

Employees Retirement System

2017 Budget Overview
Finance & Personnel Committee
October 7, 2016

Budget Data

| | 2016 ADOPTED BUDGET | 2017 PROPOSED BUDGET | DIFFERENCE (amount, %) |
|-------------------------------|------------------------|-------------------------|---------------------------|
| FTEs – O&M | 43.50 | 43.50 | 0 (0%) |
| FTEs - Other | 0 | 0 | 0 (0%) |
| | | | |
| Salaries & Wages | \$2,803,664 | \$2,852,489 | \$48,825 (+1.71%) |
| Fringe Benefits | \$1,345,759 | \$1,283,620 | \$-62,139 (-4.84%) |
| Operating Expenditures | \$22,290,000 | \$20,283,000 | \$-2,007,000 (-9.89%) |
| Equipment | \$204,000 | \$564,000 | \$360,000 (63.83%) |
| Special Funds | \$0 | \$0 | \$0 (0%) |
| TOTAL | \$26,643,423 | \$24,983,109 | \$-1,660,314 (-6.65%) |

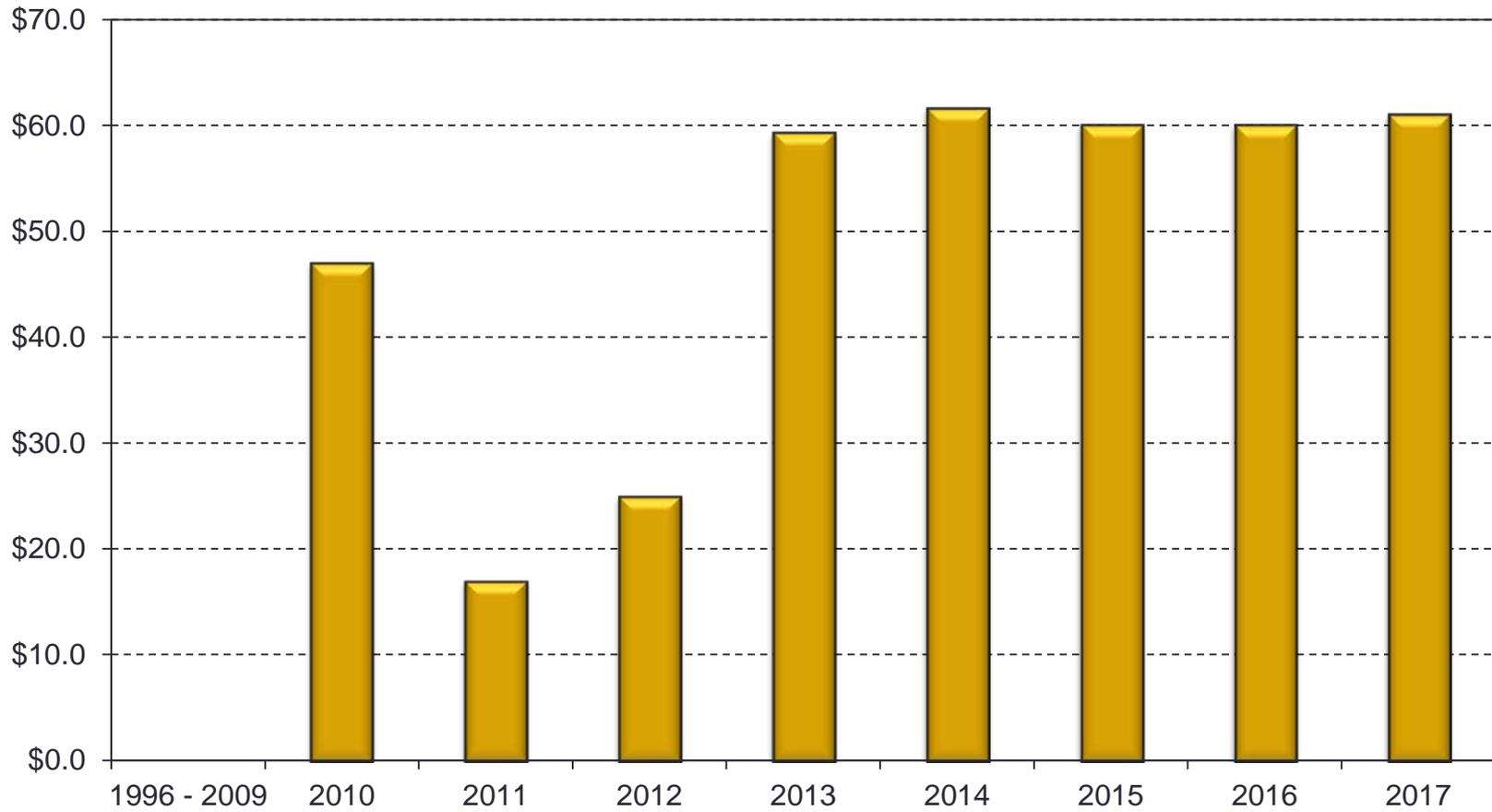
Pension Fund Status January 1, 2016

- ❑ 96.7% on an actuarial basis
- ❑ 93.8% on a market basis
- ❑ 7.0% return on investment on actuarial value
- ❑ .52% return on investment on market value

2017 Pension Contribution

- ❑ Pension reserve fund will have a balance of approximately \$15.4 million at year-end
- ❑ The budget provides a payment of \$61 million for the Employer Contribution
- ❑ No utilization of the pension reserve funds
- ❑ No member contribution paid by the employer; employee now pay there own contributions

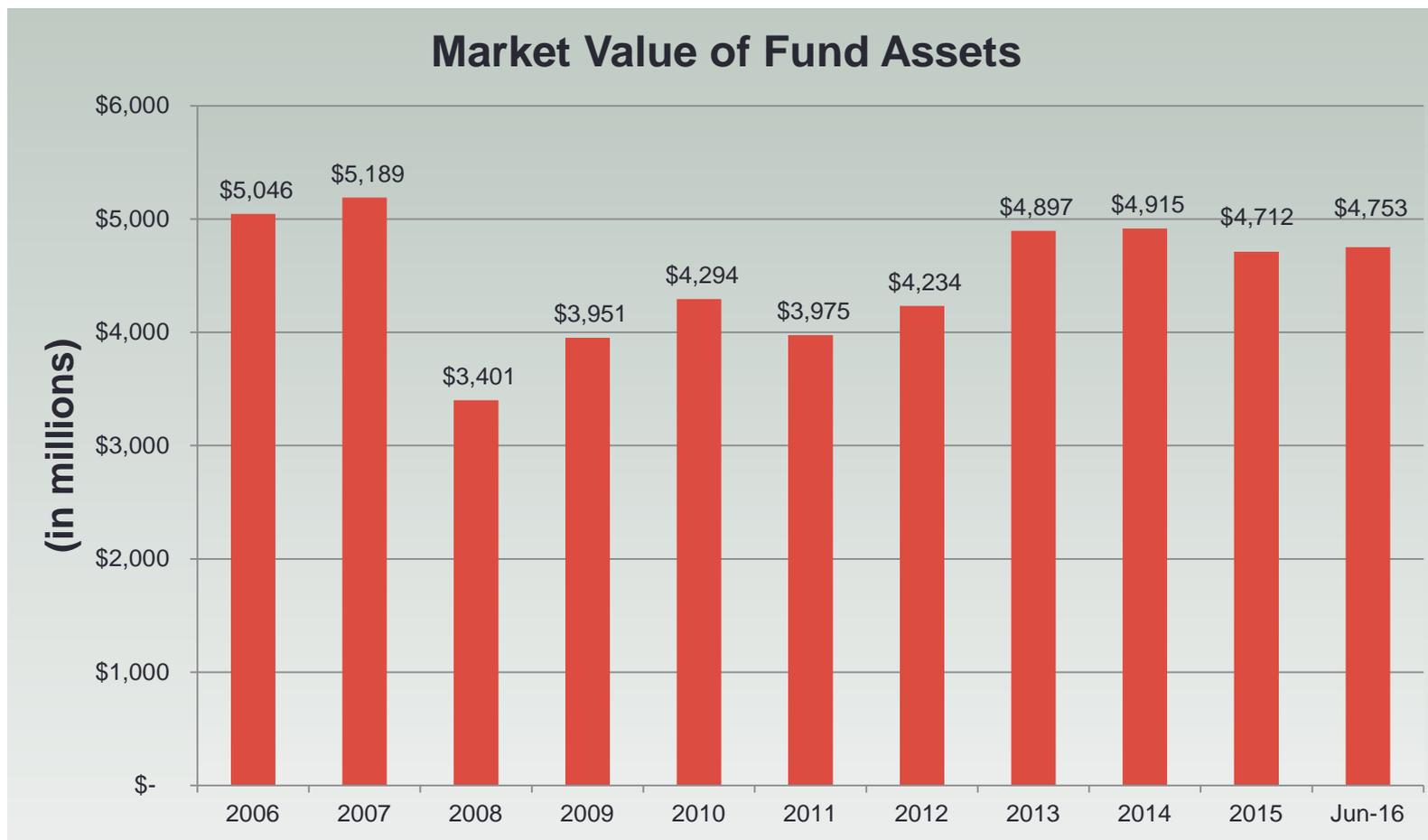
“New Normal” for Employer Pension Contributions



Contributions in 2011 and 2012 were made to the employer's pension reserve. 2018-2022 contributions will be based on a reset of stable contribution rates. Actuary has indicated a 1.5 percentage point increase to the Police rate is possible, which is a \$2.3 million annual contribution impact. Source: City Budget documents.

