Pennsylvania Municipal Retirement System

Actuarial Valuation as of January 1, 2008

Produced by Cheiron

May 2009

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May 15, 2009

Pennsylvania Municipal Retirement Board of the
Pennsylvania Municipal Retirement System
c/o James B. Allen, Secretary
P.O. Box 1165
Harrisburg, PA 17108-1165

Dear Members of the Board:

At your request, we have conducted the annual actuarial valuation of the Pennsylvania Municipal Retirement System (the System) as of January 1, 2008. This report includes the valuation of the four county plans and reflects a roll forward of all other plans administered by the System. The results of the valuation are contained in this report. The purpose of the valuation is discussed in the Foreword.

This report contains information on System assets, as well as analyses which combine asset and liability performance and projections. As a single retirement system made up of plans for participating municipalities and counties in which assets and liabilities are separately accounted for, this report reflects aggregate valuation results for the System which is considered a multiple employer plan. The report provides statistics on employer contribution levels for the defined benefit portion of the municipal plans participating in the system as of the valuation date as well as required disclosures under the Governmental Accounting Standards Board Statement #25 for the entire System.

Your attention is called to the Foreword in which we refer to the general approach employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions on which our findings are based. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief. All municipalities that were required to file an Act 205 form as of January 1, 2007, had their liabilities actuarially adjusted and included in this report to maintain a true valuation of the System from year to year. All county plans reported to the State for the Act 293 2008 System Year are the actual values. Additionally, we rely on future System experience conforming to the underlying assumptions. To the extent that actual System experience deviates from the underlying assumptions, the results would 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 Kenneth A. Kent, as a Member of the American Academy of Actuaries, meets the Qualification Standards to render the opinions contained in this report.

Sincerely,
Cheiron

Kenneth A. Kent, FSA, FCA	Anthony J. Bucci, Jr.
Consulting Actuary	Analyst

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM

FOREWORD

Cheiron has performed the actuarial valuation of the Pennsylvania Municipal Retirement System (System) as of January 1, 2008. The purpose of this report is to:

1) **Measure and disclose**, as of the valuation date, the financial condition of the System;

2) **Indicate trends** in the financial progress of the System;

3) **Determine the average contribution rate** to be paid by the System's individual municipalities; and

4) **Provide specific information** and documentation required by the Governmental Accounting Standards Board (GASB).

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.

Section I presents a summary containing our findings and disclosing important trends experienced by the System in recent years.

Section II contains details on various asset measures, together with pertinent performance measurements.

Section III shows similar information on System liabilities, measured for actuarial, accounting, and government reporting purposes.

Section IV shows the distribution of the municipalities' contribution rates by component.

Section V includes the required disclosures under GASB Statement Number 25.

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

As this System is a multiple employer plan in which each of the participating municipalities are entitled to define and submit to the Board for amendment the benefit provisions for their respective employees, the actual plan provisions are not included in this report. We based our results on the plan provisions defined and submitted to the State under the 2007 Act 205 filings and 2008 Act 293 filings in preparing this valuation. Because the System is bound by Act 205 to complete a biennial valuation for each employer, we have developed liabilities for 2008 for all county plans required to submit a valuation as of January 1, 2008 using the 2007 information. For the municipalities valued as of January 1, 2007 we used the 2007 results and current active counts to estimate the liabilities for these plans to provide an overall measure of the funded status of the System. This method is referred to as a "roll forward" and is used throughout this report in all 2008 calculations for the municipalities to reduce the appearance of volatility in results.

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

FOREWORD

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 System could vary from our results.

Finally, in preparing this report, we have conformed to generally 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.

SECTION I
BOARD SUMMARY

General Comments

The primary purpose of the actuarial valuation and this report is to disclose the following as of the valuation date:

- The overall financial condition of the Pennsylvania Municipal Retirement System,
- Biennial valuation of the county plans participating in the System,
- Past trends and expected future trends in the System's financial condition, and
- Information required by the Governmental Accounting Standards Board (GASB).

In this Section, we present a summary of the principal valuation results. This includes the basis upon which the January 1, 2008 valuation was completed and an examination of the current financial condition of the System. In addition, we present a review of the key historical trends followed by the System's projected financial outlook.

A. Valuation Basis

This valuation is the second that Cheiron has performed for the Pennsylvania Municipal Retirement System. The January 1, 2008 valuation results are based on the same actuarial assumptions used in the January 1, 2007 valuation. All results presented prior to January 1, 2007 are based on the valuation reports prepared by the prior actuary. In our valuation process we replicated their results within generally accepted margins, but we do not certify the results presented prior to January 1, 2007.

Below we identify two key results of this valuation.

- *Unfunded Actuarial Liability (UAL):* The UAL is the excess of the System's actuarial liability (AL) over the actuarial value of assets (AVA). Because the System is made up of many plans, some with UAL and others with surplus (when the AVA is greater than the AL), it is interesting to note the aggregate change of each of these values that combined provide the net funded level of the System. In aggregate the System has been in a net surplus, and that surplus has increased from $54.0 million as of January 1, 2007 to $83.4 million as of January 1, 2008.

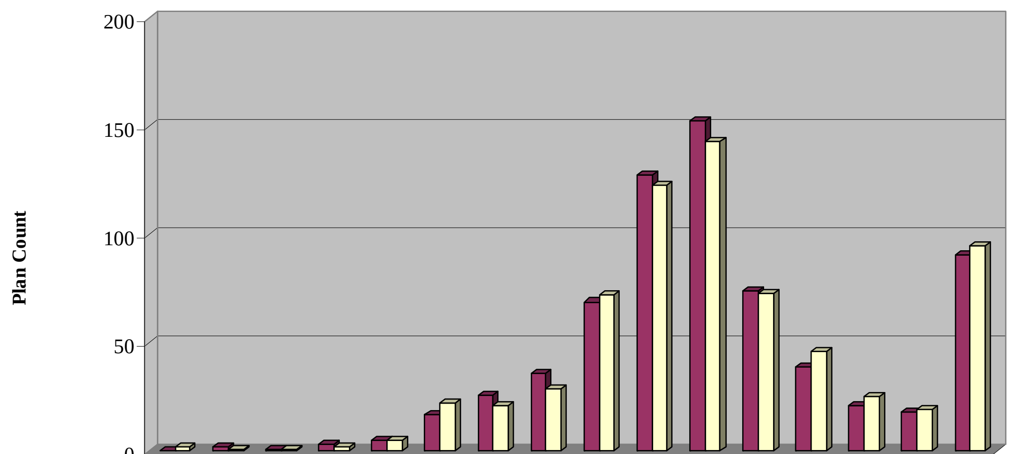
- *Funding Ratio:* This is the ratio of the System's AVA to AL. The funding ratio increased from 104.2% as of January 1, 2007 to 105.9% as of January 1, 2008.

SECTION I
BOARD SUMMARY

The following chart shows a distribution of the funded status of the plans covered by the System in 2007 and 2008. From this comparison it would appear that those plans that were well funded, over 100%, tended to decrease in funded status from 2007 to 2008. This is more a function of the valuation being performed for the majority of the plans (the municipalities) on the odd years and for those in surplus in 2007, 10% of the surplus is used to offset the plan costs. Therefore when rolling forward the liabilities for these plans the funded status is anticipated to decline.

For the four county plans valued, the funded status on average decreased from 109.8% as of January 1, 2006 to 101.3% as of January 1, 2008.

Defined Benefit Plan
Funded Status of Municipalities



	0 - 9%	10 - 19%	20 - 29%	30 - 39%	40 - 49%	50 - 59%	60 - 69%	70 - 79%	80 - 89%	90 - 99%	100 - 109%	110 - 119%	120 - 129%	130 - 139%	140 - 149%	Greater than 150%
2008	0	2	1	3	5	17	26	36	69	128	153	74	39	21	18	91
2007	2	1	1	2	5	22	21	29	72	123	143	73	46	25	19	95

Percent Funded

B. Current Financial Condition

On the following pages, we summarize the key results of the January 1, 2008 valuation and how they compare to the results from the January 1, 2007 valuation.

1. System Membership:

As shown in Table I-1 below, total membership in the Retirement System increased by 1.7% from 2007 to 2008. The net growth in active participation is attributable to a 3.5% increase in the defined contribution plans and an increase in active participation among the defined benefit plans of 0.8%. The aggregate covered payroll of the System increased by 2.3% this year, while the average salary per active member increased by 1.2%.

Table I-1
Membership Total

	January 1, 2008	January 1, 2007	% Change
Defined Benefit Actives	8,383	8,314	0.8%
Defined Contribution Actives	950	918	3.5%
Terminated Vesteds	751	756	-0.7%
Participants Receiving Benefit Payments	3,173	2,965	7.0%
Beneficiaries	425	494	-14.0%
Total System Members	13,682	13,447	1.7%
Annual Salaries*	$395,972,321	$386,904,315	2.3%
Average Salary per Active Member	42,427	41,909	1.2%

* *Projected salary for Defined Benefit plan participants and actual salary for Defined Contribution participants.*

SECTION I
BOARD SUMMARY

Table I-2 is a summary of the demographic make-up of the defined benefit and defined contribution plans in the System.

