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City of Miami

Fire Fighters' and Police Officers' Retirement Trust

October 1, 2015

Actuarial Valuation Report

| Actuarial Certification | 3 |
|---|----|
| Executive Summary | 5 |
| Summary Results | 5 |
| Changes Since Prior Valuation and Key Notes | 6 |
| Assets and Liabilities | 7 |
| Present Value of Future Benefits | 7 |
| Asset Information | 8 |
| Reconciliation of Gain/Loss | 10 |
| Contribution Requirements | 11 |
| Development of Recommended Contribution | 11 |
| Demographic Information | 12 |
| Participant Reconciliation | 14 |
| Plan Provisions | 16 |
| Actuarial Assumptions | 22 |
| Other Measurements | 25 |
| Market Value Reconciliation | 26 |
| Membership and Benefits Cost-of-Living Adjustment Account Summary | 27 |
| Investment Results | 28 |
| Florida State Requirements | 30 |
| GASB 5 for COLA Fund | 42 |



At the request of the plan sponsor, this report summarizes the City of Miami Fire Fighters' and Police Officers' Retirement Trust as of October 1, 2015. The purpose of this report is to communicate the following results of the valuation:

· Determine Funded Status; and

• Determine Recommended Contribution for the fiscal year October 1, 2016 through September 30, 2017.

This report has been prepared in accordance with the applicable Federal and State laws. Consequently, it may not be appropriate for other purposes. Please contact Nyhart prior to disclosing this report to any other party or relying on its content for any purpose other than that explained above. Failure to do so may result in misrepresentation or misinterpretation of this report.

The results in this report were prepared using information provided to us by other parties. The census information has been provided to us by the plan administrator. Asset information has been provided to us by the plan administrator. We have reviewed the provided data for reasonableness when compared to prior information provided, but have not audited the data. Where relevant data may be missing, we have made assumptions we believe to be reasonable. We are not aware of any significant issues with and have relied on the data provided. Any errors in the data provided may result in a different result than those provided in this report. A summary of the data used in the valuation is included in this report.

The actuarial assumptions and methods were chosen by the Board. In our opinion, all actuarial assumptions and methods are individually reasonable and in combination represent our best estimate of anticipated experience of the plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and
- changes in plan provisions or applicable law. We did not perform an analysis of the potential range of future measurements due to the limited scope of our engagement. This report has been prepared in accordance with generally accepted actuarial principles and practice.

This actuarial valuation and/or cost determination was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

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City of Miami Fire Fighters' and Police Officers' Retirement Trust Actuarial Valuation as of October 1, 2015 Actuarial Certification

With respect to reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, meet the requirements of Section 112.664 (1), Florida Statutes, and Rule 60T-1.0035, Florida Administrative Code.

Neither Nyhart nor any of its employees have any relationship with the plan or its sponsor which could impair or appear to impair the objectivity of this report. To the extent that this report or any attachment concerns tax matters, it is not intended to be used and cannot be used by a taxpayer for the purpose of avoiding penalties that may be imposed by law.

The undersigned are compliant with the continuing education requirements of the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States and are available for any questions.

Nyhart

David D. Harris

David D. Harris, ASA, EA, MAAA Enrolled Actuary No. 14-5609

<u>May 23, 2016</u> Date

Heath W Markk

Heath W. Merlak, FSA, EA, MAAA Enrolled Actuary No. 14-5967

Copies of this Report are to be furnished to the Division of Retirement within 60 days of receipt from the actuary at the following addresses:

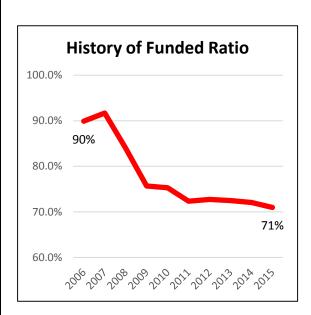
Ms. Sarah Carr Benefits Administrator Municipal Police Officers' & Firefighters' Trust Funds Division of Retirement Post Office Box 3010 Tallahassee, FL 32315-3010 Mr. Keith Brinkman Bureau Chief, Bureau of Local Retirement Systems Florida Department of Management Services Division of Retirement Department of Management Services P. O. Box 9000 Tallahassee, FL 32315-9000



Summary Results

The actuarial valuation's primary purpose is to produce a scorecard measure displaying the funding progress of the plan toward the ultimate goal of paying benefits at retirement. The accrued liability is based on an entry age level percentage of pay.

| | October 1, 2014 | October 1, 2015 |
|---|-----------------|-----------------|
| Funded Status Measures | | |
| Accrued Liability | \$1,597,778,645 | \$1,616,131,503 |
| Actuarial Value of Assets | 1,151,016,531 | 1,147,334,950 |
| Unfunded Accrued Liability | \$446,762,114 | \$468,796,553 |
| Funded Percentage (AVA) | 72.0% | 71.0% |
| Funded percentage (MVA) | 71.1% | 67.5% |
| Cost Measures | | |
| Recommended Contribution For Next Fiscal Year | \$43,964,153 | \$47,102,220 |
| Recommended Contribution (as a percentage of payroll) | 46.9% | 44.3% |
| Asset Performance | | |
| Market Value of Assets (MVA) | \$1,136,462,242 | \$1,090,944,360 |
| Actuarial Value of Assets (AVA) | \$1,151,016,531 | \$1,147,334,950 |
| Actuarial Value/Market Value | 101.3% | 105.2% |
| Participant Information | | |
| Active Members | 1,482 | 1,650 |
| Terminated Vested Members | 12 | 15 |
| Retirees, Beneficiaries, and Disabled Members | 1,846 | 1,952 |
| DROP Participants | 401 | 278 |
| Total | 3,741 | 3,895 |
| Expected Payroll | \$93,705,765 | \$106,278,378 |
| Total Payroll | \$127,786,644 | \$133,966,173 |



Changes Since Prior Valuation and Key Notes

As of October 1, 2015 all Fire Fighters will contribute 10% of pay, and all Police hired prior to 10/1/2012 will contribute 7% of pay. The benefit for Fire Fighters who had not reached rule of 64 by 9/30/2009 or 68 by 9/30/2010 increased to 3% of Average Final Compensation for the first fifteen years of Creditable Service plus 3.5% of Average Final Compensation for each Creditable Service after the fifteenth year.

The administrative expense has increased to \$2,058,798 from the prior year.

Present Value of Future Benefits

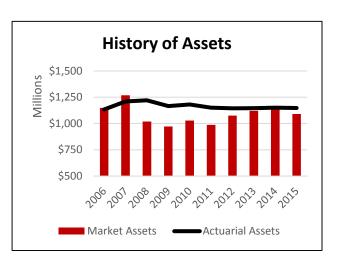
The Present Value of Future Benefits represents the current future benefits payable to the participant.

| | October 1, 2015 | |
|--------------------------------|-----------------|--------------------------|
| esent Value of Future Benefits | | |
| tive members | | Breakdown of Present Val |
| Retirement | \$455,877,149 | |
| Disability | 56,071,742 | |
| Death | 8,046,397 | 14% |
| Termination | 26,849,525 | |
| Refund of contributions | 2,462,886 | 14% |
| Total active | \$549,307,699 | |
| active members | | |
| Retired members | \$1,046,575,406 | |
| DROP members | 244,492,504 | |
| Beneficiaries | 28,706,393 | |
| Disabled members | 28,037,791 | Inactive Liability |
| Terminated vested members | 2,715,494 | Normal Cost |
| Total inactive | \$1,350,527,588 | |
| tal | \$1,899,835,287 | |
| esent value of future payrolls | \$1,585,673,300 | |

Asset Information

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

| | October 1, 2015 |
|---|-----------------|
| Market Value Reconciliation | |
| Market value of assets, beginning of prior year | \$1,136,678,362 |
| Employer contributions (incl. discounted accrued items) | 42,919,757 |
| Member contributions | 9,317,231 |
| Investment income, net expenses | 30,555,177 |
| Benefit payments and refunds | (126,153,910) |
| Administrative expenses | (2,222,561) |
| Other expenses | (149,696) |
| Market value of asset, beginning of current year | \$1,090,944,360 |
| Return on Market Value | 2.8% |
| Actuarial value of assets | |
| Value at beginning of current year | \$1,147,334,950 |



Asset Information (continued)

Plan Assets are used to develop funded percentages and contribution requirements.