Fund Value of Assets: 2006 - 2016

(Year Ended Dates reflect 12/31 Fund Values)



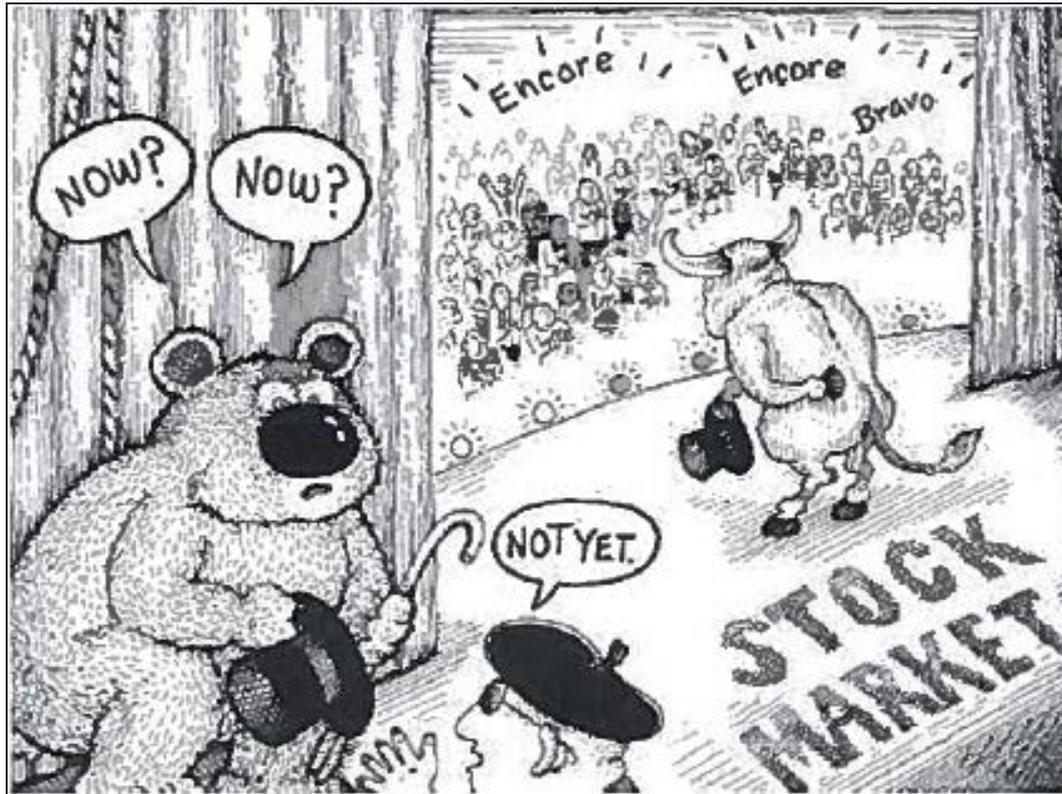
| | |
|-------------------------|---------------|
| Benefit Payments | \$2.7 billion |
| Expenses | \$182 million |
| Contributions | \$716 million |
| Investment Gain | \$1.9 billion |



Source: Morningstar Direct

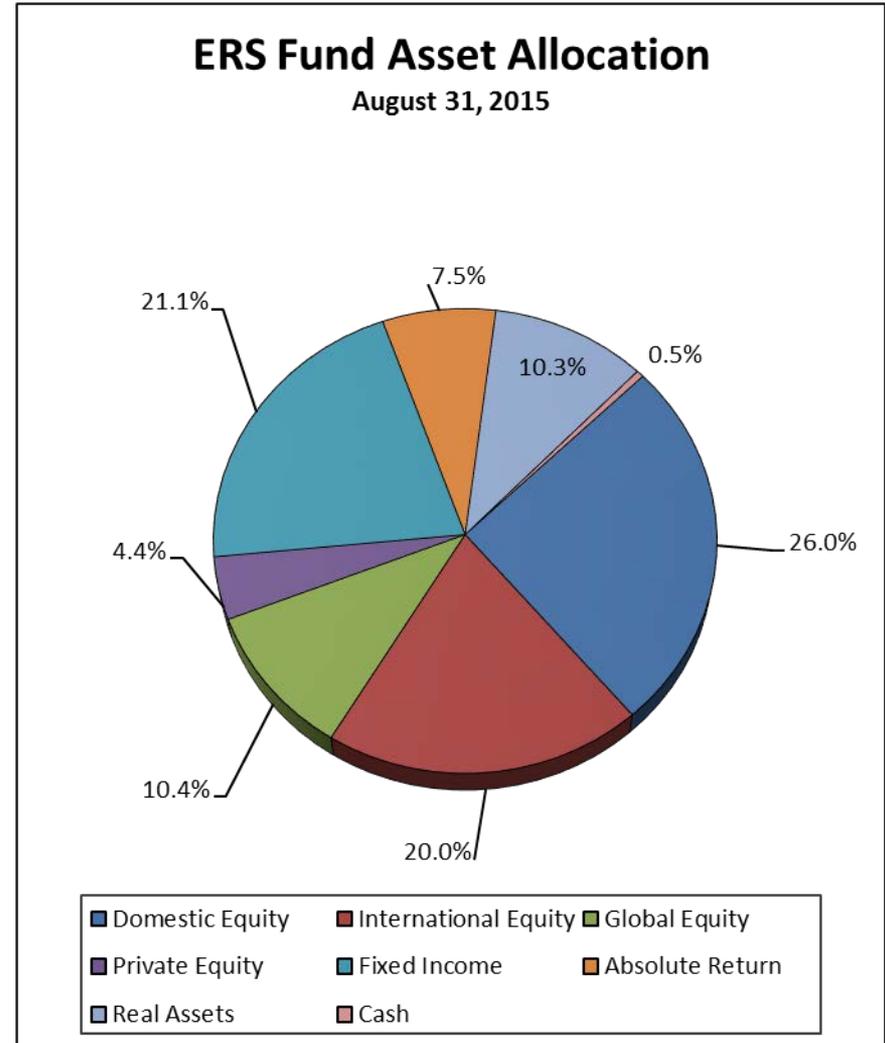
*9 1/2 Year Estimates (1/1/07 - 6/30/16)

“What’s the Next Act?”

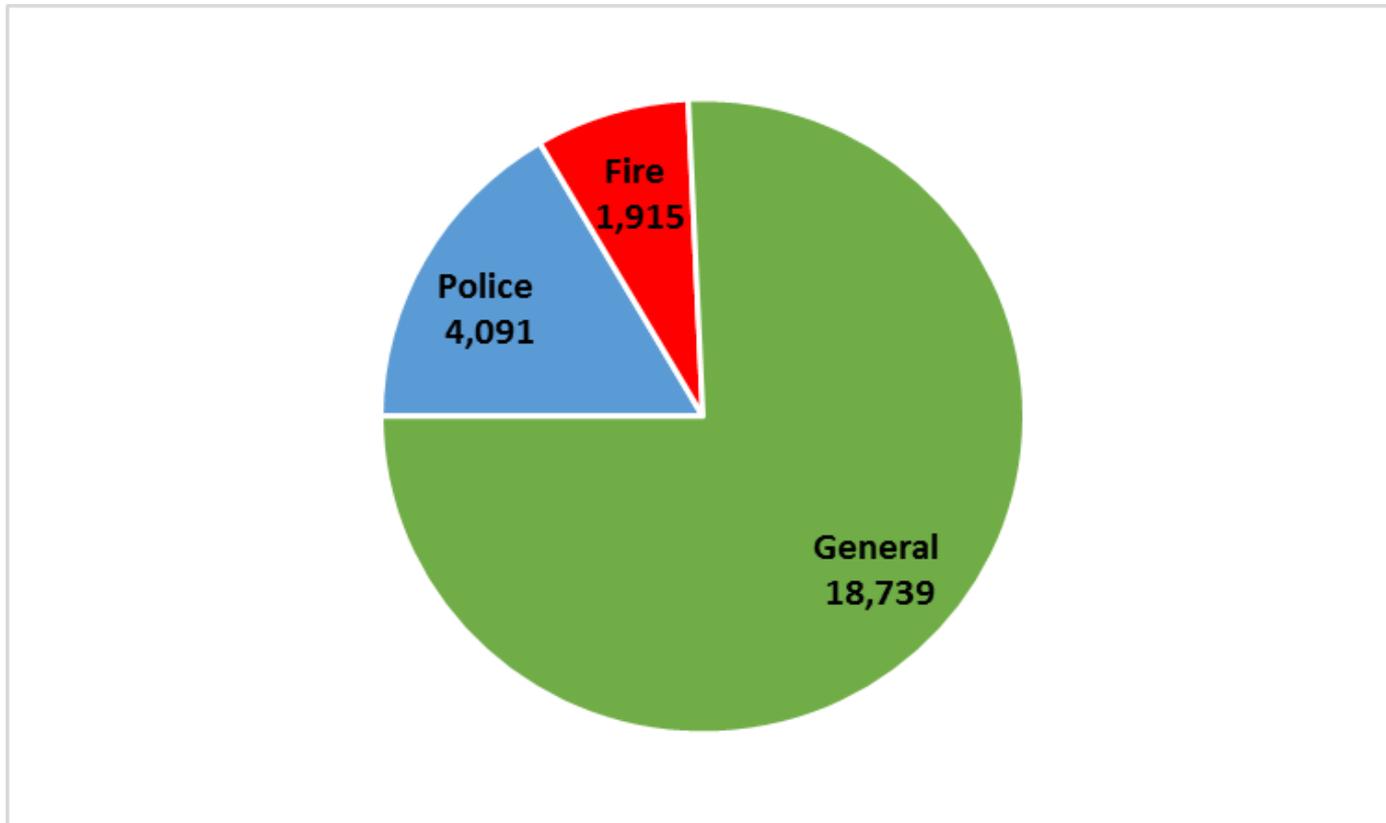


General Pension Fund Statistics

- ❑ Fund Value: \$4.87 billion (as of Aug. 31, 2016)
- ❑ Membership Breakdown (per 2016 valuation):
 - Actives: 10,982
 - Deferred: 3,338
 - Retirees / Beneficiaries: 12,763
- ❑ Actuarial Funded Status: 96.7% (per 2016 actuarial valuation; 93.8% based on market value)
- ❑ Total Annual Pension Payroll: \$336.3 million (est. for 2016 based on actuals through August 2016)
- ❑ Total Annual Pensionable Wages : \$551.0 million (est. for 2016 based on YTD actuals through pay pd.18)
- ❑ Total Annual Member Contributions: \$32.7 million (est. for 2016 based on YTD actuals through pay pd.18)

