

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

CHAPTER 112.664, F.S. COMPLIANCE REPORT

**In Connection with the October 1, 2015 Funding Actuarial Valuation Report
and the Fund's Financial Reporting for the Year Ended September 30, 2015**



July 19, 2016

Ms. Donna Brito
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

Re: October 1, 2015 Chapter 112.664 Compliance Report

Dear Donna:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Board of Trustees (Board) of the City Pension Fund for Firefighters and Police Officers in the City of Miami Beach (Fund) to prepare a disclosure report to satisfy the requirements set forth in Chapter 112.664, F.S. and as further required pursuant to Chapter 60T-1.0035, F.A.C.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board.

The purpose of the report is to provide the required information specified in Chapter 112.664, F.S. and to supplement this information with additional exhibits. This report should not be relied on for any purpose other than the purpose described above.

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 or additional cost or contribution requirements based on the Fund's funded status); and changes in Fund provisions or applicable law. The scope of this engagement does not include an analysis of the potential range of such measurements.

This report was based upon information furnished by the City and the Board concerning Fund benefits, Fund provisions and Fund members as used in the corresponding Actuarial Valuation Reports for the Valuation Dates indicated. Financial information was provided by the City and Board as of September 30, 2015. We reviewed the information provided for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the City and Board.

Except where specific assumptions are required by Chapter 112.664, F.S, this report was prepared using actuarial assumptions adopted by the Board as described in Section C. The Board's demographic assumptions are based on the results of an actuarial experience study for the period October 1, 2009 through September 30, 2014. The Board's investment return assumption is based upon input from the Investment Consultant and based upon a Capital Market Assumption Study completed in 2014. The Board's assumptions represent an estimate of future Fund experience.

The investment return assumption of 2% higher than the investment return assumption utilized in the Actuarial Valuation Report does not represent an estimate of future Fund experience nor observation of the estimates inherent in market data. This assumption is provided as a counterpart to the Chapter 112.664, F.S. requirement to utilize an investment return assumption of 2% lower than the investment return assumption utilized in the Actuarial Valuation Report. The inclusion of the additional 2% higher assumption shows a more complete assessment of the range of potential results as opposed to the *one-sided* range required by statute.

If all actuarial assumptions are met and if all current and future minimum required contributions are paid Fund assets will be sufficient to pay all Fund benefits. Fund minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act and for Fire and Police Retirement Chapters 175 and 185 with normal cost determined as a level percent of covered payroll and a level percent of pay amortization payment using a maximum amortization period of 30 years.

The Fund's funded ratio as of October 1, 2015 is 70.9% defined as the ratio of the market value of Fund assets to the actuarial accrued liability.

The Fund's funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Fund assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

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 herein. The signing actuaries are independent of the Fund sponsor.


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 presents the actuarial position of the Fund as of the valuation date as required by statute. 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.

Board of Trustees
July 19, 2016
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With respect to the reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, meet the requirements of Section 112.664(1), F.S., and Section 60T-1.0035, F.A.C.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

By 
Lawrence F. Wilson, M.A.A.A
Enrolled Actuary No. 14-02802
Senior Consultant & Actuary
Date: July 19, 2016


By 
Jennifer M. Borregard, M.A.A.A
Enrolled Actuary No. 14-07624
Consultant & Actuary

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SECTION A
CHAPTER 112.664, F.S. RESULTS

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

Net Pension Liability

Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68

Measurement Date	<u>September 30, 2015</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 16,098,560
Interest	78,415,039
Benefit Changes	0
Difference Between Actual and Expected Experience	12,428,547
Assumption Changes	5,686,196
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Other	0
Net Change in Total Pension Liability	<u>\$ 49,941,626</u>
Total Pension Liability (TPL) - (beginning of year)	<u>991,506,019</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 1,041,447,645</u></u>
B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 33,028,839
Contributions - State	120,549
Contributions - Member	5,944,414
Net Investment Income	5,689,333
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Administrative Expenses	(777,493)
Other	0
Net Change in Fund Fiduciary Net Position	<u>\$ (18,681,074)</u>
Fund Fiduciary Net Position - (beginning of year)	<u>769,298,572</u>
Fund Fiduciary Net Position - (end of year)	<u><u>\$ 750,617,498</u></u>
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 290,830,147

Valuation Date October 1, 2014

Certain Key Assumptions

Investment Return Assumption 7.95%

Mortality Table:

Healthy Members: RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with Blue Collar Adjustment and projected 15 years from valuation date for pre-retirement mortality and 7 years from valuation date for post-retirement mortality with Scale AA. Disabled Members: RP-2000 Disabled Mortality Tables, separate rates for males and females, without projection for future mortality improvement.

