



# **Judicial Retirement System**

## **Presentation to Public Retirement Systems Committee**

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**December 11, 2019**



# Governance

- Established in Iowa Code Chapter 602
- Referenced in the State Constitution: General Assembly “shall prescribe mandatory retirement for judges of the supreme court and the district court at a specific age and shall provide for adequate retirement compensation”.
- System is administered by the State Court Administrator who is appointed by the Supreme Court (note no Board of Trustees)



# Judicial Retirement System

- JRS is a Defined Benefit Plan
  - Amount is based on a formula that is dependent on years of service and salary
  - Benefit paid as lifetime monthly income (annuity)
  - Contributions from both employer and employee
  - Pooled contributions are invested in a trust which is for the exclusive benefit of members of the System
  - Investments are managed by professional investment managers



# General Plan Overview

- Fund value at 6/30/2019: \$216,405,241
- Membership at 6/30/2019: 429 Total Members
  - Actives: 205
  - Inactive vested: 4
  - Retirees: 171
  - Beneficiaries: 49
- Total Annual Pension Payroll: \$14,161,609
  - Average Annual Benefit: \$64,371
- Total Annual Covered Payroll: \$29,957,857
  - Average Annual Salary: \$146,136
- Total Contributions (FY 2019)
  - Member: \$2,680,087
  - State: \$8,771,171



# Membership Provisions

- Supreme Court and Court of Appeals judges
- District judges and district associate judges
- Full-time probate judges and juvenile judges
- Magistrates and other employees of the Judicial Branch are members of IPERS



# Benefit Provisions

- Benefit is 3.25% of Average Salary (3 highest Basic Annual Salary) times years of service
- Maximum benefit: 65% of Highest Monthly Salary
- Benefit payable for life of judge with 50% continuing to surviving spouse
- Normal Retirement: age 65 with 4 years of service or age 50 and 20 years of service
- Mandatory retirement: age 72 for active judges



# Benefit Provisions

- Senior Judge Program
  - ❖ Provides additional judicial resources of a minimum of 13 weeks per year per judge
  - ❖ Senior judges receive a salary as determined by the General Assembly and an increase in their retirement benefit when active judges receive a salary increase
  - ❖ Senior judges may only serve for a total of six years, and not beyond age 78.



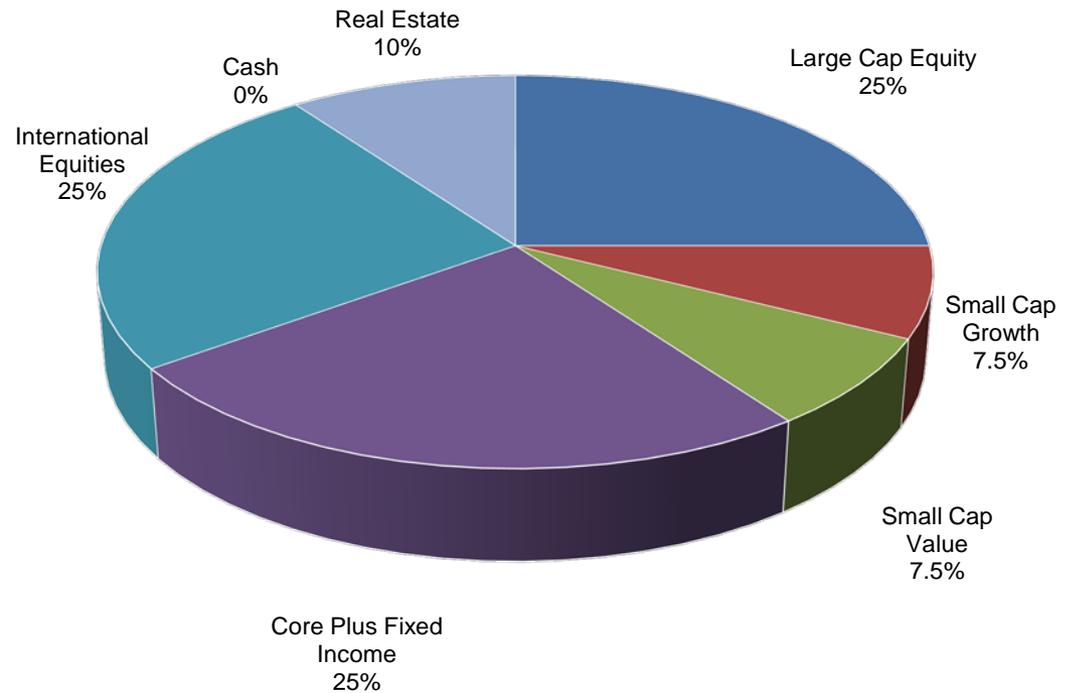
# Funding Provisions

- Contributions by both judges and the employer are established in statute
- Current statutory contribution rates:
  - ❖ Employee: 9.35%
  - ❖ Employer: 30.60%
- Once fully funded, the contribution rate will vary each year with the valuation results, with employees paying 40% of the actuarial contribution rate and the employer paying 60%