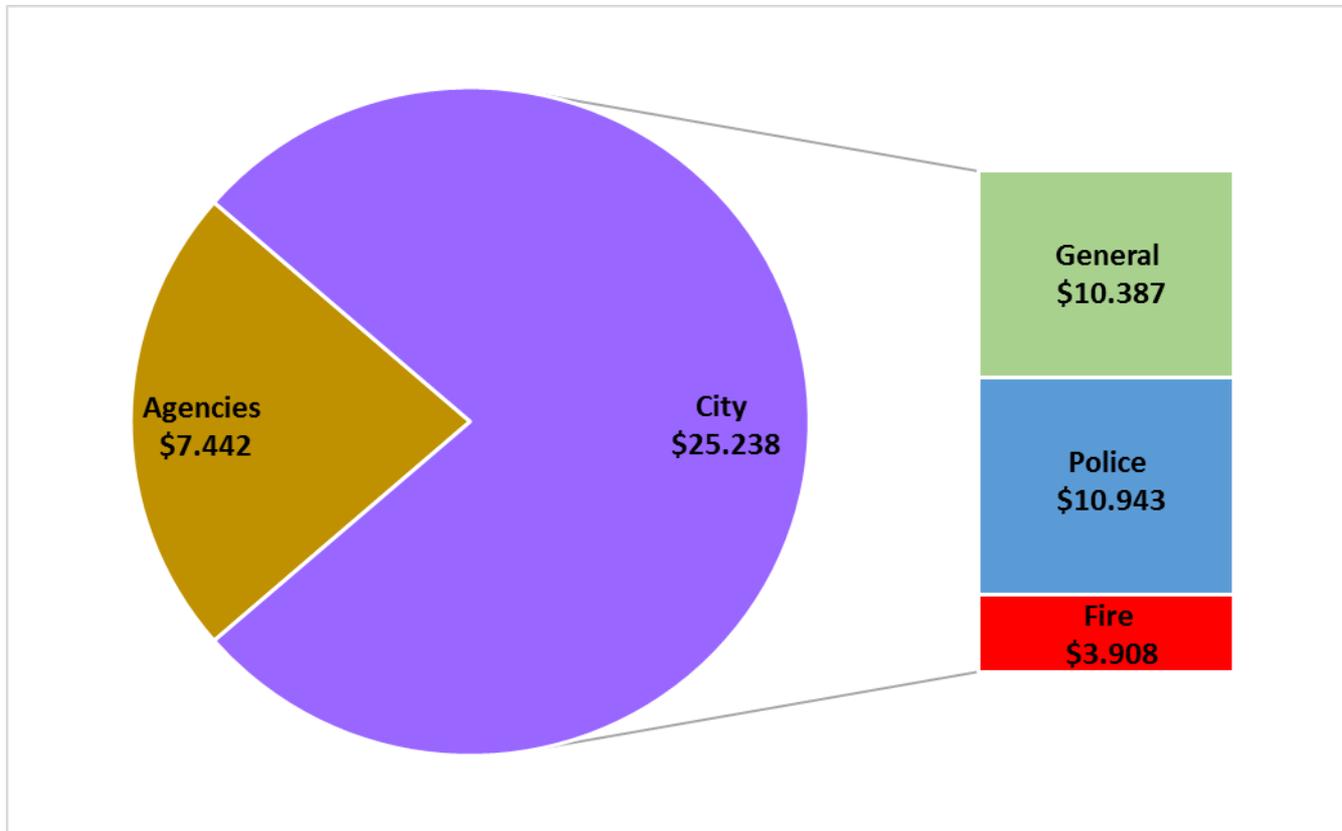


CMERS Participant Headcount (Active, Deferred and Retired) as of August 31, 2016



(chart does not include survivors/beneficiaries in payment)

Total Annual Member Contributions (in millions) (projected for 2016)



Stable Employer Contribution Policy

| Group | Employer Rate based on: | | |
|-------------|-------------------------------------|--------------------------------|---------------------------------------------|
| | Stable Employer Contribution Policy | Prior Contribution Requirement | Market Based Prior Contribution Requirement |
| General | 8.48% | 6.89% | 8.52% |
| Policemen | 22.63% | 20.81% | 24.13% |
| Firefighter | 24.83% | 20.80% | 24.55% |

- The Prior Contribution Requirement would have provided for a smaller contribution this year
- This is in line with our final projections, which show the Stable Employer Contribution Policy rates being higher in the future
- The Market Based Prior Contribution Requirement is an indicator of where the contribution rates would head if we were to reset the stable policy now. Based on this year's early indicator, a 1.5% increase for police, and the others are similar. We will be resetting in a year. If we have another down year, and we have to decrease the discount rate, it is possible to see a bit of an increase in the stable rates.

Stable Employer Contribution Policy

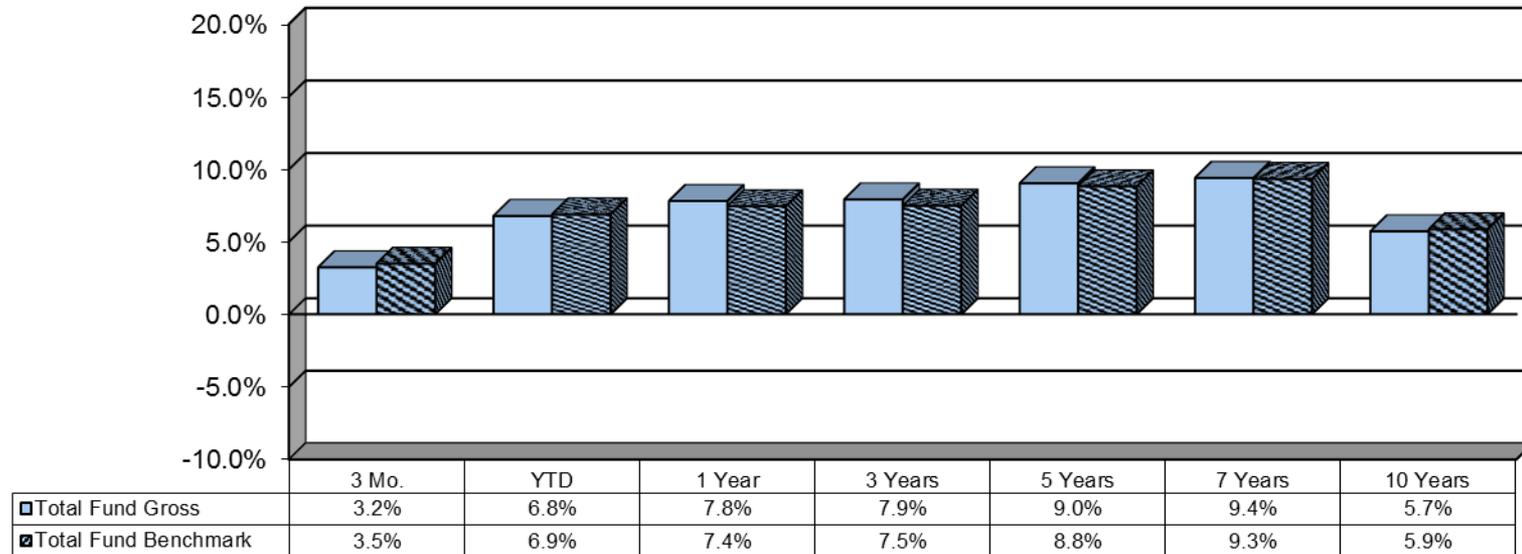
| | General | Police | Fire |
|-------------------------------------|---------|--------|--------|
| Stable Employer Contribution Policy | 8.48% | 22.63% | 24.83% |
| Prior Contribution requirement | | | |
| 2013 | 10.60% | 25.87% | 27.18% |
| 2014 | 8.36% | 22.60% | 22.86% |
| 2015 | 6.96% | 19.93% | 19.98% |
| 2016 | 6.89% | 20.81% | 20.80% |
| Average | 8.20% | 22.30% | 22.71% |

When the rates are reset in late 2017, the funded ratio in 2017 will factor heavily in rate setting. The table above shows that for the last three years the contribution rate has been higher under the stable rate than would have been under the previous policy. In the first year the contribution was less than what would have been under the prior policy

CMERS Investment Performance History

Periods Ending August 31, 2016

August 31, 2016



■ Total Fund Gross

▨ Total Fund Benchmark

Active Management versus Passive Analysis

21-Years

1/1/95 - 12/31/15

MERS' decision to hire some active managers versus hiring only passive managers.

| | | Time Weighted Returns | | | Dollar Weighted Estimates (Net of fees) | | |
|------------------------------------------------------------------------------------------|--------------------|-----------------------------|-------------|------------------|-----------------------------------------|---------|--------------------------|
| | | Annualized MERS Asset Class | | Annualized Index | Value of a Dollar Invested in | | Active Management Impact |
| MERS Asset Class | Index | Gross | Net of fees | Net of fees | MERS Asset Class | Index | \$Millions |
| Domestic Equity | Russell 3000 | 9.83% | 9.57% | 9.47% | \$ 6.82 | \$ 6.68 | \$ 121.8 |
| International Equity* | MSCI EAFE | 6.96% | 6.56% | 4.16% | \$ 3.48 | \$ 2.23 | \$ 331.7 |
| Global Equity ** | MSCI World / ACWI | 6.66% | 6.27% | 7.57% | \$ 1.42 | \$ 1.52 | \$ (25.5) |
| Fixed Income | Barclays Aggregate | 7.08% | 6.98% | 5.92% | \$ 4.13 | \$ 3.34 | \$ 206.6 |
| Estimate of Fund's benefit from its decision to hire active managers over past 21 years. | | | | | | | \$ 634.5 |

