

**OHIO STATE HIGHWAY PATROL RETIREMENT SYSTEM
ANNUAL ACTUARIAL VALUATION REPORT
DECEMBER 31, 2009**

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August 30, 2010

The Retirement Board
Ohio State Highway Patrol Retirement System
Columbus, Ohio

Ladies and Gentlemen:

The results of the regular annual **actuarial valuation as of December 31, 2009** of the Ohio State Highway Patrol Retirement System, as established by Chapter 5505 of the Revised Code, are presented in this report.

Your Executive Director furnished the member statistical data required for the valuation, together with pertinent data on financial operations. Data was reviewed for reasonableness, but was not audited by the actuary. The actuarial assumptions used in making the valuation are shown in Section F of this report.

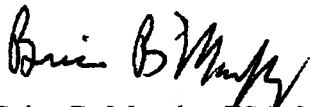
Your attention is directed particularly to the summary of results and comments on pages 2 through 6.

The actuarial calculations were performed in accordance with accepted actuarial procedures. The calculations were based upon provisions of the Retirement System described in Section A and upon actuarial assumptions that are internally consistent and reasonably based upon the actual experience of the System.


The cooperation of the Executive Director and staff in furnishing materials requested for this valuation, and the complete and excellent condition of the records, is acknowledged with appreciation.

The actuaries submitting this report are Members of the American Academy of Actuaries (MAAA) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



Brian B. Murphy, FSA, MAAA



Mita D. Drazilov, ASA, MAAA

BBM:MDD

DECEMBER 31, 2009

SUMMARY

Valuations performed as of odd-numbered years (2009, 2011, 2013, 2015...) form the basis for employer contribution rates, which are effective over two-year periods. Valuations performed as of even-numbered years are intended to provide interim measures of the funding status of the Retirement System, and to provide the Board an opportunity to reallocate the total employer contribution rate between the pension and retiree health programs, if necessary.

The employer contribution rate for the two-year period beginning July 1, 2011 was determined in accordance with this December 31, 2009 valuation.

The **total employer contribution rate** for the two-year period beginning July 1, 2011 is 26.50%, as established by the Board and Statute based upon the results of the December 31, 2009 actuarial valuation. Based upon preliminary December 31, 2009 actuarial valuation results, the Board at its August, 2010 meeting voted to allocate 23% of payroll to the pension program (last year the employer rate for pensions was 22%). In addition, the figures in this report are based upon a continuation of the member rate at its present (10%) level, since legislation to increase the member rate by 1% has not yet been enacted. The breakdown between employer, employee, pension and health is shown below. This breakdown produces an infinite amortization period for pensions.

	Employer Contribution Rates Expressed As % of Active Payroll		
	Retirement, Survivor & Disability Allowances	Post Retirement Health Care	Totals
Employer	23.00%	3.50%	26.50%
Employee	10.00%	0.00 %	10.00%
Totals	33.00%	3.50%	36.50%

DECEMBER 31, 2009
SUMMARY

Items of significant importance for the December 31, 2009 actuarial valuation include:

1. The rate of market value investment return for the calendar year was greater than the actuarial assumed investment return rate of 8.0%. The market value rate of return for calendar year 2009 was approximately 22.7%. This figure will generally differ from other reported return figures due to restated audited asset figures, approximate formulas and treatment of System expenses. Because losses that occurred in 2008 are not yet fully recognized, the funding value rate of return was lower than the assumed investment return rate. The funding value rate of return for calendar year 2009 was approximately 6.2%.
2. The funding value of assets currently exceeds the market value of assets by approximately \$30 million. (This is primarily due to the unrecognized portion of investment losses from calendar year 2008.) The difference between the funding value of assets and the market value of assets has decreased considerably from last year's difference of \$116 million. This is a favorable result.
3. Experience in the retiree health plan was favorable this year, leading to an increase in the projected solvency period to 2028. However, the reallocation of 1% of the employer contribution rate to the pension program from the retiree health program decreased the projected solvency period to 2026.
4. In the December 31, 2008 valuation, it was reported that the then current contribution rates were not sufficient to fund the benefits in accordance with the statutory 30 year requirement. The Board subsequently developed a plan for restoring funding to 30 years and presented such plan to the legislature on September 9, 2009. The plan involved changes to the COLA provisions, changes in the member contribution rate, and a reallocation of contribution rate from the health plan to the pension plan. It also included a repeal of the HB 1 128th GA changes to 5505.15. None of the changes in the plan have been enacted at the time of this writing.
5. Changes to the retiree health program effective 1/1/2010 (i.e., Medicare Advantage plan) were not reflected in the December 31, 2009 valuation. They will be reflected beginning with the December 31, 2010 valuation and are expected to have a small effect.

SUMMARY & RECOMMENDATIONS - DECEMBER 31, 2009
(CONTINUED)

This valuation indicates that a total employer contribution rate of 26.50% with an employee rate of 10.00% produces an infinite amortization period for the pension program, based upon a 3.50% employer rate allocation to the retiree health program and based upon the Funding Value of Assets.

Comment on Post Retirement Health Care:

With regard to the retiree health plan, higher contributions are required to extend the solvency of the fund. The benefit payout rate is approximately 10% of payroll, approximately double the contribution income. This situation cannot continue indefinitely. It may be necessary for the Board to further reduce the contribution to the health plan in the future to help achieve a 30-year amortization period in the pension program. In addition, changes to the retiree health plan and/or further increases in contribution rates will need to be a part of the future. The Board may wish to consider reviewing the investment return assumption used for solvency projections. Please see pages B-7 and B-11 for details.

