

**CITY PENSION FUND FOR FIREFIGHTERS AND POLICE OFFICERS  
IN THE CITY OF MIAMI BEACH**

*ACTUARIAL VALUATION AS OF OCTOBER 1, 2013*

**This Valuation Determines the Annual Contribution for the Fund Year October 1, 2014 through September 30, 2015 to be paid in Fiscal Year October 1, 2014 to September 30, 2015**

**May 14, 2014**



**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

<b>TABLE OF CONTENTS</b>
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	<u>Page</u>
Commentary	1
I. Summary of Retirement Fund Costs .....	5
II. Comparison of Cost Data of Current and Prior Valuations.....	7
III. Characteristics of Participants in Actuarial Valuation .....	8
IV. Statement of Assets .....	9
V. Reconciliation of Fund Assets.....	10
VI. Actuarial Gains (Losses) .....	13
VII. Amortization of Unfunded Actuarial Accrued Liability .....	14
VIII. Accounting Disclosure Exhibit .....	15
IX. Outline of Principal Provisions of the Retirement Fund .....	23
X. Actuarial Assumptions and Actuarial Cost Methods Used .....	29
XI. Assumption Change History .....	33
XII. Distribution of Fund Participants by Attained Age Groups and Service Groups.....	36
XIII. Statistics for Participants Entitled to Deferred Benefits and Participants Receiving Benefits .....	39
XIV. Reconciliation of Employee Data.....	40
XV. Projected Retirement Benefits.....	41
XVI. Recent Fund Experience.....	42
XVII. Employer Contribution Information.....	45
XVIII. Twenty Year Projections .....	46
XIX. State Required Exhibit .....	47

May 14, 2014

Ms. Celia B. Locke, CEBS  
Executive Director  
City Pension Fund for Firefighters and Police Officers in the City of Miami Beach  
1691 Michigan Avenue, Suite 355  
Miami Beach, Florida 33139

Dear Celia:

### **October 1, 2013 Actuarial Valuation**

We are pleased to present our October 1, 2013 Actuarial Valuation for the City Pension Fund for Firefighters and Police Officers in the City of Miami Beach. The purpose of this report is to indicate appropriate contribution levels, comment on the actuarial stability of the Fund and to satisfy State requirements. The Board of Trustees has retained Gabriel, Roeder, Smith and Company (GRS) to prepare an annual actuarial valuation under Section 63 of the Fund Ordinance.

This report consists of this commentary, detailed Tables I through XVIII and the State Required Exhibit on Table XIX. The Tables contain basic Fund cost figures plus significant details on the benefits, liabilities and experience of the Fund. We suggest that you thoroughly review the report at your convenience and contact us with any questions that may arise.

### **Retirement Fund Costs**

Our Actuarial Valuation develops the required minimum Retirement Fund payment under the Florida Protection of Public Employee Retirement Benefits Act and for Fire and Police Retirement Chapters 175 and 185. The minimum payment consists of payment of annual normal costs including amortization of the components of the unfunded actuarial accrued liability over various periods as prescribed by law. The **minimum required contribution for fiscal year ending September 30, 2015 is \$37,865,791 (80.3% / 65.5%)**. The figures in parentheses is the Fund cost expressed as a percentage of projected annual pensionable payroll excluding DROP payroll (\$47,164,032) and projected annual pensionable payroll including DROP payroll (\$57,851,961) respectively for fiscal year ending September 30, 2015.

This total cost is to be met by member, City and State (Share Plan) contributions. We anticipate that member contributions will be **\$4,716,403 (10.0% / 8.2%)**, the State (Share Plan) will contribute **\$120,549 (0.3% / 0.2%)** and the resulting minimum required City contribution will be **\$33,028,839 (70.0% / 57.1%)**. The City contribution includes an interest adjustment and must be increased if State contributions are less than \$120,549.

Ms. Celia B. Locke, CEBS  
May 14, 2014  
Page Two

The City contribution requirements presented above reflect an annual payment at the beginning of the fiscal year according to our understanding of the City's payment schedule.

#### **Changes in Actuarial Assumptions, Methods and Fund Benefits**

Fund provisions are unchanged from the October 1, 2012 Actuarial Impact Statement. Fund provisions are summarized on Table IX.

The method used to determine the actuarial value of assets has been updated to phase in the deviation between the expected and actual return on assets at a rate of 20% per year. Pensionable pay adjusted for overtime for purposes of member contributions is reduced from 20% to 16% to reflect the annual limit on overtime to 300 hours for purposes of expected member contributions. DROP account balances are included in the assets and liabilities. Inclusion of DROP account balances in assets and liabilities is required for accounting purposes under GASB 67 (and 68) but does not affect contribution requirements.

The remaining actuarial assumptions and methods are unchanged from the October 1, 2012 Actuarial Impact Statement. The actuarial assumptions and methods are outlined on Table X.

Projected Government Accounting Standards Board Statement Number 67 (GASB 67) disclosures are included.

#### **Comparison of October 1, 2012 and October 1, 2013 Valuation Results**

Table II of our report provides information of a comparative nature. The left columns of the Table indicate the costs as calculated for October 1, 2012. The center right columns indicate the costs as calculated for October 1, 2013, prior to the update in actuarial assumptions and methods. The right columns indicate the costs as calculated for October 1, 2013, after the update in actuarial assumptions and methods.

Comparing the left center and right center columns of Table II shows the effect of Fund experience during the year. The number of active participants increased by approximately 7%. Projected pensionable payroll increased by approximately 5%. Total Fund membership increased by approximately 4%. Total normal cost increased both as a dollar amount and as a percentage of covered payroll. The unfunded actuarial accrued liability decreased both as a dollar amount and as a percentage of payroll. The net City minimum funding requirement increased both as a dollar amount but decreased as a percentage of payroll.

Comparing the center right and right columns of Table II shows the effect of the update of the actuarial assumptions and methods. The unfunded actuarial liability and minimum funding requirement decreased both as a percentage of covered payroll and as a dollar amount.

Ms. Celia B. Locke, CEBS  
May 14, 2014  
Page Three

The value of vested accrued benefits exceeds Fund assets, resulting in a Vested Benefit Security Ratio (VBSR) of 78.8% which is an increase from 74.6% as of the October 1, 2012 Actuarial Valuation Report. The VBSR is measured on a market value of assets basis.

### **Fund Experience**

The Fund experienced an actuarial loss in the amount of \$1,540,235 this year. This indicates net Fund experience was less favorable than expected based upon the actuarial assumptions.

Table XVII (salary, turnover and investment yield) provides figures on recent Fund experience.

Salary experience indicates actual salary increases averaged approximately 3.9% for Fund Year ended September 30, 2013. The average salary increase assumption was 3.8%. Salary increase experience was generally a source of actuarial loss. Three, five and ten-year average annual salary increases are 4.3%, 4.7% and 6.1%, respectively.

Employee turnover this year was approximately 110% of the assumed and was generally an offsetting source of actuarial gain.

This year's smoothed value investment return of 8.8% (prior method) was more than the Fund's investment return assumption of 8.0%. Smoothed investment return was an offsetting source of actuarial gain during the year. Three, five and ten year average annual investment returns are 5.0%, 4.7% and 5.8%, respectively on a smoothed actuarial value basis (prior method). Average annual market value returns for the one, three, five and ten-year periods have been 13.1%, 10.6%, 8.7% and 7.3%, respectively.

### **Member Census and Financial Data**

The Board submitted the Member census data as of October 1, 2013 used for this actuarial valuation to us. This information contains name, Social Security number, date of birth, date of hire, October 1, 2013 rate of pay and member contributions for the previous year. Dates of termination and retirement are provided where applicable. The Board updated information on inactive participants including retirees, beneficiaries and vested terminees.

We received financial information as of September 30, 2013 concerning Fund assets from the Fund Auditors. We do not audit the Member census data and asset information that is provided to us. However, we perform certain reasonableness checks and on this basis we believe that the information that we received is reliable.

### **Summary**

In our opinion the benefits provided for under the current Fund will be sufficiently funded through the payment of the amount as indicated in this and future Actuarial Valuation reports. We will

Ms. Celia B. Locke, CEBS  
May 14, 2014  
Page Four

continue to update you on the future payment requirements for the Fund through our actuarial reports. These reports will also continue to monitor the future experience of the Fund.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Fund experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period); and changes in Fund provisions or applicable law. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

This report should not be relied on for any purpose other than the purpose described in the primary communication. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Fund as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

This report may be provided to parties other than the Board only in its entirety and only with the permission of an approved representative of the Board.

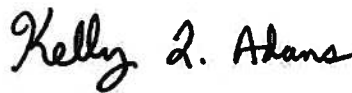
The signing actuaries are independent of the Fund sponsor.

The undersigned are Members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. We are available to respond to any questions with regards to matters covered in this report.

Very truly yours,



Lawrence F. Wilson, A.S.A.  
Senior Consultant and Actuary



Kelly L. Adams, A.S.A.  
Consultant and Actuary

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Summary of Retirement Plan Costs as of October 1, 2013**

	<u>Prior Methods and Assumptions</u>		<u>Current Methods and Assumptions</u>	
	<u>Cost Data</u>	<u>% of Pensionable Payroll</u>	<u>Cost Data</u>	<u>% of Pensionable Payroll</u>
<b>A. Participant Data Summary (Table III)</b>				
1. Active Employees	458	N/A	458	N/A
2. Terminated Vested	15	N/A	15	N/A
3. Receiving Benefits (including DROPs)	696	N/A	696	N/A
4. Total Annual Base Payroll <sup>1</sup>	\$ 39,283,718	80.5%	\$ 39,283,718	83.3%
5. Projected Annual Base Payroll <sup>2</sup>	40,658,648	83.3%	40,658,648	86.2%
6. Projected Annual Pensionable Payroll <sup>3</sup>	48,790,378	100.0%	47,164,032	100.0%
7. Projected Annual Pensionable Payroll including DROP <sup>4</sup>	59,478,306	121.9%	57,851,961	122.7%
<b>B. Total Normal Costs</b>				
1. Age Retirement Benefits	\$ 12,132,848	24.9%	\$ 12,132,848	25.7%
2. Termination Benefits	624,393	1.3%	624,393	1.3%
3. Death Benefits	412,435	0.8%	412,435	0.9%
4. Disability Benefits	1,593,919	3.3%	1,593,919	3.4%
5. Estimated Expenses	805,919	1.7%	805,919	1.7%
6. Total Annual Normal Costs	<u>\$ 15,569,514</u>	31.9%	<u>\$ 15,569,514</u>	33.0%
<b>C. Total Actuarial Accrued Liability</b>				
1. Age Retirement Benefits Active Employees	\$ 192,804,715	395.2%	\$ 192,804,715	408.8%
2. Termination Benefits Active Employees	1,278,461	2.6%	1,278,461	2.7%
3. Death Benefits Active Employees	1,117,380	2.3%	1,117,380	2.4%
4. Disability Benefits Active Employees	9,227,034	18.9%	9,227,034	19.6%
5. Retired or Terminated Vested Participants Receiving Benefits (including DROPs)	676,822,574	1387.2%	676,822,574	1435.0%
6. Terminated Vested Participants Entitled to Future Benefits	3,097,833	6.3%	3,097,833	6.6%
7. Deceased Participants Whose Beneficiaries are Receiving Benefits	30,280,652	62.1%	30,280,652	64.2%
8. Disabled Participants Receiving Benefits	40,609,957	83.2%	40,609,957	86.1%
9. Miscellaneous Liability (Refunds in Process)	0	0.0%	0	0.0%
10. Total Actuarial Accrued Liability	<u>\$ 955,238,606</u>	1957.8%	<u>\$ 955,238,606</u>	2025.4%

<sup>1</sup> Total Annual Base Payroll - Participant's base pay (including salary, premiums and longevity) at snapshot date of September 30th increased by assumed salary scale to reflect pay increases that are usually granted in October. Premiums are any salary or pay on which longevity is calculated.