Manager Fees for indices are assumed to be:

Russell 3000 Index - 2 basis points

MSCI EAFE Index - 5 basis points

MSCI World / ACWI Index - 5 basis points

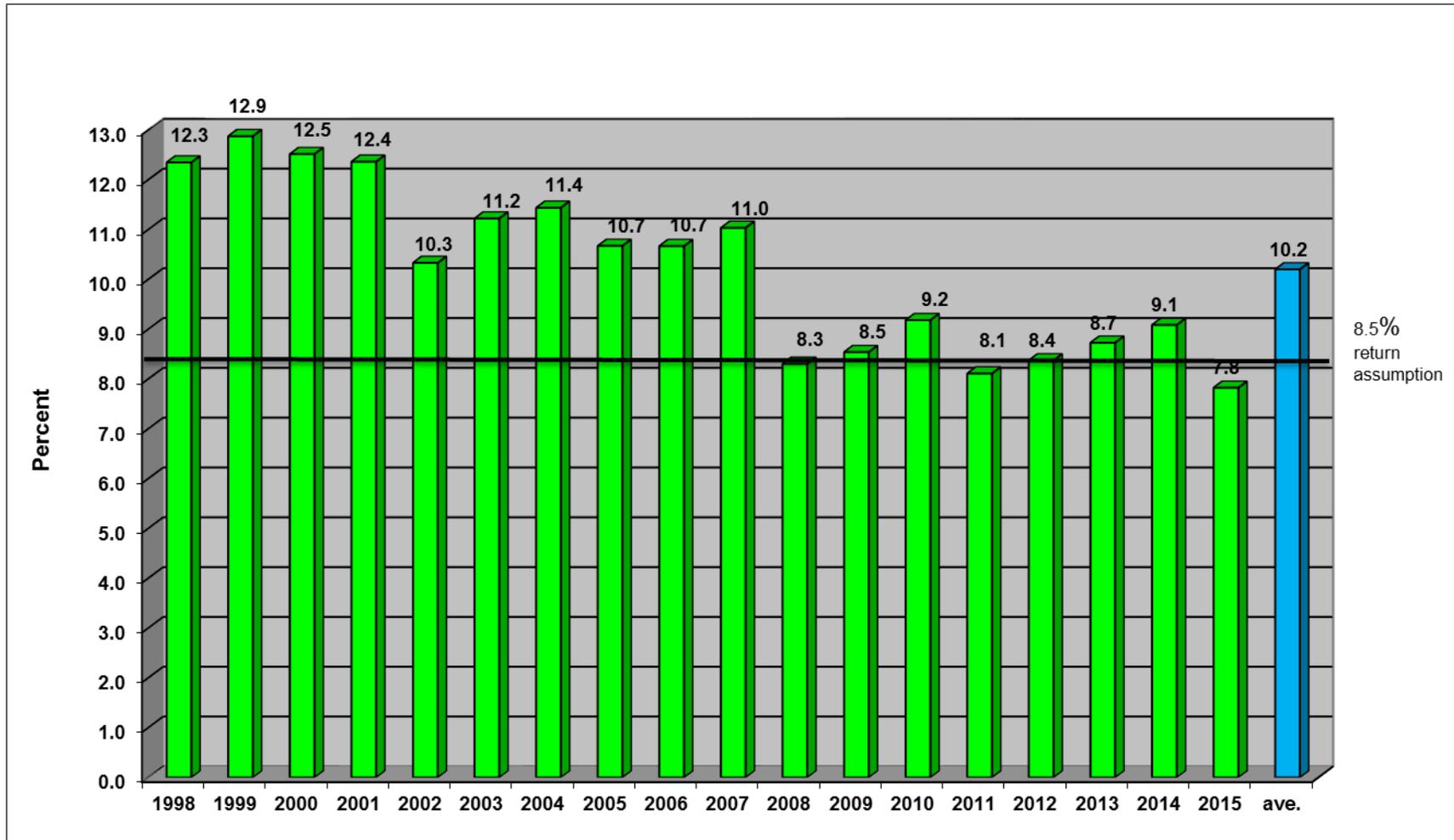
Barclays Aggregate Index - 2 basis points

Value estimates are based on monthly ERS asset class balances.

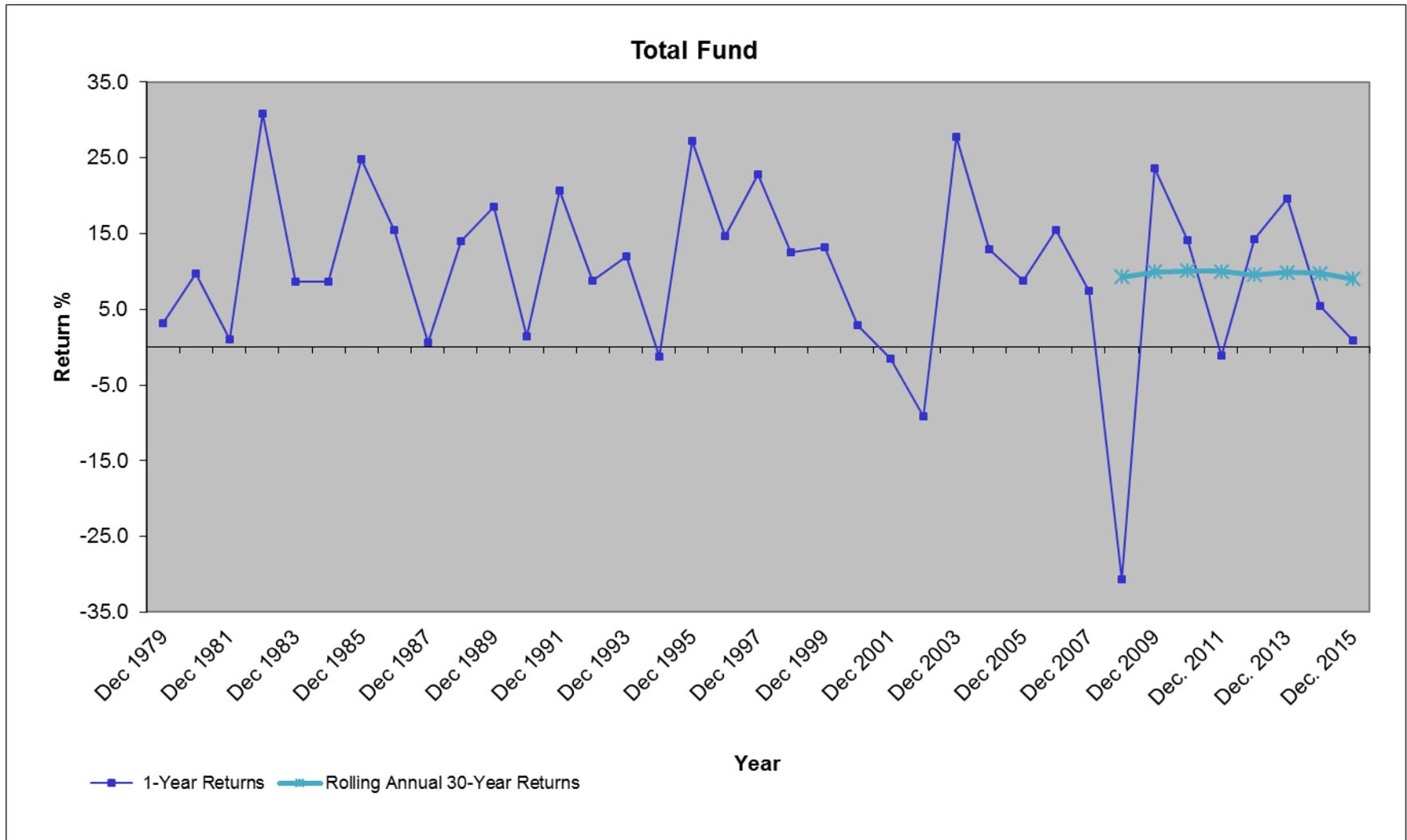
** Inception Date for International Equity Composite is May 1, 1996

