Revised January 12, 2011
Actuarial Valuation Report
for the
Employees' Retirement System
of the City of Baltimore

as of June 30, 2010

Produced by Cheiron

January 2011

Table of Contents

January 19, 2011

Board of Trustees
Employees' Retirement System
7 East Redwood Street
12th Floor
Baltimore, Maryland 21202-3470

Dear Members of the Board:

We are pleased to submit the June 30, 2010 revised actuarial valuation of the Employees' Retirement System of the City of Baltimore. **On December 30, 2010, the City sent updated salary figures and asset figures, this report reflects these updates.** This report contains information on System assets, liabilities, and contributions as well as discloses employer contribution levels.

In preparing our report, we relied without audit, on information (some oral and some written) supplied by the System's staff. This information includes, but is not limited to, plan provisions, employee data, and financial information. The actuarial assumptions reflect our understanding of the likely future experience of the Plan and the assumptions as a whole represent our best estimate in cooperation with the Board's views for the future experience of the Plan. The results of this report are only applicable to the System's contribution for Fiscal Year Ending 2012, and rely on future plan experience conforming to the underlying assumptions. To the extent that actual plan experience deviates from the underlying assumptions, the results will vary accordingly.

We hereby certify that, to the best of our knowledge, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board, and that as Members of the American Academy of Actuaries, we meet the Qualification Standards to render the opinion contained in this report.

Sincerely,
Cheiron

Kenneth Kent, FSA, FCA, MAAA
Principal Consulting Actuary

Margaret Tempkin, FSA, MAAA
Consulting Actuary

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FOREWORD

Cheiron is pleased to provide the revised annual actuarial valuation report of the **Employees' Retirement System of the City of Baltimore** as of June 30, 2010. The purpose of this report is to:

1) **measure and disclose**, as of the valuation date, the financial condition of the System,
2) **report** on past and expected financial trends
3) **determine** the recommended contributions for FYE 2012,
4) **define** the variable benefit increase to be applied on January 1, 2011, and
5) **provide specific information** and documentation to support the City's funding obligation and information required by the auditors of the System.

An actuarial valuation establishes and analyzes System assets and liabilities on a consistent basis, and traces the progress of both from one year to the next. It includes measurement of the System's investment performance as well as an analysis of actuarial liability gains and losses. This valuation report is organized as follows:

Section I presents a summary of the valuation and compares this year's results to last year's results.

Section II contains exhibits relating to the valuation of assets.

Section III shows the various measures of liabilities, and required contributions and presents an analysis of the experience gains and losses over the past year and the source of changes to the unfunded actuarial accrued liability.

Section IV develops the City contribution rate determined using actuarial techniques

Section V shows the development of the variable benefit calculation.

The appendices to this report contain a summary of the System's membership at the valuation date, a summary of the major provisions of the System, and the actuarial methods and assumptions used in the valuation.

In preparing our report, we relied without audit, on information (some oral and some written) supplied by the Retirement System's Office. This information includes, but is not limited to, the Plan provisions, employee data, and financial information.

The actuarial assumptions reflect our understanding of the likely future experience of the System and the assumptions as a whole represent our best estimate for the future experience of the System. The results of this report are dependent upon future experience conforming to these assumptions. To the extent that future experience deviates from the actuarial assumptions, the true cost of the Plan could vary from our results.

SECTION I
SUMMARY

The key results of the June 30, 2010 actuarial valuation are as follows:

- The revisions made in this report reflect additional payroll information discovered on audit that should be included as pensionable income and increased the total payroll from $393.2 million to $401.3 million or a net $8.1 million. In addition, updated financial information was provided which added $2.2 million to the total assets at market value from $1,083.0 million to $1,085.2 million. The net cost impact presented in this revised report is an increase in the lump sum cost rate from 19.36% to 19.43% and is estimated to increase the total lump sum cost by $1.86 million.

- Investments earned 11.15% on a market value basis. The expected rate of return is defined by the definition of *regular interest* in the City Code which is 6.8% for participant liability in pay status and 8.0% for all other liabilities. For comparing the actual return we determined a liability weighted expected return (taking the regular interest times a ratio of the respective present value of benefits over the total present value of benefits of the System) which aggregates these two values results in an expected return this year of 7.37%.

- The net investment return during FYE 2010 was above the 6.8% required for an increase in retiree benefits based on investment earnings. However because the variable portion of the cost of living increase is limited by the Consumer Price Index for the year ending June 30, 2010 and that value equals 1.05%, no variable benefit increase is due.

- The actuarial asset value return was 1.16%, which produced a net loss of $83.7 million to the fund this year.

- The unfunded actuarial liability increased from $300.7 million on June 30, 2009 to $439.7 million on June 30, 2010, primarily due to an assumption change and the investment experience on actuarial asset value which continues to take into account the 2008 market decline. The Plan had a large loss in the actuarial liability from 2009 to 2010, mostly attributable to the cost of living adjustment assumption being increased from a fixed 1.5% at all ages to 1.5% increase for participants in pay status under age 65 and 2.0% for participants in pay status age 65 and over. This change, which increased the actuarial liabilities by $53 million, was made in compliance with the provisions of the Code that stimulate the guaranteed cost of living adjustment will match those provided under the Fire and Police Employees Retirement System. Gains and losses are presented in detail in Section III.

- The total recommended contribution increased by 25% from $62,374,397 for FYE 2011 to $77,995,002 for FYE 2012 as a reflection of the prior years experience and increased unfunded actuarial liability (UAL) as of June 30, 2010. This represents a projected increase in cost as a percent of pay from 15.67% to 19.43%. The City's portion net of Detention Services and Department of Education of the FYE 2012 is $66,896,066 compared to $53,082,715 for FYE 2011. The School Board will contribute for Department of Education participants, and the State will contribute for Detention Services participants.

SECTION I
SUMMARY

- This year's valuation for the Department of Education reflects a small increase in the number of active participants that will be covered under the City's plan from 1,787 in 2009 to 1,801 in 2010.

- The short term strategy of managing the market decline are to make no other changes allowing the City to manage the significant cost impact, however, the long term implication may call for review of the historic funding policy. The current policy provides for the unfunded actuarial liability to be re-amortized over 20 years each year which doesn't explicitly result in paying down the full unfunded. An alternative approach would include an ultimate full funding target date.

SECTION I
SUMMARY

The tables below provide details on the development of the FYE 2012 contribution results, unfunded actuarial liabilities, and statistics on Plan membership.

VALUATION SUMMARY

	2009 Valuation Applies to FYE 2011			2010 Valuation Applies to FYE 2012		
1 CONTRIBUTIONS		**Amount**	**% of Pay**		**Amount**	**% of Pay**
Total Normal Cost	$	31,932,146	8.02%	$	33,379,561	8.32%
Expected Employee Contributions		27,692	0.01%		18,154	0.00%
Normal Cost	$	31,904,454	8.02%	$	33,361,407	8.31%
Allocation from 6/30/2000 excess earnings to pay Ordinance 01-189 normal cost	$	(2,511,324)	-0.63%	$	(2,611,777)	-0.65%
Amortization of unfunded actuarial liability	$	28,360,941	7.13%	$	41,467,965	10.33%
Interest to beginning of next FY	$	4,620,326	1.16%	$	5,777,407	1.44%
Total lump sum cost	$	62,374,397	15.67%	$	77,995,002	19.43%
2 UNFUNDED LIABILITIES						
Actuarial Liablity						
Active	$	644,434,000		$	679,595,438	
Retirees and dependents		1,039,839,384			1,103,746,648	
Terminated vested		40,657,298			46,882,433	
Total	$	1,724,930,682		$	1,830,224,519	
Less: Actuarial value of assets	$	1,424,202,644		$	1,390,514,840	
Unfunded actuarial liability	$	300,728,038		$	439,709,679	

SECTION I
SUMMARY

The following tables summarize changes in plan membership over the past year.