<sup>2</sup> Projected Annual Base Payroll - Total Annual Base Payroll projected to the end of year (and beginning of fiscal year for which the city contributions are determined) by assuming an aggregate increase in payroll of 3.5%.

<sup>3</sup> Projected Annual Pensionable Payroll - Projected Annual Base Payroll loaded to reflect estimated other pays included in pensionable pay as of October 1, 2009.

<sup>4</sup> Projected Annual Pensionable Payroll including DROP - Projected Annual Pensionable Payroll plus DROP participants pay at snapshot date of September 30th increased by assumed salary scale to reflect pay increases that are usually granted in October and then projected to the end of the year assuming an aggregate increase in payroll of 3.5%.



City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

Summary of Retirement Plan Costs as of October 1, 2013

	Prior Methods and Assumptions		Current Methods and Assumptions	
	<u>Cost Data</u>	<u>% Pensionable Payroll</u>	<u>Cost Data</u>	<u>% Pensionable Payroll</u>
D. Assets (Table V)				
1. Smoothed Actuarial Value of Assets	\$ 599,336,717	1228.4%	\$ 663,233,454	1406.2%
2. Market Value of Assets	\$ 710,329,822	1455.9%	\$ 710,329,822	1506.1%
E. Unfunded Actuarial Accrued Liability (C. - D.1.)	\$ 355,901,889	729.5%	\$ 292,005,152	619.1%
F. Preliminary Minimum Required Contribution				
1. Total Normal Cost (including expenses)	\$ 15,569,514	31.9%	\$ 15,569,514	33.0%
2. Amortization of Unfunded Liability	23,240,473	47.6%	19,548,224	41.4%
3. Interest Adjustment	2,907,226	6.0%	2,618,352	5.6%
4. Expected Service Buyback	134,174	0.3%	129,701	0.3%
5. Total Preliminary Minimum Required Contribution	\$ 41,851,387	85.8%	\$ 37,865,791	80.3%
G. Contribution Sources for Fiscal Year Ending September 30, 2015				
1. City	\$ 36,851,800	75.5%	\$ 33,028,839	70.0%
2. State	\$ 120,549	0.2%	\$ 120,549	0.3%
3. Member	\$ 4,879,038	10.0%	\$ 4,716,403	10.0%
H. City Contribution (Percent of Pensionable DROP payroll)	\$ 36,851,800	62.0%	\$ 33,028,839	57.1%
I. Actuarial Gains (Losses)	\$ (1,540,235)	(3.2%)	\$ (1,540,235)	(3.3%)
J. Actuarial Present Value of Vested Accrued Benefits				
1. Retired, Terminated Vested, Beneficiaries and Disabled Receiving Benefits (including DROPs)	\$ 747,713,183	1532.5%	\$ 747,713,183	1585.3%
2. Terminated Vested Participants Entitled to Future Benefits and Miscellaneous	3,097,833	6.3%	3,097,833	6.6%
3. Active Participants Entitled to Future Benefits	150,758,990	309.0%	150,758,990	319.6%
4. Total Actuarial Present Value of Vested Accrued Benefits	\$ 901,570,006	1847.8%	\$ 901,570,006	1911.6%
K. Unfunded Actuarial Present Value of Vested Accrued Benefits (J. - D.2., not less than zero)	\$ 191,240,184	392.0%	\$ 191,240,184	405.5%
L. Vested Benefit Security Ratio (D.2. ÷ J.)	78.8%	N/A	78.8%	N/A

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Comparison of Cost Data of October 1, 2012 and Updated October 1, 2013 Valuations**

	Actuarial Valuation October 1, 2012			Actuarial Impact Statement October 1, 2012			Prior Methods and Assumptions October 1, 2013			Current Methods and Assumptions October 1, 2013		
	Cost Data	Pensionable Payroll	% of Pensionable Payroll	Cost Data	Pensionable Payroll	% of Pensionable Payroll	Cost Data	Pensionable Payroll	% of Pensionable Payroll	Cost Data	Pensionable Payroll	% of Pensionable Payroll
<b>A. Participants</b>												
1. Active Employees	428	N/A	N/A	428	N/A	N/A	458	N/A	N/A	458	N/A	N/A
2. Terminated Vested	16	N/A	N/A	16	N/A	N/A	15	N/A	N/A	15	N/A	N/A
3. Receiving Benefits (including DROPs)	682	N/A	N/A	682	N/A	N/A	696	N/A	N/A	696	N/A	N/A
4. Projected Annual Pensionable Payroll	\$ 46,313,650	100.0%	100.0%	\$ 46,313,650	100.0%	100.0%	\$ 48,790,378	100.0%	100.0%	\$ 47,164,032	100.0%	100.0%
5. Projected Annual Pensionable Payroll (including DROPs)	\$ 56,136,914	121.2%	121.2%	\$ 56,136,914	121.2%	121.2%	\$ 59,478,306	121.9%	121.9%	\$ 57,851,961	122.7%	122.7%
<b>B. Present Value of Future Benefits</b>	\$ 1,060,686,520	2290.2%		N/A	N/A		\$ 1,096,504,276	2247.4%		\$ 1,096,504,276	2324.9%	
<b>C. Total Normal Costs</b>	\$ 15,766,586	34.0%		\$ 14,525,258	31.4%		\$ 15,569,514	31.9%		\$ 15,569,514	33.0%	
<b>D. Actuarial Accrued Liability (EAN)</b>	\$ 922,739,522	1992.4%		\$ 902,778,453	1949.3%		\$ 955,238,606	1957.8%		\$ 955,238,606	2025.4%	
<b>E. Smoothed Actuarial Value of Assets</b>	\$ 545,067,653	1176.9%		\$ 545,067,653	1176.9%		\$ 599,336,717	1228.4%		\$ 663,233,454	1406.2%	
<b>F. Unfunded Actuarial Accrued Liability (EAN)</b>	\$ 377,671,869	815.5%		\$ 357,710,800	772.4%		\$ 355,901,889	729.5%		\$ 292,005,152	619.1%	
<b>G. City Minimum Funding Payment (% of Projected Annual Payroll including DROP)</b>	\$ 41,077,586	88.7%		\$ 35,839,777	77.4%		\$ 36,851,800	75.5%		\$ 33,028,839	70.0%	
		73.2%			63.8%			62.0%			57.1%	
<b>H. Vested Benefit Security Ratio</b>	74.6%	N/A		74.6%	N/A		78.8%	N/A		78.8%	N/A	

**Table III**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Characteristics of Participants in  
Actuarial Valuation as of October 1, 2013**

**A. Active Plan Participants Summary**

1. Active participants fully vested	357
2. Active participants partially vested	0
3. Active participants non-vested	101
4. Total active participants	<u>458</u>
5. Total Annual Base Payroll	\$ 39,283,718
6. Projected Annual Base Payroll	\$ 40,658,648
7. Projected Annual Pensionable Payroll	\$ 47,164,032
8. Projected Annual Pensionable Payroll (Including DROPs)	\$ 57,851,961

**B. Retired and Terminated Vested Participant Summary**

1. Retired or terminated vested participants receiving benefits (including DROPs)	540
2. Terminated vested participants entitled to future benefits	15
3. Deceased participants whose beneficiaries are receiving benefits	98
4. Disabled participants receiving benefits	58

**C. Projected Annual Retirement Benefits**

1. Retired or terminated vested receiving benefits (including DROPs)	\$ 48,736,676
2. Terminated vested entitled to future benefits	\$ 270,789
3. Beneficiaries of deceased participants	\$ 3,303,495
4. Disabled participants	\$ 3,596,407

Table IV

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Statement of Assets as of October 1, 2013**

<u>Assets</u>	<u>Market Value</u>
A. <u>Cash and Cash Equivalents</u>	\$ 20,000
B. <u>General Investments</u>	
1. Short Term Investments	\$ 18,129,793
2. U.S. Government Securities	23,145,088
3. Common Stocks	329,803,640
4. Domestic Equity Fund	62,575,982
5. International Equity Fund	32,494,167
6. Domestic Corporate Bonds	154,983,512
7. International Fixed Income	50,568,738
8. Real Estate Fund	23,813,474
9. Mutual Funds Self-Directed DROP Participants	11,807,256
C. <u>Receivables</u>	
1. Accrued Interest	\$ 2,154,308
2. Contributions Receivable	0
3. Member Buybacks	1,222,109
D. <u>Payables</u>	
1. Accounts Payable	\$ 388,245
2. Due to Broker	0
E. <u>Total Assets</u> (A. + B. + C. - D.)	\$ 710,329,822

Table V

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Reconciliation of Plan Assets**

<b>A. <u>Market Value of Assets as of October 1, 2012</u></b>		<b>\$ 631,816,817</b>
<b>B. <u>Receipts During Period</u></b>		
1. Contributions		
a. Member	\$ 5,091,354	
b. Buybacks	4,625,982	
c. City	39,371,501	
d. State (Share Plan)	120,549	
e. Total	<u>\$ 49,209,386</u>	
2. Investment Income		
a. Interest and dividends	\$ 16,766,193	
b. Realized gains	44,000,245	
c. Unrealized gains	24,357,872	
d. Investment expenses	(2,910,167)	
e. Net investment income	<u>\$ 82,214,143</u>	
3. Total receipts during period		<b>\$ 131,423,529</b>
<b>C. <u>Disbursements During Period</u></b>		
1. Pension payments	\$ 45,442,156	
2. DROP distributions	6,475,244	
3. Contribution refunds	187,205	
4. Administrative expenses	805,919	
5. Total disbursements during period	<u>\$ 52,910,524</u>	
<b>D. <u>Market Value of Assets as of September 30, 2013</u></b>		<b>\$ 710,329,822</b>
<b>E. <u>Reconciliation of DROP Account Balances</u></b>		
1. DROP Accounts Balance as of October 1, 2012	\$ 9,408,588	
2. Benefit Payments into DROP Accounts during Year	8,250,776	
3. Investment Gains (Losses) during Year	623,136	
4. Distributions from DROP Accounts during Year	(6,475,244)	
5. DROP Accounts Balance as of September 30, 2013	<u>\$ 11,807,256</u>	