** Inception Date for Global Equity Composite is April 1, 2010

ERS 20 Year Rolling Ave. Investment Returns, 1979-2015

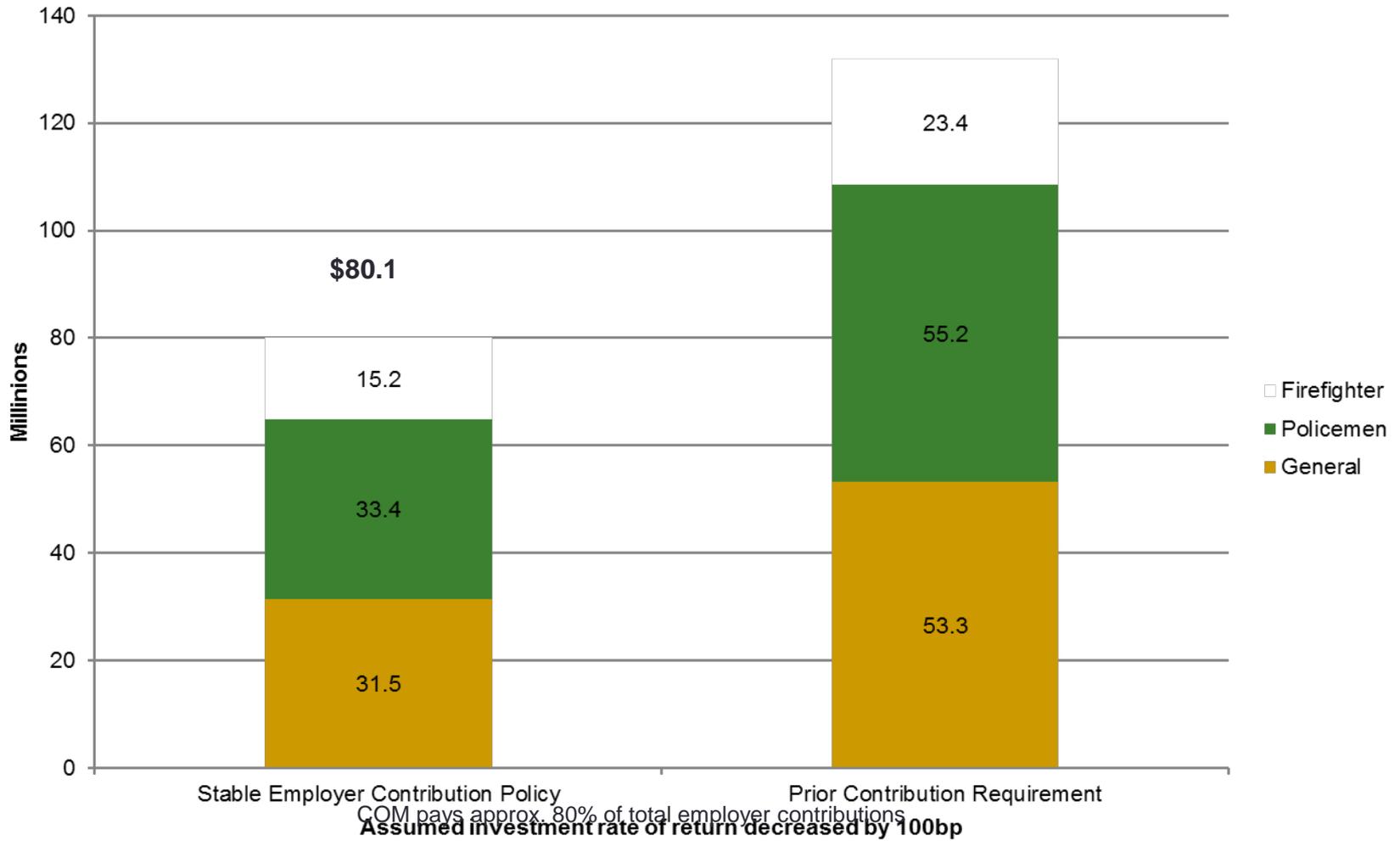


Rolling Fund Returns 1979 - 2015



Pension Contribution

Rate of return impact on Contribution **\$131.9**



Appendix—Not part of Presentation

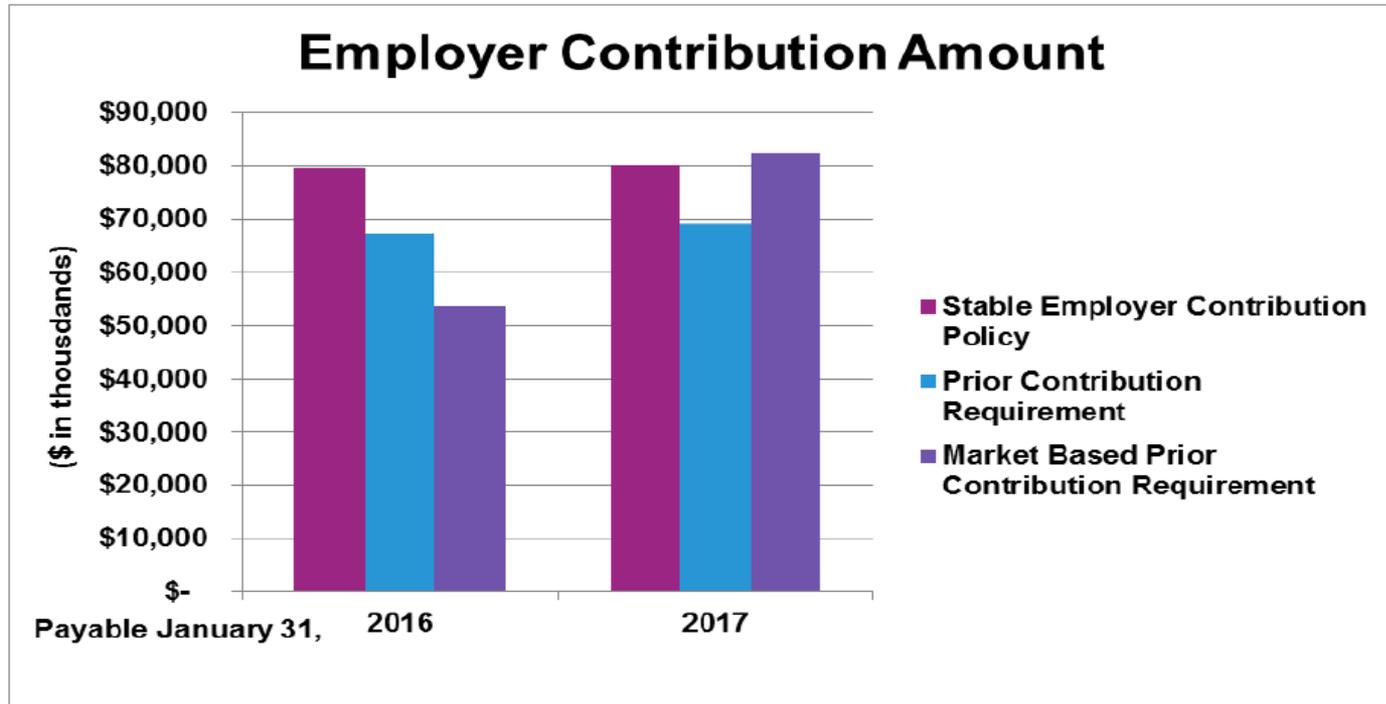
Annual Member Contributions (Projected for 2016)

| Unit | Collected Through PP18-2016 | | | | Straight Line Projections for 2016 ^(a) | | | |
|---------------------|-----------------------------|------------------------------|----------------------|----------------------|---------------------------------------------------|------------------------------|----------------------|----------------------|
| | Payroll Size | Employer Paid ^(b) | Member Paid | Total | Payroll Size | Employer Paid ^(b) | Member Paid | Total |
| City - General | 130,494,359 | - | 6,924,439 | 6,924,439 | 195,741,538 | - | 10,386,658 | 10,386,658 |
| City - Police | 104,213,856 | 28,563 | 7,266,482 | 7,295,045 | 156,320,784 | - | 10,942,567.83 | 10,942,568 |
| City - Fire | 37,222,721 | 2,336,372 | 269,224 | 2,605,596 | 55,834,082 | - | 3,908,394.14 | 3,908,394 |
| City - Total | 271,930,936 | 2,364,936 | 14,460,145 | 16,825,080 | 407,896,404 | - | 25,237,620 | 25,237,620 |
| Agencies | 90,122,774 | 121,746 | 4,563,931 | 4,685,677 | 143,136,171 | 193,362 | 7,248,596 | 7,441,958 |
| Total | \$ 362,053,710 | \$ 2,486,682 | \$ 19,024,076 | \$ 21,510,757 | \$ 551,032,575 | \$ 193,362 | \$ 32,486,217 | \$ 32,679,578 |

^(a) For the projections, please note that there will be 27 pay periods in 2016 compared to the regular 26 (leap year correction)

^(b) The employer paid member contributions for Police and Fire will reduce to \$0 once the contract settlement changes are implemented