ACTIVE MEMBERSHIP SUMMARY

	Active Members			Payroll		
	2009	2010	% increase	2009	2010	% increase
Class A	51	42	-17.65%	$ 2,041,734	$ 1,715,825	-15.96%
Class C	9,668	9,638	-0.31%	395,967,729	399,613,155	0.92%
Total	9,719	9,680	-0.40%	$ 398,009,463	$ 401,328,980	0.83%
Average				$ 40,952	$ 41,460	1.24%

INACTIVE MEMBERSHIP SUMMARY

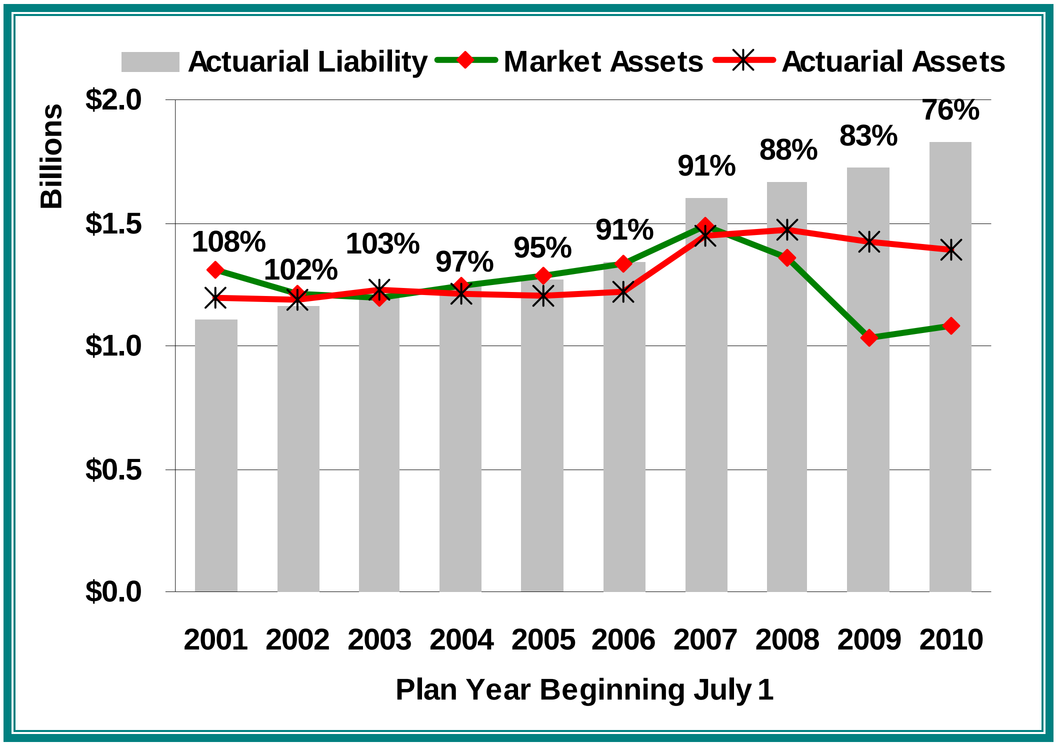
	Number of Retirees			Average Annual Benefit Amount		
	2009	2010	% increase	2009	2010	% increase
Normal Service Retirement	5,422	5,455	0.6%	$ 13,323	$ 13,794	3.5%
Discontinued Service	941	951	1.1%	17,228	17,583	2.1%
Ordinary Disability	795	801	0.8%	7,941	8,200	3.3%
Accidental Disability	81	78	-3.7%	18,220	18,578	2.0%
Social Security Equalization	12	12	0.0%	5,833	5,921	1.5%
Beneficiaries of Above	1,231	1,215	-1.3%	6,504	6,757	3.9%
Ordinary Death	111	105	-5.4%	10,070	10,066	0.0%
Special Death	25	20	-20.0%	19,496	20,673	6.0%
Total	**8,618**	**8,637**	**0.2%**	**$ 12,291**	**$ 12,705**	**3.4%**

SECTION I
SUMMARY

Historical Trends

It is important to take a step back from these latest results and view them in the context of the System's recent history. Below we present a series of charts which display key factors in the valuations of the last ten years.

Assets and Liabilities

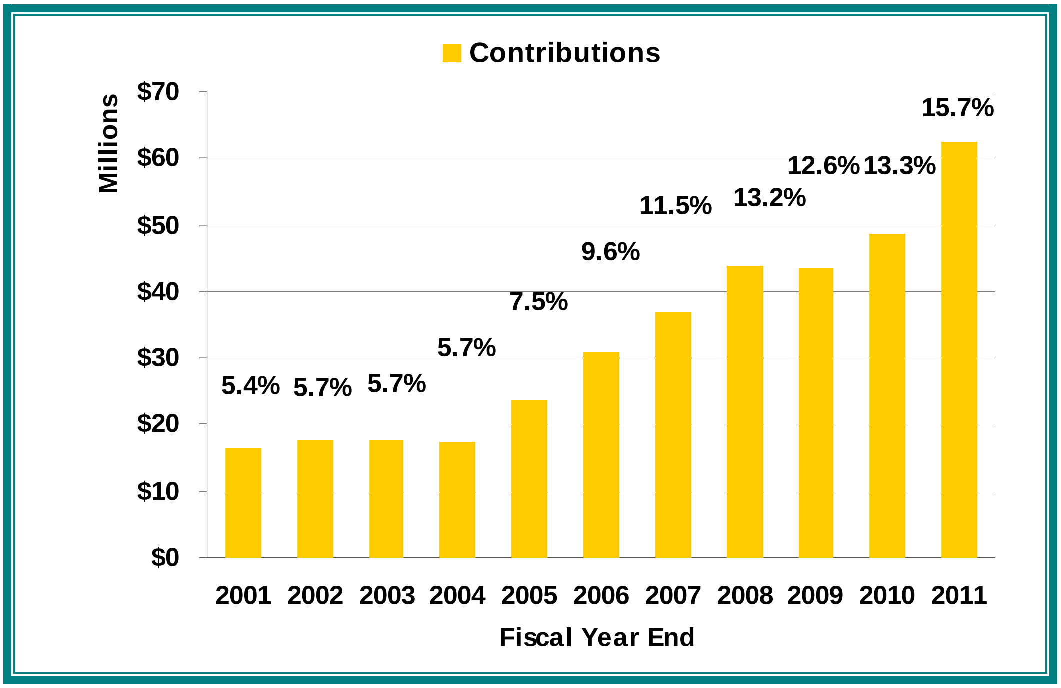


The bars represent the liability measured in this report. For funding purposes, the target amount is represented by the percent on top of the bar. We compare the actuarial assets to this measure of liability in developing the funded percent. These are the percentages shown in the graph along the top of each bar. As you can see, the System had its highest funded percentage (108%) at July 1, 2001, just prior to the impact of the first market decline in 2000 through 2002 which resulted in the lower funded rates through 2002 through 2006 as a function of the asset smoothing method deferring recognition of investment losses. A similar but more dramatic slow recovery is anticipated from the market decline impacting the 2008/2009 time period.

SECTION I
SUMMARY

Contribution Rates

This graph shows the actual contributions made in dollars and the actuarially calculated City contribution rate, denominated as a percent of payroll at time of calculation.



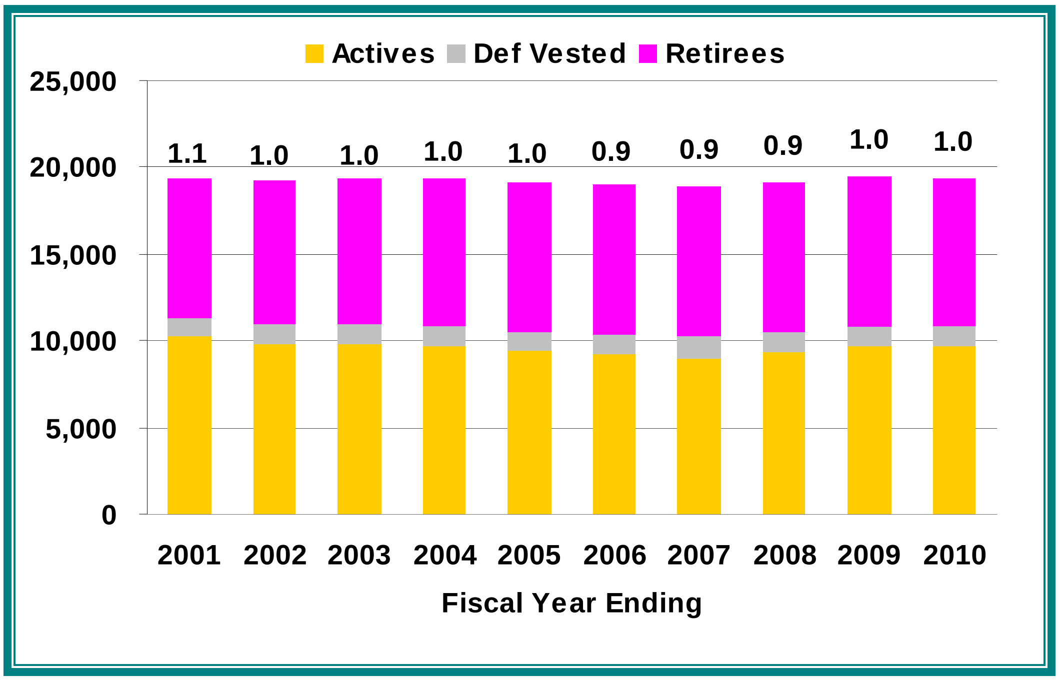
The higher costs in recent years are a reflection of an increasing unfunded actuarial liability. Under the funding method each year the unfunded actuarial liability is amortized on a fresh-start basis over 20 years.

SECTION I
SUMMARY

Participant Trends

As with many public employer pension funds in this country, the ratio of active to retired members is at or below one, this represents the System's maturity.