Table V  
(Cont'd)

City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

Development of Smoothed Value of Assets as of September 30 - Prior Method

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
A. Preliminary smoothed value from prior year	\$ 554,476,241				
B. Market value beginning of year	631,816,817				
C. Market value end of year	710,329,822				
D. Realized and unrealized gains / (losses)					
1. Realized gains / (losses)	44,000,245				
2. Unrealized gains / (losses)	24,357,872				
3. Realized and unrealized gains / (losses)	<u>68,358,117</u>				
E. Historical realized and unrealized gains / (losses)					
1. Current year	68,358,117				
2. First prior year	92,213,224	68,358,117			
3. Second prior year	(17,217,915)	92,213,224	68,358,117		
4. Third prior year	39,329,217	(17,217,915)	92,213,224	68,358,117	
5. Fourth prior year	(9,154,705)	39,329,217	(17,217,915)	92,213,224	68,358,117
6. Total	<u>173,527,938</u>	<u>182,682,643</u>	<u>143,353,426</u>	<u>160,571,341</u>	<u>68,358,117</u>
F. Phase-In of realized and unrealized gains / (losses)					
1. Current year - 20%	13,671,623				
2. First prior year - 40%	36,885,290	27,343,247			
3. Second prior year - 60%	(10,330,749)	55,327,934	41,014,870		
4. Third prior year - 80%	31,463,374	(13,774,332)	73,770,579	54,686,494	
5. Fourth prior year - 100%	(9,154,705)	39,329,217	(17,217,915)	92,213,224	68,358,117
6. Total	<u>62,534,833</u>	<u>108,226,066</u>	<u>97,567,534</u>	<u>146,899,718</u>	<u>68,358,117</u>
G. Smoothed value end of year					
1. Preliminary total smoothed actuarial value end of year:					
C. - E.6. + F.6.	599,336,717				
2. Upper corridor limit: 120% of C.	852,395,786				
3. Lower corridor limit: 80% of C.	568,263,858				
4. Smoothed value end of year:					
G.1., not more than G.2., nor less than G.3.	599,336,717				
H. Difference - market value less smoothed value	110,993,105				
I. Actuarial value rate of return	8.8%				
J. Market value rate of return	13.1%				

City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

Development of Smoothed Value of Assets as of September 30 - Current Method

	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>
A. Preliminary smoothed value of assets prior year	\$ 611,357,122	\$ 663,233,454			
B. Market value of assets beginning of year	631,816,817	710,329,822			
C. Market value of assets end of year	710,329,822				
D. Non-investment net cash flow	(3,701,138)				
E. Investment return					
1. Market value return: C. - B. - D.	82,214,143				
2. Amount for immediate recognition	50,397,300				
3. Amount for phased-in recognition: E.1. - E.2.	31,816,843				
F. Phased-in recognition of investment return					
1. Current year: 20% of E.3.	6,363,369				
2. First prior year	12,585,137	6,363,369			
3. Second prior year	(9,301,024)	12,585,137	6,363,369		
4. Third prior year	2,489,530	(9,301,024)	12,585,137	6,363,369	
5. Fourth prior year	(6,956,842)	2,489,531	(9,301,024)	12,585,137	6,363,367
6. Total phased-in recognition of investment return	5,180,170	12,137,013	9,647,482	18,948,506	6,363,367
G. Smoothed value of assets end of year					
1. Preliminary smoothed actuarial value of assets end of year:					
A. + D. + E.2. + F.6.	663,233,454				
2. Upper corridor limit: 120% of C.	852,395,786				
3. Lower corridor limit: 80% of C.	568,263,858				
4. Smoothed value of assets end of year:					
G.1., not more than G.2., nor less than G.3.	663,233,454				
H. Difference - market value less smoothed value	47,096,368				
I. Actuarial value rate of return	9.1%				
J. Market value rate of return	13.1%				

Table VI

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Gains (Losses) for Plan Year  
Ending September 30, 2013**

**A. Derivation of Actuarial Gain (Loss)**

1. Employer normal cost previous actuarial impact statement	\$ 9,893,893
2. Unfunded actuarial accrued liability previous actuarial impact statement	\$ 357,710,800
3. Employer contributions previous year:	
(a) City	\$ 39,371,501
(b) State	120,549
(c) Total	\$ 39,492,050
4. Interest on:	
(a) Employer normal cost	\$ 791,511
(b) Unfunded actuarial accrued liability	28,616,864
(c) Employer contributions	3,159,364
(d) Net total: (a) + (b) - (c)	\$ 26,249,011
5. Increase (decrease) due to changes in methods and assumptions	\$ (63,896,737)
6. Expected unfunded actuarial liability current year: (1. + 2. - 3. + 4. + 5.)	\$ 290,464,917
7. Actual unfunded actuarial liability current year	292,005,152
8. Actuarial gain / (loss): (6. - 7.)	\$ (1,540,235)

**B. Approximate Portion of Gain (Loss) Due to Investments**

1. Smoothed actuarial value of assets previous year	\$ 554,476,241
2. Contributions during period	49,209,386
3. Benefits, refunds and admin expenses during period	52,910,524
4. Expected net appreciation for period	44,210,054
5. Increase (decrease) due to change in method	63,896,737
6. Expected smoothed actuarial value assets current year: (1. + 2. - 3. + 4. + 5.)	\$ 658,881,894
7. Actual smoothed actuarial value of assets current year	\$ 663,233,454
8. Approximate gain / (loss) due to investments: (7. - 6.)	\$ 4,351,560

**C. Approximate Portion of Gain (Loss) due to Liabilities: (A. - B.)** \$ (5,891,795)



**Table VII**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Amortization of Unfunded Actuarial Accrued Liability**

**A. Unfunded Actuarial Accrued Liability**

<u>Date</u>	<u>Unfunded Liability</u>	<u>Amortization Payment</u>
October 1, 2013	\$ 292,005,152	\$ 19,548,224
October 1, 2014	\$ 294,253,481	\$ 20,232,414
October 1, 2015	\$ 295,942,751	\$ 20,940,548
October 1, 2016	\$ 297,002,381	\$ 21,673,467
October 1, 2017	\$ 297,355,227	\$ 22,432,041
...		
...		
October 1, 2043	\$ 0	\$ 0

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Accounting Disclosure Exhibit**

	<u>10/01/2012</u>	<u>10/01/2013</u>
<b>I. <u>Number of Plan Members</u></b>		
a. Retirees and beneficiaries receiving benefits	682	696
b. Terminated plan members entitled to but not yet receiving benefits	16	15
c. Active plan members	428	458
d. Total	<u>1,126</u>	<u>1,169</u>
<b>II. <u>Financial Accounting Standards Board Allocation as of October 1, 2013</u></b>		
<b>A. <u>Statement of Accumulated Plan Benefits</u></b>		
1. Actuarial present value of accumulated vested plan benefits		
a. Participants currently receiving benefits	\$ 713,132,257	\$ 747,713,183
b. Other participants	120,906,735	153,856,823
c. Total	<u>\$ 834,038,992</u>	<u>\$ 901,570,006</u>
2. Actuarial present value of accumulated non-vested plan benefits	<u>\$ 30,008,206</u>	<u>\$ 7,401,076</u>
3. Total actuarial present value of accumulated plan benefits	<u>\$ 864,047,198</u>	<u>\$ 908,971,082</u>
<b>B. <u>Statement of Change in Accumulated Plan Benefits</u></b>		
1. Actuarial present value of accumulated plan benefits as of October 1, 2012		\$ 864,047,198
2. Increase (decrease) during year attributable to:		
a. Plan amendment		\$ 0
b. Change in actuarial assumptions		0
c. Benefits paid including refunds		(52,104,605)
d. Other, including benefits accumulated, increase for interest due to decrease in the discount period		<u>97,028,489</u>
e. Net increase		<u>\$ 44,923,884</u>
3. Actuarial present value of accumulated plan benefits as of October 1, 2013		\$ 908,971,082
<b>C. <u>Significant Matters Affecting Calculations</u></b>		
1. Assumed rate of return used in determining actuarial present values		8%
2. Change in plan provisions		None.
3. Change in actuarial assumptions and methods		None affecting calculations.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Accounting Disclosure Exhibit**

**III. Actuarial Assumptions and Methods:**

Actuarial valuation date	October 1, 2013
Actuarial cost method	Entry Age Normal
Amortization method	Level percent, closed
Remaining amortization period	23 years
Asset valuation method	5 year smoothed market

**Actuarial assumptions:**

Investment rate of return *	8.0%
Projected salary increases *	2.87% - 9.87%
Payroll growth	3.5%
Cost of living adjustments	1.5%, 2.0% or 2.5%

\* Includes inflation at 3.0%

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Accounting Disclosure Exhibit**

IV. Historical Trend Information

Schedule of Employer Costs (GASB No. 27)

<u>Fiscal Year Ended</u>	<u>Annual Pension Cost (APC)</u>	<u>Percentage of APC Contributed</u>	<u>Net Pension Obligation/(Asset)</u>
9/30/2011 <sup>1</sup>	\$ 32,811,570	100%	\$ 0
9/30/2012 <sup>1</sup>	\$ 36,297,459	100%	\$ 0
9/30/2013 <sup>1</sup>	\$ 39,492,050	100%	\$ 0

V. Annual Pension Cost and Net Pension Asset (GASB No. 27)

<u>Fiscal Year Ended</u>	<u>9/30/2013<sup>1</sup></u>	<u>Projected 9/30/2014</u>
Annual Required Contribution (ARC)	\$ 39,492,050	\$ 35,960,326
Interest on Net Pension Asset (NPA)	0	0
Adjustment to ARC	0	0
APC	<u>\$ 39,492,050</u>	<u>\$ 35,960,326</u>
City and State Contributions	<u>\$ (39,492,050)</u>	
(Increase) Decrease in NPA	\$ 0	
NPA (beginning of year)	0	
NPA (end of year)	\$ 0	

<sup>1</sup> As reported in the City's Comprehensive Annual Financial Report (CAFR)

**Table VIII  
(Cont'd)**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Schedule of Funding Progress  
(Dollar Amounts in Thousands)**

**VI. Schedule of Funding Progress (GASB No. 27)**

Actuarial Valuation Date	Smoothed Actuarial Value of Assets (a)	Actuarial Liability (EAN) (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Projected Pensionable Payroll (c)	UAAL as a Percentage of Payroll ((b-a)/c)
10/01/2010	\$ 525,709	\$ 817,641	\$ 291,932	64.3%	\$ 49,719	587.2%
10/01/2011	\$ 531,821	\$ 871,119	\$ 339,297	61.1%	\$ 49,187	689.8%
10/01/2012	\$ 545,068	\$ 902,778	\$ 357,711	60.4%	\$ 46,314	772.4%
10/01/2013	\$ 599,337	\$ 955,239	\$ 355,902	62.7%	\$ 47,164	754.6%
10/01/2013	\$ 663,233	\$ 955,239	\$ 292,006	69.4%	\$ 47,164	619.1%