Stable Employer Contribution Policy

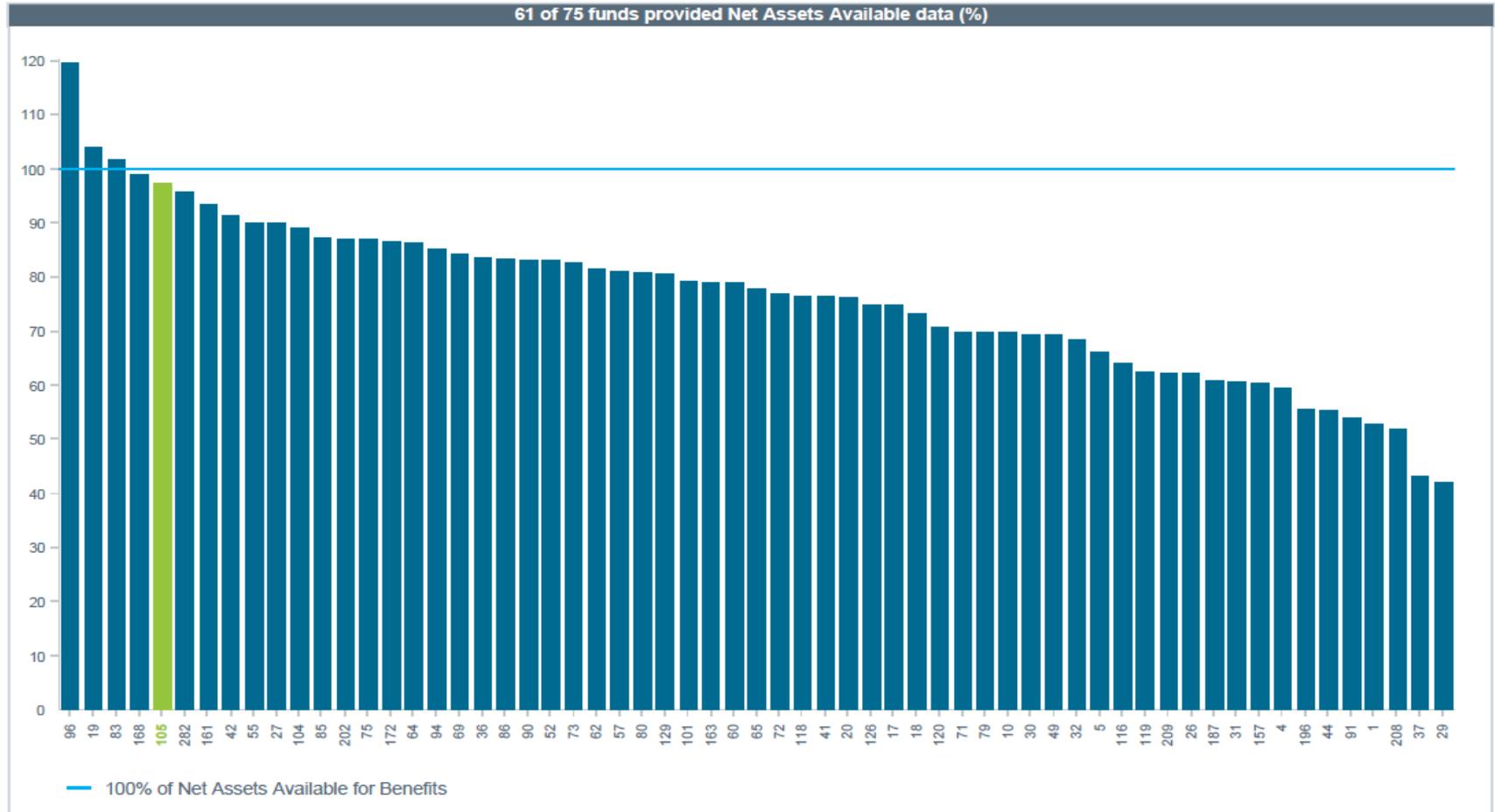


- The results this year are similar to those from last year's valuation for the stable policy and prior contribution requirement.
- Note that the increase in the market based prior policy contribution requirement is due to the unfavorable return in the assets.

Fund Number: 105

As of December 31, 2015

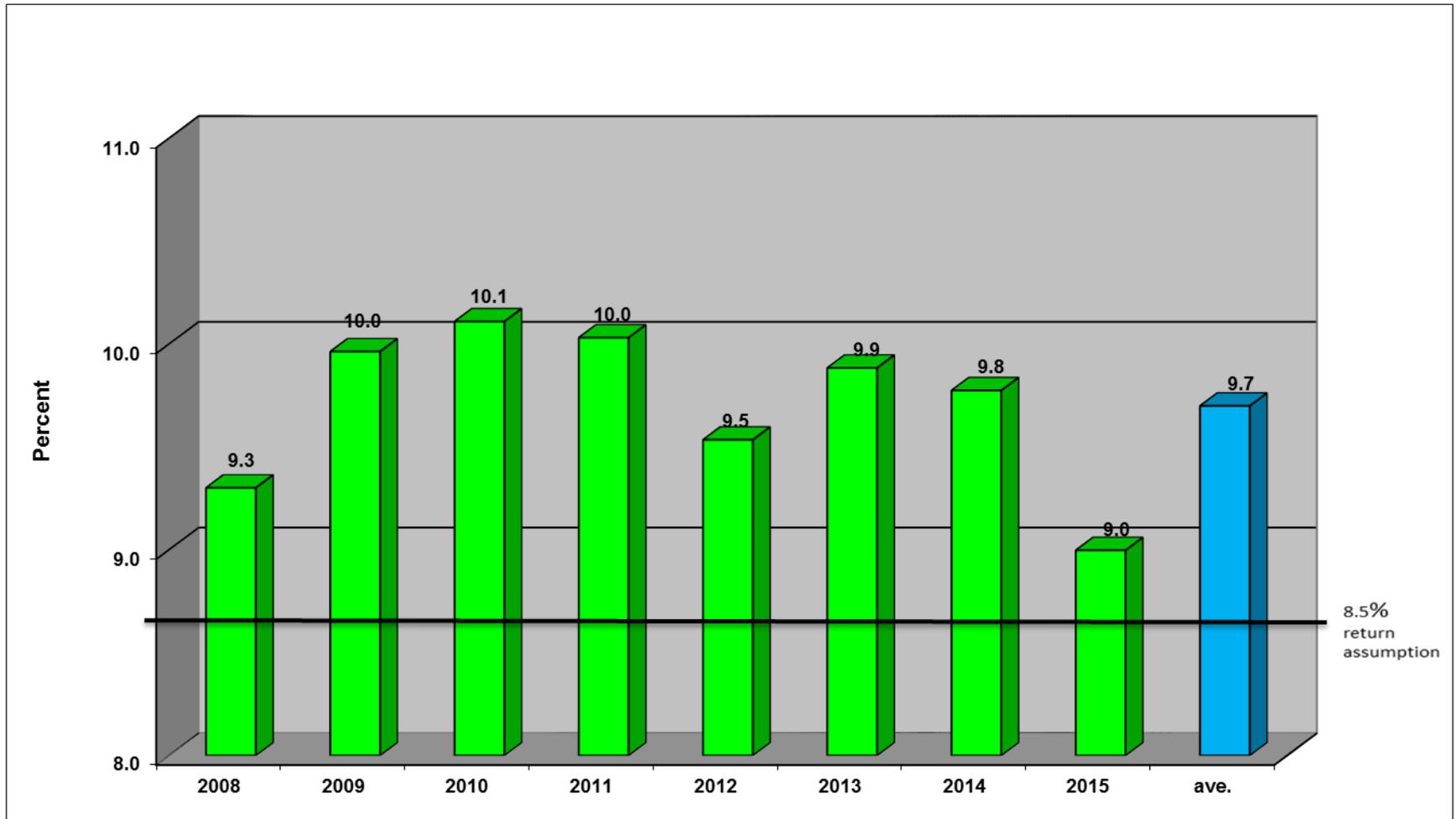
Net Assets Available For Benefits
Expressed as a Percentage of the Pension Benefit Obligation



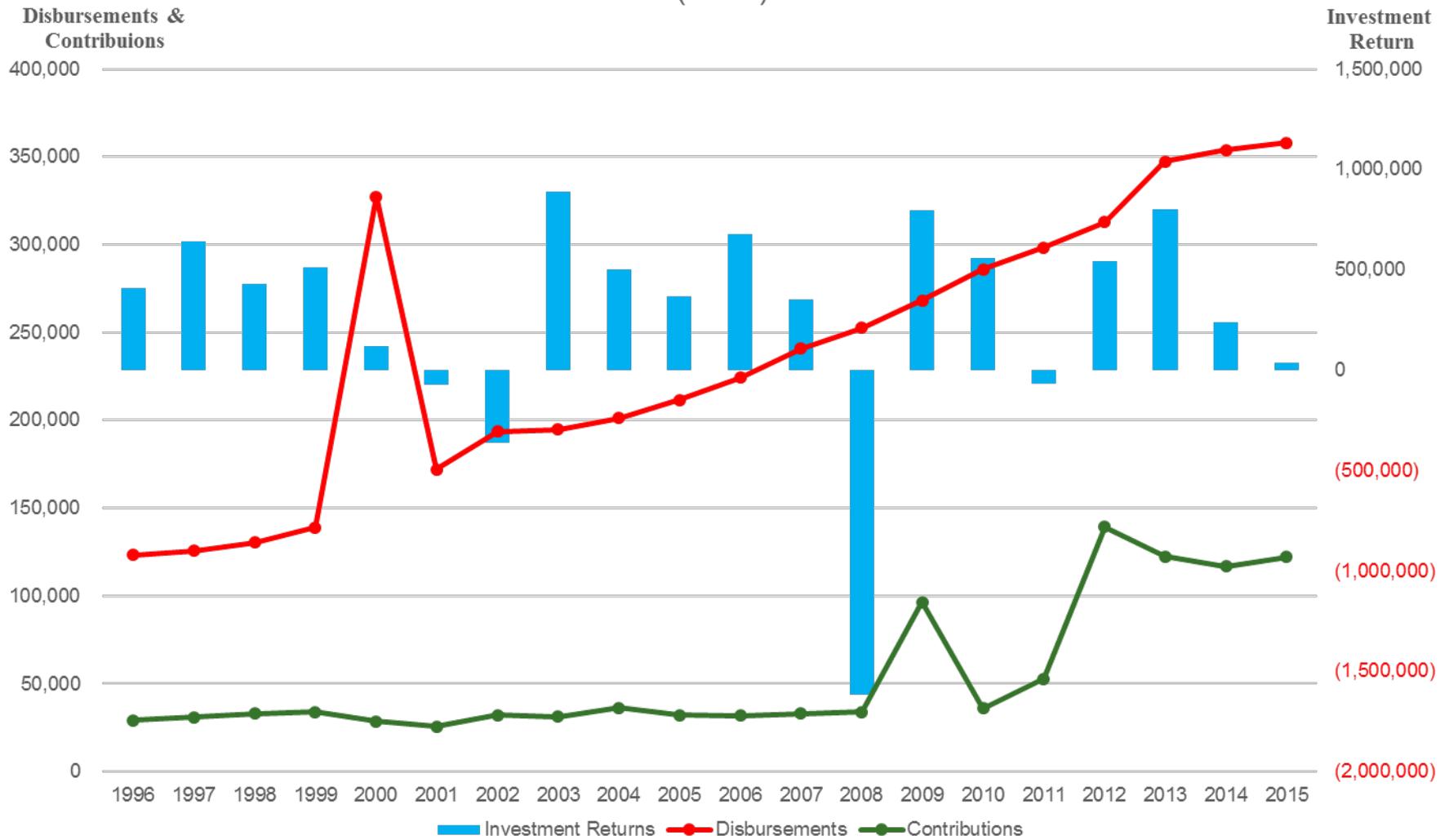
Funds that did not provide data will not appear in the chart.