Recommendation: The following reserve transfers are recommended as of December 31, 2009:

Transfer To (From)	Total Amount
Pension Reserve Fund:	\$96,760,488
Survivor Benefit Fund:	1,412,251
Total	\$98,172,739

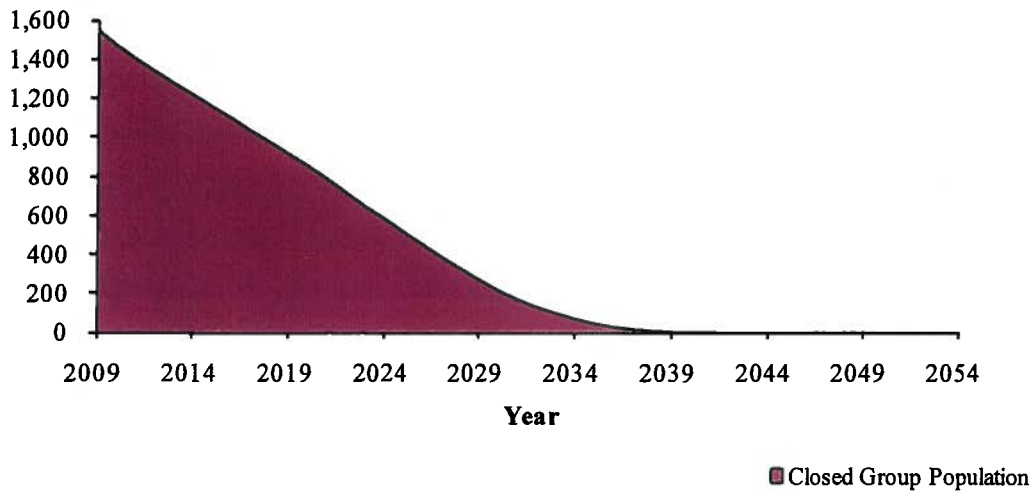
The reserve funds from which the transfers are made are determined as follows: First, the accumulated contributions of members who retired or died with survivor benefits payable prior to January 1, 2010 should be transferred from the Employees' Savings Fund if this has not already been done. The remainder of the transfer should then be taken from the Income Fund or the Employer's Accumulation Fund, as the Board deems appropriate. The purpose of these transfers is to ensure that all pension benefits that have come into pay status since January 1, 1966 are fully funded by the appropriate reserve funds. Benefits effective prior to January 1, 1966 represent a closed group and are paid from the Employer Accumulation Fund.

SUMMARY & RECOMMENDATIONS - DECEMBER 31, 2009
(CONTINUED)

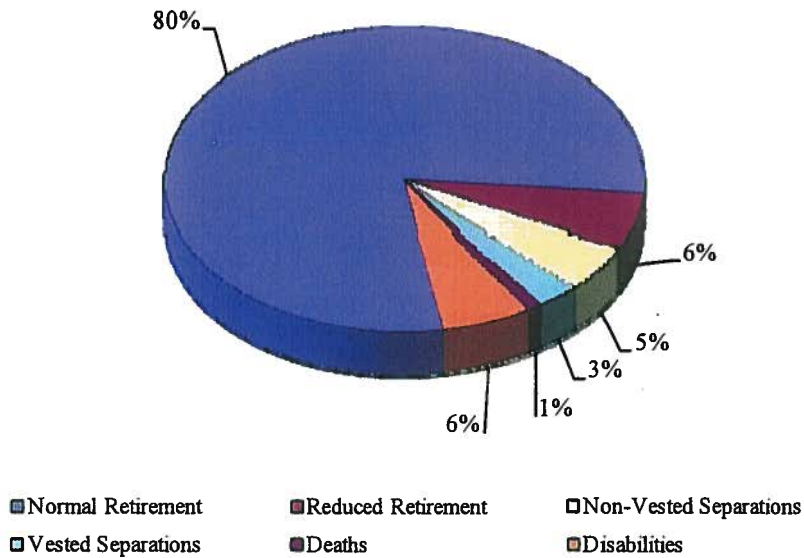
Conclusion: Based upon the results of the December 31, 2009 regular annual actuarial valuation, in the absence of future actuarial gains, the Ohio State Highway Patrol Retirement System will require contribution increases or benefit changes to the pension program to successfully amortize the unfunded actuarial accrued liabilities over a 30-year period. With regard to the Retiree Health Plan, solvency to 2026 is a relatively favorable result, but most people presently near retirement will live beyond that date. A combination of contribution increases and continued cost containment measures will be important for the retiree health plan to accomplish its objectives.

EXPECTED DEVELOPMENT OF PRESENT POPULATION DECEMBER 31, 2009

Closed Group Population Projection



Expected Terminations from Active Employment for Current Active Members



The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 1,547 active members. Eventually, 5% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for an employer provided benefit. 89% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, or by separating from service without withdrawing contributions. 7% of the present population is expected to become eligible for death-in-service or disability benefits. Within 14 years, over half of the covered membership is expected to consist of new hires.

SECTION A

**RETIREMENT, SURVIVOR, AND
DISABILITY ALLOWANCES**

RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
BENEFITS AND CONDITIONS VALUED
DECEMBER 31, 2009

Age & Service Pension: A member may retire at age 52 to age 60, provided he has 20 or more years of service, or at age 48 with 25 or more years of contributing service. The member's pension equals the sum of 2-1/2% of final average salary (average of salaries during highest 3 years) times years of service not in excess of 20, 2-1/4% of final average salary times years of service in excess of 20 but not in excess of 25 and 2% of final average salary times years of service in excess of 25. The maximum pension payable is 79.25% of the member's final average salary. A member must retire upon attainment of age 60 or completion of 20 years of service, whichever occurs later.

Reduced Retirement: A member who has acquired at least 20 but less than 25 years of service and is between the ages of 48 and 52 is eligible to receive a Pension computed in the same manner as an Age & Service pension but reduced as follows:

Age	Percent of Age & Service Pension
48	75%
49	80
50	86
51	93
52	100

Deferred Pension: A member who has acquired 20 years of service and retires is eligible to receive a pension computed in the same manner as an Age & Service Pension at the attainment of age 52. A reduced benefit is payable if the retirant elects to receive a benefit after age 48 and prior to age 52. The reduction is waived for members with 25 or more years of service. A member, who has acquired 15 years of service and who voluntarily resigns or is discharged, is eligible to receive a pension equal to 1-1/2% of final average salary multiplied by total service. The pension shall begin the first month after attainment of age 55, provided the member does not withdraw his accumulated contributions from the employees' savings fund.

RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
BENEFITS AND CONDITIONS VALUED
DECEMBER 31, 2009
(CONTINUED)

Disability Pension:

- A. **On-Duty:** A member who is permanently disabled with a duty-related injury is eligible to receive a pension that is the largest of (i) 61.25% of average final salary, or (ii) the Age & Service Pension.

- B. **Off-Duty:** A member who is permanently disabled with a non-duty related injury or illness is eligible to receive a pension that is the larger of (i) 50% of average annual salary, or (ii) the Age & Service Pension.