<sup>1</sup> As shown in the City's Comprehensive Annual Financial Report (CAFR)

<sup>2</sup> Prior to update in actuarial method

<sup>3</sup> After update in actuarial method

<sup>4</sup> Includes DROP accounts in assets and liabilities

City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

Accounting Disclosure Exhibit

VII. Net Pension Liability and Related Ratios (GASB No. 67)

Measurement date	Projected 9/30/2014*
<b>A. <u>Total Pension Liability</u></b>	
Service Cost	\$ 14,763,595
Interest	75,332,539
Benefit Changes	0
Difference Between Actual and Expected Experience	7,685,043
Assumption Changes	0
Benefit Payments, including Refunds of Member Contributions	(56,690,935)
Net Change in Total Pension Liability	41,090,242
Total Pension Liability (TPL) - (beginning of year)	947,553,563
Total Pension Liability (TPL) - (end of year)	<u>\$ 988,643,805</u>
<b>B. <u>Plan Fiduciary Net Position</u></b>	
Contributions - City and State	\$ 35,960,326
Contributions - Member	4,716,403
Net Investment Income	56,153,581
Benefit Payments, including Refunds of Member Contributions	(56,690,935)
Administrative Expenses	(805,919)
Other	0
Net Change in Plan Fiduciary Net Position	39,333,456
Plan Fiduciary Net Position - (beginning of year)	710,329,822
Plan Fiduciary Net Position - (end of year)	<u>\$ 749,663,278</u>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	238,980,527
<b>D. <u>Plan Fiduciary Net Position as a Percentage of TPL: (B) / (A)</u></b>	75.83 %
<b>E. <u>Covered Employee Payroll**</u></b>	\$ 57,851,961
<b>F. <u>NPL as a Percentage of Covered Employee Payroll: (C) / (E)</u></b>	413.09 %
<b>G. <u>Notes to Schedule:</u></b>	
Valuation Date	10/01/2013
Update procedures were used to roll forward the total pension liability to the measurement date	
See Table X., Item O. for assumption and/or method changes during the year.	
No benefit changes during the year.	

\* Projected - actual amounts will be available after fiscal year end

\*\* Projected pensionable payroll including DROP payroll

Table VIII  
(Cont'd)

City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

Accounting Disclosure Exhibit

VIII. Schedule of the Employer's Net Pension Liability (GASB No. 67)

Measurement Date	Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll**	Net Pension Liability as a % of Covered Payroll
9/30/2014*	\$ 988,643,805	\$ 749,663,278	\$ 238,980,527	75.83%	\$ 57,851,961	413.09%

\* Projected - actual amounts will be available after fiscal year end

\*\* Projected pensionable payroll including DROP payroll

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Accounting Disclosure Exhibit**

**IX. Schedule of Employer Contributions (GASB No. 67)**

<u>Fiscal Year End</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll**</u>	<u>Actual Contribution as a % of Covered Payroll</u>
9/30/2014*	\$ 35,960,326	\$ 35,960,326	\$ 0	\$ 57,851,961	62.16%

\* Projected - actual amounts will be available after fiscal year end

\*\* Projected pensionable payroll including DROP payroll

**X. Notes to Schedule of Contributions (GASB No. 67)**

**Valuation Date:** Actuarially determined contributions are calculated as of October 1st - one year prior the fiscal year end in which contributions are reported.

**Methods and Assumptions Used to Determine Contribution Rates:**

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage, Closed
Amortization Period	30 years
Asset Valuation Method	5-year smoothed market
Inflation	3.00%
Payroll Growth	3.50%
Salary Increases	2.87% - 9.87%
Investment Rate of Return	8.00%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	For healthy participants, the RP-2000 Combined Mortality Table with Blue Collar Adjustment projected 15 years from valuation date for pre-retirement mortality and 7 years from valuation date for post-retirement mortality was used. For disabled participants, the RP-2000 Disabled Mortality Table was used.
Cost-of-Living Increases	1.5%, 2.0% or 2.5%

**Other Information:**

**Notes** See Table X., Item O. for assumption and/or method changes during the year.  
No benefit changes affecting calculations during the year.



**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Accounting Disclosure Exhibit**

**XI. Discount Rate (GASB No. 67)**

A discount rate of 8.00% was used to measure the total pension liability. This discount rate was based on the expected rate of return on Fund investments of 8.00%. The projection of cash flows used to determine this discount rate assumed member contributions will be made at the current contribution rate and employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on Fund investments was applied to all periods of projected benefit payments to determine the total pension liability.

**XII. Sensitivity of the Net Pension Liability to the Discount Rate Assumption\* (GASB No. 67)**

Measurement date: 9/30/2014 \*

	<u>1% Decrease</u>	<u>Current Discount Rate</u>	<u>1% Increase</u>
Discount Rate	7.00%	8.00%	9.00%
Net Pension Liability	\$ 362,176,402	\$ 238,980,527	\$ 137,611,355

\* Projected - actual amounts will be available after fiscal year end

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Outline of Principal Provisions of the Retirement Plan**

A. Relevant Provisions:

The Plan was created under Chapter 23414, Laws of Florida, Special Act of 1945, as amended by Ordinance No. 2013-3817 adopted September 30, 2013.

B. Eligibility Requirements:

Any full-time employee of the City who is certified as a Firefighter or Police Officer as a condition of employment.

C. Membership Tiers:

Tier 1 - Members hired prior to July 14, 2010

Tier 2 - Members hired on or after July 14, 2010 but prior to September 30, 2013

Tier 3 - Members hired on or after September 30, 2013

D. Credited Service:

All periods of employment as an Employee for which contributions have been made to the Fund together with all service in the uniformed services of the United States required to be included.

E. Pre-Employment Service:

Effective September 30, 2013 members with at least 5 years of service may contribute an additional amount of 10% for those hired prior to September 30, 2013 and 10.5% for those hired on or after September 30, 2013 to receive credit for pre-employment military service. A member may purchase up to 2 total years of additional service credit at the 3% accrual rate for time spent on active military duty. The total of all combinations of pre-employment benefit purchased cannot exceed a 12% increase in accrual.

Pre-employment benefit service must be purchased within 36 months following September 30, 2013, or upon completion of 5 years of creditable pension service under the pension plan, whichever occurs later.

Effective September 30, 2013, members will no longer be able to purchase an increase in benefit multiplier or pre-employee public safety service credit as a Police Officer or Firefighter.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Outline of Principal Provisions of the Retirement Plan**

**F. Pensionable Pay:**

Salary is defined as base pay, longevity pay, overtime, shift differential and extra compensation allowance such as uniform allowance and any pays which are negotiated as pensionable. Effective July 14, 2010, off-duty pay is pensionable for any member who is eligible for overtime and receives off-duty compensation through the City. Overtime is limited to 300 hours a year.

**1. Overtime and Off-Duty pay included in pension computation for Police Officers:**

- Off-Duty and overtime pay not exceeding 300 hours per calendar year is limited in each year to an amount that is equal to 11% of highest annualized pay rate for the same salary rank that the member is in at time of retirement. The 11% limitation shall not apply to any member who holds the rank of sergeant or lieutenant on September 30, 2013, or any Police Officer promoted to the rank of sergeant prior to the date the 2013 Certified Police Sergeant Promotional Register expires in 2015.

**2. Overtime and Off-Duty pay included in pension computation for Firefighters:**

- Off-Duty and overtime pay not exceeding 300 hours per calendar year is limited in each year to an amount that is equal to 11% of highest annualized pay rate for the same salary rank that the member is in at time of retirement. For Firefighters who are eligible for overtime pay and who retire on or after September 30, 2010, overtime, off-duty and unused sick and / or vacation leave time can be used to reach the 11% limit.

**G. Final Average Monthly Earnings (FAME):**

Tier 1 and eligible to retire prior to September 30, 2015 - the greater of the average of the 2 highest paid years prior to date of retirement or the 2 last paid years after taking into consideration the overtime limit.

Tier 1 and eligible to retire on or after September 30, 2015 - the greater of the average of the 3 highest paid years prior to date of retirement or the 3 last paid years after taking into consideration the overtime limit.

Tier 2 - the greater of the average of the 3 highest paid years prior to date of retirement or the 3 last paid years after taking into consideration the overtime limit.

Tier 3 - the greater of the average of the 5 highest paid years prior to date of retirement or the 5 last paid years after taking into consideration the overtime limit.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Outline of Principal Provisions of the Retirement Plan**

**H. Normal Retirement:**

**1. Eligibility:**

Tier 1 and eligible to retire prior to September 30, 2013 - the earlier of attainment of age 50 or Rule of 70

Tier 1 and eligible to retire on or after September 30, 2013 - the earlier of attainment of age 50 or Rule of 70 (must attain age 47)

Tier 2 and Tier 3 - the earlier of attainment of age 50 or Rule of 70 (must attain age 48)

**2. Benefit:**

Tier 1 and eligible to retire prior to September 30, 2013:

3% x FAME x Credited Service up to 15 years + 4% x Credited Service after 15 years  
Benefit shall not exceed 90% of FAME.

Tier 1 and eligible to retire on or after September 30, 2013 but prior to September 30, 2015:

3% x FAME x Credited Service up to 20 years + 4% x Credited Service after 20 years  
Benefit shall not exceed 85% of FAME (exception if exceeded 85% as of September 30, 2013).

Tier 1 and eligible to retire on or after September 30, 2015, Tier 2 and Tier 3:

3% x FAME x Credited Service up to 20 years + 4% x Credited Service after 20 years  
Benefit shall not exceed 85% of FAME.

A member's benefit multiplier for credited service earned before October 1, 2013 shall not be reduced.

**I. Deferred Retirement:**

**1. Eligibility:**

Any first day of a month past Normal Retirement Date.

**2. Benefit:**

Benefit calculated as for Normal Retirement based upon service and pay to Deferred Retirement Date.

**J. Disability Retirement:**

**1. Eligibility:**

Totally and permanently disabled meaning incapacity to perform regular duty as Firefighter or Police Officer (and completion of at least 5 years of Credited Service for non-service incurred disability).

**2. Benefit:**

Accrued benefit (minimum of 85% of current salary at time of disability for service incurred disability).

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Outline of Principal Provisions of the Retirement Plan**

**K. Death Benefit:**

**1. Service Incurred:**

Greater of accrued benefit and 85% of compensation payable as a monthly benefit to the widow until death or remarriage, to a Domestic Partner until death, marriage or entry into another Domestic Partnership, to unmarried children in equal shares until age 18 (until age 22 if a full-time student or until recovery from disability if disabled), or to dependent parents in equal shares.