Table I-2
Demographic Make-up of the System

Category	Valuation as of January 1 2008	2007	Percent Change
Number of plans:			
Defined Benefit Plans	692	683	1.32%
Defined Contribution Plans	183	177	3.39%
Active Employees in Defined Benefit Plans:			
Count	8,383	8,314	0.83%
Average Age	46.8	46.5	0.65%
Average Service	12.0	11.8	1.69%
Total Payroll*	$ 364,865,185	$ 358,690,830	1.72%
Average Pay	$ 43,524	$ 43,143	0.88%
Active Employees in Defined Contribution Plans:			
Count	950	918	3.49%
Average Age	48.4	47.9	1.04%
Average Service	10.6	10.2	3.92%
Average Pay**	$ 32,744	$ 30,734	6.54%
Inactive Participants in Defined Benefit Plans with Rights			
Deferred Pension	570	561	1.60%
Return of Contributions	7	33	-78.79%
Inactive Participants in Defined Contribution Plans	174	162	7.41%
Pensioners:			
Count	3,173	2,965	7.02%
Average Age	69.9	69.9	0.00%
Average Monthly Benefit	$ 1,025	$ 993	3.22%
Number of New Awards	236	252	-6.35%
Average New Monthly Benefit	$ 1,065	$ 1,069	-0.38%
Number Receiving Legislated COLA	195	185	5.41%
Survivor Beneficiaries:			
Count	425	494	-13.97%
Average Age	76.7	72.3	6.09%
Average Monthly Benefit	$ 756	$ 766	-1.31%

**Projected salaries for the current Plan year.*
***Actual salaries paid during the prior Plan year.*

2. <u>System Assets and Liabilities:</u>

Table I-3 presents a comparison between the January 1, 2008 and January 1, 2007 System assets, liabilities, unfunded actuarial liability, and funding ratios for defined benefit non-county, defined benefit county, and defined contribution only plans. While this valuation was prepared to support the county plans, we were provided non-county participant data and *rolled forward* their liabilities for estimation purposes. This process uses the January 1, 2007 valuation results and expected cash flows to estimate the non-county liabilities this year. The total funding ratio increased from 104.2% as of January 1, 2007 to 105.9% as of January 1, 2008.

SECTION I
BOARD SUMMARY

Table I-3
Total Plan Assets and Liabilities
($ thousands)

	January 1, 2008	January 1, 2007	% Change
Defined Benefit (Non-county) Plans:			
Actives	$ 791,065	$ 746,622	6.0%
Terminated Vesteds	41,243	39,336	4.8%
In Pay	430,160	404,054	6.5%
Total Actuarial Liability	$ 1,262,468	$ 1,190,012	6.1%
Actuarial Value of Assets*	1,342,510	1,231,958	9.0%
Unfunded/(Surplus) of Actuarial Liability	$ (80,042)	$ (41,946)	90.8%
Defined Benefit (County) Plans:			
Actives	$ 46,879	$ 32,641	43.6%
Terminated Vesteds	5,108	4,335	17.8%
In Pay	16,896	15,198	11.2%
Total Actuarial Liability**	$ 68,883	$ 52,174	32.0%
Actuarial Value of Assets*	69,788	64,215	8.7%
Unfunded/(Surplus) of Actuarial Liability	$ (905)	$ (12,041)	-92.5%
Defined Contribution Plans:			
Actives	$ 35,924	$ 30,988	15.9%
Terminated Vesteds	5,877	5,080	15.7%
In Pay	4,049	3,768	7.5%
Total Actuarial Liability	$ 45,850	$ 39,836	15.1%
Actuarial Value of Assets*	45,850	39,836	15.1%
Unfunded/(Surplus) of Actuarial Liability	$ -	$ -	0.0%
Total Plans			
Actives	$ 873,868	$ 810,251	7.9%
Terminated Vesteds	52,228	48,751	7.1%
In Pay	451,105	423,020	6.6%
Total Actuarial Liability	$ 1,377,201	$ 1,282,022	7.4%
Market Value of Assets	$ 1,564,774	$ 1,455,869	7.5%
Actuarial Value of Assets*	$ 1,458,148	1,336,009	9.1%
Unfunded/(Surplus) of Actuarial Liability	$ (80,947)	$ (53,987)	49.9%
Funding Ratio	105.9%	104.2%	1.7%

* *The assets shown here are attributable to the defined benefit, defined contribution, non-county, and county plans. They exclude one year of administration expense reserve and excess interest allocation, if any, to be credited at year end.*

** *Non-County Plan liabilities are estimated in even years based on unaudited data received from the System.*

SECTION I
BOARD SUMMARY

Table I-4 presents a summary of the January 1, 2008 County defined benefit plans that are in a surplus or underfunded position.

Table I-4
Funded Status of Municipalities as of January 1, 2008

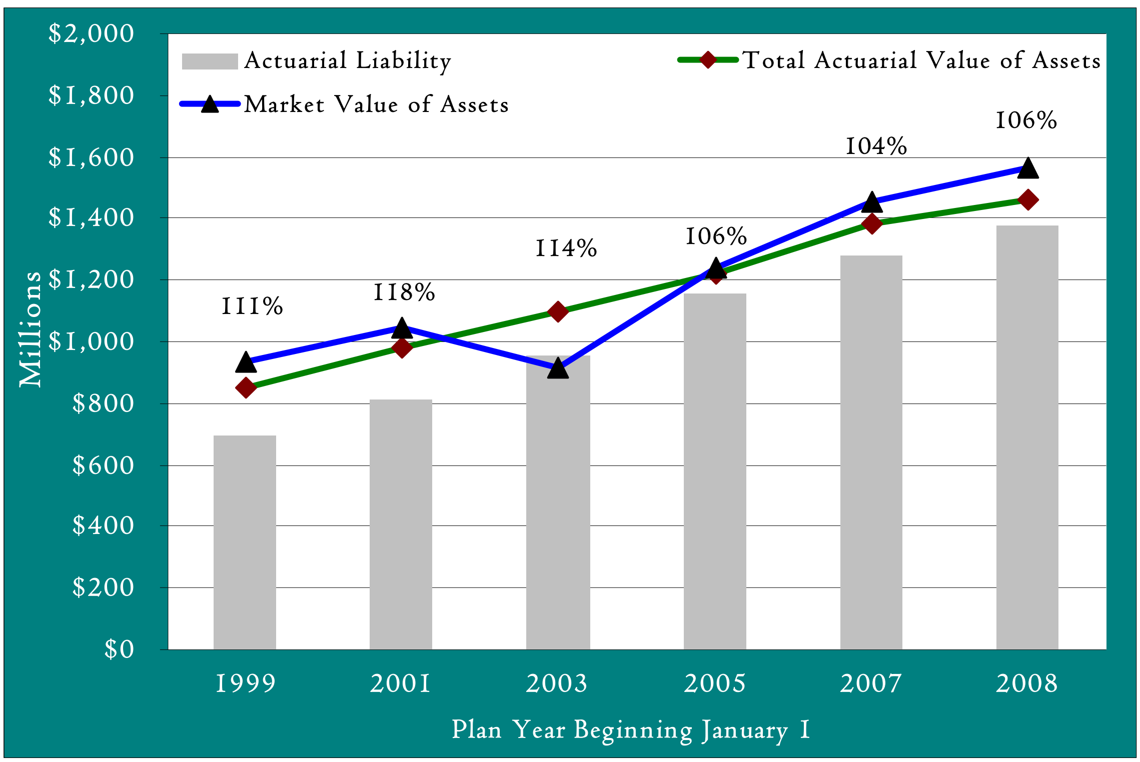
A. County Plans in a surplus position	
1. Number of plans with a surplus	2
2. Assets in plans with a surplus	$33,476,758
3. Actuarial Liability in plans with a surplus	31,770,409
4. Amount of surplus (2. – 3.)	$1,706,349
B. County Plans in an underfunded position	
1. Number of underfunded plans	2
2. Assets in underfunded plans	$36,310,834
3. Actuarial Liability in underfunded plans	37,112,582
4. Amount of (unfunded) liability (2. – 3.)	($801,748)

C. Historical Trends

Even though most of the attention given to the valuation reflects the most recently computed actuarial liability and funding ratio, it is important to remember that each valuation is merely a snapshot of the long-term progress of the System. It is equally important to judge a current year's valuation result relative to historical trends, as well as trends expected into the future.