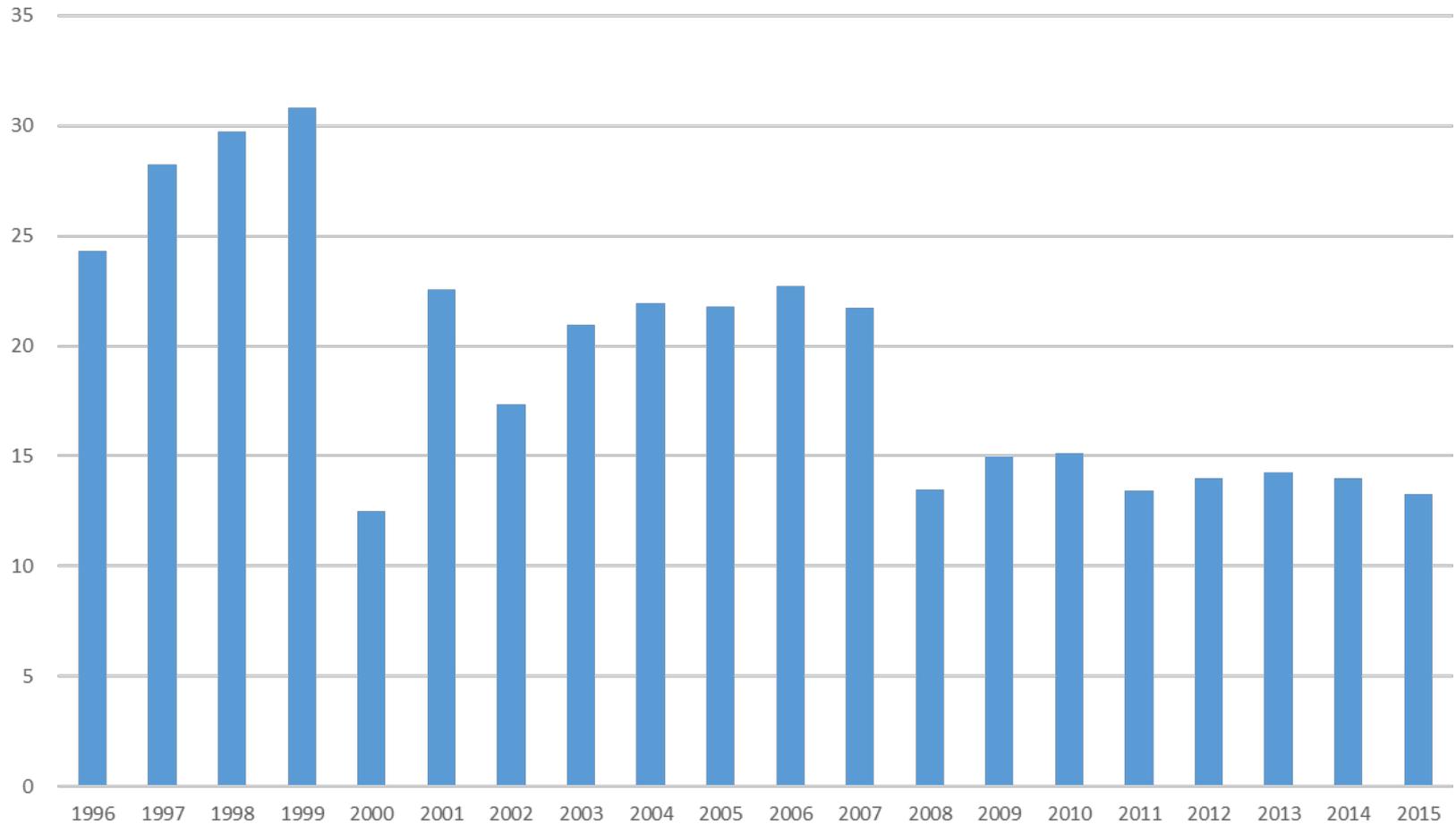
ERS 30 Year Rolling Ave. Investment Returns, 1979-2015



Change in CMERS Disbursements, Contributions and Investment Returns 1996-2015 (000's)

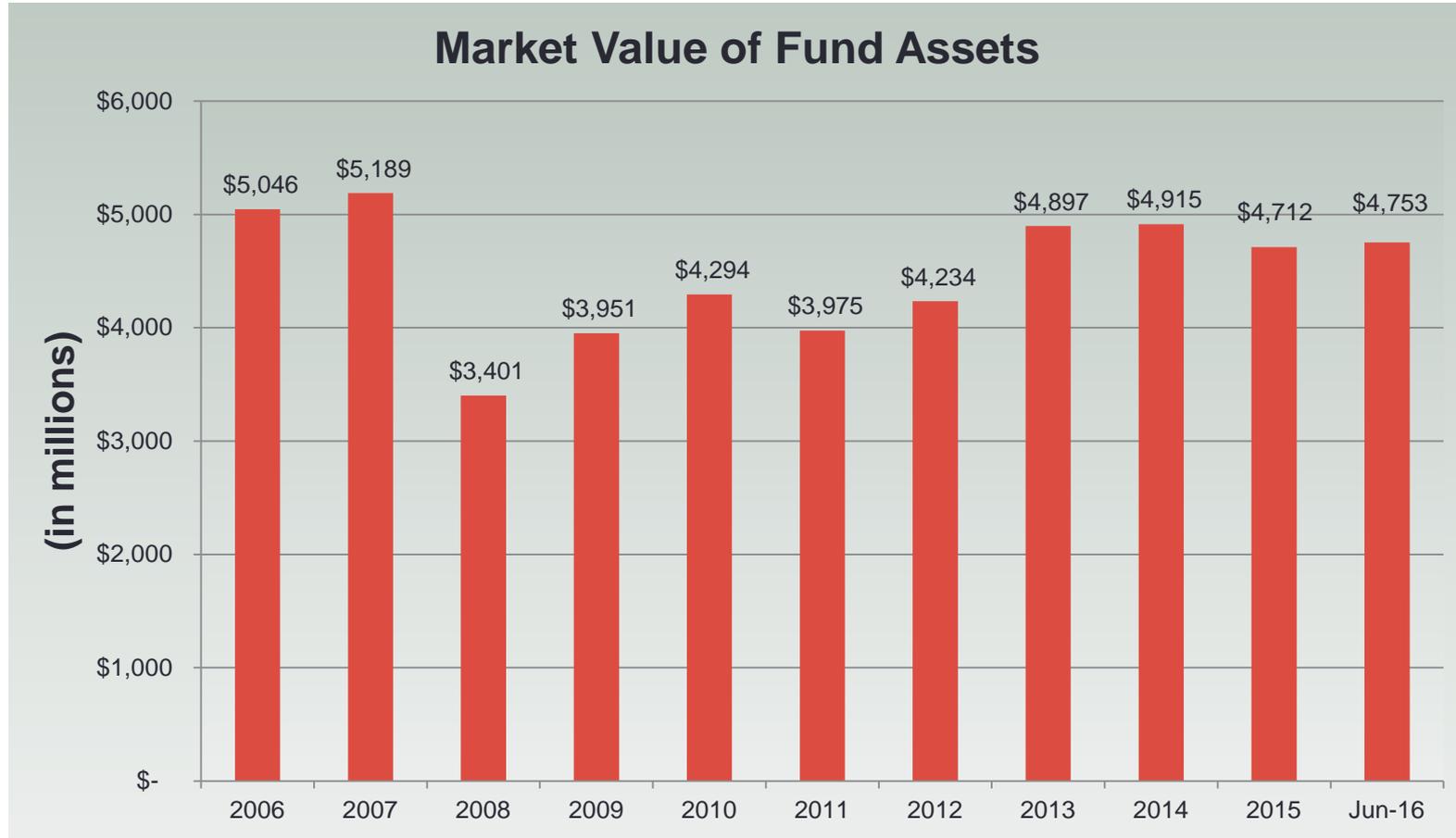


Years of CMERS Disbursements Remaining



Fund Value of Assets: 2006 - 2016

(Year Ended Dates reflect 12/31 Fund Values)



| | |
|-------------------------|---------------|
| Benefit Payments | \$2.7 billion |
| Expenses | \$182 million |
| Contributions | \$716 million |
| Investment Gain | \$1.9 billion |

