



# Metropolitan Government of Nashville and Davidson County

---

**Funding Status and History of the Metro Open  
Pension Plan and the Guaranteed Payment Plan**

November 12, 2020

---



# Topics

---

- **Purpose of the Annual Actuarial Valuation**
- **Annual Plan Contribution Cost**
- **Current Funded Status and History**
- **Comparison with National Studies**
- **Summary of the Guaranteed Payment Plan**



# Fundamental Pension Fact

---

**Contributions**



**Investment  
Earnings –  
Fees**



**Benefit  
Payments**

**Determined by Actuarial Valuations based upon:**

- Assumed investment returns (adjusted for actual)
- Assumed mortality, salary increases, turnover, retirements, COLA (adjusted for actual)

**Determined by:**

- Plan investment allocation and market forces
- Fees paid by the trust (investment and non-investment)

**Determined by:**

- Metro Code
- Actual Earnings and Service History
- Participant actions
- Inflation (actual COLA)



# The Annual Valuation

---

- **Purpose of the Annual Actuarial Valuation**

- To recommend a rate of pay to be contributed to the pension trust for the July 1 – June 30 fiscal year
- Measure the funded status of the plan
- Creates the basis for the Governmental Accounting Standards Board (GASB) disclosure
  - Shown in the Comprehensive Annual Financial Report (CAFR)
- Verify the recommended rate satisfies the state minimum required contribution



# Determining the Recommended Contribution

---

## How is the Recommended Contribution Determined?

- Sum of-
  - The cost of benefits earned during the year (the “normal cost”)
  - Amortization of any unfunded liability
  - Interest
- Reported as a % of total pay

## Desirable Characteristics of the Recommended Contribution

- Fund the benefits as they are earned
- Keep the plan well funded (80% or more)
- Be reasonably level
- Be reasonably predictable



# Plan Census Information

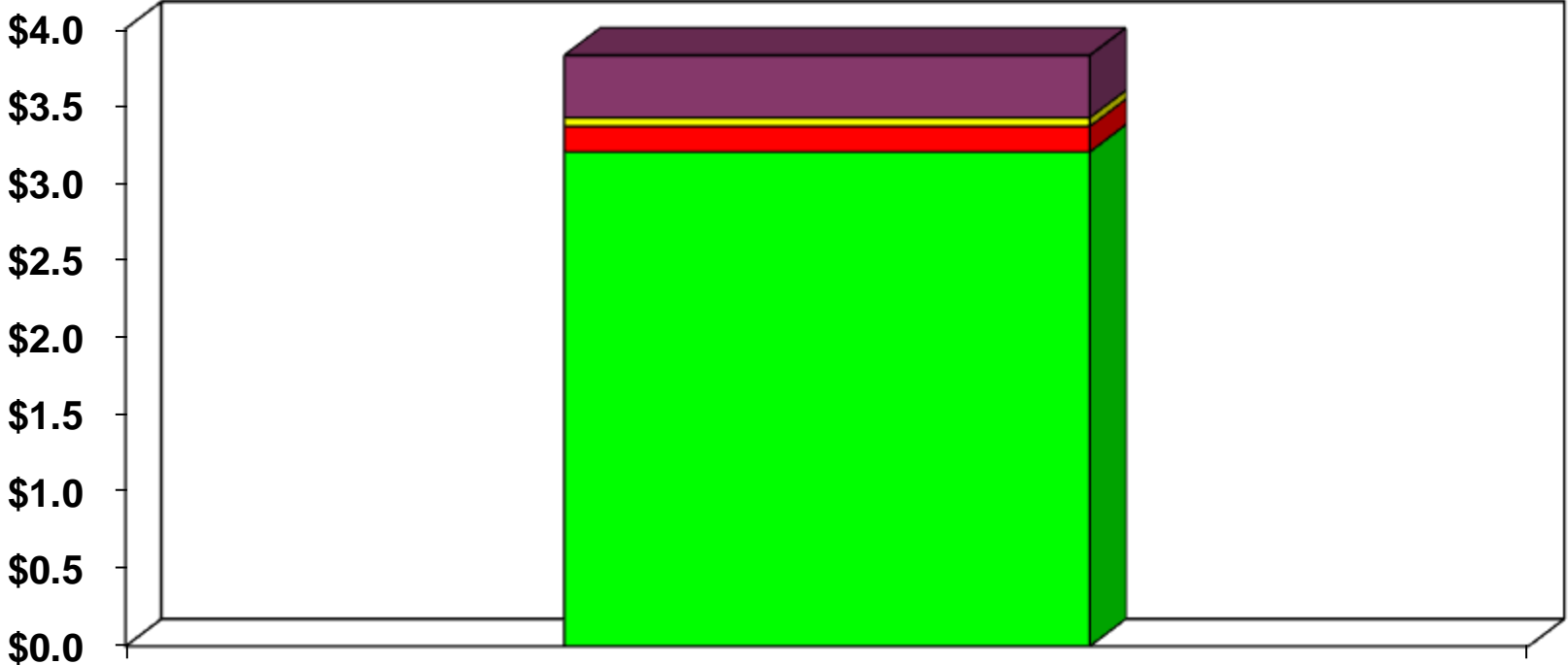
	<u>2018</u>	<u>2019</u>	<u>Percent Change</u>
<b>Active Members</b>			
Division A	58	55	-5.17%
Division B	11,543	11,773	1.99%
<b>Total</b>	<b>11,601</b>	<b>11,828</b>	<b>1.96%</b>
<b>Compensation</b>	<b>\$623,435,266</b>	<b>\$638,020,539</b>	<b>2.34%</b>
<b>Average Compensation</b>	<b>\$53,740</b>	<b>\$53,942</b>	<b>0.38%</b>
<b>Inactive Members and Beneficiaries</b>			
Retired/Disabled	8,916	9,374	5.14%
Deferred Vested	3,466	3,450	-0.46%