In the chart below, we present the historical trends for the total System (defined benefit, defined contribution, county and non-county) market and actuarial value of assets compared to the total System (defined benefit, defined contribution, county and non-county) actuarial liabilities. Additionally, we have included the funding ratio to show the progress of the Retirement System since 1999.

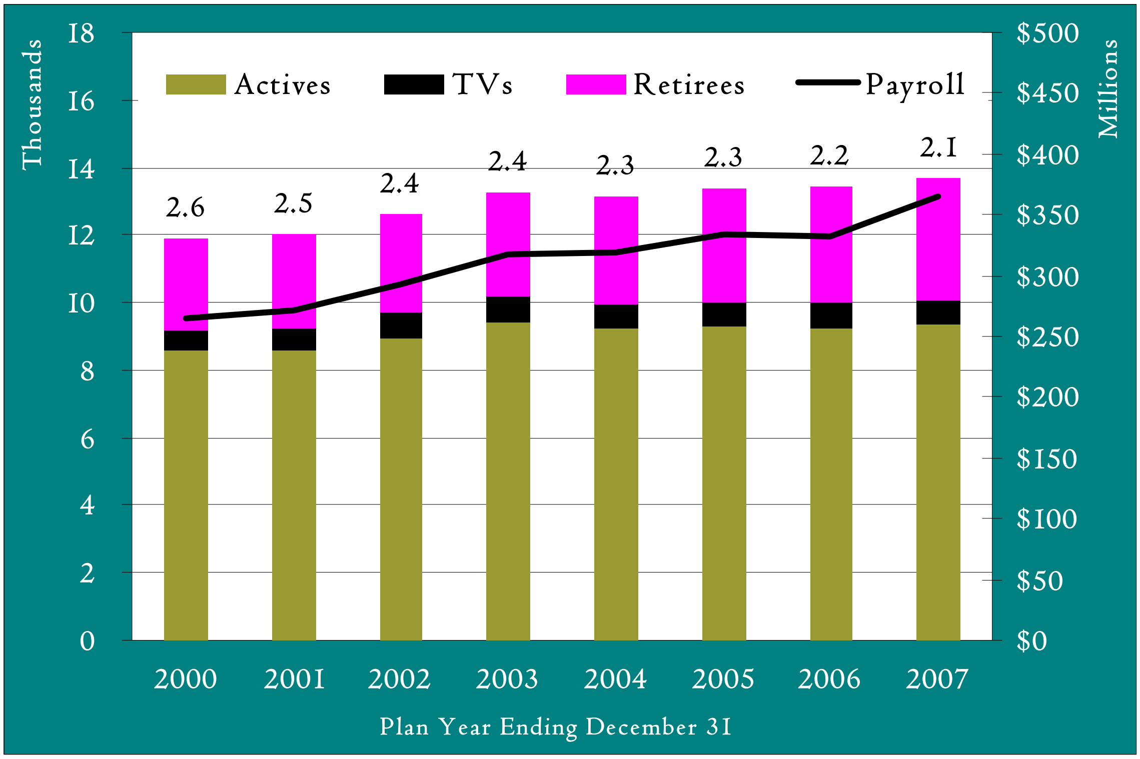
Pennsylvania Municipal Retirement System Assets and Liabilities – 1999 to 2008



While this graph demonstrates the System's funding ratio has remained over 100% even during the some of the difficult investment markets, it is anticipated that the System is expected to be underfunded for the next valuation report as of January 1, 2009.

SECTION I
BOARD SUMMARY

Pennsylvania Municipal Retirement System Participant Counts – 2000 to 2008



The chart above shows a comparison of the demographic makeup of the System over the last eight years. The number above the bars represents the ratio of active to inactive employees which is decreasing at a steady pace. A retirement system has a life cycle of its own, reaching maturity when as many or more of the covered participants are non-active (retirees and terminated vested participants (TVs)). When this occurs, the ratio moves closer to and sometimes below 1.0. For the System, the fact that this ratio is still relatively high indicates that contribution income is significant and net negative cash flows are very small, at less than 0.5% of assets.

D. Projected Financial Trends

Our analysis of the Pennsylvania Municipal Retirement System's projected financial trends is an important part of this valuation. In this section, we present our assessment of the implications of the January 1, 2008 valuation results on the future outlook in terms of benefit security (assets over liabilities) and the System's expected funding progression.

In the charts that follow, we project the Retirement System's assets and liabilities. We assume the Act 205 contributions are made each year. The projections are provided on two different bases:

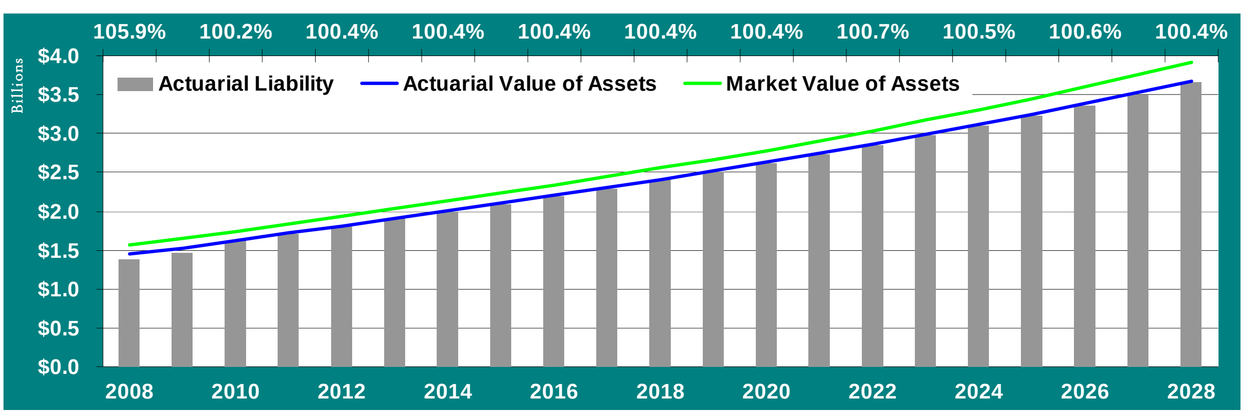
1) Assuming 6.00% returns each and every year, and

2) Assuming returns shown in the table below. These are rates of return which vary each year but over the projection period equal on average the assumed 6.00% return. We do this because the System's return will never be level from year to year.

Table I-5
Projected Returns Equal to the Valuation Rate

Fiscal Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Return	-25.00%	3.00%	17.00%	15.00%	11.00%	8.00%	5.00%	4.00%	14.00%	8.00%
Fiscal Year	2018	2019	2020	2021	2022	2023	2024	2025	2026	
Return	6.00%	0.00%	4.00%	5.00%	9.00%	10.00%	12.00%	7.00%	8.75%	

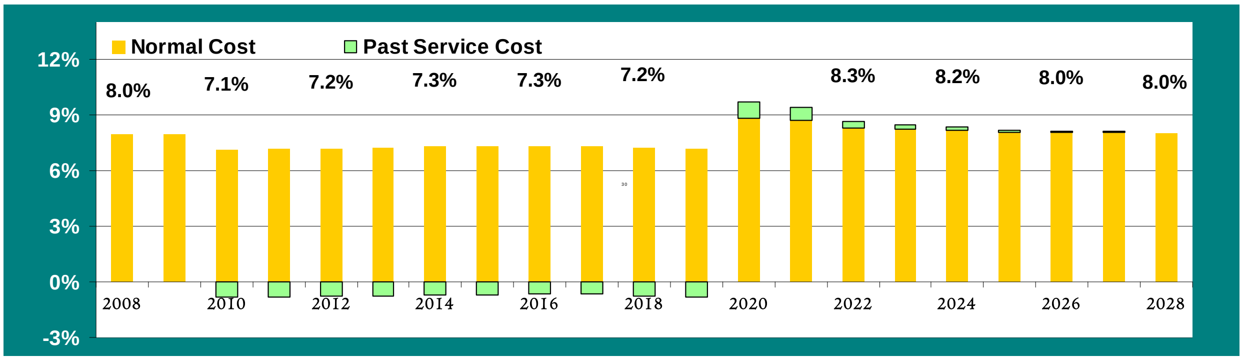
This first chart shows how the actuarial assets are defined as equal to the liabilities. Given the current surplus margins, the market value of assets was projected to stay above the liabilities as of January 1, 2008.



The gray bars represent the liabilities each year with the blue line representing the actuarial asset value and green line the market value of assets. Along the top of the graph is the funded ratio of actuarial asset value to liabilities which is projected to remain just above 100% if the fund returns 6.0% each year into the future.