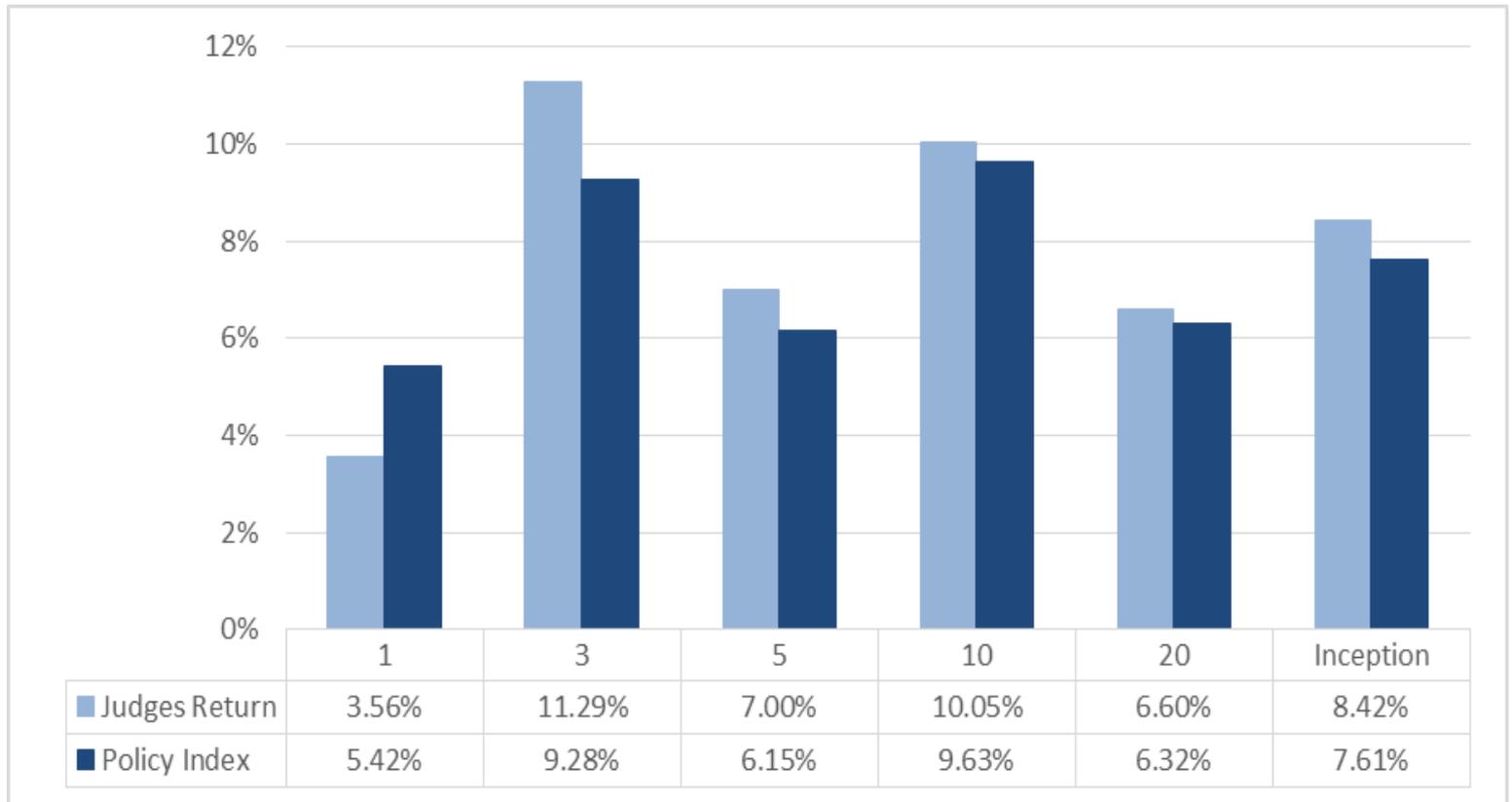
# Current Target Asset Allocation

- Funds are invested by the State Treasurer.
- Asset allocation is the key driver of actual returns.