~~***Survivor's Benefits:***~~ The spouse of a deceased retirant (other than a deferred retirant) is eligible to receive a pension of \$900 a month, or 50% of the computed monthly pension the retirant was receiving, whichever is greater. The surviving spouse of an active member or of a deferred retirant who *was not* yet eligible for an immediate pension benefit is eligible to receive a pension of \$900 per month. The surviving spouse of an active member or of a deferred retirant who *was* eligible for an immediate pension benefit is eligible to receive \$900 per month or 50% of the immediate benefit for which the retiree was eligible, whichever is greater. The benefit terminates upon death. Each surviving child of a deceased member or retirant is eligible for a pension of \$150 a month until attainment of age 18, marriage, or death. The benefit may be continued to age 23 if the child is a full-time student. Each surviving child regardless of age, who was totally dependent upon the deceased member or retirant at his death because of physical or mental disability is eligible to receive a pension of \$150 per month until his death or recovery from the disability. If there is no spouse or surviving children, each dependent parent is eligible to receive a pension of \$154 a month. Additionally, a \$5,000 lump sum benefit is payable upon the death of the retirant.

Minimum Benefit: All members who retired with an Age & Service Pension or Disability Benefit are eligible to receive a minimum benefit of \$1,050 per month.

Members' Contributions to the Fund: Members contribute 10.0% of salary to the employees' savings fund. A member who leaves the employ of the State Highway Patrol before a benefit is payable may withdraw the accumulated contributions, without interest, in lieu of any other system provided benefit.

RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
BENEFITS AND CONDITIONS VALUED
DECEMBER 31, 2009
(CONTINUED)

State Contributions: The state contributes the remaining amount necessary to finance the Retirement System on an actuarial basis. By statute, the state's contribution rate can be neither less than the member contribution rate, nor more than three times the member rate.

Post-Retirement Increases: The basic benefit for all retirants is increased by 3 percent each year after age 53. The retirant must have also been receiving monthly benefits for at least twelve months. Benefit recipients receiving survivor benefits are eligible for the increase after receiving benefits for twelve months. Benefit recipients receiving disability benefits are eligible for the increase after receiving benefits for sixty months or age 53 whichever occurs first.

PLUS: A qualified member may elect a partial lump sum benefit of not less than 6 times the monthly amount payable to the member as a single lifetime pension and not more than 60 times that amount.

Deferred Retirement Option Program (DROP): Members are eligible for a one-time election to "DROP in" upon attainment of unreduced retirement eligibility. The primary features of the DROP include:

- a) During participation in the DROP, members continue to make contributions based upon the 10% member contribution rate. While participating in the DROP, 100% of members' contributions are deposited to their DROP account.
- b) 100% of the member's computed benefit (based upon service and salary at time of DROP), including any scheduled 3% post-retirement increases, is credited to the member's DROP account.
- c) The DROP account is credited with interest annually based upon a rate of return earned on a selected group of cash equivalent type investments (assumed to be 3% for actuarial valuation purposes).

**RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
BENEFITS AND CONDITIONS VALUED
DECEMBER 31, 2009
(CONCLUDED)**

Deferred Retirement Option Program (DROP) (Continued):

- d) A member who “DROPs in” must stay in the DROP for a minimum period of time based on age at time of “DROPing in”. A minimum participation period of 3 years for members who “DROP in” prior to age 52 and 2 years for members who “DROP in” on or after age 52. After a maximum of 8 years in the DROP program or attaining age 60, the member who entered the DROP program must retire.
- e) If the member “DROPs in”, the member’s annual benefit when the member “DROPs out” (i.e. retires) is based upon the benefit calculations at time of the “DROP in”, including any post-retirement increases that may have accrued during the DROP participation period.
- f) If, during participation in the DROP, a member becomes disabled due to a duty related injury/illness, the member can choose to 1) have a disability pension benefit calculated based on the assumption that participation in the DROP did not occur, or 2) the member can elect to accept the age/service pension benefit achieved through DROP participation plus the accumulation in the DROP account. Duty disability benefit recipients will not suffer the loss of accumulated interest for early departure from the DROP.
- g) Once a member elects to participate in the DROP, their contributions are committed for the minimum period (2 or 3 years). If the member voluntarily discontinues DROP participation prior to the minimum participation period, the member will not receive any interest accumulated in the DROP account but will receive all accumulated pension benefits and pension contributions deposited into the DROP account at the end of the minimum participation period.

SAMPLE BENEFIT COMPUTATION FOR MEMBERS

Assumed data in connection with this sample retirement is shown below:

	Data	Description
A.	\$40,000	Final Average Compensation
B.	27	Years of Credited Service
C.	50	Age of Retirant
D.	50%	Percentage to continue to spouse after retirant's death (this is automatic)

Sample Computation Steps

E. Benefit Formula:	0.0250 x 20 x \$40,000 =	\$20,000
	0.0225 x 5 x \$40,000 =	\$4,500
	0.0200 x 2 x \$40,000 =	<u>\$1,600</u>
		<u>\$26,100</u>

Benefit payable to:

F. Retirant while spouse is alive (E)	\$26,100
G. Spouse after retirant's death (D x E)	\$13,050
H. Retirant after spouse's death (E)	\$26,100

Projected Benefits to Member

Year Ended December 31	Amount Payable
2010	\$ 26,100
2011	26,100
2012	26,100
2013	26,883
2014	27,666
2015	28,449
2016	29,232
2017	30,015
2018	30,798

Benefits for years 2019 and later increase by \$783 over the previous year's amount.

**RETIREMENT SURVIVOR & DISABILITY ALLOWANCES
COMPUTED EMPLOYER CONTRIBUTIONS TO SUPPORT BENEFITS**

Contributions for	Contributions Expressed as Percents of Payroll	
Valuation Date - December 31	2009	2008
Results for the Period Ending June 30	2012	2011
Normal Cost:		
Age & Service Benefits	16.55%	16.54%
Disability Benefits	2.85%	2.85%
Survivor Benefits	0.19%	0.18%
Separation Benefits	0.89%	0.89%
Purchase of Military Service	0.75%	0.75%
Total Normal Cost	21.23%	21.21%
Less Member Contributions	10.00%	10.00%
<hr/>		
Employer Normal Cost	11.23%	11.21%
Unfunded Actuarial Accrued Liabilities Amortization Period	11.77% N/A	10.79% N/A
PENSION EMPLOYER CONTRIBUTION RATE	23.00%	22.00%

The amortization period is the period of years over which the employer contribution rate and the employee contribution rate will finance the unfunded liabilities.

