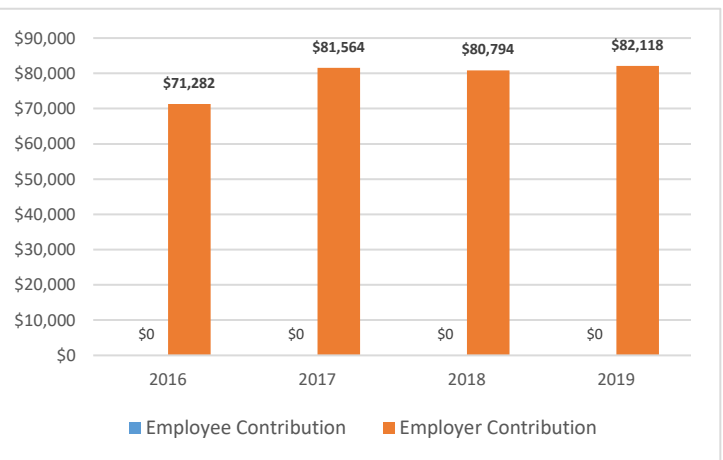
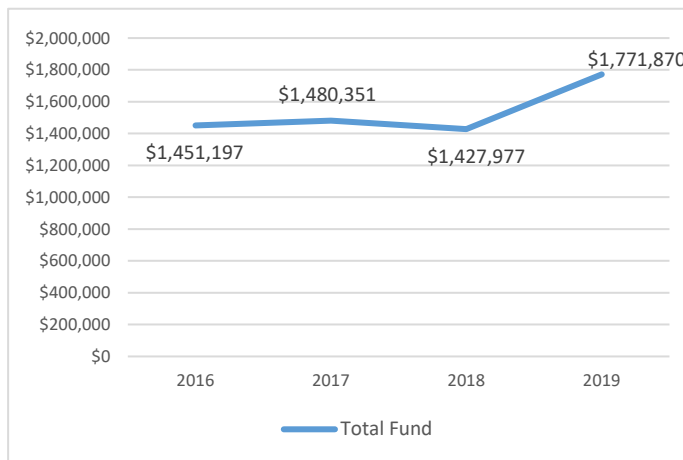
Notes: Employee contributions are optional.

BOTHWELL REGIONAL HEALTH CENTER RETIREMENT PLAN



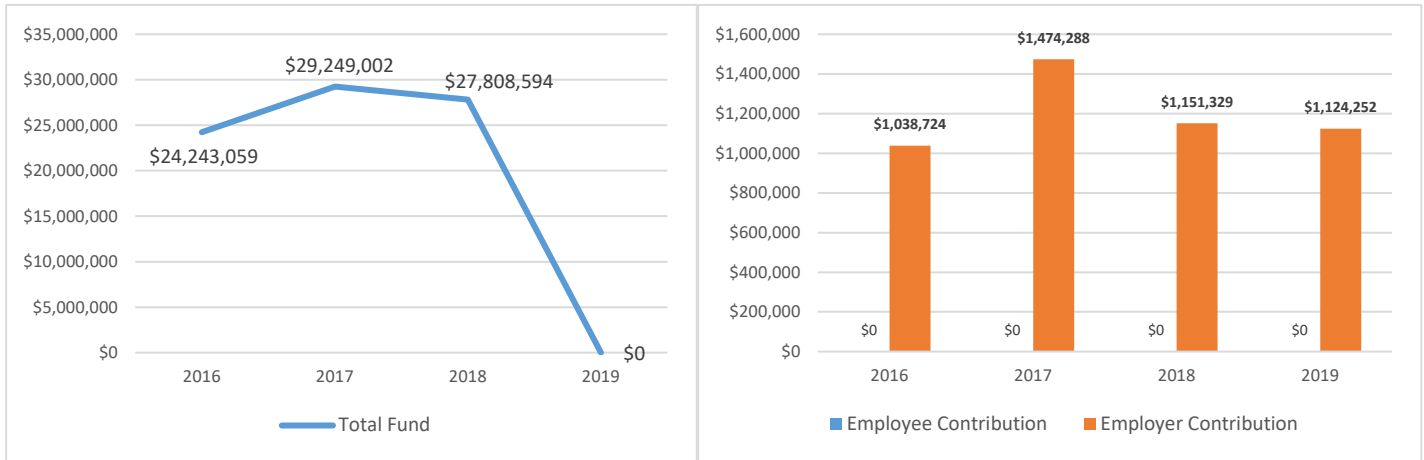
Active Members: 940

CEDAR HILL FIRE PROTECTION DISTRICT MONEY PURCHASE PLAN



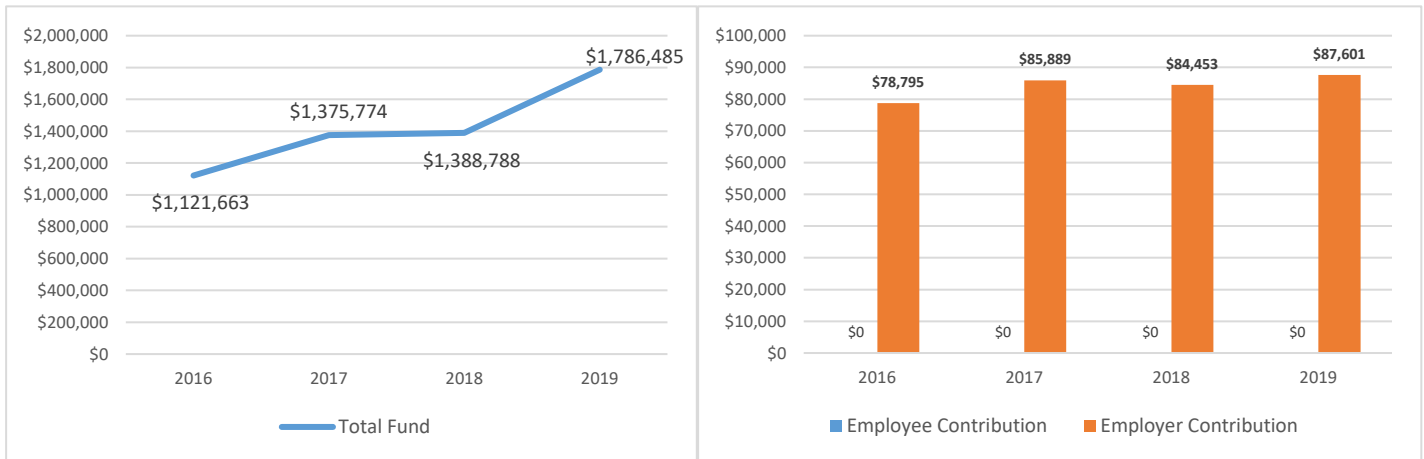
Active Members: 27 Vesting: Partial 1 year / Full 5 years

CENTRAL COUNTY FIRE & RESCUE PENSION PLAN



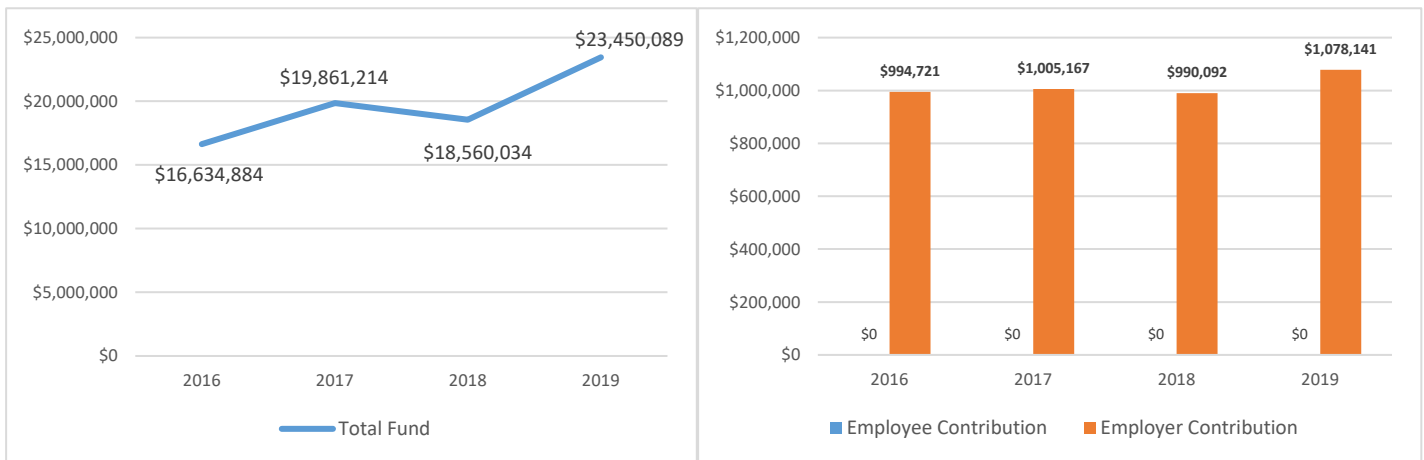
Active Members: 82 Vesting: 1 year The FPD terminated the DC plan at the end of plan year 2019. Most assets were rolled into a new DB plan that the FPD established effective 1/1/20. The new DB plan will appear in next year's annual report.

CERF ADMINISTRATIVE OFFICE 401(A) PLAN



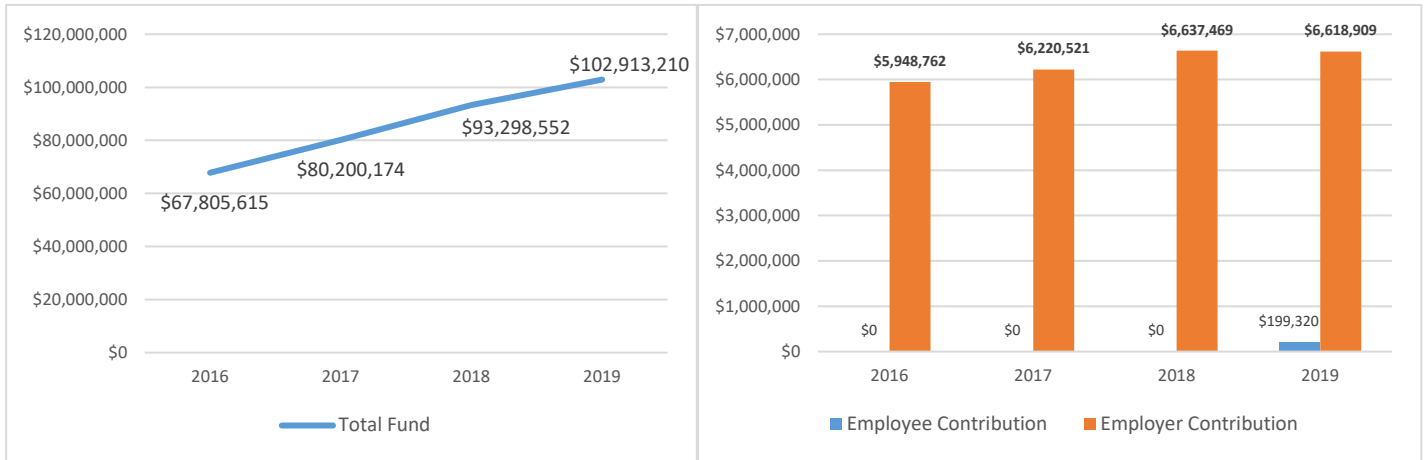
Active Members: 16 Vesting: 5 years

CHESTERFIELD RETIREMENT PLAN



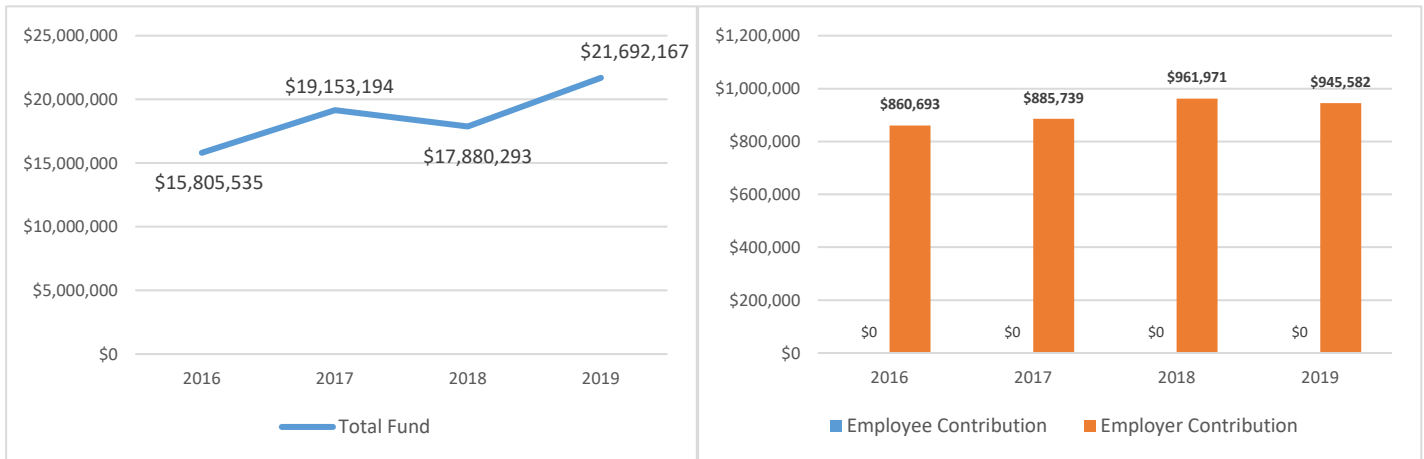
Active Members: 256 Vesting: 5 years

COLLEGE & UNIVERSITY RETIREMENT PLAN (CURP)



