

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

**October 1, 2013 Actuarial Report**

**For the Fiscal and Plan Year  
October 1, 2014  
through  
September 30, 2015**

**Prepared By:**

**The Nyhart Company, Inc.  
2000 RiverEdge Parkway/ Suite 900  
Atlanta, GA 30328**

**(770) 933-1933**

**June 12, 2014**

June 12, 2014

Board of Trustees  
City of Miami Fire Fighters' and  
Police Officers' Retirement Trust  
1895 SW 3 Avenue  
Miami, FL 33129-1456

October 1, 2013 Actuarial Report

Dear Board Members:

Enclosed is our report on the actuarial valuation of the City of Miami Fire Fighters' and Police Officers' Retirement Trust as of October 1, 2013, for the fiscal year beginning October 1, 2014.

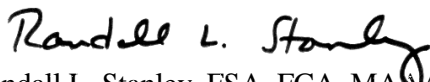
The report is based upon the terms of Ordinance No. 10002 and the Amended Final Judgment in the matter of Gates v. City of Miami, as well as Ordinance 13344 (excluding any change to the Entry Age Cost Method).

The City contribution requirement for the 2014/2015 fiscal year is \$43,995,049, compared to \$41,827,871 for the 2013/2014 fiscal year.

When expressed as a percentage of total payroll (for active members and members in forward DROP), the City contribution rate increased from 33.53% as of October 1, 2012 to 35.32% as of October 1, 2013. The percentages of total payroll reflect the hypothetical impact on funding if there were no forward DROP, since members who are presently in DROP could well be more likely to be retired and replaced with active members. The ordinance and State law do not permit funding after members enter a forward DROP.

Respectfully submitted,

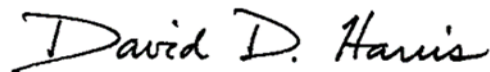
**THE NYHART COMPANY, INC.**



Randall L. Stanley, FSA, FCA, MAAA, EA



Heath W. Merlak, FSA, MAAA, EA  
Actuary



David D. Harris, ASA, FCA, MAAA, EA  
Actuary

Enclosures: Electronic ([danial@miamifipo.org](mailto:danial@miamifipo.org))  
Bound (10 copies)

RLS/DDH/HWM/di  
MIAM501801/701

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

**OCTOBER 1, 2013 ACTUARIAL REPORT**

**Table of Contents**

	-Page-
SUMMARY OF RESULTS - Regular Fund.....	1-2
SUMMARY OF RESULTS - COLA Fund .....	3
REVIEW OF COSTS .....	4-12
Summary Discussion .....	4
Comparison of Deposit Requirements .....	4
Table 1 – Historical City Costs.....	4
Analysis of Cost Changes .....	5
Table 2 – Gain/Loss Analysis.....	5
Table 3 – Expected and Actual Turnover by Duration .....	6
Table 4 – Expected and Actual Retirements by Duration .....	7
Plan Assets .....	8
Table 5 – Actuarial vs. Market Value of Assets .....	8
Expected Ongoing Cost Levels .....	9
Sources of Benefit Funding .....	9
Table 6 – Funding Sources .....	9
Funding Progress.....	10
Governmental Accounting Standards.....	10
Table 7 – Actuarial Assets and Liabilities.....	10
Governmental Accounting Standards.....	11
Allocated Contribution Requirements.....	11
Revised Florida Requirements.....	11
COLA Fund .....	12
Cumulative Experience Position .....	12
COLA Transfer Calculations.....	12
Enrolled Actuary's Statement .....	13

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

**OCTOBER 1, 2013 ACTUARIAL REPORT**

**Table of Contents**  
(Continued)

-Page-

EXHIBITS

1	City Contribution Requirement for 2014/2015 Fiscal Year .....	14
2A	Development of Actuarial Asset Value.....	16
2B	Development of Actuarial Asset Value (3 Years for COLA Transfers).....	17
2C	Calculation of Excess Investment Return .....	18
3	Summary of Asset Transactions.....	19
4	Distribution of Assets .....	20
5	Summary of Accounting Information .....	22
6	Comparison of Funding Progress .....	23
7	Member Statistics .....	24
8	Summary of Principal System Provisions .....	27
9	Summary of Actuarial Basis .....	33
10	Information Under Florida Statutes.....	37
11	Disclosure Information .....	40

COLA Exhibits

12	COLA Fund Increases .....	47
13	COLA Fund - Assets and Liabilities .....	49
14	Cumulative Experience Position Net of Asset Transfers .....	51
15	Summary of Principal COLA Provisions.....	52
16	Summary of Actuarial Basis - COLA Fund .....	55
17	Disclosure Information .....	59

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Comparative Summary of Principal Valuation Results - Regular Fund

	Actuarial Valuation Prepared as of	
	<u>10/1/2013</u>	<u>10/1/2012</u>
<b>A. <u>Participant Data</u> (Ex.7)</b>		
Active Members	1,273	1,236
Covered Payroll	\$85,222,842	\$82,205,838
Members in Forward DROP	474	449
DROP Payroll	\$39,340,208	\$42,524,730
Projected Total Payroll	\$124,563,050	\$124,730,568
Retired Members and Beneficiaries	2,119	2,101
Total Annualized Benefits	\$122,124,656	\$121,052,898
Disabled Members	161	170
Total Annualized Benefits	\$3,438,990	\$3,562,869
Terminated Vested Members	13	14
Total Annualized Benefits	\$391,669	\$398,444
<b>B. <u>Assets</u></b>	-\$-	-\$-
Actuarial Value (Ex. 2A)	1,145,461,866	1,143,606,948
Market Value (Ex. 4)	1,121,166,552	1,075,059,845
<b>C. <u>Liabilities</u> (Excl. COLA)</b>		
Present Value of Benefits (Ex. 1)		
Active Members - Retirement	355,226,122	341,843,203
Vesting	22,199,983	22,373,923
Disability	45,613,622	44,965,635
Death	6,437,282	6,261,069
Return of Contributions	<u>1,777,650</u>	<u>1,805,399</u>
Total	431,254,659	417,249,229
Inactive Members - Retired and Beneficiaries	1,344,589,383	1,347,162,561
Disabled	29,878,873	31,219,352
Terminated Vested	<u>2,847,867</u>	<u>3,082,011</u>
Total	1,377,316,123	1,381,463,924
<b>Total</b>	<u>1,808,570,782</u>	<u>1,798,713,153</u>
Actuarial Accrued Liability	N/A	N/A
Unfunded Actuarial Accrued Liability	N/A	N/A

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Comparative Summary of Principal Valuation Results - Regular Fund  
(Continued)

	Actuarial Valuation	
	Prepared as of	
	<u>10/1/2013</u>	<u>10/1/2012</u>
D. <u>Actuarial Present Value of Accrued Benefits</u> (Exhibit 5)	-\$-	-\$-
Vested Accrued Benefits		
Inactive Members and Beneficiaries	1,377,316,123	1,381,463,924
Active Members	<u>172,853,328</u>	<u>151,491,635</u>
Total	1,550,169,451	1,532,955,559
Non-Vested Accrued Benefits	<u>6,592,056</u>	<u>6,221,643</u>
Total	1,556,761,507	1,539,177,202
E. <u>Pension Cost</u> (Exhibit 1)		
Normal Cost	52,517,333	50,048,455
Payment to Amortize Unfunded Liability	N/A	N/A
Expected Plan Sponsor Contribution	43,995,049	41,827,871
As % of Covered Payroll	51.62%	50.88%
As % of Total Payroll	35.32%	33.53%
Expected Member Contribution	8,522,284	8,220,584
As % of Payroll	10.00%	10.00%
F. <u>Past Contributions</u>	Year Ending <u>9/30/2012</u>	Year Ending <u>9/30/2011</u>
	-\$-	-\$-
Required Plan Sponsor Contribution	40,145,125	42,353,775
Required Member Contributions	6,216,462	8,390,922
Actual Contributions		
Plan Sponsor	40,145,125	42,353,775
Members	6,216,462	8,390,922
G. <u>Net Actuarial Gain (Loss)</u>	N/A	N/A
H. <u>Other Disclosures</u>		
Active Members:		
Present Value Future Salaries (at attained age)	1,271,916,984	1,243,531,237
Present Value Future Contributions (at attained age)	85,481,072	98,090,159

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Comparative Summary of Principal Valuation Results – COLA Fund

	<u>Actuarial Valuation</u> <u>Prepared as of</u>	
	<u>10/1/2013</u>	<u>10/1/2012</u>
<b>A. <u>Participant Data</u></b>		
Retired Members and Beneficiaries	2,118	2,101
Total Annualized Benefits	\$21,919,475	\$17,727,912
Disabled Members	161	178
Total Annualized Benefits	\$3,290,932	\$3,056,099
Table	\$1,629	\$1,427
<b>B. <u>Assets</u></b>	-\$-	-\$-
Actuarial Value (Ex. 13)	456,457,838	425,036,803
Market Value (Ex. 13)	378,739,577	350,307,706
<b>C. <u>Liabilities (COLA Only)</u></b>		
Present Value of Benefits (Ex. 13)		
Active Members - Reserve for Current Actives	31,689,347	29,909,388
Reserve for Contribution Refunds	N/A	N/A
Reserve for Future Actives	<u>4,753,402</u>	<u>4,486,408</u>
Total (excl. 457 Service)	36,442,749	34,395,796
Inactive Members - Frozen COLA I Benefits	1,000,098	1,105,244
COLA II Benefits	<u>282,539,187</u>	<u>277,101,134</u>
Total	283,539,285	278,206,378
<b>Total</b>	<u>319,982,034</u>	<u>312,602,174</u>

Comparative Summary of Total Assets - Combined

Market Value (Ex. 4)	<u>1,499,906,129</u>	<u>1,425,367,551</u>
----------------------	----------------------	----------------------

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

**REVIEW OF COSTS**

**Summary Discussion**

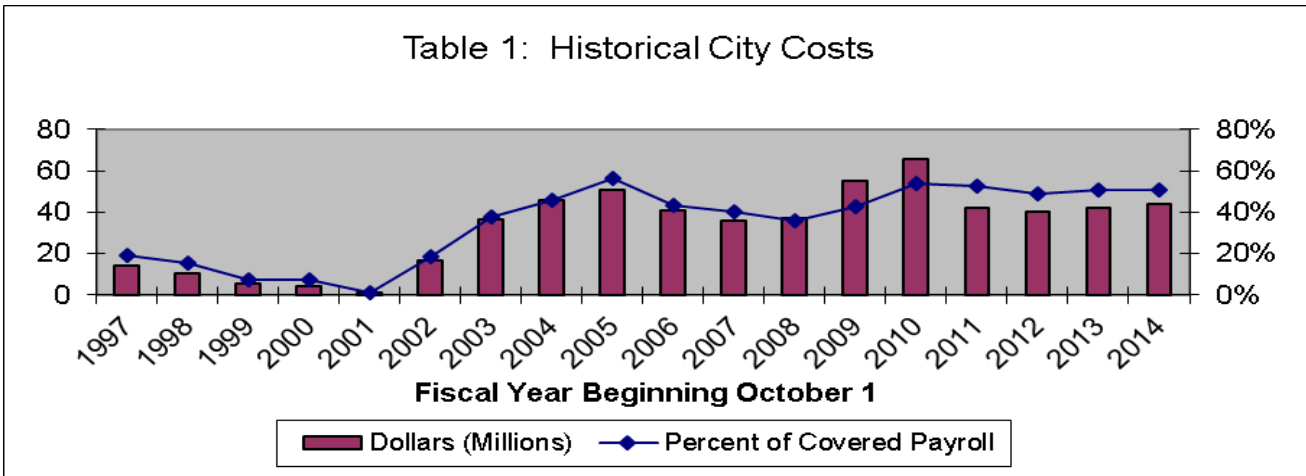
This is the actuarial report for the fiscal year beginning October 1, 2014 for the City of Miami Fire Fighters' and Police Officers' Retirement Trust. This is the thirtieth annual actuarial report prepared by The Nyhart Company. This report is intended to reflect the provisions and requirements of Ordinance No. 10002, as well as Ordinance 13344.

**Comparison of Deposit Requirements**

The City contribution requirements, and the results calculated for the 2014/2015 fiscal year, are as follows:

	<u>2014/2015</u>	<u>2013/2014</u>
Past Service Cost	-\$-	-\$-
Normal Cost	N/A	N/A
Payment Timing	0	0
	<u>43,995,049</u>	<u>41,827,871</u>
Percentage of Covered Payroll	51.62%	50.88%
Percentage of Total Payroll	35.32%	33.53%

The 2014/2015 deposit amount of \$43,995,049 is approximately \$2.2 million more than the \$41,827,871 for the prior year.





## Analysis of Cost Changes

The Normal Cost element of FIPO costs is expected to remain level as a percentage of covered payroll, if the actual Plan experience is the same as the actuarial assumptions and there are no Plan or assumption changes. In the absence of Plan or assumption changes, an increase in the Normal Cost rate indicates that experience has been less favorable than assumed, while a decrease indicates more favorable experience.

Quantification of the reasons for the changes is as follows:

<u>Table 2 – Gain/Loss Analysis of Cost Changes from October 1, 2012 to October 1, 2013 Valuations</u>		
	<u>Normal Cost</u>	
	<u>-\$-</u>	<u>-%-</u>
2012/2013 Normal Cost (Valuation Report)	41,827,871	50.88*
2013/2014 Normal Cost Expected (for continuing participants)	43,461,378	51.65*
<u>Element of Experience</u>		
Salary Increases	-841,302	-1.64
Turnover	-176,645	-0.21
Mortality	+180,945	+0.21
Retirement	+219,559	+0.26
New Participants	+581,328	+0.68
Disability	-81,700	-0.09
Investment Return	+437,490	+0.51
Other, Data	+213,996	+0.25
Total	+533,671	-0.03
2013/2014 Normal Cost	43,995,049	51.62* 35.32**

\* Percentage of Covered Payroll

\*\* Percentage of Total Payroll

Projected Total Payroll of \$124,563,050 is equal to 100% of Covered Payroll of \$85,222,842 plus \$39,340,208 payroll for members in DROP.

Following is a more detailed description of the elements of experience:

Salary Increases - During the period October 1, 2012 through September 30, 2013, covered payroll for the continuing actives increased less than expected. This resulted in a decrease of \$841,302 in the Normal Cost. Covered payroll for continuing active participants at September 30, 2013 increased 3.64% compared to an expected 7.77% increase.

Mortality - For active members there was 1 death, as compared to 1 expected; for inactive members there were 32 deaths (16 with survivors), as compared to 49 expected. This increased the normal cost by \$180,945.

Disability - During the past year there were no disabilities, as compared to 5 expected. This decreased the normal cost by \$81,700.