**2. Non-Service Incurred:**

For members with at least 5 years of service, accrued benefit is payable for the first 12 months after death and 75% of the accrued benefit is payable thereafter (with a minimum benefit of 25% of average monthly salary); Benefits are payable to the widow until death or remarriage, to a Domestic Partner until death, marriage or entry into another Domestic Partnership, to unmarried children in equal shares until age 18 (until age 22 if a full-time student or until recovery from disability or until marriage if disabled), or to dependent parents in equal shares. However, if the member has been married for less than 10 years, benefits are payable to the spouse only for the life expectancy of the deceased member at time of death.

**L. Withdrawal Benefit:**

**1. Eligibility:**

Any age prior to 50 with at least 5 years of service for members who terminate employment on or after September 30, 2013.

**2. Benefit:**

Return of employee contributions or accrued benefit. If a member withdraws with less than 10 years of service and passes away prior to the normal retirement date the return of employee contributions is the only benefit.

**M. Employee Contributions:**

10% of salary per year (on a pre-tax basis) for members hired prior to September 30, 2013 and 10.5% of salary per year (on a pre-tax basis) for members hired on or after September 30, 2013; If contributions are refunded to the member or to his beneficiaries, then interest is credited at the rate of 3% per annum.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Outline of Principal Provisions of the Retirement Plan**

**N. Normal Form of Payment of Retirement Income:**

For members except those retiring prior to November 5, 2003, the normal form of payment is a 75% joint and survivor annuity with a specified beneficiary as provided under the plan. The specified beneficiary will receive a survivor annuity equal to 100% of the total benefit for one year following the death of the member and thereafter the greater of 75% of the total benefit or 25% of the average monthly salary for the two highest paid years. However, upon death, if the member has been married for less than 10 years, the survivor annuity is payable only for the life expectancy of the deceased member at time of death.

The members may also elect the actuarial equivalent of the 10 year certain and life annuity, with a designated beneficiary, any of the following optional forms of payment:

- 75% joint and contingent survivor annuity with a designated beneficiary
- 66 ⅔% joint and contingent annuity with a designated beneficiary
- 50% joint and contingent annuity with a designated beneficiary
- 25% joint and contingent annuity with a designated beneficiary
- 10 year certain and life annuity with a designated beneficiary

Members who retired prior to November 5, 2003 were subject to different normal and optional forms of payment.

**O. Deferred Retirement Option Program (DROP):**

Police Officers and Firefighters are eligible to participate in a Deferred Retirement Option Program (DROP) upon meeting any one of the following criteria:

- the attainment of age 50 or
- the sum of the member's age and creditable service equal to at least 70 (minimum age may apply)

**Operations of the DROP:**

- The member's monthly retirement benefit, based on final average earnings and service, will be calculated as of the date prior to them entering the DROP.
- The member's monthly pension will be deposited into the selected investment vehicles.
- The member will cease to accrue additional pension benefits (with the exception of the COLA under the pension plan).
- The member will no longer be eligible for Disability or Service Connected Death benefits from the Pension Plan.
- Member contributions to the Pension Plan will cease upon entering the DROP.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Outline of Principal Provisions of the Retirement Plan**

- Upon entering the DROP, the member will select the length of the DROP period. The maximum period of participation in the DROP is 36 months for members who enter the DROP prior to September 1, 2012 and 60 months for members who enter the DROP on or after September 1, 2012. Notwithstanding the above, participation may not continue beyond the date when the member's combined years of creditable service and time in the DROP equals 352 months for members who enter the DROP prior to September 1, 2012 and 408 for members who enter the DROP on or after September 1, 2012.
- The member will not have access or be able to borrow against any of the funds accumulated in their DROP account.
- The member may sever employment with the City at any time during the DROP period. Such separation will terminate their participation in the DROP.
- No payment will be made from the DROP account until the member severs employment with the City.
- Following severance of employment, the funds in the DROP will be paid under the options the member selected. The member will also start receiving their monthly pension which was previously being deposited in the DROP.
- A 2.5% COLA (1.5% per year for participants hired on or after July 14, 2010) is paid annually on the anniversary date of the member's retirement. For members who enter the DROP after September 1, 2012 and before September 30, 2013 - no cost of living adjustment for the third and fourth annual anniversary date, if the member participates in the DROP for six months or longer. Any member who exits the DROP within 6 months following the date of DROP entry, shall be eligible for the 2.5% COLA annually on the anniversary date of the member's retirement.

P. Cost-of-Living Adjustment:

Effective October 1, 2010, benefits are increased by 2.5% per year (1.5% per year for participants hired on or after July 14, 2010), compounded annually, on the anniversary date of each member's retirement. Members whose grandfathered Base Plan benefit is greater than the benefit otherwise provided by this plan will receive the applicable cost-of-living adjustment on that basis (2% a year beginning the October three years after retirement) until such time as the benefit from this plan with 2.5% cost-of-living exceeds that comparable grandfathered Base Plan benefit.

For members retired prior to October 1, 2010, benefit increases occur on the first of October each year.

Q. Changes Since Previous Actuarial Impact Statement

None.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Assumptions and Actuarial Cost Methods  
Used in the Valuation**

**A. Mortality**

For healthy participants, the RP-2000 Combined Mortality Table with Blue Collar Adjustment projected 15 years from valuation date for pre-retirement mortality and 7 years from valuation date for post-retirement mortality with Scale AA was used.

For disabled participants, the RP-2000 Disabled Mortality Table was used without projection for future mortality improvement.

**B. Investment Return**

8.0%, compounded annually, net of investment expenses.

**C. Expenses**

Prior year's actual administrative expenses.

**D. Employee Withdrawal Rates**

Representative values of the assumed annual rates of withdrawal among members in active service are as follows:

<u>Age</u>	<u>Withdrawal Rate</u>	<u>Age</u>	<u>Withdrawal Rate</u>
20	0.50%	35	1.50%
25	1.00%	40	0.75%
30	1.25%	45	0.25%

**E. Disability Rates**

Representative values of the assumed annual rates of disability among members in active service are as follows:

<u>Age</u>	<u>Disability Rates</u>	<u>Age</u>	<u>Disability Rate</u>
20	0.0007	45	0.0058
25	0.0011	50	0.0099
30	0.0016	55	0.0142
35	0.0022	60	0.0200
40	0.0032	64	0.0269

55% of disabilities are assumed to be ordinary - 45% accidental.



**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Assumptions and Actuarial Cost Methods  
Used in the Valuation**

**F. Salary Increase Factors**

Representative values of the assumed annual rates of future salary increase are as follows:

<u>Age</u>	<u>Salary Increase</u>	<u>Age</u>	<u>Salary Increase</u>
20	5.88%	45	4.88%
25	9.89%	50	4.88%
30	8.89%	55	4.88%
35	5.88%	60	3.88%
40	4.88%	64	2.88%

The average assumed salary increase rates shown above are reduced by the expected cost of living increases of 2.18% for FY 2014 and increased by a 3.0% cost of living increase in FY 2015.

**G. Payroll Increase Assumption**

The aggregate compensation used to compute the accrued liability contribution rate was assumed to increase at a rate of 3.50% per year.

**H. Loadings for Contingencies**

**Compensation:** Salary rates have been increased by 16.00% to load for overtime and other pays.

**Pre-Employment Service:** A City contribution of 0.275% of loaded compensation is assumed sufficient to provide for the purchase (or *buyback*) of pre-employment service by the membership.

**I. Loading for Projected Pensionable Payroll**

The Projected Base Pay is loaded by 16.00% to estimate the projected pensionable payroll used to determine expected member contributions.

**J. Marital Assumptions**

1. 77% of members are assumed married or entitled to benefits for dependents, including registered domestic partners.
2. Male spouses are assumed to be three years older than female spouses.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Assumptions and Actuarial Cost Methods  
Used in the Valuation**

**K. Retirement**

All members are assumed to retire at age 50 with 26.25 years of service, but not later than age 65. Members under age 50 meeting the Rule of 70 are assumed to retire at the rate of 40% per year. Otherwise, retirement is assumed to occur in accordance with the following rates:

Service	Rate of Retirement	
	Meeting Rule of 70	Not Meeting Rule of 70
Less than 20	20%	2%
20	30%	5%
21	50%	10%
22	30%	10%
23	30%	20%
24	45%	60%
25	65%	60%
26	100%	100%
More than 26	100%	100%

**L. DROP Assumption**

It is assumed that upon retirement 80% of all active participants will participate in the DROP.

**M. Smoothed Asset Valuation Method**

The method used for determining the smoothed actuarial value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. The smoothed actuarial value of assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of plan assets and whose upper limit is 120% of the fair market value of plan assets.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Assumptions and Actuarial Cost Methods  
Used in the Valuation**

N. Actuarial Cost Method

Normal Retirement, Termination, Disability, and Death Benefits: Entry-Age-Actuarial Cost Method.

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his age at hire to his assumed retirement age to fund his estimated benefits, assuming the Plan had always been in effect. The normal cost for the Plan is the sum of such amounts for all employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the Plan is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the smoothed actuarial value of assets of the Plan.

O. Changes Since Previous Actuarial Impact Statement

Asset Valuation Method was:

Actuarial value of assets is equal to the market value of assets adjusted to reflect a five-year phase-in of the net capital gains or losses. At October 1, 2005, the "fresh start method" using the current market value of assets and starting a new five year phase-in of realized and unrealized gains and losses was implemented, recognizing one year of asset performance in the actuarial value of assets.

Loading for Projected Pensionable Payroll was:

The Projected Base Pay was loaded by 20.00% to estimate the projected pensionable payroll used to determine expected member contributions.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Assumption Change History**

**A. Effective October 1, 2002:**

The actuarial cost method was changed from frozen initial liability to entry age.

The amortization of the unfunded accrued liability was changed from level dollar to level percentage of pay, with aggregate payroll assumed to increase at 3.50% per year.

**B. Effective October 1, 2005:**

The "fresh start" method was applied to the actuarial value of assets to begin a new five-year phase-in of realized and unrealized gains and losses.

The retirement rates were increased to reflect retirement experience for participants meeting the age 50 and "Rule of 70" eligibility criteria.

The loadings for contingencies and pre-employment service were increased from 5.00% to 7.00% and from 4.50% to 5.50% respectively.

**C. Effective October 1, 2006:**

The actuarial valuation system used by Buck Consultants was upgraded effective October 1, 2006. The gain resulting from this upgrade was amortized over 30 years.

**D. Effective October 1, 2008:**

The interest rate used to calculate all liabilities was reduced to 8.40% from 8.50%.

The salary scale used to project future pay increases was reduced by 50 basis points at each age to reflect the current and projected economic climate.

The loadings for contingencies were increased by 100 basis points (50 basis points for salary rates and 50 basis points for buybacks).

The retirement assumption was updated to reflect an increase in the level of retirements starting at age 45.

**E. Effective October 1, 2009:**

The interest rate used to calculate all liabilities was reduced from 8.40% to 8.30%.

The mortality rates were changed from the 1983 Group Annuity Mortality Table to the RP-2000 Combined Mortality Table with a blue collar adjustment for healthy lives and the RP-2000 Disabled Mortality Table for disabled participants.