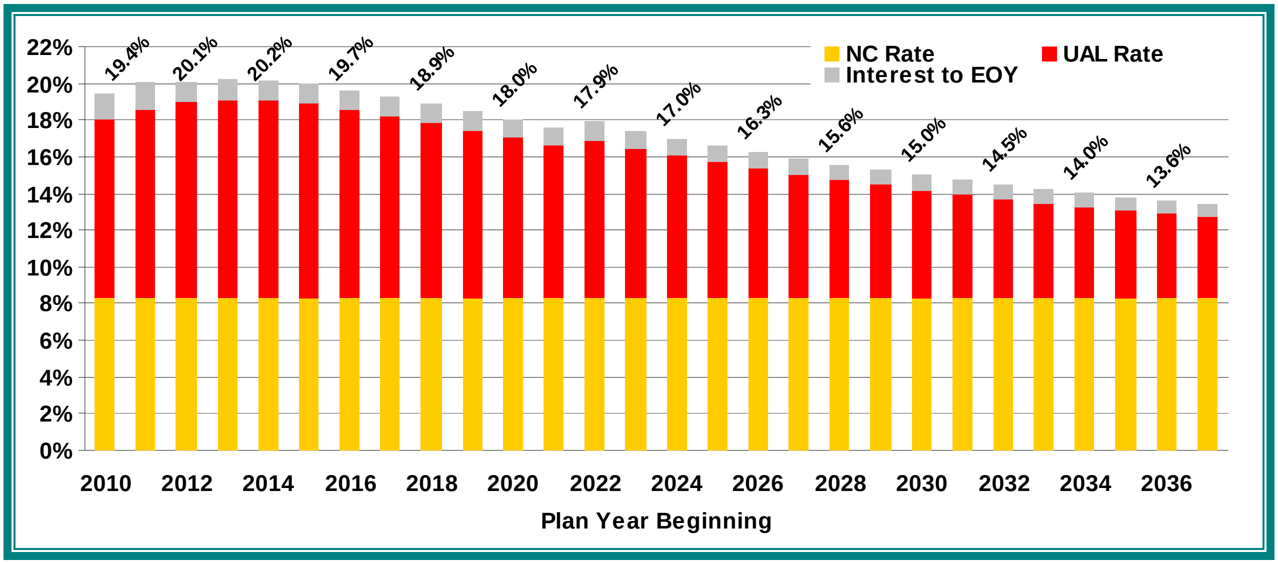
The following chart shows that the number of actives covered by the Plan has remained relatively stable over the nine year period. The ratio of active to inactive participants has now risen to one. This trend may be due to the economic environment that less active participants are retiring when first eligible. The implications of this ratio of one active for each inactive participant is that the unfunded liabilities, which represent the System overall, is funded as a percent of payroll.



SECTION I
SUMMARY

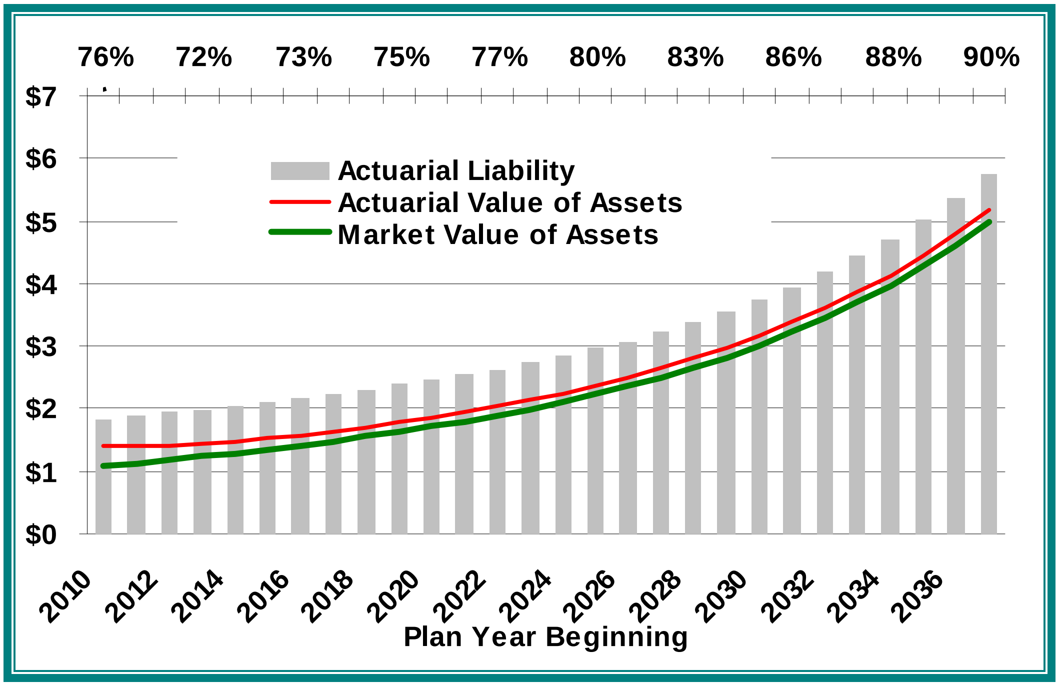
Base Line Projections

The charts on this page show the expected progress of the System's funding status over the next 25 years measured in terms of the City's contribution rate and the funding ratio assuming the long-term return rate of 8.0%. The first chart below shows that the City's composite contribution rate is projected to first increase as the balance of the 2008/2009 investment loss gets included in the actuarial asset value and then decline as a percent of payroll as the unfunded actuarial liability (UAL) gets paid down over time, if all actuarial assumptions are met, including the 8.0% anticipated investment return assumption. The increase in the UAL in year 2022 is due to ending of the ordinance 01-189 normal cost adjustment.



SECTION I
SUMMARY

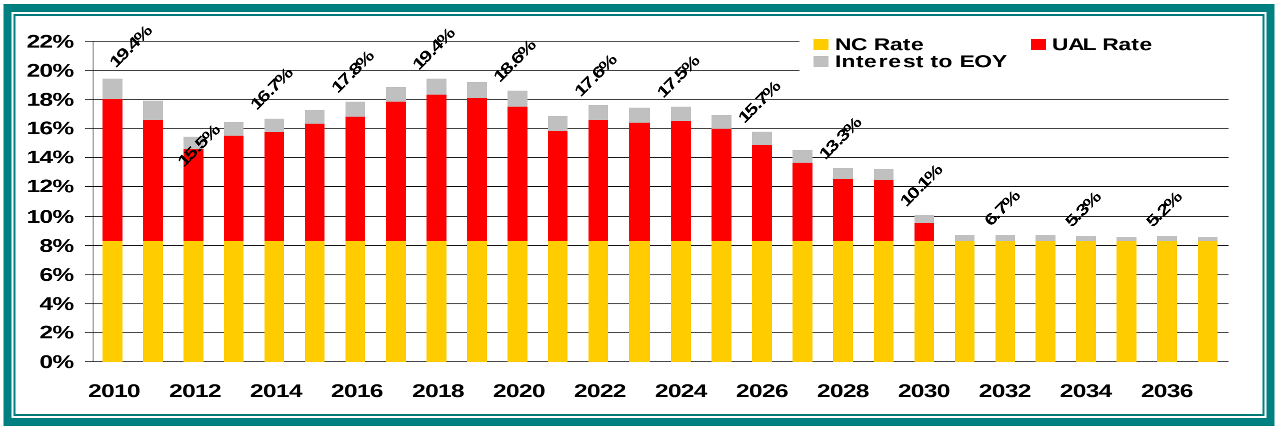
The next chart compares Assets and Liabilities and shows that if all actuarial assumptions are exactly met, the Plan's funded ratio shown along the top of the graph is projected to first decline again due to the asset smoothing and then improves gradually from the current level of 76% to 90% funding in 27 years.



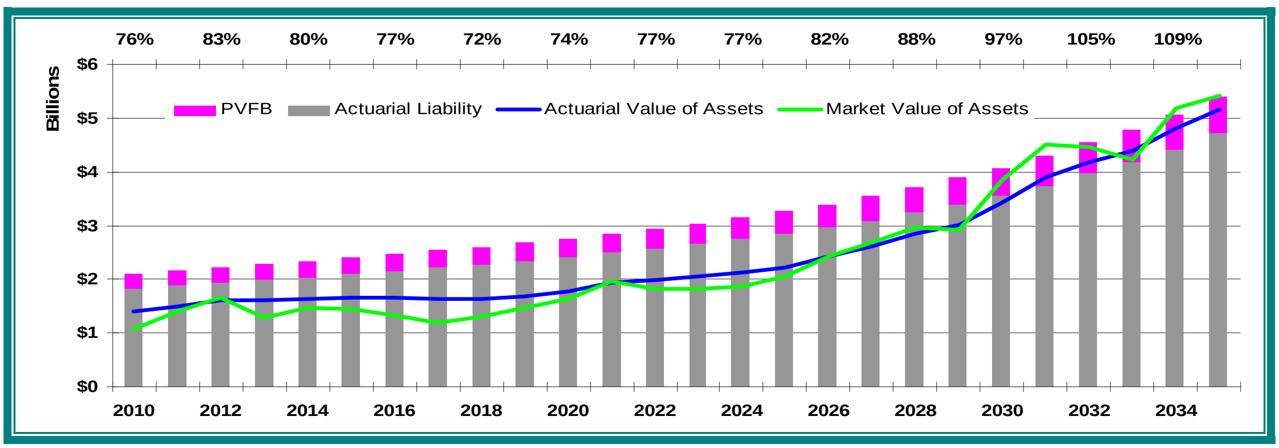
This pattern of gradual funded status improvement is a function of the funding policy to re-amortize the UAL over 20 years. Historically, prior to the two significant market declines, the City has contributed sufficient funds to keep the fund funded at 100%. It may be appropriate to consider an alternative funding policy to achieve this objective over a shorter period than the projections reflect.