# Present Value of Benefits June 30, 2019

**\$ 3,829,589,009**

Billions



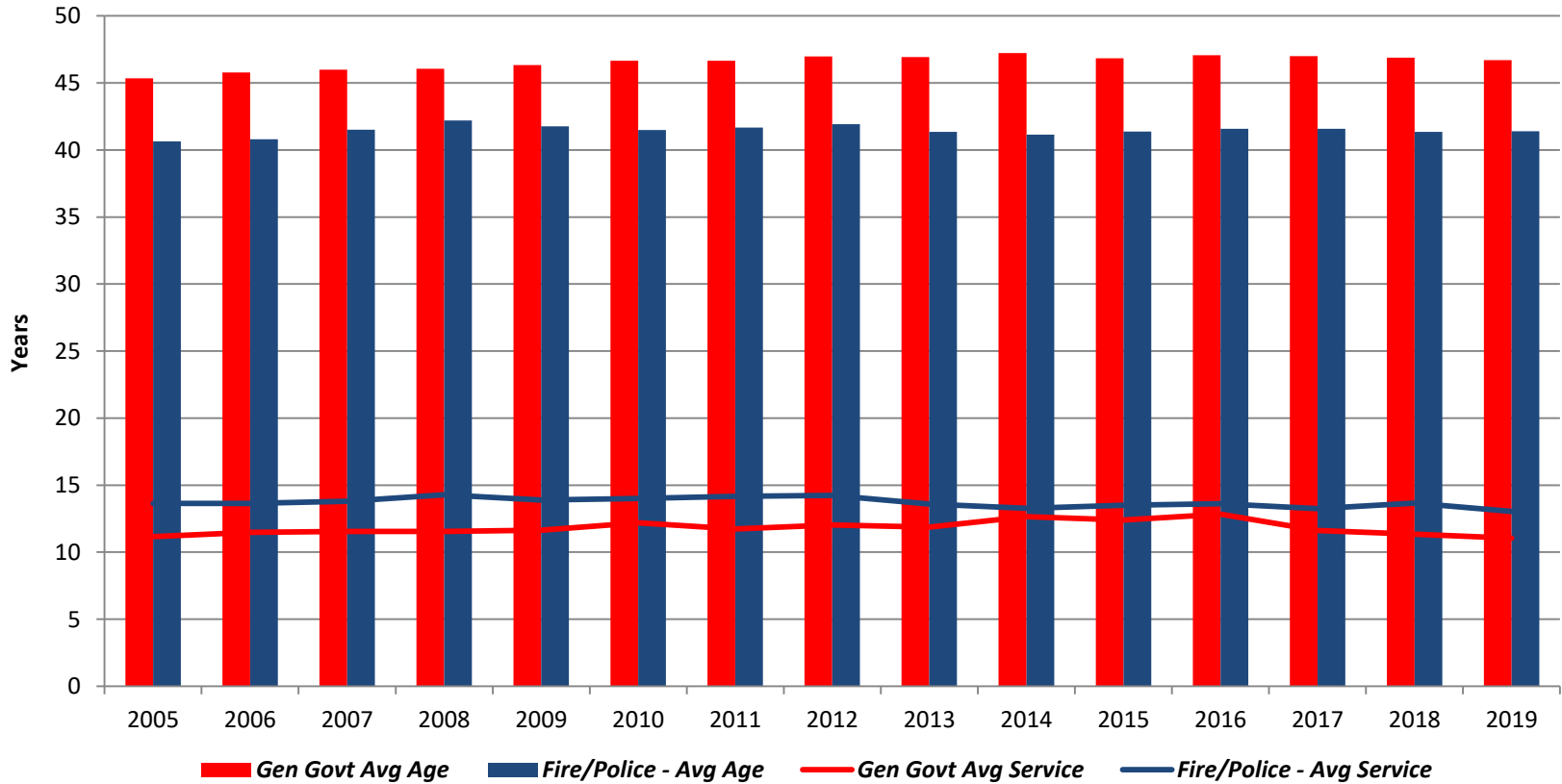
Valuation Assets	Unfunded Accrued Liability	Normal Cost	Future Normal Costs
------------------	----------------------------	-------------	---------------------