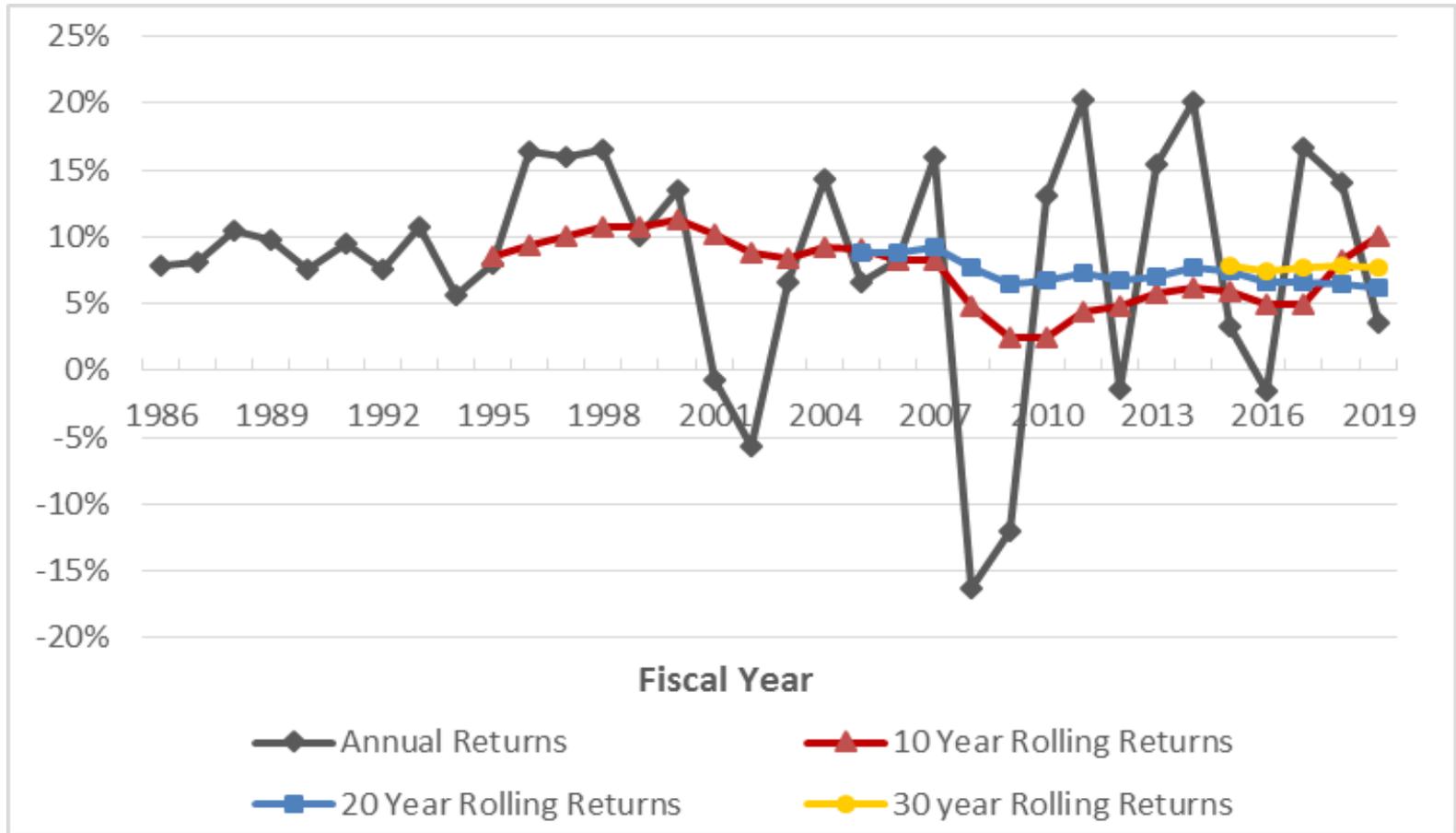
# Investment Performance History



Note: Current investment return assumption is 6.75%.



# Rolling Fund Returns (1986 – 2019)



Returns are much smoother over longer periods of time, like 20 and 30 years.



# Basic Funding Equation



$$C + I = B + E$$

C: Contributions  
I: Investment Income

B: Benefits  
E: Expenses



# Actuarial Valuation Process

- The valuation process can be viewed as a budgeting process. Like a budget, we make use of information we know as of a certain date, and using assumptions, we estimate what we think will happen in the future.
- Member data and asset data are provided by the System staff. Benefit provisions are in statute.
- Assumptions and Funding methodology are determined by the State Court Administrator, with input from the actuary and other professionals.

## Inputs

Member Data  
Asset Data  
Benefit Provisions  
Assumptions  
Funding Methodology



## Results

Actuarial Value of Assets  
Actuarial Accrued Liability  
Net Actuarial Gain or Loss  
Funded Ratio  
Actuarial Contribution Rate



# Funding of Retirement Systems

- Retirement systems represent a very long-term obligation
- Future benefit amounts are unknown so actuarial assumptions are used to help estimate the amount and timing of future benefit payments
  - Assumptions intended to be neither overly aggressive or conservative because costs are being allocated to different generations of members and taxpayers
  - Experience studies are performed on a regular basis (every 4-5 years) to review all assumptions and ensure they are reasonable and best estimates of future experience
  - Most recent experience study for JRS was in 2018



# Experience Study Recommended Changes

- Actuarial assumption changes reflected in July 1, 2018 valuation
  - Lowered investment return assumption from 7.50% to 6.75%
  - Updated mortality table to RP-2014 White Collar Mortality Table with a two year age setback (MP-2017 Improvement Scale)
  - Lowered salary increase assumption from 4.25% to 3.75%
  
- Net impact on 2018 valuation
  - Increased unfunded actuarial liability by \$33 million
  - Decreased funded ratio from 97.6% to 83.7%
  - Increased actuarial contribution rate by 13.84%



# Actuarial Valuation Process

- Valuations assist with monitoring funding progress and evaluating or setting contribution rates
- Actuarial process is a ***budgeting tool*** that allocates the cost of the benefits to different years of service worked by members
- Methodology used for JRS is *Entry Age Normal* which develops costs as a level percent of pay over a member's working career
  - ❖ Produces a stable cost, as a rate of pay
  - ❖ By design, dollar amounts of cost will increase with expected increases in covered payroll