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

**Net Pension Liability
Using Assumptions Required Under 112.664(1)(a), F.S.**

Measurement Date	<u>September 30, 2015</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 16,745,085
Interest	80,868,282
Benefit Changes	0
Difference Between Actual and Expected Experience	10,798,388
Assumption Changes	6,054,459
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Other	0
Net Change in Total Pension Liability	<u>\$ 51,779,498</u>
Total Pension Liability (TPL) - (beginning of year)	<u>1,022,979,786</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 1,074,759,284</u></u>
B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 33,028,839
Contributions - State	120,549
Contributions - Member	5,944,414
Net Investment Income	5,689,333
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Administrative Expenses	(777,493)
Other	0
Net Change in Fund Fiduciary Net Position	<u>\$ (18,681,074)</u>
Fund Fiduciary Net Position - (beginning of year)	<u>769,298,572</u>
Fund Fiduciary Net Position - (end of year)	<u><u>\$ 750,617,498</u></u>
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 324,141,786

Valuation Date

October 1, 2014

Certain Key Assumptions

Investment Return Assumption

7.95%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

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

**Net Pension Liability
Using Assumptions Required Under 112.664(1)(b), F.S.**

Measurement Date	<u>September 30, 2015</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 27,116,522
Interest	79,250,150
Benefit Changes	0
Difference Between Actual and Expected Experience	14,686,089
Assumption Changes	9,293,611
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Other	0
Net Change in Total Pension Liability	<u>\$ 67,659,656</u>
Total Pension Liability (TPL) - (beginning of year)	<u>1,318,504,192</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 1,386,163,848</u></u>
B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 33,028,839
Contributions - State	120,549
Contributions - Member	5,944,414
Net Investment Income	5,689,333
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Administrative Expenses	(777,493)
Other	0
Net Change in Fund Fiduciary Net Position	<u>\$ (18,681,074)</u>
Fund Fiduciary Net Position - (beginning of year)	<u>769,298,572</u>
Fund Fiduciary Net Position - (end of year)	<u><u>\$ 750,617,498</u></u>
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 635,546,350

Valuation Date October 1, 2014

Certain Key Assumptions

Investment Return Assumption 5.95%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

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

Net Pension Liability

Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

Measurement Date	<u>September 30, 2015</u>
A. <u>Total Pension Liability (TPL)</u>	
Service Cost	\$ 10,797,149
Interest	80,447,160
Benefit Changes	0
Difference Between Actual and Expected Experience	8,182,100
Assumption Changes	4,143,001
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Other	0
Net Change in Total Pension Liability	<u>\$ 40,882,694</u>
Total Pension Liability (TPL) - (beginning of year)	<u>825,776,038</u>
Total Pension Liability (TPL) - (end of year)	<u><u>\$ 866,658,732</u></u>
B. <u>Fund Fiduciary Net Position</u>	
Contributions - City	\$ 33,028,839
Contributions - State	120,549
Contributions - Member	5,944,414
Net Investment Income	5,689,333
Benefit Payments	(62,600,040)
Contribution Refunds	(86,676)
Administrative Expenses	(777,493)
Other	0
Net Change in Fund Fiduciary Net Position	<u>\$ (18,681,074)</u>
Fund Fiduciary Net Position - (beginning of year)	<u>769,298,572</u>
Fund Fiduciary Net Position - (end of year)	<u><u>\$ 750,617,498</u></u>
C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u>	\$ 116,041,234

Valuation Date October 1, 2014

Certain Key Assumptions

Investment Return Assumption 9.95%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