Turnover - From October 1, 2012 to September 30, 2013, there were 36 employee terminations, as compared to 20 predicted by the actuarial assumptions. This decreased the normal cost by \$176,645. Following is a comparison of the expected and actual turnover rates for the past nine years:

<u>Age</u>	<u>2005/2008</u>		<u>2008/2009</u>		<u>2009/2010</u>		<u>2010/2011</u>		<u>2011/2012</u>		<u>2012/2013</u>	
	<u>Exp.</u>	<u>Act.</u>	<u>Exp.</u>	<u>Act.</u>	<u>Exp.</u>	<u>Act.</u>	<u>Exp.</u>	<u>Act.</u>	<u>Exp.</u>	<u>Act.</u>	<u>Exp.</u>	<u>Act.</u>
20-24	3.2	4	1.7	2	1.2	0	0.8	1	0.4	0	0.0	2
25-29	9.0	12	4.2	6	4.3	1	4.5	0	5.0	2	3.8	9
30-34	13.5	19	5.0	5	5.0	1	4.9	0	5.2	5	5.6	11
35-39	15.3	13	5.1	5	4.9	0	4.6	4	4.8	0	5.1	9
40+	<u>11.5</u>	<u>8</u>	<u>4.0</u>	<u>4</u>	<u>3.9</u>	<u>1</u>	<u>4.4</u>	<u>4</u>	<u>4.5</u>	<u>1</u>	<u>5.0</u>	<u>5</u>
	52.5	56	20.0	22	19.3	3	19.2	9	19.9	8	19.5	36

Retirement - There were 25 retirements during the period (3 firefighters, 22 police), as compared to 1 expected. This large number of retirements caused an increase in costs of \$219,559. However, the corresponding significant decline in payroll resulted in the percentage cost increasing by 0.26%.

Following is a comparison of the expected and actual retirements during the past year:

Table 4 – Expected and Actual Retirements by Duration

Service*	Firefighters			Police Officers			Combined		
	Expected	Actual	A/E	Expected	Actual	A/E	Expected	Actual	A/E
0	0.00	1	0.0%	0.00	13	0.0%	0.70	14	2000.0%
1	0.21	0	0.0%	0.00	5	0.0%	0.15	5	3333.3%
2	0.09	0	0.0%	0.03	3	10000.0%	0.09	3	3333.3%
3	0.06	1	1666.7%	0.03	0	0.0%	0.06	1	1666.7%
4	0.06	1	1666.7%	0.00	1	0.0%	0.06	2	3333.3%
5	0.05	0	0.0%	0.00	0	0.0%	0.05	0	0.0%
6	0.00	0	0.0%	0.00	0	0.0%	0.15	0	0.0%
7	0.10	0	0.0%	0.00	0	0.0%	0.00	0	0.0%
8	0.05	0	0.0%	0.00	0	0.0%	0.00	0	0.0%
9	0.00	0	0.0%	0.00	0	0.0%	0.00	0	0.0%
10+	<u>0.00</u>	<u>0</u>	0.0%	<u>0.00</u>	<u>0</u>	0.0%	<u>0.00</u>	<u>0</u>	0.0%
Total	0.62	3	483.9%	0.06	22	36666.7%	0.68	25	3676.5%

\*After attainment of Normal Retirement Age

Investment Return - The rate of return for the year ending September 30, 2013 was 6.95% on actuarial asset value (Exhibit 2A).

As shown in Exhibit 2C, there is no COLA transfer as of January 1, 2014; there could be a transfer on January 1, 2015 of \$23,979,194 only if there were a favorable cumulative experience position as of September 30, 2014. The city minimum COLA contributions without the transfer is \$5,477,808 on January 1, 2014 and \$5,696,920 on January 1, 2015 to the COLA fund.

New Members – During the year there were 99 new members, who increased the City contribution by \$581,328. Last year, 83 new members increased the cost by \$561,615.

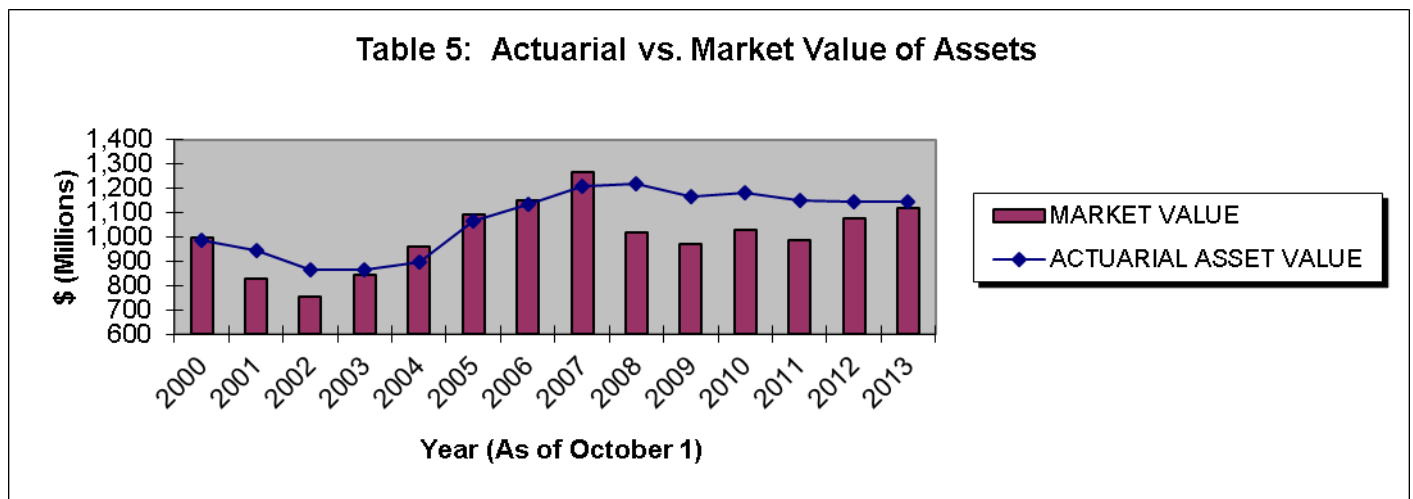
Administrative Expense – The prior year’s assumed administrative cost was \$2,087,114. This increased to \$2,222,561 for the current year, increasing the City contribution (with interest) by \$145,606.

## Plan Assets

Exhibits 3 and 4 show the asset transactions and investment results during the year. The rate of return on mean market value for the period ending September 30, 2013 was 11.9%.

The asset valuation method results in an actuarial asset value of \$1.145 billion as of October 1, 2013 (Exhibit 2A), 102% of the market value of \$1.121 billion, as compared to 106% in the previous year. The rate of return on Actuarial Asset Value was 6.95%, as compared to the 7.5% assumption (Exhibit 2A).

Table 5 illustrates the effect of using the asset smoothing methodology. The volatility of the market value of assets can be seen in the columns, while the actuarial value is illustrated by the line. The actuarial asset value line reflects the 20% Write-Up Method from September 30, 2005.



For COLA transfer purposes, the actuarial asset valuation method utilizes a 3-year moving average (Exhibit 2B). Under this method, the rate of return for the year ending September 30, 2013 was 11.15%. This would result in a transfer of \$23,979,194 from the Regular Fund to the COLA Fund on January 1, 2015 (Exhibit 2C), if there were a favorable cumulative experience position. However, the cumulative experience position is unfavorable – a cumulative net loss of \$219 million as of October 1, 2013 (Exhibit 14).

Expected Ongoing Cost Levels

System costs have varied dramatically over the past several years, due to asset performance, payroll practices, and benefit changes. Since the City’s contribution requirement is the primary variable, it has been significantly impacted.

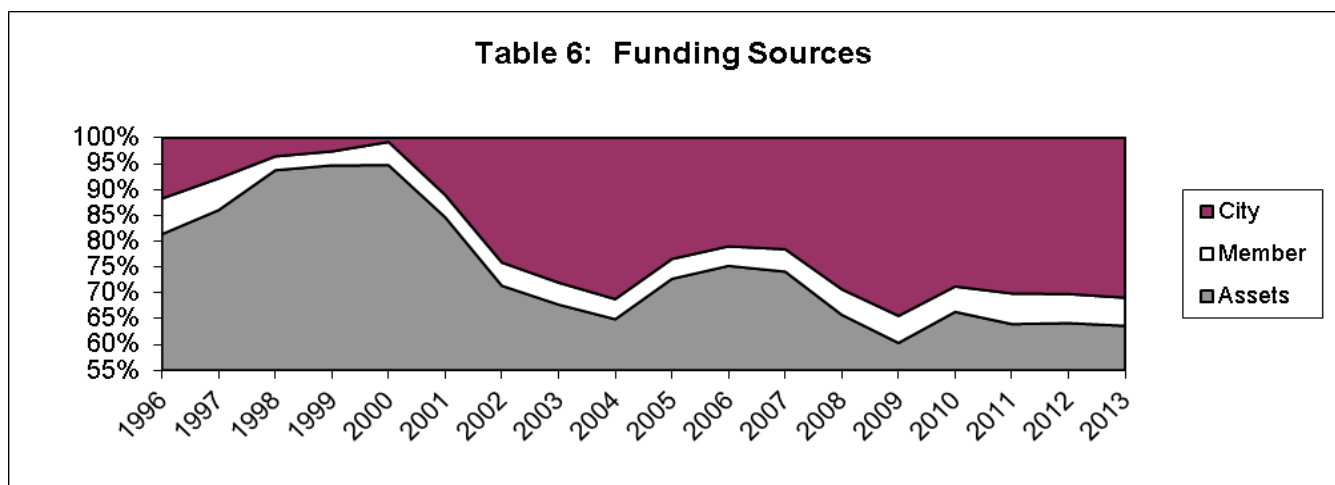
Nevertheless, it is important to distinguish between individual annual costs (which may be somewhat erratic) and expected ongoing annual costs. The following table compares the City contribution requirement as a percentage of payroll to the theoretical entry age normal City contribution percentages:

<u>Valuation Date</u>	<u>Contribution %</u>	<u>EAN %</u>
10/1/2013	52	18
10/1/2012	51	17
10/1/2011	56	16
10/1/2010	53	18
10/1/2009	54	21
10/1/2008	43	21
10/1/2007	36	22
10/1/2006	40	23
10/1/2005 (Revised AAV)	44	23
10/1/2005 (Prior AAV)	60	23
10/1/2004	57	23
10/1/2003	46	21
10/1/2002	45	17
10/1/2001	20	19
10/1/2000	1	16
10/1/1999	5	17

As will be noted, contribution requirements in the two years before the 10/1/2002 valuation were below the System’s theoretical contribution level. This was due to the System having accumulated more assets than expected. During the 2001-2005 period the contribution requirement (under the prior actuarial asset valuation method) had increased dramatically, due to erosion of assets and the delayed effect of asset smoothing.

Sources of Benefit Funding

Table 6 compares the sources of benefit funding for the past 16 years. The present value of benefits is equal to 100% in the Table. The present value of benefits is provided by three sources; the actuarial value of assets, the present value of member contributions, and the present value of future normal costs (city).



As seen in the table, the city portion of future benefit responsibility decreased as asset values climbed during the late nineties. When asset values started to decline, the city portion increased. As of October 1, 2013, the actuarial value of assets equals 64% of the present value of benefits, the present value of member contributions equals 5%, and the present value of future City normal costs equal 31% of the present value of future benefits.

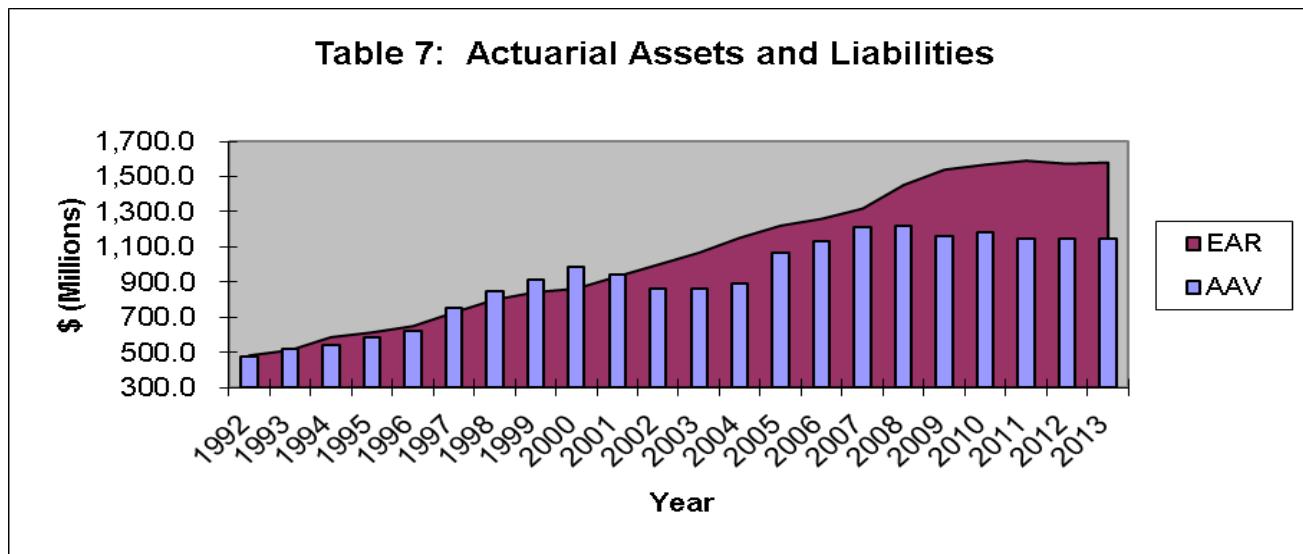
Funding Progress

The comparison of the present values of vested and accrued benefits to FIPO assets from one year to the next, or over a period of time, is a measure of interim funding progress and the degree of benefit security.

Exhibit 6 contains the result of this comparison for the past three years. The market value of assets on October 1, 2013 is \$1,121,166,552, as compared to the value of accrued benefits of \$1,556,761,506 for a ratio of 72.0%. The ratio as of October 1, 2012 was 69.8%.

A ratio in excess of 80% typically is one indication of a well-funded program.

As of October 1, 2013 the entry age reserve is \$1,580.4 million. This compares to an Actuarial Asset Value of \$1,145.4 million, for a funded ratio of 72%. Last year the funded ratio was 73%. These amounts, together with other disclosures, are contained in Exhibit 11 and illustrated in the following Table 7:



## Governmental Accounting Standards

The Governmental Accounting Standards Board (GASB) has issued Statement No. 67 to replace GASB Statement No. 25 (“Financial Reporting for Pension Plans”) and Statement No. 68 to replace Statement No. 27 (“Financial Reporting for Pensions”).

Statement No. 67 is effective for the 2014/2015 fiscal year; Statement No. 68 is effective one year later.