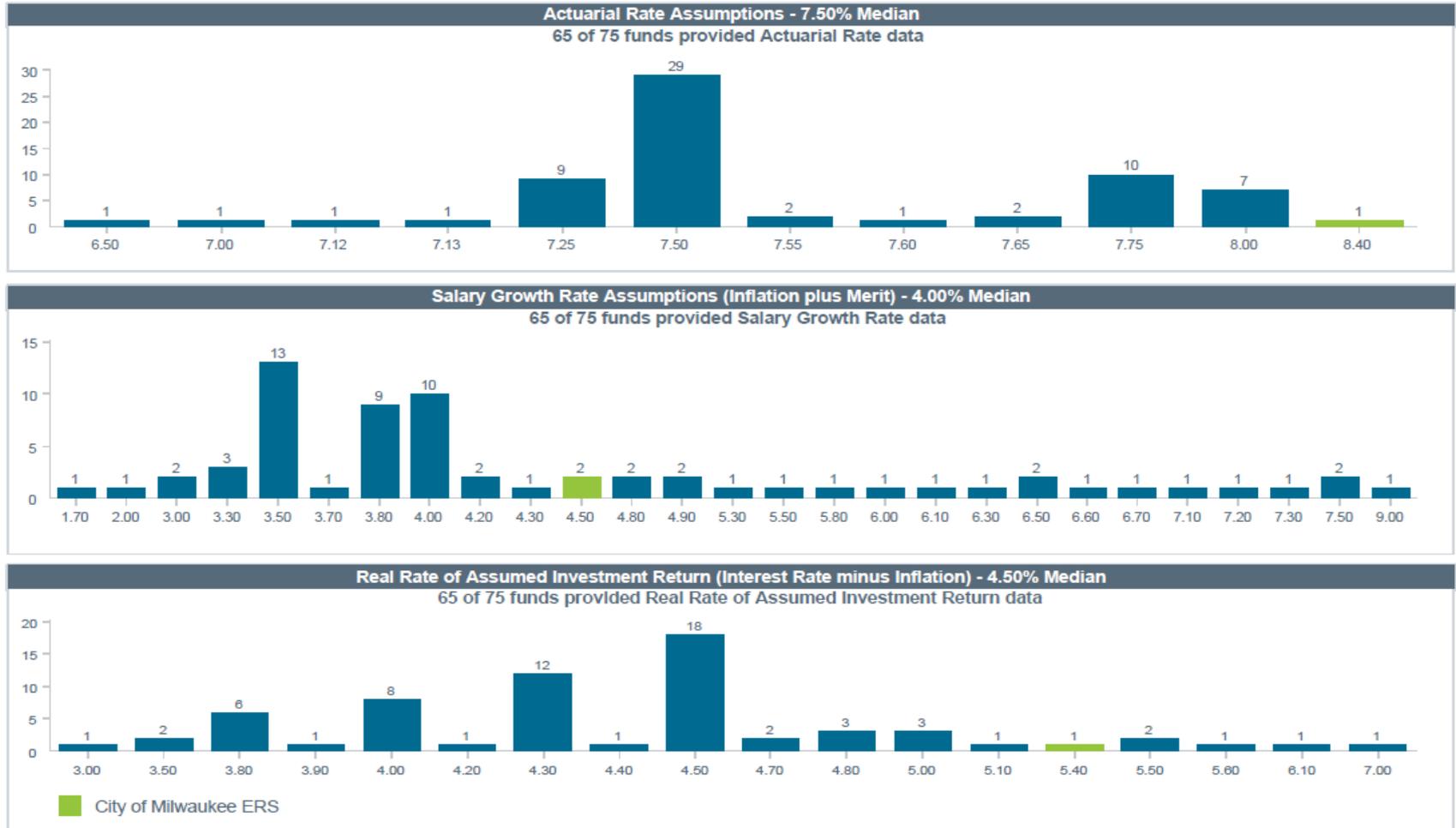


Source: Morningstar Direct

*9 1/2 Year Estimates (1/1/07 - 6/30/16)

Fund Number: 105
Actuarial Assumption Rates

As of December 31, 2015



Funds that did not provide data will not appear in the chart.

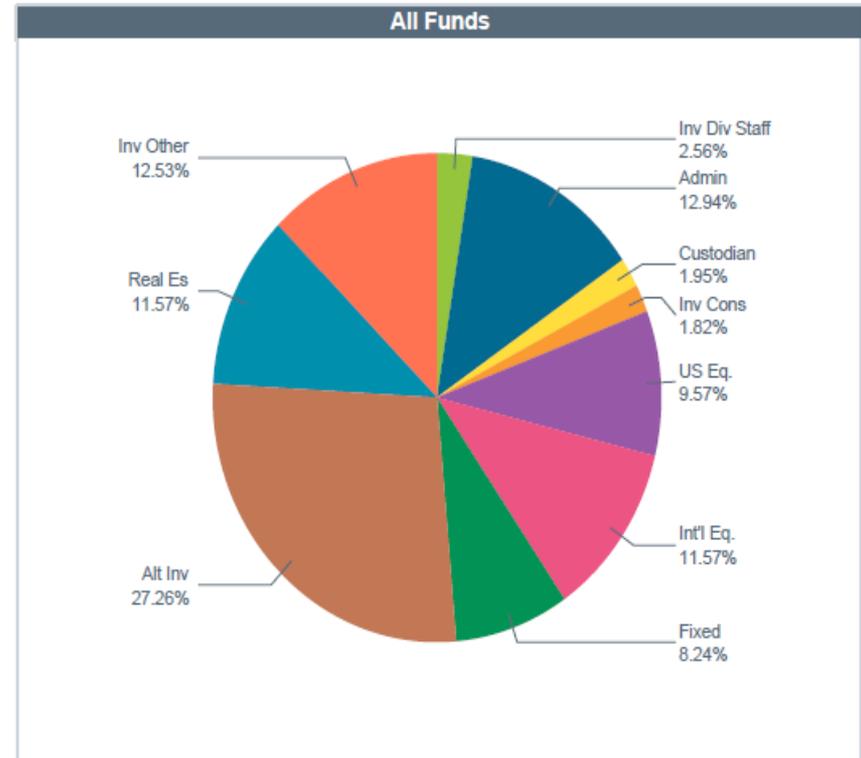
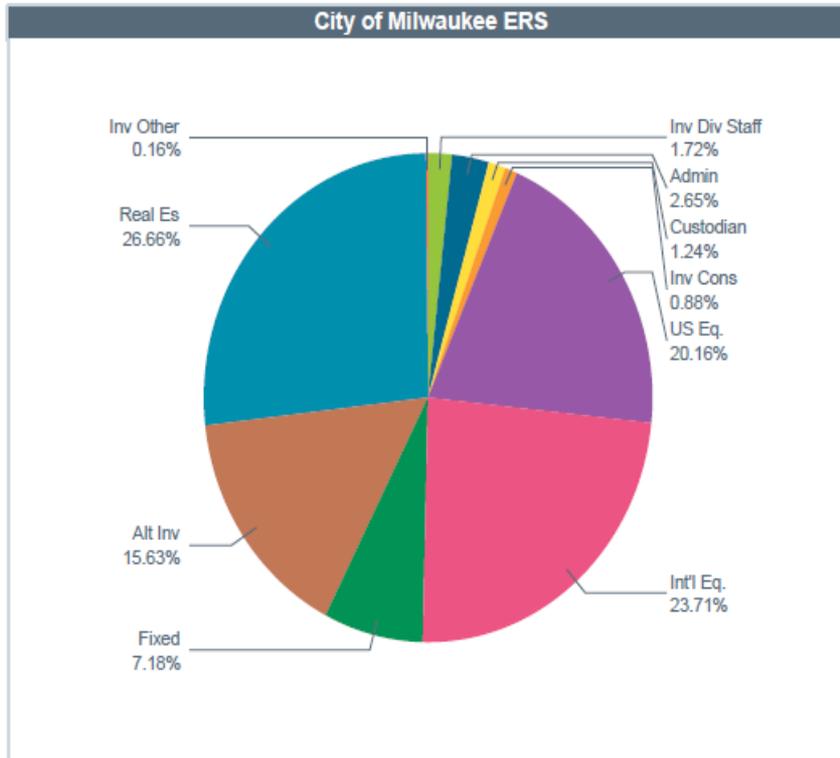


Fund Number: 105

As of December 31, 2015

Total Administrative and Investment Fees

City of Milwaukee ERS vs. All Funds



Fund Number: 105

As of December 31, 2015

Total Fund Fee Summary in Basis Points

City of Milwaukee ERS vs. Average by Asset Range

59 of 75 funds provided fee data for this time period

| Administrative Expenses | City of Milwaukee ERS | Under \$500 Million | \$500mm - \$1 Billion | \$1 - \$5 Billion | \$5 - \$10 Billion | \$10 - \$20 Billion | Over \$20 Billion |
|------------------------------------------------|-----------------------|---------------------|-----------------------|-------------------|--------------------|---------------------|-------------------|
| Internal Inv. Div. Staff | 0.89 | 1.21 | 0.00 | 1.73 | 0.81 | 1.02 | 1.67 |
| Actuary | 0.34 | 1.78 | 1.14 | 0.49 | 0.27 | 0.14 | 0.12 |
| Legal | 0.33 | 1.34 | 0.70 | 0.68 | 0.27 | 0.35 | 0.16 |
| Consultant | 0.00 | 0.24 | 0.16 | 0.19 | 0.57 | 0.10 | 0.11 |
| Audit | 0.16 | 1.14 | 0.44 | 0.20 | 0.15 | 0.09 | 0.07 |
| Other Professional | 0.14 | 0.02 | 0.74 | 0.23 | 0.13 | 0.27 | 0.57 |
| General Administrative | 0.39 | 12.41 | 12.14 | 7.26 | 7.12 | 4.68 | 1.98 |
| Total Administrative Expenses | 2.25 | 18.14 | 15.33 | 10.78 | 9.32 | 6.64 | 4.67 |
| Investment Expenses | City of Milwaukee ERS | Under \$500 Million | \$500mm - \$1 Billion | \$1 - \$5 Billion | \$5 - \$10 Billion | \$10 - \$20 Billion | Over \$20 Billion |
| Custodial | 0.64 | 2.14 | 2.68 | 1.99 | 0.63 | 0.62 | 0.30 |
| Investment Consulting | 0.45 | 2.58 | 2.19 | 1.53 | 0.70 | 0.64 | 0.47 |
| Domestic Equity | 10.37 | 1.33 | 3.42 | 8.40 | 7.36 | 4.33 | 2.14 |
| International Equity | 12.20 | 0.00 | 6.11 | 7.82 | 8.12 | 6.14 | 4.49 |
| Fixed Income | 3.69 | 5.62 | 7.75 | 5.70 | 5.28 | 3.30 | 3.07 |
| Real Estate | 13.72 | 3.68 | 8.11 | 5.89 | 8.77 | 5.76 | 5.65 |
| Other Investment Management | 0.08 | 8.63 | 8.71 | 6.60 | 1.78 | 8.25 | 7.49 |
| Total Investment Expenses (ex. Alt Inv) | 41.16 | 23.98 | 38.97 | 37.92 | 32.65 | 29.04 | 23.62 |
| Alternative Investments | 8.04 | 8.30 | 12.70 | 12.59 | 19.27 | 9.37 | 18.72 |
| Total Investment Expenses | 49.20 | 32.28 | 51.67 | 50.51 | 51.91 | 38.40 | 42.33 |
| Total Expenses | 51.45 | 50.46 | \$7.6 million | 61.23 | 61.23 | 45.04 | 47.01 |

Expressed in basis points on total fund assets. Funds that did not provide fee data will not appear in the table.