RETIREMENT, SURVIVOR, & DISABILITY ALLOWANCES
METHOD OF FINANCING FUTURE BENEFITS FOR
PRESENT ACTIVE MEMBERS
DECEMBER 31, 2009

Normal cost and the allocation of present values between service rendered before and after the valuation date were determined using an individual entry-age actuarial cost method having the following characteristics:

- (i) The annual normal costs for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;
 - (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.
-

Actuarial Accrued Liabilities, \$940,084,346, less pension assets of \$620,356,505 resulted in unfunded actuarial accrued liabilities of \$319,727,841, which were amortized as a level percent of payroll over an infinite period. The characteristics of this method are illustrated on the following page. Actuarial accrued liabilities represent the portion of present values not covered by future normal cost contributions.

**RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
FINANCING UNFUNDED ACTUARIAL ACCRUED LIABILITIES
WHICH WERE CALCULATED USING AN INFLATION ASSUMPTION
OF 4.00% AND AN INVESTMENT RETURN ASSUMPTION OF
8.00% COMPOUNDED ANNUALLY**

**Level % of Payroll Amortization:
Closed Amortization
(\$ Thousands)**

Year	Active Employee Payroll	Unfunded Actuarial Accrued Liability	Annual Contributions		UAAL as % of Payroll
			Dollars	% of Payroll	
	\$ 98,618	\$ 319,728	\$ 11,607	11.77%	324.2%
1	102,563	333,244	12,072	11.77%	324.9%
2	106,666	347,358	12,555	11.77%	325.7%
3	110,933	362,100	13,057	11.77%	326.4%
4	115,370	377,499	13,579	11.77%	327.2%
5	119,985	393,587	14,122	11.77%	328.0%
6	124,784	410,398	14,687	11.77%	328.9%
7	129,775	427,967	15,275	11.77%	329.8%
8	134,966	446,331	15,885	11.77%	330.7%
9	140,365	465,529	16,521	11.77%	331.7%
10	145,980	485,602	17,182	11.77%	332.6%
11	151,819	506,594	17,869	11.77%	333.7%
12	157,892	528,551	18,584	11.77%	334.8%
13	164,208	551,522	19,327	11.77%	335.9%
14	170,776	575,558	20,100	11.77%	337.0%
15	177,607	600,714	20,904	11.77%	338.2%
16	184,711	627,047	21,740	11.77%	339.5%
17	192,099	654,617	22,610	11.77%	340.8%
18	199,783	683,489	23,514	11.77%	342.1%
19	207,774	713,731	24,455	11.77%	343.5%
20	216,085	745,415	25,433	11.77%	345.0%
21	224,728	778,617	26,450	11.77%	346.5%
22	233,717	813,418	27,508	11.77%	348.0%
23	243,066	849,904	28,609	11.77%	349.7%
24	252,789	888,165	29,753	11.77%	351.3%
25	262,901	928,298	30,943	11.77%	353.1%
26	273,417	970,404	32,181	11.77%	354.9%
27	284,354	1,014,593	33,468	11.77%	356.8%
28	295,728	1,060,979	34,807	11.77%	358.8%
29	307,557	1,109,685	36,199	11.77%	360.8%
30	319,859	1,160,840	37,647	11.77%	362.9%

**RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
ACTUARIAL PRESENT VALUE OF FUTURE BENEFITS
PRESENT RETIRED LIVES AND VESTED DEFERRED CASES
DECEMBER 31, 2009**

Benefits Payable	Number	Monthly Amount	Actuarial Value
From Employer Accumulation Fund:			
Regular Retirements Effective Before 1/1/66	0	\$ 0	\$ 0
Disability Retirements Effective Before 1/1/66	0	0	0
Total Benefits Payable from Employer Accumulation Fund	0	0	0
From Pension Reserve Fund:			
Regular Retirements Effective After 1/1/66	1,017	3,224,707	456,165,849
Disability Retirements Effective After 1/1/66	110	273,109	41,351,853
Total Benefits Payable from Pension Reserve Fund	1,127	3,497,816	497,517,702
From Survivor Benefit Fund:			
Surviving Spouses, Dependent Children & Dependent Parents	258	295,238	29,798,808
Total Benefits Payable from Survivor Benefit Fund	258	295,238	29,798,808
Total Retirement Benefits Payable	1,385	3,793,054	527,316,510
Total Vested Deferred Benefits Payable	3	5,461	770,540
Grand Total	1,388	\$3,798,515	\$528,087,050

RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
DEVELOPMENT OF ACTUARIAL ACCRUED LIABILITIES
DECEMBER 31, 2009

Actuarial Present Value, December 31, of	(1) Total Actuarial Present Value	(2) Portion Covered By Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1) - (2)
Age & service allowances based on service rendered before and likely to be rendered after valuation date	\$ 557,043,908	\$ 153,744,802	\$ 403,299,106
Disability allowances likely to be paid to present active members who become totally and permanently disabled	32,942,333	25,547,487	7,394,846
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	2,679,050	1,578,671	1,100,379
Separation benefits (refunds of contributions and deferred allowances likely to be paid on behalf of present active members)	7,910,694	7,707,729	202,965
Retirement benefits likely to be paid to current retirants and beneficiaries and to present inactive members	528,087,050	0	528,087,050
Total	\$ 1,128,663,035	\$ 188,578,689	\$ 940,084,346
Member portion	191,126,448	88,357,454	102,768,994
Employer portion	\$ 937,536,587	\$ 100,221,235	\$ 837,315,352

RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS
DECEMBER 31, 2009

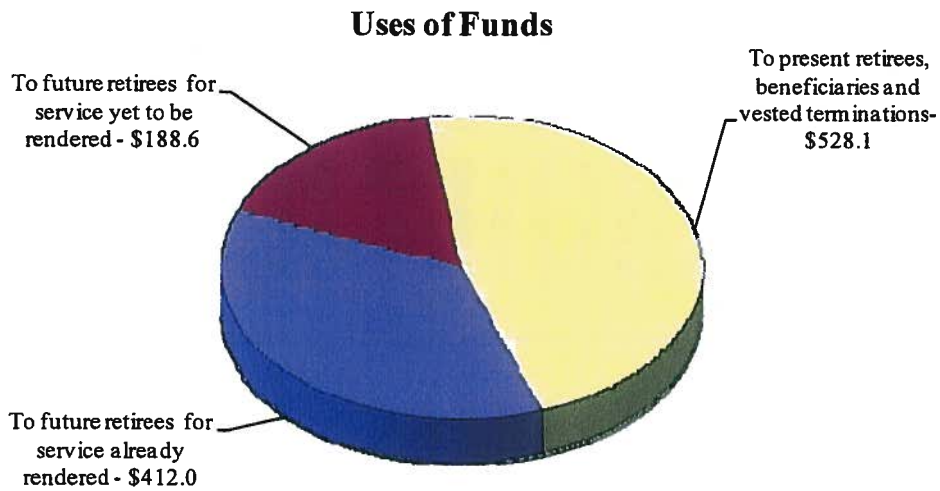
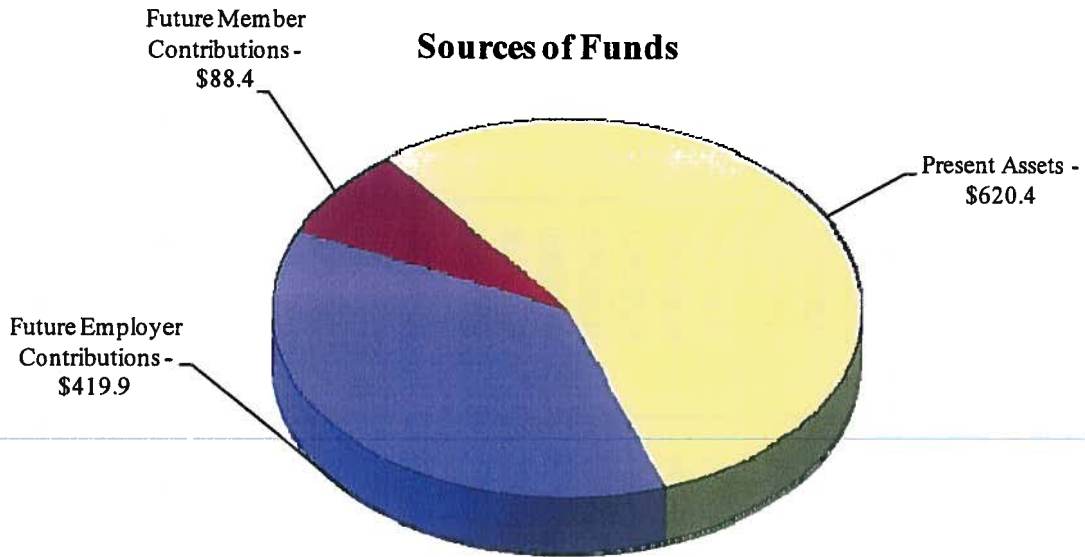
PRESENT RESOURCES AND EXPECTED FUTURE RESOURCES

A. Present valuation assets	
1. Net assets from system financial statements	\$ 691,584,789
2. Market Value Adjustment	29,519,501
3. Health Assets	<u>100,747,785</u>
4. Valuation Assets: 1 + 2 - 3	\$ 620,356,505
B. Actuarial present value of expected future Employer contributions	
1. For normal costs	100,221,235
2. For unfunded actuarial accrued liability	<u>319,727,841</u>
3. Total	<u>419,949,076</u>
C. Actuarial present value of expected future member contributions	<u>88,357,454</u>
D. Total Present and Expected Future Resources	<u><u>\$ 1,128,663,035</u></u>

ACTUARIAL PRESENT VALUE OF EXPECTED FUTURE BENEFIT PAYMENTS

A. To retirants and beneficiaries	\$ 527,316,510
B. To terminated members	770,540
C. To present active members	
1. Allocated to service rendered prior to valuation date (actuarial accrued liability)	411,997,296
2. Allocated to service likely to be rendered after valuation date	<u>188,578,689</u>
3. Total	600,575,985
D. Total Actuarial Present Value of Expected Future Benefit Payments	<u><u>\$ 1,128,663,035</u></u>

**RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES
FINANCING \$1,128.7 MILLION OF BENEFIT PROMISES
DECEMBER 31, 2009**



RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES COMPARATIVE STATEMENT

Valuation Date December 31	No.	Annual Payroll	Actuarial Accrued Liabilities			Unfunded/ Payroll	% Funded	Funding Years
			Total	Funded	Unfunded			
1994 #	1,465	\$ 58,116,787	\$ 374,006,767	\$ 330,787,044	\$ 43,219,723	0.7	88.4%	12
1995	1,455	59,825,356	402,450,332	370,425,462	32,024,870	0.5	92.0%	8
1996	1,375	59,239,349	454,514,187	411,316,254	43,197,933	0.7	90.5%	16
1997	1,445	62,233,299	487,392,406	460,667,112	26,725,294	0.4	94.5%	9
1997 *	1,445	62,233,299	496,917,335	460,667,112	36,250,223	0.6	92.7%	17
1998	1,446	65,153,864	532,956,745	509,859,924	23,096,821	0.4	95.7%	10
1999	1,445	66,017,381	564,672,560	546,510,779	18,161,781	0.3	96.8%	7
1999 *	1,445	66,017,381	577,010,085	546,510,779	30,499,306	0.5	94.7%	20
2000	1,489	69,028,285	607,411,320	569,858,387	37,552,933	0.5	93.8%	26
2000 #	1,489	69,028,285	594,222,603	570,039,631	24,182,972	0.4	95.9%	8
2001	1,520	76,344,002	636,715,458	551,279,438	85,436,020	1.1	86.6%	31
2002 #	1,548	78,997,065	668,605,932	492,430,826	176,175,106	2.2	73.7%	32
2003	1,542	81,737,962	702,799,017	545,981,513	156,817,504	1.9	77.7%	32
2004	1,562	81,757,707	737,867,378	569,858,387	168,008,991	2.1	77.2%	37
2004 *	1,562	81,757,707	734,464,371	569,858,387	164,605,984	2.0	77.6%	34
2005	1,573	83,408,155	766,741,437	591,922,200	174,819,237	2.1	77.2%	37
2005 #	1,573	83,408,155	773,856,164	591,922,200	181,933,964	2.2	76.5%	35
2006 *	1,592	85,878,329	807,760,712	653,493,046	154,267,666	1.8	80.9%	28
2007	1,597	93,752,908	866,255,394	700,860,707	165,394,687	1.8	80.9%	27
2008	1,544	94,301,538	904,522,377	603,265,803	301,256,574	3.2	66.7%	N/A
2009	1,547	94,824,789	940,084,346	620,356,505	319,727,841	3.4	66.0%	N/A

* Plan amended.

Revised actuarial assumptions or methods.

While no one or two numeric indices can fully describe the financial condition of a retirement plan, *the ratio of unfunded actuarial accrued liabilities to active member payroll ("Unfunded/Payroll" above) is significant.* Unfunded actuarial accrued liabilities represent a kind of debt, while active member payroll represents the Plan's capacity to collect contributions to pay toward debt --- thus *the ratio is a relative index of condition. The lower the ratio, the greater the financial strength.* And vice-versa.