In general, the new statements mandate:

- blended discount rates to determine the actuarial liability;
- use of the entry age normal cost method;
- assets at market values;
- balance sheet recognition of the unfunded liability;
- immediate recognition of unfunded liability changes due to benefit changes for retirees
- benefit changes for active members be recognized over future working lifetimes.

Shortly after September 30, 2014 a report will be issued, providing the actuarial information needed to meet the requirements of GASB 67.

As was the case for GASB 25 and GASB 27, the new standards are not meant to be used as a funding basis.

## Allocated Contribution Requirements (2013/2014)

The Division of Retirement is now requiring that plans covering both police and firefighters disclose the costs separately for the two groups. Since assets have not been separately maintained, this necessitates a hypothetical asset allocation. Exhibit 11 (page 46) shows this allocation, based on the Entry Age Accrued Liabilities, calculated separately for the two groups.

As shown in Exhibit 11, the asset and resulting Unfunded allocation approach based on the Actuarial Accrued Liability results in allocated amounts for these two cost components that are equal to the total components.

## Revised Florida Requirements

Recent State legislation mandates that financial statements include calculations based on assumed return and discount rates be based on rates which are 200 basis points less than the plans assumed rate of return.

Projections are also required, showing the number of months or years for which the current market value of assets is adequate to sustain the payment of expected retirement benefits.

This requirement is effective July 1, 2013, with disclosures beginning within 60 days after the report for the year ending September 30, 2014.

### COLA Fund

Calculations were made based on the information provided as of 10/1/2013. The calculations reflect the approach adopted with the Amended Final Judgment in the matter of Gates vs. City of Miami.

Exhibit 12, parts I and II, illustrate the general impact of the COLA increases which have been provided thus far (under the \$1,427 table as of 1/1/2014), by duration since retirement and by age, respectively.

As discussed in earlier reports, there is probably no completely acceptable index for measuring the impact of inflation on retirees' benefits. Although the CPI is the most widely used inflation index, it is generally considered to distort inflation for retirees, since it includes components which are not typically germane to them, such as home purchases. In the absence of a suitable alternative, a percentage of the CPI is often used as a target. If the cumulative CPI were used as a target, the current COLA averages 50% of the target. A comparison of COLA increases to the CPI is shown in Exhibit 12, part III. Historical data on the CPI is shown in Exhibit 12, part IV.

### Cumulative Experience Position

Ordinance Section 40-204(C) (4) provides that transfers of excess investment return from the Regular Fund to the COLA Fund may be made only if the System remains in a net positive experience position on a cumulative basis from October 1, 1982. This result is the same as that for the previous year - a potential transfer eliminated due to the experience position. Since the aggregate cost method is used for determining funding requirements, the determination of the experience position is measured under the entry age normal method.

The cumulative experience loss increased from \$191,906,898 as of October 1, 2012, to a cumulative loss of \$219,095,159 as of October 1, 2013 (Exhibit 14).

### COLA Transfer Calculations

Exhibit 2C shows the transfer calculations as of this valuation. As will be noted, the excess return transfer as of January 1, 2014 is scheduled to be \$0 and the excess return transfer as of January 1, 2015 is \$0. Therefore, a City contribution to the COLA fund of \$5,379,658 was due as of January 1, 2014.

The excess return on the COLA Funds resulted in a \$202 increase in the COLA Table, from \$1,427 to \$1,629 (Exhibit 13).

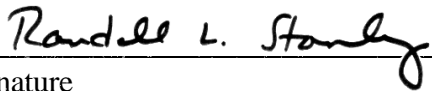


Enrolled Actuary's Statement

This report has been prepared in accordance with standards established by the American Academy of Actuaries. To the best of our knowledge, it reflects the actuarial condition of the City of Miami Fire Fighters' and Police Officers' Retirement Trust as of October 1, 2013 for the Retirement Fund and for the COLA Fund.

All costs and cost components are calculated on the basis of actuarial assumptions which reasonably reflect the experience of the Trust.

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.



Signature

Enrolled Actuary No. 11-602

June 12, 2014

Date

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  
Local Retirement Systems  
Division of Retirement  
Department of Management Services  
P. O. Box 9000  
Tallahassee, FL 32315-9000

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

City Contribution Requirement for 2014/2015 Fiscal Year

	<u>2014/2015</u>	<u>2013/2014</u>
	-\$-	-\$-
I. <u>Unfunded Actuarial Accrued Liability</u>	N/A	N/A
II. <u>Normal Cost</u>		
A. Present Value of Future Benefits		
1. <u>Active Members</u>		
a. Retirement	355,226,122	341,843,203
b. Disability	45,613,622	44,965,635
c. Death	6,437,282	6,261,069
d. Turnover	22,199,983	22,373,923
e. Return of Contributions	<u>1,777,650</u>	<u>1,805,399</u>
f. Total	431,254,659	417,249,229
2. <u>Retired Members and Beneficiaries</u>		
a. Service Retirements and Beneficiaries	1,344,589,383	1,347,162,561
b. Disability Retirements	29,878,873	31,219,352
c. Terminated Vested Members	<u>2,847,867</u>	<u>3,082,011</u>
d. Total	1,377,316,123	1,381,463,924
3. Total	<u>1,808,570,782</u>	<u>1,798,713,153</u>

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

City Contribution Requirement for 2014/2015 Fiscal Year

	<u>2014/2015</u>	<u>2013/2014</u>
	-\$-	-\$-
<b>II. <u>Normal Cost</u> (Cont'd)</b>		
A. Total Present Value of Future Benefits	1,808,570,782	1,798,713,153
B. Present Value of Future Member Contributions	85,481,072	98,090,159
C. Actuarial Asset Value	1,145,461,866	1,143,606,948
D. Unfunded Actuarial Accrued Liability	<u>0</u>	<u>0</u>
E. Present Value of Future Normal Costs (A-B-C-D)	577,627,844	557,016,046
F. Present Value of Future Payrolls	1,271,916,984	1,243,531,237
G. Administrative Expense	2,222,561	2,087,114
H. Current Payroll for those under Expected Retirement Age	85,222,842	82,205,838
I. Interest Rate	7.5%	7.5%
J. Current Normal Cost - Payable 10/1/2014 ( [ (E)x(H) / (F) ] + (G)) (1+(I))	43,995,049	41,827,871
K. Covered Payroll	85,222,842	82,205,838
L. Normal Cost as Percentage of Covered Payroll (J)/ (K)	51.62%	50.88%
<b>III. <u>Quarterly City Contribution Schedule</u></b>		
A. Past Service Cost	0	0
B. Normal Cost	43,995,049	41,827,871
C. Payment Timing	<u>0</u>	<u>0</u>
D. Total	<u>43,995,049</u>	<u>41,827,871</u>

**CITY OF MIAMI**  
**FIRE FIGHTERS' AND POLICE OFFICERS'**  
**RETIREMENT TRUST**

Actuarial Asset Value – 20% Write Up Method

I. <u>Determination of Actuarial Asset Value as of October 1, 2013</u>	-\$-
A. Actuarial Value of Assets as of 10/01/2012	1,143,606,948
B. City Contributions	40,977,546
C. Member Contributions	9,427,186
D. Benefits Paid	125,025,792
E. Contributions Refunded	732,160
F. Expected Return *	<u>83,281,967</u>
G. Expected Actuarial Value of Assets (A+B+C-D-E+F)	1,151,535,695
H. Market Value of Assets at 9/30/2013	1,121,166,552
I. Present Value of 01/01/14 COLA Transfer	0
J. Present Value of 01/01/15 COLA Transfer	0
K. Difference (H-I-J-G)	(30,369,143)
L. 20% of Difference	(6,073,829)
M. Preliminary Actuarial Asset Value (G+L)	1,145,461,866
N. Maximum Actuarial Asset Value (120% of H-I-J)	1,345,399,862
O. Minimum Actuarial Asset Value (80% of H-I-J)	896,933,242
P. Actuarial Asset Value at 10/1/2013	1,145,461,866
Q. Contribution Surplus Account Balance	0
<b>R. Final Actuarial Value at 10/01/2013 (P – Q)</b>	<b><u>1,145,461,866</u></b>
II. <u>Rate of Return on Actuarial Asset Value</u>	-\$-
A. Actuarial Asset Value at 10/01/2012	1,143,606,948
B. Contributions	
1. City (Including amount from Contribution Surplus Account)	40,977,546
2. Members	<u>9,427,186</u>
3. Total	50,404,732
C. Benefits and Refunds	125,757,952
D. Contribution Surplus	0
E. Actuarial Asset Value at 10/01/2013	1,145,461,866
F. Net Return on Investment [E+D+C-B-A]	77,208,138
G. Rate of Return (II F/I F) (.075)	6.95%

\*[1,143,606,948 + 9,427,186 (2.5/4) - (125,025,792 + 732,160) (13/24)] (.075) + \$2,178,463

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

I. Development of Actuarial Asset Value (3 Years, for COLA Transfer Purposes)

	<u>9/30/2013</u>	<u>9/30/2012</u>	<u>9/30/2011</u>
	-\$-	-\$-	-\$-
A. Book Value	981,515,568	982,006,300	995,657,667
B. Market Value	1,121,166,552	1,075,059,845	987,084,959
C. B/A	1.1422810	1.0947586	0.9913899
-----			
D. $1/3 \sum (C)$		1.0761432	
E. Adjusted Market Value at 9/30/2013 D x \$982,006,300		1,056,251,304	
F. Contribution Surplus at 9/30/2013		0	
G. 1. 80% of (Market Value – (F))		896,933,242	
2. 120% of (Market Value – (F))		1,345,399,862	
H. Preliminary Actuarial Asset Value (E – F)		1,056,251,304	
I. Present Value of 1/1/2015 COLA Transfer, discounted at 7.50%		0	
J. Actuarial Asset Value		1,056,251,304	

II. Rate of Return on Actuarial Asset Value

A. Actuarial Asset Value at 10/01/2012	-\$-	1,021,854,053
B. Contributions		
1. City (Including amount from Contribution Surplus Account)		40,977,546
2. Members		9,427,186
3. Total		<u>50,404,732</u>
C. Benefits and Refunds		125,757,952
D. Present Value of 1/1/2015 COLA Transfer		0
E. Contribution Surplus		0
F. Actuarial Asset Value at 10/01/2013		1,056,251,304
G. Net Return on Investment [F+E+D+C-B-A]		109,750,471
H. Rate of Return [2 x G/ (A+F-G)]		11.15%

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Calculation of Excess Investment Return  
On Membership and Benefits Accounts for 2012/2013 Fiscal Year  
2015 COLA Transfer

<b>I.</b>	<b>Net Actual Return on Actuarial Asset Value</b>		-\$-
	A. Preliminary Actuarial Asset Value as of 10/1/2013		1,056,251,304
	B. Benefits Paid During Plan Year		125,025,792
	C. Contributions Refunded During Plan Year		732,160
	D. City Contributions During Plan Year (Required)		40,977,546
	E. Member Contributions During Plan Year		9,427,186
	F. Actuarial Asset Value as of 10/1/2012		<u>1,021,854,053</u>
	G. Total Actual Return During Plan year (A)+(B)+(C)-(D)-(E)-(F)		109,750,471
<b>II.</b>	<b>Net Expected Return on Actuarial Asset Value</b>		
	A. Actuarial Asset Value as of 10/1/2012		1,021,854,053
	B. Benefits Paid During Plan Year		125,025,792
	C. Contributions Refunded During Plan Year		732,160
	D. City Contributions During Plan Year (Required)		40,977,546
	E. Member Contributions During Plan Year		9,427,186
	F. Expected Rate of Return		7.50%
	G. Expected Return During Plan Year		74,150,500 *
	H. Base Amount for Expected Return (G)/.075		988,673,333
	I. Excess Return on Assets (I(G) - II(G))		35,599,971
	J. Excess Return as % of II(H)		3.600782%**
<b>III.</b>	<b>Amount to be Transferred to COLA Fund</b>		
	A.	<u>Excess Return</u>	<u>COLA Transfer</u>
		%	%
		\$	-\$-
	First	2.5      24,716,833	75      18,537,625
	Next	2.5      10,883,138	50      5,441,569
	Next		25
			--
			<u>                    --</u>
	B. Total Transfer Amount at 1/1/2015		<u>23,979,194 ***</u>

\*Assumes Uniform Quarterly Contributions and Monthly Benefits

[1,021,854,053 + (9,427,186) (2.5/4) - (125,025,792  
+732,160) (13/24)](.075) + 2,178,463 =

74,150,500

\*\* Before 1/1/2015 COLA Transfer

\*\*\*Limited to favorable cumulative experience position

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Asset Transactions for Year Ending September 30, 2013 \*

	<u>Membership and Benefits Accounts</u>	<u>COLA I Account</u>	<u>COLA II Account</u>
	-\$-	-\$-	-\$-
A. Market Value as of October 1, 2012	1,075,059,845	47,308,832	302,998,874
B. Book Value as of October 1, 2012	982,006,300	43,213,940	276,772,316
C. Income During Year			
1. City Contributions	40,977,546	0	5,267,123
2. Member Contributions	9,427,186	0	0
3. Other Contributions	0	0	0
4. Interest	18,855,170	886,636	5,600,650
5. Dividends	9,248,376	418,637	2,637,994
6. Net Realized Gains (Losses)	52,738,258	2,392,749	15,051,371
7. Securities Lending Income	665,592	30,078	189,315
8. Rental and Other Income	260,535	11,915	74,651
9. Income Transfer	<u>0</u>	<u>0</u>	<u>0</u>
	132,172,663	3,740,015	28,821,104
D. Disbursements during Years			
1. Benefit Payments	125,025,792	225,814	19,296,457
2. Contribution Refunds	732,160	0	0
3. Custodial and Investment Expenses	4,662,823	210,592	1,328,391
4. Administrative Expense	2,044,488	0	0
5. Securities Lending Fees	166,180	7,532	47,409
6. Building Depreciation	<u>31,952</u>	<u>1,505</u>	<u>9,269</u>
	132,663,395	445,443	20,681,526
E. Book Value as of September 30, 2013 (B)+(C)-(D)	981,515,568	46,508,512	284,911,894
F. Net Change in Unrealized Gains (Losses)	46,597,439	2,545,447	14,452,274
G. Unrealized Gains (Losses)	139,650,984	6,640,339	40,678,832
H. Market Value as of September 30, 2013 (A)+(C)-(D)+(F)	1,121,166,552	53,148,851	325,590,726
I. January 1, 2014 Allocation to COLA II (discounted)	<u>0</u>	<u>N/A</u>	<u>0</u>
J. Net Market Value as of September 30, 2013	1,121,166,552	53,148,851	325,590,726

\* Based on unaudited financial statements.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Distribution of Assets as of September 30, 2013 <sup>(1)</sup>

Membership and Benefits and Cost-of-Living Adjustment Accounts

<u>Description</u>	<u>Market</u>	<u>Book</u>
	-\$-	-\$-
Bills, Bonds, Notes	500,301,805	493,560,875
Domestic Stocks	482,380,711	347,458,135
International Stocks	259,474,357	232,237,547
Private Equity	53,081,448	50,018,723
Money Market Funds and Time Deposits	20,045,691	20,765,033
Mutual Funds	117,203,184	101,476,730
Real Estate <sup>(2)</sup>	1,957,187	1,957,187
Securities Lending Adjustment	<u>0</u>	<u>0</u>
<b>A: Sub-Total</b>	<b>1,434,444,383</b>	<b>1,247,474,230</b>
<b>B: Cash</b>	<b>59,725,110</b>	<b>59,725,110</b>
Receivables:		
City Contributions	3,409,094	3,409,094
Accounts Receivable	5,768	5,768
Member Contributions	0	0
Accrued Interest	4,480,364	4,480,364
Accrued Dividends	1,131,395	1,131,395
Securities Sold	<u>35,252,091</u>	<u>35,252,091</u>
<b>C: Sub-Total</b>	<b>44,278,712</b>	<b>44,278,712</b>
Payables:		
Budget Advance	(100,874)	(100,874)
Transfer	0	0
Tax Withheld	16,184	16,184
Accounts Payable	23,387,115	23,387,115
Securities Purchased	<u>15,239,651</u>	<u>15,239,651</u>
<b>D: Sub-Total</b>	<b>38,542,076</b>	<b>38,542,076</b>
<b>E. Total (A+B+C-D)</b>	<b>1,499,906,129</b>	<b>1,312,935,976</b>
Accounts:		
<b>COLA I Account</b>	<b>53,148,851</b>	<b>46,508,512</b>
<b>COLA II Account</b>	<b>325,590,726</b>	<b>284,911,896</b>
<b>COLA II Transfer (1/1/2014)</b>	<b>0</b>	<b>0</b>
<b>F: Membership &amp; Benefits Account</b>	<b>1,121,166,552</b>	<b>981,515,568</b>

<sup>(1)</sup>Based on unaudited financial statements.