**\$3,203,494,948    \$164,680,847    \$57,106,258    \$404,306,956**



# Plan Active Population Detail

## Average Age/Average Past Service

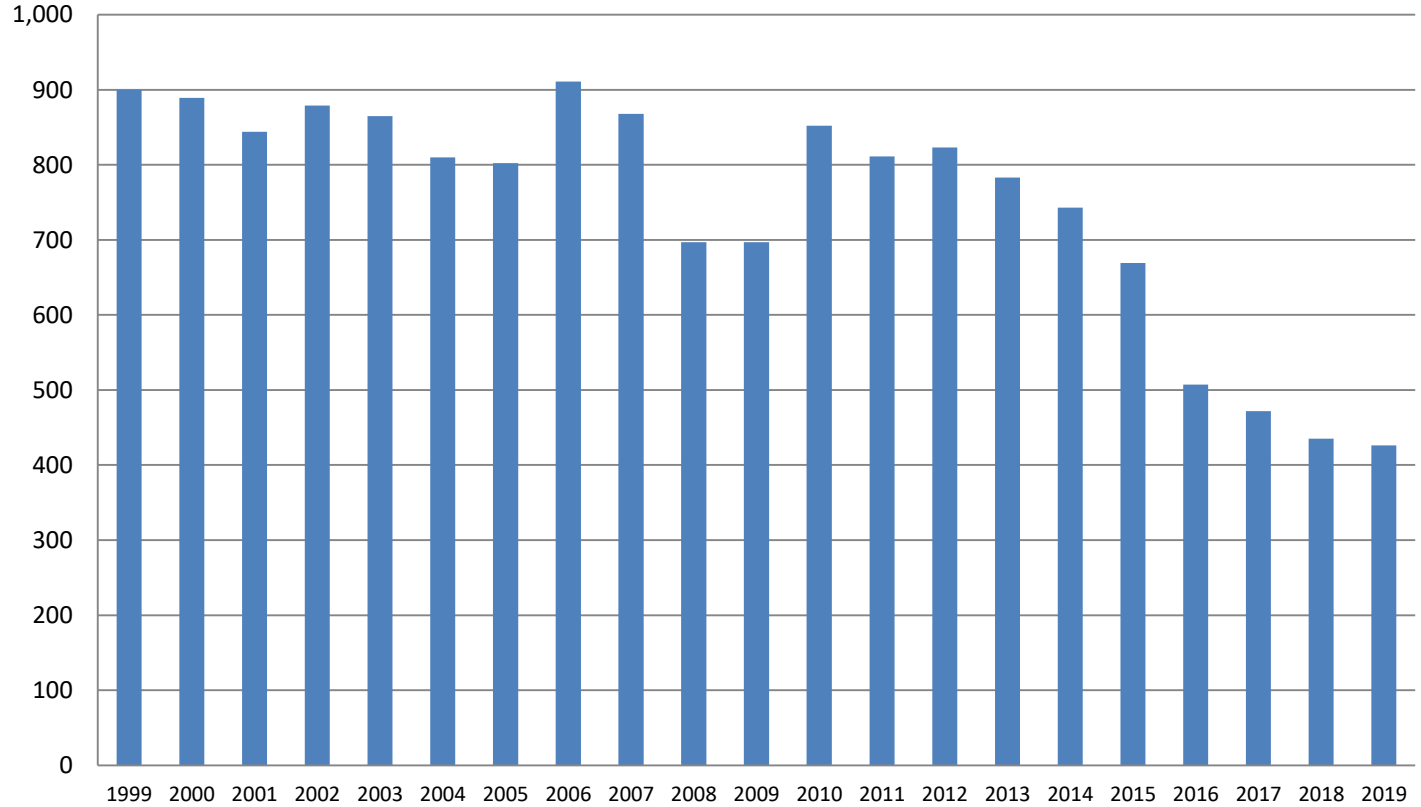






# Plan Census Information

## Number of Disabled Participants 1999 - 2019



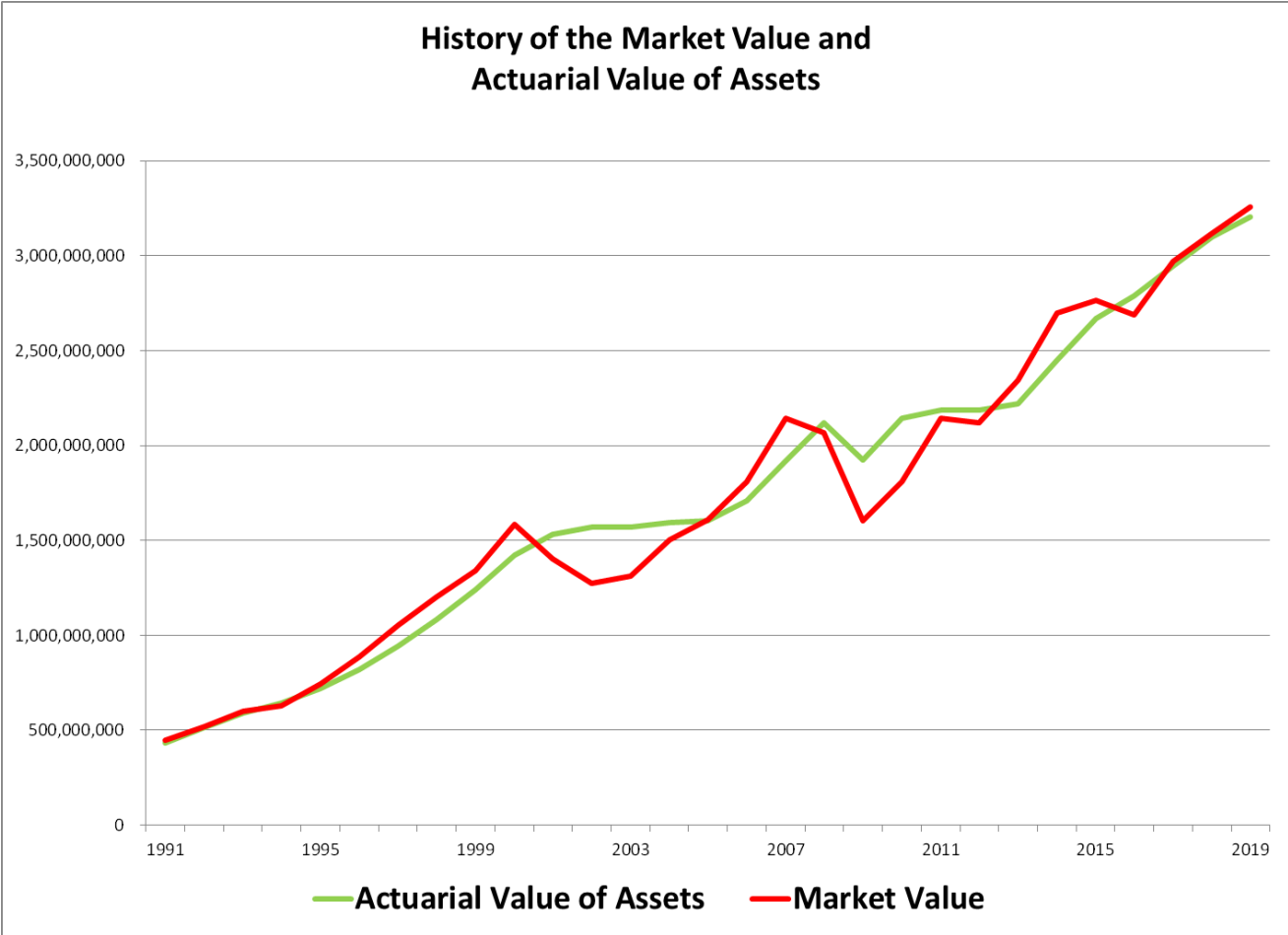


## Recommended Contribution Rate – June 30, 2019

Valuation Date	June 30, 2019	June 30, 2018
Contribution Year	July 1, 2020 – June 30, 2021	July 1, 2019 – June 30, 2020
Normal Cost	\$57,106,258	\$55,478,684
Amortization	\$17,125,985	\$17,355,837
Interest	\$2,690,918	\$2,640,251
Total	\$76,923,161	\$75,474,772
Compensation	\$638,020,539	\$623,435,778
<b>Percent of Compensation Rate</b>	<b>12.057%</b>	<b>12.106%</b>
<b>Rate Approved by the Board</b>	<b>12.340%</b>	<b>12.340%</b>