CHANGES IN AVERAGE PAY

Year	Number of Members	Total Payroll	Average Pay	% Change from Prior Year in		
				Average Pay	N.A.E.+	CPI
1995	1,455	\$59,825,356	\$41,117	3.6%	4.0%	2.6%
1996	1,375	59,239,349	43,083	4.8%	4.9%	3.3%
1997	1,445	62,233,299	43,068	0.0%	5.8%	1.7%
1998	1,446	65,153,864	45,058	4.6%	5.2%	3.4%
1999	1,445	66,017,381	45,687	1.4%	5.6%	2.7%
2000	1,489	69,028,285	46,359	1.5%	5.5%	3.4%
2001	1,520	76,344,002	50,226	8.3%	2.4%	1.6%
2002	1,548	78,997,065	51,032	1.6%	1.0%	2.4%
2003	1,542	81,737,962	53,008	3.9%	2.4%	1.9%
2004	1,562	81,757,707	52,342	(1.3)%	4.6%	3.3%
2005	1,573	83,408,155	53,025	1.3%	3.7%	3.4%
2006	1,592	85,878,329	53,944	1.7%	4.6%	2.6%
2007	1,597	93,752,908	58,706	8.8%	4.7%	4.1%
2008	1,544	94,301,538	61,076	4.0%	2.3%	0.1%
2009	1,547	94,824,789	61,296	0.4%	1.7% *	2.7%
10 Year Average				3.0%	3.3%	2.5%

+ *National Average Earnings published by the Social Security Administration.*

* *Estimated National Average Earnings published by the Social Security Administration.*

Over long periods of time, the change in average pay is an approximate measure of the impact of inflation and “Across the Board” pay increases on member pays. In years when the number of members decreases, the change in average pay may tend to be greater than actual pay increases experienced by members. In years when the number of members increases the change in average pay may tend to be less than actual pay increases experienced by members.

**RETIREMENT, SURVIVOR, AND DISABILITY BENEFITS IN PAY STATUS
COMPARATIVE STATEMENT**

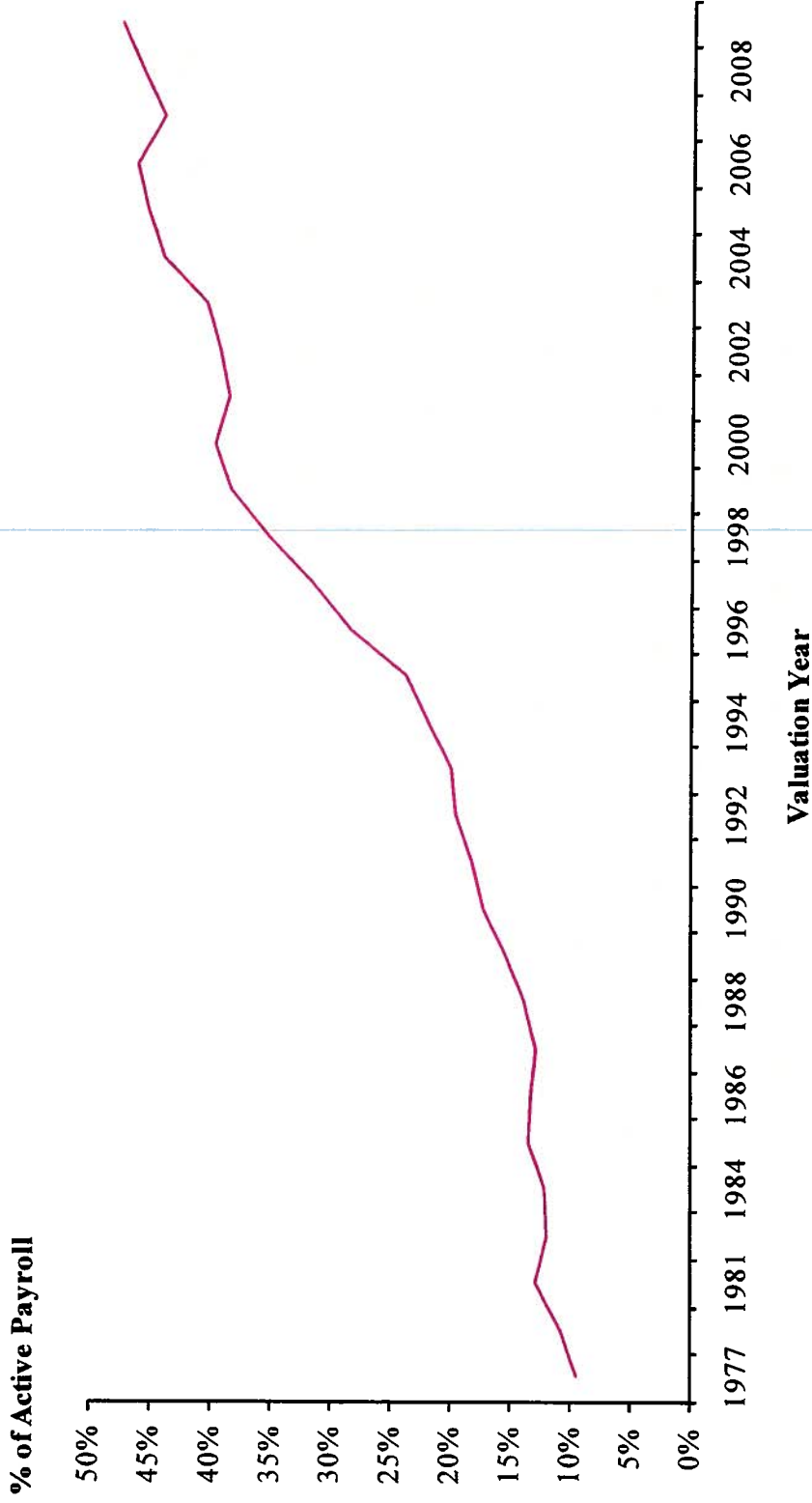
Valuation Date December 31	Number of People	Monthly Pensions	Active Payroll	Average Amount	% of Active Member Pays
1977 *	346	\$ 148,133	\$ 18,995,363	\$ 428	9.4%
1979 #	402	191,356	21,558,774	476	10.7%
1981 *	445	250,287	23,539,234	562	12.8%
1983	488	299,519	30,234,935	614	11.9%
1984	504	319,789	32,020,914	635	12.0%
1985 #	530	359,208	32,500,428	678	13.3%
1986	544	382,419	34,757,277	703	13.2%
1987 *#	558	427,132	39,938,921	765	12.8%
1988	575	466,519	40,674,634	811	13.8%
1989	599	544,631	43,053,057	909	15.2%
1990 *#	654	660,112	45,679,355	1,009	17.3%
1991	675	732,576	48,488,406	1,085	18.1%
1992	706	819,869	50,235,996	1,161	19.6%
1993 *	723	927,168	55,781,585	1,282	19.9%
1994 #	764	1,057,577	58,116,787	1,384	21.8%
1995 *#	826	1,184,405	59,825,356	1,434	23.8%
1996	911	1,402,909	59,239,349	1,540	28.4%
1997 *	984	1,645,613	62,233,299	1,672	31.7%
1998	1,060	1,914,091	65,153,864	1,806	35.3%
1999 *	1,123	2,123,471	66,017,381	1,891	38.6%
2000 #	1,174	2,300,464	69,028,285	1,960	40.0%
2001	1,207	2,460,308	76,344,002	2,038	38.7%
2002	1,231	2,603,108	78,997,065	2,115	39.5%
2003	1,253	2,770,149	81,737,962	2,211	40.7%
2004	1,282	3,023,341	81,757,707	2,358	44.4%
2005 #	1,301	3,177,731	83,408,155	2,443	45.7%
2006 *	1,337	3,341,805	85,878,329	2,499	46.7%
2007	1,359	3,470,329	93,752,908	2,554	44.4%
2008	1,371	3,628,092	94,301,538	2,646	46.2%
2009	1,385	3,793,054	94,824,789	2,739	48.0%