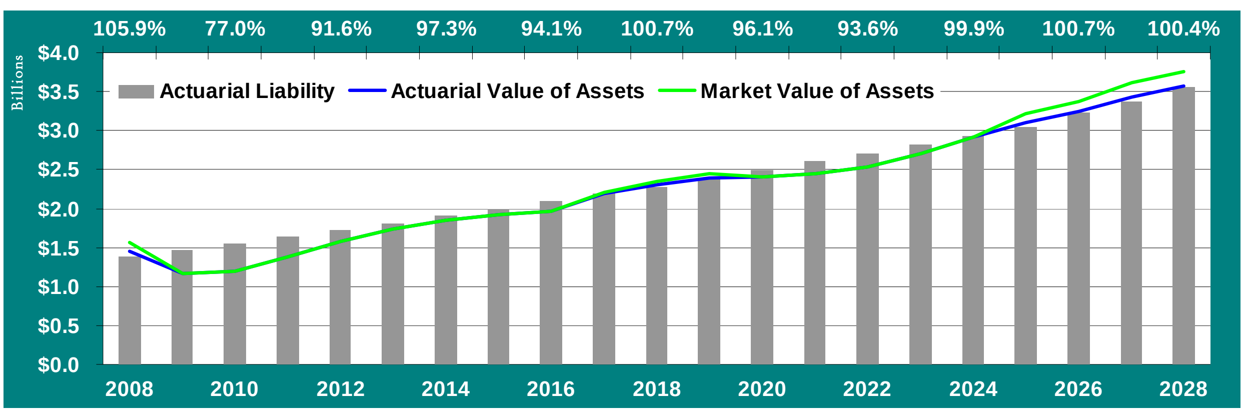
SECTION I
BOARD SUMMARY

This next graph shows what the aggregate average employer cost as a percent of pay is projected to be. The increase in cost reflects the fact that those municipalities with surplus are projected to run out after 10 years causing their cost to increase. The light green bars that show up above or below the yellow bars reflect additional amortization of costs or net surplus that offsets the normal cost of benefits. For those municipalities with unfunded liability we have amortized the unfunded based on actual reported amounts due.



The values above the bars represent the net employer contribution rates as a percent of covered pay.

What we know for certain is the System's return on assets each year will not equal exactly 6.0% but will, over the long run, have a high likelihood of achieving this rate of return. Based on the hypothetical future return rates in the table above which average 6.0% over this projected period of time the projected funded status could be similar to the graph below.



Based on this illustration, there is potential for the plans to fall out of full funding which reflects some of the real expectations for 2008 returns. It also shows that it may take some time for the fund to return to full funding even though the average returns over this period will equal the assumption. The period of time to return to full funding is in part a function of the relative net negative cash flow of the system which is currently relatively low but anticipated to increase over time.

SECTION II
ASSETS

The System's assets play a key role in the financial operation and in the decisions the Board may make with respect to future deployment of those assets. The level of assets, the allocation of assets among asset classes, and the methodology used to measure assets will likely impact upon benefit levels, Municipal and County contributions, and the ultimate security of participants' benefits.

In this section, we present detailed information on total (county & non-county) System assets including:

- **Disclosure** of System assets at December 31, 2007 and December 31, 2006;
- Statement of the **changes** in market values during the year;
- Development of the **actuarial value of assets**; and
- Allocation of **excess interest**.

Disclosure

The market value of assets represents a "snap-shot" or "cash-out" value, which provides the principal basis for measuring financial performance from one year to the next. Market values, however, can fluctuate widely with corresponding swings in the marketplace. As a result, market values are usually not suitable for long-range planning.

The actuarial values are market values which have been smoothed and are the actuary's best estimate of long-term asset values. They are used for evaluating the System's ongoing liability to meet its obligations. Table II-1 summarizes assets at market value by asset class.

Table II-1
Statement of Assets at Market Value December 31 ($ Thousands)

	2007	**2006**
Assets		
Equity Investments	$1,023,768	$1,007,092
Accounts Receivable	16,338	6,759
Fixed Income Investments	390,777	348,982
Real Estate Investments	146,522	97,025
Fixed Assets	224	282
Accounts Payable	(1,892)	(1,829)
Investment Purchases Payable	(10,963)	(2,442)
Total Market Value of Assets	**$1,564,774**	**$1,455,869**

SECTION II
ASSETS

Table II-2 summarizes the transaction of the assets during the year leading up to our valuation.

Table II-2
Changes in Market Value in ($ Thousands)

Market Value of Assets – January 1, 2007		**$1,455,869**
Additions		
Contributions:		
Plan Members	$17,492	
Municipal Employers	29,059	
Assessments	283	
Total Contributions		$46,834
Investment Income:		
Net Appreciation In Fair Value Of Investments	96,708	
Short-Term And Other Investments	1,910	
Common And Preferred Stock	10,388	
Real Estate Equity	5,746	
International Equities	4,274	
Miscellaneous Income	326	
Securities Lending Income	5,959	
Less Securities Lending Expenses	(4,872)	
Less Investment Expenses	(5,600)	
Net Investment Income		$114,839
Total Additions		**$161,673**
Deductions		
Annuity Benefits	(42,899)	
Terminations	(7,006)	
Administrative Expenses	(2,863)	
Total Deductions		**($52,768)**
Market Value of Assets – January 1, 2008		**$1,564,774**

From the above table it is important to recognize that benefit payouts plus expenses of $52.8 million exceeds contribution income of $46.8 million for a net negative cash flow of $6.0 million which is best met through cash income from investments. The difference between contributions and benefit payments is much smaller compared to the $27.7 million difference in 2007.

Actuarial Value of Assets

The actuarial value of assets represents a "smoothed" value developed by the actuary to reduce, or eliminate, erratic results which could develop from short-term fluctuations in the market value of assets. This asset valuation method also takes into account the calculation of *excess interest* which is derived from income in excess of the long-term investment return assumption. The steps in the determination of the actuarial asset value as of December 31, 2007 are shown below. The difference between the market value of assets and the actuarial value of assets is considered the surplus. The amount of assets not recognized for funding purposes as of December 31, 2007 is $106.6 million which is 6.81% of the market value and is reserved against a future year when investment returns fail to meet the long-term 6.0% investment assumption.

Table II-3
Development of Actuarial Value of Assets ($ Thousands)

1. Prior Year Actuarial Value:	$1,382,105
2. Total Audited Reserve Accounts:	1,454,773
3. Expected Administrative Expenses:	3,375
4. Preliminary Actuarial Value (2+3):	1,458,148
5. Current Year Market Value of Assets:	1,564,774
6. Prior Year Market Value of Assets:	1,455,869
7. New Surplus {Minimum of [(5-4) & (5-4) - (6-1)]}:	32,862
8. Percentage of New Surplus Credited as Excess Interest:[a]	55.233%
9. Excess Interest (Maximum of 0 and (7x8)) available:	18,151
10. Excess Interest awarded[b]	0
11. Current Year Actuarial Value of Assets (4+10):	**$1,458,148**

a *See Table II-4b*
b *Excess interest award waived by Board decision*

SECTION II
ASSETS

Excess Interest Allocation

Each year, municipalities are eligible to receive a supplemental allocation of investment monies beyond the regular 6.0% interest rate. This "excess interest" award is derived as a portion of "new surplus" created during the year. "Surplus" refers to the excess of market value over the actuarial value of assets. Once the preliminary actuarial asset value has been determined, a formula is used to determine the new surplus. Depending on the relative size of surplus to market value "margin," between 10% and 90% of new surplus will be designated as "excess interest."

For the year ended December 31, 2007 there was a new surplus of $32.9 million that could have been partially allocated as excess interest. The calculation below details the final excess interest calculation which was not awarded due to the dramatic decline in the prices of stocks.

Table II-4a
Determination of Excess Interest ($ Thousands)

1. Assets		
a. Market value	$	1,564,774
b. Preliminary Actuarial Value		1,458,148
c. Available Surplus (1a. - 1b.)	**$**	**106,626**
2. Reserves		
a. Members	$	351,521
b. Municipal		653,176
c. Disability		33
d. Retired		450,043
e. Total (2a. + 2b. + 2c. + 2d.)	**$**	**1,454,773**
3. Last year's surplus	$	73,764
4. New surplus (1c. - 3.)	$	32,862
5. Excess percent of New Surplus (see Table II-4b)		55.233%
6. Excess Interest Awarded	$	-
7. Percent of reserve {6. / (2e. - 2c.)}		0.00%
8. Trial Surplus (1c. - 6.)	$	106,626
9. Trial margin percent {8. / 1a.}		6.81%

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SECTION II
ASSETS

Table II-4b
Determination of Excess Percent of New Surplus ($ Thousands)

1. Market Value of Assets	$ 1,564,774
2. Available Surplus	$ 106,626
3. Margin (2. / 1.)	6.81%
4. New Surplus	32,862
5. New Margin (4. / 1.)	2.10%
6. Excess Percent (10% + 8*3.) / (100% + 8*5.)	55.233%

Because "excess percent of new surplus" is between 10% and 90%, the new surplus of $32.9 million multiplied by 55.233% can be allocated as excess interest and equals $18.2 million. However based on the 2008 market experience the Board has elected to defer the distribution of excess interest and therefore no adjustment to the actuarial asset value for excess interest has been made.