<sup>(2)</sup>Reflects accumulated depreciation of \$469,984.



**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Investment Results

Yield on Mean Values for 12-Month Period Ending September 30, 2013

	-\$-	<u>Market</u> -%-	<u>Book</u> -%-
<u>Membership and Benefits Accounts*</u>			
Interest	18,855,170	1.8	2.0
Dividends	9,248,376	0.9	1.0
Rental and Other Income, less Depreciation	228,583	0.0	0.0
Realized Gains	52,738,258	5.1	5.6
Securities Lending (Net)	499,412	0.1	0.1
Increase in Unrealized Gains	46,597,439	4.5	--
Custodial and Investment Expenses	<u>(4,662,823)</u>	<u>(0.4)</u>	<u>(0.5)</u>
	123,504,415	11.9	8.2
 <u>COLA I Account</u>			
Interest	886,636	1.9	2.1
Dividends	418,637	0.9	1.0
Rental and Other Income, less Depreciation	10,410	0.0	0.0
Realized Gains	2,392,749	5.1	5.6
Securities Lending (Net)	22,546	0.1	0.1
Increase in Unrealized Gains	2,545,447	5.4	--
Custodial and Investment Expenses	<u>(210,592)</u>	<u>(0.4)</u>	<u>(0.5)</u>
	6,065,833	12.9	8.3
 <u>COLA II Account</u>			
Interest	5,600,650	1.9	2.1
Dividends	2,637,994	0.9	1.0
Rental and Other Income, less Depreciation	65,382	0.0	0.0
Realized Gains	15,051,371	5.1	5.6
Securities Lending (Net)	141,906	0.0	0.1
Increase in Unrealized Gains	14,452,274	4.9	--
Custodial and Investment Expenses	<u>(1,328,391)</u>	<u>(0.4)</u>	<u>(0.5)</u>
	36,621,186	12.4	8.3

\*Before 1/1/2015 COLA transfer, if any

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Accounting Information  
As of October 1

	<u>2013</u>	<u>2012</u>
I. <u>Present Value of Vested Accrued Benefits</u>	-\$-	-\$-
A. Service Retirements and Beneficiaries	1,344,589,383	1,347,162,561
B. Disability Retirements	29,878,873	31,219,352
C. Vested Terminated Members	2,847,867	3,082,011
D. Active Members	<u>172,853,328</u>	<u>151,491,635</u>
E. Total	1,550,169,451	1,532,955,559
II. <u>Present Value of Non-Vested Accrued Benefits</u>	6,592,056	6,221,643
III. <u>Present Value of Accrued Benefits</u>	1,556,761,507	1,539,177,202
IV. The values of accumulated plan benefits were determined in accordance with the Academy of Actuaries Interpretations and ASC 960 (formerly FASB Statement No. 35, <u>Accounting and Reporting by Defined Benefit Pension Plans.</u> )		
V. <u>Statement of Changes in Accrued Benefits</u>		
A. Present Value of Accrued Benefits at Beginning of Year		1,539,177,202
B. Increase (Decrease) During the Year Attributable to:		
1. Benefits Accumulated		32,619,890
2. Benefits Paid and Contributions Refunded		(125,757,952)
3. Plan Amendment		0
4. Assumption/Method Changes		0
5. Increase Due to Decrease in Discount Period		<u>110,722,367</u>
6. Net Increase		17,584,305
C. Present Value of Accrued Benefits at End of Year		1,556,761,507

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Comparison of Funding Progress  
(\$000)

I. <u>Assets</u>	<u>10/1/2013</u>	<u>10/1/2012</u>	<u>10/1/2011</u>
	-\$-	-\$-	-\$-
A. Book Value	981,516	982,006	995,683
B. Market Value	1,121,167	1,075,060	987,111
II. <u>Liabilities</u>			
A. Retired and Vested	1,377,316	1,381,464	1,377,617
B. Active			
Employee Contributions	79,175	72,203	66,927
Other Vested	93,679	79,288	91,013
Non-Vested Accrued	<u>6,592</u>	<u>6,222</u>	<u>32,766</u>
C. Total Accrued	1,556,762	1,539,177	1,568,323
III. <u>Ratios</u>	%	%	%
IA/IIC	63.0	63.8	63.5
IB/IIC	72.0	69.8	62.9

---

Note: Item II amounts are present values of accrued benefits.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Member Statistics

I. Active Members

	<u>10/1/2013</u>	<u>10/1/2012</u>	<u>10/1/2011</u>
Number of			
Males	1,097	1,064	1,023
Females	<u>176</u>	<u>172</u>	<u>173</u>
Total	1,273	1,236	1,196

Averages

Current Age	36.8	36.6	36.4
Past Service	9.8	9.6	9.5
Credited Past Service	9.8	9.6	9.5
Annual Earnings	\$66,946	\$66,510	\$68,700

II. Inactive Members

A. Retirees and Beneficiaries

Number	2,119	2,101	2,089
Average Annual Benefit	\$57,633	\$57,617	\$57,253
Average Age	63.5	62.8	62.4

B. Disabled

Number	161	170	178
Average Annual Benefit	\$21,360	\$20,958	\$20,523
Average Age	69.7	69.2	68.6

C. Vested Terminated

Number	13	14	18
Average Deferred Benefit	\$30,128	\$28,460	\$26,681
Average Age	42.7	43.2	43.9

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Age-Service Distribution

<u>Age</u>	<u>Completed Years of Service</u>										<u>Earnings</u>	
	<u>0-1</u>	<u>2-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30-34</u>	<u>35+</u>	<u>Total</u>	<u>Total</u>	<u>Average</u>
											<u>-\$-</u>	<u>-\$-</u>
15-24	31	13	1	0	0	0	0	0	0	45	2,057,911	45,731
25-29	37	81	103	5	0	0	0	0	0	226	12,234,082	54,133
30-34	17	43	160	49	0	0	0	0	0	269	16,269,387	60,481
35-39	4	21	96	104	45	0	0	0	0	270	19,033,972	70,496
40-44	4	10	65	64	105	32	0	0	0	280	20,877,439	74,562
45-49	2	4	19	34	47	34	2	0	0	142	11,075,473	77,996
50-54	0	1	5	2	7	14	4	0	0	33	3,081,144	93,368
55-59	0	0	3	1	2	2	0	0	0	8	593,434	74,179
60-64	0	0	0	0	0	0	0	0	0	0	0	0
65+	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
<b>Total</b>	95	173	452	259	206	82	6	0	0	1,273	85,222,842	66,946

Average Age: 36.8

Average Service: 9.8

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Reconciliation of Participant Counts

	<u>Actives</u>	<u>Retirees &amp; Beneficiaries</u>	<u>Disableds</u>	<u>Vested Terminated</u>
10/1/2012	1,236	2,101	170	14
Changes due to:				
Retirement	-25	+27		-2
Withdrawal	-34			
Terminated	-2			
Disability				+2
Death	-1	-23	-9	
New Beneficiary		+12		
New Hires	+99			
Data Changes		+2		-1
	_____	_____	_____	_____
10/1/2013	1,273	2,119	161	13

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Principal System Provisions

(Based on Ordinance No. 10002, as Amended  
through Ordinance No. 12-01048)

- Effective Date: January 1, 1940, as restated effective May 23, 1985, and amended through September 30, 2012.
- Fiscal Year: October 1 - September 30.
- Membership: Police officers and fire fighters.
- Covered 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.
- Contributions: For Police Officers hired prior to October 1, 2012:  
Effective 10/1/2012: 10%  
Effective 9/30/2014: 7%
- For Police Officers hired on or after October 1, 2012, 3% more than for Police Officers hired prior to October 1, 2012.
- For Fire Fighters hired prior to October 1, 2014:  
Effective 10/1/2012: 10%  
Effective 9/30/2014: 7%
- For Fire Fighters hired on or after October 1, 2014, 10%
- City: Balance, as actuarially determined.
- Creditable Service: 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.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Principal System Provisions  
(continued)

Average Final  
Compensation:

For members who retire or terminate employment with ten or more years of creditable service prior to October 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. Effective September 30, 2010, for members who retire on or after October 1, 2010, average final compensation shall mean the average of the highest 5 years of service, to be phased in over the next 4 years as follows: for members who retire on or after October 1, 2010 and on or before September 30, 2011, the average of the highest 2 years of membership service; for members who retire on or after October 1, 2011 and on or before September 30, 2012, the average of the highest 3 years of membership service; for members who retire on or after October 1, 2012 and on or before September 30, 2013, the average of the highest 4 years of membership service; and for members who retire on or after October 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 firefighter on September 30, 2010 and retires on or after October 1, 2010, be less than the highest year of membership service prior to September 30, 2010.

Normal Service Age:

Age 50



**CITY OF MIAMI**  
**FIRE FIGHTERS' AND POLICE OFFICERS'**  
**RETIREMENT TRUST**

Summary of Principal System Provisions

(Continued)

- Service Retirement: For Police Officers who have reached Rule of 64 by September 30, 2010, for Fire Fighters who had reached Rule of 64 by September 30, 2009, and for Fire Fighters who have reached Rule of 68 by September 30, 2010: 3% of Average Final Compensation for each of the first fifteen years of Creditable Service plus 3.5% of Average Final Compensation for each year of Creditable Service after the fifteenth year; maximum of 100% of Average Final Compensation.
- For all others, for service prior to October 1, 2010: 3% of Average Final Compensation for each of the first fifteen years of Creditable Service plus 3.5% of Average Final Compensation for each of Creditable Service after the fifteenth year; for service after September 30, 2010: 3% of Average Final Compensation for each year of Creditable Service; The combined percentage for service before October 1, 2010 and service after September 30, 2010 may not exceed 100% of Average Final Compensation. The final benefit may not exceed the larger of the September 30, 2010 accrued benefit and \$100,000.
- Early Service Retirement: After 20 years of Creditable Service. Benefits are based on Average Final Compensation and Creditable Service at retirement date. Actuarial equivalence for early commencement.
- Rule of 64 Retirement: Service retirement on the basis of combined age and Creditable Service equaling 64 or more. Rule of 64 applies to Fire Fighters who had obtained 64 points by September 30, 2009 and Police Officers who had 64 points by September 30, 2010. Rule of 64 also applies to the accrued benefit as of September 30, 2010 of Police Officers who were active members as of September 29, 2010.
- Rule of 68 Retirement: Service retirement on the basis of combined age and Creditable Service equaling 68 or more. Rule of 68 applies to Fire Fighters who had not attained 64 points by September 30, 2009 and had attained 68 points by September 30, 2010. Rule of 68 also applies to the accrued benefit as of September 30, 2010 of Fire Fighters who were active members as of September 29, 2010.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Principal System Provisions  
(Continued)

- Rule of 70 Retirement: Service retirement on the basis of combined age and Creditable Service equaling 70 or more, after attainment of age 50 and completion of 10 years of Creditable Service. Rule of 70 applies to all new members hired on or after October 1, 2010, as well as to all benefits accrued after September 30, 2010 by Fire Fighters who had not attained 68 points on September 30, 2010 and Police Officers who had not attained 64 points on September 30, 2010.
- Disability: Ordinary Disability: After 10 or more years of Creditable Service, and not eligible for service retirement. Not incurred as accident in performance of duties. 90% of benefit rate times Average Final Compensation times Creditable Service, with a minimum benefit of 30% of Average Final Compensation; 10 years' certain and life normal form.
- Accidental Disability: Incurred as accident in performance of duties.  $66 \frac{2}{3}\%$  of Average Final Compensation, or  $66 \frac{2}{3}\%$  of Final Compensation, whichever is greater. 40% joint & survivor normal form, with a minimum of 10 years' certain and life.
- Deferred Retirement Option Plan: Effective January 1, 2013, members may elect the BackDROP option (maximum of 7 years), to receive:
- (a) monthly benefit based on earlier retirement date
  - (b) lump sum of past payments compounded at 3%/year
- Election must be made within 10 years after eligibility for normal retirement. Members eligible for forward DROP as of January 1, 2013 or vested as of January 1, 2010 remain eligible for forward DROP.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Principal System Provisions  
(Continued)

- Death: Ordinary Death: (a) Between 3 and 10 years of Creditable Service, and death not accidentally incurred in performance of duties: Lump sum benefit equal to 50% of Compensation received in year preceding death. (b) 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. (c) 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: Incurred in performance of duties. (a) 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 until attainment of age 18. If no spouse or no children under 18, benefit is payable to dependent parents. (b) After 10 years of Creditable Service. Beneficiary does not have to survive deferral period or 10 years' certain period.
- Employment Termination: After 10 years of Creditable Service, based on Creditable Service and Average Final Compensation at termination date. If Member contributions are withdrawn, benefit is forfeited. Benefits are deferred to Normal Retirement Age.
- Optional Allowances: Normal Form: For Police Officers who have reached Rule of 64 by September 30, 2010, for Fire Fighters who had reached Rule of 64 by September 30, 2009, and for Fire Fighters who have reached Rule of 68 by September 30, 2010: Normal Form is joint and 40% contingent survivor, with a minimum of 10 years' certain and life.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Principal System Provisions  
(Continued)

Optional Allowances: (Continued)	For all others, for benefits based on service prior to October 1, 2010: Normal Form is joint and 40% contingent survivor, with a minimum of 10 years' certain and life; for benefits based on service after September 30, 2010, Normal Form is 10 years' certain and life.
	Option 1 is cash refund annuity, based on present value at retirement. Option 2 is joint and 100% survivor. Option 3 is joint and 50% contingent survivor. Option 4 is open option. Option 5 is determined by Board due to incapacity of Member. Option 6 is withdrawal of member contributions with credited interest; monthly benefit is ½ of normal level.
Transfer of Compensated Leave Balances:	Accumulated leave balances may be transferred into system immediately prior to retirement to purchase additional Creditable Service, on an actuarially equivalent basis.
Transfer of 457 Balances:	457 balances of Firefighters may be transferred into System at retirement to purchase additional Service for multiplier purposes.
Changes Since Prior Valuation:	None.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Actuarial Basis

Valuation Date: October 1, 2013 for Fiscal Year beginning October 1, 2014.