SECTION I
SUMMARY

The next two graphs show the same information as above but reflect the fact that the 8.0% investment return is not likely to actually occur each year. Starting with actual investment return history from 1935 forward we illustrate the potential of a projection if history repeats itself as follows.



That period of historic returns could result in a projection of future funded ratios that could look like this:



These illustrations are based on the following projected return assumption.

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
32.40%	23.12%	-19.92%	21.10%	1.36%	-4.52%	-5.88%	13.22%	16.66%	13.70%	23.48%	-4.18%	2.50%

2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
4.94%	12.60%	19.86%	13.32%	12.44%	0.76%	33.72%	19.16%	1.24%	-3.00%	25.16%	6.80%	3.94%

This illustrates a more realistic view of the potential volatility of the System and serves to assist the Board in understanding the long-term implications of the funding and funded status risks from market volatility.

SECTION II
ASSETS

The assets below are based on unaudited financial data furnished by the Retirement System's Office. The change in market value of assets during the valuation year ending June 30, 2010 is summarized below.

ASSETS OF THE PLAN AS OF JUNE 30, 2010

		Total Market Value
Fund Balance on 06/30/2009	$	1,036,413,237
Transfers		-
Adjusted Fund Balance on 06/30/2009	$	1,036,413,237
Contributions		
Member	$	215,669
City/State	$	48,748,397
Net Investment Income		
Interest, Dividends, and Realized Captial Gains	$	26,318,245
Unrealized Gains (Losses)		91,458,311
Expenses		(5,728,212)
Total Investment Income	$	112,048,344
Aministrative Expenses	$	(3,061,461)
Payments of Benefit & Refunds	$	(109,172,838)
Fund Balance on 06/30/2010	$	1,085,191,347
Transfers	$	-
Adjusted Fund Balance on 06/30/2010	$	1,085,191,347

SECTION II
ASSETS

The chart below shows the calculation of investment gains and losses. On market value the fund earned an 11.15% return amounting to total investment income of $112,048,344 during FY 2009-2010. Because the liabilities are valued using different discount rates, we allocate this return over net actuarial liabilities of actives and inactives separately. The investment gain on a market basis related to the inactive liabilities using the expected return rate of 6.8% was $43.7 million. The investment gain on a market basis related to the active liabilities using the expected return rate of 8.0% was $31.7 million. Combining these two gains in relation to the portion of funds in each group, results in a net System asset gain over the assumptions on a market value basis of $38.0 million.

Development of Investment Gain / (Loss)	
1. Mean assets (see Section IV)	$ 1,004,778,120
2. Investment return (see Section IV)	11.1516%
3. Investment gain / (loss)	
a. Relative to 6.80%: [(2) - 6.80%]x(1)	$ 43,723,925
b. Relative to 8.00%: [(2) - 8.00%]x(1)	$ 31,666,587
4. Funds as a portion of market value of assets	
a. Retired PVFB/Total PVFB	0.52603
b. (Total PVFB - Retired PVFB)/Total PVFB	0.47397
c. Total: (a) + (b)	1.00000
5. Total investment gain / (loss)	
a. Retired: (3a) x (4a)	$ 23,000,207
b. Active: (3b) x (4b)	$ 15,008,932
c. Total: (a) + (b)	$ 38,009,139

The investment gains for FYE 2010 are taken together with past experience to determine an actuarial asset value for determining the City's contribution obligations.

SECTION II
ASSETS

The chart below shows the development of the unallocated earnings which represent the earnings above and below the valuation interest assumption. The excess earnings are calculated by the "asset averaging method" from Article 22(7) (b) of the Baltimore City Code. This method uses one-fifth of the excess earnings for the year to adjust the unfunded actuarial liability in the current year. The other four-fifths of the excess earnings is used to smooth investment experience, and occasionally has been used for purposes such as benefit improvements, contribution reductions and changes in actuarial assumptions when positive. The net unallocated excess/(deficit) earnings are $(266,912,265) at June 30, 2010. This net deficit is gradually recognized in the future actuarial value of assets and impacts future contributions to the System. However, future investment gains/(losses) may ameliorate/(exacerbate) this recognition.

Development of Unallocated Earnings

The development of current unallocated excess/(deficit) earnings over the most recent two years is as follows:

	Valuation Date	
	6/30/2009	6/30/2010
1. Remaining net excess earnings from prior valuation	$(102,255,349)	$ (363,740,454)
2. New investment gain (loss)	(352,420,218)	38,009,139
3. Current net excess earnings (1. + 2.)	$(454,675,567)	$ (325,731,315)
4. Variable benefit funds	-	(7,909,017)
5. One-fifth (credit) charge (3. + 4.)/5.	90,935,113	66,728,066
6. Net unallocated excess/(deficit) earnings (3. + 4. + 5.)	$(363,740,454)	$ (266,912,265)

SECTION II
ASSETS

The chart below shows the calculation of the actuarial value of assets. The assets are smoothed using the unallocated earnings calculation. One additional item is included in the actuarial value of assets which is the Normal Cost Reserve from Plan Changes.

Actuarial Value of Assets

The actuarial value of assets used to calculate the unfunded actuarial liability is developed as follows:

1. Assets in the Fund on 6/30/2010	$ 1,085,191,347	
2. Net deferred recognition of unallocated excess/(deficit) earnings	$ (266,912,265)	
3. Normal Cost Reserve from Plan Change	$ (23,963,169)	*
4. Present value of prior year's contributions not yet paid	$ 62,374,397	
5. Actuarial value of assets on 6/30/2010 (1.- 2. + 3. + 4.)	$ 1,390,514,840	**

* A reserve from the 6/30/2000 accumulated net excess earnings was established to pay the assumed increase in normal cost due to the ordinance 01-189 improvements.

** The Actuarial value of assets represents 128.1% of the maret value which is down from the same measurement least year of 137.4%.

On an actuarial asset value the results are below expectation with an investment return for the year of 1.16% which is compared to the liability weighted expected return of 7.37% (based on an 8% return for active participants and 6.8% return for non-active participants). This is due to the continued gradual recognition of the 2008/2009 investment losses.

SECTION II
ASSETS

The chart below shows the schedule of the Normal Cost Reserve from Plan Changes. This schedule was established during the 2001 valuation year as a means of funding a benefit enhancement by reserving the full amount of the cost at a time when the actuarial asset value exceeded the liabilities. The Normal Cost Reserve, which reflects the unamortized balance, is taken out of the actuarial value of assets until valuation year 2021, at which time, the Plan Changes will be fully amortized.

Normal Cost Reserve from Plan Change

June 30,	Additional Normal Cost	Normal Cost Reserve
2001	$ 1,835,000	$ 26,256,000
2002	1,908,400	26,374,680
2003	1,984,736	26,423,582
2004	2,064,125	26,393,954
2005	2,146,690	26,276,215
2006	2,232,558	26,059,887
2007	2,321,860	25,733,516
2008	2,414,734	25,284,589
2009	2,511,324	24,699,443
2010	2,611,777	23,963,169
2011	2,716,248	23,059,504
2012	2,824,898	21,970,716
2013	2,937,893	20,677,484
2014	3,055,409	19,158,758
2015	3,177,626	17,391,617
2016	3,304,731	15,351,110
2017	3,436,920	13,010,090
2018	3,574,397	10,339,024
2019	3,717,373	7,305,797
2020	3,866,067	3,875,499
2021	4,020,710	10,186

SECTION III
LIABILITIES AND EXPERIENCE GAINS/(LOSSES)

The table below presents the actuarial liabilities by membership status and employer; then allocates the assets in proportion to each employer's liabilities, to produce the unfunded actuarial liability by employer. On the following page, this unfunded liability is amortized over twenty years, and that amount is then added to the Net Normal Cost (cost to cover the upcoming year's expected accruals less member contributions) to produce the recommended employer contributions.

Liability By Employee Group

	As of June 30, 2010			
	Dept of Education	**Detention Services**	**All Others**	**Total**
Number of Participants				
Active	1,801	15	7,864	9,680
Service retired				6,416
Disabled				881
Terminated vested				1,094
Dependents				1,340
Total Participants				19,411
Annual compensation of active participants	$ 66,165,521	$ 884,976	$ 334,278,483	$ 401,328,980
Average Age	49.34	58.27	48.85	48.96
Average Service	11.43	29.41	13.66	13.27
Development of Unfunded Actuarial Laibility				
Actuarial Liability				
Active	$ 82,739,845	$ 3,881,499	$ 592,974,094	$ 679,595,438
Retirees and dependents				1,103,746,648
Terminated vested				46,882,433
Total liabilities				$ 1,830,224,519
Actuarial value of assets				
Actives	$ 29,205,774	$ 1,370,104	$ 209,309,882	$ 239,885,759
Retirees and dependents				1,103,746,648
Terminated vested				46,882,433
Total assets				$ 1,390,514,840
Unfunded actuarial liability *	$ 53,534,071	$ 2,511,395	$ 383,664,212	$ 439,709,679

* *Unfunded actuarial liability was allocated in proportion to each employee group actuarial active liability.*

SECTION III
LIABILITIES AND EXPERIENCE GAINS/(LOSSES)

The table below presents the change in actuarial liabilities during the plan year. In general, the unfunded actuarial liability (UAL) of any retirement system is expected to change at each subsequent valuation for a variety of reasons. In each valuation, we report on those elements of change in the UAL which are of particular significance, potentially affecting the long-term financial outlook of the System. Below we present key changes in liabilities and assets since the last valuation.