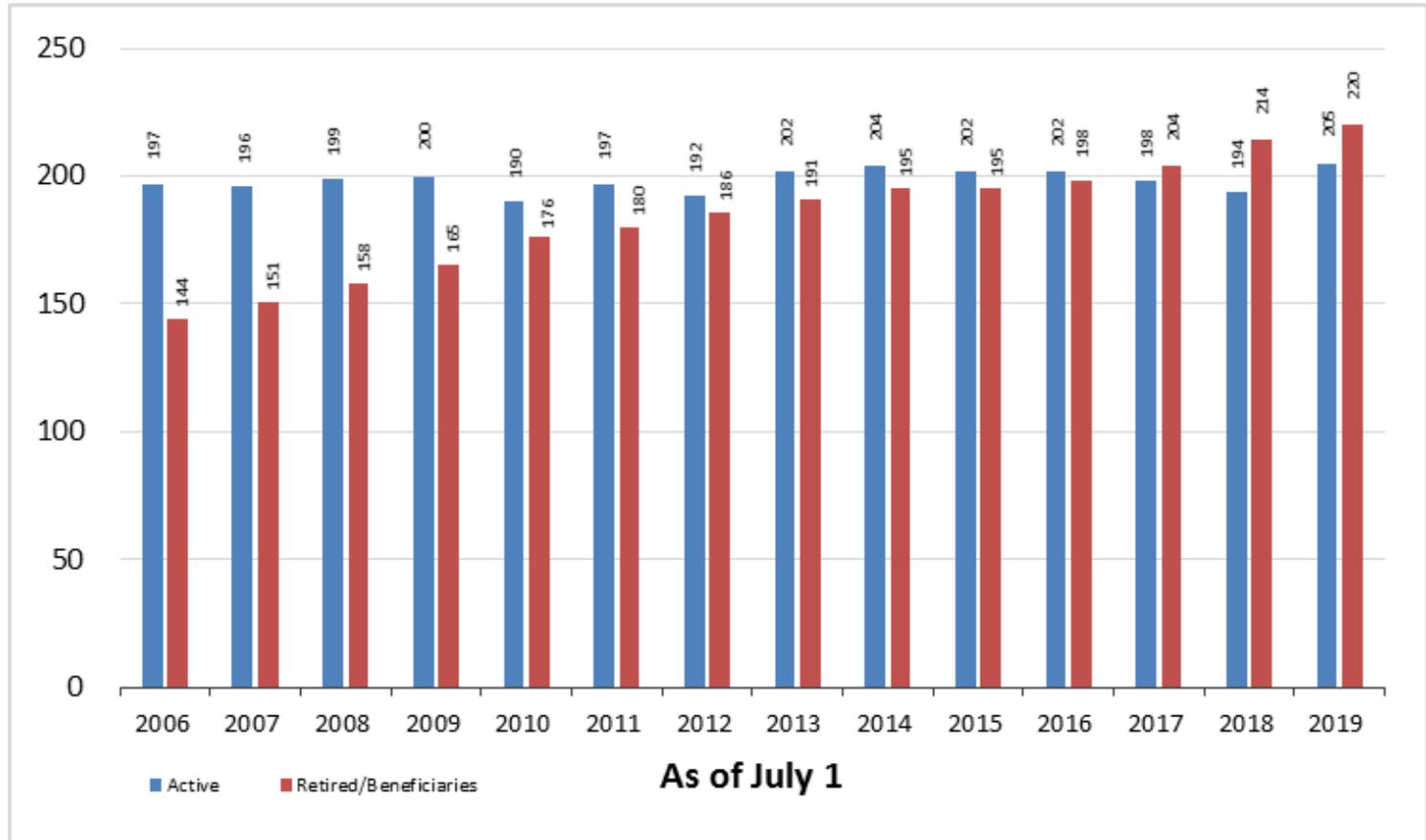


# Actuarial Valuation Process

- Variations of actual experience from that assumed are to be expected from year to year as assumptions are long-term in nature
  - ❖ Deviations are called “*actuarial experience gains or losses*”
  - ❖ Gains are favorable experience (assets are higher than expected or liabilities are lower). Losses are unfavorable.
  - ❖ Reflected in the amount of the unfunded actuarial liability in the valuation each year and then funded over closed 25 year periods
- “*Actuarially funded*” means that current assets plus future contributions, along with future investment earnings, equal the value of future benefit payments



# Judicial Membership



Note: While the number of actives has remained relatively stable, the number of retirees has grown over this time period which has been anticipated in the valuations. This is an indication of the maturity of the System.

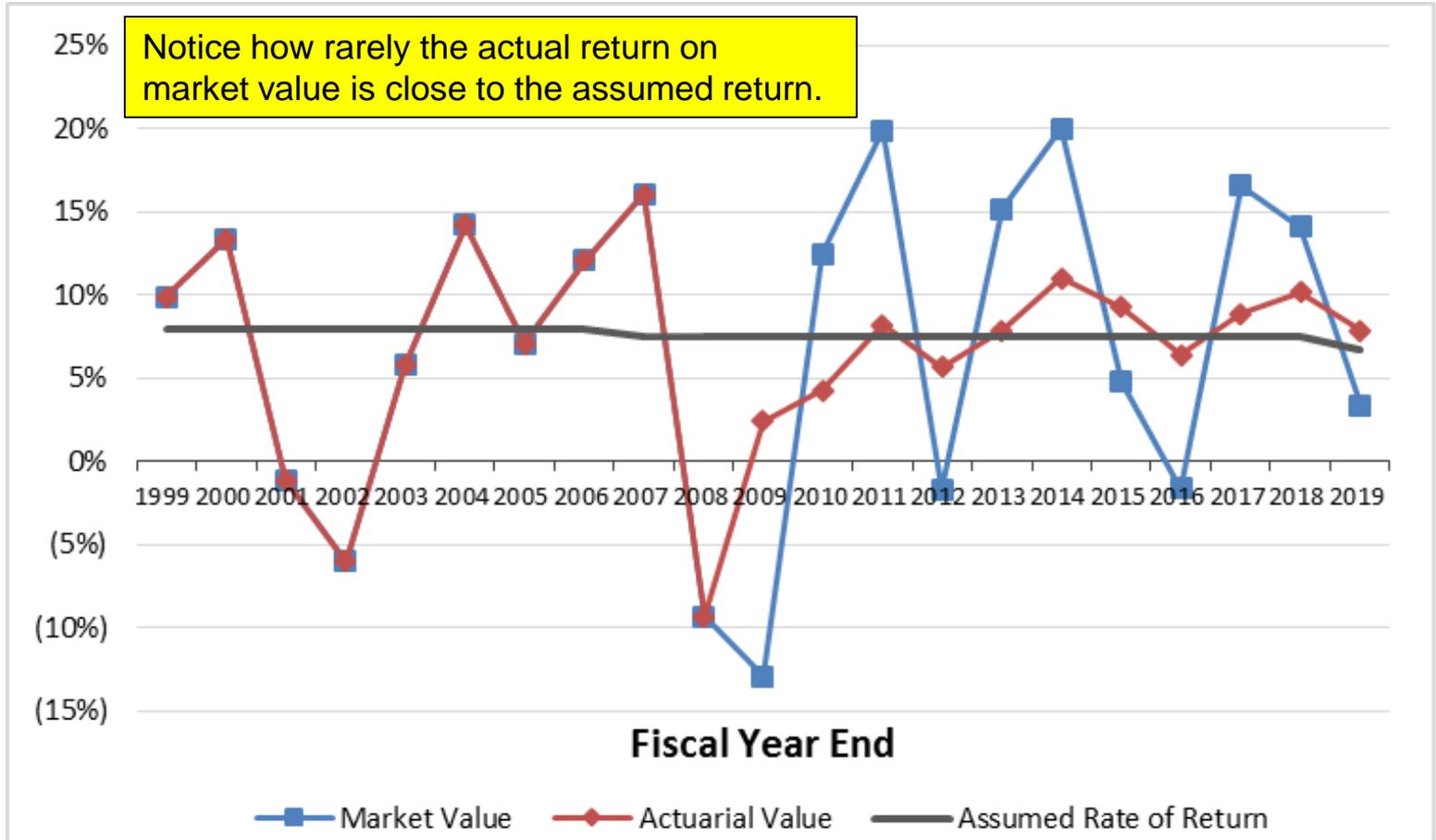


# Actuarial Valuation Definitions

- **Actuarial Assets:** Smoothed value of assets used in the valuation process (market-related value)
- **Actuarial Liability:** Theoretical amount that should be in the trust, based on the funding plan. Portion of liability assigned to past years of service.
- **Unfunded Actuarial Liability (UAL):** Actuarial Liability minus Actuarial Assets
- **Funded ratio:** Actuarial Assets divided by Actuarial Liability
- **Actuarial Contribution Rate** = Sum of Normal Cost and UAL Payment (note this may not be the actual contribution made to the System)