Valuation Method: Aggregate Cost Method.

Asset Valuation Method: 20% Write-Up Method: Expected value is based on the Interest Discount/Investment Return rate applied to the actuarial asset value as of previous valuation date and cash flow during the year. 20% of the difference between the Expected Value and the Market Value (net of pending transfers to the COLA Fund) is added to the Expected Value.

The result cannot be greater than 120% of market value or less than 80% of market value (net of pending COLA transfers).

Actuarial Assumptions:

Interest Discount/  
Investment Return: 7.50%, compounded annually.

Inflation: 3.25%, compounded annually.

Mortality: RP 2000 Mortality Table, Employees and Annuitants Combined, projected by scale AA to 2020, producing following specimen rates:

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	.0235%	.0138%
30	.0402%	.0216%
40	.0919%	.0522%
50	.1487%	.1189%
60	.4887%	.4573%
70	1.6413%	1.5145%
80	5.7647%	3.9866%

Disabled Mortality: RP 2000 Disabled Mortality Table projected by scale AA to 2020, producing following specimen rates:

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	1.5696%	.5287%
30	2.0418%	.6093%
40	1.9221%	.5507%
50	2.0149%	.8186%
60	3.0450%	1.9756%
70	4.6257%	3.4045%
80	8.9456%	6.2834%

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Actuarial Basis  
(Continued)

<u>Age</u>	<u>Disability</u>	<u>Turnover</u>	
		<u>&lt;5</u>	<u>5+</u>
31	.00200	.0240	.0192
32	.00220	.0240	.0192
33	.00245	.0240	.0192
34	.00265	.0240	.0192
35	.00285	.0240	.0192
36	.00305	.0228	.0182
37	.00325	.0216	.0173
38	.00345	.0204	.0163
39	.00370	.0192	.0154
40	.00390	.0180	.0144
41	.00470	.0168	.0134
42	.00555	.0156	.0125
43	.00635	.0144	.0115
44	.00720	.0132	.0106
45	.00800	.0120	.0096
46	.00880	.0096	.0077
47	.00965	.0072	.0057
48	.01045	.0048	.0038
49	.01130	.0024	.0019
50	.01210	.0000	.0000
51	.01295	.0000	.0000
52	.01375	.0000	.0000
53	.01455	.0000	.0000
54	.01540	.0000	.0000
55	.01620	.0000	.0000
56	.01785	.0000	.0000
57	.01870	.0000	.0000
58	.01950	.0000	.0000
59	.02030	.0000	.0000
60	.00000	.0000	.0000

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Actuarial Basis  
(Continued)

Retirement: Fire Fighters who had attained 64 points by September 30, 2009 and Police Officers who had attained 64 points by September 30, 2010 are subject to the Rule of 64; Fire Fighters who had attained 68 points by September 30, 2010 are subject to the Rule of 68; all others are subject to the Rule of 70. If eligible for Retirement, the following decrements apply, based on service:

<u>Years of Service</u>	<u>Police %</u>	<u>Fire %</u>
<20	0	0
20	10	10
21-24	3	3
25-29	40	5
30-34	50	25
35	100	25
36		25
37		100

All Members retire in accordance with the probabilities above. All Members are assumed to elect a five-year BackDROP when they reach five years following first retirement eligibility.

Salary Merit Scale:

<u>Service</u>	<u>Police</u>	<u>Fire</u>
0	.0500	.0500
1	.0500	.0500
2	.0500	.0500
3	.0500	.0500
4	.0500	.0500
5	.0500	.0500
6	.0500	.0500
7	.0250	.0500
8	.0500	.0500
9	.0500	.0500
10	.0100	.0000
11	.0100	.0000
12	.0100	.0000
13	.0100	.0000
14	.0100	.0000
15	.0125	.0250
16	.0125	.0250
17	.0100	.0100
18	.0100	.0100
19	.0100	.0100
20	.0100	.0100
21	.0100	.0100
22 +	.0000	.0000

Salary Merit Scale is combined with 3.25% inflation and 1.5% for promotions and other increases. There is no additional increase at retirement.

Projected Total Payroll: Covered Payroll plus \$39,340,208 in payroll for members in forward DROP during 2012/2013 year.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Summary of Actuarial Basis  
(Continued)

Type of Disability:	100% of the disabilities are expected to be accidental disabilities.
Recovery:	No probabilities of recovery are used.
Type of Death:	100% of the assumed deaths are expected to be ordinary deaths.
Remarriage:	No probabilities of remarriage are used.
Spouse's Ages:	Female spouses are assumed to be 3 years younger than male spouses.
Marital Status:	All employees are assumed to be married. For Members currently receiving benefits, actual spouse's information is provided.
Investment Expenses:	The investment return assumption of 7.5% is net of investment expenses.
Administration Expenses:	\$2,222,561
Withdrawal of Employee Contributions:	It is assumed that employees do not withdraw their contribution balances upon employment termination or retirement.
Compensated Absence Balance Transfers:	No liabilities or costs are included for the provision to transfer compensated absence balances into FIPO to purchase additional creditable service, based on our understanding that assets will be transferred immediately prior to retirement to cover 100% of the liability for the additional service.
Adjustments from Valuation Date:	One year's interest is added to the calculated deposit to reflect ordinance provision. For purposes of minimum City contributions as specified by State Division of Retirement (Exhibit 18), additional interest discount is included to reflect monthly contributions.
Sources of Data:	Asset data is from unaudited financial statements and includes an appraised value for the real estate to be used for Market Value. Membership data was furnished by Administrator. Member compensation used is final bi-weekly pay in the year, annualized, with estimated reductions for each active member as of October 1, 2012 based on approach summarized in Tables 2 and 3 in September 24, 2012 Actuarial Impact Statement.
<b>Changes Since Prior Valuation:</b>	<b>Administration expenses have been increased to \$2,222,561 from \$2,087,114.</b>



**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Information Under Florida Statutes

I. Comparison of Salary Increases

<u>Year Ending</u>	<u>Actual</u>	<u>Assumed</u>
	-%-	-%-
9/30/13	3.64	7.77
9/30/12	(0.75)	7.92
9/30/11	7.14	7.48
9/30/10	(9.33)*	7.51
9/30/09	6.35	7.26
9/30/08	18.20	7.17
9/30/07	18.19*	5.81
9/30/06	2.84	5.79
9/30/05	8.15	5.77
9/30/04	10.20	5.78
9/30/03	5.38	4.00
9/30/02	2.43	2.00
9/30/01	4.79	2.00
9/30/00	7.12	2.00
9/30/99	0.52	2.75
9/30/98	(1.35)	2.75
9/30/97	(1.07)	2.75
9/30/96	0.76	2.75
9/30/95	5.50	2.75
9/30/94	2.86	3.00
9/30/93	6.37	6.80
9/30/92	3.48	6.80
9/30/91	2.65	6.80
9/30/90	2.79	7.00
9/30/89	8.64	7.00
9/30/88	6.05	7.00
9/30/87	7.45	7.50
9/30/86	7.49	7.50
9/30/85	14.28	7.50
9/30/84	11.53	7.50

\* Including impact of change in valuation pay definition.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Information Under Florida Statutes

II. Comparison of Investment Returns

<u>Year Ending</u>	<u>Actual MV</u>	<u>Actual AAV*</u>	<u>Assumed</u>
-%-	-%-	-%-	-%-
9/30/13	11.2	6.95	7.50
9/30/12	17.4	5.98	7.50
9/30/11	3.6	3.98	7.50
9/30/10	9.8	4.48	7.75
9/30/09	(0.3)	(1.31)	7.75
9/30/08	(14.3)	3.65	7.75
9/30/07	14.2	8.27	7.75
9/30/06	9.1	7.57	7.75
9/30/05 (Revised)	15.6	7.83	7.75
9/30/05 (Prior)	15.6	8.43	7.75
9/30/04	12.9	4.29	7.75
9/30/03	15.7	3.26	7.75
9/30/02	(5.5)	(3.93)	7.75
9/30/01	(10.6)	(1.29)	7.75
9/30/00	12.7	16.01	7.75
9/30/99	13.8	13.40	7.75
9/30/98	6.9	19.45	7.75
9/30/97	28.3	26.34	8.00
9/30/96	13.2	11.27	8.00
9/30/95	21.0	12.86	7.75
9/30/94	(1.7)	5.18	7.75
9/30/93	15.8	13.73	7.75
9/30/92	9.9	12.48	7.75
9/30/91	25.9	20.93	7.75
9/30/90	0.4	1.89	7.50
9/30/89	N.A.	16.09	7.50
9/30/88	N.A.	0.08	7.50
9/30/87	N.A.	22.64	7.00
9/30/86	N.A.	21.66	7.00

\* Based on mean actuarial asset values for periods ending 9/30. Rates of return on AAV prior to 9/30/05 are based on prior asset valuation methods, with COLA transfers treated as cash flow.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Information Under Florida Statutes  
(Continued)

III. Comparison of Payroll Growth

<u>Year Ending</u>	<u>Actual</u> -%-	<u>Assumed</u> -%-
9/30/13	3.7	N.A.
9/30/12	0.1	N.A.
9/30/11	2.5	N.A.
9/30/10	(34.4)	N.A.
9/30/09	(5.5)	N.A.
9/30/08	24.8	N.A.
9/30/07	14.7	N.A.
9/30/06	(1.3)	N.A.
9/30/05	2.6	N.A.
9/30/04	(9.9)	N.A.
9/30/03	2.1	N.A.
9/30/02	8.1	N.A.
9/30/01	6.3	N.A.
9/30/00	8.5	N.A.
9/30/99	4.6	N.A.
9/30/98	6.8	N.A.
9/30/97	(4.5)	N.A.
9/30/96	1.9	N.A.
9/30/95	(1.9)	N.A.
9/30/94	1.1	N.A.
9/30/93	7.5	N.A.
9/30/92	2.1	N.A.
9/30/91	(7.6)	5.00
9/30/90	(0.8)	5.00
9/30/89	9.5	5.00
9/30/88	3.4	5.00
9/30/87	5.9	5.00
9/30/86	5.8	5.00
9/30/85	7.8	5.00
9/30/84	9.7	5.00
Average (10 years)	(0.3)	N.A.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Disclosure Information Under GASB 25  
(Excluding COLA Fund)

I. Funding Status and Progress as of September 30, 2013 and 2012

Entry Age Accrued Liability:	<u>\$(Millions)</u>	
	<u>Sept. 30, 2013</u>	<u>Sept. 30, 2012</u>
	-\$-	-\$-
- Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	1,377.3	1,381.5
- Current employees - Accumulated employee contributions including interest	79.2	72.2
Employer - financed vested	93.7	79.3
Employer - financed nonvested	<u>30.1</u>	<u>40.0</u>
Total Actuarial Accrued Liability	1,580.3	1,573.0
Net assets available for benefits (market value)	<u>1,121.1</u>	<u>1,075.1</u>
Unfunded Actuarial Accrued Liability	459.2	497.9

The actuarial accrued liability was determined as part of actuarial valuations at September 30, 2013 and September 30, 2012. Significant actuarial assumptions used include (a) a rate of return on the investment of present and future assets of 7.50 percent per year compounded annually, (b) projected salary increases of 3.25 percent per year compounded annually, attributable to inflation, (c) additional projected salary increases of 0.0 percent to 5.0 percent per year, attributable to seniority/merit and (d) 1.5% for promotions and other increases.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Disclosure Information Under GASB 25  
(Excluding COLA Fund)

II. Contributions Required and Contributions Made

The funding policy provides for periodic employer contributions at actuarially determined rates that are sufficient to pay benefits when due. Contributions for normal costs are determined using the aggregate actuarial cost method. This cost method does not provide for an unfunded actuarial accrued liability.

Contributions totaling \$46,361,587 (\$40,145,125 employer and \$6,216,462 employee) were made for the year ending September 30, 2013. These contributions consisted of (a) \$46,361,587 normal cost, (b) \$0 amortization of the unfunded actuarial accrued liability, and (c) \$0 noninvestment expenses.

Significant actuarial assumptions used to compute contribution requirements are the same as those used to compute the standardized measure of the pension obligation as of the beginning of the preceding year.