# Market Assets versus Actuarial Assets





# Historical Return Information

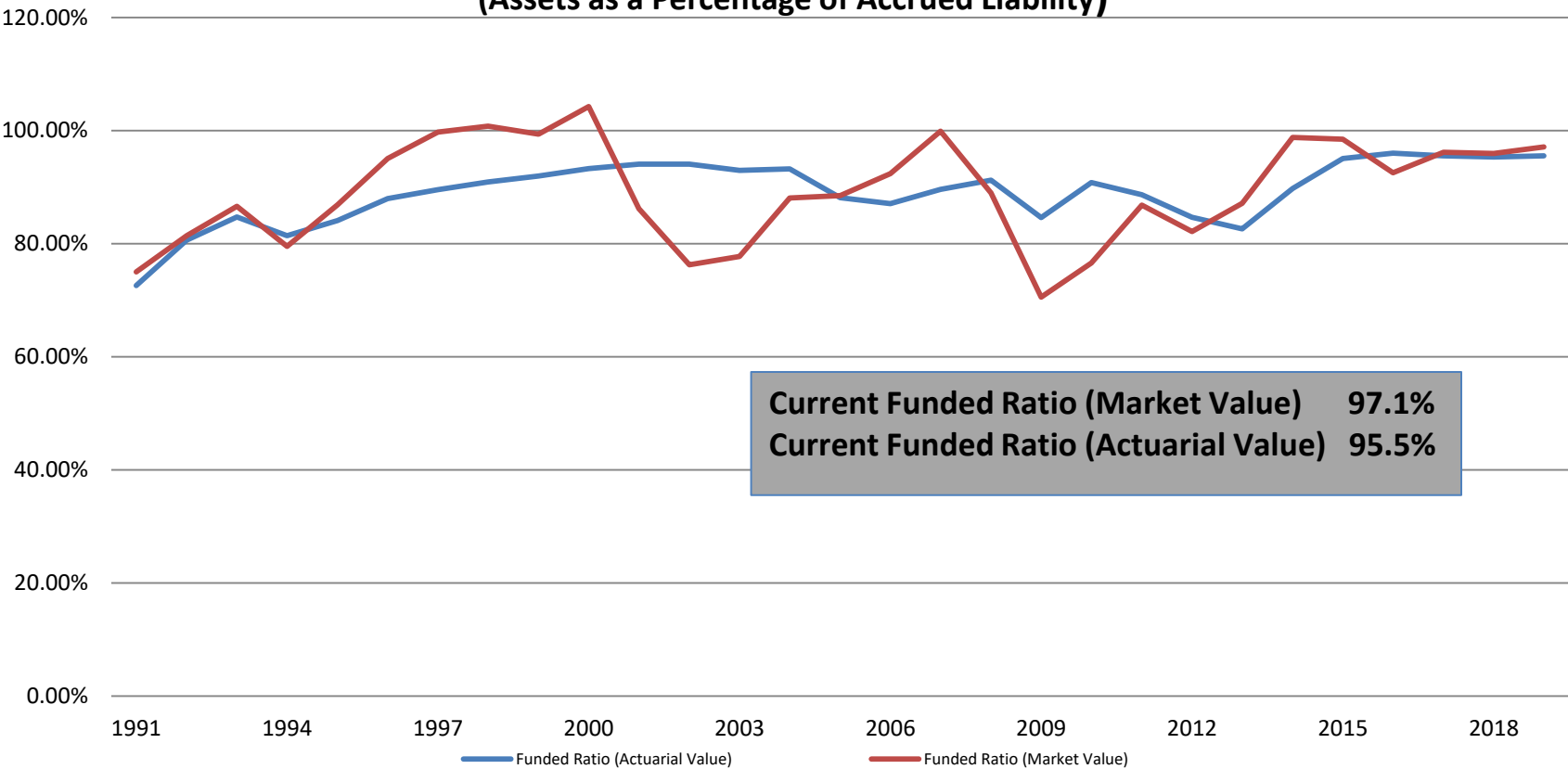
Average Return Since July 1, 1990	7.65%
Average Assumed Return over That Period	7.86%
Highest Annual Return (PYE 6/30/2011)	20.6%
Lowest Annual Return (PYE 6/30/2009)	-21.4%
Years Above Expected	19
Years Below Expected	10
Average Amount Above Expected, When Above	5.9%
Average Amount Below Expected, When Below	10.4%
Best Five Year Period (Five Years Ending 6/30/2000)	14.9%
Worst Five Year Period (Five Years Ending 6/30/2012)	1.2%



# Funded Status

## Funded Ratio of the Plan

(Assets as a Percentage of Accrued Liability)



**Current Funded Ratio (Market Value) 97.1%**  
**Current Funded Ratio (Actuarial Value) 95.5%**



# Funded Status – Recent History

---

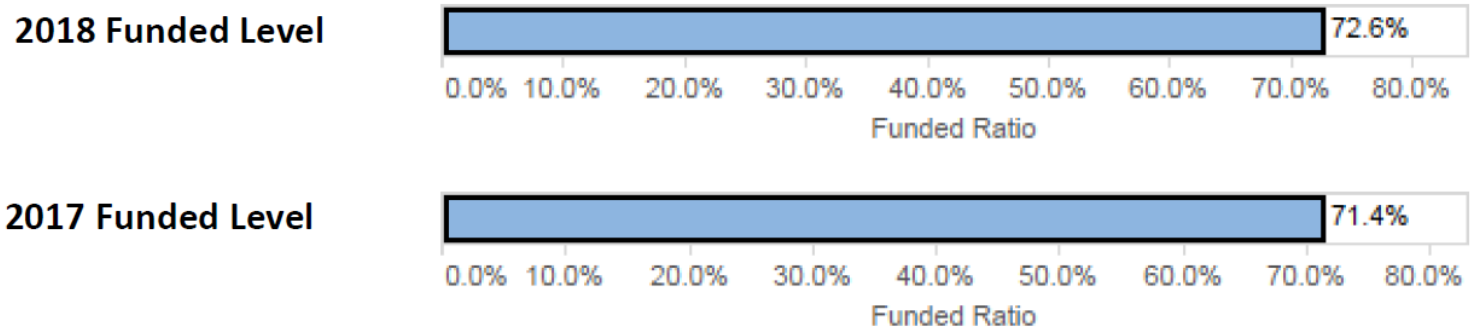
	<u>Funded Ratio (Actuarial Value)</u>	<u>Funded Ratio (Market Value)</u>
July 1, 2019	95.5%	97.1%
July 1, 2018	95.3%	95.9%
July 1, 2017	95.5%	96.1%
July 1, 2016	96.0%	92.5%
July 1, 2019 (CAFR*)	NA	96.4%

\*Comprehensive Annual Financial Report



# Funded Status Comparison

The average funded level is 72.6 percent, up from 71.4 percent in 2017. Plans eligible for Social Security tended to have higher funded levels.