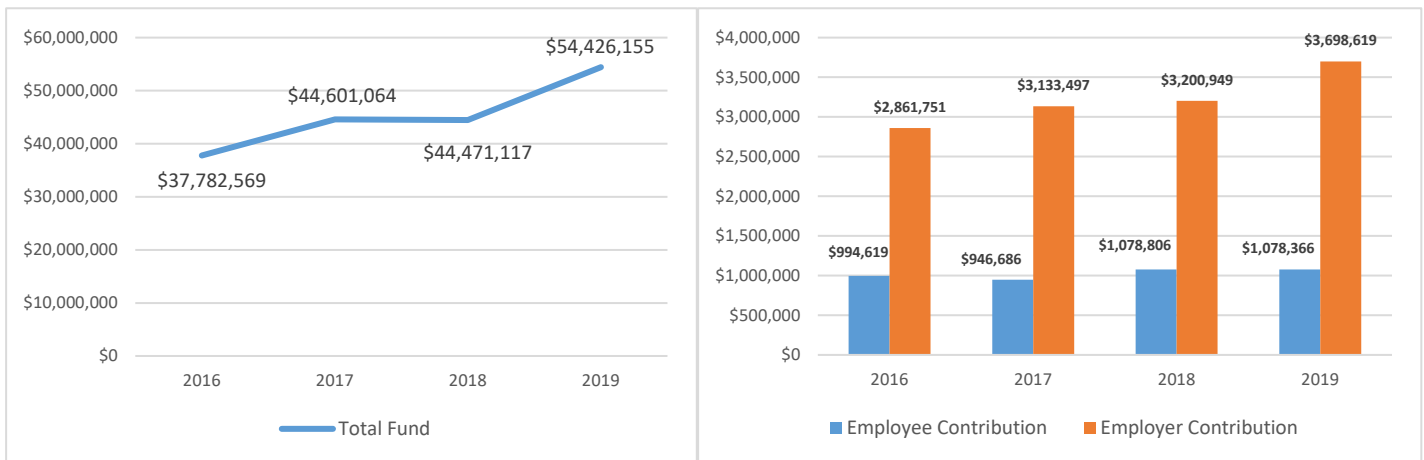
Active Members: 2,547 **Vesting:** Immediate upon employment. SB 62 (2017) required an employer contribution rate of 6% effective 7/1/18. Certain employees are required to contribute 2% of pay to the plan.

COTTEVILLE COMMUNITY FIRE PROTECTION DISTRICT RETIREMENT PLAN



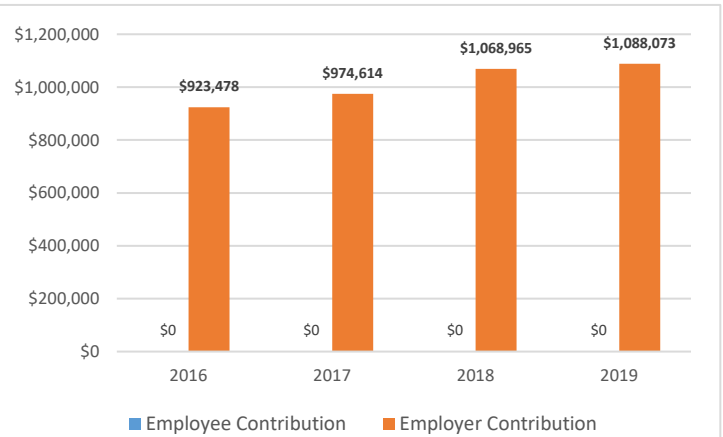
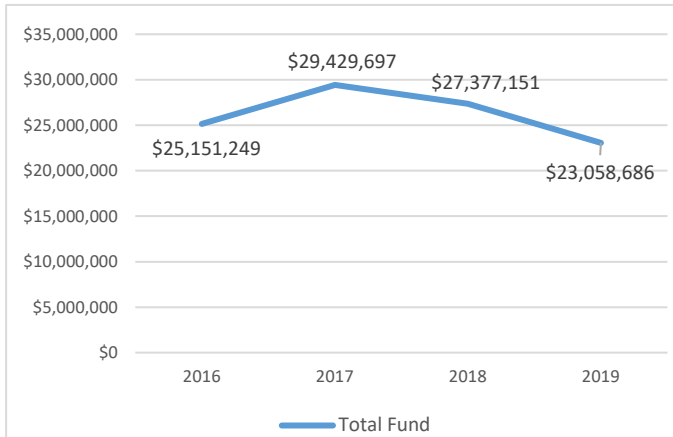
Active Members: 59 **Vesting:** Partial 3 years / Full 7 years

COUNTY EMPLOYEES RETIREMENT FUND (CERF)



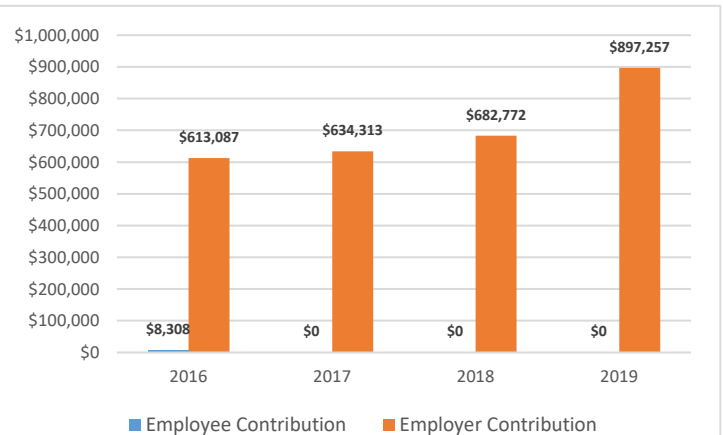
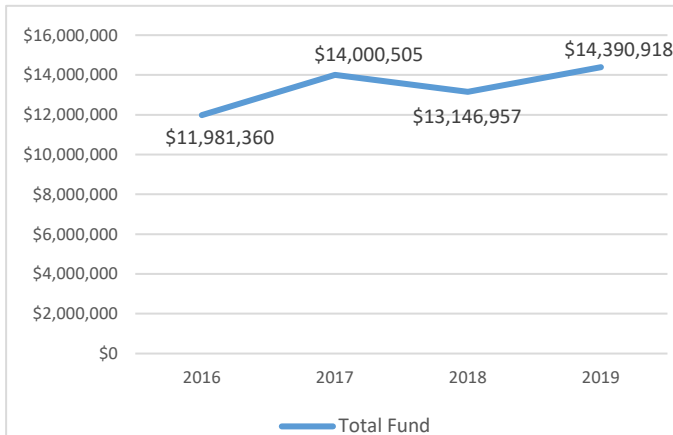
Active Members: 9,090 **Vesting:** 5 years

CREVE COEUR FIRE PROTECTION DISTRICT RETIREMENT PLAN



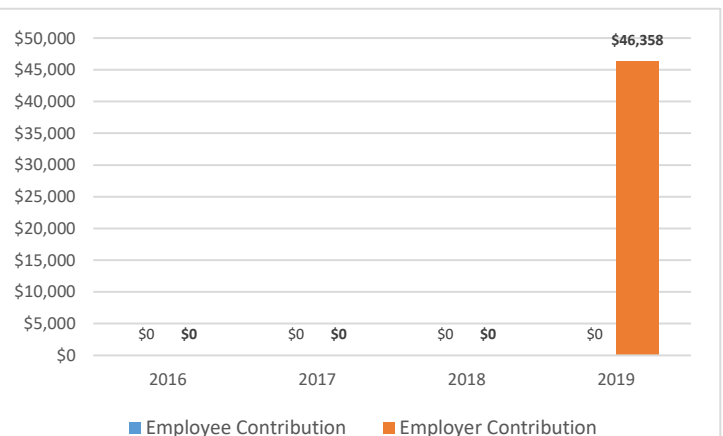
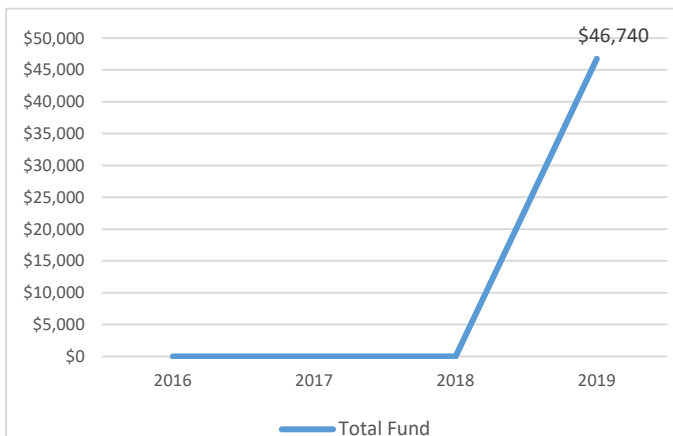
Active Members: 56 **Vesting:** Partial 5 years / Full 9 years

DES PERES RETIREMENT PLAN



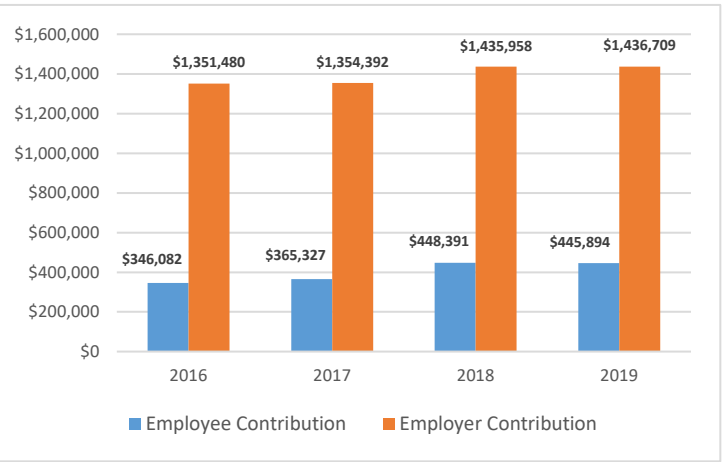
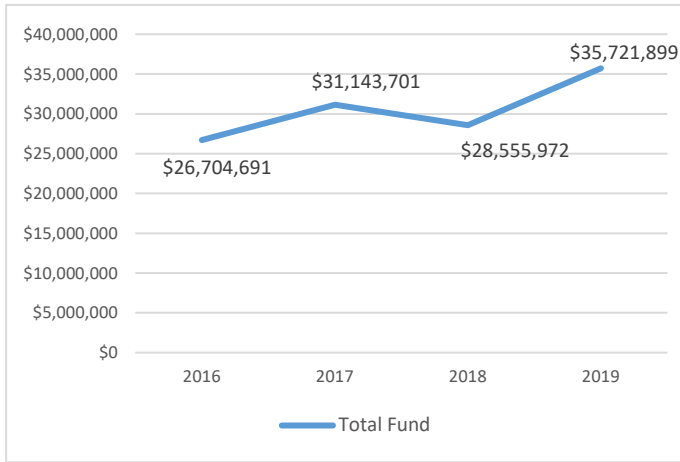
Active Members: 100 **Vesting:** 3 years

EUREKA FIRE PROTECTION DISTRICT 401(A) PLAN



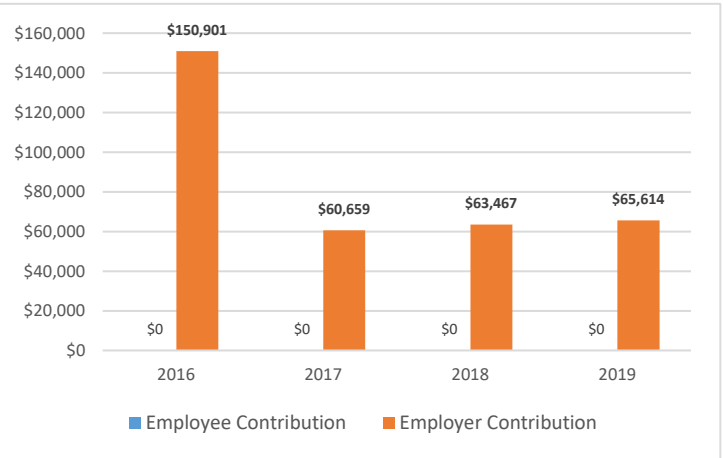
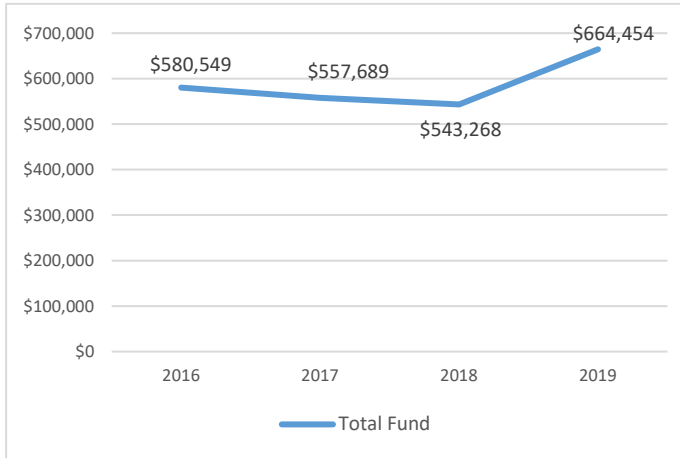
Active Members: 20 **Vesting:** 10 years **Notes:** The FPD established the plan effective 1/1/18. 2019 was the first year the FPD contributed to it and reported it to the JCPER.