A load of 20% was added to the projected base payroll to estimate the projected pensionable payroll used to determine the expected member contributions.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Assumption Change History**

**E. Effective October 1, 2009 (cont'd):**

An experience study was performed on the plan over the 5 year period October 1, 2003 through October 1, 2008 and the following assumptions were changed to more accurately reflect the plans experience:

- **Retirement Rates:** The retirement assumption was changed to reflect the results of the experience study.
- **Withdrawal Rates:** The withdrawal assumption was changed to reflect the results of the experience study.
- **Salary Increase Rates:** The salary increase assumption was changed to an average increase of 3.83% for plan year 2009 to reflect the freeze on COLA for the plan year and to an average increase of 6.00% for all subsequent plan years.
- **Load for Overtime and Other Pays:** The load for overtime and other pays was changed from 7.50% to 16.00% to reflect the results of the experience study.

**F. Effective October 1, 2010:**

The interest rate used to calculate all liabilities was reduced from 8.30% to 8.20%.

The freeze on the cost of living increase component of the salary scale was extended to March 31, 2012.

**G. Effective October 1, 2011:**

The interest rate used to calculate all liabilities was reduced from 8.20% to 8.10%.

The mortality tables for healthy pre and post retirement participants was projected 15 and 7 years respectively from the valuation date to reflect mortality improvements.

The contingency compensation load for overtime and other pays was increased from 16% to 18% to account for the expected increase in pensionable pay due to the inclusion of off duty pay in the computation of pensionable pay.

**H. Effective October 1, 2012:**

The interest rate used to calculate all liabilities was reduced from 8.10% to 8.00%.

The expected salary increases for FY2013 and 2014 were reduced by 2.17% to reflect a freeze in the cost of living increases and increased by 3.0% to reflect a 3.0% cost of living increase in FY2015.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Assumption Change History**

**H. Effective October 1, 2012 (cont'd):**

The contingency compensation load for overtime and other pays was decreased from 18% to 16% to account for the expected decrease in pensionable pay due to the cap on overtime hours in the computation of pensionable pay.

The contingency pre-employment service load was decreased from 6.000% to 0.275% to account for the elimination of certain buybacks.

The expected salary increases were adjusted to account for the extension of ranges for Firefighter I, Police Officer, Sergeant of Police and Police Lieutenant effective April 1, 2015.

**I. Effective October 1, 2013:**

The asset valuation method was updated to phase in the deviation between the expected and actual return on assets at the rate of 20% per year - further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of plan assets and whose upper limit is 120% of the fair market value of plan assets.

The load for projected pensionable payroll was decreased from 20% to 16% to account for the expected decrease in pensionable pay due to the cap on overtime hours in the computation of pensionable pay.

Table XII

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach  
Distribution by Attained Age Groups  
and Service Groups as of October 1, 2013**

<u>Attained</u> <u>Age Group</u>	<u>COMPLETED YEARS OF SERVICE</u>							<u>Total</u>
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30 &amp; Over</u>	
Under 25	2	-	-	-	-	-	-	2
25-29	21	8	-	-	-	-	-	29
30-34	15	18	9	-	-	-	-	42
35-39	4	12	14	-	-	-	-	30
40-44	3	3	10	5	2	-	-	23
45-49	1	1	10	10	-	-	-	22
50-54	-	-	3	4	-	-	-	7
55-59	-	-	-	1	-	-	-	1
60-64	-	-	-	-	-	-	-	0
65 & Over	-	-	-	-	-	-	-	0
<b>TOTAL</b>	<b>46</b>	<b>42</b>	<b>46</b>	<b>20</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>156</b>

Average Attained Age	<u>10/01/2012</u>	<u>10/01/2013</u>
Average Hire Age	N/A	36.99 years
Average Base Pay	\$ 91,180	27.89 years
Percent Female	N/A	\$ 94,067 6.4%

**Table XII  
(Cont'd)**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach  
Distribution by Attained Age Groups  
and Service Groups as of October 1, 2013**

<u>Attained Age Group</u>	<u>COMPLETED YEARS OF SERVICE</u>							<u>Total</u>
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30 &amp; Over</u>	
Under 25	3	-	-	-	-	-	-	3
25-29	15	10	-	-	-	-	-	25
30-34	15	26	3	-	-	-	-	44
35-39	13	22	16	2	-	-	-	53
40-44	7	17	37	30	2	-	-	93
45-49	1	8	15	31	9	-	-	64
50-54	1	-	7	5	3	-	-	16
55-59	-	-	2	2	-	-	-	4
60-64	-	-	-	-	-	-	-	0
65 & Over	-	-	-	-	-	-	-	0
<b>TOTAL</b>	<b>55</b>	<b>83</b>	<b>80</b>	<b>70</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>302</b>

Average Attained Age	<u>10/01/2012</u>	<u>10/01/2013</u>
Average Hire Age	N/A	40.45 years
Average Base Pay	\$ 79,218	28.71 years
Percent Female	N/A	\$ 81,488 13.2%



**Table XII  
(Cont'd)**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach  
Distribution by Attained Age Groups  
and Service Groups as of October 1, 2013**

<u>Attained Age Group</u>	<u>All Active Members</u>							<u>Total</u>
	<u>0-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30 &amp; Over</u>	
Under 25	5	-	-	-	-	-	-	5
25-29	36	18	-	-	-	-	-	54
30-34	30	44	12	-	-	-	-	86
35-39	17	34	30	2	-	-	-	83
40-44	10	20	47	35	4	-	-	116
45-49	2	9	25	41	9	-	-	86
50-54	1	-	10	9	3	-	-	23
55-59	-	-	2	3	-	-	-	5
60-64	-	-	-	-	-	-	-	0
65 & Over	-	-	-	-	-	-	-	0
<b>TOTAL</b>	<b>101</b>	<b>125</b>	<b>126</b>	<b>90</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>458</b>

Average Attained Age	<u>10/01/2012</u>	<u>10/01/2013</u>
Average Hire Age	39.70 years	39.27 years
Average Base Pay	28.70 years	28.43 years
Percent Female	\$ 83,075	\$ 85,772
	N/A	10.9%

**Table XIII**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Statistics for Participants Entitled to Deferred Benefits  
and Participants Receiving Benefits**

**A. Entitled to Deferred Benefits\***

<b><u>Current Age Group</u></b>	<b><u>Count</u></b>	<b><u>Total Annual Benefit</u></b>	<b><u>Average Annual Benefit</u></b>
Less than 40	3	\$ 103,583	\$ 34,528
40-44	1	31,308	31,308
45-49	4	106,187	26,547
50-54	1	29,711	29,711
55-59	-	-	-
60-64	-	-	-
65 & Over	-	-	-
<b>TOTAL</b>	<b>9</b>	<b>\$ 270,789</b>	<b>\$ 30,088</b>

\* Excludes 6 dormant members

**B. Receiving Benefits (including DROPs)**

<b><u>Current Age Group</u></b>	<b><u>Count</u></b>	<b><u>Total Annual Benefit</u></b>	<b><u>Average Annual Benefit</u></b>
Less than 50	52	\$ 5,491,248	\$ 105,601
50-54	126	13,005,199	103,216
55-59	129	12,023,992	93,209
60-64	102	7,989,705	78,330
65-69	83	6,265,312	75,486
70-74	57	4,414,210	77,442
75 & Over	147	6,446,912	43,857
<b>TOTAL</b>	<b>696</b>	<b>\$ 55,636,578</b>	<b>\$ 79,938</b>

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Reconciliation of Employee Data**

<b>A. <u>Active Participants</u></b>	
1. Active participants previous year	428
2. Retired during year	(2)
3. Entered DROP	(13)
4. Died during year	0
5. Disabled during year	(2)
6. Terminated during year	(2)
7. New active participants	47
8. Rehired during year	3
9. Dormant during the year	(2)
10. Data Correction	1
11. Active participants current year	<u>458</u>
<b>B. <u>Participants Receiving Benefits</u></b>	
1. Participants receiving benefits previous year	605
2. New retired participants	2
3. New terminated vested receiving benefits	0
4. New disabled receiving benefits	2
5. New beneficiaries receiving benefits	8
6. Former DROPs now receiving benefits	21
7. Died or ceased payment during year	(12)
8. Data Correction	1
9. Retired or terminated vested receiving benefits current year	<u>627</u>
<b>C. <u>DROP Participants</u></b>	
1. DROP participants previous year	77
2. Died during year	0
3. Became disabled during year	0
4. Employment terminated and retired during year	(21)
5. Entered DROP during year	13
6. DROP participants current year	<u>69</u>
<b>D. <u>Terminated Vested Participants Entitled to Future Benefits</u></b>	
1. Terminated vested entitled previous year	16
2. Died during year	0
3. Commenced receiving benefits during year	0
4. Rehired during the year	(3)
5. New terminated vested	3
6. Terminated vested paid lump sum	(1)
7. Terminated vested entitled current year	<u>15</u>

**Table XV****City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach****Projected Retirement Benefits**

<b><u>Fiscal Year</u></b>	<b><u>Projected Total Annual Payout</u></b>
2014	\$ 56,690,935
2015	\$ 57,981,129
2016	\$ 60,190,730
2017	\$ 62,497,542
2018	\$ 64,938,766
2019	\$ 68,078,734
2020	\$ 71,105,182
2021	\$ 74,217,168
2022	\$ 77,205,202
2023	\$ 80,214,419

The above projected payout of Plan benefits during the next ten years is based on assumptions involving all decrements. Actual payouts may differ from the above estimates depending upon the death, salary and retirement experience of the Plan. However, since the projected payment is recomputed each valuation date, there is an automatic correction to the extent that actual experience varies from expected experience.

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Analysis of Investment Yield as of October 1, 2013**

This Table sets forth the results of an analysis made of investment yields on the assets held under the City Pension Fund for Firefighters and Police Officers in the City of Miami Beach.

The basic sources for this analysis were the Statements produced by the Plan Auditors.

The basic data was initially checked for internal consistency. Since no difficulties were encountered with the data, yield rates were calculated directly from the transaction information submitted. A summary of the transaction information is set forth on the following page.