SECTION III
LIABILITIES

Disclosure

The actuarial liabilities are used for funding calculations and GASB disclosures. This liability is calculated taking the present value of benefits and future normal costs under an acceptable actuarial funding method. This method is referred to as the **Entry Age Normal** funding method.

The following table presents the defined benefit County plan liabilities for the 2008 valuation.

Table III-1
Liabilities/Net Unfunded/(Surplus) of Defined Benefit Municipal Plans

	January 1, 2008
Present Value of Benefits	
Active Participant Benefits	$71,910,012
Retiree and Inactive Benefits	22,003,925
Present Value of Benefits (PVB)	**$93,913,937**
Actuarial Liability	
Present Value of Benefits (PVB)	$93,913,937
Present Value of Future Normal Costs (PVFNC)	25,030,946
Actuarial Liability (AL = PVB – PVFNC)	**$68,882,991**
Municipal Actuarial Value of Assets (AVA)	69,787,592
Net Unfunded/(Surplus) (AL – AVA)	**($904,601)**

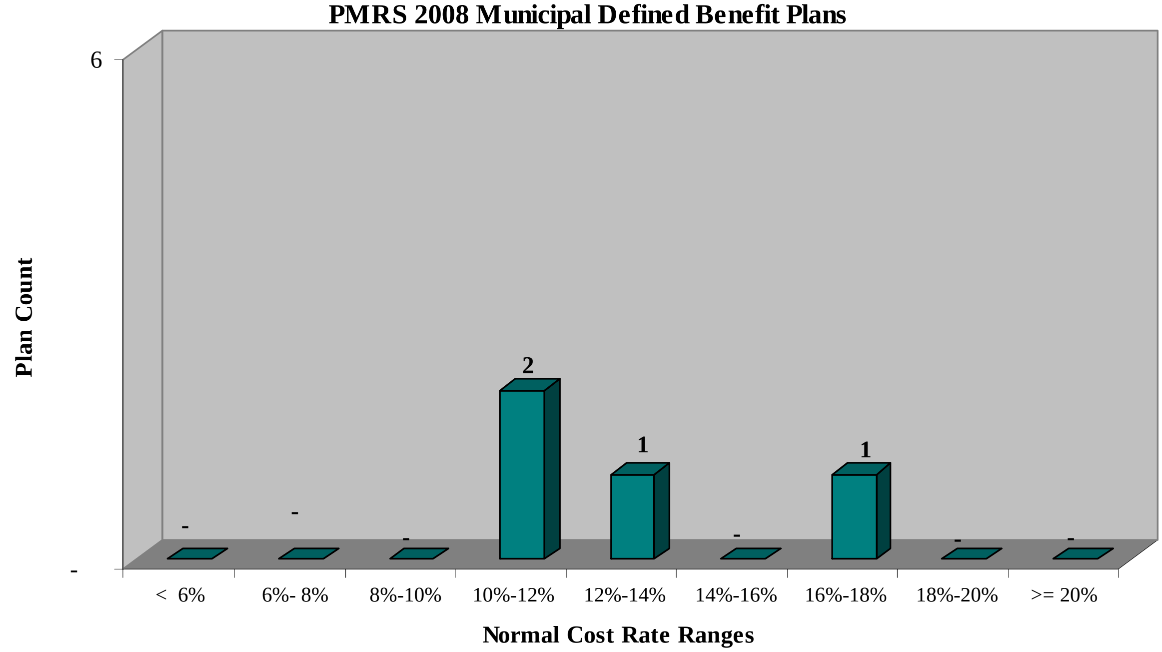
SECTION IV
CONTRIBUTIONS

In the process of evaluating the financial condition of any pension plan, the actuary analyzes the assets and liabilities to determine what level (if any) of contributions is needed to properly maintain the funding status of the Plan. Typically, the actuarial process will use a funding technique that will result in a pattern of contributions that are both stable and predictable.

For each of the plans covered by the System, the funding method employed is the **Entry Age Actuarial Cost Method**. Under this method, there are three components to the total contribution: the **normal cost rate**, the **initial unfunded actuarial liability rate**, any **increases/decreases in the unfunded actuarial liability rate / or adjustment for surplus**. For plans with a surplus, 10% of the surplus is added to the contribution for the year.

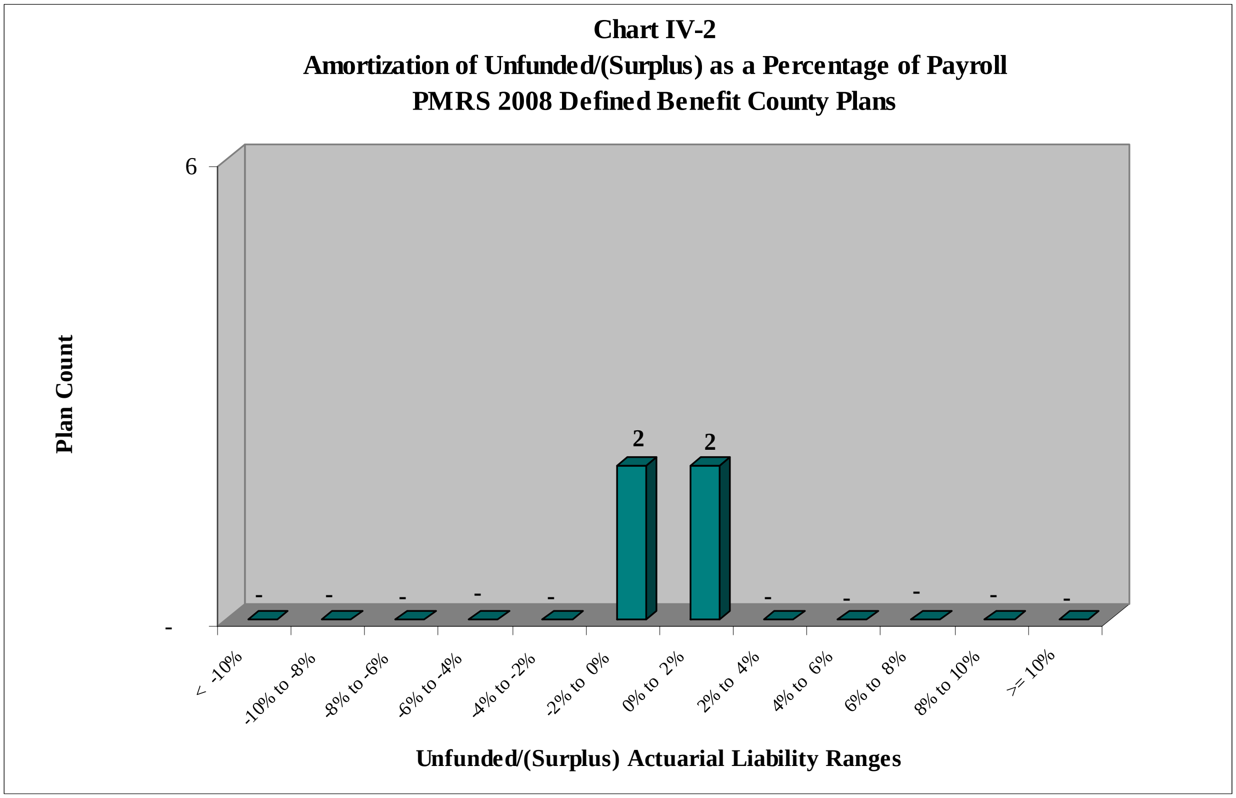
The normal cost rate is determined in the following steps. First, for a typical new entrant an individual normal cost rate is determined by taking the value, as of entry age into the plan, of that member's projected future benefits. This value is then divided by the value, also at entry age, of the member's expected future salary. Finally, the total normal cost rate is reduced by the member contribution rate to produce the employer normal cost rate. The chart below is a summary of the normal cost rates determined for the four defined benefit County plans as of January 1, 2008.