FLORISSANT EMPLOYEES PENSION PLAN



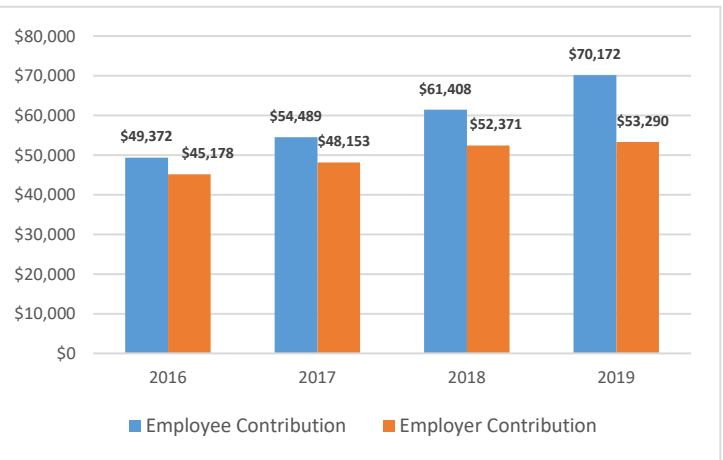
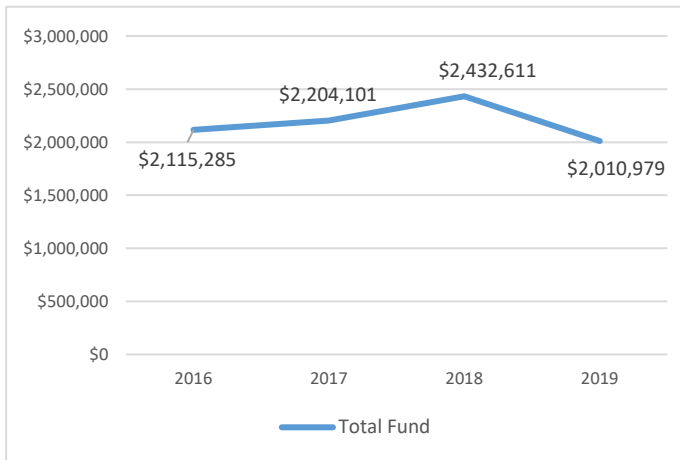
Active Members: 256 **Vesting:** Partial 3 years / Full 7 years

FRANKLIN COUNTY SB40 RESOURCE BOARD



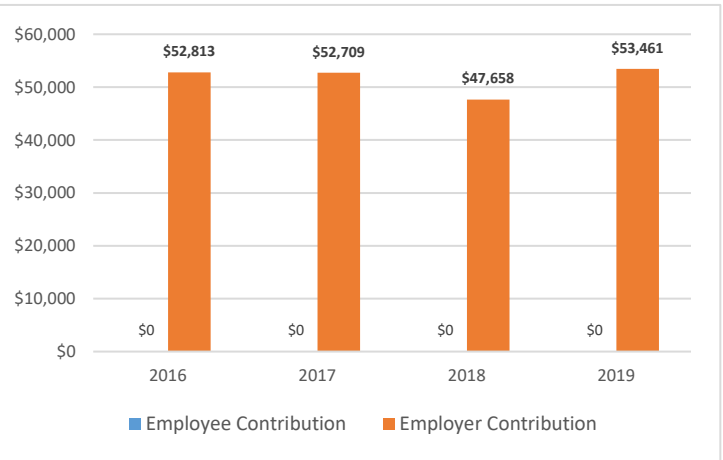
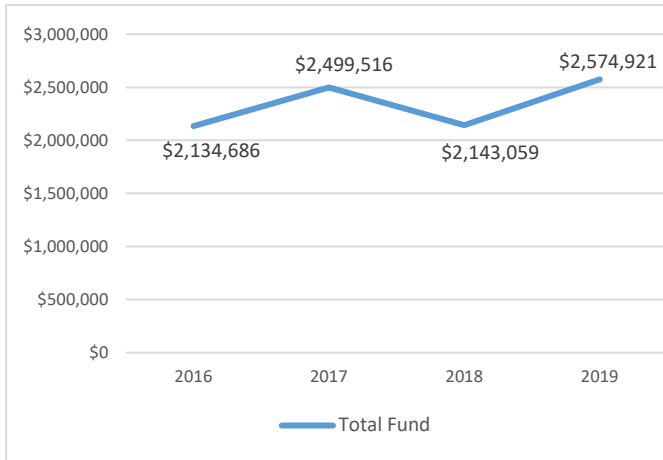
Active Members: 22 **Vesting:** Partial 2 years / Full 6 years

JACKSON COUNTY PUBLIC WATER SUPPLY DISTRICT #2



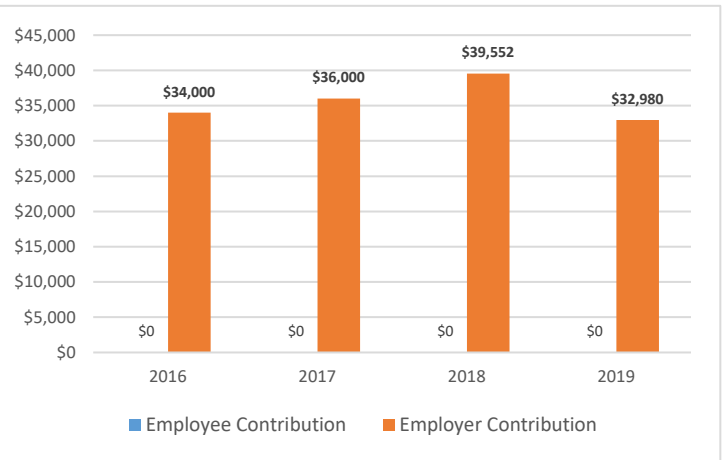
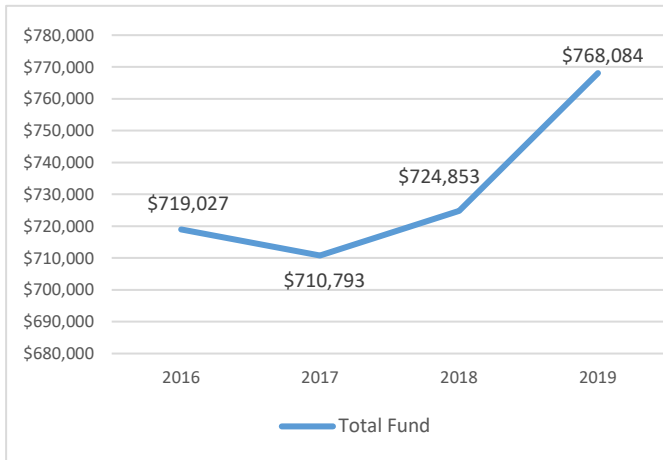
Active Members: 10 **Vesting:** 3 years

JEFFERSON COUNTY CONSOLIDATED WATER DISTRICT C-1



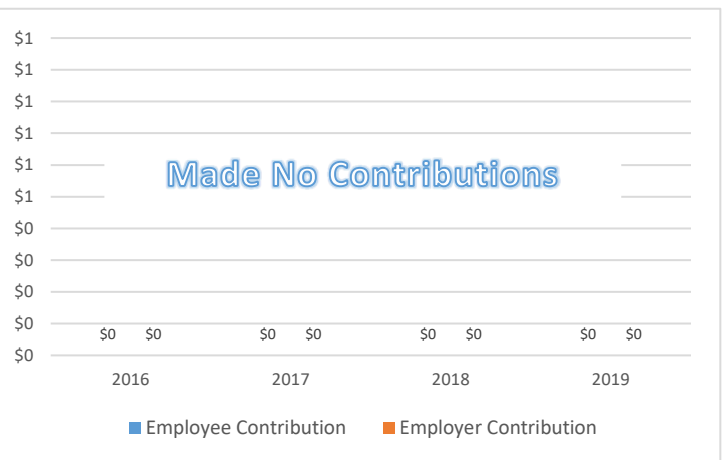
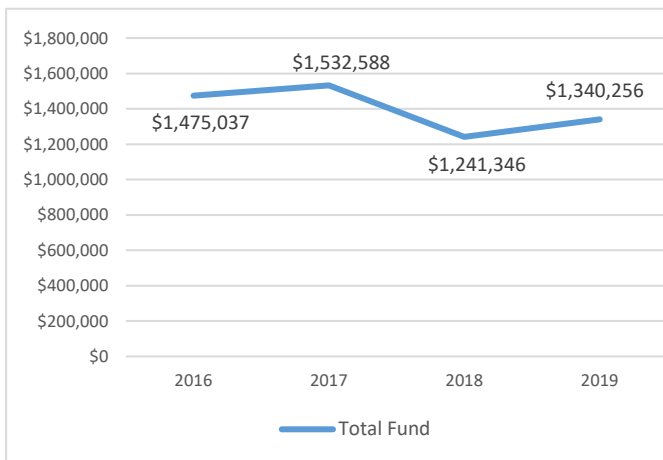
Active Members: 15 **Vesting:** Partial 4 years / Full 10 years

JEFFERSON COUNTY PUBLIC WATER SUPPLY DISTRICT #3



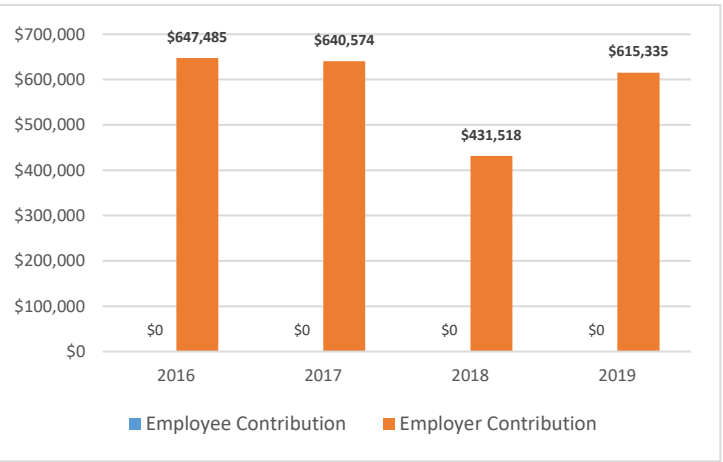
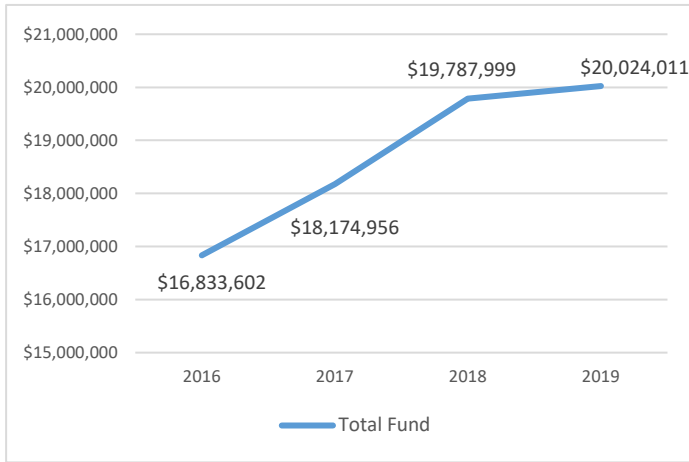
Active Members: 12 **Vesting:** Partial 1 year / Full 3 years