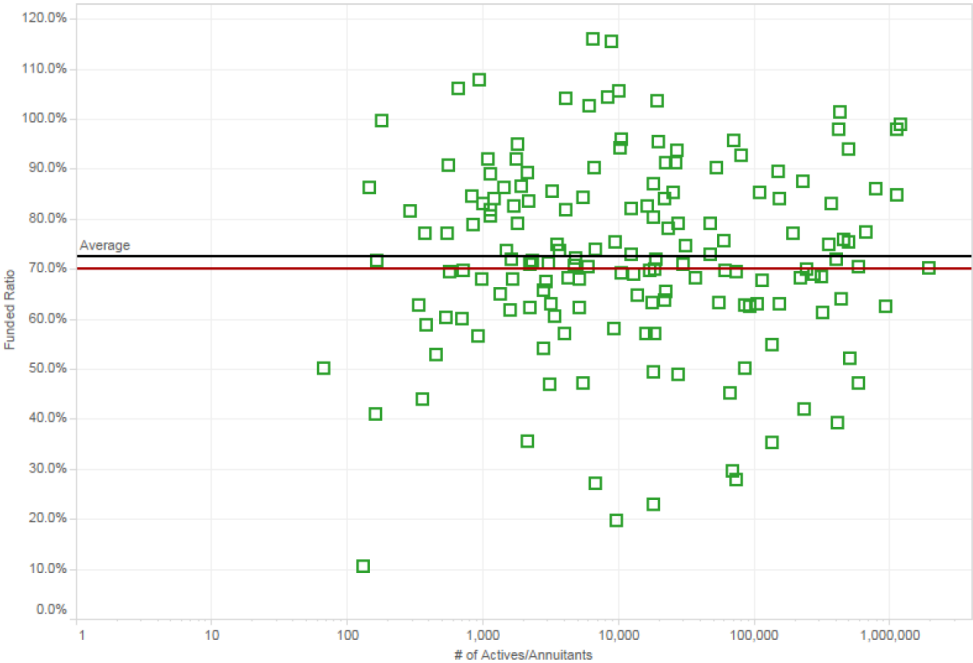
From the 2018 NCPERS Public Retirement Systems Study



# Funded Status Comparison

The bottom graph shows the distribution of funded levels and fund size. The vertical axis shows level of funding, and the horizontal axis shows the size of the fund by total active and retired participants. The black center line denotes the average of 72.6 percent, and the red center line denotes the 70 percent funding target that Fitch Ratings considers to be adequate.