Development of 2010 Experience Gain/(Loss)

	Actuarial Liability	Actuarial Value of Assets	Unfunded Actuarial Liability
1. Value as of June 30, 2009	**$ 1,724,930,682**	**$ 1,424,202,644**	**$ 300,728,038**
a.) Actives at (8%)	$ 644,434,000		
b.) Inactives and TV at (6.8%)	$ 1,080,496,682		
2. Additions			
a.) Normal Cost	$ 31,904,454		$ 31,904,454
b.) Expected Employer Contributions		$ 48,748,396	$ (48,748,396)
c.) Expected Member Contributions		$ 39,334	$ (39,334)
3. Decreases			
a.) Benefits and Expenses	$ (109,172,838)	$ (112,234,299)	$ 3,061,461
4. Expected Interest			
a.) On 1 for one year	$ 125,028,494	$ 113,936,211	$ 11,092,283
b.) On 2a for one year	$ 2,552,356	$ -	$ 2,552,356
c.) On 2b for one year*	$ -	$ 3,899,872	$ (3,899,872)
d.) On 2c for 1/2 year	$ -	$ 1,543	$ (1,543)
e.) On 3a for 1/2 year	$ (3,650,833)	$ (4,403,006)	$ 752,173
5. Expected Value June 30, 2010: (sum 1-4)	**$ 1,771,592,315**	**$ 1,474,190,695**	**$ 297,401,621**
6. Change in methods/assumptions	**$ 53,012,391**	**$ -**	**$ 53,012,391**
7. Change in benefits	**$ -**	**$ -**	$ -
8. Expected value after changes: sum (5-7)	**$ 1,824,604,706**	**$ 1,474,190,695**	**$ 350,414,011**
9. Actual Value as of June 30, 2010	**$ 1,830,224,519**	**$ 1,390,514,840**	**$ 439,709,679**
10. Actuarial (Gain)/Loss: (8 -9)	**$ 5,619,813**	**$ 83,675,854**	**$ 89,295,667**
11. Total (Gain)/Loss: (6 + 7 + 10)	**$ 58,632,204**	**$ 83,675,854**	**$ 142,308,058**

* Assumes contributions made at year end.

SECTION III
LIABILITIES AND EXPERIENCE GAINS/(LOSSES)

Development of 2010 Experience Gain/(Loss)	
1. Unfunded Actuarial Liability at 6/30/2009	$ 300,728,038
2. Addiitions (normal cost and contribution)	(16,883,276)
3. Decrease (benefits and expenses)	3,061,461
4. Interest accrued*	10,495,397
5. Expected Unfunded Actuarial Liability at 6/30/2010 (1. + 2. + 3. + 4.)	$ 297,401,621
6. Actual Unfunded Actuarial Liability at 6/30/2010	$ 439,709,679
7. Total Gain/(Loss) at 6/30/2010 (5. - 6.)	$ (142,308,058)

Elements of Actuarial Assets - Gain/(Loss)	
1. Change in unallocated earnings-Gain/(Loss)	$ (96,828,188)
2. Change in Normal Cost Reserve-Gain/(Loss)	736,274
3. Asset Return-Gain/(Loss)	12,416,060
4. Total Actuarial Assets-Gain/(Loss) (1. + 2. + 3.)	$ (83,675,854)

Elements of Actuarial Liability - Gain/(Loss)	
1. Age and Service Retirements-Gain/(Loss)	$ (10,285,269)
2. Disability Retirements-Gain/(Loss)	(4,597,919)
3. Death in Service Benefits-Gain/(Loss)	(2,717,853)
4. Withdrawal from Employment-Gain/(Loss)	(5,783,134)
5. Pay Increases-Gain/(Loss)	14,979,132
6. Death after Retirement-Gain/(Loss)	7,553,690
7. New Entrants-Gain/(Loss)	(2,509,606)
8. Assumption Changes-Gain/(Loss)	(53,012,391)
9. Other-Gain/(Loss)	(2,258,854)
10. Total Actuarial Liability-Gain/(Loss) (sum 1. to 9.)	$ (58,632,204)

* Interest rate depends on active versus inactive.

SECTION IV
CONTRIBUTIONS

This table presents the components that make up the costs by employer including the normal cost reflective of the value of the benefits earned during the year, employee contributions for members under Class A membership, the proportional shares of the amortization cost to pay off the unfunded actuarial liability and the special credit normal cost defined in Ordinance 01-189, all brought forward with interest for the one year delay in funding to the next fiscal year beginning.

Contribution Summary

	As of June 30, 2010				
	Dept of Education	Detention Services	All Others	Total	% Payroll
Total Normal Cost	$ 5,222,212	$ 109,041	$ 28,048,308	$ 33,379,561	8.32%
Expected Employee Contributions	7,076	-	11,078	18,154	0.00%
Net Normal Cost	$ 5,215,136	$ 109,041	$ 28,037,230	$ 33,361,407	8.31%
Twenty-year amortization of Unfunded Actuarial Liability	5,048,670	236,844	36,182,451	41,467,965	10.33%
Allocation from 6/30/2000 excess earnings to pay Ordinance 01-189 normal cost	(317,980)	(14,917)	(2,278,879)	(2,611,777)	-0.65%
Net plan cost at 7/1/2010	$ 9,945,826	$ 330,968	$ 61,940,802	$ 72,217,595	17.99%
Interest to 7/1/2011	795,666	26,477	4,955,264	5,777,407	1.44%
Net plan cost at 7/1/2011	$ 10,741,492	$ 357,445	$ 66,896,066	$ 77,995,002	19.43%

SECTION V
VARIABLE BENEFIT

Below is the development of the variable benefit. The amended retirement ordinance provides for an automatic increase in benefits to certain retirees and beneficiaries of 1.5%, plus whenever the market value investment performance exceeds 6.8% an additional variable benefit increase is granted up to the CPI (Consumer Price Index) for the year. During FYE 2010, the Fund earned 11.15% on a market value basis. The CPI for the year ending June 30, 2010 is 1.05%. The net variable benefit subject to the limitation of the CPI is therefore 0.00% (1.05% - 1.50% but not less than zero) Therefore, no an additional benefit increase will be granted in addition to the guaranteed 1.50% cost of living adjustment.

Variable Increase Calculation		
1. Market Value of assets as of 6/30/2009	$	1,036,413,237
2. Market Value of assets as of 6/30/2010	$	1,085,191,347
3. Earnings during 7/30/2009 to 6/30/2010 (including expenses)	$	112,048,344
4. Mean Assets Half of [1. + 2. - 3.]	$	1,004,778,120
5. Investment return 2009-2010 (3. divided by 4.)		11.15%
6. Earnings between 6.8% and 8.0% (Excess of (5.) over 6.8%, but not more than 1.2%) divided by (5.) times (3.)	$	12,057,284
7. Present Value of Retires and Beneficiaries on 6/30/2010	$	1,103,746,648
8. Total Present Value of Benefits on 6/30/2010	$	2,098,247,885
9. Present Value of Future Normal Cost on 6/30/2010	$	268,023,366
10. Market Value of Assets on 6/30/2010	$	1,085,191,347
11. Retired Life Portion of Market Value of Assets on 6/30/2010	$	711,834,962
12. Assets available for Variable Increase [(6.) times (11. divided by 10.)]	$	7,909,017
13. Cost to provide each additional 1%	$	10,319,894
14. Compound Increase [12. ÷ 13.] x 1%		0.77%
15. Consumer Price Index for year ending 6/302010		1.05%
16. Net maximum variable increase (CPI - 1.5% [guraranteed COLA])		0.00%
17. Net allowable variable increase cost of living adjustment		0.00%
18. Current accumulated Earning Increase Account	$	-
19. Addition/(subtraction) to Earnings Increase Account	$	7,909,017
20. Net carryover Earnings Increase Account	$	7,909,017

The variable benefit increase is applied to members with benefits in payment on June 30, 2009.

APPENDIX A
PLAN MEMBERSHIP

The data for this valuation was provided electronically in Excel and text formats by the Retirement System Office. Cheiron did not audit any of the data. The data for active and inactive participants is as of June 30, 2010. Where data elements were missing, dates of hire, dates of birth, and benefit accrual level assumptions were made to fill-in the blanks. The assumed values are included in Appendix B.

The following pages contain a summary of the data provided.