KANSAS CITY SUPPLEMENTAL RETIREMENT PLAN



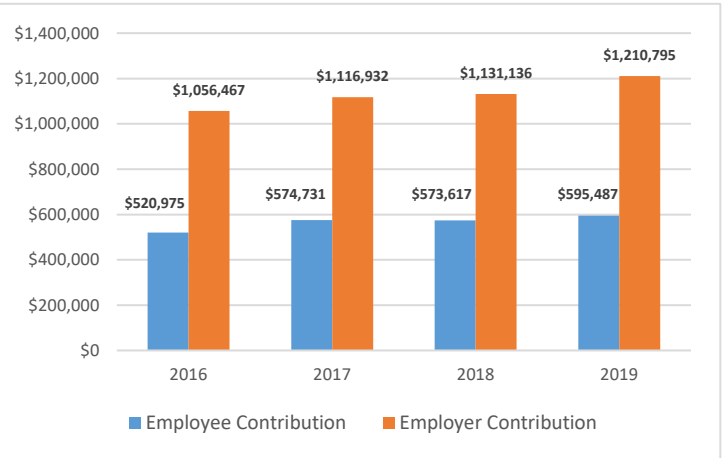
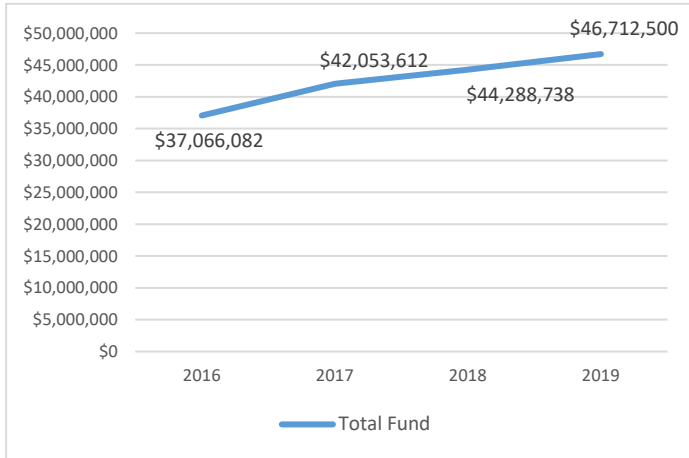
Active Members: 6 **Vesting:** 5 years **Notes:** The City established the plan in 2000 for select employees. The City no longer contributes to it.

KIRKWOOD CIVILIAN EMPLOYEES PENSION PLAN



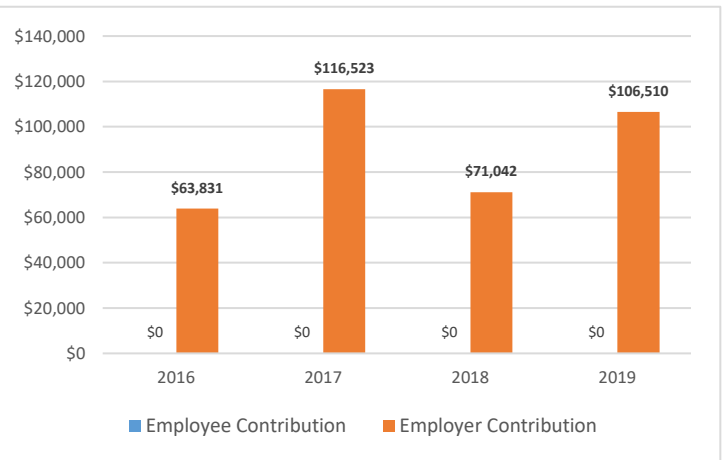
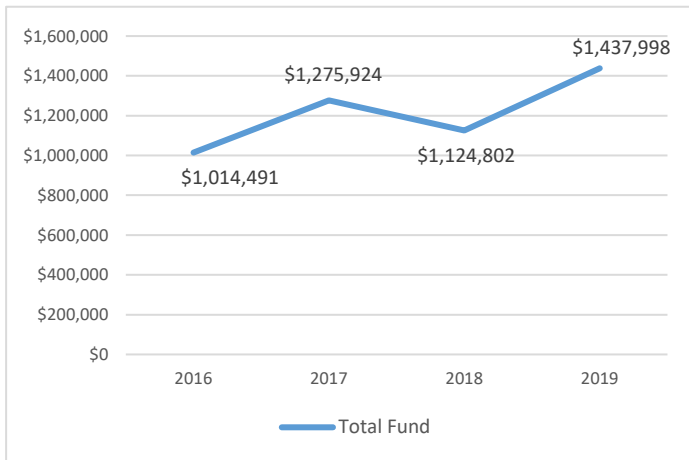
Active Members: 203 Vesting: 5 years

KIRKWOOD POLICE & FIRE PENSION PLAN



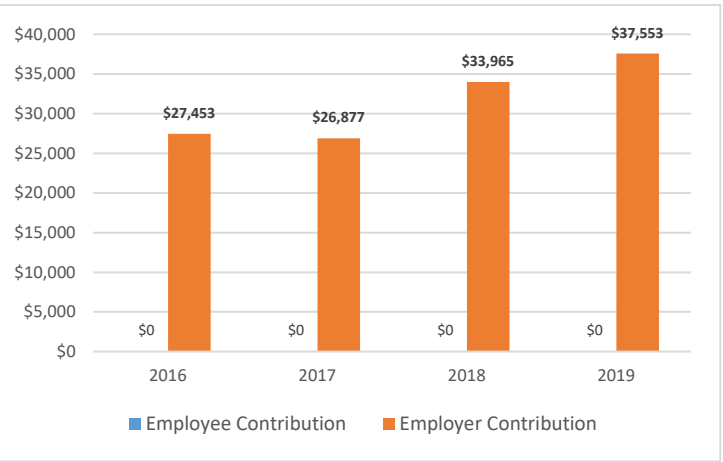
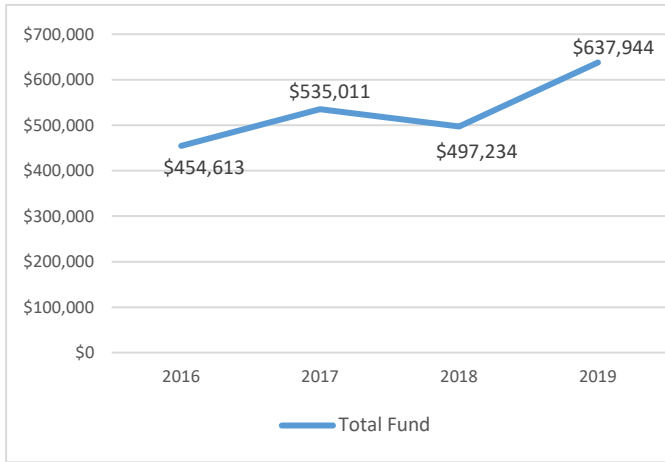
Active Members: 113 Vesting: 5 years

LAKE ST. LOUIS FIRE PROTECTION DISTRICT PROFIT SHARING PLAN



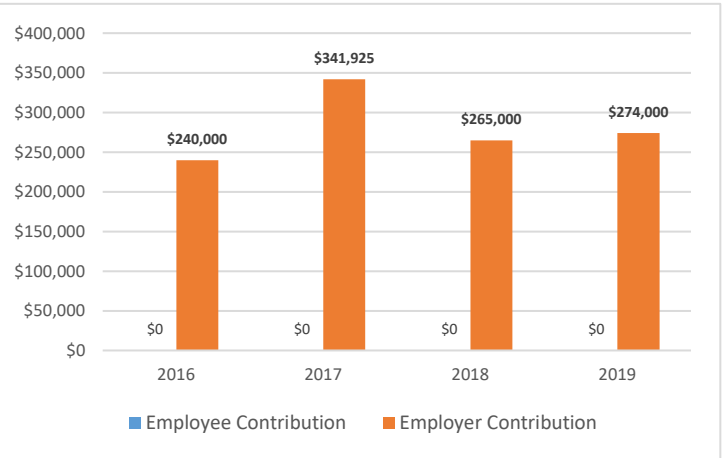
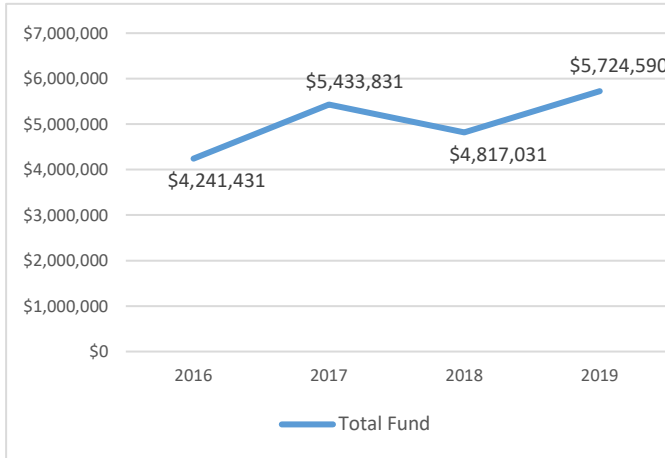
Active Members: 13 Vesting: Partial 2 years / Full 6 years

LAKE WEST AMBULANCE DISTRICT RETIREMENT PLAN



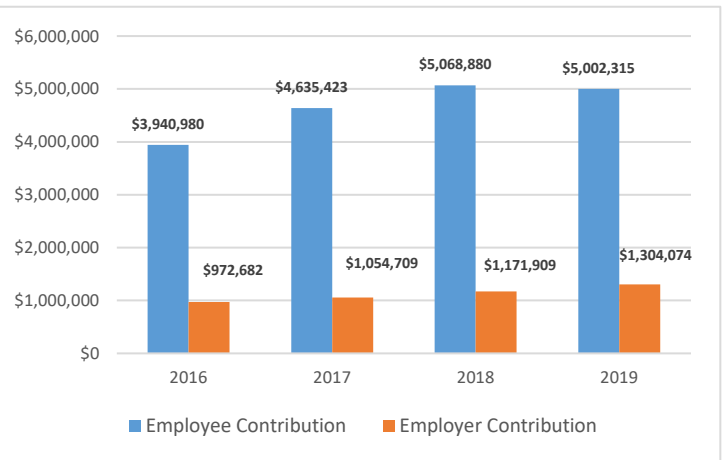
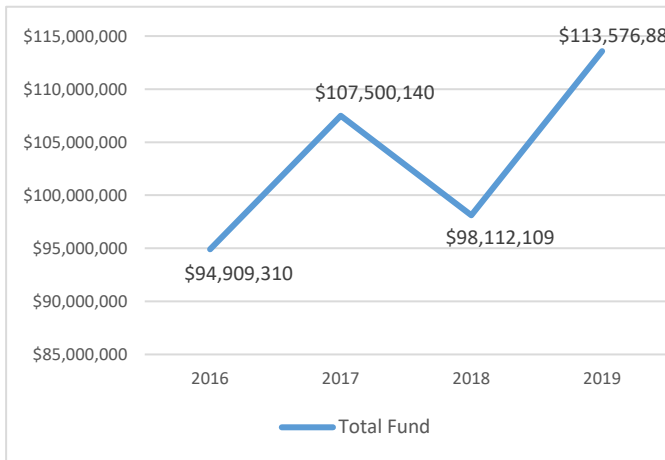
Active Members: 21 Vesting: 3 years

LEMAY FIRE PROTECTION DISTRICT RETIREMENT PLAN



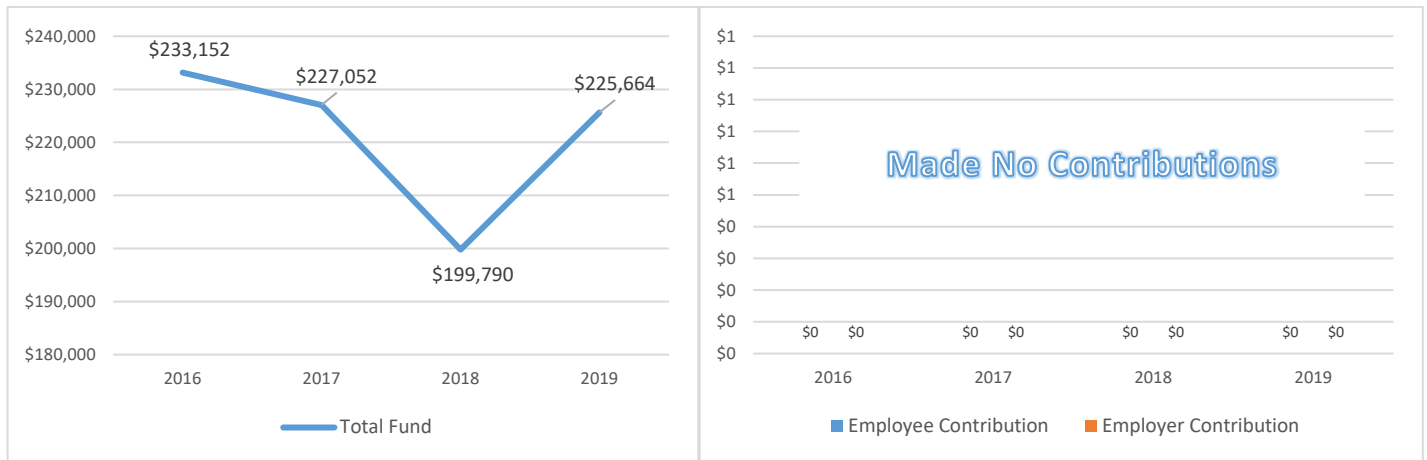
Active Members: 25 Vesting: Partial 5 years / Full 10 years