III. Analysis of Funding Progress (\$ Millions)

<u>Fiscal Year</u>	(1) <u>Actuarial Asset Value</u> (\$)	(2) <u>Entry Age Reserve</u> (\$)	(3) <u>Percent Funded</u> (%)	(4) <u>Unfunded EAR</u> <u>(2)-(1)</u> (\$)	(5) <u>Annual Covered Payroll</u> (\$)	<u>(4)/(5)</u> (%)
1992	476.6	483.7	99	7.1	67.1	11
1993	523.0	513.4	102	(9.6)	72.0	(13)
1994	540.3	587.5	92	47.2	72.9	65
1995	585.6	614.4	95	28.8	71.5	40
1996	626.0	650.0	96	24.0	72.9	33
1997	750.9	727.1	103	(23.8)	69.6	(34)
1998	850.7	800.7	106	(50.0)	74.3	(67)
1999	911.7	843.2	108	(68.5)	77.7	(88)
2000	988.8	863.4	115	(125.4)	84.3	(149)
2001	941.8	932.7	101	(9.1)	89.7	(10)
2002	865.5	999.8	87	134.3	96.9	139
2003	865.8	1,067.9	81	202.1	98.9	204
2004	894.6	1,152.8	78	258.2	89.2	289
2005	1,064.9	1,221.6	87	156.7	91.5	171
2006	1,133.0	1,260.5	90	127.5	90.4	141
2007	1,208.8	1,318.4	92	109.6	103.6	106
2008	1,219.6	1,452.5	85	222.9	129.4	172
2009	1,165.0	1,539.3	76	374.4	122.2	306
2010	1,180.6	1,568.3	75	387.7	80.2	483
2011	1,150.3	1,590.5	72	440.2	82.2	536
2012	1,143.6	1,573.0	73	429.4	82.2	522
2013	1,145.5	1,580.3	72	434.8	85.2	510

**CITY OF MIAMI**  
**FIRE FIGHTERS' AND POLICE OFFICERS'**  
**RETIREMENT TRUST**

(Excluding COLA Fund)

IV. Revenues and Expenses

Revenues by Source				
<u>Fiscal</u> <u>Year</u> (\$)	<u>Employee</u> <u>Contributions</u> (\$)	<u>Employer</u> <u>Contributions</u> (\$)	<u>Investment</u> <u>Income</u> (\$)	<u>Total</u>
1992	6,115,655	10,029,747	44,569,353	60,714,755
1993	6,455,623	10,442,881	50,309,468	67,207,972
1994	7,435,034	9,296,175	36,915,202	53,646,411
1995	8,318,833	10,880,346	38,919,229	58,118,408
1996	7,852,469	16,547,235	55,421,603	79,821,307
1997	7,664,034	14,377,032	83,180,597	105,221,663
1998	7,692,571	14,155,472	96,007,011	117,855,054
1999	8,556,140	10,376,473	66,039,984	84,972,597
2000	6,257,588	5,400,784	129,752,337	141,410,709
2001	6,336,918	5,481,599	17,717,791	29,536,308
2002	6,721,236	5,400,784	(27,704,711)	(15,582,691)
2003	7,193,936	15,024,366	30,466,098	52,684,400
2004	24,415,150	32,959,003	53,963,150	111,337,303
2005	18,607,681	45,545,130	71,904,910	136,057,721
2006	7,698,594	50,635,213	71,669,124	130,002,931
2007	14,702,629	40,542,078	82,937,630	138,182,337
2008	9,719,896	36,040,251	62,728,078	108,488,225
2009	9,769,139	36,993,395	(58,111,291)	(11,348,757)
2010	10,436,367	54,342,926	62,459,916	127,239,209
2011	7,137,824	40,058,891	83,951,919	131,148,634
2012	8,390,922	42,353,775	67,505,092	118,249,769
2013	9,248,376	40,977,546	81,946,741	132,172,663

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(Excluding COLA Fund)

IV. Revenues and Expenses (Continued)

Fiscal Year	Expenses by Type			
	Benefits (\$)	Administrative Expenses (\$)	Refunds (\$)	Total (\$)
1992	22,345,166	1,137,047	751,088	24,233,301
1993	22,735,888	1,314,925	672,376	24,723,189
1994	23,787,091	1,420,693	510,074	25,717,858
1995	25,846,564	1,567,841	703,269	28,117,674
1996	29,506,924	1,870,188	822,497	32,199,609
1997	33,841,809	2,079,183	1,225,239	37,146,231
1998	35,593,108	2,543,855	391,524	38,537,297
1999	36,900,501	2,689,079	258,383	39,847,963
2000	41,237,423	2,710,752	258,804	44,206,979
2001	41,386,774	2,933,939	481,746	44,802,459
2002	42,766,860	2,825,903	364,256	45,957,019
2003	46,083,206	2,922,537	429,225	49,434,968
2004	53,249,450	3,334,460	301,580	56,885,490
2005	66,518,783	3,865,995	257,859	70,642,637
2006	69,825,105	4,687,601	573,228	75,085,934
2007	72,378,966	5,143,290	307,545	77,829,801
2008	77,794,816	5,469,431	664,235	83,928,482
2009	85,094,354	3,898,278	336,755	89,329,387
2010	101,438,423	3,900,819	174,358	105,513,600
2011	123,360,907	4,328,130	225,732	127,914,769
2012	124,321,444	6,814,172	765,520	131,901,136
2013	125,025,792	6,905,443	732,160	132,663,385

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(Excluding COLA Fund)

V. Schedule of Employer Contributions

<u>Fiscal Year</u>	<u>Annual Pension Cost (APC)</u> (\$)	<u>Amount Contributed</u> (\$)	<u>Percentage Contributed</u> (%)	<u>Net Pension Obligation</u> (\$)
1994	9,296,175		100	0
1995	10,880,346		100	0
1996	16,547,235		100	0
1997	14,377,032		100	0
1998	14,155,472		100	0
1999	10,376,473		100	0
2000	5,400,784		100	0
2001	4,003,892		100	0
2002	1,051,629		100	0
2003	18,163,588		100	0
2004	36,341,515		100	0
2005	45,545,130		100	0
2006	50,635,213		100	0
2007	40,542,078		100	0
2008	36,040,251		100	0
2009	36,993,395		100	0
2010	54,342,926	54,342,926	100	0
2011	42,287,046*	40,058,891	95	2,228,155
2012	42,353,775	42,353,775	100	2,395,267
2013	40,145,125	40,145,125	100	2,574,912
2014	41,827,871			

\*After 9/30/2010 Impact Statement Changes



**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Hypothetical City Contribution Requirement for 2014/2015 Fiscal Year

	2014/2015		
	<u>Total</u>	<u>Police</u>	<u>Fire</u>
	-\$-	-\$-	-\$-
I. <u>Unfunded Actuarial Accrued Liability</u>	N/A	N/A	N/A
II. <u>Normal Cost</u>			
A. Present Value of Future Benefits			
1. <u>Active Members</u>			
a. Retirement	355,266,122	206,310,915	148,915,207
b. Disability	45,613,622	26,311,824	19,301,798
c. Death	6,439,282	3,215,784	3,221,498
d. Turnover	22,199,983	11,857,274	10,342,709
e. Return of Contributions	<u>1,777,650</u>	<u>1,040,694</u>	<u>736,950</u>
f. Total	431,254,659	248,736,491	182,518,168
2. <u>Retired Members and Beneficiaries</u>			
a. Service Retirements + Beneficiaries	1,344,589,383	736,710,805	607,878,578
b. Disability Retirements	29,878,873	25,921,916	3,956,957
c. Terminated Vested Members	<u>2,847,867</u>	<u>2,111,726</u>	<u>736,141</u>
d. Total	1,377,316,123	764,744,446	612,571,677
3. Total	<u>1,808,570,782</u>	<u>1,013,480,937</u>	<u>795,089,845</u>
Entry Age Reserve			
1. Active	203,038,388	114,243,143	88,795,245
2. Inactive	<u>1,377,316,123</u>	<u>764,344,446</u>	<u>612,571,677</u>
3. Total	1,580,354,511	878,987,589	701,366,922
Actuarial Asset Value*	1,145,461,866	637,101,838	508,360,028

\*Allocated based on Entry Age Reserve

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Hypothetical City Contribution Requirement for 2014/2015 Fiscal Year

	2014/2015		
	<u>Total</u> -\$-	<u>Police</u> -\$-	<u>Fire</u> -\$-
<b>II. <u>Normal Cost</u> (Cont'd)</b>			
A. Total Present Value of Future Benefits	1,808,570,782	1,013,480,937	795,089,845
B. Present Value of Future Member Contributions	85,481,072	45,180,840	40,300,232
C. Actuarial Asset Value*	1,145,461,866	637,101,838	508,360,028
D. Unfunded Actuarial Accrued Liability	<u>0</u>	<u>0</u>	<u>0</u>
E. Present Value of Future Normal Costs (A-B-C-D)	577,627,844	331,198,259	246,429,585
F. Present Value of Future Payrolls	1,271,916,984	662,475,242	609,441,742
G. Administrative Expense*	2,222,561	1,236,180	986,381
H. Current Payroll for those under Expected Retirement Age	85,222,842	45,945,636	39,277,206
I. Interest Rate	7.5%	7.5%	7.5%
J. Current Normal Cost - Payable 10/1/2013 ([ (E)x(H) / (F) ] + (G)) (1+(I))	43,995,049	26,021,738	18,133,354
K. Covered Payroll	85,222,842	45,945,636	39,277,206
L. Normal Cost as Percentage of Covered Payroll (J)/ (K)	51.62%	56.64%	46.17%
<b>III. <u>Quarterly City Contribution Schedule</u></b>			
A. Past Service Cost	0	0	0
B. Normal Cost	43,995,049	26,021,738	18,133,354
C. Payment Timing	<u>0</u>	<u>0</u>	<u>0</u>
D. Total	<u>43,995,049**</u>	<u>26,021,738</u>	<u>18,133,354</u>

\* Allocated based on Entry Age Reserve

\*\* Hypothetical Total: \$44,155,092

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(COLA Fund)

I. COLA Increases by Duration Since Retirement

<u>Years Retired</u>	<u>No.</u>	<u>FIPO Benefits</u>	<u>COLA Benefits</u>	<u>%</u>
		<u>-\$-</u>	<u>-\$-</u>	
0 - 5	741	5,375,042	0	0.0
5 -10	349	1,924,848	89,557	4.7
10-15	248	1,061,024	157,557	14.9
15-20	216	744,388	192,747	25.9
20-25	233	744,165	318,495	42.8
25-30	151	317,378	244,607	77.1
30-35	141	153,772	247,518	161.0
35-40	156	120,600	286,664	237.7
40-45	38	18,860	70,242	372.4
45-50	7	3,560	19,051	535.1
50+	0	0	0	0.0
Total	2,280	10,463,637	1,626,438	15.5

II. COLA Increases by Attained Age (2013 Table)

<u>Age</u>	<u>No.</u>	<u>FIPO Benefits</u>	<u>COLA Benefits</u>	<u>%</u>
		<u>-\$-</u>	<u>-\$-</u>	
<45	33	158,234	725	0.5
45-50	171	1,062,781	1,550	0.1
50-54	437	2,836,572	31,447	1.1
55-59	379	2,408,149	74,206	3.1
60-64	334	1,687,884	174,153	10.3
65-69	255	995,316	236,558	23.8
70-74	200	600,461	249,007	41.5
75-79	152	328,117	227,113	69.2
80-84	166	245,130	326,973	133.4
85-89	121	117,129	232,560	198.6
>90	32	23,862	72,144	302.3
Total	2,280	10,463,637	1,626,438	15.5

**CITY OF MIAMI**  
**FIRE FIGHTERS' AND POLICE OFFICERS'**  
**RETIREMENT TRUST**  
(COLA Fund)

III. COLA Increases vs. CPI)

<u>Years Retired</u>	<u>No.</u>	<u>COLA</u>	<u>CPI</u>	<u>COLA/CPI</u>
		<u>-%-</u>	<u>-%-</u>	<u>%</u>
0 - 5	741	0.0	8.0	0.0
5 -10	349	4.7	21.5	21.6
10-15	248	14.9	37.7	39.4
15-20	216	25.9	51.6	50.2
20-25	233	42.8	71.5	59.9
25-30	151	77.1	113.4	67.9
30-35	141	161.0	168.2	95.7
35-40	156	237.7	294.4	80.7
40-45	38	372.4	448.4	83.1
45-50	7	535.1	621.0	86.1
50+	0	0.0	0.0	0.0
Total	2,280	15.5	31.0	50.2

IV. Consumer Price Index (CPI-U)

<u>Year</u>	<u>December Index</u>	<u>Annual %</u>	<u>Year</u>	<u>December Index</u>	<u>Annual %</u>
1956	27.600	2.9	1986	110.500	1.1
1957	28.400	3.0	1987	115.400	4.4
1958	28.900	1.8	1988	120.500	4.4
1959	29.400	1.5	1989	126.100	4.6
1960	29.800	1.5	1990	133.800	6.2
1961	30.000	0.7	1991	137.900	3.0
1962	30.400	1.2	1992	141.900	2.9
1963	30.900	1.6	1993	145.800	2.7
1964	31.200	1.2	1994	149.700	2.7
1965	31.800	1.9	1995	153.500	2.5
1966	32.900	3.4	1996	158.600	3.3
1967	33.900	3.0	1997	161.300	1.7
1968	35.500	4.7	1998	163.900	1.6
1969	37.700	6.1	1999	168.300	2.7
1970	39.800	5.5	2000	174.000	3.4
1971	41.100	3.4	2001	176.700	1.6
1972	42.500	3.4	2002	180.900	2.4
1973	46.200	8.7	2003	184.300	1.9
1974	51.900	12.2	2004	190.300	3.3
1975	55.500	7.0	2005	196.800	3.4
1976	58.200	4.8	2006	201.800	2.5
1977	62.100	6.8	2007	210.036	4.1
1978	67.700	9.0	2008	210.228	0.1
1979	76.700	13.3	2009	215.949	2.7
1980	86.300	12.4	2010	219.179	1.5
1981	94.000	8.9	2011	225.672	3.0
1982	97.600	3.9	2012	229.601	1.7
1983	101.300	3.8	2013	233.049	1.5
1984	105.300	4.0			
1985	109.300	3.8			

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(COLA Fund)

**I. Summary of Assets Available for Benefits at October 1, 2013**

		-\$-
A.	COLA Accounts (Exhibit 4)	
1.	COLA I Account at 9/30/2013	53,148,851
2.	COLA II Account at 9/30/2013	325,590,726
B.	Transfers of Excess Investment Income	
1.	\$0 due on 1/1/2014	0
2.	\$0 due on 1/1/2015	0
C.	Minimum City Contributions <sup>(1)</sup>	
	\$5,924,797 beginning 1/1/2016 permanent, discounted	67,134,097
D.	City Contribution	
1.	Contribution of \$5,477,808 due on 1/1/2014, discounted	5,379,658
2.	Contribution of \$5,696,920 due on 1/1/2015, discounted	5,204,506
E.	Assets Available for COLA Benefits	<u>456,457,838</u>

**II. COLA Fund Liabilities for Benefits at October 1, 2013 <sup>(2)</sup>**

A.	Present Value of Existing COLA Benefits for Inactives	
1.	Frozen COLA I benefits	1,000,098
2.	COLA II benefits	<u>282,539,187</u>
3.	Total inactive COLA benefits	283,539,285
B.	Present Value of Projected COLA Benefits for Actives	
1.	Reserve for current actives	31,689,347
2.	Reserve for future actives (15% of B(1))	<u>4,753,402</u>
3.	Total	36,442,749
C.	Total Liability Allocated (A(3) + (B3))	319,982,034
D.	Contingency Reserve [20% of I(E)-I(B)(2)]	91,291,568
E.	Unallocated Reserve <sup>(3)</sup>	<u>45,184,236</u>
F.	Total Liability for COLA Benefits	456,457,838