2018 Funded Level Distribution

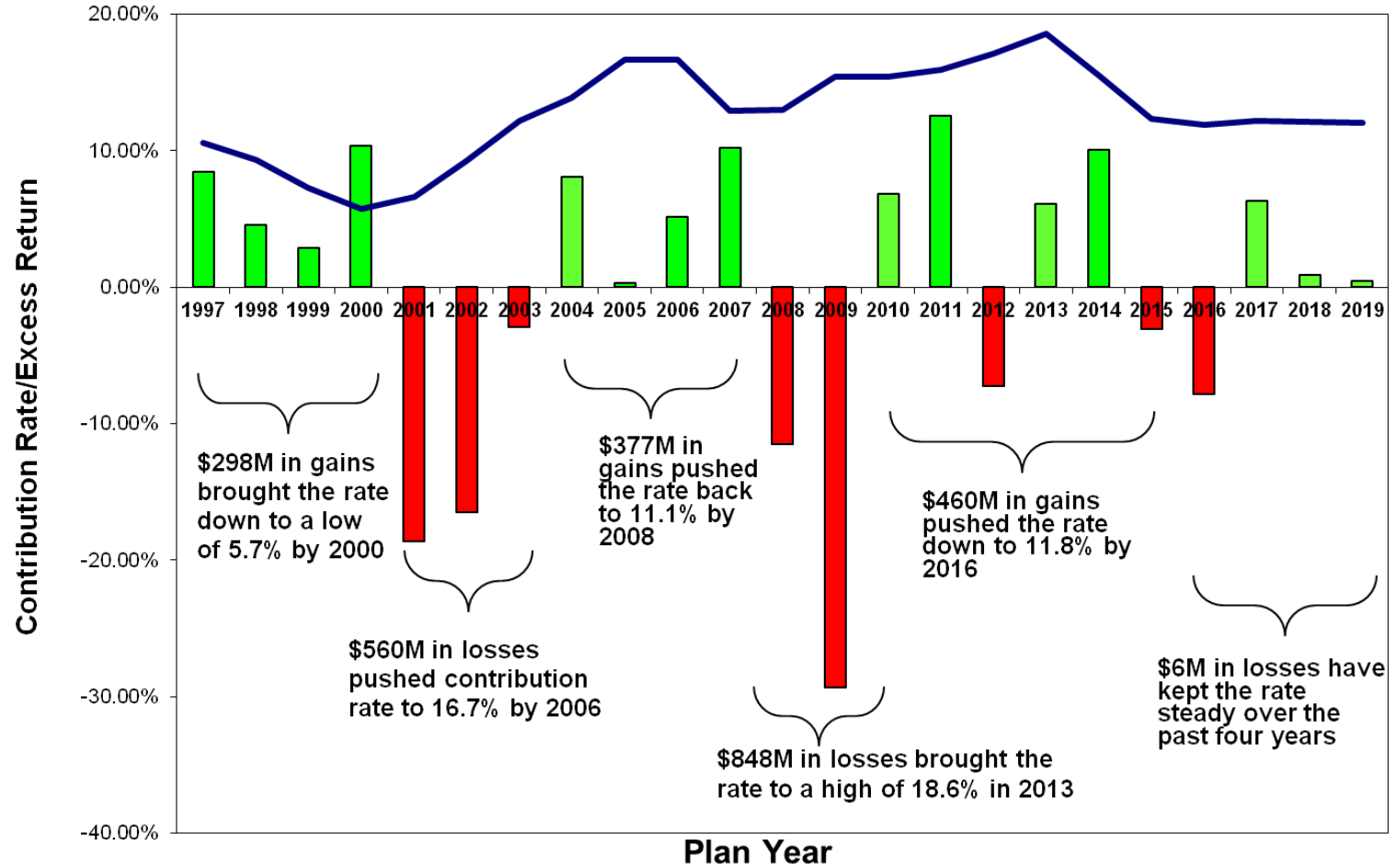


From the 2018 NCPERS Public Retirement Systems Study



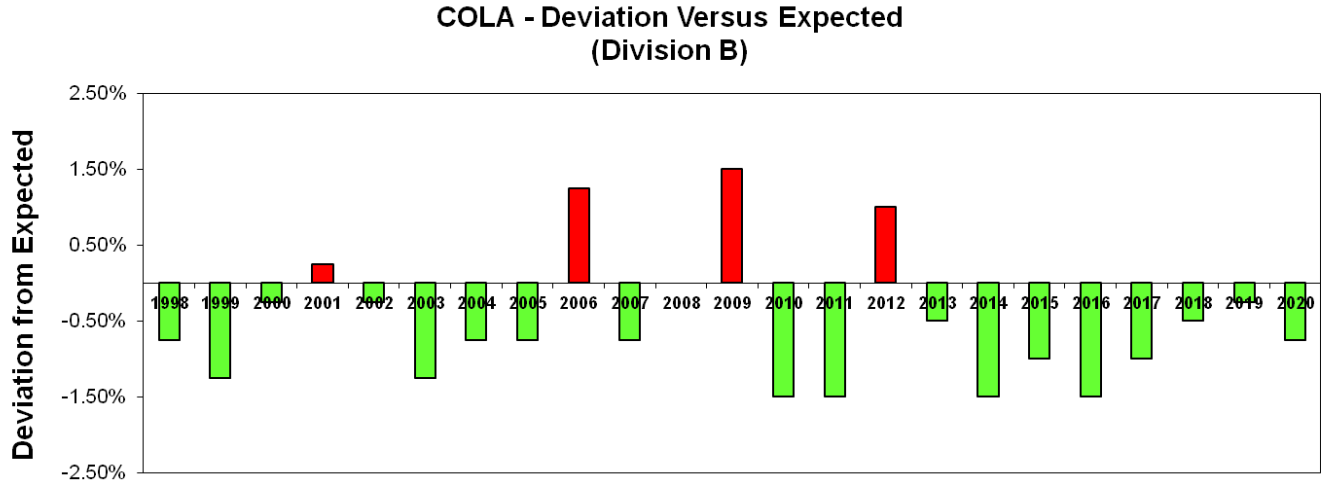
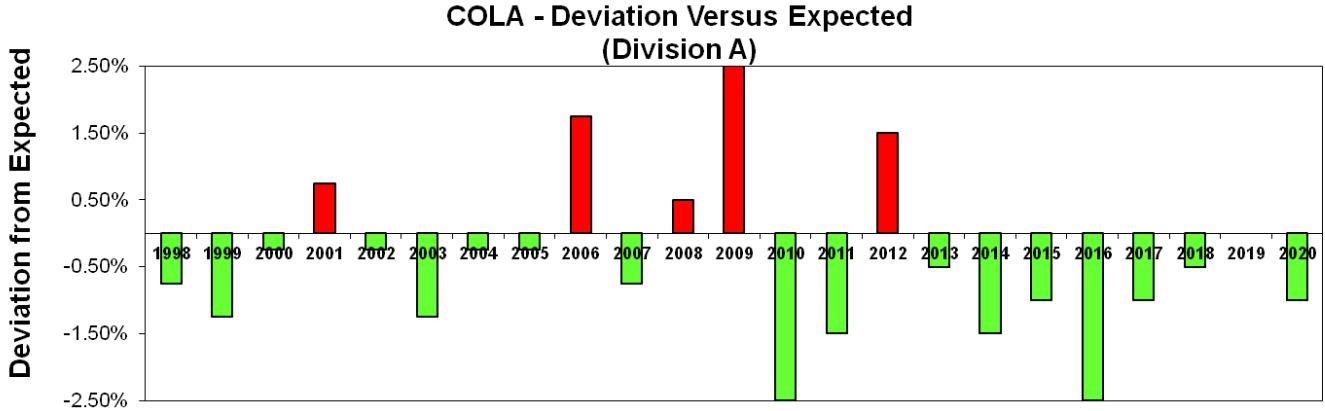


# Surplus/Shortfall Return and the Contribution Rate





# Annual Cost of Living Adjustment (COLA) Deviation from Expected





## Contribution Rate Trend – Projection Assumptions

---

- Existing gains and losses continue to be recognized
- Three Investment return scenarios:
  1. Baseline Scenario-
    - 7.25% annual return for all future years
  2. 8.25% Annual Return for 2019/2020
    - 7.25% annual return after 2019/2020
  3. 6.25% Annual Return for 2019/2020
    - 7.25% annual return after 2019/2020
- All other plan assumptions are realized with respect to retirements, deaths, salary increases and turnover
- Future new entrant groups are consistent with 2018-2019 new entrants



# Contribution Rate Trend – Existing Gains and Losses

---

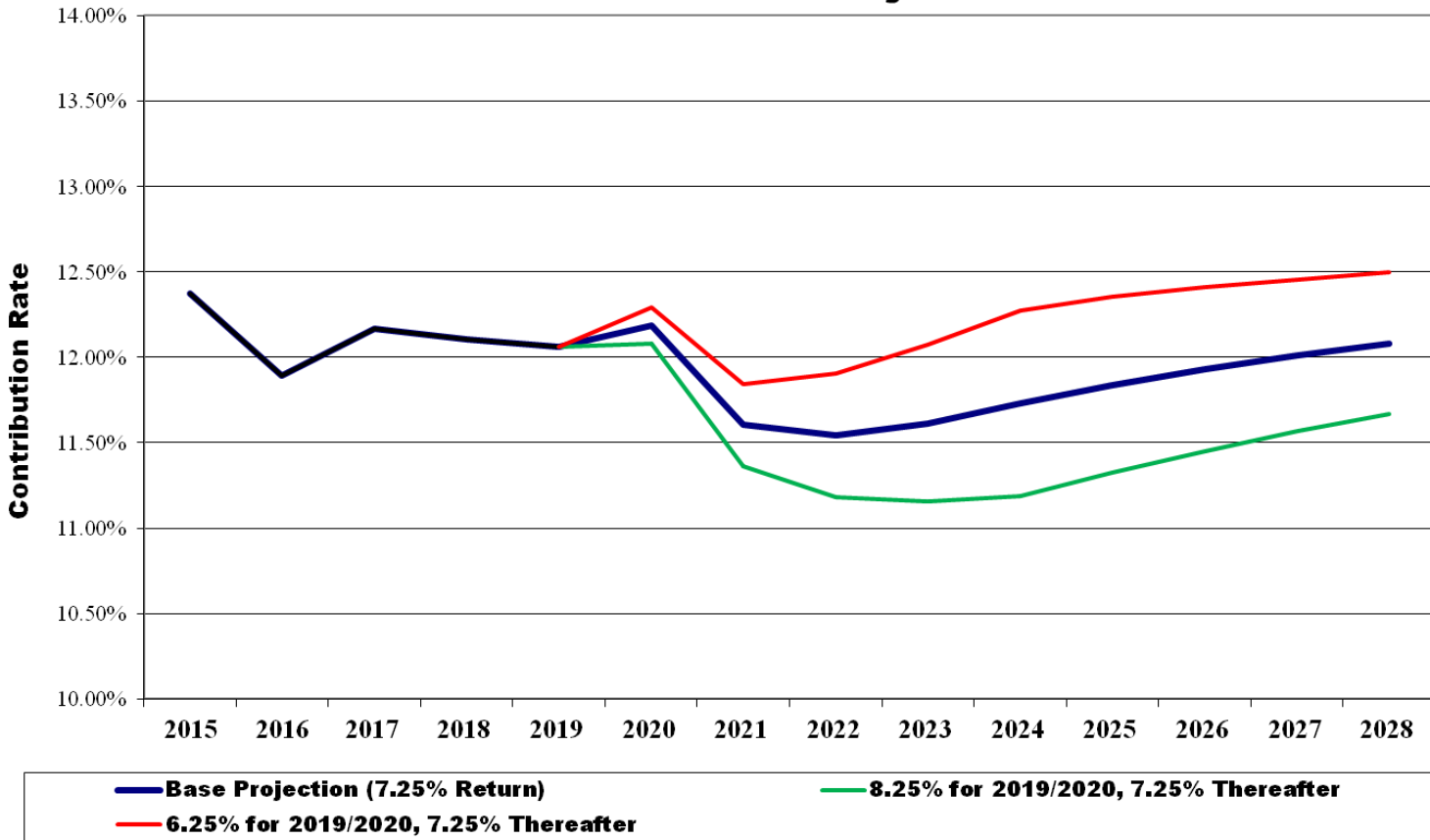
<b>Amount Recognized Each Year</b>
------------------------------------