LIBERTY HOSPITAL RETIREMENT INCOME PLAN



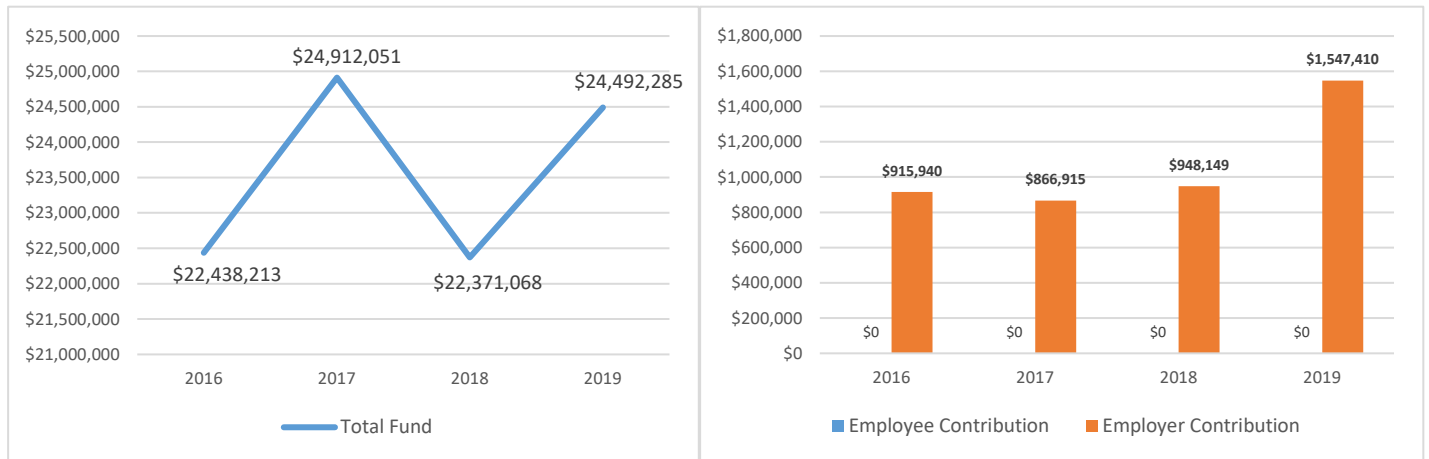
Active Members: 1,427 Vesting: 3 years

LINCOLN COUNTY MEMORIAL HOSPITAL RETIREMENT PLAN



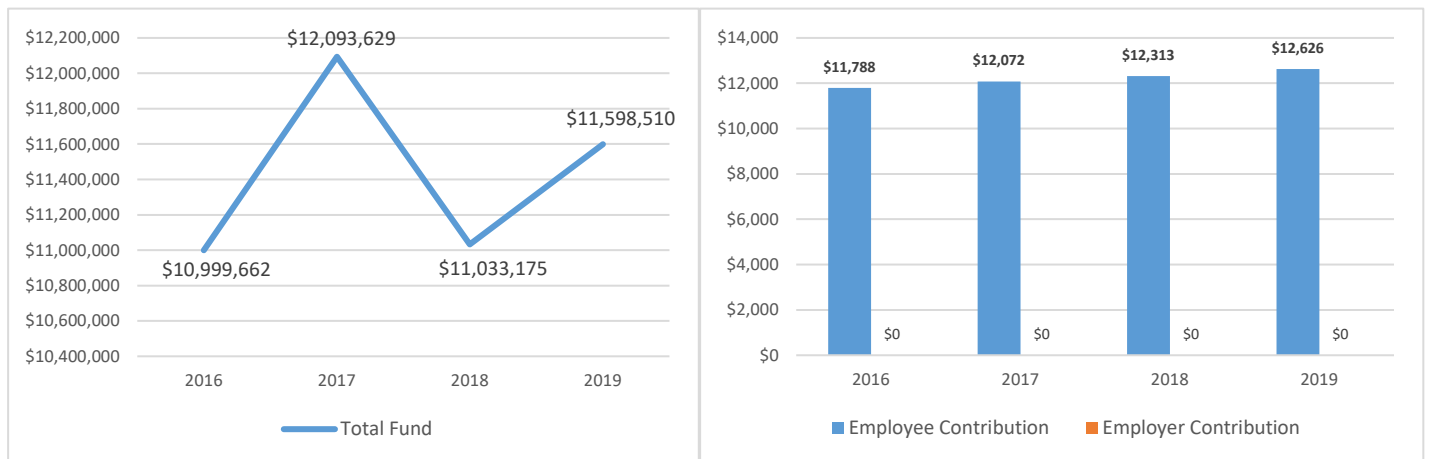
Active Members: 32 Vesting: Partial 3 years / Full 4 years LCMH operations were sold to Mercy 3/1/15. Employer contributions have ceased. Most employees have rolled their accounts into the Mercy plan.

MARYLAND HEIGHTS FIRE PROTECTION DISTRICT RETIREMENT PLAN



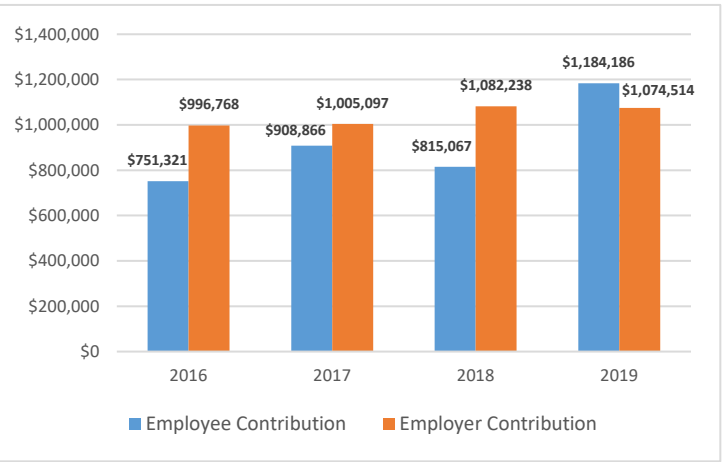
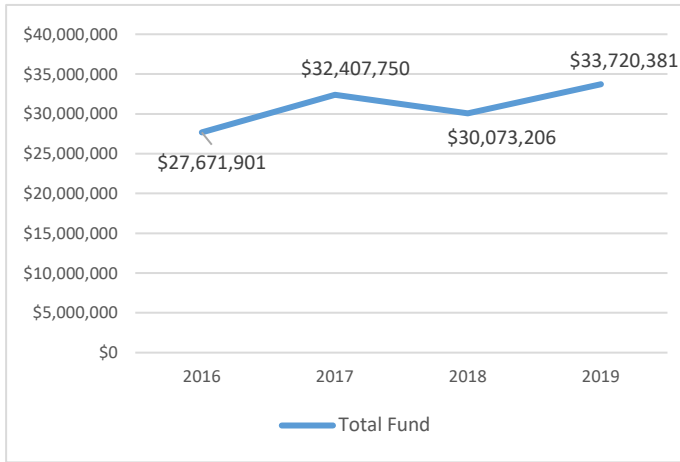
Active Members: 54 Vesting: Partial 1 year / Full 5 years

MARYLAND HEIGHTS PENSION PLAN



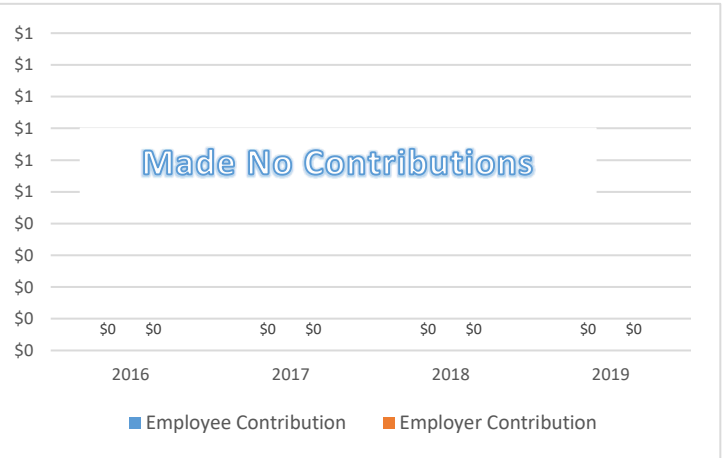
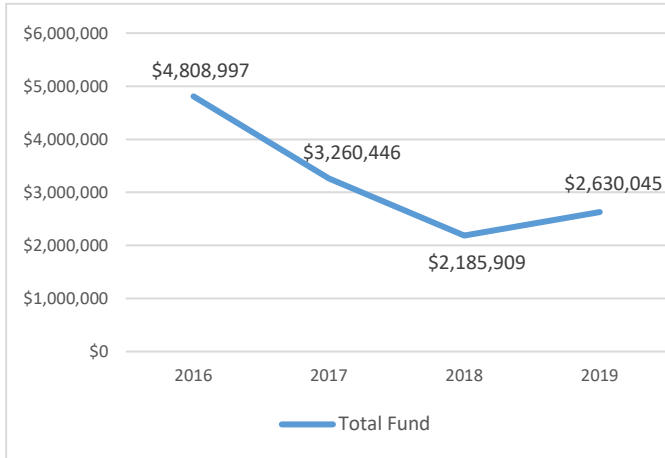
Active Members: 77 Vesting: 3 years The City joined LAGERS on 1/1/04 and no longer contributes to this plan.

MEHLVILLE FIRE PROTECTION DISTRICT RETIREMENT PLAN



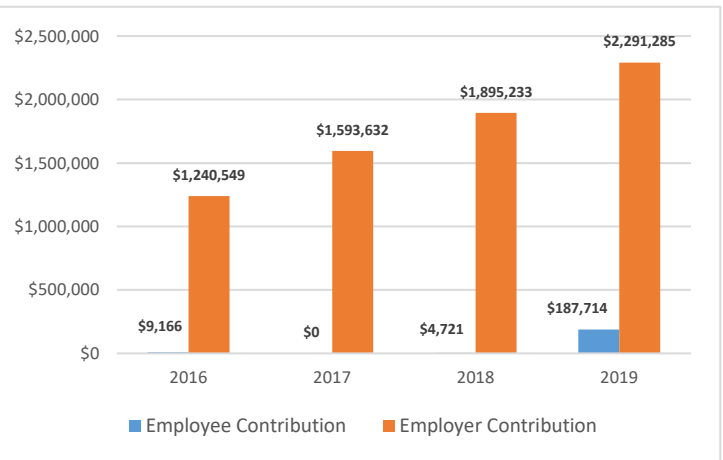
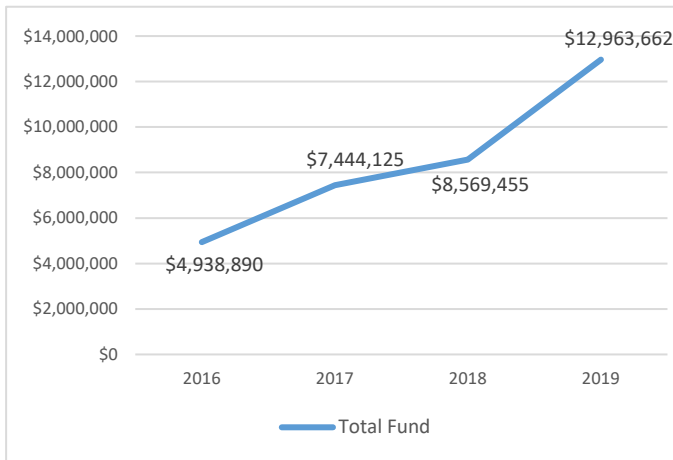
Active Members: 138 **Vesting:** immediate upon employment

METRO NORTH FIRE PROTECTION DISTRICT RETIREMENT PLAN



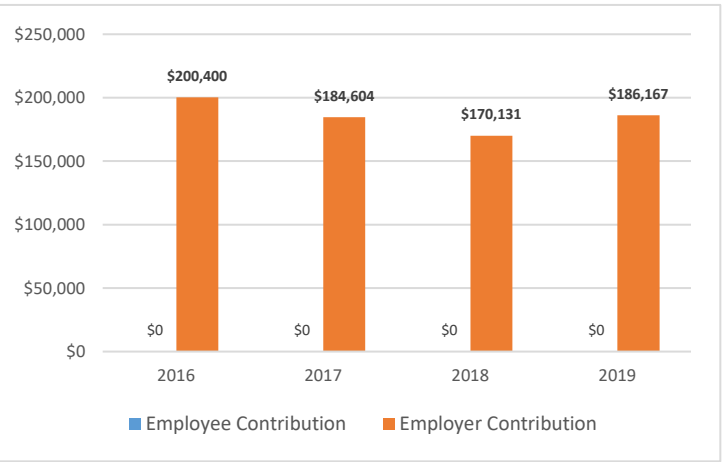
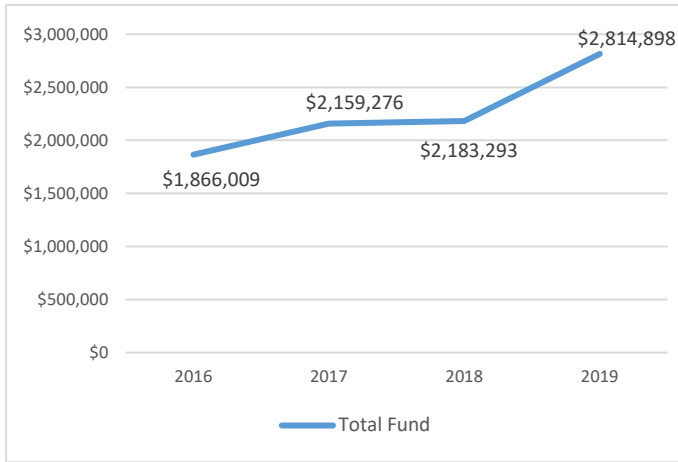
Active Members: 8 **Vesting:** immediate upon employment **Note:** Contributions have not been made to the plan since 2010.