* Plan amended.

Revised actuarial assumptions or methods.

Pensions expressed as a % of payroll exceed contribution income by a considerable margin. This is a normal and expected condition in a funded plan such as HPRS, but it does have implications for cash flow and investment planning.

**RETIREMENT, SURVIVOR, AND DISABILITY ALLOWANCES BEING PAID
EXPRESSED AS A % OF ACTIVE MEMBER PAYROLL
DECEMBER 31, 2009**



SHORT-TERM SOLVENCY TEST

The HPRS financing objective is to pay for the benefits through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the system are level in concept and soundly executed, the system will *pay all promised benefits when due – the ultimate test of financial soundness.*

Short-term solvency test is one means of checking a system's progress under its funding program. In a short-term solvency test, the plan's present assets (cash and investments) are compared with: 1) Active member contributions on deposit; 2) The liabilities for future benefits to present retired lives; 3) The liabilities for service already rendered by active members. In a system that has been following the discipline of level percent financing, the liabilities for active member contributions on deposit (1) and the liabilities for future benefits to present retired lives (2) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by active members (3) will be partially covered by the remainder of present assets. Generally, if the system has been using level cost financing, the funded portion of column 3 will increase over time.

Accrued Liabilities and Assets Allocated to Retirement, Survivor and Disability Allowances

Valuation Year	(1) Active Member Contributions	(2) Retirants, Beneficiaries & Vested Deferrals	(3) Active Members (Employer Financed Portion)	Valuation Assets	Portion of Accrued Liabilities Covered By Reported Assets		
					(1)	(2)	(3)
1994 #	\$47,947,979	\$156,363,745	\$169,695,043	\$330,787,044	100%	100%	75%
1995	50,547,938	176,541,660	175,360,734	370,425,462	100%	100%	82%
1995 *	50,547,938	187,922,028	189,287,398	370,425,462	100%	100%	70%
1995 *#	50,547,938	189,010,261	184,793,495	370,425,462	100%	100%	71%
1996	52,297,873	218,164,080	184,052,234	411,316,254	100%	100%	77%
1997	53,264,614	256,268,302	177,859,490	460,667,112	100%	100%	85%
1997 *	53,264,614	260,095,357	183,557,364	460,667,112	100%	100%	80%
1998	53,797,385	291,066,407	188,092,953	509,859,924	100%	100%	88%
1999	55,558,145	325,395,987	183,718,428	546,510,779	100%	100%	90%
1999 *	55,558,145	333,340,728	188,111,212	546,510,779	100%	100%	84%
2000	59,455,707	360,125,257	187,830,356	570,039,631	100%	100%	80%
2000 #	59,455,707	358,422,165	176,344,731	570,039,631	100%	100%	86%
2001	63,969,216	374,228,361	198,517,881	551,279,438	100%	100%	57%
2002	68,794,904	391,098,788	208,712,240	492,430,826	100%	100%	16%
2002 #	68,794,904	391,098,788	203,176,113	527,604,456	100%	100%	33%
2003	73,358,075	412,818,959	216,621,983	545,981,513	100%	100%	28%
2004	77,100,466	445,084,791	215,682,121	569,858,387	100%	100%	22%
2004 *	77,100,466	445,084,791	212,279,114	569,858,387	100%	100%	22%
2005	77,779,569	462,913,927	226,047,941	591,922,200	100%	100%	23%
2005 #	77,779,569	463,476,318	232,600,277	591,922,200	100%	100%	22%
2006 *	82,720,940	482,998,754	242,041,018	653,493,046	100%	100%	36%
2007	89,279,853	509,179,659	267,795,882	700,860,707	100%	100%	38%
2008	94,749,356	511,626,943	298,146,078	603,265,803	100%	99%	0%
2009	101,131,517	528,087,050	310,865,779	620,356,505	100%	98%	0%

* Plan amendment.

Assumption or method change.

SUMMARY OF UNFUNDED ACCRUED LIABILITIES

Each time a new benefit is added which applies to service already rendered, an "unfunded accrued liability" is created. Also, if actual financial experiences are less favorable than assumed financial experiences, the difference is added to unfunded accrued liabilities.

In an inflationary economy, the value of the dollar is decreasing. This environment results in employee pays increasing in dollar amounts resulting in unfunded accrued liabilities increasing in dollar amounts, all at a time when the actual substance of these items may be decreasing. Looking at just dollar amounts of unfunded accrued liabilities can be misleading. Unfunded accrued liabilities divided by active employee payroll provides an index, which aids understanding. The smaller ratio of unfunded liabilities to active member payroll, the stronger the system. Observation of this relative index over a period of years will give an indication of whether the system is becoming financially stronger or weaker.