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

**Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions**

Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2016	739,180,336	55,756,054	62,400,177	732,536,213
2017	732,536,213	55,178,511	63,645,183	724,069,541
2018	724,069,541	54,417,425	65,825,576	712,661,390
2019	712,661,390	53,406,472	68,419,503	697,648,359
2020	697,648,359	52,119,270	70,811,591	678,956,038
2021	678,956,038	50,548,939	73,025,535	656,479,442
2022	656,479,442	48,678,875	75,257,804	629,900,513
2023	629,900,513	46,495,895	77,226,000	599,170,408
2024	599,170,408	43,984,289	79,210,368	563,944,329
2025	563,944,329	41,125,091	81,015,277	524,054,143
2026	524,054,143	37,898,600	82,792,477	479,160,266
2027	479,160,266	34,285,753	84,358,420	429,087,599
2028	429,087,599	30,269,330	85,793,172	373,563,757
2029	373,563,757	25,824,188	87,182,434	312,205,511
2030	312,205,511	20,919,529	88,538,572	244,586,468
2031	244,586,468	15,529,560	89,674,992	170,441,036
2032	170,441,036	9,631,908	90,624,594	89,448,350
2033	89,448,350	3,199,511	91,427,879	1,219,982
2034	1,219,982	-	91,997,969	-
2035	-	-	92,383,053	-
2036	-	-	92,555,799	-
2037	-	-	92,406,985	-
2038	-	-	92,195,794	-
2039	-	-	91,781,169	-
2040	-	-	91,165,782	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 18.00

Certain Key Assumptions

Investment return assumption 7.90%

Mortality Table:

Healthy Members: RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with Blue Collar Adjustment and projected 15 years from valuation date for pre-retirement mortality and 7 years from valuation date for post-retirement mortality with Scale AA. Disabled Members: RP-2000 Disabled Mortality Tables, separate rates for males and females, without projection for future mortality improvement.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.

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

**Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions
Using Assumptions Required Under 112.664(1)(a), F.S.**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2016	739,180,336	55,755,845	62,405,125	732,531,056
2017	732,531,056	55,174,762	63,724,204	723,981,614
2018	723,981,614	54,403,263	65,996,187	712,388,690
2019	712,388,690	53,373,473	68,690,368	697,071,795
2020	697,071,795	52,057,609	71,192,551	677,936,853
2021	677,936,853	50,447,208	73,527,139	654,856,922
2022	654,856,922	48,523,881	75,891,814	627,488,989
2023	627,488,989	46,272,428	78,005,231	595,756,186
2024	595,756,186	43,674,873	80,148,835	559,282,224
2025	559,282,224	40,709,705	82,128,402	517,863,527
2026	517,863,527	37,354,385	84,096,574	471,121,338
2027	471,121,338	33,586,723	85,870,546	418,837,515
2028	418,837,515	29,386,029	87,532,036	360,691,508
2029	360,691,508	24,723,344	89,167,002	296,247,850
2030	296,247,850	19,563,706	90,788,701	225,022,855
2031	225,022,855	13,876,760	92,211,359	146,688,256
2032	146,688,256	7,635,206	93,467,333	60,856,129
2033	60,856,129	1,338,923	94,598,803	-
2034	-	-	95,518,662	-
2035	-	-	96,274,191	-
2036	-	-	96,837,580	-
2037	-	-	97,093,041	-
2038	-	-	97,308,997	-
2039	-	-	97,338,238	-
2040	-	-	97,181,058	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 17.58

Certain Key Assumptions

Investment return assumption 7.90%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.