METROPOLITAN ST. LOUIS SEWER DISTRICT EMPLOYEES PENSION PLAN



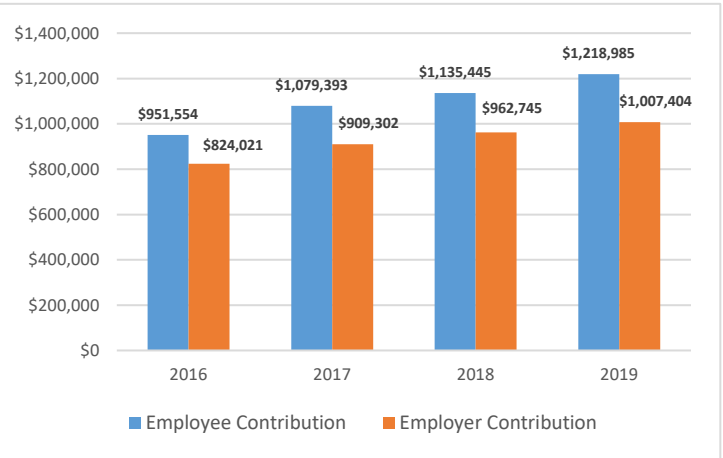
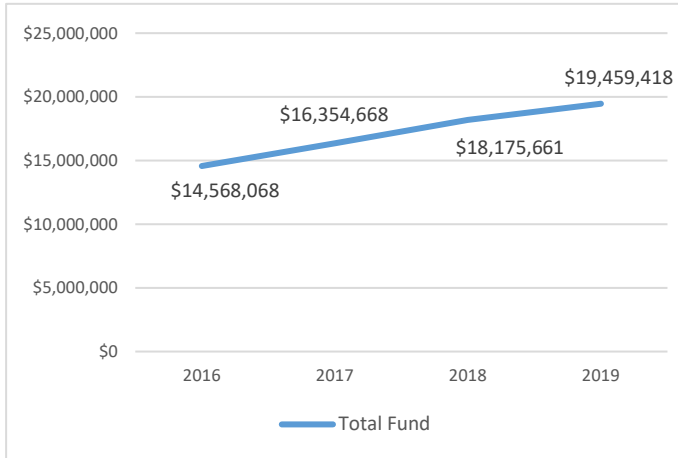
Active Members: 521 **Vesting:** Partial 1 year / Full 5 years

MID-COUNTY FIRE PROTECTION DISTRICT RETIREMENT PLAN



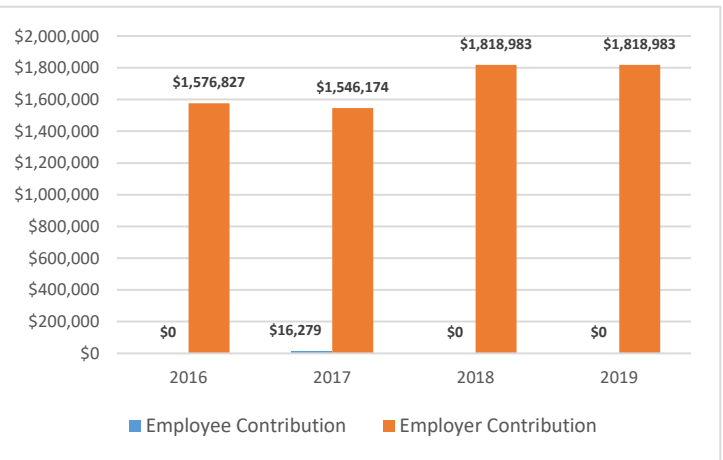
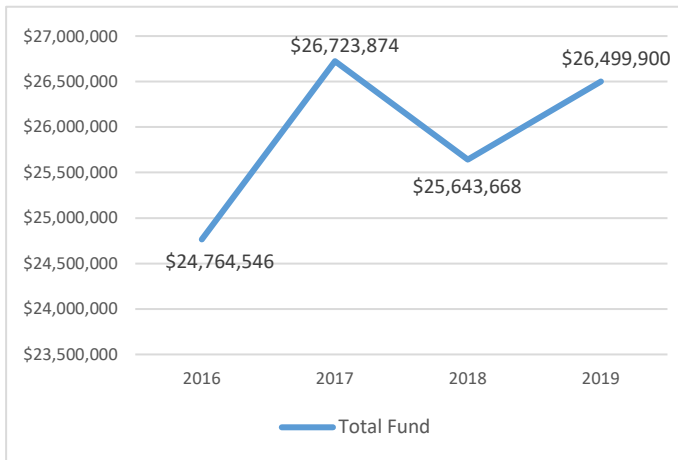
Active Members: 19 **Vesting:** Partial 1 year / Full 5 years

MISSOURI HIGHER EDUCATION LOAN AUTHORITY PENSION PLAN



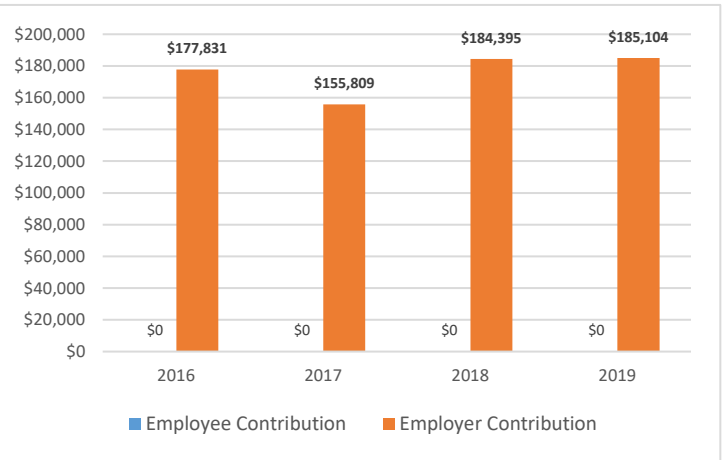
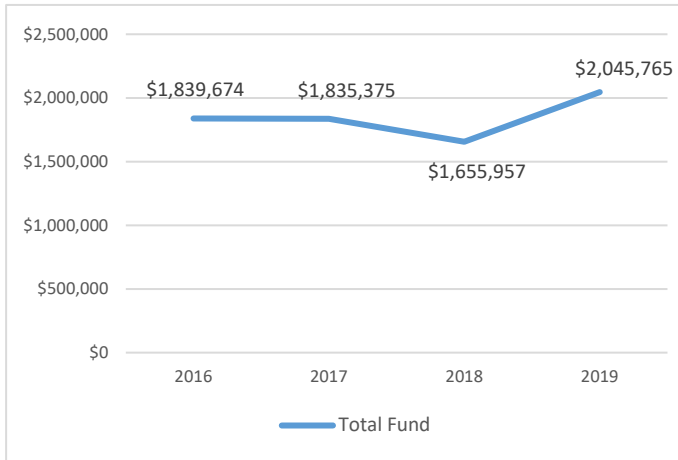
Active Members: 333 **Vesting:** Partial 4 years/ Full 5 years

MONARCH FIRE PROTECTION DISTRICT RETIREMENT PLAN



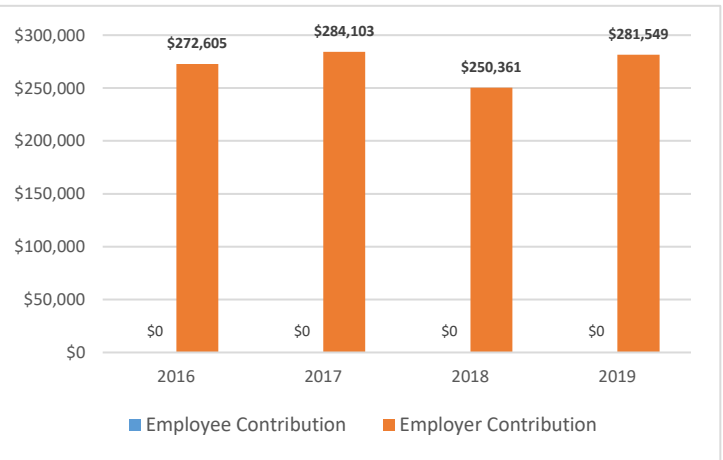
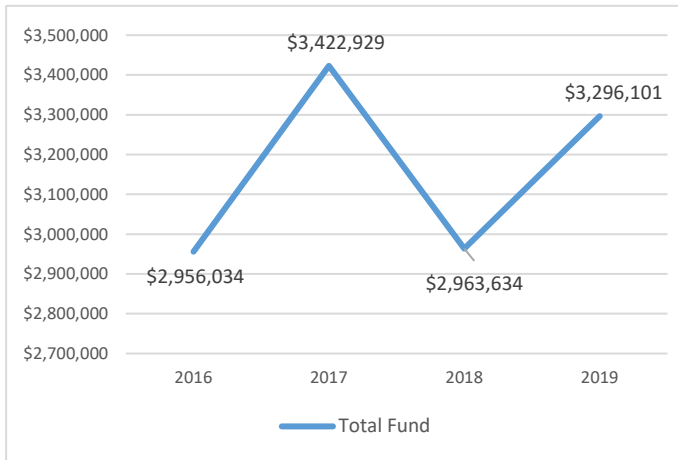
Active Members: 115 **Vesting:** Partial 2 years / Full 6 years

NORTH JEFFERSON COUNTY AMBULANCE DISTRICT



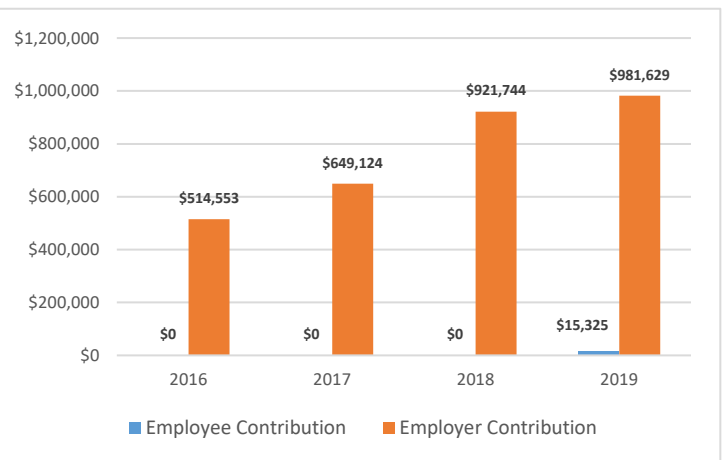
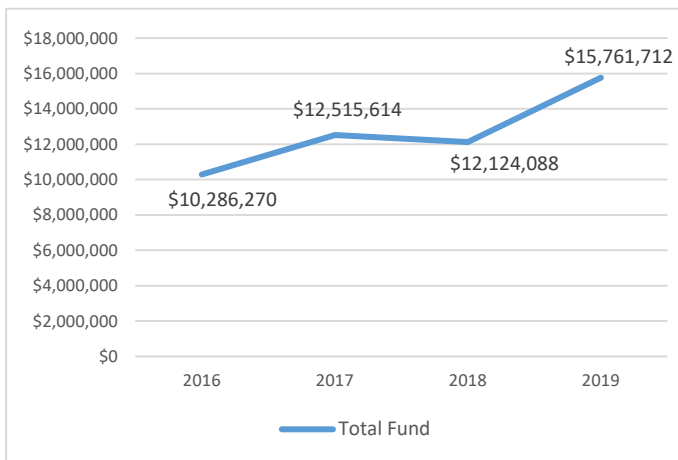
Active Members: 16 **Vesting:** Partial 1 year / Full 5 years