Chart IV-1
Distribution of Normal Cost Rates as a Percentage of Payroll
PMRS 2008 Municipal Defined Benefit Plans



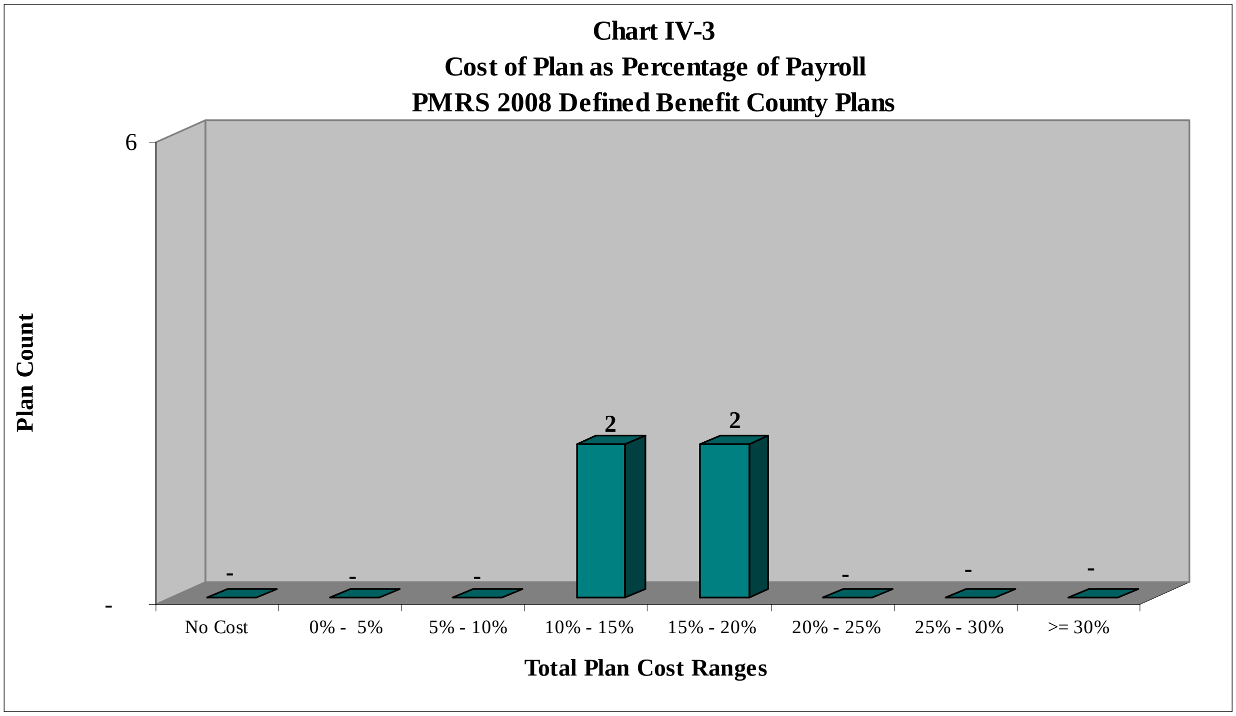
SECTION IV
CONTRIBUTIONS

Chart IV-2 below is a summary of the unfunded/(surplus) actuarial liability amortization costs defined as a percent of covered payroll of each plan's active members, determined for the four defined benefit County plans as of January 1, 2008.



SECTION IV
CONTRIBUTIONS

Chart IV-3 below is a summary of the total costs as a percentage of covered payroll, representing the sum of the normal cost and amortization of unfunded/(surplus) offset determined for the four defined benefit County plans as of January 1, 2008.



SECTION V
ACCOUNTING STATEMENT INFORMATION

Statement No. 25 of the Governmental Accounting Standards Board (GASB) establishes standards for disclosure of pension information by public employee retirement systems (PERS) and governmental employers in notes to financial statements and supplementary information.

The GASB-25 actuarial liability is the same as the actuarial liability amount calculated for funding purposes.

The actuarial liability (GASB-25) is determined assuming that the System is on-going and participants continue to terminate employment, retire, etc., in accordance with the actuarial assumptions. Liabilities are discounted at the assumed valuation interest rate of 6.0% per annum.

GASB Statement No. 25 requires the actuarial liability be compared with the actuarial value of assets for funding purposes. The relevant amounts as of January 1, 2008 are exhibited in Table V-1.

Tables V-2 through V-7 are exhibits to be used with the System's CAFR report:

- Table V-2 is the Note to Required Supplementary Information;
- Table V-3 is the Solvency Test which shows the portion of Actuarial Liability covered by Assets;
- Table V-4 is the Funded Status of Actuarial Liabilities;
- Table V-5 is the Schedule of Retirees and Beneficiaries;
- Table V-6 is the Schedule of Total Membership; and
- Table V-7 is the Schedule of Total Membership Funded Status of Actuarial Liabilities.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-1
Accounting Statement Information

	January 1, 2008	**January 1, 2007**
A. GASB No. 25 Basis		
1. Actuarial Liabilities for retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$461,965,617	$471,770,821
2. Actuarial Liabilities for current employees	914,570,414	810,251,177
3. Total Actuarial Liability (1. + 2.)	$1,376,536,031	$1,282,021,998
4. Net Actuarial Assets available for benefits	$1,458,148,442	$1,336,009,295
5. Unfunded/(Surplus) Actuarial Liability (3. - 4.)	($81,612,411)	($53,987,297)

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-2
NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the date indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	January 1, 2009
Actuarial cost method	Entry age
Amortization method	Level dollar for Plan Bases and open for Aggregate Gain/Loss
Actuarial assumptions:	
Investment rate of return*	6.0%
Projected salary increases*	3.0%-7.8%
*Includes inflation at	3.0%
Cost-of-living adjustments	ad hoc

The actuarial assumptions used have been recommended by the actuary and adopted by the System's Board based on the most recent review of the System's experience completed in 2003.

The rate of employer contributions to the System is composed of the normal cost, amortization of the unfunded actuarial liability and an allowance for administrative expenses. The normal cost is a level percent of payroll cost which, along with member contributions, will pay for projected benefits at retirement for the average plan participant. The actuarial liability is that portion of the present value of projected benefits that will not be paid by future employer normal costs or member contributions. The difference between this liability and the funds accumulated as of the same date is the unfunded actuarial liability. The allowance for administrative expenses is based upon the System's actual administrative expenses.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-3
SOLVENCY TEST
Aggregate Accrued Liabilities for

Valuation Date January 1,	Active Member Contributions (1)*	Retirees & Beneficiaries (2)	Active Member Employer Financed Contributions (3)	Actuarial Value of Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets (1)	(2)	(3)
2008	$321,567,969	461,965,617	593,002,445	1,458,148,442	100%	100%	114%
2007	293,593,948	471,770,821	516,657,229	1,336,009,295	100%	100%	110%
2005	231,122,200	395,061,900	528,674,100	1,219,130,000	100%	100%	112%
2003	213,174,400	329,766,100	412,318,900	1,084,828,900	100%	100%	131%
2001	201,814,300	263,171,300	347,659,500	976,868,000	100%	100%	147%

* *This includes the sum of the active member employee contribution balances, the member separate annuity account balances, the municipal for separate annuity account balances, and the excess interest allocations.*

Table V-4
Funded Status of Actuarial Liabilities
GASB Statement No. 25 Disclosure

Valuation Date January 1,	Actuarial Value of Assets (A)	Actuarial Liability (AL) Entry Age (B)	Unfunded AL (Surplus) (B-A)	Funded Ratio (A/B)
2008	1,458,148,442	1,376,536,031	(81,612,411)	105.9%
2007	1,336,009,295	1,282,021,998	(53,987,297)	104.2%
2006	60,678,307	55,251,080	(5,427,227)	109.8%
2005	1,219,130,000	1,154,858,200	(64,271,800)	105.6%
2004	54,024,249	45,580,670	(8,443,579)	118.5%
2003	1,084,828,900	955,259,400	(129,569,500)	113.6%

The actuarial assumptions as of January 1, 2008 are shown in the assumptions and methods section. The above information was derived from the following membership data, as provided by the System, regarding:

- Four defined benefit plans required to re-determine contribution levels as of January 1, 2008;
- 679 defined benefit county and non-county plans and 177 defined contribution only plans as of January 1, 2007;
- Four defined benefit plans required to re-determine contribution levels as of January 1, 2006;
- 678 defined benefit county and non-county plans and 169 defined contribution only plans as of January 1, 2005;
- Four defined benefit plans required to re-determine contribution levels as of January 1, 2004;
- 656 defined benefit county and non-county plans and 163 defined contribution only plans as of January 1, 2003.

The table below is a schedule of the changes to the retiree and beneficiary rolls over the last six years.

SECTION V
ACCOUNTING STATEMENT INFORMATION

Table V-5
Schedule of Retirees and Beneficiaries
Added to and Removed from Rolls in Last Six Years

Valuation Date January 1,	Added to roll	Average Annual Annuities Added	Annual Benefit Increase	Deleted from roll	Average Annual Annuities Removed	Number on roll	Annual Annuities	Percentage Increase in annuities	Average Annual Annuities	Percent increase in Average Annual Annuities
2008	236	12,780	874,404	97	8,921	3,598	42,895,559	7.6%	11,922	3.4%
2007	252	12,828	N/A	170	N/A	3,459	39,870,509	5.1%	11,527	2.6%
2006	268	N/A	N/A	83	N/A	3,377	37,943,181	9.4%	11,236	3.4%
2005	251	N/A	N/A	116	N/A	3,192	34,691,928	8.4%	10,868	3.8%
2004	214	N/A	N/A	84	N/A	3,057	32,010,035	7.4%	10,471	2.8%
2003	199	N/A	N/A	71	N/A	2,927	29,816,676	8.2%	10,187	3.4%

The table below is a summary of the total membership over the last six years.