	<u>Original Gain/(Loss)</u>	<u>June 30, 2020 Valuation Assets</u>	<u>June 30, 2021 Valuation Assets</u>	<u>June 30, 2022 Valuation Assets</u>	<u>June 30, 2023 Valuation Assets</u>
<b>2016 Loss</b>	(213,172,182)	(42,634,436)			
<b>2017 Gain</b>	166,357,119	33,271,424	33,271,424		
<b>2018 Gain</b>	25,939,448	5,187,890	5,187,890	5,187,890	
<b>2019 Gain</b>	15,020,989	3,004,198	3,004,198	3,004,198	3,004,198
<b>Total Recognized Each Year</b>		(\$1,170,925)	\$41,463,511	\$8,192,087	\$3,004,198



# Projected Contribution Rate Trend

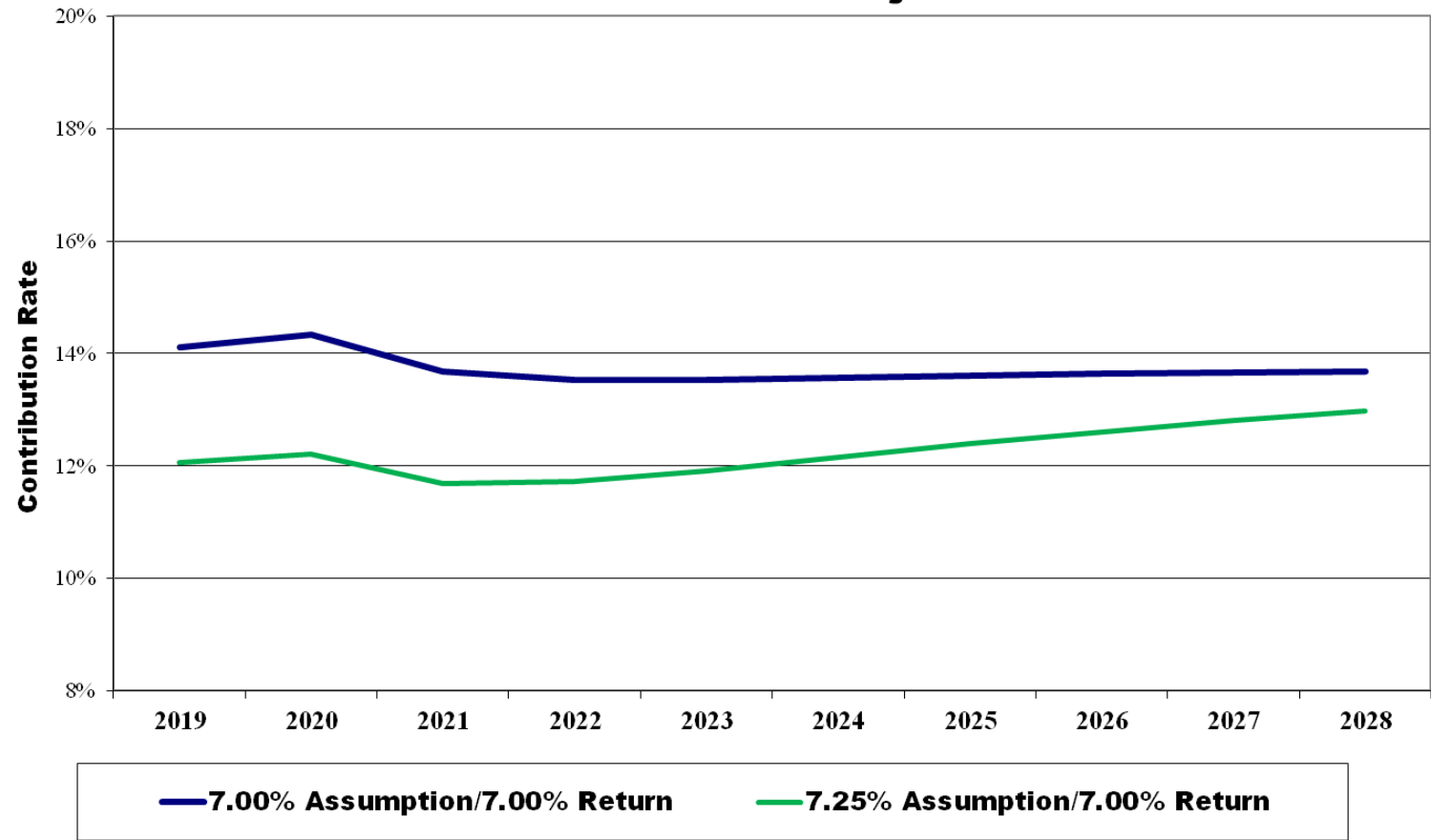
## Metro Open Plan Contribution Projection