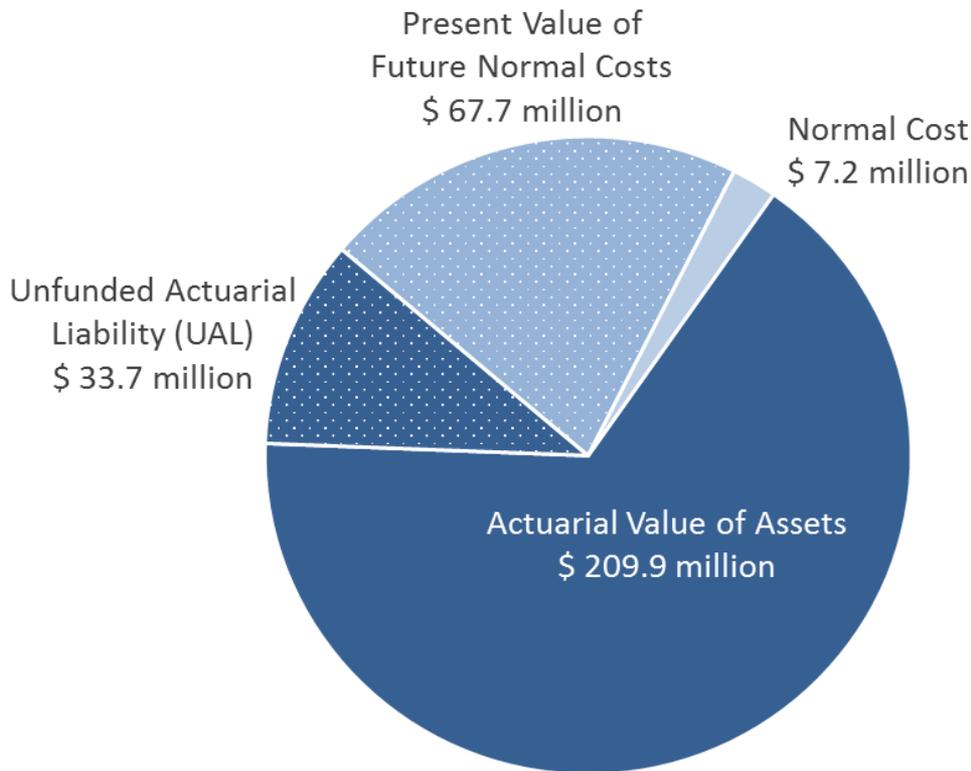
# Rate of Return (Market and Actuarial Value)



Note: Asset smoothing method was first reflected in the 2009 valuation.



# Funding Methodology



The amount of Actuarial Liability that is not covered by assets, known as Unfunded Actuarial Liability, is to be financed over various time periods.

Note that the assets used here are the Actuarial value of assets, not the Market value of assets. The Actuarial value of assets can be thought of as an average value of assets over the past four years. It is used to remove some of the volatility in the Funded Ratio and Actuarial Contribution Rate.

Actuarial liability is the dark blue piece of the actuarial pie (\$243.6 M) of which \$209.9 is funded. The dotted dark blue piece is the unfunded portion of the actuarial liability.



# Valuation Results - Funded Status

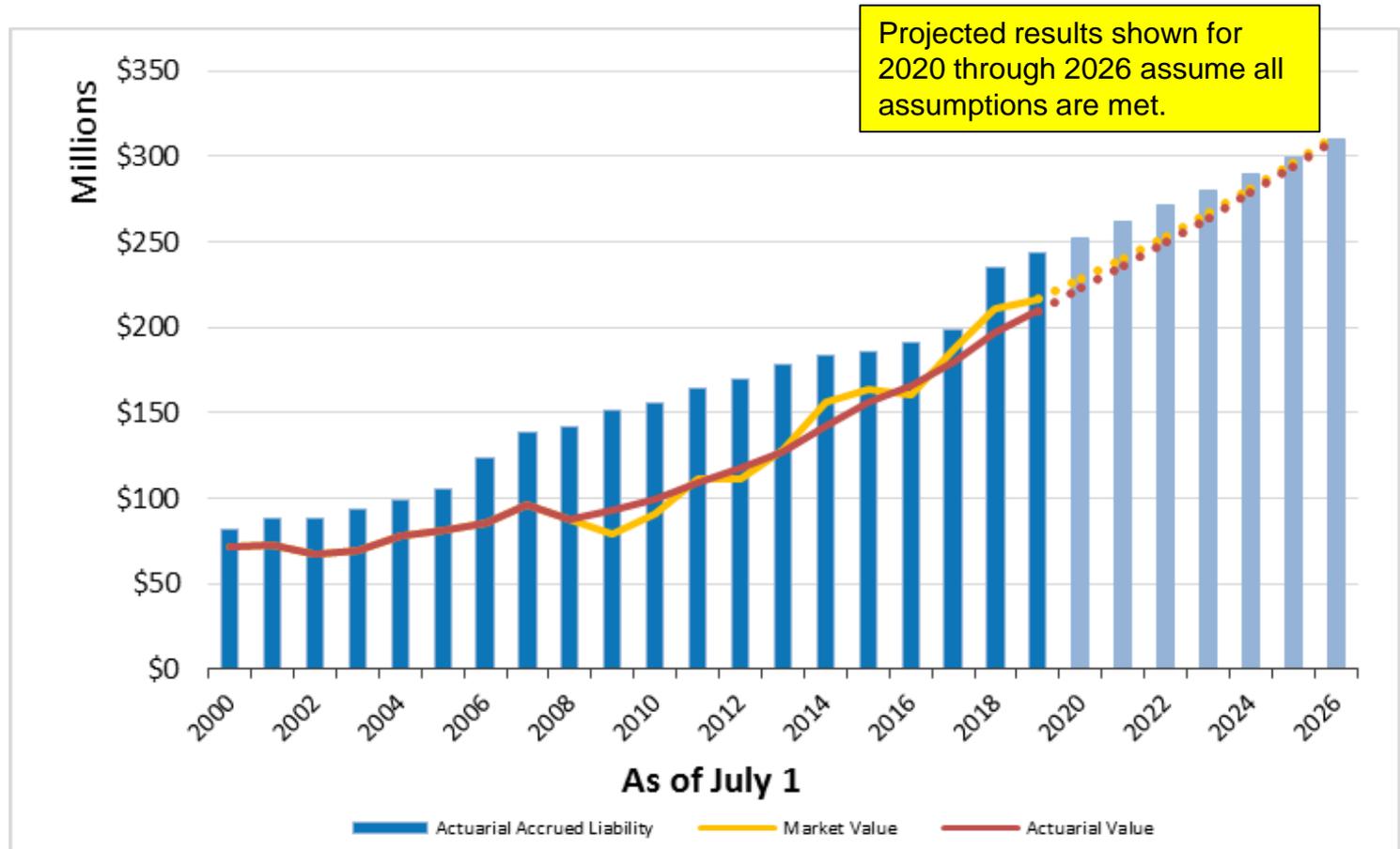
(\$ in Millions)