Notes: <sup>(1)</sup>  $(1/1.0750)^{2.25} \times (\ddot{a}_{\overline{25}|}) = 11.3310379$   
<sup>(2)</sup> For \$1,427 Table, II(D)+II(E) = \$136,475,804  
<sup>(3)</sup> Service for COLA excludes 457 buyback service.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(COLA Fund)

III. Derivation of Increase in Table as of January 1, 2013

		-\$-
A.	Liability based on current \$1,427 table	
1.	Inactive COLA II Benefits	282,539,187
2.	Present Value of Projected COLA benefits for current actives	31,689,347
3.	Reserve for future actives [15% of (2)]	<u>4,753,402</u>
4.	Total	318,981,936
B.	Assets available to increase table	
1.	Total assets available for COLA Benefits	456,457,838
2.	Total Liability Allocated (current \$1,427 table)	319,982,034
3.	Contingency Reserve II(D)	<u>91,291,568</u>
4.	Available Assets [(1)-(2)-(3)]	45,184,236
5.	\$0 due on 1/1/2015, discounted	<u>0</u>
6.	Net Available Assets [(4)-(5)]	45,184,236
7.	Increase ratio [(B6)/ (A4)]	0.141651
8.	Table increase [\$1,427x (7)]	202
9.	New table amount [\$1,427+ (8)]	1,629
10.	Actual new table amount	1,629

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST  
(COLA Fund)**

Cumulative Experience Position Net of Asset Transfers

I. <u>Calculation of Expected Unfunded Actuarial Accrued Liability at 10/1/2013</u>	
A. Expected Unfunded Actuarial Liability at 10/1/2012	-\$- 239,949,522
B. Entry Age Normal Cost for 2012/2013 Year Paid or Payable by Employer	7,170,710
C. Interest on (A) and (B) at 7.50%	18,534,017
D. Contributions for 2012/2013 Year Paid or Payable by Employer (Required)	40,977,546
E. Interest on (D) at 7.50%	<u>2,178,463</u>
F. Expected Unfunded Actuarial Liability at 9/30/2013	222,498,240
G. Additional Unfunded Actuarial Liability due to	
1. Assumption Changes	0
2. Plan Amendment	0
3. Valuation System Change	(6,700,754)
H. Final Expected Unfunded Actuarial Liability at 9/30/2013	215,797,486
II. <u>Determination of Net Cumulative Experience Position at 10/1/2013 (Preliminary)</u>	
A. Expected Unfunded Actuarial Liability at 9/30/2013	215,797,486
B. Entry Age Reserve	
1. Actives	203,038,388
2. Inactives	<u>1,377,316,123</u>
2. Total	1,580,354,511
C. Actuarial Asset Value	1,145,461,866
D. Actual Unfunded Actuarial Liability (B)-(C)	<u>434,892,645</u>
E. Cumulative Experience Gain (Loss) (A)-(D)	(219,095,159)
III. <u>Future Transfers of Excess Investment Income at 10/1/2013</u>	
A. \$0 due on 1/1/2014, discounted	0
B. \$23,979,194 due on 1/1/2015, discounted	<u>21,906,551*</u>
C. Total Future Transfers at 10/1/2013 (A)+(B)	21,906,551

\*No transfer permitted unless cumulative experience is positive at the valuation date preceding transfer

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(COLA Fund)

Summary of Principal COLA Provisions

Effective Date:	January 1, 1994, amended January 1, 1995.
Eligibility:	All inactive members in Miami Fire Fighters' and Police Officers' Retirement Trust.
Prior COLA:	Benefits granted through 1993 continue to be paid, in addition to benefits to be granted in the future.
Available Assets:	Existing COLA assets as of January 1, 1995; beginning with the 1991/92 fiscal year, a percentage of excess investment return on FIPO assets (75% of first 2.5%, 50% of next 2.5%, 25% of next 2.5%), subject to a minimum City contribution of \$2.5 million, increasing 4% annually.
Allocated Assets:	Current COLA assets as of September 30, 2013, plus present value of \$2.5 million minimum guarantee. The 4% future annual increases is not pre-allocated. A contingency reserve of 20% has been established for adverse experience.
COLA Benefits:	In addition to prior COLA, benefits are based on attached table, with \$1,629 monthly benefit for 25 years of creditable service and 22 completed years of retirement (after age 46). The \$1,629 amount is reduced by 5% for each year of retirement less than 22 and each year of creditable service less than 25 and increased similarly for years of retirement greater than 22 and years of creditable service greater than 25.  Benefits are based on the FIPO option elected. Tabular amounts are adjusted, based on the FIPO adjustments at the time of FIPO benefit commencement, for options other than Option 8 (Joint & 40%). Surviving spouses receive the percentage of the table amount determined under the FIPO election.  Service-incurred and accidental disabilities and deaths receive benefits based on the greater of 25 years or actual creditable service.
<b>Changes from Prior Year Valuation:</b>	<b>The radix of the COLA table was increased from \$1,427 to \$1,629.</b>



**Miami Firefighters' and Police Officers' Retirement Trust  
2014 Monthly Retirement Supplements (\$1629 Table)**

		Completed Years of Retirement (after age 46)																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
10		0	0	0	41	61	81	102	122	143	163	183	204	224	244	265	285	305	326	346	367	387	407	428	448	468
11		0	0	0	49	73	98	122	147	171	195	220	244	269	293	318	342	367	391	415	440	464	489	513	538	562
12		0	0	0	57	86	114	143	171	200	228	257	285	314	342	371	399	428	456	485	513	542	570	599	627	656
13		0	0	0	65	98	130	163	195	228	261	293	326	358	391	424	456	489	521	554	586	619	652	684	717	749
14		0	0	0	73	110	147	183	220	257	293	330	367	403	440	476	513	550	586	623	660	696	733	770	806	843
15		0	0	0	81	122	163	204	244	285	326	367	407	448	489	529	570	611	652	692	733	774	815	855	896	937
16		0	0	0	90	134	179	224	269	314	358	403	448	493	538	582	627	672	717	762	806	851	896	941	986	1030
17		0	0	0	98	147	195	244	293	342	391	440	489	538	586	635	684	733	782	831	880	929	977	1026	1075	1124
18	Y	0	0	0	106	159	212	265	318	371	424	476	529	582	635	688	741	794	847	900	953	1006	1059	1112	1165	1218
19	e	0	0	0	114	171	228	285	342	399	456	513	570	627	684	741	798	855	912	969	1026	1083	1140	1197	1254	1311
20	a	0	0	0	122	183	244	305	367	428	489	550	611	672	733	794	855	916	977	1038	1100	1161	1222	1283	1344	1405
21	r	0	0	0	130	195	261	326	391	456	521	586	652	717	782	847	912	977	1043	1108	1173	1238	1303	1368	1434	1499
22	s	0	0	0	138	208	277	346	415	485	554	623	692	762	831	900	969	1038	1108	1177	1246	1315	1385	1454	1523	1592
23	o	0	0	0	147	220	293	367	440	513	586	660	733	806	880	953	1026	1100	1173	1246	1319	1393	1466	1539	1613	1686
24	f	0	0	0	155	232	310	387	464	542	619	696	774	851	929	1006	1083	1161	1238	1315	1393	1470	1548	1625	1702	1780
25		0	0	0	163	244	326	407	489	570	652	733	815	896	977	1059	1140	1222	1303	1385	1466	1548	1629	1710	1792	1873
26		0	0	0	171	257	342	428	513	599	684	770	855	941	1026	1112	1197	1283	1368	1454	1539	1625	1710	1796	1881	1967
27	C	0	0	0	179	269	358	448	538	627	717	806	896	986	1075	1165	1254	1344	1434	1523	1613	1702	1792	1881	1971	2061
28	r	0	0	0	187	281	375	468	562	656	749	843	937	1030	1124	1218	1311	1405	1499	1592	1686	1780	1873	1967	2061	2154
29	e	0	0	0	195	293	391	489	586	684	782	880	977	1075	1173	1271	1368	1466	1564	1662	1759	1857	1955	2053	2150	2248
30	d	0	0	0	204	305	407	509	611	713	815	916	1018	1120	1222	1324	1425	1527	1629	1731	1833	1934	2036	2138	2240	2342
31	i	0	0	0	212	318	424	529	635	741	847	953	1059	1165	1271	1377	1482	1588	1694	1800	1906	2012	2118	2224	2329	2435
32	t	0	0	0	220	330	440	550	660	770	880	990	1100	1210	1319	1429	1539	1649	1759	1869	1979	2089	2199	2309	2419	2529
33	e	0	0	0	228	342	456	570	684	798	912	1026	1140	1254	1368	1482	1596	1710	1824	1939	2053	2167	2281	2395	2509	2623
34	d	0	0	0	236	354	472	591	709	827	945	1063	1181	1299	1417	1535	1653	1772	1890	2008	2126	2244	2362	2480	2598	2716
35		0	0	0	244	367	489	611	733	855	977	1100	1222	1344	1466	1588	1710	1833	1955	2077	2199	2321	2444	2566	2688	2810
36	S	0	0	0	252	379	505	631	757	884	1010	1136	1262	1389	1515	1641	1767	1894	2020	2146	2272	2399	2525	2651	2777	2904
37	e	0	0	0	261	391	521	652	782	912	1043	1173	1303	1434	1564	1694	1824	1955	2085	2215	2346	2476	2606	2737	2867	2997
38	r	0	0	0	269	403	538	672	806	941	1075	1210	1344	1478	1613	1747	1881	2016	2150	2285	2419	2553	2688	2822	2957	3091
39	v	0	0	0	277	415	554	692	831	969	1108	1246	1385	1523	1662	1800	1939	2077	2215	2354	2492	2631	2769	2908	3046	3185
40	i	0	0	0	285	428	570	713	855	998	1140	1283	1425	1568	1710	1853	1996	2138	2281	2423	2566	2708	2851	2993	3136	3278
41	c	0	0	0	293	440	586	733	880	1026	1173	1319	1466	1613	1759	1906	2053	2199	2346	2492	2639	2786	2932	3079	3225	3372
42	e	0	0	0	301	452	603	753	904	1055	1205	1356	1507	1658	1808	1959	2110	2260	2411	2562	2712	2863	3014	3164	3315	3466
43		0	0	0	310	464	619	774	929	1083	1238	1393	1548	1702	1857	2012	2167	2321	2476	2631	2786	2940	3095	3250	3405	3559
44		0	0	0	318	476	635	794	953	1112	1271	1429	1588	1747	1906	2065	2224	2382	2541	2700	2859	3018	3177	3335	3494	3653
45		0	0	0	326	489	652	814	977	1140	1303	1466	1629	1792	1955	2118	2281	2444	2606	2769	2932	3095	3258	3421	3584	3747
46		0	0	0	334	501	668	835	1002	1169	1336	1503	1670	1837	2004	2171	2338	2505	2672	2839	3006	3172	3339	3506	3673	3840
47		0	0	0	342	513	684	855	1026	1197	1368	1539	1710	1881	2053	2224	2395	2566	2737	2908	3079	3250	3421	3592	3763	3934
48		0	0	0	350	525	700	876	1051	1226	1401	1576	1751	1926	2101	2277	2452	2627	2802	2977	3152	3327	3502	3677	3853	4028
49		0	0	0	358	538	717	896	1075	1254	1434	1613	1792	1971	2150	2329	2509	2688	2867	3046	3225	3405	3584	3763	3942	4121
50		0	0	0	367	550	733	916	1100	1283	1466	1649	1833	2016	2199	2382	2566	2749	2932	3115	3299	3482	3665	3849	4032	4215

**Miami Firefighters' and Police Officers' Retirement Trust  
2014 Monthly Retirement Supplements (\$1629 Table)**

Completed Years of Retirement (after age 46)