Table V-6
Schedule of Total Membership
Six Year Trend

Valuation Date January 1,	Active Members Defined Benefit Plans	Active Members Defined Contribution Plans	Retirees	Beneficiaries	Deferred Pensions	Inactive Members	Total
2008	8,383	950	3,173	425	744	7	13,682
2007	8,314	918	2,965	494	723	33	13,447
2006	8,374	896	2,941	436	675	66	13,388
2005	8,341	867	2,768	424	602	165	13,167
2004	8,491	902	2,657	416	546	230	13,242
2003	8,142	797	2,534	393	573	177	12,616

SECTION V
ACCOUNTING STATEMENT INFORMATION

The table below is a schedule of the total membership over the last four years.

Table V-7
Schedule of Total Membership
Funded Status of Actuarial Liabilities

	As of January 1[a]			
	2008	**2007**	**2006**	**2005**
a. Retirees currently receiving benefits	3,173	2,965	218	2,768
b. Beneficiaries currently receiving benefits	425	494	8	424
c. Terminated vested employees entitled to future benefits from DB Plans	570	561	53	464
d. Terminated non-vested employees entitled to contribution refunds from DB Plans	7	33	7	165
e. Active employees in defined benefit plans	8,383	8,314	717	8,341
i. Aggregate Salary[b]	$364,865,185	$358,690,830	$23,905,899	$319,004,918
ii. Vested[c]	4,913	4,430	358	4,603
iii. Non-vested	3,470	3,884	359	3,738
f. Participants in defined contribution-only plans	1,124	1,080	-	1,005
i. Aggregate Salary[d]	$31,107,136	$28,213,485	-	$26,807,519
ii. Active	950	918	-	867
iii. Inactive	174	162	-	138

a *2005 and 2007 include defined benefit non-county plans, defined benefit county plans, and defined contribution only plans. 2006 results consist of defined benefit county plans only*
b *Projected salary at 5% for year following valuation date*
c *Count of vested participants estimated based on service as of the valuation date*
d *Actual salary for preceding valuation date*

APPENDIX A
MEMBERSHIP INFORMATION

Pennsylvania Municipal Retirement System Distribution of Active Members by Age and Service as of January 1, 2008

COUNTS BY AGE/SERVICE

	Service										
Age	1 year or less	1 to 2	2 to 3	3 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 & up	Total
Under 20	9	3	0	0	0	0	0	0	0	0	12
20 to 24	108	57	36	20	6	0	0	0	0	0	227
25 to 29	107	104	80	115	130	2	0	0	0	0	538
30 to 34	84	75	73	109	263	60	1	0	0	0	665
35 to 39	86	75	70	131	327	189	99	6	0	0	983
40 to 44	102	90	76	137	321	229	232	87	11	0	1,285
45 to 49	76	88	66	155	331	249	281	189	165	20	1,620
50 to 54	61	93	55	135	301	248	258	177	209	163	1,700
55 to 59	41	48	49	91	199	176	229	144	122	222	1,321
60 to 64	17	24	15	50	133	101	141	77	62	79	699
65 & up	12	8	0	25	53	41	52	21	27	44	283
Total	703	665	520	968	2,064	1,295	1,293	701	596	528	9,333

APPENDIX A
MEMBERSHIP INFORMATION

Pennsylvania Municipal Retirement System Distribution of Active Members by Age and Service as of January 1, 2008

AVERAGE SALARY BY AGE/SERVICE*

Age	Service										Total
	1 year or less	1 to 2	2 to 3	3 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 & up	
Under 20	$8,153	$24,982	$0	$0	$0	$0	$0	$0	$0	$0	$12,360
20 to 24	$18,259	$34,232	$34,386	$38,157	$31,832	$0	$0	$0	$0	$0	$26,939
25 to 29	$17,318	$33,708	$37,120	$40,587	$42,529	$47,000	$0	$0	$0	$0	$34,607
30 to 34	$19,106	$34,971	$39,197	$40,371	$44,763	$43,898	$53,552	$0	$0	$0	$39,022
35 to 39	$20,739	$34,317	$40,533	$39,519	$43,964	$47,636	$48,735	$49,145	$0	$0	$41,578
40 to 44	$19,227	$34,761	$34,658	$37,915	$41,004	$45,782	$50,038	$50,199	$42,973	$0	$41,256
45 to 49	$18,445	$33,330	$37,419	$38,319	$40,336	$42,107	$46,656	$50,801	$47,937	$49,752	$42,096
50 to 54	$22,554	$33,686	$34,290	$33,183	$39,354	$40,683	$44,211	$47,425	$49,771	$49,423	$41,805
55 to 59	$23,829	$35,373	$35,527	$37,152	$36,138	$41,507	$43,241	$47,006	$48,984	$54,222	$43,132
60 to 64	$20,796	$30,413	$34,087	$31,772	$37,262	$36,809	$39,767	$43,542	$48,278	$49,631	$39,672
65 & up	$19,378	$26,554	$0	$24,298	$28,648	$36,304	$32,608	$43,383	$39,779	$49,310	$35,016
Total	$19,330	$33,929	$36,823	$37,395	$40,646	$42,703	$45,018	$48,061	$48,369	$51,475	$40,565

**Actual 2007 salary.*

APPENDIX A
MEMBERSHIP INFORMATION

Pennsylvania Municipal Retirement System Distribution of Inactive Benefit Payments as of January 1, 2008

COUNTS BY BENEFIT/AGE: RECEIVING PAYMENTS

Age	Monthly Benefit	Count
x < 30	$0	0
30 <= x < 35	$0	0
35 <= x < 40	$3,788	6
40 <= x < 45	$7,720	16
45 <= x < 50	$36,736	43
50 <= x < 55	$158,857	119
55 <= x < 60	$390,807	268
60 <= x < 65	$755,228	594
65 <= x < 70	$759,084	710
70 <= x < 75	$597,387	645
75 <= x < 80	$414,871	511
80 <= x < 85	$293,361	408
85 <= x	$156,791	278
<Total>	$3,574,630	3,598

COUNTS BY BENEFIT/AGE: DEFERRED PAYMENTS

Age	Monthly Benefit	Count
x < 30	$892	3
30 <= x < 35	$3,587	8
35 <= x < 40	$21,888	46
40 <= x < 45	$55,335	83
45 <= x < 50	$90,793	125
50 <= x < 55	$164,933	195
55 <= x < 60	$53,307	86
60 <= x < 65	$10,432	24
65 <= x < 70	$0	0
70 <= x < 75	$0	0
75 <= x < 80	$0	0
80 <= x < 85	$0	0
85 <= x	$0	0
<Total>	$401,166	570

APPENDIX A
MEMBERSHIP INFORMATION

Pensions in Payment on January 1, 2008 by Type and Amount

		Pension Type				
Monthly Amount	**Total**	**Normal**	**Involuntary early**	**Voluntary early**	**Service disability**	**Non-service disability**
Total	3,598	2,963	181	351	31	72
Under $100	169	146	11	10	1	1
$ 100 - $199	225	174	30	19	2	0
200 - 299	260	205	29	26	0	0
300 - 399	261	212	24	24	0	1
400 - 499	212	168	13	25	2	4
500 - 599	257	211	14	24	1	7
600 - 699	213	174	11	21	0	7
700 - 799	208	159	10	30	0	9
800 - 899	197	154	7	22	2	12
900 - 999	193	152	10	22	2	7
1,000 - 1,199	325	261	6	41	5	12
1,200 - 1,399	219	180	6	25	4	4
1,400 - 1,599	193	166	5	15	5	2
1,600 - 1,799	141	121	2	15	3	0
1,800 - 1,999	121	105	2	10	0	4
2,000 - 2,199	97	89	0	7	1	0
2,200 - 2,399	57	54	0	3	0	0
2,400 - 2,599	64	58	0	4	1	1
2,600 - 2,799	49	46	1	1	1	0
2,800 - 2,999	29	27	0	1	0	1
3,000 - 3,499	54	49	0	4	1	0
3,500 - 3,999	33	31	0	2	0	0
4,000 and over	21	21	0	0	0	0

PENNSYLVANIA MUNICIPAL RETIREMENT SYSTEM

APPENDIX A
MEMBERSHIP INFORMATION

Pensions Awarded in Prior Ten Years, by Type and Monthly Amount

	Total		Normal		Involuntary early		Voluntary early		Disability		
Year Ended December 31:	Number	Average Monthly Amount	Number	Average Monthly Amount	Number	Average Monthly Amount	Number	Average Monthly Amount	Number*		Average Monthly Amount
1997	169	782	142	831	10	594	9	337	8	(4)	647
1998	152	939	122	1,006	13	785	6	347	11	(2)	698
1999	179	869	152	912	22	647	3	345	2	(0)	850
2000	185	954	147	1,028	25	736	8	423	5	(1)	702
2001	246	1,277	206	1,346	30	957	6	945	4	(0)	655
2002	199	1,087	170	1,121	17	974	5	670	7	(2)	837
2003	214	1,199	171	1,226	26	1,206	8	609	9	(4)	1,199
2004	247	1,126	189	1,185	35	994	13	653	10	(1)	1,100
2005	264	1,270	217	1,290	23	1,257	11	639	13	(4)	1,493
2006	252	1,069	192	1,082	19	572	32	1,196	9	(2)	1,373
2007	236	1,065	227	1,056	6	1,259	-	-	3	(0)	1,350

**Numbers of service-related disability pensions are shown in parentheses.*

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

Actuarial Assumptions:

The current PMRS actuarial assumptions used in this study are as follows.