	<u>As of July 1,</u>	
	<u>2019</u>	<u>2018</u>
1. Actuarial Liability (AL)	\$ 243.6	\$ 235.1
2. Actuarial Assets	<u>209.9</u>	<u>196.8</u>
3. Unfunded AL: (1)-(2)	\$ 33.7	\$ 38.4
4. <b>Funded Ratio: (2)/(1)</b>	<b>86%</b>	<b>84%</b>
5. Market Value Assets	\$ 216.4	\$ 211.5
6. <b>Funded Ratio: (5)/(1)</b>	<b>89%</b>	<b>90%</b>

Note: numbers may not add due to rounding.



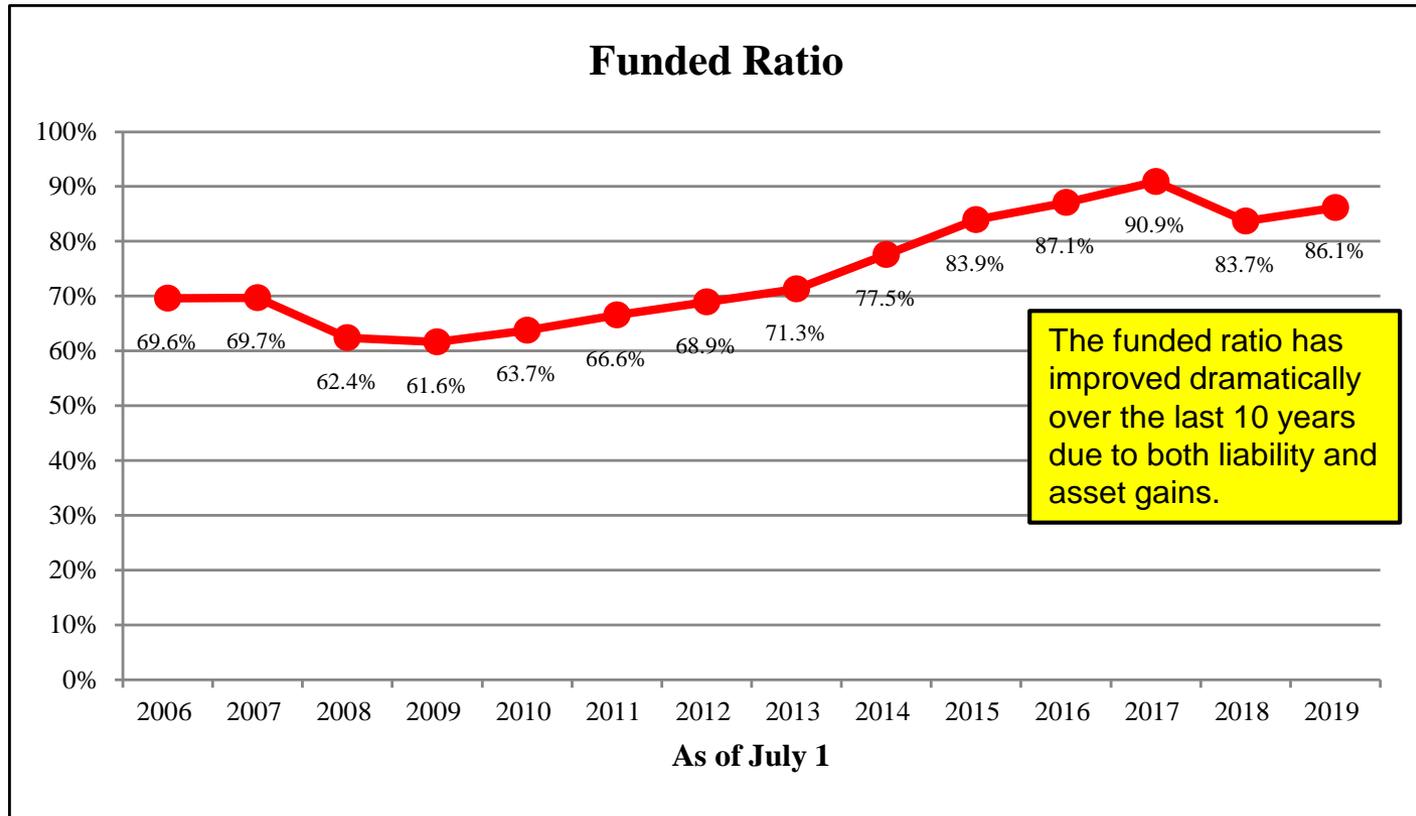
# Assets Compared to Actuarial Liability



Note: Actuarial liability tends to increase rather steadily over time while assets are less predictable. Asset smoothing method first used in the 2009 valuation. The increase in the Actuarial Liability in 2018 was due to the assumption changes.