NORTHEAST AMBULANCE & FIRE PROTECTION DISTRICT



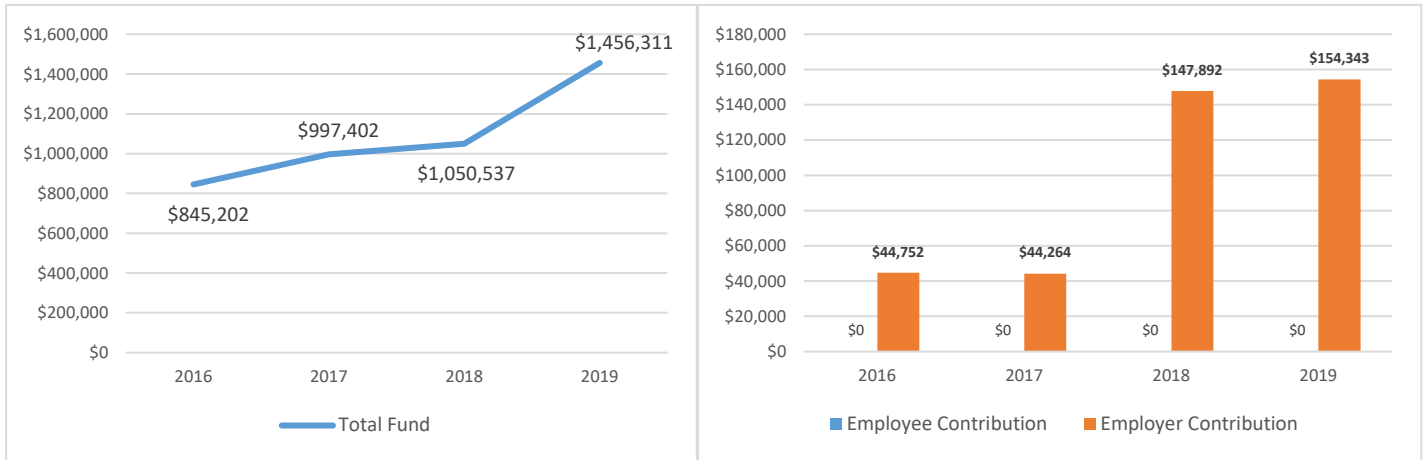
Active Members: 23 **Vesting:** 1 year

O'FALLON FIRE PROTECTION DISTRICT RETIREMENT PLAN



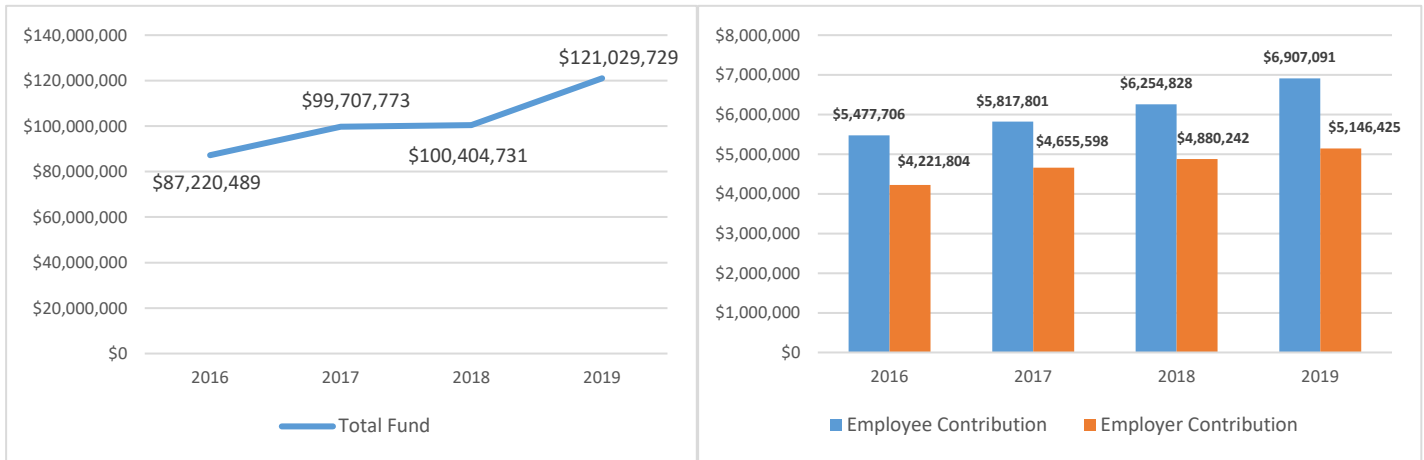
Active Members: 63 **Vesting:** Partial 1 year / Full 5 years

PACIFIC FIRE PROTECTION DISTRICT RETIREMENT PLAN



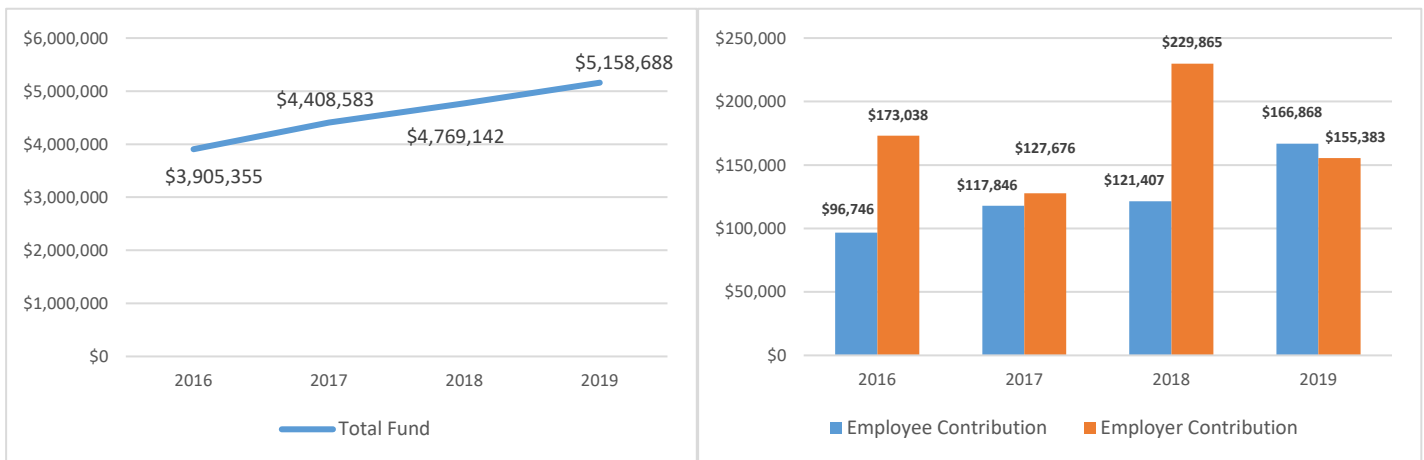
Active Members: 18 **Vesting:** Partial 2 years / Full 6 years

PHELPS COUNTY REGIONAL MEDICAL CENTER PENSION PLAN



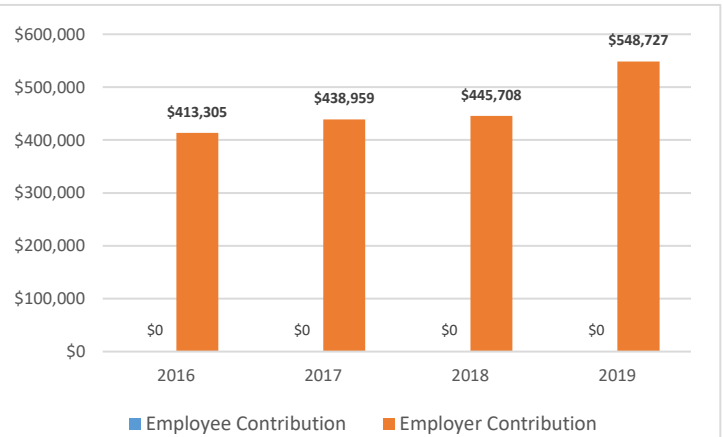
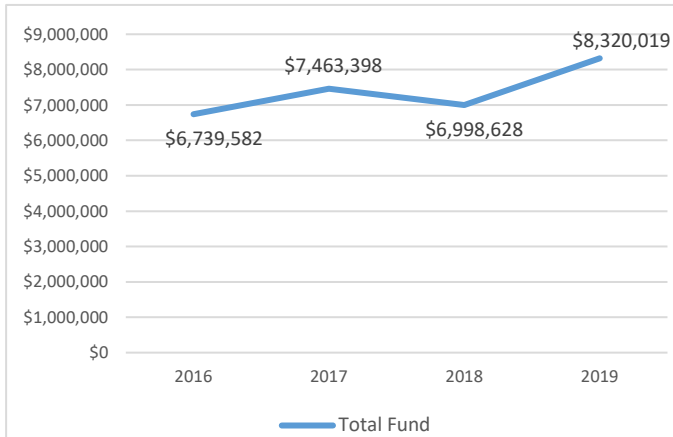
Active Members: 1,797 **Vesting:** Partial 2 years / Full 6 years

PIKE COUNTY MEMORIAL HOSPITAL RETIREMENT PLAN



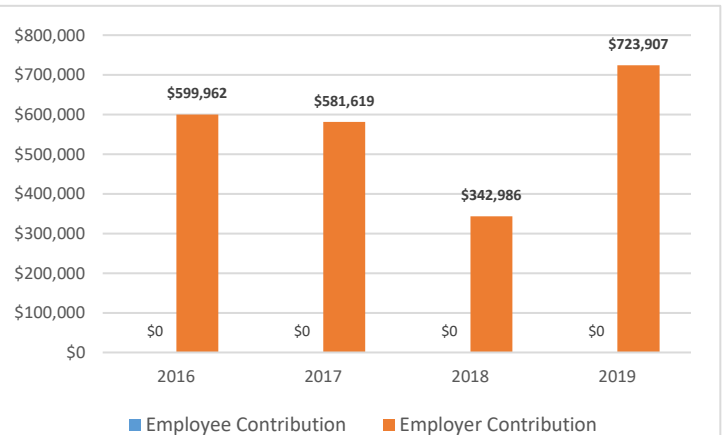
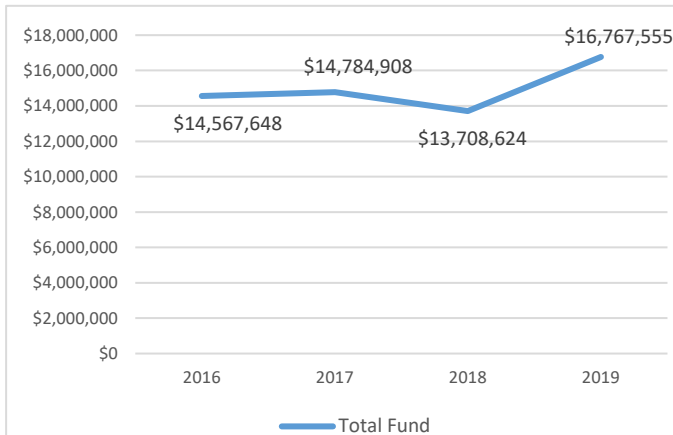
Active Members: 155 **Vesting:** 3 years

RIVERVIEW FIRE PROTECTION DISTRICT RETIREMENT PLAN



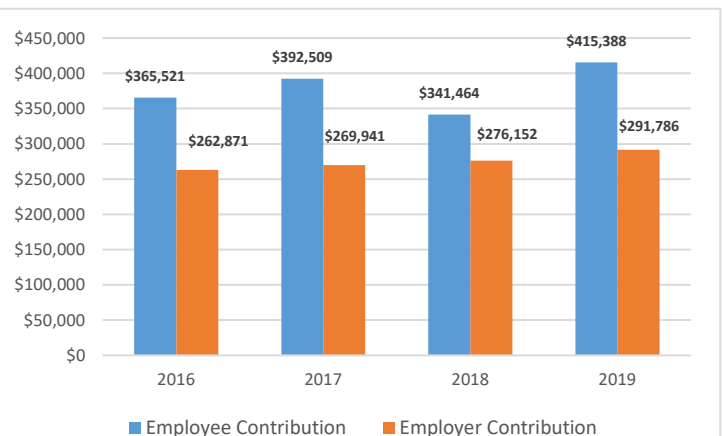
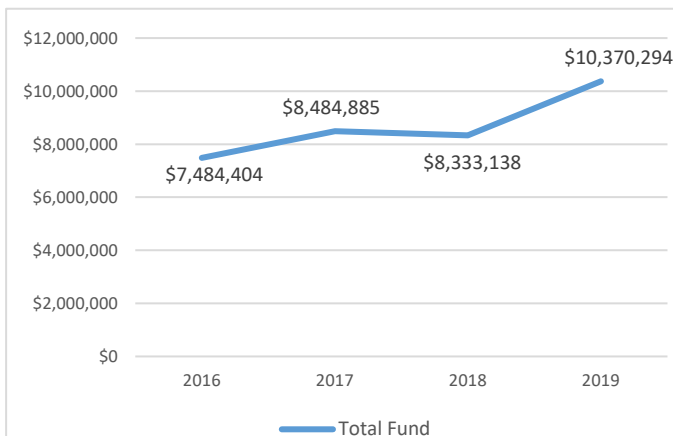
Active Members: 33 Vesting: Partial 5 years / Full 10 years