- Reconciliation of active members as of June 30, 2010
- Reconciliation of terminated vested members as of June 30, 2010
- Reconciliation of retirees and beneficiaries as of June 30, 2010
- Age/service and age/salary/service distribution for active members as of June 30, 2010
- Counts and average benefit amount by age for retirees, beneficiaries and disabled members as of June 30, 2010

APPENDIX A
PLAN MEMBERSHIP

Reconciliation of Active ERS Members

		Class A	Class C	Total
A. Active Members as of June 30, 2009		**51**	**9,668**	**9,719**
B. Exits:				
1. Terminations:	Non-vested	0	291	291
	Vested	0	71	71
2. Transfers Out				
3. Leaves:	Military	0	0	0
	Other	0	9	9
4. Prior Incorrect inclusions				
5. Deaths:	Ordinary with no Survivor	0	21	21
	Accidental with Survivor	0	0	0
	Ordinary with Survivor	0	3	3
6. Retirements:	Service	8	252	260
7. Disablements:	Ordinary	0	43	43
	Accidental	0	0	0
	Accidental - Special	0	0	0
	Pending	0	0	0
8. Other Exits:		1	2	3
9. Subtotal (all exits):		9	692	701
C. Remaining Active (A. - B.9)		**42**	**8,976**	**9,018**
D. Entrances:				
1. New Entrants		0	623	623
2. Prior Omissions		0	35	35
3. Transfers In		0	0	0
4. Restorations:	Pending	0	0	0
	Leave	0	0	0
	Retirement	0	0	0
	Disability - Ordinary	0	0	0
	Disability - Special	0	0	0
	Other Termination	0	4	4
5. Subtotal (all entrances):		0	662	662
E. Active Members as of June 30, 2010 (C. + D.5)		**42**	**9,638**	**9,680**
F. Members included in the valuation as of June 20, 2010 (E. + Pending Disablements in B.7)		**42**	**9,638**	**9,680**

APPENDIX A
PLAN MEMBERSHIP

Reconciliation of Terminated Vested ERS Members

A. Terminated Vested Members as of June 30, 2009	**1,110**
B. Exits:	
1. Retirements	58
2. Restorations	4
3. Transfers Out of State Plan	0
4. Prior Incorrect Inclusions	5
5. Deaths	1
6. Lump Sum Payment	18
7. Other Exits	1
8. Subtotal (all exits):	87
C. Remaining Terminated Vested (A. - B.7)	**1,023**
D. Entrances:	
1. New Entrants	71
2. Prior Omissions	0
3. Subtotal (all entrances)	71
E. Terminated Vested as of June 30, 2010	**1,094**

APPENDIX A
PLAN MEMBERSHIP

Reconciliation of Retired ERS Members and their Beneficiaries

	Retired		Disabled		
	Primary	Beneficiary	Primary	Beneficiary	Total
A. Members as of June 30, 2009	**6,375**	**1,125**	**876**	**242**	**8,618**
B. Exits:					
1. Beneficiary Payments Ceased	0	0	0	0	0
2. Returned to Active Membership	0	0	0	0	0
3. Prior Incorrect Inclusion	0	0	0	0	0
4. Deaths: Primary with no Survivor	194	0	23	0	217
Beneficiary	0	111	0	28	139
Primary with Survivor	80	0	18	0	98
5. Subtotal (all exits):	274	111	41	28	454
C. Remaining Members (A - B.5)	**6,101**	**1,014**	**835**	**214**	**8,164**
Adjustments					
Adjusted Remaining Members	**6,101**	**1,014**	**835**	**214**	**8,164**
D. Entrances:					
1. New Retirements: Primary	254	0	43	0	297
2. Retired from Terminated Vested	57	0	0	0	57
3. Active Death: Beneficiary	0	3	0	0	3
4. Beneficiary Assumes Payments	0	80	0	20	100
5. Prior Omissions	4	9	3	0	16
6. Ex-Spouse Receiving Payments	0	0	0	0	0
7. Subtotal (all entrances):	315	92	46	20	473
E. Members as of June 30, 2010 (C + D.7)	**6,416**	**1,106**	**881**	**234**	**8,637**

APPENDIX A
PLAN MEMBERSHIP

AGE/SERVICE DISTRIBUTION OF ACTIVE PARTICIPANTS

ACTIVE PARTICIPANTS AS OF JUNE 30, 2010

	COMPLETED YEARS OF CREDITED SERVICE									
AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	Total
Under 25	113	1	0	0	0	0	0	0	0	114
25-29	361	89	0	0	0	0	0	0	0	450
30-34	441	201	43	1	0	0	0	0	0	686
35-39	332	267	152	38	0	0	0	0	0	789
40-44	385	285	198	90	103	2	0	0	0	1,063
45-49	352	338	241	151	287	90	4	0	0	1,463
50-54	275	296	316	169	370	281	117	0	0	1,824
55-59	215	224	201	125	289	219	256	89	1	1,619
60-64	139	132	149	73	175	144	150	121	35	1,118
65-69	40	51	55	46	56	39	41	23	22	373
70 & Up	22	33	21	12	27	19	24	13	10	181
Total	2,675	1,917	1,376	705	1,307	794	592	246	68	**9,680**

Average Age = 48.96 Average Service = 13.27

APPENDIX A
PLAN MEMBERSHIP

AGE/SERVICE DISTRIBUTION OF ACTIVE PARTICIPANTS

ACTIVE PARTICIPANTS AS OF JUNE 30, 2010

	AVERAGE EARNINGS									
AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40 & Up	Total
Under 25	$ 26,853	$ 38,970	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 26,960
25-29	34,041	33,834	0	0	0	0	0	0	0	34,000
30-34	40,275	41,573	34,716	39,761	0	0	0	0	0	40,306
35-39	40,810	44,211	43,091	42,500	0	0	0	0	0	42,482
40-44	38,546	39,325	41,495	46,793	44,581	35,401	0	0	0	40,581
45-49	38,862	37,482	39,058	44,381	46,108	45,950	37,810	0	0	41,000
50-54	37,316	35,556	35,887	40,952	44,310	50,109	51,592	0	0	41,425
55-59	37,390	42,723	36,674	43,062	43,202	48,397	51,863	49,118	56,623	43,949
60-64	42,017	36,145	41,832	40,039	48,075	48,622	50,663	50,866	47,389	45,255
65-69	37,296	35,088	36,474	37,252	40,404	51,968	41,522	46,766	44,326	40,331
70 & Up	25,929	31,313	26,132	26,699	41,645	45,612	36,580	42,625	42,057	34,898
Total	$ 37,891	$ 39,007	$ 38,642	$ 42,309	$ 44,763	$ 48,842	$ 50,075	$ 49,415	$ 45,750	$ 41,460

Total Earnings = $ 401,328,982 Average Earnings = $ 41,460

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APPENDIX A
PLAN MEMBERSHIP

Schedule of Benefit Recipients by Attained Age and Type of Retirement - ERS
June 30, 2010 - Primary Members

	TYPE OF RETIREMENT					
AGE	NR	ER	DS	ODis	ADis	Total
Under 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	2	0	2
30-34	0	0	0	10	0	10
35-39	0	0	1	17	0	18
40-44	3	0	21	54	1	79
45-49	38	0	84	129	6	257
50-54	229	182	168	150	10	739
55-59	447	354	181	143	7	1,132
60-64	638	384	147	124	9	1,302
65-69	564	355	133	76	11	1,139
70-74	485	377	112	47	15	1,036
75-79	470	228	69	27	10	804
80-84	355	128	33	15	6	537
85 & Up	195	35	2	7	3	242
Total	3,424	2,043	951	801	78	**7,297**
Average Annual Benefit	$ 18,330	$ 6,144	$ 17,583	$ 8,200	$ 18,578	$ 13,712

NR - Service Retirement
ER - Early Retirement
DS - Discontinued Service
ODis - Ordinary Disability
ADis - Accidental Disability

APPENDIX A
PLAN MEMBERSHIP

Schedule of Benefit Recipients by Attained Age and Type of Retirement - ERS
June 30, 2010 - Beneficiaries

	TYPE OF RETIREMENT							
AGE	NR	ER	DS	ODis	ADis	ODth	ADth	Total
Under 20	4	2	3	10	0	2	0	21
20-24	1	0	1	2	0	0	0	4
25-29	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0
35-39	0	0	1	0	0	0	0	1
40-44	0	1	0	2	1	0	0	4
45-49	5	3	0	5	0	2	0	15
50-54	21	3	4	9	1	8	0	46
55-59	32	9	6	31	0	5	0	83
60-64	46	20	13	24	2	11	0	116
65-69	60	21	11	32	3	16	1	144
70-74	69	42	6	31	2	11	2	163
75-79	113	56	13	22	3	21	3	231
80-84	135	41	6	25	4	14	5	230
85 & Up	188	38	7	21	4	15	9	282
Total	674	236	71	214	20	105	20	**1,340**
Average Annual Benefit	$ 8,281	$ 3,639	$ 8,525	$ 4,692	$ 8,023	$ 10,066	$ 20,673	$ 7,224

NR - Service Retirement
ER - Early Retirement
DS - Discontinued Service
ODis - Ordinary Disability
ADis - Accidental Disability
ADth - Accidental Death

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Highlights

The Cost of Living Adjustment assumption has been updated from 1.5% to 2.0% at the recommendation of the Board.