| | October 1, 2015 |
|---|---|
| Expected actuarial value of assets (a) Actuarial value of assets – beginning of prior year (b) City Contributions (c) Member Contributions (d) Benefits payments and refunds (e) Expected return (f) Expected actuarial value of assets – beginning of current year | \$1,151,016,531 42,919,757 9,317,231 (126,153,910) <u>84,332,989</u> \$1,161,432,598 |
| 2. Market value of assets – beginning of current year | \$1,090,944,360 |
| 3. Present value of COLA transfers (a) Current year (b) Next year (c) Total | \$0 0 \$0 |
| 4. Market value net COLA transfer [(2)-(3)] | \$1,090,944,360 |
| 5. Amount subject to phase in [(4)-(1f)] | \$(70,488,238) |
| 6. Phase in of asset gain loss [(5)x20%] | \$(14,097,648) |
| 7. Preliminary actuarial value of assets – beginning of current year [(1f)+(6)] | \$1,147,334,950 |
| 8. 80% of Market value of assets | \$872,755,488 |
| 9. 120% of Market value of assets | \$1,309,133,232 |
| 10. Adjusted actuarial value of assets | \$1,147,334,950 |
| 11. Contribution surplus account balance | \$0 |
| 12. Final actuarial value of assets – beginning of current year [(10)-(11)] | \$1,147,334,950 |
| 13. Return on actuarial value of assets | 6.2% |

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Reconciliation of Gain/Loss

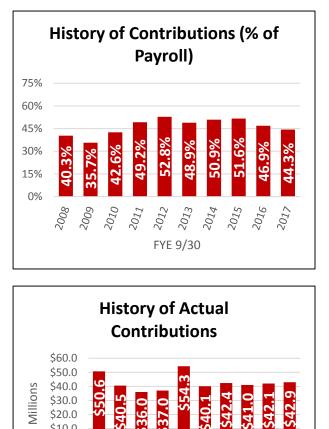
| | October 1, 2015 |
|---|-----------------|
| Liability (gain)/loss | |
| Present value of future benefits | \$1,862,016,468 |
| Present value of employee contributions | (112,603,159) |
| Expected employee contribution | 7,637,375 |
| Benefit payments | (126,153,910) |
| Interest | 125,776,393_ |
| Expected liability | \$1,756,673,167 |
| Plan Amendment | \$(3,980,804) |
| Expected after changes | \$1,752,692,363 |
| Actual liability | \$1,770,839,504 |
| Liability (gain)/loss | \$18,147,141 |
| Asset (gain)/loss | |
| Actuarial value of assets, beginning of prior year | \$1,151,016,531 |
| Contributions | 52,236,988 |
| Benefit payments and expenses | (126,153,910) |
| Expected Investment return | 84,332,989 |
| Expected actuarial value of assets, beginning of current year | \$1,161,432,598 |
| Actual actuarial value of assets, beginning of current year | \$1,147,334,950 |
| Asset (gain)/loss | \$14,097,648 |
| Total (gain)/loss | \$32,244,789 |

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Development of Recommended Contribution

The actuarial determined contribution is the annual amount necessary to fund the plan according to funding policies and/or applicable laws.

| | October 1, 2015 |
|--|-----------------|
| | |
| 1. Present value of future benefits | \$1,899,835,287 |
| 2. Actuarial value of assets | 1,147,334,950 |
| 3. Present value of future member contributions | 128,995,783 |
| 4. Present value of future normal Cost [(1)-(2)-(3)] | \$623,504,554 |
| 5. Present value of future payroll | \$1,585,673,300 |
| 6. Normal cost actual rate [(4)/(5)] | 39.32% |
| 7. Administrative expenses | \$2,058,798 |
| 8. Expected payroll | \$106,278,378 |
| 9. Applicable interest | 7.42% |
| 10. Normal cost [(6)x(8)+(7)] | \$43,848,650 |
| 11. Interest to estimated payment date | \$3,253,570 |
| 12. Total recommended contribution as of end of year [(10)+(11)] | \$47,102,220 |
| 13. As a percentage of expected payroll | 44.32% |
| 14. As a percentage of total payroll | 35.16% |



2009

2010 2011

FYE 9/30

2012 2013

2014 2015

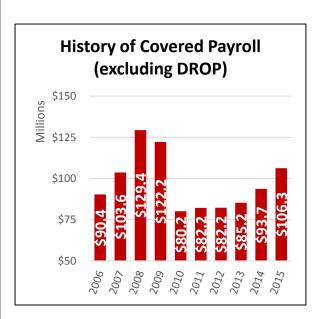
\$20.0 \$10.0 \$0.0

> 2006 2007 2008

Demographic Information

The foundation of a reliable actuarial report is the member information provided by the plan sponsor. Monitoring trends in demographic information is crucial for long-term pension planning.

| | October 1, 2015 |
|---------------------------------|-----------------|
| Member Counts | |
| Active Members | 1,650 |
| Retired Members | 1,546 |
| Beneficiaries | 259 |
| Disabled Members | 147 |
| Terminated Vested Members | 15 |
| DROP Members | 278 |
| Total | 3,895 |
| Active Participant Demographics | |
| Average Age | 35.98 |
| Average Service | 8.93 |
| Average Compensation | \$64,411 |
| Covered Payroll | \$106,278,378 |
| Total Payroll | \$133,966,173 |



Demographic Information (continued)

| | October 1, 2015 |
|------------------------------|-----------------|
| Retired Member Statistics | |
| Average Age | 64.91 |
| Average Monthly Benefit | \$5,295 |
| Beneficiary Statistics | |
| Average Age | 76.16 |
| Average Monthly Benefit | \$1,079 |
| Disabled Member Statistics | |
| Average Age | 76.35 |
| Average Monthly Benefit | \$1,854 |
| Terminated Member Statistics | |
| Average Age | 41.60 |
| Average Monthly Benefit | \$2,240 |
| DROP Member Statistics | |
| Average Age | 52.05 |
| Average Monthly Benefit | \$6,074 |
| Payroll | \$27,687,795 |

Participant Reconciliation

| | Active | Terminated Vested | Disabled | Retired | Beneficiaries | Totals |
|----------------------|--------|----------------------|----------|---------|-------------------------|--------|
| Prior Year | 1,482 | 12 | 149 | 1,842 | 256 | 3,741 |
| Active | | | | | | |
| To Terminated Vested | (4) | 4 | | | | 0 |
| To Retired | (6) | | | 6 | | 0 |
| To Refund | (28) | | | | | (28) |
| To Death | (3) | | | | | (3) |
| Terminated Vested | (-) | | | | | (-) |
| To Retired | | (1) | | 1 | | 0 |
| Disabled | | | | | | |
| To Death | | | (2) | | | (2) |
| Retired | | | | | | () |
| To Death | | | | (25) | | (25) |
| Survivor | | | | | | (-) |
| To Death | | | | | (14) | (14) |
| Additions | 209 | | | | 1 7 [′] | 226 |
| Current Year | 1,650 | 15 | 147 | 1,824 | 259 | 3,895 |

Active Participant Schedule

Active participant information grouped based on age and service.

| | | | | | Years o | f Service | | | | | | |
|-----------|---------|--------|--------|----------|----------|-----------|----------|----------|----------|---------|-------|-------------|
| Age Group | Under 1 | 1 to 4 | 5 to 9 | 10 to 14 | 15 to 19 | 20 to 24 | 25 to 29 | 30 to 34 | 35 to 39 | 40 & Up | Total | Average Pay |
| Under 25 | 59 | 69 | 1 | | | | | | | | 129 | \$33,838 |
| 25 to 29 | 68 | 200 | 45 | 4 | | | | | | | 317 | 46,329 |
| 30 to 34 | 43 | 91 | 180 | 53 | 1 | | | | | | 368 | 57,421 |
| 35 to 39 | 14 | 32 | 93 | 100 | 55 | 1 | | | | | 295 | 71,525 |
| 40 to 44 | 7 | 10 | 45 | 63 | 111 | 43 | 4 | | | | 283 | 79,992 |
| 45 to 49 | 1 | 3 | 29 | 31 | 74 | 43 | 9 | | | | 190 | 84,570 |
| 50 to 54 | | 2 | 8 | 10 | 13 | 15 | 6 | 2 | | | 56 | 93,230 |
| 55 to 59 | | | | 3 | | 4 | 1 | 1 | | | 9 | 92,951 |
| 60 to 64 | | | | 1 | | 1 | 1 | | | | 3 | 77,667 |
| 65 to 69 | | | | | | | | | | | 0 | 0 |
| 70 & up | | | | | | | | | | | 0 | 0 |
| Total | 192 | 407 | 401 | 265 | 254 | 107 | 21 | 3 | 0 | 0 | 1,650 | \$64,411 |

Plan Status

January 1, 1940, as restated effective May 23, 1985, and amended through September 30, 2012.

Eligibility for Participation

Police officers and fire fighters.

Accrual of Benefits

The accrued benefit is determined as follows:

For Police Officers who have reached Rule of 64 by 9/30/2010:

3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years. Maximum of 100% of Average Final Compensation.

For other Police Officers:

For service prior to 10/1/2010: 3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years.

For service after 9/30/2010: 3% of the Average Final Compensation for each year of Creditable Service.

The combined percentage for service may not exceed 100% of Average Final Compensation and the final benefit may not exceed the larger of the 9/30/2010 Accrued Benefit and \$100,000.

For Firefighters who have reached Rule of 64 by 9/30/2009 or Rule of 68 by 9/30/2010: 3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years. Maximum of 100% of Average Final Compensation.