ROBERTSON FIRE PROTECTION DISTRICT RETIREMENT PLAN



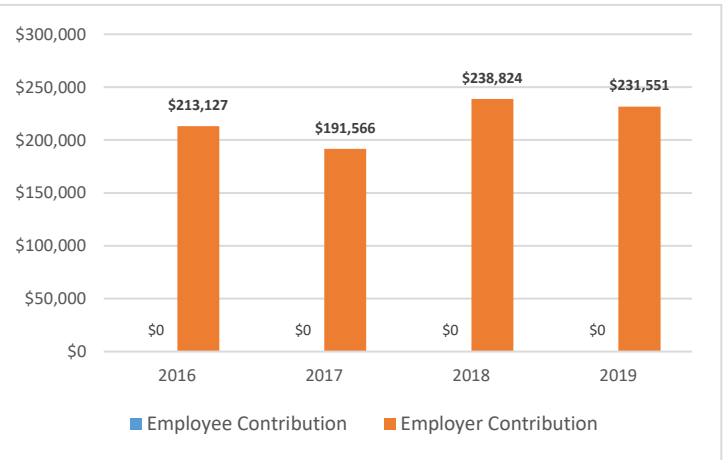
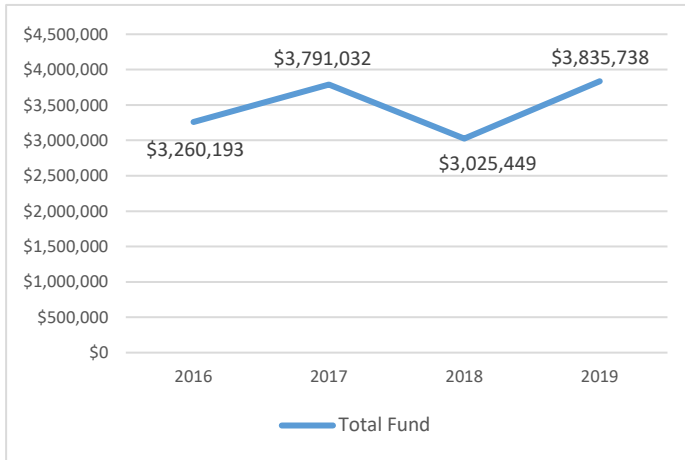
Active Members: 41 Vesting: Partial 5 years / Full 9 years

SAMARITAN MEMORIAL HOSPITAL PENSION PLAN



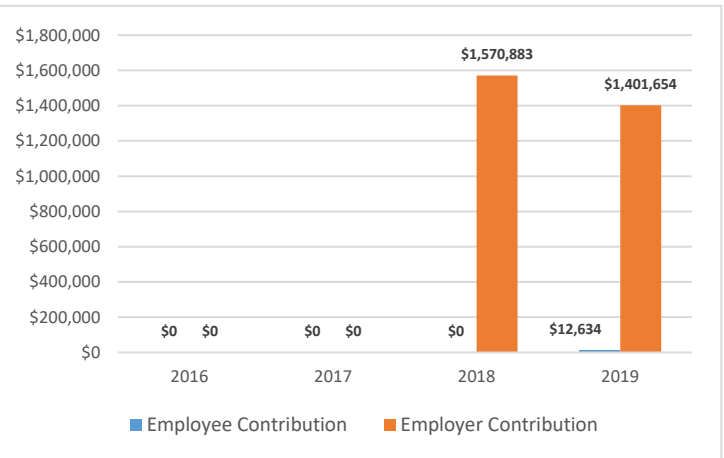
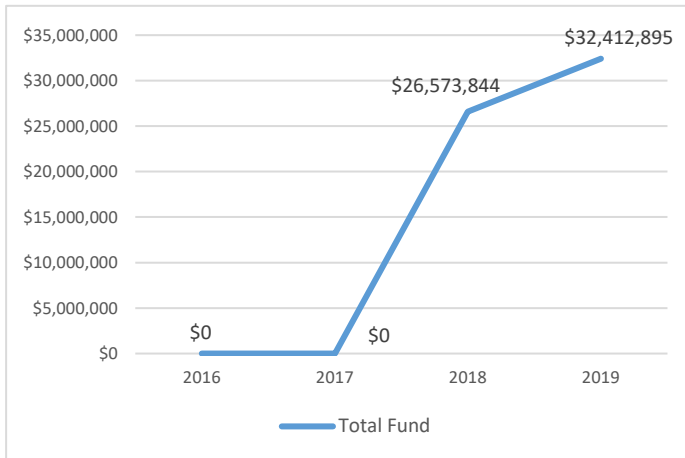
Active Members: 137 Vesting: 2 years

SPANISH LAKE FIRE PROTECTION DISTRICT RETIREMENT PLAN



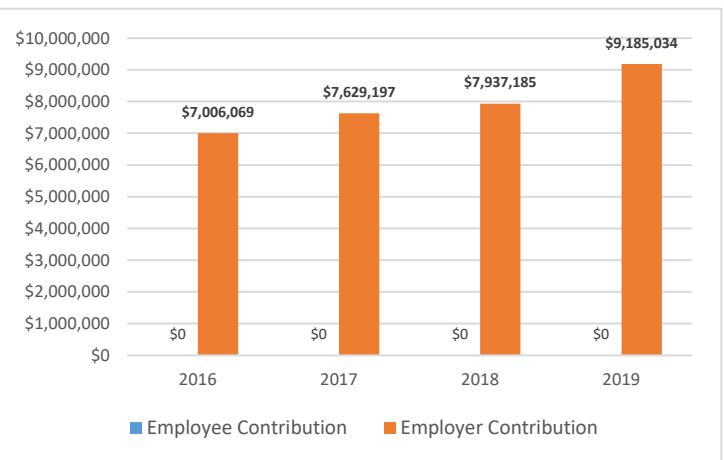
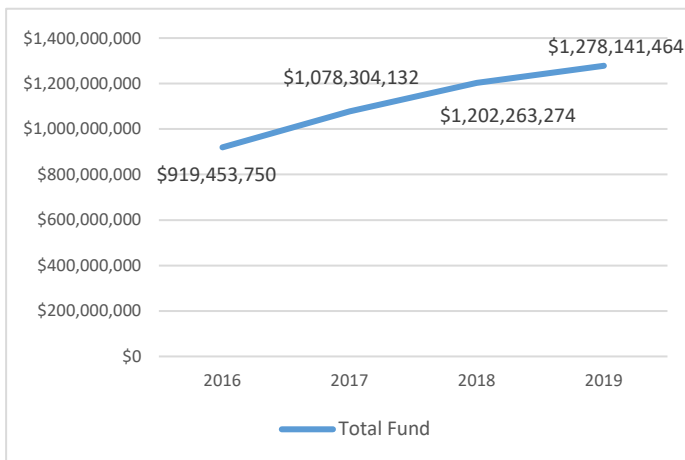
Active Members: 14 **Vesting:** 5 years

ST. CHARLES COUNTY AMBULANCE DISTRICT



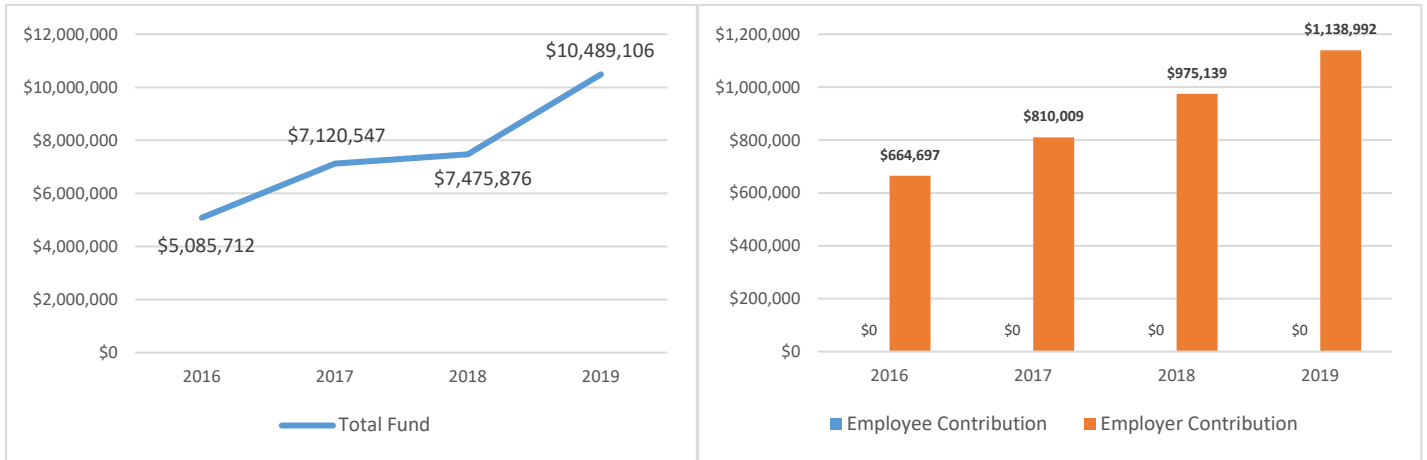
Active Members: 206 **Vesting:** Partial 1 year / Full 5 years The District began reporting to the JCPER in plan year 2018.

UNIVERSITY OF MISSOURI RETIREMENT, DISABILITY & DEATH BENEFIT PLAN



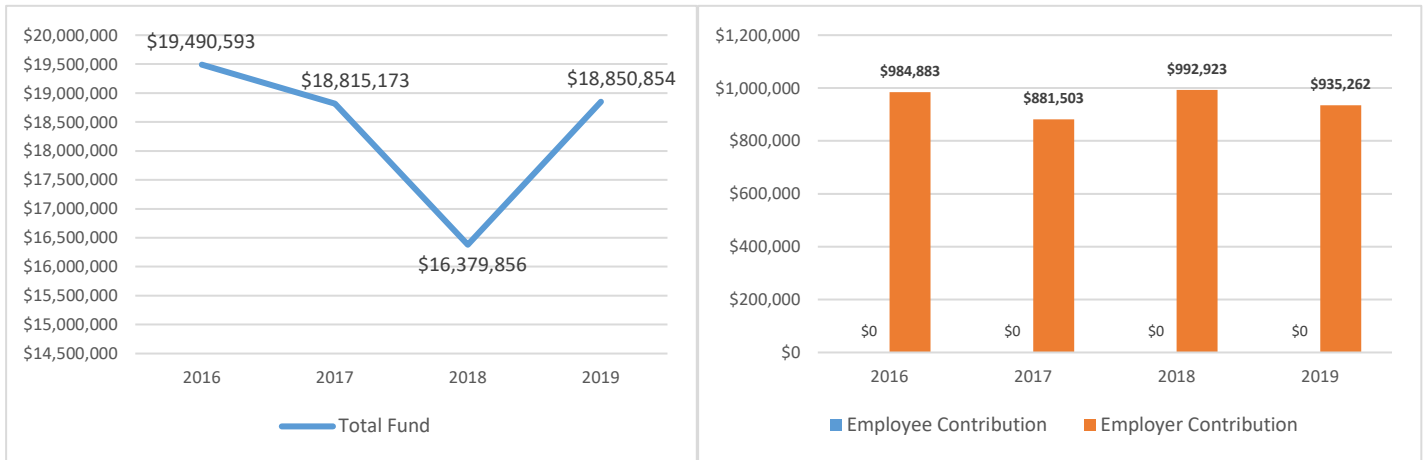
Active Members: 9,785 **Vesting:** 3 years

WENTZVILLE FIRE PROTECTION DISTRICT PENSION PLAN



Active Members: 61 **Vesting:** immediate upon contribution

WEST COUNTY EMS & FIRE PROTECTION DISTRICT RETIREMENT PLAN



Active Members: 62 **Vesting:** Partial 5 years / Full 10 years