Projected Unit Credit Method

Liabilities and contributions shown in this report are computed using the Projected Unit Credit method of funding.

The objective under this method is to fund each participant's benefits under the Plan as they would accrue, taking into consideration future salary increases. The total pension, to which each participant is expected to become entitled, is broken down into units, each associated with a year of past or future credited service. When this method is introduced, there will be an initial liability for benefits credited for service prior to that date, and to the extent that the liability is not covered by assets of the Plan, there is an unfunded liability to be funded over a chosen period in accordance with an amortization schedule.

A description of the calculation follows:

An individual's accrued benefit for valuation purposes related to a particular separation date is the accrued benefit described under the Plan but determined using the projected salary that would be used in the calculation of the benefit on the expected separation date.

The benefit deemed to accrue for an individual during a plan year is the prorated portion of the projected benefit attributable to one year of service. The projected benefit is calculated at the various anticipated separation dates.

An individual's accrued liability is the present value of the accrued benefit for valuation purposes at the beginning of the plan year, and the normal cost is the present value of the benefit deemed to accrue in the plan year. If multi-decrements are used, the accrued liability and the normal cost for an individual are the sum of the component accrued liabilities and normal costs associated with the various anticipated separation dates. Such accrued liabilities and normal costs reflect the accrued benefits as modified to obtain the benefits payable on those dates and the probability of the individual separating on those dates.

The Plan's normal cost is the sum of the individual normal costs, and the Plan's accrued (actuarial) liability is the sum of the accrued liabilities for all participants under the Plan.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions and Methods

Method of Funding: The Projected Unit Credit Funding Method has been in used, since the effective date of 7/1/1989, in accord with Ordinance 275.

The current unfunded actuarial liability is amortized as a level dollar over 20 years. This 20-year period is restarted each year. The Trustees may elect to change this period.

Asset Valuation: The actuarial value of assets is equal to the market value, adjusted for investment surpluses and deficits over a five-year period. This calculation is done in the following steps:

1. The investment gain or loss for the current year is calculated; this equals the actual investment earnings during the year minus the expected earnings. Expected earnings are calculated using a weighted average of the pre- and post-retirement interest rate assumptions multiplied by the mean market value of assts during the year.

2. The current net excess earnings are computed by adding the investment gain or loss for the current year to the remaining excess earnings for the prior valuation.

Discount Rate: 8.0% compounded annually until retirement except employee accumulations; 6.8% compounded annually after retirement (effective 6/30/1999).

Investment Return: A liability weighted return on assets is expected on the basis that an 8.0% return is achieved on the portion of assets attributable to active participants, and a 6.8% return is assumed for non-active based assets. The weighted expected return this year is 7.37%

Social Security Wage Base: 4.00% per year compounded annually (effective 6/30/2002)

Inflation: 3.00% (effective 6/30/2002)

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Salary Increases: Salary increases are assumed to vary with age. Sample rates are as follows:

AGE	Salary
20	0.0695
25	0.0660
30	0.0603
35	0.0545
40	0.0493
45	0.0448
50	0.0425
55	0.0425
60	0.0425
65	0.0425
69	0.0425

Cost-of-Living Adjustment Assumption: 1.5% for inactives in pay status under age 65 and 2.0% over age 65, plus variable based on excess returns assumed to be zero.

Percent Married: Males 80%, females 60%

Spouse Age: A husband is assumed to be 4 years older than his wife.

Remarriage Rates: None

Expenses: Administration and investment expenses are assumed to be paid out of investment earnings. It is assumed that the fund will have sufficient earnings to pay these expenses and meet the interest assumption.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Withdrawal:

AGE	Withdrawal Less than 1	1	2	3+
25	0.23214	0.21000	0.15000	0.11500
30	0.20592	0.17800	0.13000	0.10500
35	0.14765	0.13800	0.10500	0.08000
40	0.11372	0.09800	0.08500	0.05500
45	0.11300	0.09800	0.08500	0.04500
50	0.11300	0.09800	0.08500	0.04500
55	0.11300	0.11000	0.08500	0.05000
60	0.16500	0.16000	0.11000	0.07500
65	0.41500	0.41000	0.31500	0.28000
69	0.41500	0.41000	0.31500	0.28000

Disability:

The Line-of-Duty disability rates for classes A and B were effective 6/30/1999; class C disability rates and Non-Line-Of-Duty rates are effective 6/30/2002.

AGE	Non-Line-of-Duty Disability	Line-of Duty Disability (Classes A&B)	Line-of Duty Disability (Class C)
25	0.00050	0.00004	0.00008
30	0.00059	0.00004	0.00008
35	0.00115	0.00008	0.00016
40	0.00236	0.00008	0.00016
45	0.00425	0.00012	0.00024
50	0.00675	0.00020	0.00039
55	0.01043	0.00024	0.00047
60	0.00579	0.00027	0.00055
65	0.00130	0.00038	0.00076
69	0.00078	0.00039	0.00078

Workers compensation offset is included in the above rates.

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Pre-Retirement Mortality:

1. Non-line-of-Duty - 1994 Uninsured Pensioners Generational Mortality table (Male + 4, Female + 1) with generational projections using 50% of the AA scale projected to 2016.

2. Line-of-Duty - 0.005% at all ages (effective 6/30/1999).

AGE	Non-Line-of-Duty Death * Male	Non-Line-of-Duty Death * Female	Line-of Duty Death*
25	0.00080	0.00030	0.00005
30	0.00089	0.00038	0.00005
35	0.00105	0.00052	0.00005
40	0.00151	0.00077	0.00005
45	0.00234	0.00103	0.00005
50	0.00391	0.00155	0.00005
55	0.00693	0.00265	0.00005
60	0.01284	0.00534	0.00005
65	0.02178	0.01017	0.00005
69	0.03127	0.01440	0.00005

** Rates for individuals who are the age shown as of June 30, 2010*

Post-Retirement Mortality:

1. Retirees and Beneficiaries:
   Males and Females - 1994 Uninsured Pensioners Generational Mortality table (Male + 4, Female + 1) with generational projections using 50% of the AA scale projected to 2016.

2. Disabled members:
   Sample rates (rates effective 6/30/2002).

AGE	Retirees and Beneficiaries *		Disabled Members	
	Male	Female	Male	Female
55	0.00693	0.00265	0.05392	0.02529
60	0.01284	0.00534	0.06435	0.03138
65	0.02178	0.01017	0.07679	0.04088
70	0.03396	0.01568	0.09558	0.05568
75	0.05599	0.02616	0.12298	0.07841
80	0.09165	0.04563	0.16115	0.11274

** Rates for individuals who are the age shown as of 6/30/2010*

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Service Retirement:

Early Retirement prior to the later of age 60 and eligibility for Normal Retirement (earlier of age 65 with 5 years of service and 30 years of service)

	Rates of Retirement		
AGE	**< 30 yos**	**30 yos**	**30 + yos**
55 - 58	0.06	0.20	0.10
59	0.07	0.20	0.15
60	0.07	0.20	0.20
61	0.15	0.20	0.25
62	0.20	0.20	0.45
63 - 64	0.20	0.20	0.20
65	0.20	0.40	0.40
66 - 69	0.20	0.40	0.25
70	1.00	1.00	1.00

Normal Retirement is assumed on or after the later of age 60 and eligibility for Normal Retirement (earlier of age 65 with 5 years of service and 30 years of service).

Joint and Survivor Forms of Payment:

All benefits with Joint & Survivor Forms of Payment for retirees had their survivor benefits increased by 4% to account for children's benefits.

Data Assumptions:

The data provided for this valuation had several participants missing salaries. We assumed the average salary by service for these participants.

Assumption Changes Since Last Valuation:

The Cost of Living Adjustment assumption was changed from 1.5% fixed to 1.5% under age 65 and 2.0% age 65 and older, as recommended by the Board.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

Highlights

It has been represented to us that there were no changes in plan provisions from the 2009 valuation.

Effective Date

The System was effective January 1, 1926 and has been periodically amended.

Eligibility

Any regular and permanent officer, agent, or employee of the City with the exception of those required to join the Maryland State or any other Retirement System shall become a Class C member of the Employees' Retirement System upon completion of 1 year of service. The Board of Estimate may authorize prospective membership for any class of part-time employees. There are three classes of members as follows:

1. Class A – Members who were hired before July 1, 1979, and entered membership on or after January 1, 1954, or who elected, prior to April 1, 1954, to contribute at the higher Class A rate. Any Class B member may elect to become a Class A member by bringing his accumulated contributions and interest up to what they would be if he had elected Class membership on January 1, 1954.

2. Class B – Members as of January 1, 1954 who did not elect Class A membership.

3. Class C – Members who were hired on or after July 1, 1979, or any other members who may have elected to transfer during various open transfer periods.

Member Contributions

Class C members make no contributions. All other members currently contribute at the rate of 4% of earnable compensation. Contributions are not required upon attaining age 60 and completing 35 years of service. Interest is credited on contributions at a rate of 5.5% per annum.