For all other Fire Fighters:

3% of Average Final Compensation for the first 15 years of Creditable Service plus 3.5% of Average Final Compensation after 15 years. Maximum of 100% of Average Final Compensation and the final benefit may not exceed the larger of the 9/30/2010 accrued benefit and \$100,000.

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Benefits

Normal Retirement

| Eligibility | Age plus Creditable Service equal to 64 (Rule of 64) on 9/30/2010 for police officers active 9/30/2010 and firefighters active 9/30/2009. |
|------------------------------|---|
| | Age plus Creditable Service equal to 68 (Rule of 68) on 9/30/2010 for fire fighters active 9/30/2010 and not eligible for Rule of 64 at 9/30/2009. |
| | Age plus Creditable Service equal to 70 (Rule of 70) with attainment of age 50 and 10 years of Creditable Service for all members hired on or after 10/1/2010 and police officers and fire fighters who were not eligible for the Rule of 64 or the Rule of 68 on the specified dates above. |
| Benefit | Unreduced Accrued Benefit payable immediately. |
| Early Retirement | |
| Eligibility | Completion of 20 years of Creditable Service. |
| Benefit | Accrued Benefit adjusted with actuarial equivalence for early commencement. |
| Late Retirement | |
| Eligibility | Participation continues after normal retirement date. |
| Benefit | Accrued Benefit |
| Ordinary Death before Retire | ement |
| Eligibility | Participant with 3 years of Creditable Service who dies off duty. |
| Benefit | Between 3 and 10 years of Creditable Service: Lump sum benefit equal to 50% of Compensation received in year preceding death. |
| | After 10 years of Creditable Service and before eligibility for Early Service or Rule of 64 Retirement: Accrued benefit, deferred to earlier of member's 50th birthday or Rule of 64 eligibility, payable for 10 years. Beneficiary does not have to survive deferred period or 10 years' certain period. |
| | If eligible for Service, Early Service, or Rule of 64 retirement, considered to have retired on the date of death. Surviving spouse would receive 40% of the member's monthly retirement allowance. |

Accidental Death before Retirement

| | Eligibility | Member who dies during performance of duties. |
|--------|--------------------------|--|
| | Benefit | Pension of 50% of Average Final Compensation to spouse until death or remarriage. If there is no spouse, or if spouse dies or remarries before youngest child is 18, payable to child until attainment of age 18. If no spouse or no children under 18, benefit is payable to dependent parents. |
| | | After 10 years of Creditable Service - Beneficiary receives benefit otherwise payable to member at early or normal retirement for a period of 10 years. |
| Termir | nation Benefit | |
| | Eligibility | Fully vested after completion of 10 years of Creditable Service. |
| | Benefit | Accrued Benefit payable at the member's Early or Normal Retirement Date. If the member terminates prior to 10 years of Creditable Service a refund of accumulated contributions with interest will be issued. |
| Ordina | ry Disability Benefit | |
| | Eligibility | Completion of 10 years of Creditable Service. |
| | Benefit | 90% of benefit rate times Average Final Compensation times Creditable Service, with a minimum benefit of 30% of Average Final Compensation. The normal form is a 10 year certain and life normal form. |
| Accide | ental Disability Benefit | |
| | Eligibility | Immediately upon permanent disability |
| | Benefit | 66 2/3% of Average Final Compensation, or 66 2/3% of Final Compensation, whichever is greater. The normal form is a 40% joint & survivor annuity, with a minimum of 10 years' certain and life. |

Compensation

Earnable Compensation

An employee's base salary, including pick-up contributions, for all straight time hours worked, plus assignment pay and payments received for vacation and sick leave taken, jury duty, and death-in-family leave taken. Earnable compensation shall not include overtime pay; payments for accrued sick leave, accrued vacation leave, or accrued compensatory leave; holiday pay; premium pay for holidays worked; the value of any employment benefits or non-monetary entitlements; or any other form of remuneration.

Average Final Compensation

For members who retire or terminate employment with ten or more years of creditable service prior to 10/1/2010: the annual earnable compensation of a member during either the last one year or the highest year of membership service, whichever is greater.

For members who retire on or after 10/1/2010: the Average Final Compensation shall mean the average of the highest 5 years of service, to be phased in effective 9/30/2010 over the next 4 years as follows:

For members who retire between 10/1/2010 and 9/30/2011: the average of the highest 2 years of membership service

For members who retire between 10/1/2011 and 9/30/2012: the average of the highest 3 years of membership service

For members who retire between 10/1/2012 and 9/30/2013: the average of the highest 4 years of membership service

For members who retire on or after 10/1/2013: the average of the highest 5 years of membership service.

Provided, in no event shall the Average Final Compensation of any member who was employed as a police officer or fire fighter on 9/30/2010 and retires on or after 10/1/2010, be less than the highest year of membership service prior to 9/30/2010.

Creditable Service

For Vesting and Benefit Accrual

Service credited under Retirement System; military service (maximum of four years) during wartime for which Member makes contributions; maternity leave (maximum of 180 days for each leave) for which Member makes contributions; up to 5 years, without member contributions, if member was an employee before period of military service.

Accumulated leave balances may be transferred into system immediately prior to retirement to purchase up to 3 whole years of additional Creditable Service, on an actuarially equivalent basis.

457 balances of Firefighters may be transferred into System at retirement to purchase up to 3 whole years of additional Creditable Service for multiplier purposes.



Member Contributions

| Police Officers: | 7% (10% if hired on or after 10/1/2012) |
|------------------|---|
| Fire Fighters: | 10% |

DROP

| Eligibility | Election must be made within 10 years after eligibility for normal retirement. Members eligible for forward DROP as of 1/1/2013 or vested as of 1/1/2010 remain eligible for forward DROP. |
|-------------|--|
| Benefit | Effective 1/1/2013 members may elect the BackDROP option (maximum of 7 years). Members receive a monthly benefit based |

on an earlier retirement date and a lump sum of past payments compounded at 3%/year.

COLA

| Eligibility | Participant or Beneficiary |
|-------------|---|
| Benefit | Amount varies annually with the adjustment on January 1 |

Payment Forms

Normal Form

For Police Officers who have reached Rule of 64 by 9/30/2010 or Fire Fighters who reached Rule of 64 by 9/30/2009: Joint and 40% Contingent Survivor with a minimum 10 years Certain and Life

For Fire Fighters who have reached Rule of 68 by 9/30/2010: Joint and 40% Contingent Survivor with a minimum of 10 years Certain and Life

For all others:

Benefits based on service prior to 10/1/2010: Joint and 40% Contingent Survivor with minimum of 10 years Certain and Life

Benefits based on service after 9/30/2010: 10 years Certain and Life

Optional Forms

- Option 1 Cash refund annuity based on Present Value at retirement
- Option 2 Joint and 100% Contingent Annuity
- Option 3 Joint and 50% Contingent Annuity
- Option 4 Joint and Contingent Annuity approved by the Board
- Option 5 Determined by Board due to incapacity of member
- Option 6 Withdrawal of member contributions with interest and benefit that is 1/2 of normal level

Plan Provision Not Included

The COLA benefits and liabilities are not included in this report; these benefits are reported in a separate COLA report dated December 9, 2015. We are not aware of any other provisions not included in this report.

Adjustments Made for Subsequent Events

We are not aware of any event following the measurement date and prior to the date of this report that would materially impact the results.

Pension Stabilization Fund

Beginning October 1, 2008, any time the city's contributions to normal cost fall below 37% of valuation payroll, the difference will be deposited into the Pension Stabilization Fund to be used in subsequent years when the city's required contributions exceed 37%. No payment to this trust is required if the funded level of this trust exceeds 10% of the actuarial value of assets of the retirement system.