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

**Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions
Using Assumptions Required Under 112.664(1)(b), F.S.**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2016	739,180,336	41,634,742	62,405,125	718,409,953
2017	718,409,953	40,367,503	63,724,204	695,053,252
2018	695,053,252	38,917,484	65,996,187	667,974,549
2019	667,974,549	37,234,493	68,690,368	636,518,674
2020	636,518,674	35,299,332	71,192,551	600,625,455
2021	600,625,455	33,107,675	73,527,139	560,205,991
2022	560,205,991	30,648,018	75,891,814	514,962,195
2023	514,962,195	27,911,684	78,005,231	464,868,648
2024	464,868,648	24,888,259	80,148,835	409,608,072
2025	409,608,072	21,565,175	82,128,402	349,044,845
2026	349,044,845	17,929,596	84,096,574	282,877,867
2027	282,877,867	13,969,548	85,870,546	210,976,869
2028	210,976,869	9,674,755	87,532,036	133,119,588
2029	133,119,588	5,029,383	89,167,002	48,981,969
2030	48,981,969	657,360	90,788,701	-
2031	-	-	92,211,359	-
2032	-	-	93,467,333	-
2033	-	-	94,598,803	-
2034	-	-	95,518,662	-
2035	-	-	96,274,191	-
2036	-	-	96,837,580	-
2037	-	-	97,093,041	-
2038	-	-	97,308,997	-
2039	-	-	97,338,238	-
2040	-	-	97,181,058	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 14.50

Certain Key Assumptions

Investment return assumption 5.90%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.

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

**Asset and Benefit Payment Projection
Not Reflecting Any Future Contributions**

Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2016	739,180,336	69,880,635	62,405,125	746,655,846
2017	746,655,846	70,550,995	63,724,204	753,482,637
2018	753,482,637	71,106,769	65,996,187	758,593,219
2019	758,593,219	71,470,325	68,690,368	761,373,176
2020	761,373,176	71,613,296	71,192,551	761,793,921
2021	761,793,921	71,531,563	73,527,139	759,798,345
2022	759,798,345	71,209,023	75,891,814	755,115,554
2023	755,115,554	70,633,729	78,005,231	747,744,052
2024	747,744,052	69,790,657	80,148,835	737,385,874
2025	737,385,874	68,660,574	82,128,402	723,918,046
2026	723,918,046	67,223,238	84,096,574	707,044,710
2027	707,044,710	65,459,020	85,870,546	686,633,184
2028	686,633,184	63,350,467	87,532,036	662,451,615
2029	662,451,615	60,870,081	89,167,002	634,154,694
2030	634,154,694	57,982,976	90,788,701	601,348,969
2031	601,348,969	54,660,019	92,211,359	563,797,629
2032	563,797,629	50,876,056	93,467,333	521,206,352
2033	521,206,352	46,599,720	94,598,803	473,207,269
2034	473,207,269	41,799,194	95,518,662	419,487,801
2035	419,487,801	36,441,036	96,274,191	359,654,646
2036	359,654,646	30,487,777	96,837,580	293,304,843
2037	293,304,843	23,905,645	97,093,041	220,117,447
2038	220,117,447	16,648,680	97,308,997	139,457,130
2039	139,457,130	8,661,763	97,338,238	50,780,655
2040	50,780,655	1,093,366	97,181,058	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 24.50

Certain Key Assumptions

Investment return assumption 9.90%

Mortality Table:

RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with fully generational mortality improvements projected to each future payment date with Scale AA.

Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Fund assets does not include future contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Fund can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Fund is expected to be able to pay all future benefit payments.