Compensation

Earnable compensation is the annual salary authorized for the member, not including overtime, differential pay, environmental pay, hazardous duty pay, pay for conversion of leave or other fringe benefits, or any like additional payment. Average Final Compensation is the average of the member's annual earnable compensation on January 1 for the three successive years of service when the member's earnable compensation is the highest or, if the member is in service on January 1 for less than three successive years, than the average during total service.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

Covered Compensation

The covered compensation (for Class C only) is the average of the FICA wage base for the 35 year period ending with the calendar year which ends immediately prior to the earlier of: (1) January 1, employment; or (2) January 1, of the calendar year in which the member attains age 65.

Military Service Credit

A. Military Service Prior to Employment:
   1. Classes A and B
      A maximum of 3 years service credit is granted provided the member has acquired 10 years of service and has reached the age of 60 or has acquired 20 years of service, regardless of age.
   2. Class C
      A maximum of 3 years service credit is granted provided the member has acquired 10 years of service and has reached the age of 62 or has acquired 20 years of service, regardless of age.

B. Military Service Within Employment:
   1. Classes A and B
      Upon retirement or death, any member who, because of military duty, had a break in employment shall receive service credit for the period of absence as provided by the Veterans' Reemployment Rights Act.

Retirement Eligibility

A. Service Retirement:
   1. Classes A and B – Age 60 with 5 years of service or 30 years of membership service.

   2. Class C – Age 65 with 5 years of service or 30 years of service, regardless of age. Early retirement allowed at age 55 with 5 years of service payable at age 65 or reduced for payment before 65.

B. Non-Line-of-Duty Disability Retirement:
   5 years of membership service and determined by a hearing examiner to be mentally or physically incapacitated for the performance of duty and that incapacity is likely to be permanent.

C. Line-of-Duty Disability Retirement:
   Totally and permanently incapacitated for duty as the result of an accident while in performance of duty and certified by a hearing examiner as mentally or physically incapacitated for the performance of duty and that such incapacity is likely to be permanent.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

D. Dismemberment Disability Retirement:
   1. Class C – Loss of any 2 or more of hands, feet, sight of eye(s) as a direct result of bodily injury from an accident while in actual performance of duty as determined by a hearing examiner.

Termination of Employment

A. Classes A and B
   1. Eligible for Termination Retirement Allowance, deferred to age 60, upon completion of (1) 15 years of membership service, or (2) 5 years of service, if removed from a position without fault.
   2. Eligible for a Termination Retirement Allowance, payable immediately, upon completing 20 years of service, if removed from a position without fault.
   3. Eligible for a refund of accumulated contributions if not eligible for any other benefits.

B. Class C
   1. Eligible for a Termination Retirement Allowance, deferred to age 65, upon completion of (1) 10 years of service, or (2) 5 years of service, if removed from a position without fault.
   2. Eligible for an immediate benefit if removed without fault after 20 years of service.

Retirement Allowances

A. Service Retirement:
   1. Classes A and B
      The sum of:
      1. an annuity of the actuarial equivalent of a member's accumulated contributions; and
      2. a pension, which together with the annuity shall equal 1.935% (Class A) or 1.785% (Class B) of Average Final Compensation times years of service.
   2. Class C
      A pension of (1) 1.60% of Average Final Compensation, times years of service up to 30 years, plus (2) 0.25% of Average Final Compensation in excess of Covered Compensation, times years of service up to 30 years, plus (3) 1.85% of Average Final Compensation, times years of service in excess of 30 years.

B. Early Retirement:
   1. Class C
      If a member is age 55 with 5 years of service, the member may retire at any time, with a benefit reduced for early commencement. The reduction factor is 1/180 for each of the first 60 months prior to age 65 and 1/360 for each additional month preceding age 65. If the member has 30 years of service at retirement, then there is no reduction factor applied to the benefit.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

C. Non-Line-of-Duty Disability Retirement:

1. Classes A and B

   A benefit equal to the service retirement benefit if age 60; otherwise, an annuity of the actuarial equivalent of a member's accumulated contributions plus a pension which, together with the annuity, shall equal 1.90% (Class A) or 1.75% (Class B) of Average Final Compensation times years of service.

   The member will receive the benefit as calculated above if the benefit exceeds 25% of the member's Average Final Compensation. Otherwise, the member shall receive 25% of the member's Average Final Compensation.

   This benefit is offset by:

   1. worker's compensation (excluding amounts paid to third parties);
   2. earnings in excess of base amount (current earnable compensation in same job grade and step adjusted for longevity) with a $1.00 reduction for each $2.00 of the first $5,000 of excess and a $2.00 reduction for each $5.00 of additional excess earnings.

2. Class C

   The ordinary disability pension shall be equal to the greater of:

   1. the member's accrued service retirement benefit; or
   2. 15% of the member's average final compensation.

   This benefit is offset by:

   1. worker's compensation (excluding amounts paid to third parties);
   2. unemployment compensation.

D. Line-of-Duty Disability Retirement:

An annuity of the actuarial equivalent of a member's accumulated contributions, plus a pension equal to 66-2/3% of Average Final Compensation.

This benefit is offset by:

Same offsets are applied as for non-line of duty disability.

E. Dismemberment Disability Retirement:

1. Class C

   A pension, equal to 100% of Average Final Compensation. Same offsets as for Class C Line-of-Duty Disability benefits.

F. Termination Retirement Allowance (Deferred Payment):

Determined the same as for Service Retirement, but based on membership service and Average Final Compensation at the time of termination.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

G. Termination Retirement Allowance (Immediate Payment):
Determined the same as if the member had retired with a non-line-of-duty retirement allowance.

<u>Option Methods of Receiving Benefit Payments</u>

A. Maximum Service Retirement:
Joint & Survivor form of payment to unmarried spouse or dependent children until the last marries, dies or attains age 18 (age 22 if a full-time student). The percent continued to the spouse is 40%.

B. Cash refund to retiree's beneficiary based on present value of allowance at retirement less payments made.

C. Joint and 100% to Contingent Beneficiary

D. Joint and 50% to Contingent Beneficiary

E. Some other periodic benefit subject to the approval of the Board of Trustees

These options are available for service, termination, non-line-of-duty disability and line-of-duty disability retirement. Any option and / or beneficiary may be changed by the retired member within 30 days after retirement.

<u>Non-Line-of-Duty-Death Benefits</u>

A. <u>Class A and B</u>
- The member's accumulated contributions will be returned; plus, if one or more years of membership service, 50% of the greater of Average Final Compensation or current annual earnable compensation, or
- If (1) eligible for service retirement, or (2) would have become eligible for service retirement within 90 days, or (3) if retired on account of service, non-line-of-duty disability, or line-of-duty disability and dies within 30 days of retirement, or (4) entitled to a deferred allowance at age 60; and the member's designated beneficiary is his spouse with whom he has been living for at least 5 years or his partner(s), such beneficiary may elect, in lieu of paragraph(1) above, an allowance equal to the greater of 40% of the participant's accrued benefit or the amount that would have been paid under the Joint and 100% Contingent Option.

This benefit is offset by worker's compensation (excluding amounts paid to third parties). If no beneficiary and if intestate without heirs, then contributions shall remain part of the System.

APPENDIX C
SUMMARY OF PLAN PROVISIONS

B. Class C

- If (1) eligible for service retirement, or (2) would have become eligible for service retirement within 90 days, or (3) if retired on account of service, ordinary disability, or accidental disability and dies within 30 days of retirement, or (4) entitled to a deferred allowance at age 65, or (5) has 20 years of service and dies anytime between effective retirement date at age 65 and no later than 30 days following the attainment of age 65; and the member's designated beneficiary shall receive an allowance equal to the greater of 40% of the participant's accrued benefit or the amount that would have been paid under the Joint and 100% Contingent Option, or
- If (1) not eligible under paragraph (1) above, and (2) if one or more years of service, 50% of the greater of Average Final Compensation or current annual earnable compensation, shall be paid as a lump sum.

Line-of-Duty Death Benefits

If a member's death was the result of injuries in the line of duty, a refund of contributions shall be payable, if applicable. In addition, an annual pension of 100% of current earnable compensation (not less than $10,000 on June 30, 1994) shall be payable to:

A. the spouse, provided there is no voluntary separation agreement renouncing rights of inheritance during her widowhood;

B. if no eligible spouse, or if the spouse dies or remarries, the child or children equally until age 18 (age 22 if full-time student(s));

C. if no eligible spouse or child surviving, then to the deceased's father and / or mother equally, or to the survivor;

D. for Classes A and B, any member who retires and dies within 30 days after the effective date of line-of-duty disability retirement shall receive the above benefits if death is the result of injuries in the line of duty.

This benefit is offset by worker's compensation (excluding amounts paid to third parties). If no beneficiary and if intestate without heirs, then contributions shall remain part of the System.

Post Retirement Benefit Increases

Annual post-retirement benefit increases of a fixed 1.5% for participants in pay status under age 65 and 2.0% for participants in pay status age 65 and over.

Post Retirement Benefit Increases (Variable Increase)

Additional increases may be provided when investment performance exceeds 6.8% provided for all participants in pay status for more than 18 months.