Changes Since Prior Report

Police officers hired prior to October 1, 2012 will contribute 7% of compensation. All fire fighters will contribute 10% of compensation. The benefit for fire fighters who had not reached rule of 64 by 9/30/2009 or rule of 68 by 9/30/2010 increased to a 3.5% from 3.0% accrual for service over 15 years.

| Cost Method (CO) | Aggregate Cost Method | | | |
|---|--|---|---|--|
| Asset Valuation Method (CO) | 20% Write-Up Method: Expected actuarial value of assets, adjusted by 20% of the difference between expected actuarial value and actual market value (net of pending transfers to the COLA Fund). | | | |
| | The result cann of pending COL | | an 120% of market value or less than 80% of market value (net | |
| Interest Rates (CO) | 7.42% net of in | vestment exper | nses | |
| Annual Pay Increases (FE) | 3.25% inflation <u>Service</u> 0-6 7 8-9 10-14 15-16 17-21 22+ | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | | |
| | There is no add | ditional increase | e at retirement. | |
| Expense and/or Contingency Loading (FE) | \$2,058,798 | | | |
| Mortality Rates (CO) | | | | |
| Healthy Disabled | RP 2000 Mortality Table projected to 2020 using Scale AA RP 2000 Disabled Mortality Table projected to 2020 using Scale AA | | | |
| | 100% of the as | 100% of the assumed deaths are expected to be ordinary deaths | | |

| Retirement Rates (FE) | If eligible for Retirement, the following decrements apply, based on service. | | |
|---------------------------------------|---|--|---|
| | Years of Service <20 20 21-24 25-29 30-34 35 36 37 | Police % 0 10 3 40 50 100 | Fire % 0 10 3 5 25 25 25 25 100 |
| | All Members are a following first retir | | ect a 5-year BackDROP when they reach five years y. |
| Disability Rates (FE) | 100% of the disal recovery is assum | | ected to be accidental with the following probabilities. No |
| | 35 0 40 0 45 0 | <u>Rates</u>).285%).390%).800% .210% | |
| Withdrawal Rates (FE) | Based on Years of | of Creditable S | ervice using the rates below |
| | <u>Age</u> 30 35 40 45 50 | <5 2.40% 2.40% 1.80% 1.20% 0.00% | <u>5+</u> 1.92% 1.92% 1.44% 0.96% 0.00% |
| Marital Status and Ages | 100% of Members younger than mal | | to be married. Female spouses assumed to be 3 years |
| Compensated Absence Balance Transfers | balances into FIP | O to purchase at assets will be | ed for the provision to transfer compensated absence additional creditable service, based on our e transferred immediately prior to retirement to cover ional service. |

nyhart

| Withdrawal of Employee Contributions | It is assumed that employees do not withdraw their contribution balances upon employment termination or retirement. |
|--------------------------------------|---|
| COLA | COLA benefits are assumed to increase as indicated in the COLA table; these are documented in a separate COLA report. No increase to the table is assumed to occur. |
| Changes Since Prior Report | The administrative expense increased to \$2,058,798. |

FE indicates an assumption representing an estimate of future experience. MO indicates an assumption representing an observation of estimates inherit to market data.

CO indicates an assumption representing a combination of an estimate of future experience and observations of market data.

The actuarial report also shows the necessary items required for plan reporting and the any state requirements.

- ✓ Market Value Reconciliation
- ✓ Membership and Benefits Cost-Of-Living Adjustment Account Summary
- ✓ Investment Results
- ✓ Florida State Requirements
 - Comparative Summary of Principal Valuation Results
 - Separation for Police & Fire
 - Comparison of payroll growth, salary increases and investment returns
 - Requirements under Florida Statute 112.664 and F.A.C. 60T-1.0035
- ✓ COLA GASB 5 information

Market Value Reconciliation

The amount of assets backing the pension promise is the most significant driver of volatility and future costs within a pension plan. The investment performance of the assets directly offsets the ultimate cost.

| | | | September 30, 2015 |
|---|--|--|---|
| | Membership and Benefits Accounts | COLA I <u>Account</u> | COLA II <u>Account</u> |
| 1. Market value – beginning of prior year | \$1,136,678,362 | \$57,880,282 | \$336,471,254 |
| 2. Book value – beginning of prior year | \$991,118,217 | \$50,467,336 | \$293,378,112 |
| 3. Income (a) City contributions (b) Member contributions (c) Other contributions (d) Interest and dividends (e) Net realized gains (losses) (f) Securities lending income (g) Rental and other income (h) Income transfer (i) Total | \$42,919,757 9,317,231 0 22,574,666 71,178,572 466,401 245,520 0 \$146,702,147 | \$0 0 953,019 2,981,475 19,746 10,394 0 \$3,964,634 | \$5,696,920 0 5,428,186 17,101,242 112,200 59,143 0 \$28,397,691 |
| 4. Disbursements (a) Benefit payments and refunds (b) Custodial and investment expenses (c) Administrative expense (d) Other expense (e) Securities lending fees (f) Building depreciation (g) Total | \$126,153,910 4,211,734 2,222,561 0 116,494 <u>33,202</u> \$132,737,901 | \$164,707 177,536 0 4,932 1,458 \$348,633 | \$23,399,027 1,013,078 0 0 28,024 8,065 \$24,448,194 |
| 5. Book value – beginning of current year [(2)+(3i)-(4g)] | \$1,005,082,463 | \$54,083,337 | \$297,327,609 |
| 6. Net change in unrealized gains (losses) | \$(59,698,248) | \$(2,791,286) | \$(17,685,187) |
| 7. Unrealized gains (losses) | \$85,861,897 | \$4,621,660 | \$25,407,955 |
| 8. Market value – beginning of current year [(1)+(3i)-(4g)+6] | \$1,090,944,360 | \$58,704,997 | \$322,735,564 |
| 9. Current year allocation to COLA II (discounted) | \$0 | N/A | \$0 |
| 10. Net market value – beginning of current year | \$1,090,944,360 | \$58,704,997 | \$322,735,564 |

Membership and Benefits Cost-Of-Living Adjustment Account Summary

| | | | September 30, 2015 |
|----|---|---|--|
| | | Market | <u>Book</u> |
| 1. | Investments (a) Bill, bonds, notes (b) Domestic stocks (c) International stocks (d) Private equity (e) Money market fund and time deposit (f) Mutual fund (g) Real estate (h) Securities lending adjustment (i) Total investment | \$530,228,074 387,709,723 231,843,380 119,680,233 9,065,975 146,332,060 1,871,735 0 \$1,426,731,180 | \$536,960,245 320,180,881 222,252,977 109,160,298 10,685,785 109,727,747 1,871,735 0 \$1,310,839,668 |
| 2. | | \$44,746,653 | \$44,746,653 |
| 3. | | \$349,061 0 5,768 3,539,126 8,728,226 \$12,622,181 | \$349,061 0 5,768 3,539,126 8,728,226 \$12,622,181 |
| 4. | Payables: (a) Budget advance (b) Accrual expense (c) Transfer (d) Tax withheld (e) Accounts payable (f) Securities purchased (g) Total payables | \$0 160,006 0 13,628 176,380 <u>11,365,079</u> \$11,715,093 | \$0 160,006 0 13,628 176,380 <u>11,365,079</u> \$11,715,093 |
| 5. | Total [(1i)+(2)+(3f)-(4g)] | \$1,472,384,921 | \$1,356,493,409 |
| 6. | COLA I account | \$58,704,997 | \$54,083,337 |
| 7. | COLA II account | \$322,735,564 | \$297,327,609 |
| 8. | Current year COLA II transfer | \$0 | \$0 |
| 9. | Membership & benefits account [(5)-(6)-(7)-(8)] | \$1,090,944,360 | \$1,005,082,463 |

Investment Results - Membership and Benefits Accounts

| | September 30, 2015 | | |
|--|--------------------|---------------|-------------|
| | Dollar Return | Market Return | Book Return |
| Interest | \$13,745,436 | 1.3% | 1.4% |
| Dividends | 8,829,230 | 0.8% | 0.9% |
| Rental and other income, less depreciation | 212,318 | 0.0% | 0.0% |
| Realized gains | 71,178,572 | 6.5% | 7.5% |
| Securities lending (net) | 349,907 | 0.0% | 0.0% |
| Increase in unrealized gains | (59,698,248) | (5.4)% | N/A |
| Custodial and investment expenses | (4,211,734) | (0.4)% | (0.4)% |
| Total return on investment | \$30,405,481 | 2.8% | 9.4% |

Page 28



Investment Results – COLA I and II Accounts

September 30, 2015

COLA I Account

| | Dollar Return | Market Return | Book Return |
|--|---------------|---------------|-------------|
| Interest | \$578,846 | 1.0% | 1.2% |
| Dividends | 374,173 | 0.6% | 0.7% |
| Rental and other income, less depreciation | 8,936 | 0.0% | 0.0% |
| Realized gains | 2,981,475 | 5.2% | 5.9% |
| Securities lending (net) | 14,814 | 0.0% | 0.0% |
| Increase in unrealized gains | (2,791,286) | (4.8)% | N/A |
| Custodial and investment expenses | (177,536) | (0.3)% | (0.3)% |
| Total return on investment | \$989,422 | 1.7% | 7.5% |