# Impact of Investment Assumption

## Metro Open Plan Contribution Projection





# Contribution Rates Percentage of Total Payroll

---

<b>Minimum (Metro Code)</b>	<b>11.083%</b>
<b>Minimum (State Law)</b>	<b>11.335%</b>
<b>Recommended (15 Year Amortization)</b>	<b>12.057%</b>
<b>Level Rate</b>	<b>12.340%</b>



# The Guaranteed Payment Plan (GPP)

---

- Metro (and Metro Public Schools) have five old closed/frozen pension plan
  - Metro Teacher's Retirement Plan
  - Former City/County Teacher's Plans
  - Former City/County Employees Plans
- Section 2.24.470 of the Metro Code created the GPP to systematically fund these five plans over a 30 year period
- On July 1, 2000, the status of these plans were as follows-
  - Assets of \$105MM (all in the Metro Teachers Plan)
  - Liabilities of \$444MM
  - Annual Benefit Payment of \$44.4MM
- Annual funding established at \$33,577,294 per year





# The Guaranteed Payment Plan (GPP)

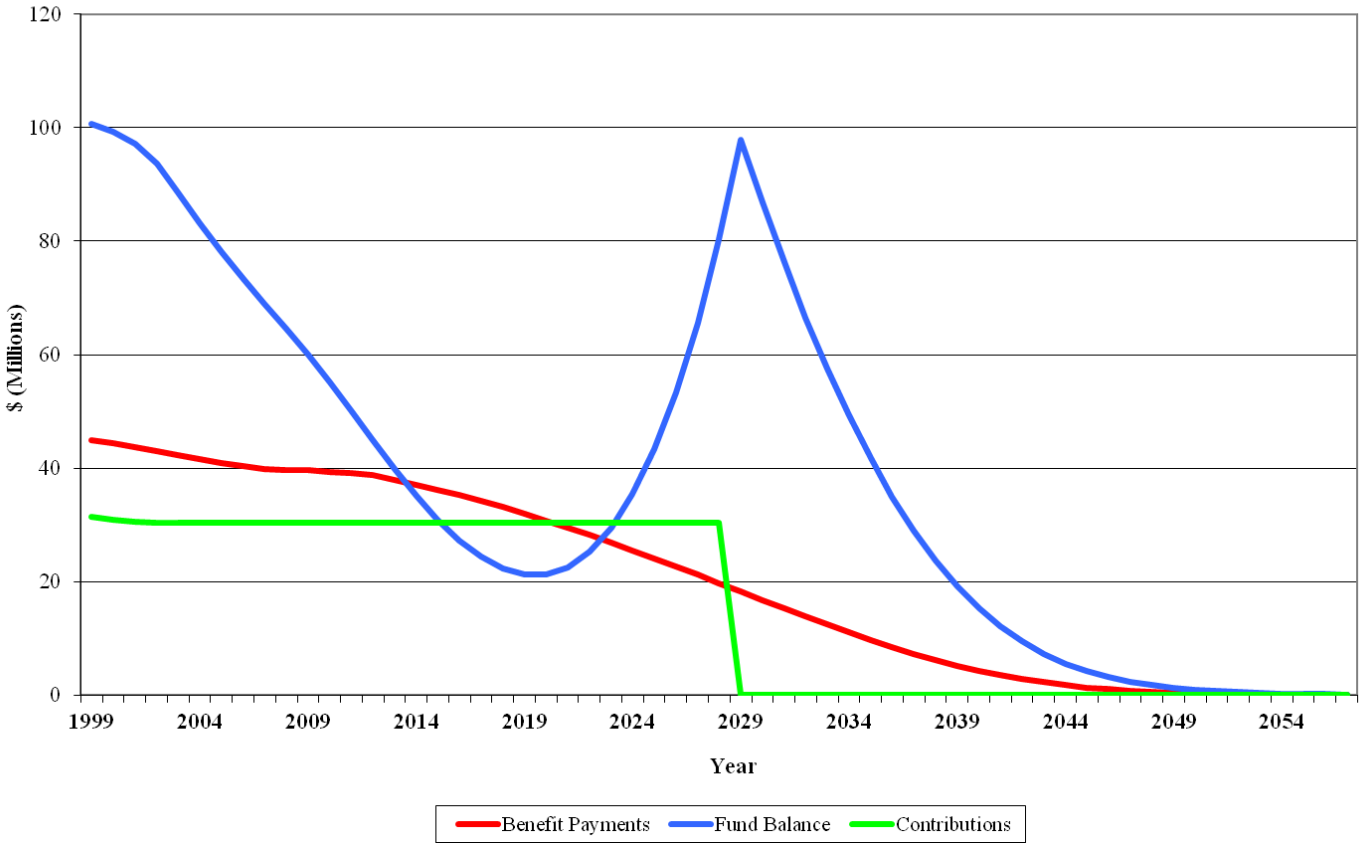
	<b>Number of Participants</b>	<b>Annual Pension Payments* (Millions)</b>	<b>Average Age</b>
Closed City Plan	273	\$5.1	84.9
Closed County Plan	55	1.0	84.7
City Teachers Plan	73	1.2	88.3
County Teachers Plan	143	2.8	86.2
Metro BOE Plan	825	19.8	80.5
<b>Total</b>	<b>1,369</b>	<b>\$29.9</b>	<b>82.6</b>

\*Net of State Funding for the Plans



# Original GPP Projection

Projection of Expected Cash Flows





# The Guaranteed Payment Plan (GPP)

---

	<b>Projected 2019 Status (From 2000)</b>	<b>Actual 2019 Status</b>
Annual Payments*	\$33.9	\$29.9
Plan Liabilities	\$262.6	\$229.2
Plan Assets	\$19.2	\$111.6
Remaining Unfunded Liabilities	\$243.4	\$117.6
Remaining Amortization Period	11 Years	4 Years

\*Net of State Funding for the Plans



# The Guaranteed Payment Plan (GPP)

---

- The GPP will approach full funding over the next few years
- The plans can (and will) continue to have gains and losses that could require additional funding after the GPP payments cease
  - Investment gains and losses will be primary source
  - Participant/beneficiary mortality
  - Cost of living adjustments



# Questions/Discussion

---

---

---

---

---

---

---

---