**Table XVI  
(Cont'd)**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Summary of Transaction Information**

Year Ending	Benefits Paid <sup>1</sup>	Administrative Expenses	Employee Contributions <sup>2</sup>	City Contributions	State Contributions	Smoothed Actuarial Value <sup>3</sup>
09/30/2013	\$ 52,104,605	\$ 805,919	\$ 9,717,336	\$ 39,371,501	\$ 120,549	\$ 663,233,454
09/30/2012	48,725,783	859,125	7,504,966	36,176,910	120,549	545,067,653
09/30/2011	44,934,423	971,906	5,783,503	32,691,021	120,549	531,821,181
09/30/2010	42,314,959	697,141	5,989,852	23,283,269	120,549	525,709,407
09/30/2009	38,195,186	767,484	6,542,597	20,039,446	120,549	517,602,834
09/30/2008	35,014,659	641,844	5,577,298	17,497,496	120,549	507,363,812
09/30/2007	32,367,302	646,588	5,194,282	15,110,868	120,549	495,993,903
09/30/2006	30,109,229	633,113	4,915,270	14,481,287	120,549	470,603,144
09/30/2005	27,202,700	581,953	4,982,579	11,857,606	120,549	457,680,582
09/30/2004	24,173,338	564,532	4,588,390	9,387,091	107,000	418,089,222
09/30/2003	22,072,374	521,173	4,437,529	8,577,326	0	410,423,595

<sup>1</sup> Includes DROP distributions and contribution refunds

<sup>2</sup> Includes buybacks

<sup>3</sup> Effective for fiscal year ending September 30, 2013, includes DROP account balances

**Table XVI  
(Cont'd)**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Recent Compensation, Termination and Investment Return Experience**

Valuation Date	Compensation		Termination Ratio of Actual to Expected	Investment Return		Assumed Rate of Return
	% Increase (Decrease)	Assumed Increase		Market Value Yield	Smoother Actuarial Value Yield	
10/01/2013	3.9%	3.8%	1.1	13.1%	8.8%	8.0%
10/01/2012	5.6%	3.9%	N/A	20.2%	3.6%	8.1%
10/01/2011	3.4%	3.9%	N/A	(0.6%)	2.6%	8.2%
10/01/2010	2.7%	3.8%	N/A	10.9%	4.3%	8.3%
10/01/2009	7.9%	4.4%	N/A	1.4%	4.5%	8.4%
10/01/2008	8.8%	4.9%	N/A	(10.4%)	4.9%	8.5%
10/01/2007	9.5%	4.9%	N/A	14.3%	8.2%	8.5%
10/01/2006	7.9%	4.8%	N/A	8.3%	5.3%	8.5%
10/01/2005	5.7%	4.8%	N/A	10.0%	12.2%	8.5%
10/01/2004	6.3%	4.8%	N/A	9.7%	4.5%	8.5%
Last 3 Years	4.3%	3.9%	N/A	10.6%	5.0%	8.1%
Last 5 Years	4.7%	4.0%	N/A	8.7%	4.7%	8.2%
Last 10 Years	6.1%	4.4%	N/A	7.3%	5.8%	8.3%

**Table XVII****City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach****Employer Contribution Information**

<u>Valuation Date</u>	<u>Contribution Fiscal Year End</u>	<u>Minimum Required Employer Contributions</u>	<u>Actual City Contributions Made</u>	<u>Actual State Contributions Made</u>	<u>Actual Employer Contributions Made</u>
10/01/2013	09/30/2015	\$ 33,149,388	N/A	N/A	N/A
10/01/2012	09/30/2014	\$ 35,960,326	N/A	N/A	N/A
10/01/2011	09/30/2013	\$ 39,492,050	\$ 39,371,501	\$ 120,549	\$ 39,492,050
10/01/2010	09/30/2012	\$ 36,296,459	\$ 36,176,910	\$ 120,549	\$ 36,297,459
10/01/2009	09/30/2011	\$ 34,537,068	\$ 32,691,021	\$ 120,549	\$ 32,811,570
10/01/2008	09/30/2010	\$ 23,403,818	\$ 23,283,269	\$ 120,549	\$ 23,403,818
10/01/2007	09/30/2009	\$ 20,159,995	\$ 20,039,446	\$ 120,549	\$ 20,159,995



**Table XVIII**

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**20 Year Projections**

Throughout the forecast period, new members are assumed to be hired each year at a rate sufficient to maintain a constant active employee headcount – stationary population. Newly employed members are assumed to have the same average demographic characteristics (age, gender, salary – adjusted each year for inflation) as those of members hired during the past five (5) years. State (Share Plan) contributions are projected to remain \$120,549 during the projection period.

These projections are deterministic – assume all actuarial assumptions are realized.

<b>Contribution Fiscal Year</b>	<b>Projected Annual Pensionable Payroll</b>	<b>Projected Net City Required Contribution</b>	
		<b><u>Amount</u></b>	<b><u>% of Pay</u></b>
2014 - 2015	47,164,032	33,028,839	70.0%
2015 - 2016	48,435,607	32,994,237	68.1%
2016 - 2017	50,884,941	33,461,084	65.8%
2017 - 2018	52,623,557	33,179,957	63.1%
2018 - 2019	54,298,873	33,687,739	62.0%
2019 - 2020	55,903,469	34,527,161	61.8%
2020 - 2021	56,952,555	35,233,991	61.9%
2021 - 2022	58,094,054	35,998,811	62.0%
2022 - 2023	59,150,031	37,011,050	62.6%
2023 - 2024	60,270,672	37,909,563	62.9%
2024 - 2025	61,326,565	38,932,843	63.5%
2025 - 2026	62,325,535	39,903,490	64.0%
2026 - 2027	63,380,618	40,751,358	64.3%
2027 - 2028	64,283,475	41,903,969	65.2%
2028 - 2029	65,417,294	43,153,441	66.0%
2029 - 2030	66,349,814	44,273,322	66.7%
2030 - 2031	66,773,516	44,964,561	67.3%
2031 - 2032	66,472,531	46,087,880	69.3%
2032 - 2033	66,391,329	44,981,640	67.8%
2033 - 2034	66,244,053	43,516,269	65.7%
<b>5 Year Totals</b>	<b>253,407,010</b>	<b>166,351,855</b>	<b>65.6%</b>
<b>10 Year Totals</b>	<b>543,777,791</b>	<b>347,032,430</b>	<b>63.8%</b>
<b>20 Year Totals</b>	<b>1,192,742,521</b>	<b>775,501,203</b>	<b>65.0%</b>

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Valuation as of October 1, 2013**

**State Required Exhibit - All Members**

	<u>10/01/2012</u>	<u>Prior Methods and Assumptions 10/01/2013</u>	<u>Current Methods and Assumptions 10/01/2013</u>
<b>A. <u>Participant Data</u></b>			
1. Active participants	428	458	458
2. Retired participants and beneficiaries receiving benefits (including DROPs)	626	638	638
3. Disabled participants receiving benefits	56	58	58
4. Terminated vested participants	16	15	15
5. Total Annual Base Payroll	\$ 37,289,573	\$ 39,283,718	\$ 39,283,718
6. Projected Annual Base Payroll	\$ 38,594,708	\$ 40,658,648	\$ 40,658,648
7. Projected Annual Pensionable Payroll	\$ 46,313,650	\$ 48,790,378	\$ 47,164,032
8. Annual benefits payable to those currently receiving benefits (including DROPs)	\$ 52,791,227	\$ 55,636,578	\$ 55,636,578
<b>B. <u>Value of Assets</u></b>			
1. Smoothed Actuarial Value	\$ 545,067,653	\$ 599,336,717	\$ 663,233,454
2. Market Value	\$ 622,408,229	\$ 710,329,822	\$ 710,329,822
<b>C. <u>Liabilities</u></b>			
1. Actuarial present value of future expected benefit payments for active members			
a. Retirement benefits	\$ 311,906,148	\$ 309,472,252	\$ 309,472,252
b. Vesting benefits	618,205	7,265,218	7,265,218
c. Death benefits	3,447,640	4,984,571	4,984,571
d. Disability benefits	22,887,347	23,971,219	23,971,219
e. Total	\$ 338,859,340	\$ 345,693,260	\$ 345,693,260
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 2,840,139	\$ 3,097,833	\$ 3,097,833
3. Actuarial present value of future expected benefit payments for members currently receiving benefits			
a. Service retired (includes DROPs)	\$ 672,768,278	\$ 676,822,574	\$ 676,822,574
b. Beneficiaries (included in a)		30,280,652	30,280,652
c. Disability retired	40,363,979	40,609,957	40,609,957
d. Miscellaneous	5,854,784	0	0
e. Total	\$ 718,987,041	\$ 747,713,183	\$ 747,713,183

City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

Actuarial Valuation as of October 1, 2013

State Required Exhibit - All Members

	<u>10/01/2012</u>	<u>Prior Methods and Assumptions 10/01/2013</u>	<u>Current Methods and Assumptions 10/01/2013</u>
4. Total actuarial present value of future expected benefit payments	\$ 1,060,686,520	\$ 1,096,504,276	\$ 1,096,504,276
5. Actuarial accrued liabilities (EAN)	\$ 922,739,522	\$ 955,238,606	\$ 955,238,606
6. Unfunded actuarial liabilities (EAN)	\$ 377,671,869	\$ 355,901,889	\$ 292,005,152
 <b>D. <u>Statement of Accumulated Plan Benefits</u></b>			
1. Actuarial present value of accumulated vested benefits			
a. Participants currently receiving benefits	\$ 713,132,257	\$ 747,713,183	\$ 747,713,183
b. Other participants	120,906,735	153,856,823	153,856,823
c. Total	\$ 834,038,992	\$ 901,570,006	\$ 901,570,006
2. Actuarial present value of accumulated non-vested plan benefits	30,008,206	7,401,076	7,401,076
3. Total actuarial present value of accumulated plan benefits	\$ 864,047,198	\$ 908,971,082	\$ 908,971,082
 <b>E. <u>Pension Cost</u></b>			
1. Total normal cost (including admin expenses)	\$ 15,766,586	\$ 15,569,514	\$ 15,569,514
2. Payment required to amortize unfunded liability	23,986,250	23,240,473	19,548,224
3. Interest adjustment	3,297,845	2,907,226	2,618,352
4. Expected service buyback	2,778,819	134,174	129,701
5. Total required contribution	\$ 45,829,500	\$ 41,851,387	\$ 37,865,791
6. Item 5 as a percentage of projected pensionable payroll	99.0%	85.8%	80.3%
7. Estimated employee contributions	\$ 4,631,365	\$ 4,879,038	\$ 4,716,403
8. Item 7 as a percentage of projected pensionable payroll	10.0%	10.0%	10.0%
9. Estimated State contributions	\$ 120,549	\$ 120,549	\$ 120,549
10. Item 9 as a percentage of projected pensionable payroll	0.3%	0.2%	0.3%
11. Net amount payable by City	\$ 41,077,586	\$ 36,851,800	\$ 33,028,839
12. Item 11 as a percentage of projected pensionable payroll	88.7%	75.5%	70.0%

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Valuation as of October 1, 2013**

**State Required Exhibit - All Members**

	<b>Prior Methods and Assumptions</b>			<b>Current Methods and Assumptions</b>		
	<b>10/01/2012</b>	<b>10/01/2013</b>		<b>10/01/2013</b>		
<b>F. <u>Past Contributions</u></b>						
1. Total contribution required (prior valuation)	\$ 44,410,722	\$ 45,829,500		\$ 45,829,500		
2. Actual contributions made:						
a. Members	\$ 5,091,354	N/A		N/A		
b. City	39,371,501	N/A		N/A		
c. State	120,549	N/A		N/A		
d. Total	\$ 44,583,404	N/A		N/A		
<b>G. <u>Disclosure of Following Items:</u></b>						
1. Actuarial present value of future salaries excluding DROP payroll -attained age	\$ 338,415,868	\$ 380,032,386		\$ 380,032,386		
2. Actuarial present value of future employee contributions - attained age	\$ 48,394,041	\$ 38,003,239		\$ 38,003,239		
3. Actuarial present value of future contributions from other sources	N/A	N/A		N/A		
4. Amount of active members' accumulated contributions	\$ 46,162,066	\$ 49,479,668		\$ 49,479,668		
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A		N/A		
6. Actuarial present value of future employee contributions at entry age	N/A	N/A		N/A		