	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
10	489	509	529	550	570	591	611	631	652	672	692	713	733	753	774	794	814	835	855	876	896	916	937	957	977
11	586	611	635	660	684	709	733	757	782	806	831	855	880	904	929	953	977	1002	1026	1051	1075	1100	1124	1148	1173
12	684	713	741	770	798	827	855	884	912	941	969	998	1026	1055	1083	1112	1140	1169	1197	1226	1254	1283	1311	1340	1368
13	782	814	847	880	912	945	977	1010	1043	1075	1108	1140	1173	1205	1238	1271	1303	1336	1368	1401	1434	1466	1499	1531	1564
14	880	916	953	990	1026	1063	1100	1136	1173	1210	1246	1283	1319	1356	1393	1429	1466	1503	1539	1576	1613	1649	1686	1723	1759
15	977	1018	1059	1100	1140	1181	1222	1262	1303	1344	1385	1425	1466	1507	1548	1588	1629	1670	1710	1751	1792	1833	1873	1914	1955
16	1075	1120	1165	1210	1254	1299	1344	1389	1434	1478	1523	1568	1613	1658	1702	1747	1792	1837	1881	1926	1971	2016	2061	2105	2150
17	1173	1222	1271	1319	1368	1417	1466	1515	1564	1613	1662	1710	1759	1808	1857	1906	1955	2004	2053	2101	2150	2199	2248	2297	2346
18	1271	1324	1377	1429	1482	1535	1588	1641	1694	1747	1800	1853	1906	1959	2012	2065	2118	2171	2224	2277	2329	2382	2435	2488	2541
19	1368	1425	1482	1539	1596	1653	1710	1767	1824	1881	1939	1996	2053	2110	2167	2224	2281	2338	2395	2452	2509	2566	2623	2680	2737
20	1466	1527	1588	1649	1710	1772	1833	1894	1955	2016	2077	2138	2199	2260	2321	2382	2444	2505	2566	2627	2688	2749	2810	2871	2932
21	1564	1629	1694	1759	1824	1890	1955	2020	2085	2150	2215	2281	2346	2411	2476	2541	2606	2672	2737	2802	2867	2932	2997	3063	3128
22	1662	1731	1800	1869	1939	2008	2077	2146	2215	2285	2354	2423	2492	2562	2631	2700	2769	2839	2908	2977	3046	3115	3185	3254	3323
23	1759	1833	1906	1979	2053	2126	2199	2272	2346	2419	2492	2566	2639	2712	2786	2859	2932	3006	3079	3152	3225	3299	3372	3445	3519
24	1857	1934	2012	2089	2167	2244	2321	2399	2476	2553	2631	2708	2786	2863	2940	3018	3095	3172	3250	3327	3405	3482	3559	3637	3714
25	1955	2036	2118	2199	2281	2362	2444	2525	2606	2688	2769	2851	2932	3014	3095	3177	3258	3339	3421	3502	3584	3665	3747	3828	3910
26	2053	2138	2224	2309	2395	2480	2566	2651	2737	2822	2908	2993	3079	3164	3250	3335	3421	3506	3592	3677	3763	3849	3934	4020	4105
27	2150	2240	2329	2419	2509	2598	2688	2777	2867	2957	3046	3136	3225	3315	3405	3494	3584	3673	3763	3853	3942	4032	4121	4211	4301
28	2248	2342	2435	2529	2623	2716	2810	2904	2997	3091	3185	3278	3372	3466	3559	3653	3747	3840	3934	4028	4121	4215	4309	4402	4496
29	2346	2444	2541	2639	2737	2834	2932	3030	3128	3225	3323	3421	3519	3616	3714	3812	3910	4007	4105	4203	4301	4398	4496	4594	4692
30	2444	2545	2647	2749	2851	2953	3054	3156	3258	3360	3462	3563	3665	3767	3869	3971	4073	4174	4276	4378	4480	4582	4683	4785	4887
31	2541	2647	2753	2859	2965	3071	3177	3282	3388	3494	3600	3706	3812	3918	4024	4130	4235	4341	4447	4553	4659	4765	4871	4977	5082
32	2639	2749	2859	2969	3079	3189	3299	3409	3519	3629	3739	3849	3958	4068	4178	4288	4398	4508	4618	4728	4838	4948	5058	5168	5278
33	2737	2851	2965	3079	3193	3307	3421	3535	3649	3763	3877	3991	4105	4219	4333	4447	4561	4675	4789	4903	5017	5131	5245	5359	5473
34	2834	2953	3071	3189	3307	3425	3543	3661	3779	3897	4015	4134	4252	4370	4488	4606	4724	4842	4960	5078	5197	5315	5433	5551	5669
35	2932	3054	3177	3299	3421	3543	3665	3787	3910	4032	4154	4276	4398	4520	4643	4765	4887	5009	5131	5254	5376	5498	5620	5742	5864
36	3030	3156	3282	3409	3535	3661	3787	3914	4040	4166	4292	4419	4545	4671	4797	4924	5050	5176	5302	5429	5555	5681	5807	5934	6060
37	3128	3258	3388	3519	3649	3779	3910	4040	4170	4301	4431	4561	4692	4822	4952	5082	5213	5343	5473	5604	5734	5864	5995	6125	6255
38	3225	3360	3494	3629	3763	3897	4032	4166	4301	4435	4569	4704	4838	4973	5107	5241	5376	5510	5644	5779	5913	6048	6182	6316	6451
39	3323	3462	3600	3739	3877	4015	4154	4292	4431	4569	4708	4846	4985	5123	5262	5400	5539	5677	5816	5954	6092	6231	6369	6508	6646
40	3421	3563	3706	3849	3991	4134	4276	4419	4561	4704	4846	4989	5131	5274	5416	5559	5702	5844	5987	6129	6272	6414	6557	6699	6842
41	3519	3665	3812	3958	4105	4252	4398	4545	4692	4838	4985	5131	5278	5425	5571	5718	5864	6011	6158	6304	6451	6597	6744	6891	7037
42	3616	3767	3918	4068	4219	4370	4520	4671	4822	4973	5123	5274	5425	5575	5726	5877	6027	6178	6329	6479	6630	6781	6931	7082	7233
43	3714	3869	4024	4178	4333	4488	4643	4797	4952	5107	5262	5416	5571	5726	5881	6035	6190	6345	6500	6654	6809	6964	7119	7273	7428
44	3812	3971	4130	4288	4447	4606	4765	4924	5082	5241	5400	5559	5718	5877	6035	6194	6353	6512	6671	6830	6988	7147	7306	7465	7624
45	3910	4073	4235	4398	4561	4724	4887	5050	5213	5376	5539	5701	5864	6027	6190	6353	6516	6679	6842	7005	7168	7330	7493	7656	7819
46	4007	4174	4341	4508	4675	4842	5009	5176	5343	5510	5677	5844	6011	6178	6345	6512	6679	6846	7013	7180	7347	7514	7681	7848	8015
47	4105	4276	4447	4618	4789	4960	5131	5302	5473	5644	5816	5987	6158	6329	6500	6671	6842	7013	7184	7355	7526	7697	7868	8039	8210
48	4203	4378	4553	4728	4903	5078	5254	5429	5604	5779	5954	6129	6304	6479	6654	6830	7005	7180	7355	7530	7705	7880	8055	8231	8406
49	4301	4480	4659	4838	5017	5197	5376	5555	5734	5913	6092	6272	6451	6630	6809	6988	7168	7347	7526	7705	7884	8064	8243	8422	8601
50	4398	4582	4765	4948	5131	5315	5498	5681	5864	6048	6231	6414	6597	6781	6964	7147	7330	7514	7697	7880	8064	8247	8430	8613	8797

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(COLA Fund)

Summary of Actuarial Basis

Valuation Date: January 1, 2014.

Valuation Method: Accrued Benefit Cost Method, based on benefits granted to date.

Asset Valuation Method: Market Value, plus present value of future minimum City contributions.

Actuarial Assumptions:

Investment Return: 7.50%, compounded annually.

Mortality: RP 2000 Mortality Table, Employees and Annuitants Combined, projected by scale AA to 2020, producing following specimen rates:

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	.0235%	.0138%
30	.0402%	.0216%
40	.0919%	.0522%
50	.1487%	.1189%
60	.4887%	.4573%
70	1.6413%	1.5145%
80	5.7647%	3.9866%

Disabled Mortality: RP 2000 Disabled Mortality Table projected by scale AA to 2020, producing following specimen rates:

<u>Age</u>	<u>Male</u>	<u>Female</u>
20	1.5696%	.5287%
30	2.0418%	.6093%
40	1.9221%	.5507%
50	2.0149%	.8186%
60	3.0450%	1.9756%
70	4.6257%	3.4045%
80	8.9456%	6.2834%

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**  
(COLA Fund)

Summary of Actuarial Basis  
(Continued)

<u>Age</u>	<u>Disability</u>	<u>Turnover</u>	
		<u>&lt;5</u>	<u>5+</u>
20	.00085	.0240	.0192
21	.00095	.0240	.0192
22	.00105	.0240	.0192
23	.00110	.0240	.0192
24	.00125	.0240	.0192
25	.00130	.0240	.0192
26	.00140	.0240	.0192
27	.00150	.0240	.0192
28	.00160	.0240	.0192
29	.00170	.0240	.0192
30	.00180	.0240	.0192
31	.00200	.0240	.0192
32	.00220	.0240	.0192
33	.00245	.0240	.0192
34	.00265	.0240	.0192
35	.00285	.0240	.0192
36	.00305	.0228	.0182
37	.00325	.0216	.0173
38	.00345	.0204	.0163
39	.00370	.0192	.0154
40	.00390	.0180	.0144
41	.00470	.0168	.0134
42	.00555	.0156	.0125
43	.00635	.0144	.0115
44	.00720	.0132	.0106
45	.00800	.0120	.0096
46	.00880	.0096	.0077
47	.00965	.0072	.0057
48	.01045	.0048	.0038
49	.01130	.0024	.0019
50	.01210	.0000	.0000

**CITY OF MIAMI**  
**FIRE FIGHTERS' AND POLICE OFFICERS'**  
**RETIREMENT TRUST**  
(COLA Fund)

Summary of Actuarial Basis  
(Continued)

<u>Age</u>	<u>Disability</u>	<u>Turnover</u>	
		<u>&lt; 5</u>	<u>5+</u>
51	.01295	.0000	.0000
52	.01375	.0000	.0000
53	.01455	.0000	.0000
54	.01540	.0000	.0000
55	.01620	.0000	.0000
56	.01785	.0000	.0000
57	.01870	.0000	.0000
58	.01950	.0000	.0000
59	.02030	.0000	.0000
60	.00000	.0000	.0000
61	.00000	.0000	.0000
62	.00000	.0000	.0000
63	.00000	.0000	.0000
64	.00000	.0000	.0000
65	.00000	.0000	.0000

Retirement: Fire Fighters who had attained 64 points by September 30, 2009 and Police Officers who had attained 64 points by September 30, 2010 are subject to the Rule of 64; Fire Fighters who had attained 68 points by September 30, 2010 are subject to the Rule of 68; all others are subject to the Rule of 70. If eligible for Retirement, the following decrements apply, based on service.

<u>Years of Service</u>	<u>Police %</u>	<u>Fire %</u>
<20	0	0
20	10	10
21-24	3	3
25-29	40	5
30-34	50	25
35	100	25
36		25
37		100

There is no explicit assumption on the percentage of retirements expected to enter the DROP. No distinction is necessary, since funding is calculated to expected retirement or expected DROP entry.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

(COLA Fund)

Summary of Actuarial Basis  
(Continued)

Type of Disability:	100% of the disabilities are expected to be accidental disabilities.
Recovery:	No probabilities of recovery are used.
Type of Death:	100% of the assumed deaths are expected to be ordinary deaths.
Remarriage:	No probabilities of remarriage are used.
Spouse's Ages:	Female spouses are assumed to be 3 years younger than male spouses.
Marital Status:	All employees are assumed to be married.
Investment Expenses:	Not provided for.
Withdrawal of Employee Contributions:	It is assumed that employees do not withdraw their contribution balances upon employment termination or retirement.
Adjustments from Valuation Date:	Liabilities are discounted for 3 months at the Investment Return assumption.
Sources of Data:	Asset data is from unaudited financial statements. Membership data was furnished by Administrator.
Changes from Prior Year Valuation:	None.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Disclosure Information Under GASB 5  
(COLA Fund)  
(Based on 01/01/2013 \$1,429 Table)

I. Funding Status and Progress as of September 30, 2013 and 2012

Pension benefit obligation:	\$(Millions)	
	<u>2013</u>	<u>2012</u>
- Retirees and beneficiaries currently receiving prior COLA benefits	1.0	1.1
- Retirees and beneficiaries receiving COLA tabular benefits (beginning January 1) and terminated employees not yet receiving tabular benefits	282.5	277.1
- Current Employees Accumulated employee contributions including interest	.2	0.1
Employer - financed vested	0.0	0.0
Employer - financed non-vested	<u>36.3</u>	<u>34.3</u>
- Total pension benefit obligation	320.0	312.6
Net assets available for benefits	<u>378.7</u>	<u>350.3</u>
Unfunded pension benefit (obligation)/asset	58.7	37.7

The pension benefit obligations were determined as part of actuarial valuations at January 1, 2014 and January 1, 2013, based on data and asset information at September 30, 2013 and September 30, 2012. Significant actuarial assumptions used include (a) a rate of return on the investment of present and future assets of 7.50% per year compounded annually, (b) post retirement COLA benefits based on the table in effect at January 1, 2013 and January 1, 2012.

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Disclosure Information Under GASB 5  
(COLA Fund)  
(Based on 01/01/2013 \$1,427 Table)

II. Contributions Required and Contributions Made

The funding policy provides for annual employer contributions for 25 years 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 7.50 percent assumption.

III. Analysis of funding Progress (\$ Millions)

Fiscal Year	(1) Net Assets Available for Benefits*	(2) Pension Benefit Obligation**	(3) Percent Funded	(4) Unfunded PBO (2)-(1)	(5) Annual Covered Payroll	(4)/(5)
	(\$)	(\$)	(%)	(\$)	(\$)	(%)
1993	40.8	32.5	126	(8.3)	72.0	(12)
1994	42.6	51.5	83	8.9	72.9	12
1995	63.8	52.0	123	(11.8)	71.5	(17)
1996	83.9	65.7	128	(18.1)	72.9	(25)
1997	117.7	70.8	166	(46.9)	69.6	(67)
1998	144.2	90.9	159	(53.3)	74.3	(72)
1999	180.7	116.3	155	(64.4)	77.7	(83)
2000	220.5	137.0	161	(83.5)	84.3	(99)
2001	195.0	158.4	123	(36.6)	89.7	(41)
2002	174.1	164.5	106	(9.6)	96.9	(10)
2003	194.8	165.1	118	(29.7)	98.9	(30)
2004	210.3	185.7	113	(24.7)	89.2	(28)
2005	231.6	195.0	119	(36.6)	91.5	(40)
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)

\* Excluding future City minimum contributions.

\*\* Excluding new increment, contingency reserves, and reserves for future actives.



**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Disclosure Information Under GASB 5  
(COLA Fund)

IV. Revenues and Expenses

<u>Fiscal Year</u>	<u>Revenues by Source</u>			
	<u>Employee Contributions</u>	<u>Employer Contributions</u>	<u>Investment Income</u>	<u>Total</u>
	(\$)	(\$)	(\$)	(\$)
1987	1,246,688	298,682	871,969	2,417,339
1988	1,272,000	0	393,935	1,665,935
1989	1,381,407	0	686,477	2,067,884
1990	1,457,451	0	694,749	2,152,200
1991	1,505,015	0	1,024,972	2,529,987
1992	1,422,192	0	1,031,806	2,453,998
1993	1,493,735	0	1,151,821	2,645,556
1994	474,233	9,481,546	1,313,750	11,269,529
1995	506	16,818,431	3,754,787	20,573,724
1996	0	2,622,149	3,795,508	6,417,657
1997	4,226	12,736,609	7,724,214	20,465,049
1998	1,094	14,344,834	10,325,730	24,671,658
1999	11,792	17,020,337	9,278,121	26,310,250
2000	293	23,437,048	18,932,095	42,369,436
2001	0	28,380,385	6,709,796	35,090,181
2002	0	32,080,031	571,271	32,651,302
2003	0	3,558,280	6,649,841	10,208,121
2004	0	3,700,611	9,923,222	13,623,833
2005	0	3,848,635	12,516,741	16,365,377
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	44,696,486
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

**CITY OF MIAMI  
FIRE FIGHTERS' AND POLICE OFFICERS'  
RETIREMENT TRUST**

Disclosure Information Under GASB 5  
(COLA Fund)  
(Continued)

IV. Revenues and Expenses (Continued)

Fiscal Year	Expenses by Type			
	Benefits	Administrative Expenses	Refunds	Total
	(\$)	(\$)	(\$)	(\$)
1987	183,548	7,301	36,679	227,528
1988	321,908	387	68,950	391,245
1989	430,185	0	46,021	476,206
1990	534,058	0	85,067	619,125
1991	578,758	0	76,730	655,488
1992	628,793	20,956	78,054	727,803
1993	665,938	27,288	84,945	778,171
1994	1,657,947	7,430	72,595	1,737,972
1995	2,706,830	0	101,814	2,808,644
1996	3,051,315	0	84,143	3,135,458
1997	3,676,801	0	124,925	3,801,726
1998	4,695,927	0	30,136	4,726,063
1999	5,765,042	295,708	17,974	6,078,724
2000	7,016,378	334,588	13,932	7,364,898
2001	8,225,910	445,723	16,796	8,688,429
2002	8,943,616	437,703	11,101	9,392,420
2003	9,332,318	590,842	9,806	9,932,966
2004	9,916,255	609,251	6,313	10,531,819
2005	10,614,510	672,938	1,182	11,288,630
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