A. **Healthy Life Mortality:** Sample rates are**:**

	Retirees Prior to January 1, 2005 (1983 GAM Males; females setback 6 years)		New Retirees on or after January 1, 2005 (1994 GAM)	
Age	Male	Female	Male	Female
50	0.39%	0.19%	**0.26%**	**0.14%**
55	0.61	0.35	**0.44**	**0.23**
60	0.92	0.57	**0.80**	**0.44**
65	1.56	0.84	**1.45**	**0.86**
70	2.75	1.39	**2.37**	**1.37**
75	4.46	2.48	**3.72**	**2.27**
80	7.41	4.04	**6.20**	**3.94**
85	11.48	6.71	**9.72**	**6.77**

(a) Type of Death:
   (i) 15% of mortality is assumed to be service related for municipal plans, and
   (ii) 50% of mortalities are assumed to be service related for uniform plans.

B. **Disabled Life Mortality Rates:** Mortality under healthy life table for a life 10 years older.

C. **Termination Rates Before Retirement:** For all plans with 25 or more active members, the termination rates indicated below were used; for municipalities with between 6 and 24 members, a percentage of the indicated rates where such percentage equals 100 percent less 5 percent x (25 – number of members); for municipalities with 5 or fewer members, no terminations were assumed.

	Current Valuation Rate[1]		
	Uniformed	Municipal	
Years of Service	Male and Female	Male	Female
Less than 1	**13%**	**13%**	**16%**
1 but less than 2	**10**	**12**	**15**
2 but less than 3	**7**	**10**	**13**
3 but less than 4	**7**	**9**	**11**
4 but less than 5	**6**	**6**	**9**
5 but less than 6	**5**	**6**	**8**
6 but less than 7	**4**	**6**	**7**
7 but less than 8	**3**	**5**	**7**
8 but less than 9	**3**	**4**	**6**
9 but less than 10	**3**	**3**	**5**
10 or more	**3**	**2**	**4**

[1] *No termination rates are applied once the employee becomes eligible for voluntary early or normal retirement.*

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

D. Disability Incidence Rates:

Municipal - 40% of 1964 OASDI (Social Security) Experience for Males. Sample rates are:

Age	Valuation Rate (%)
25	0.034%
35	0.059
45	0.144
55	0.404
65	0.928

Uniformed plans – 60% of 1964 OASDI (Social Security) Experience for Males. Sample rates are:

Age	Valuation Rate (%)
25	0.051%
35	0.088
45	0.216
55	0.605
65	1.393

Type of Disability:
(i) 15% of disablements are assumed to be service related for municipal plans, and
(ii) 50% of disablements are assumed to be service related for uniform plans.

E. Workers Compensation: Service-related disability benefits payable from municipal plans are offset by 25% of final average salary.

F. Salary Scale: Three year select rates include 3.0% inflation and age-related scale for merit/seniority based on sample rates below plus 2% during the select period only then reverting to inflation and merit/seniority thereafter. Final actual salary plans assume an additional 6% at retirement.

Sample rates are as follows:

Age	Total Rate (%)* (including inflation)
25	7.8%
30	5.9
35	5.1
40	4.5
45	4.2
50	4.1
55	3.9
60	3.7
65	3.0

* *Add 2% for each of the first 3 years of service.*

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

G. Retirement Age: The age at which unreduced benefits are available. No early retirement is assumed. Specific assumptions regarding retirement age are:

(a) Uniformed Members:

(i) Members first eligible to retire at age 57 or younger will defer their retirement four years,
(ii) Members first eligible to retire at ages 58, 59, 60 or 61 will retire at age 62, and
(iii) Members first eligible to retire at ages 62 or older will retire when first eligible.

(b) Municipal Members:

Members are assumed to retire over a range of ages as shown below:

Age	Current Rate of Normal Retirement[2]
Under 46	5%
46 – 54	15
55 – 59	10
60 – 61	10
62	30
63 – 64	20
65	35
66 – 74	15
75	100

Inactive vested members are assumed to retire when first eligible for unreduced benefits.

H. Marital Status and Spouse's Age:[3] 85 percent of members will be married at time of retirement and females are four years younger than their spouses.

I. Social Security Projections[3]:

(a) The Social Security Taxable Wage Base will increase by 3.5% compounded annually;

(b) The Consumer Price Index will increase 3.0% compounded annually

(c) The Average Total Wages of All Workers will increase by 3.5% compounded annually.

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[2] *Rates indicated are adjusted by adding 5% (and 10% for ages 60-62 under current rate assumptions) for the year in which the member is first eligible for normal retirement.*
[3] *If applicable.*

J. Post-Retirement Cost of Living Increases[3]: 3.0% per year, subject to plan limitations.

K. Net Investment Return: 6.0% compounded annually (net of investment and certain administration expenses) for funding purposes.

L. Administrative Expenses: The reserve for non-investment related expenses of the system, net the $20 per participant annual assessment is based on expected expenses for the current year. The amount allocated for 2008 is $3,375,000 compared to $3,050,000 for 2007.

Actuarial Methods:

Contribution requirements are individually determined for each participating municipality, on an actuarial basis as described below, at least biennially. The frequency of the actuarial valuation is determined by applicable Commonwealth statute (Act 205 of 1984 and Act 293 of 1972). The following actuarial methods were adopted effective January 1, 1985, unless indicated otherwise.

Actuarial Value of Assets:

Sum of all audited reserve accounts as of the valuation date, including Member, Municipal, Retired, and Disability Reserves, and a one-year administration expense reserve, plus the portion of any additional investment income to be distributed as "excess interest." The actuarial value can never be less than 90 percent of fair market value.

Each year, municipalities receive an excess interest allocation derived as a portion of new surplus created during the prior year. "Surplus" refers to the excess of fair market value over the actuarial value of assets. Once the preliminary actuarial asset value has been determined, a formula is used to allocate the new surplus. Generally, depending on the relative size of surplus to fair market value, between 10 percent and 90 percent of the new surplus will become excess interest.

Actuarial Cost Method:

Entry Age Normal Actuarial Cost Method.

Entry age is defined as attained age less credited service. The normal cost rate is derived as a level percent of future compensation of current employees, on an individual basis. This rate is applied to the projected payroll and projected employee contributions are deducted. Actuarial gains (or losses), including the effect of contributions greater or lesser than the previously determined actuarial level, are reflected by decreases (or increases) in the unfunded actuarial liability. Under Act 205 of 1984, the unfunded actuarial liability is amortized as a level dollar amount over the lesser of:

APPENDIX B
ACTUARIAL ASSUMPTIONS AND METHODS

(a) (i) 30 years, with respect to the initial liability as of 1/1/85 (or first valuation);
(ii) 20 years, with respect to changes due to plan provisions and actuarial assumptions;
(iii) 10 years, with respect to changes in benefits for currently retired members;
(iv) 15 years, with respect to actuarial gains and losses; or

(b) The average assumed working lifetime of active employees as of the date the liability was established.[4]

With the two exceptions which follow, the funding method is applied individually with respect to each municipality:

1) Retired and disabled members are paid monthly benefits from the System's Retired Reserve account, which at the time of retirement receives a transfer from the municipal and member accounts in an amount actuarially determined to be sufficient to pay all future benefits for the member (and, if applicable, a surviving beneficiary). Thus, post-retirement experience is pooled with the System. (However, this procedure does not apply to the legislated ad-hoc adjustments effective January 1, 1989.)

2) A disabled member's pension is met in part from the amount that can be provided by the value of that portion of the member's accrued benefit attributable to municipal contributions, with the balance of the pension being provided by the appropriate transfer from the Disability Reserve Account. The amount of annual transfer from the accumulated municipal contributions to the Disability Reserve Account is determined on the one year term cost basis, i.e. the expected cost of disabilities in the coming year.

4 *If there are no active employees, the unfunded liability is amortized one year after the liability was established.*