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

ACTUARIALLY DETERMINED CONTRIBUTION

	<u>Valuation Assumptions</u>	<u>112.664(1)(a), F.S. Assumptions</u>	<u>112.664(1)(b), F.S. Assumptions</u>	<u>112.664(1)(a), F.S. Assumptions Plus 2% on Investment Return Assumption</u>
A. Valuation Date	October 1, 2015	October 1, 2015	October 1, 2015	October 1, 2015
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2017	September 30, 2017	September 30, 2017	September 30, 2017
C. Annual Payroll of Active Employees	\$ 59,124,134	\$ 59,124,134	\$ 59,124,134	\$ 59,124,134
D. Total Minimum Funding Requirement				
1. Total Normal Cost	\$ 18,581,095	\$ 19,319,253	\$ 30,808,675	\$ 12,748,795
2. Annual Payment to Amortize Unfunded Actuarial Liability	21,205,832	23,124,584	34,404,389	11,841,794
3. Interest Adjustment	224,475	224,475	170,812	276,185
4. Expected Service Buyback	162,591	162,591	162,591	162,591
5. Total Minimum Funding Requirement	<u>\$ 40,173,993</u>	<u>\$ 42,830,903</u>	<u>\$ 65,546,467</u>	<u>\$ 25,029,365</u>
E. Expected Payroll of Active Employees for Following Plan Year (\$ / % of pay)	\$ 61,075,230 103.30%	\$ 61,075,230 103.30%	\$ 61,075,230 103.30%	\$ 61,075,230 103.30%
F. Expected Contribution Sources (\$ / % of pay)				
1. City	\$ 35,247,317 57.71%	\$ 37,991,905 62.21%	\$ 61,457,083 100.63%	\$ 19,602,917 32.10%
2. Member	6,131,868 10.04%	6,131,868 10.04%	6,131,868 10.04%	6,131,868 10.04%
3. State	120,549 0.20%	120,549 0.20%	120,549 0.20%	120,549 0.20%
4. Total	<u>\$ 41,499,734 67.95%</u>	<u>\$ 44,244,322 72.44%</u>	<u>\$ 67,709,500 110.86%</u>	<u>\$ 25,855,334 42.33%</u>

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

Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments

<u>Amortization Base</u>	<u>Current Unfunded Liabilities</u>	<u>Amortization Payment</u>				<u>Remaining Funding Period</u>
		<u>Valuation Assumptions</u>	<u>112.664(1)(a), F.S. Assumptions</u>	<u>112.664(1)(b), F.S. Assumptions</u>	<u>112.664(1)(a), F.S. Assumptions Plus 2%</u>	
10/01/2001 Initial Unfunded Liability	\$ 11,891,501	\$ 1,009,954	\$ 1,009,954	\$ 889,685	\$ 1,135,770	16 years
10/01/2002 Method Change	13,521,452	1,101,783	1,101,783	963,217	1,247,226	17 years
10/01/2003 Fund Amendment	1,166,830	91,522	91,522	79,413	104,273	18 years
10/01/2003 Actuarial (Gain) / Loss	35,130,772	2,755,541	2,755,541	2,390,961	3,139,437	18 years
10/01/2004 Actuarial (Gain) / Loss	37,698,503	2,854,733	2,854,733	2,458,744	3,272,970	19 years
10/01/2005 Method Change	(33,438,069)	(2,450,998)	(2,450,998)	(2,095,644)	(2,827,405)	20 years
10/01/2005 Assumption Change	6,725,744	492,995	492,995	421,519	568,705	20 years
10/01/2005 Actuarial (Gain) / Loss	24,976,118	1,830,740	1,830,740	1,565,313	2,111,893	20 years
10/01/2006 Method Change	(5,025,599)	(357,414)	(357,414)	(303,400)	(414,784)	21 years
10/01/2006 Actuarial (Gain) / Loss	21,754,805	1,547,171	1,547,171	1,313,359	1,795,516	21 years
10/01/2007 Actuarial (Gain) / Loss	25,345,330	1,752,599	1,752,599	1,477,210	2,045,867	22 years
10/01/2008 Assumption Change	6,032,797	406,385	406,385	340,138	477,106	23 years
10/01/2008 Actuarial (Gain) / Loss	33,297,680	2,243,017	2,243,017	1,877,372	2,633,360	23 years
10/01/2009 Assumption Change	23,664,844	1,555,652	1,555,652	1,293,099	1,836,591	24 years
10/01/2009 Actuarial (Gain) / Loss	68,108,317	4,477,226	4,477,226	3,721,589	5,285,780	24 years
10/01/2010 Assumption Change	4,576,885	294,075	294,075	242,785	349,077	25 years
10/01/2010 Actuarial (Gain) / Loss	17,295,879	1,111,300	1,111,300	917,477	1,319,150	25 years
10/01/2011 Fund Amendment	(3,101,976)	(195,091)	(195,091)	(159,989)	(232,811)	26 years
10/01/2011 Assumption Change	17,130,724	1,077,395	1,077,395	883,540	1,285,706	26 years
10/01/2011 Actuarial (Gain) / Loss	30,472,366	1,916,485	1,916,485	1,571,654	2,287,031	26 years
10/01/2012 Assumption Change	7,806,919	481,247	481,247	392,057	577,272	27 years
10/01/2012 Actuarial (Gain) / Loss	26,284,914	1,620,298	1,620,298	1,320,007	1,943,602	27 years
10/01/2012 Plan Amendment	(20,089,474)	(1,238,388)	(1,238,388)	(1,008,877)	(1,485,488)	27 years
10/01/2013 Actuarial (Gain) / Loss	1,555,268	94,084	94,084	76,150	113,427	28 years
10/01/2013 Method Change	(64,520,385)	(3,903,068)	(3,903,068)	(3,159,076)	(4,705,516)	28 years
10/01/2014 Actuarial (Gain) / Loss	(5,946,443)	(353,409)	(353,409)	(284,214)	(428,165)	29 years
10/01/2014 Assumption Change	5,748,022	341,617	341,617	274,731	413,878	29 years
10/01/2015 Actuarial (Gain) / Loss	8,645,019	505,302	505,302	403,809	615,122	30 years
10/01/2015 Assumption Change	2,447,885	143,079	143,079	114,341	174,175	30 years
10/01/2015 Assumption Change - 112.664(1)(a), F.S. Assumptions	32,827,205	N/A	1,918,752	N/A	N/A	30 years
10/01/2015 Assumption Change - 112.664(1)(b), F.S. Assumptions	351,689,807	N/A	N/A	16,427,419	N/A	30 years
10/01/2015 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(179,850,573)	N/A	N/A	N/A	(12,796,971)	30 years