# Funded Ratio (Actuarial Assets/Actuarial Liability)



Note: Asset smoothing was first used in the 2009 valuation. Actuarial assumptions were changed in 2018 which resulted in a significant decrease in the funded ratio.



# Valuation Results: Contribution Rates

	<u>As of July 1,</u>	
	<u>2019</u>	<u>2018</u>
1. Normal Cost	25.66%	25.57%
2. Unfunded Liability Payment	<u>12.15%</u>	<u>14.04%</u>
3. Total Actuarial Contribution Rate (1) + (2)	37.81%	39.61%
4. Statutory Member Rate	<u>(9.35%)</u>	<u>(9.35%)</u>
5. State Actuarial Rate: (3) – (4)	28.46%	30.26%
6. Statutory State Contribution Rate	(30.60%)	(30.60%)
<b>7. Contribution Margin: (5)-(6)</b>	<b>(2.14%)</b>	<b>(0.34%)</b>

Note: The contribution margin will serve as a cushion to absorb adverse experience in the future or to pay off the unfunded liability more rapidly.



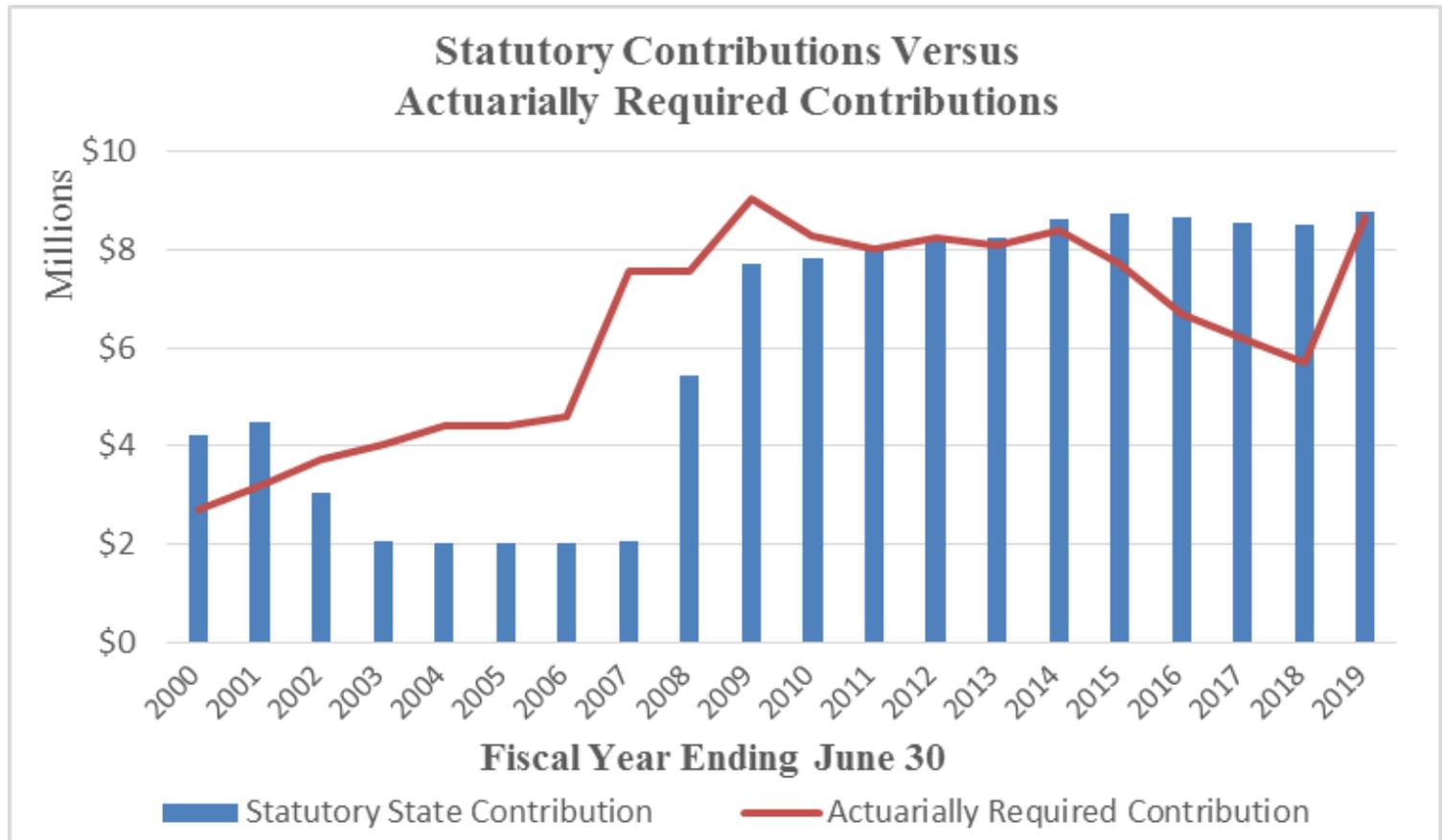
# Total Contribution Amounts

	<u>Fiscal Year End</u>	
	<u>2020*</u>	<u>2019 (Actual)</u>
Statutory Contributions		
- Members	\$ 2,801,060	\$ 2,680,087
- State	<u>9,167,104</u>	<u>8,771,171</u>
Total Statutory Contributions	\$11,968,164	\$11,451,258

\* Estimated using the expected payroll of \$30.0M from the July 1, 2019 valuation.