COLA II Account

| | Dollar Return | Market Return | Book Return |
|--|---------------|---------------|-------------|
| Interest | \$3,303,444 | 1.0% | 1.2% |
| Dividends | 2,124,742 | 0.7% | 0.8% |
| Rental and other income, less depreciation | 51,078 | 0.0% | 0.0% |
| Realized gains | 17,101,242 | 5.2% | 6.0% |
| Securities lending (net) | 84,176 | 0.0% | 0.0% |
| Increase in unrealized gains | (17,685,187) | (5.4)% | N/A |
| Custodial and investment expenses | (1,013,078) | (0.3)% | (0.4)% |
| Total return on investment | \$3,966,417 | 1.2% | 7.6% |

| Comparative Summary of Principal Valuation Results | | | |
|--|-----------------|-----------------|-----------------|
| | 10/1/2015 | 10/1/2015 | 10/1/2014 |
| | 7.42% | 7.42% | 7.42% |
| | Plan | | |
| | Changes | | |
| Participant Data | | | |
| Active members | 1,650 | 1,650 | 1,482 |
| Total annual payroll | \$106,278,378 | \$106,278,378 | \$93,705,765 |
| Members in Forward DROP | 278 | 278 | 401 |
| DROP payroll | \$27,687,795 | \$27,687,795 | \$34,080,879 |
| Projected total payroll | \$133,966,173 | \$133,966,173 | \$127,786,644 |
| Retired members and beneficiaries | 1,805 | 1,805 | 2,098 |
| Total annualized benefit | \$121,842,316 | \$121,842,316 | \$122,009,571 |
| Disabled members receiving benefits | 147 | 147 | 149 |
| Total annualized benefit | \$3,271,325 | \$3,271,325 | \$3,297,718 |
| Terminated vested members | 15 | 15 | 12 |
| Total annualized benefit | \$403,236 | \$403,236 | \$319,796 |
| Assets | | | |
| Actuarial value of assets | \$1,147,334,950 | \$1,147,334,950 | \$1,151,016,531 |
| Market value of assets | \$1,090,944,360 | \$1,090,944,360 | \$1,136,462,242 |



| omparative Summary of Principal Valuation Results (continued) | 10/1/2015 | 10/1/2015 | 10/1/2014 |
|--|-----------------|-----------------|-----------------|
| | 7.42% | 7.42% | 7.42% |
| | Plan | 7.4270 | 7.4270 |
| | Changes | | |
| abilities, present value of all future expected benefit payments | | | |
| Active members | | | |
| Retirement benefits | \$455,877,149 | \$454,747,832 | \$406,475,370 |
| Vesting benefits | 26,849,525 | 26,548,401 | 25,029,798 |
| Disability benefits | 56,071,742 | 56,071,742 | 51,259,582 |
| Death benefits | 8,046,397 | 7,977,416 | 7,307,646 |
| Return of contribution | 2,462,886 | 2,315,426 | 2,235,295 |
| Total | \$549,307,699 | \$547,660,817 | \$492,307,691 |
| erminated vested members | \$2,715,494 | \$2,715,494 | \$2,307,321 |
| Retired members and beneficiaries | \$1,319,774,303 | \$1,319,774,303 | \$1,338,709,196 |
| Disabled members | \$28,037,791 | \$28,037,791 | \$28,692,260 |
| Total | \$1,899,835,287 | \$1,898,188,405 | \$1,862,016,468 |
| Liabilities due and unpaid | \$0 | \$0 | \$0 |
| ctuarial accrued liability | N/A | N/A | N/A |
| | | | |

| Comparative Summary of Principal Valuation Results (continued) | | | |
|--|-----------------|-----------------|-----------------|
| | 10/1/2015 | 10/1/2015 | 10/1/2014 |
| | 7.42% | 7.42% | 7.42% |
| | Plan | | |
| | Changes | | |
| Actuarial present value of accrued benefits | | | |
| Statement of actuarial present value of all accrued benefits | | | |
| Vested accrued benefits | | | |
| Inactive members and beneficiaries | \$1,350,527,588 | \$1,350,527,588 | \$1,369,708,777 |
| Active members | 241,943,732 | 240,107,472 | 208,780,651 |
| Total value of all vested accrued benefits | \$1,592,471,320 | \$1,590,635,060 | \$1,578,489,428 |
| Non-vested accrued benefits | 17,066,732 | 17,123,300 | 11,128,196 |
| Total actuarial present value of all accrued benefits | \$1,609,538,052 | \$1,607,758,360 | \$1,589,617,624 |
| Statement of changes in total actuarial present value of all accrued benefits (ASC 960 |)) | | |
| Actuarial present value of accrued benefits, beginning of year | \$1,589,617,624 | \$1,589,617,624 | \$1,556,761,507 |
| Increase (decrease) during year | | | |
| Benefits accumulated | \$30,941,588 | \$30,941,588 | \$34,913,897 |
| Plan amendment | 1,779,692 | 0 | 0 |
| Changes in actuarial assumptions | 0 | 0 | 12,379,458 |
| Interest | 113,353,058 | 113,353,058 | 112,015,149 |
| Benefits paid | (126,153,910) | (126,153,910) | (126,452,387) |
| Other changes | 0 | 0 | 0 |
| Net increase (decrease) | \$19,920,428 | \$18,140,736 | \$32,856,117 |
| Actuarial present value of accrued benefits, end of year | \$1,609,538,052 | \$1,607,758,360 | \$1,589,617,624 |