SECTION B
SUMMARY OF FUND PROVISIONS

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

**Outline of Principal Provisions of the Retirement Plan
(as of October 1, 2015)**

A. Relevant Provisions:

The Fund was created under Chapter 23414, Laws of Florida, Special Act of 1945, as amended by Ordinance No. 2015-3970 adopted October 14, 2015.

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
(as of October 1, 2015)**

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. Effective September 30, 2013, 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 expired in 2015. For these members, the inclusion of overtime and / or off duty in the member's salary shall be limited in each year to an amount which is equal to 70% of the difference between the member's annualized pay rate at retirement and the highest annualized pay rate for the next higher salary rank.

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.

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
(as of October 1, 2015)**

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
(as of October 1, 2015)**

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 handicap if handicapped), 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 handicap or until marriage if handicapped), 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 upon attainment of age 50. 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
(as of October 1, 2015)**

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
(as of October 1, 2015)**

- 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 Valuation

None affecting calculations.

SECTION C
ACTUARIAL ASSUMPTIONS AND COST METHODS
USED FOR FUNDING

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

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2015)**

A. Mortality

For healthy participants, RP-2000 Combined Healthy Participant Mortality Tables, separate rates for males and females, with Blue Collar Adjustment and projected 15 years from valuation date for pre-retirement mortality and 7 years from valuation date for post-retirement mortality with Scale AA.

For disabled participants, RP-2000 Disabled Mortality Tables, separate rates for males and females, without projection for future mortality improvement.

B. Investment Return

7.90%, 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	2.00%	35	1.25%
25	1.75%	40	1.00%
30	1.50%	45	0.75%

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	0.07%	45	0.58%
25	0.11%	50	0.99%
30	0.16%	55	1.42%
35	0.22%	60	2.00%
40	0.32%	64	2.69%

35% of disabilities are assumed to be non-service incurred - 65% service incurred.

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

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2015)**

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 were reduced by the expected cost of living increase of 2.18% for FYE 2015 and then increased by a 3.00% cost of living increase in FYE 2016 and as shown above thereafter.

G. Payroll Increase Assumption

The aggregate compensation used to compute the accrued liability contribution rate was assumed to increase at a rate of 3.5% per year - not greater than historical 10-year average (3.3% as of October 1, 2015).

H. Loadings for Contingencies

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

I. 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
(as of October 1, 2015)**

J. Retirement

All members are assumed to retire at age 50 with 26.25 years of service, but not later than age 65. 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%	4%
20	25%	5%
21	30%	10%
22	35%	10%
23	40%	20%
24	50%	60%
25	70%	60%
26	100%	100%
More than 26	100%	100%

K. DROP Assumption

80% of all active participants will participate in the DROP.