# Historical Contributions



Actual contributions were less than the actuarially required amount from 2002 through 2010, but have been at or above the actuarial rate for the latter part of the period.



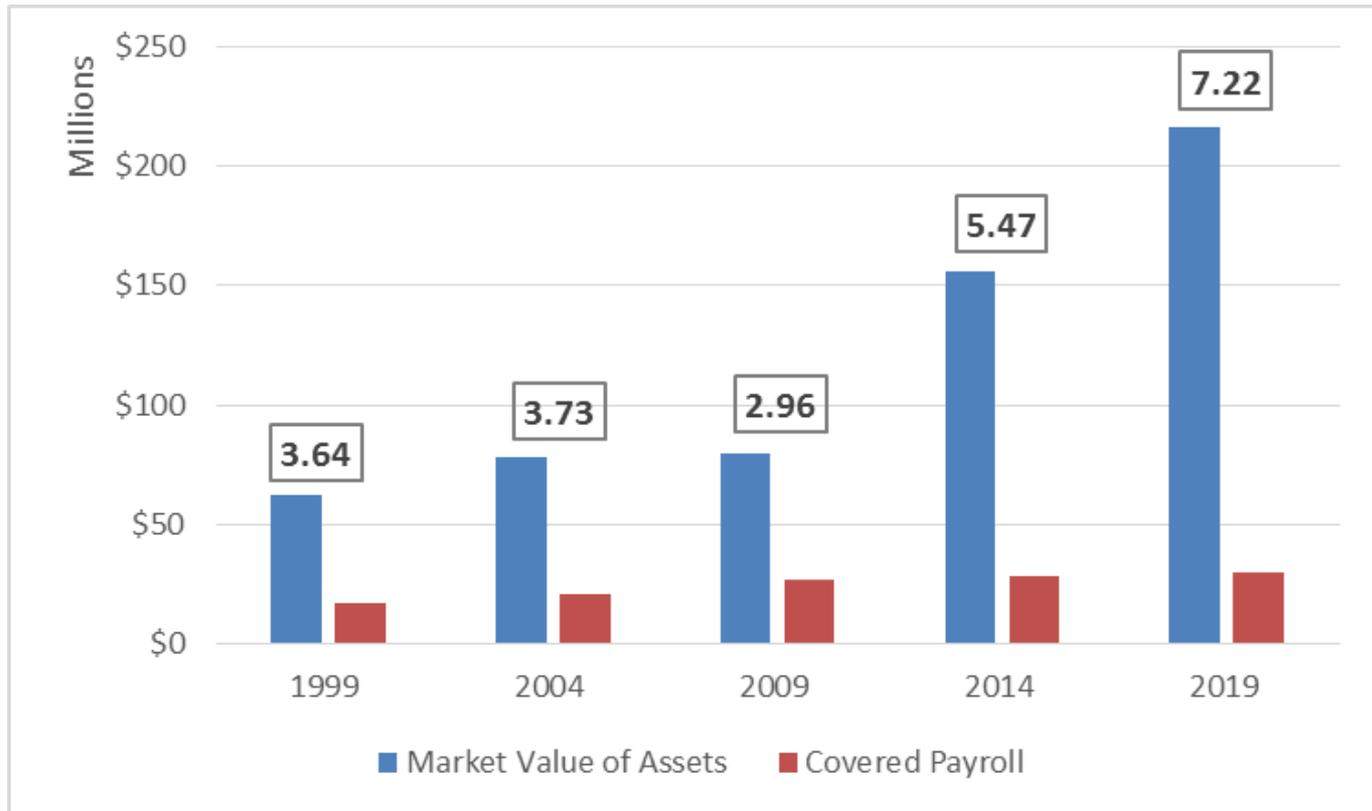
# Pension Plan Maturity

- As Plans mature, benefits accumulate, the population ages and Plan obligations become larger relative to the source of contributions (payroll)
  - ❖ Key dynamic is plan's size (assets and liabilities) compared to its contribution or revenue base (payroll)
  - ❖ Asset volatility ratio (AVR): market value of assets divided by payroll
  
- A Plan's maturity can impact its ability to recover from a negative shock in market returns and tends to result in more contribution volatility



# Plan Maturity Measurement

## Ratio of Assets to Payroll (in text box)



In 1999, the ratio of assets to payroll was 3.64, meaning a 10% actuarial investment loss was equivalent to 36% of payroll. By 2019, the ratio had grown to 7.22, making a 10% investment loss equivalent to 72% of payroll. The same investment return loss has become significantly more costly, as a percent of pay, over the years.



# Asset Volatility Ratio

## Impact of Varying Investment Returns

If Actual Return in FY 2020 is Equal to	Difference in Actual vs Expected Return of 6.75%	Increase in Actuarial Contribution Rate *	First Year Impact on Actuarial Contribution
4.25%	-2.50%	1.47%	0.37%
1.75%	-5.00%	2.93%	0.73%
-3.25%	-10.00%	5.86%	1.47%
-8.25%	-15.00%	8.79%	2.20%
-13.25%	-20.00%	11.72%	2.93%

\*Does not reflect the impact of asset smoothing. The increase shown is the full impact of the actual investment experience.

Please see the far right column for the estimated impact on the first year contribution.



# Summary of 2019 Valuation Results

- Current funded status and outlook for future is positive
  - ❖ Funded ratio of 86% in 2019 valuation
  - ❖ Contribution margin of 2.14% provides some cushion for adverse experience
  - ❖ Projected to be fully funded in 2026, if all assumptions are met in the future
  
- Future experience, particularly investment returns, will heavily influence the funding of the System and the sufficiency of the current statutory contribution rates.
  - ❖ General expectations are for lower returns in the next five to ten years
  - ❖ May create headwinds for improving funded ratio
  - ❖ Volatility in returns may eliminate the contribution margin and delay full funding date