| Normal Cost \$56,329,666 \$56,521,322 \$52,045,324 Member contributions \$9,227,446 \$9,164,333 \$8,081,171 Expected plan sponsor contribution \$47,102,220 \$47,356,999 \$43,964,153 As % of payroll 44.32% 44.56% 46.92% As % of total payroll 35.16% 35.35% 34.40% Member Contributions as % of payroll 8.68% 8.62% 8.62% Past contributions 9/30/2015 9/30/2015 9/30/2014 Required plan sponsor contribution \$9,317,231 \$9,462,563 Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Plan's sponsor \$9,317,231 \$9,462,563 \$0 Members \$0 \$42,919,757 \$42,057,691 Other \$9,317,231 \$9,462,563 \$0 Members \$0 \$42 \$16,553 Other \$0 \$42,919,757 \$42,057,691 Members \$0,317,231 \$9,462,563 \$0 Other \$0 \$42 | Comparative Summary of Principal Valuation Results (continued) | | | |
|---|--|-----------------|-----------------|-----------------|
| Plan ChangesPlan ChangesPension cost Normal Cost\$56,329,666\$56,521,332\$52,045,324Member contributions\$9,227,446\$9,164,333\$8,081,171Expected plan sponsor contribution\$47,102,220\$47,356,999\$43,964,153As % of payroll\$43,23%44,65%46,92%As % of total payroll35,16%35,35%34,40%Member Contributions as % of payroll8,68%8,62%8,62%Past contributions\$9,30/20159/30/20159/30/2014Required plan sponsor contribution\$9,317,231\$9,462,569Actual contributions made by: Plan's sponsor Members Other\$9,317,231\$9,462,569Actual contributions made by: Plan's sponsor Members OtherN/AN/AN/AWter disclosures (where applicable)N/AN/AN/APresent value of active member Future salaries at attained age\$1,585,673,300\$1,585,673,300\$1,441,538,742 | | | | |
| ChangesNormal Cost\$56,329,666\$56,521,332\$52,045,324Member contributions\$9,227,446\$9,164,333\$8,081,174Expected plan sponsor contribution\$47,102,220\$47,356,999\$43,964,153As % of payroll\$43,23%\$44,56%\$46,92%As % of total payroll35,16%35,35%34,40%Member Contributions as % of payroll8.68%8.62%8.62%Past contributions\$42,919,757\$42,057,691Required plan sponsor contribution\$9,317,231\$9,462,565Actual contributions made by: Plan's sponsor Other\$42,919,757\$42,057,691Plan's sponsor Members\$1,585,673,300\$1,585,673,300\$1,441,538,742 | | | 7.42% | 7.42% |
| Pension cost Normal Cost\$56,329,666\$56,521,332\$52,045,324Member contributions\$9,227,446\$9,164,333\$8,081,177Expected plan sponsor contribution\$447,102,220\$47,356,999\$43,964,153As % of payroll\$44,32%\$44,56%\$46,92%As % of total payroll\$35,16%35,35%34,40%Member Contributions as % of payroll\$8,68%8,62%8,62%Past contributions\$9/30/20159/30/20159/30/2015Required plan sponsor contribution\$9,317,231\$9,462,565Actual contributions\$9,317,231\$9,462,565Other\$0\$0\$0Versent Value of active member Future salaries at attained age\$1,585,673,300\$1,585,673,300\$1,441,538,742 | | | | |
| Normal Cost \$56,329,666 \$56,521,332 \$52,045,324 Member contributions \$9,227,446 \$9,164,333 \$8,081,171 Expected plan sponsor contribution \$47,102,220 \$47,356,999 \$43,964,155 As % of payroll 44.32% 44.56% 44.42% As % of total payroll 35.16% 35.35% 34.40% Member Contributions as % of payroll 35.16% 35.35% 34.40% As % of total payroll 35.16% 35.35% 34.40% Member Contributions as % of payroll 35.16% 36.2% 8.62% Past contributions \$9/30/2015 9/30/2015 9/30/2016 Required plan sponsor contribution \$9,317,231 \$9,462,565 Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,565 \$9,317,231 \$9,462,565 Other \$0 \$9 \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,565 \$9,317,231 \$9,462,565 Other \$0 \$0 | | Changes | | |
| Member contributions\$9,227,446\$9,164,333\$8,081,171Expected plan sponsor contribution\$47,102,220\$47,356,999\$43,964,153As % of payroll\$43,2%\$44.56%\$46.92%As % of total payroll35.16%35.35%34.40%Member Contributions as % of payroll8.68%8.62%8.62%Past contributions9/30/20159/30/20159/30/2014Required plan sponsor contribution\$9,317,231\$9,462,569Required member contribution\$9,317,231\$9,462,569Actual contributions made by: Plan's sponsor Other\$42,919,757\$42,057,691Plan's sponsor\$42,919,757\$42,057,691Members Other\$9,317,231\$9,462,569When bers Other\$9,317,231\$9,462,569Other\$0\$0\$0Parsent value of active member Future salaries at attained age\$1,585,673,300\$1,585,673,300\$1,441,538,742 | Pension cost | | | |
| Expected plan sponsor contribution \$47,102,220 \$47,356,999 \$43,964,152 As % of payroll 44.32% 44.56% 46.92% As % of total payroll 35.16% 35.35% 34.40% Member Contributions as % of payroll 8.68% 8.62% 8.62% Past contributions 9/30/2015 9/30/2014 \$42,919,757 \$42,057,691 Required plan sponsor contribution \$9,317,231 \$9,462,569 \$42,919,757 \$42,057,691 Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,569 \$0 \$0 Other \$9,317,231 \$9,462,569 \$0 | Normal Cost | \$56,329,666 | \$56,521,332 | \$52,045,324 |
| As % of payroll 44.32% 44.56% 46.92% As % of total payroll 35.16% 35.35% 34.40% Member Contributions as % of payroll 8.68% 8.62% 8.62% Past contributions 9/30/2015 9/30/2015 9/30/2014 Required plan sponsor contribution \$9,317,231 \$9,462,569 Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,569 \$0 \$0 Other \$9,317,231 \$9,462,569 \$0 \$0 Net actuarial gain (loss) (if applicable) N/A N/A N/A Other disclosures (where applicable) Present value of active member \$1,585,673,300 \$1,585,673,300 \$1,441,538,742 | Member contributions | \$9,227,446 | \$9,164,333 | \$8,081,171 |
| As % of payroll 44.32% 44.56% 46.92% As % of total payroll 35.16% 35.35% 34.40% Member Contributions as % of payroll 8.68% 8.62% 8.62% Past contributions 9/30/2015 9/30/2015 9/30/2014 Required plan sponsor contribution \$42,919,757 \$42,057,691 Required member contributions \$9,317,231 \$9,462,563 Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,565 \$0 \$0 Other \$9,317,231 \$9,462,565 \$0 \$0 \$0 Plan's sponsor \$42,919,757 \$42,057,691 \$0 | Expected plan sponsor contribution | \$47,102,220 | \$47,356,999 | \$43,964,153 |
| As % of total payroll35.16%35.35%34.40%Member Contributions as % of payroll8.68%8.62%8.62%Past contributions9/30/20159/30/20159/30/2014Required plan sponsor contribution\$9,317,231\$9,462,569Required member contributions made by: Plan's sponsor Members Other\$42,919,757\$42,057,691Actual contributions made by: Plan's sponsor Members Other\$42,919,757\$42,057,691Members Other\$9,317,231\$9,462,566N/AN/AN/AN/AN/AN/AN/AN/AOther\$0\$0Present value of active member Future salaries at attained age\$1,585,673,300\$1,585,673,300\$1,441,538,742 | | 44.32% | 44.56% | 46.92% |
| Past contributions 9/30/2015 9/30/2014 Required plan sponsor contribution \$42,919,757 \$42,057,691 Required member contribution \$9,317,231 \$9,462,563 Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,563 \$9,317,231 \$9,462,563 Other \$0 \$0 \$0 \$0 \$0 Nembers \$9,317,231 \$9,462,563 \$0 \$0 \$0 \$0 Other N/A N/A N/A N/A N/A N/A Present value of active member \$1,585,673,300 \$1,585,673,300 \$1,441,538,742 | As % of total payroll | 35.16% | 35.35% | 34.40% |
| Required plan sponsor contribution\$42,919,757\$42,057,691Required member contribution\$9,317,231\$9,462,569Actual contributions made by: Plan's sponsor Members Other\$42,919,757\$42,057,691Members Other\$9,317,231\$9,462,569Members Other\$9,317,231\$9,462,569Members Other\$1,585,673,300\$1,585,673,300\$1,441,538,742 | Member Contributions as % of payroll | 8.68% | 8.62% | 8.62% |
| Required member contribution \$9,317,231 \$9,462,569 Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,569 \$0 \$0 \$0 Other Other \$0 \$0 \$0 \$0 \$0 Net actuarial gain (loss) (if applicable) N/A N/A N/A N/A Other disclosures (where applicable) Present value of active member \$1,585,673,300 \$1,585,673,300 \$1,441,538,742 | Past contributions | | 9/30/2015 | 9/30/2014 |
| Actual contributions made by: Plan's sponsor \$42,919,757 \$42,057,691 Members \$9,317,231 \$9,462,565 Other \$0 \$0 Net actuarial gain (loss) (if applicable) N/A N/A Other disclosures (where applicable) Present value of active member Future salaries at attained age \$1,585,673,300 \$1,585,673,300 \$1,441,538,742 | Required plan sponsor contribution | | \$42,919,757 | \$42,057,691 |
| Plan's sponsor\$42,919,757\$42,057,691Members\$9,317,231\$9,462,569Other\$0\$0Met actuarial gain (loss) (if applicable)N/AN/AN/AN/AN/AN/AOther disclosures (where applicable)Present value of active member\$1,585,673,300\$1,585,673,300\$1,441,538,742 | Required member contribution | | \$9,317,231 | \$9,462,569 |
| Members Other\$9,317,231 \$9,462,569 \$0Iet actuarial gain (loss) (if applicable)N/AN/AN/AN/AN/AOther disclosures (where applicable)Present value of active member Future salaries at attained age\$1,585,673,300\$1,585,673,300\$1,585,673,300\$1,585,673,300\$1,441,538,742 | Actual contributions made by: | | | |
| Other\$0\$0\$0Net actuarial gain (loss) (if applicable)N/AN/AN/AOther disclosures (where applicable)Present value of active member Future salaries at attained age\$1,585,673,300\$1,585,673,300\$1,441,538,742 | Plan's sponsor | | | . , , |
| Net actuarial gain (loss) (if applicable) N/A N/A N/A Other disclosures (where applicable) Present value of active member \$1,585,673,300 \$1,585,673,300 \$1,441,538,742 | Members | | \$9,317,231 | \$9,462,569 |
| Other disclosures (where applicable) Present value of active member Future salaries at attained age \$1,585,673,300 \$1,585,673,300 | Other | | \$0 | \$0 |
| Present value of active member Future salaries at attained age \$1,585,673,300 \$1,585,673,300 \$1,441,538,742 | Net actuarial gain (loss) (if applicable) | N/A | N/A | N/A |
| Future salaries at attained age \$1,585,673,300 \$1,585,673,300 \$1,441,538,742 | Other disclosures (where applicable) | | | |
| 9 | Present value of active member | | | |
| | Future salaries at attained age | \$1,585,673,300 | \$1,585,673,300 | \$1,441,538,742 |
| | • | \$128,995,783 | \$123,368,097 | \$112,603,159 |

| | Police | Fire | Total |
|--|-----------------|---------------|-----------------|
| Unfunded actuarial accrued liability | \$0 | \$0 | \$0 |
| Liabilities, present value of all future expected benefit payments | | | |
| Active members | | | |
| Retirement benefits | \$257,526,533 | \$198,350,616 | \$455,877,149 |
| Vesting benefits | 14,015,016 | 12,834,509 | 26,849,525 |
| Disability benefits | 31,879,084 | 24,192,658 | 56,071,742 |
| Death benefits | 3,931,972 | 4,114,425 | 8,046,397 |
| Return of contribution | 1,319,474 | 1,143,412 | 2,462,886 |
| Total | \$308,672,079 | \$240,635,620 | \$549,307,699 |
| Terminated vested members | \$2,352,919 | \$362,575 | \$2,715,494 |
| Retired members and beneficiaries | \$726,632,603 | \$593,141,700 | \$1,319,774,303 |
| Disabled members | \$24,467,983 | \$3,569,808 | \$28,037,791 |
| Total | \$1,062,125,584 | \$837,709,703 | \$1,899,835,287 |
| Entry age reserve | | | |
| Active | \$148,090,459 | \$117,513,456 | \$265,603,915 |
| Inactive | 753,453,505 | 597,074,083 | 1,350,527,588 |
| Total | \$901,543,964 | \$714,587,539 | \$1,616,131,503 |
| Actuarial asset value ¹ | \$640,030,157 | \$507,304,793 | \$1,147,334,950 |