L. 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
(as of October 1, 2015)**

M. 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 Fund had always been in effect. The normal cost for the Fund 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 Fund 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 Fund.

N. Changes Since Previous Actuarial Valuation

Investment Return was:

7.95%, compounded annually, net of investment expenses.

Employee Withdrawal Rates were:

<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%

Disability Rates were:

55% of disabilities were assumed to be ordinary (non-service incurred) - 45% accidental (service incurred).

Loadings for Contingencies were:

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

Loading for Projected Pensionable Payroll was:

The Projected Base Pay was loaded by 16.00% 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**

**Actuarial Assumptions and Actuarial Cost Methods Used in the Valuation
(as of October 1, 2015)**

N. Changes Since Previous Actuarial Valuation (cont'd)

Retirement Rates were:

All members were assumed to retire at age 50 with 26.25 years of service, but not later than age 65. Retirement was 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%

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

**Assumption Change History
(as of October 1, 2015)**

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
(as of October 1, 2015)**

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 FY 2014 and 2015 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 FY2016.

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

**Assumption Change History
(as of October 1, 2015)**

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.

J. Effective October 1, 2014:

The interest rate used to calculate all liabilities was reduced from 8.00% to 7.95%.

Payroll growth assumption is limited to 10 year average.

K. Effective October 1, 2015:

The interest rate used to calculate all liabilities was decreased from 7.95% to 7.90%.

An experience study was performed on the fund over the 5 year period October 1, 2009 through September 30, 2014 and the following assumptions were changed to more accurately reflect fund experience:

- **Withdrawal Rates:** The withdrawal assumption was updated to reflect the results of the experience study.
- **Disability Incidence:** The disability incidence assumption was changed to 65% service incurred / 35% non-service incurred.
- **The load for compensation and projected pensionable payroll** was replaced with actual pensionable pay.
- **Retirement Rates:** The retirement assumption was updated to reflect the results of the experience study.

GLOSSARY

<i>Actuarial Accrued Liability</i>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<i>Actuarial Assumptions</i>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members and other items.
<i>Actuarial Cost Method</i>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<i>Actuarial Equivalent</i>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<i>Actuarial Present Value</i>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<i>Actuarial Present Value of Future Benefits</i>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<i>Actuarial Valuation</i>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.
<i>Actuarial Value of Assets</i>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution.

<i>Amortization Method</i>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<i>Amortization Payment</i>	That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<i>Amortization Period</i>	The period used in calculating the Amortization Payment.
<i>Annual Required Contribution</i>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.
<i>Closed Amortization Period</i>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<i>Employer Normal Cost</i>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<i>Equivalent Single Amortization Period</i>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<i>Experience Gain/Loss</i>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. Losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<i>Funded Ratio</i>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
<i>GASB</i>	Governmental Accounting Standards Board.

***GASB No. 67 and
GASB No. 68***

These are the governmental accounting standards that set the accounting rules for public retirement plans and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the plans themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement plans.

Normal Cost

The annual cost assigned, under the Actuarial Cost Method, to the current plan year.

Open Amortization Period

An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.

Unfunded Actuarial Accrued Liability

The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.

Valuation Date

The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

**Miami Beach Police and Fire
Section 112.664 DISCLOSURE**

Fiscal Year Ending	Plan Return (net)	Assumed Rate	Plan Allocation			
			Equity	Fixed	Alternatives	Cash
9/30/2015	0.45%	8.00%	54.10%	38.80%	5.40%	1.70%
9/30/2014	9.98%	8.00%	55.50%	36.50%	4.90%	3.10%
9/30/2013	12.80%	8.10%	61.00%	33.00%	3.40%	2.60%
9/30/2012	19.45%	8.20%	56.90%	36.60%	3.30%	3.20%
9/30/2011	-1.04%	8.30%	56.90%	36.80%	3.50%	2.80%
9/30/2010	10.66%	8.40%	56.40%	39.80%	2.90%	0.90%
9/30/2009	1.89%	8.50%	52.10%	43.90%	3.00%	1.00%