City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

Actuarial Valuation as of October 1, 2013

State Required Exhibit - Firefighters

	<u>10/01/2012</u>	<u>Prior Methods and Assumptions 10/01/2013</u>	<u>Current Methods and Assumptions 10/01/2013</u>
<b>A. <u>Participant Data</u></b>			
1. Active participants	138	156	156
2. Retired participants and beneficiaries receiving benefits (including DROPs)	263	269	269
3. Disabled participants receiving benefits	7	8	8
4. Terminated vested participants	3	4	4
5. Total Annual Base Payroll	\$ 13,260,024	\$ 14,674,485	\$ 14,674,485
6. Projected Annual Base Payroll	\$ 13,724,125	\$ 15,188,092	\$ 15,188,092
7. Projected Annual Pensionable Payroll	\$ 16,468,950	\$ 18,225,710	\$ 17,618,187
8. Annual benefits payable to those currently receiving benefits (including DROPs)	\$ 21,864,390	\$ 23,173,062	\$ 23,173,062
<b>B. <u>Liabilities</u></b>			
1. Actuarial present value of future expected benefit payments for active members			
a. Retirement benefits	\$ 110,303,374	\$ 112,054,354	\$ 112,054,354
b. Vesting benefits	295,951	3,231,721	3,231,721
c. Death benefits	1,262,457	1,941,794	1,941,794
d. Disability benefits	7,927,554	8,724,437	8,724,437
e. Total	<u>\$ 119,789,336</u>	<u>\$ 125,952,306</u>	<u>\$ 125,952,306</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 808,134	\$ 885,160	\$ 885,160
3. Actuarial present value of future expected benefit payments for members currently receiving benefits			
a. Service retired (includes DROPs)	\$ 295,311,083	\$ 296,861,942	\$ 296,861,942
b. Beneficiaries (included in a)		14,569,676	14,569,676
c. Disability retired	4,696,092	6,338,290	6,338,290
d. Miscellaneous	2,347,278	0	0
e. Total	<u>\$ 302,354,453</u>	<u>\$ 317,769,908</u>	<u>\$ 317,769,908</u>

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Valuation as of October 1, 2013**

**State Required Exhibit - Firefighters**

	<u>10/01/2012</u>	<u>Prior Methods and Assumptions 10/01/2013</u>	<u>Current Methods and Assumptions 10/01/2013</u>
4. Total actuarial present value of future expected benefit payments	\$ 422,951,923	\$ 444,607,374	\$ 444,607,374
5. Actuarial accrued liabilities (EAN)	\$ 369,992,472	\$ 386,248,242	\$ 386,248,242
<b>C. <u>Statement of Accumulated Plan Benefits</u></b>			
1. Actuarial present value of accumulated vested benefits			
a. Participants currently receiving benefits	N/A	\$ 317,769,908	\$ 317,769,908
b. Other participants	N/A	48,895,673	48,895,673
c. Total	N/A	\$ 366,665,581	\$ 366,665,581
2. Actuarial present value of accumulated non-vested plan benefits	N/A	2,759,415	2,759,415
3. Total actuarial present value of accumulated plan benefits	\$ 349,998,158	\$ 369,424,996	\$ 369,424,996
<b>D. <u>Disclosure of Following Items:</u></b>			
1. Actuarial present value of future salaries - attained age	\$ 130,210,076	\$ 157,017,926	\$ 157,017,926
2. Actuarial present value of future employee contributions - attained age	\$ 18,189,222	\$ 15,701,793	\$ 15,701,793
3. Actuarial present value of future contributions from other sources	N/A	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 15,393,637	\$ 14,364,312	\$ 14,364,312
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A	N/A
6. Actuarial present value of future employee contributions at entry age	N/A	N/A	N/A

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Valuation as of October 1, 2013**

**State Required Exhibit - Police Officers**

	<u>10/01/2012</u>	<u>Prior Methods and Assumptions 10/01/2013</u>	<u>Current Methods and Assumptions 10/01/2013</u>
<b>A. <u>Participant Data</u></b>			
1. Active participants	290	302	302
2. Retired participants and beneficiaries receiving benefits (including DROPs)	363	369	369
3. Disabled participants receiving benefits	49	50	50
4. Terminated vested participants	13	11	11
5. Total Annual Base Payroll	\$ 24,029,549	\$ 24,609,233	\$ 24,609,233
6. Projected Annual Base Payroll	\$ 24,870,583	\$ 25,470,556	\$ 25,470,556
7. Projected Annual Pensionable Payroll	\$ 29,844,700	\$ 30,564,667	\$ 29,545,845
8. Annual benefits payable to those currently receiving benefits (including DROPs)	\$ 30,926,837	\$ 32,463,516	\$ 32,463,516
<b>B. <u>Liabilities</u></b>			
1. Actuarial present value of future expected benefit payments for active members			
a. Retirement benefits	\$ 201,602,774	\$ 197,417,898	\$ 197,417,898
b. Vesting benefits	322,254	4,033,497	4,033,497
c. Death benefits	2,185,183	3,042,777	3,042,777
d. Disability benefits	14,959,793	15,246,782	15,246,782
e. Total	<u>\$ 219,070,004</u>	<u>\$ 219,740,954</u>	<u>\$ 219,740,954</u>
2. Actuarial present value of future expected benefit payments for terminated vested members	\$ 2,032,005	\$ 2,212,673	\$ 2,212,673
3. Actuarial present value of future expected benefit payments for members currently receiving benefits			
a. Service retired (includes DROPs)	\$ 377,457,195	\$ 379,960,632	\$ 379,960,632
b. Beneficiaries (included in a)	(included in a)	15,710,976	15,710,976
c. Disability retired	35,667,887	34,271,667	34,271,667
d. Miscellaneous	3,507,506	0	0
e. Total	<u>\$ 416,632,588</u>	<u>\$ 429,943,275</u>	<u>\$ 429,943,275</u>

**City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach**

**Actuarial Valuation as of October 1, 2013**

**State Required Exhibit - Police Officers**

	<u>10/01/2012</u>	<u>Prior Methods and Assumptions 10/01/2013</u>	<u>Current Methods and Assumptions 10/01/2013</u>
4. Total actuarial present value of future expected benefit payments	\$ 637,734,597	\$ 651,896,902	\$ 651,896,902
5. Actuarial accrued liabilities (EAN)	\$ 552,747,050	\$ 568,990,364	\$ 568,990,364
<b>C. <u>Statement of Accumulated Plan Benefits</u></b>			
1. Actuarial present value of accumulated vested benefits			
a. Participants currently receiving benefits	N/A	\$ 429,943,275	\$ 429,943,275
b. Other participants	N/A	104,961,150	104,961,150
c. Total	N/A	\$ 534,904,425	\$ 534,904,425
2. Actuarial present value of accumulated non-vested plan benefits	N/A	4,641,661	4,641,661
3. Total actuarial present value of accumulated plan benefits	\$ 514,049,040	\$ 539,546,086	\$ 539,546,086
<b>D. <u>Disclosure of Following Items:</u></b>			
1. Actuarial present value of future salaries - attained age	\$ 208,205,792	\$ 223,014,460	\$ 223,014,460
2. Actuarial present value of future employee contributions - attained age	\$ 30,204,819	\$ 22,301,446	\$ 22,301,446
3. Actuarial present value of future contributions from other sources	N/A	N/A	N/A
4. Amount of active members' accumulated contributions	\$ 30,768,429	\$ 35,115,356	\$ 35,115,356
5. Actuarial present value of future salaries and future benefits at entry age	N/A	N/A	N/A
6. Actuarial present value of future employee contributions at entry age	N/A	N/A	N/A



City Pension Fund for Firefighters and Police Officers  
in the City of Miami Beach

State Required Exhibit

Amortization balances are written down in proportion to amortization payments.

	<u>Unfunded Actuarial Accrued Liabilities</u>	<u>Current Unfunded Liabilities</u>	<u>Amortization Payment</u>	<u>Remaining Funding Period</u>
10/01/2001	Initial Unfunded Liability	\$ 12,385,446	\$ 964,301	18 years
10/01/2002	Method Change	13,984,703	1,050,786	19 years
10/01/2003	Plan Amendment	1,199,314	87,196	20 years
10/01/2003	Actuarial (Gain) / Loss	36,108,743	2,625,276	20 years
10/01/2004	Actuarial (Gain) / Loss	38,532,918	2,717,189	21 years
10/01/2005	Method Change	(34,007,837)	(2,330,854)	22 years
10/01/2005	Assumption Change	6,840,348	468,829	22 years
10/01/2005	Actuarial (Gain) / Loss	25,401,700	1,741,001	22 years
10/01/2006	Method Change	(5,088,252)	(339,616)	23 years
10/01/2006	Actuarial (Gain) / Loss	22,026,022	1,470,130	23 years
10/01/2007	Actuarial (Gain) / Loss	25,556,825	1,664,062	24 years
10/01/2008	Assumption Change	6,060,624	385,581	25 years
10/01/2008	Actuarial (Gain) / Loss	33,451,275	2,128,191	25 years
10/01/2009	Assumption Change	23,693,771	1,475,030	26 years
10/01/2009	Actuarial (Gain) / Loss	68,191,567	4,245,191	26 years
10/01/2010	Assumption Change	4,568,335	278,660	27 years
10/01/2010	Actuarial (Gain) / Loss	17,263,566	1,053,045	27 years
10/01/2011	Plan Amendment	(3,087,416)	(184,755)	28 years
10/01/2011	Assumption Change	17,050,314	1,020,313	28 years
10/01/2011	Actuarial (Gain) / Loss	30,329,332	1,814,947	28 years
10/01/2012	Assumption Change	7,750,049	455,495	29 years
10/01/2012	Actuarial (Gain) / Loss	26,093,438	1,533,593	29 years
10/01/2012	Plan Amendment	(19,943,131)	(1,172,120)	29 years
10/01/2013	Actuarial (Gain) / Loss	1,540,235	89,002	30 years
10/01/2013	Method Change	(63,896,737)	(3,692,249)	30 years
	TOTAL	\$ 292,005,152	\$ 19,548,224	

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 other wise provided for in the valuation. All known events or trends which may require material increase in plan costs or required contribution rates have been taken into account in the valuation.

Enrollment Number: 14-02802

Dated: May 14, 2014



Lawrence F. Wilson, A.S.A.