¹Allocated based on Entry Age Reserve

| | Police | Fire | Total |
|--|-----------------|---------------|-----------------|
| lormal cost | | | |
| Total present value of future benefits | \$1,062,125,584 | \$837,709,703 | \$1,899,835,287 |
| Present value of future member contributions | (57,958,565) | (71,037,218) | (128,995,783) |
| Actuarial asset value | (640,030,157) | (507,304,793) | (1,147,334,950) |
| Unfunded actuarial accrued liability | \$0 | \$0 | \$0 |
| Present value of future normal costs | \$364,136,862 | \$259,367,692 | \$623,504,554 |
| Present value of future payrolls | \$812,375,475 | \$773,297,824 | \$1,585,673,299 |
| Administrative expense ¹ | \$1,148,481 | \$910,317 | \$2,058,798 |
| Current payroll | \$57,494,879 | \$48,783,499 | \$106,278,378 |
| Interest rate | 7.42% | 7.42% | 7.42% |
| Current normal cost at end of year | \$28,917,272 | \$18,554,151 | \$47,102,220 |
| As a percentage of payroll | 50.30% | 38.03% | 44.32% |
| Hypothetical Total | | | 47,471,423 |

¹Allocated based on Entry Age Reserve



Historical Salary Increases and Asset Performance

| Year Ending | Payroll Growth | Salary Growth | Expected Salary Growth | Asset Return (Market) | Asset Return (Actuarial) | Asset Return (Expected) |
|-------------|----------------|----------------------|---------------------------|--------------------------|-----------------------------|----------------------------|
| 9/30/2015 | 13.42% | 12.60% | 7.79% | 2.80% | 6.18% | 7.42% |
| 9/30/2014 | 10.00% | 1.38% | 7.72% | 8.60% | 7.18% | 7.50% |
| 9/30/2013 | 3.70% | 3.64% | 7.77% | 11.20% | 6.95% | 7.50% |
| 9/30/2012 | 0.10% | (0.75%) | 7.92% | 17.40% | 5.98% | 7.50% |
| 9/30/2011 | 2.50% | 7.14% | 7.48% | 3.60% | 3.98% | 7.50% |
| 9/30/2010 | (34.40%) | (9.33%) ¹ | 7.51% | 9.80% | 4.48% | 7.75% |
| 9/30/2009 | (5.50%) | 6.35% | 7.26% | (0.30%) | (1.31%) | 7.75% |
| 9/30/2008 | 24.80% | 18.20% | 7.17% | (14.30%) | 3.65% | 7.75% |
| 9/30/2007 | 14.70% | 18.19% ¹ | 5.81% | 14.20% | 8.27% | 7.75% |
| 9/30/2006 | (1.30%) | 2.84% | 5.79% | 9.10% | 7.57% | 7.75% |
| Averages | | | | | | |
| 3-year | | | | 7.48% | 6.77% | |
| 5-year | | | | 8.59% | 6.05% | |
| 10-year | 2.80% | | | 5.85% | 5.26% | |
| 20-year | | | | 7.79% | 7.26% | |

¹Including impact of change in valuation pay definition

| | | | | October 1, 2015 |
|---|-----------------|-----------------------|---------------------------|-----------------------|
| | Valuation | - 200 bp ² | Funding Rate ² | + 200 bp ² |
| | 7.42% | 5.42% | 7.42% | 9.42% |
| Total pension liability | | | | |
| Service Cost | \$19,610,906 | \$19,610,906 | \$19,610,906 | \$19,610,906 |
| Interest | 155,662,686 | 155,662,686 | 155,662,686 | 155,662,686 |
| Benefit changes | 1,019,168 | 1,019,168 | 1,019,168 | 1,019,168 |
| Difference between expected and actual experience | 15,989,154 | 15,989,154 | 15,989,154 | 15,989,154 |
| Changes in assumptions | 0 | 494,246,097 | 23,819,635 | (311,110,932) |
| Benefit payments | (164,534,254) | (164,534,254) | (164,534,254) | (164,534,254) |
| Contribution refunds | (1,001,073) | (1,001,073) | (1,001,073) | (1,001,073) |
| Net change in pension liability | \$26,746,587 | \$520,992,684 | \$50,566,222 | (\$284,364,345) |
| Total pension liability, beginning of year | \$2,161,036,624 | \$2,161,036,624 | \$2,161,036,624 | \$2,161,036,624 |
| Total pension liability, end of year | \$2,187,783,211 | \$2,682,029,308 | \$2,211,602,846 | \$1,876,672,279 |
| Plan fiduciary net position | | | | |
| Contributions - Employer | \$48,616,677 | \$48,616,677 | \$48,616,677 | \$48,616,677 |
| Contributions - State | 0 | 0 | 0 | 0 |
| Contributions - Member | 9,317,231 | 9,317,231 | 9,317,231 | 9,317,231 |
| Net investment income | 35,529,492 | 35,529,492 | 35,529,492 | 35,529,492 |
| Benefit payments | (164,534,254) | (164,534,254) | (164,534,254) | (164,534,254) |
| Contribution refunds | (1,001,073) | (1,001,073) | (1,001,073) | (1,001,073) |
| Administrative expense | (2,222,561) | (2,222,561) | (2,222,561) | (2,222,561) |
| Other | 269,771 | 269,771 | 269,771 | 269,771 |
| Net change in plan fiduciary net position | (\$74,024,717) | (\$74,024,717) | (\$74,024,717) | (\$74,024,717) |
| Plan fiduciary net position, beginning of year | \$1,748,696,334 | \$1,748,696,334 | \$1,748,696,334 | \$1,748,696,334 |
| Plan fiduciary net position, end of year | \$1,674,671,617 | \$1,674,671,617 | \$1,674,671,617 | \$1,674,671,617 |
| Net pension liability/(asset) | \$513,111,594 | \$1,007,357,691 | \$536,931,229 | \$202,000,662 |
| Funded ratio | 76.55% | 62.44% | 75.72% | 89.24% |
| Years that Assets support expected benefit payments | 15 | 12 | 15 | 19 |
| Estimated city contribution | | | | |
| Annual dollar value | \$47,102,220 | \$74,480,439 | \$48,779,839 | \$26,092,134 |
| Percentage of payroll | 44.32% | 70.08% | 45.90% | 24.55% |

¹Includes COLA and DROP assets and liabilities

²Based on valuation assumption with the following changes -interest rate (as noted)

-mortality table of RP 2000 with generational projection using Scale AA

Octobor 1 2015

October 1, 2015

Sustainment of Expected Benefit Payments

Mortality Valuation Interest 7.42%

| <u>Year</u> | Market Value of Assets | Investment Return | Benefit Payments |
|-------------|------------------------|-------------------|----------------------------|
| 1 | \$1,674,671,617 | \$111,378,955 | \$353,540,678 ¹ |
| 2 | 1,432,509,894 | 100,785,494 | 151,133,770 |
| 3 | 1,382,161,618 | 97,051,373 | 151,086,520 |
| 4 | 1,328,126,471 | 93,034,418 | 151,293,648 |
| 5 | 1,269,867,241 | 88,677,452 | 152,230,400 |
| 6 | 1,206,314,293 | 83,902,577 | 153,856,432 |
| 7 | 1,136,360,438 | 78,616,304 | 156,482,840 |
| 8 | 1,058,493,902 | 72,731,944 | 159,410,230 |
| 9 | 971,815,616 | 66,137,080 | 163,893,020 |
| 10 | 874,059,676 | 58,773,143 | 166,924,226 |
| 11 | 765,908,593 | 50,685,290 | 168,654,439 |
| 12 | 647,939,444 | 41,844,578 | 171,053,204 |
| 13 | 518,730,818 | 32,204,928 | 172,490,506 |
| 14 | 378,445,240 | 21,673,152 | 175,854,907 |
| 15 | 224,263,485 | 10,049,046 | 180,899,895 |
| 16 | 53,412,636 | | 185,442,801 |

October 1, 2015

Sustainment of Expected Benefit Payments

Mortality RP 2000 Generational (Scale AA) Interest 5.42%

| <u>Year</u> | Market Value of Assets | Investment Return | Benefit Payments |
|-------------|------------------------|-------------------|----------------------------|
| 1 | \$1,674,671,617 | \$81,313,825 | \$353,497,394 ¹ |
| 2 | 1,402,488,048 | 71,976,669 | 151,002,905 |
| 3 | 1,323,461,812 | 67,696,483 | 150,889,369 |
| 4 | 1,240,268,926 | 63,183,065 | 151,052,537 |
| 5 | 1,152,399,454 | 58,396,034 | 151,968,889 |
| 6 | 1,058,826,599 | 53,280,791 | 153,599,061 |
| 7 | 958,508,329 | 47,772,520 | 156,254,773 |
| 8 | 850,026,076 | 41,812,995 | 159,238,304 |
| 9 | 732,600,767 | 35,326,433 | 163,804,499 |
| 10 | 604,122,701 | 28,278,846 | 166,948,403 |
| 11 | 465,453,144 | 20,712,871 | 168,821,260 |
| 12 | 317,344,755 | 12,616,630 | 171,392,681 |
| 13 | 158,568,704 | | 173,033,791 |



October 1, 2015

Sustainment of Expected Benefit Payments

Mortality RP 2000 Generational (Scale AA) Interest 7.42%

| <u>Year</u> | Market Value of Assets | Investment Return | Benefit Payments |
|-------------|------------------------|-------------------|----------------------------|
| 1 | \$1,674,671,617 | \$111,380,532 | \$353,497,394 ¹ |
| 2 | 1,432,554,755 | 100,793,591 | 151,002,905 |
| 3 | 1,382,345,441 | 97,072,196 | 150,889,369 |
| 4 | 1,328,528,268 | 93,073,017 | 151,052,537 |
| 5 | 1,270,548,748 | 88,737,548 | 151,968,889 |
| 6 | 1,207,317,407 | 83,986,385 | 153,599,061 |
| 7 | 1,137,704,731 | 78,724,361 | 156,254,773 |
| 8 | 1,060,174,319 | 72,862,896 | 159,238,304 |
| 9 | 973,798,911 | 66,287,465 | 163,804,499 |
| 10 | 876,281,877 | 58,937,150 | 166,948,403 |
| 11 | 768,270,624 | 50,854,475 | 168,821,260 |
| 12 | 650,303,839 | 42,007,647 | 171,392,681 |
| 13 | 520,918,805 | 32,347,481 | 173,033,791 |
| 14 | 380,232,495 | 21,777,241 | 176,637,789 |
| 15 | 225,371,947 | 10,092,716 | 181,958,675 |
| 16 | 53,505,988 | | 186,819,967 |

October 1, 2015

Sustainment of Expected Benefit Payments

Mortality RP 2000 Generational (Scale AA) Interest 9.42%

| <u>Year</u> | Market Value of Assets | Investment Return | Benefit Payments |
|-------------|------------------------|-------------------|----------------------------|
| 1 | \$1,674,671,617 | \$141,478,993 | \$353,497,394 ¹ |
| 2 | 1,462,653,216 | 130,829,736 | 151,002,905 |
| 3 | 1,442,480,047 | 128,934,651 | 150,889,369 |
| 4 | 1,420,525,329 | 126,859,004 | 151,052,537 |
| 5 | 1,396,331,796 | 124,537,784 | 151,968,889 |
| 6 | 1,368,900,691 | 121,878,721 | 153,599,061 |
| 7 | 1,337,180,351 | 118,768,396 | 156,254,773 |
| 8 | 1,299,693,974 | 115,099,817 | 159,238,304 |
| 9 | 1,255,555,487 | 110,731,743 | 163,804,499 |
| 10 | 1,202,482,731 | 105,587,543 | 166,948,403 |
| 11 | 1,141,121,871 | 99,721,124 | 168,821,260 |
| 12 | 1,072,021,735 | 93,093,502 | 171,392,681 |
| 13 | 993,722,556 | 85,642,163 | 173,033,791 |
| 14 | 906,330,928 | 77,243,943 | 176,637,789 |
| 15 | 806,937,082 | 67,636,068 | 181,958,675 |
| 16 | 692,614,475 | 56,643,064 | 186,819,967 |
| 17 | 562,437,572 | 44,214,625 | 190,420,618 |
| 18 | 416,231,579 | 30,283,745 | 193,858,391 |
| 19 | 252,656,933 | 14,515,243 | 201,672,658 |
| 20 | 65,499,518 | | 204,452,125 |

GASB 5 – COLA Fund

| Funding Status and Progress as of September 30, 2015 and 2014 | <u>2014</u> | <u>2015</u> | |
|---|-------------|-------------|--|
| 1. COLA Fund Table | \$1,629 | \$1,670 | |
| 2. Pension benefit obligation (in millions) | | | |
| a. Retirees and beneficiaries receiving COLA I benefits | \$0.9 | \$0.8 | |
| b. Retirees and beneficiaries receiving benefits and terminated members not yet receiving | 323.7 | 338.5 | |
| c. Current employees | | | |
| Accumulated employee contributions including interest | 0.2 | 0.0 | |
| Employer-financed vested | 0.0 | 0.0 | |
| Employer-financed nonvested | 46.2 | 54.2 | |
| d. Total pension benefit obligation (a+b+c) | \$371.0 | \$393.5 | |
| 3. Net assets available for benefits | \$394.6 | \$381.4 | |
| 4. Unfunded pension benefit (obligation)/asset [(3)-(2)] | \$23.6 | \$(12.2) | |

The pension benefit obligations were determined as part of actuarial valuations at January 1, 2016 and January 1, 2015, based on data and asset information at September 30, 2015 and September 30, 2014. Significant actuarial assumptions used include (a) a rate of return on the investment of present and future assets of 7.42% per year compounded annually for 2015 and 7.50% for 2014, (b) post retirement COLA benefits based on the table in effect at January 1, 2015 and January 1, 2014. All plan provisions and other assumptions not listed above can be found in the January 1, 2016 COLA Fund Report.

GASB 5 – COLA Fund

Contributions required and contributions made

The funding policy provides for annual employer contributions from January 1, 1994. The amount of the contribution was \$2.5 million, beginning January 1, 1994, increasing 4% per year each year thereafter, and reduced (but not below zero) by any excess investment income transfer due on the same date.

The excess investment income transfer consists of a portion of gains due to investment return exceeding the 7.42 percent assumption

Analysis of funding progress

| Fiscal Year | (1) Net Assets Available for Benefits ⁽¹⁾ | (2) Pension Benefit Obligation ⁽²⁾ | (3) Percent Funded | (4) Unfunded PBO (2)-(1) | (5) Annual Covered Payroll | (4)/(5) |
|-------------|--|---|-----------------------|--------------------------------|----------------------------------|---------|
| | (\$) | (\$) | (%) | (\$) | (\$) | (%) |
| 2006 | 249.0 | 216.8 | 115 | (32.2) | 90.4 | (36) |
| 2007 | 300.2 | 242.9 | 124 | (57.3) | 103.6 | (55) |
| 2008 | 305.8 | 279.4 | 109 | (26.4) | 129.4 | (20) |
| 2009 | 296.3 | 290.0 | 102 | (6.3) | 122.2 | (5) |
| 2010 | 311.8 | 315.6 | 99 | 3.8 | 80.2 | 5 |
| | | | | | | |
| 2011 | 310.0 | 303.6 | 102 | (6.4) | 82.2 | (8) |
| 2012 | 350.3 | 312.6 | 112 | (37.7) | 82.2 | (46) |
| 2013 | 378.7 | 320.0 | 118 | (58.7) | 85.2 | (69) |
| 2014 | 394.6 | 371.0 | 106 | (23.6) | 93.7 | (25) |
| 2015 | 381.4 | 393.5 | 97 | 12.1 | 106.3 | 11 |

⁽¹⁾ Excluding future City minimum contributions

⁽²⁾ Excluding new increment and contingency reserves

GASB 5 – COLA Fund

Revenues and Expenses

| • | Revenues by Source | | | | |
|--------|--------------------|----------------|------------|------------|--|
| Fiscal | Employee | Employer | Investment | | |
| Year | Contributions | Contributions | Income | Total | |
| | (\$) | (\$) | (\$) | (\$) | |
| 2006 | 0 | 0 | 25,340,983 | 25,340,983 | |
| 2007 | 0 | 0 | 47,781,293 | 47,781,293 | |
| 2008 | 0 | 0 | 44,539,016 | 44,539,016 | |
| 2009 | 0 | 0 | 44,696,486 | 44,969,486 | |
| 2010 | 0 | 4,682,453 | 18,493,888 | 23,176,341 | |
| 2011 | 0 | 4,869,751 | 25,484,227 | 30,353,978 | |
| 2012 | 0 | 5,064,541 | 21,399,142 | 26,463,683 | |
| 2013 | 0 | 5,267,123 | 27,293,996 | 32,561,119 | |
| 2014 | 0 | 5,477,808 | 30,812,622 | 36,290,430 | |
| 2015 | 0 | 5,696,920 | 26,665,405 | 32,362,325 | |
| | | Expense | s by Type | | |
| Fiscal | | Administrative | | | |
| Year | Benefits | Expenses | Refunds | Total | |
| | (\$) | (\$) | (\$) | (\$) | |
| 2006 | 11,760,071 | 807,594 | 1,934 | 12,569,599 | |
| 2007 | 13,304,749 | 944,477 | 388 | 14,249,614 | |
| 2008 | 15,666,175 | 1,053,599 | 14,154 | 16,733,928 | |
| 2009 | 16,925,422 | 867,083 | 0 | 17,795,505 | |
| 2010 | 17,236,918 | 1,164,379 | 0 | 18,401,297 | |
| 2011 | 17,363,841 | 1,321,324 | 0 | 18,685,165 | |
| 2012 | 17,747,481 | 1,456,098 | 421 | 19,204,000 | |
| 2013 | 19,522,271 | 1,604,698 | 0 | 21,126,969 | |
| 2014 | 22,188,409 | 1,483,762 | 0 | 23,672,171 | |
| 2015 | 23,563,734 | 1,190,614 | 0 | 24,754,348 | |
| | -,, - | , , - | - | , - , | |