Summary of Assets and Actuarial Accrued Liabilities for Retirement, Survivor, and Disability Allowances

Valuation Year	Actuarial Accrued Liability (AAL)	Valuation Assets	Unfunded Actuarial Accrued Liability (UAAL)	Ratio of Assets to AAL	Active Member Payroll	UAAL as a % of Active Member Payroll
1995 *#	\$424,351,694	\$370,425,462	\$53,926,232	87.3%	\$59,825,356	90.1%
1996	454,514,187	411,316,254	43,197,933	90.5%	59,239,349	72.9%
1997	487,392,406	460,667,112	26,725,294	94.5%	62,233,299	42.9%
1997 *	496,917,335	460,667,112	36,250,223	92.7%	62,233,299	58.2%
1998	532,956,745	509,859,924	23,096,821	95.7%	65,153,864	35.4%
1999	564,672,560	546,510,779	18,161,781	96.8%	66,017,381	27.5%
1999 *	577,010,085	546,510,779	30,499,306	94.7%	66,017,381	46.2%
2000	607,411,320	570,039,631	37,371,689	93.8%	69,028,285	54.1%
2000 #	594,222,603	570,039,631	24,182,972	95.9%	69,028,285	35.0%
2001	636,715,458	551,279,438	85,436,020	86.6%	76,344,002	111.9%
2002	668,605,932	492,430,826	176,175,106	73.7%	78,997,065	223.0%
2002 #	663,069,805	527,604,456	135,465,349	79.6%	78,997,065	171.5%
2003	702,799,017	545,981,513	156,817,504	77.7%	81,737,962	191.9%
2004	737,867,378	569,858,387	168,008,991	77.2%	81,757,707	205.5%
2004 *	734,464,371	569,858,387	164,605,984	77.6%	81,757,707	201.3%
2005	766,741,437	591,922,200	174,819,237	77.2%	83,408,155	209.6%
2005 #	773,856,164	591,922,200	181,933,964	76.5%	83,408,155	218.1%
2006 *	807,760,712	653,493,046	154,267,666	80.9%	85,878,329	179.6%
2007	866,255,394	700,860,707	165,394,687	80.9%	93,752,908	176.4%
2008	904,522,377	603,265,803	301,256,574	66.7%	94,301,538	319.5%
2009	940,084,346	620,356,505	319,727,841	66.0%	94,824,789	337.2%

* Plan amendment.

Assumption or method change.

The figures on this page do not include liabilities and assets related to post-retirement Health Care and Medicare reimbursement.

GASB STATEMENT NO. 25
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended December 31	Actual Contributions	Percent of Required Contributed
1999	\$13,569,730	100%
2000	13,210,189	100%
2001	13,901,313	100%
2002	14,923,893	100%
2003	16,361,339	100%
2004	17,205,610	100%
2005	18,467,789	100%
2006	19,263,941	98%
2007	19,956,700	92%
2008	20,302,216	96%
2009	20,453,914	102%

This information is presented in draft form for review by the System's auditor. Please let us know if there are any changes so that we may maintain consistency with the System's financial statements.

The amounts reported in this schedule do not include contributions for post-employment Health Care benefits.

GASB STATEMENT NO. 25
ANNUAL REQUIRED CONTRIBUTION

For purposes of Governmental Accounting Standards Board (GASB) Statement No. 25, the System's Annual Required Contribution for the plan year ending December 31, 2010 will be ½ of the employer contribution for the period from July 1, 2009 to June 30, 2010 (21.00% of payroll, based upon an amortization period of 27 years) plus ½ of the employer contribution for the period from July 1, 2010 to June 30, 2011 (28.60% of payroll, based upon an amortization period of 30 years). The System's Annual Required Contribution for the plan year ending December 31, 2011 will be ½ of the employer contribution for the period from July 1, 2010 to June 30, 2011 (28.60% of payroll, based upon an amortization period of 30 years) plus ½ of the employer contribution for the period from July 1, 2011 to June 30, 2012 (29.50% of payroll, based upon an amortization period of 30 years).

GASB STATEMENT NO. 25

NOTES TO TREND DATA

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

Valuation Date	December 31, 2009
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Open
Remaining Amortization Period	Infinite years for retirement allowances in determining the Annual Required Contribution
Asset Valuation Method	4 year smoothed market 20 % Corridor
Actuarial Assumptions:	
Investment Rate of Return	8.0%
Projected Salary Increases	4.3% - 14.0%
Includes Wage Inflation at	4.0%

OTHER REQUESTED CAFR INFORMATION

As of December 31, 2009, the actuarial present value of credited projected benefits for current employees is shown below:

	Actuarial Present Value of Credited Projected Benefits
Current Employees	
Accumulated employee contributions including allocated investment income	\$ 101,131,517
Employer - financed vested	208,365,312
Employer - financed non-vested	48,572,586

As of December 31, 2009, there were 678 vested active members and 869 non-vested active members.

SECTION B

**POST-RETIREMENT HEALTH CARE AND MEDICARE
REIMBURSEMENT**

**POST-RETIREMENT HEALTH CARE AND MEDICARE REIMBURSEMENT
PROVISIONS EVALUATED AND/OR CONSIDERED**

Benefits Provided

Since July 1, 1974, the Retirement System has made Health Care available for every benefit recipient and eligible dependents under a hospitalization and health care policy administered by Aetna Life & Casualty Company and Medical Mutual of Ohio. This Plan is secondary to Medicare or any other Health Care coverage. Each year the Board establishes participant premium rates, any necessary co-payments for the retiree, spouse, or dependent children, and any other changes in plan design for the following calendar year. The premium for 2009 applicable to spouses under age 65 is \$80 per month and \$25 for spouses 65 and older. The dependent child premium is \$25 per family.

Basic Plan coverage provides for payment of 100% of all reasonable and customary hospital expenses. All hospital admissions must be pre-certified prior to an elective admission. Emergency confinements require notification within 48 hours following admission. If a covered person is in a network area, he or she must use a preferred provider for the maximum benefit.

All other medical expenses are covered at the rate of 80% of reasonable and customary charges.

Designated surgical procedures require a second opinion. Also designated outpatient procedures must be pre-certified. For in-network activity, the annual out-of-pocket maximum is \$750 per individual or \$1,500 per family (out of network amounts are \$5,000 and \$10,000, respectively). Each covered person under the age of 65 must meet a \$100 annual deductible. Each covered person over 65 must meet a \$25 annual deductible. The maximum lifetime benefit is \$2,000,000 per person. If the covered person is in a network area and uses non-network providers, the annual deductible for the individual is \$1,000.

A mail-order prescription drug plan is also available. Each prescription submitted via mail order requires a co-payment of \$10.00 for generic, \$20.00 for brand and \$60.00 for non formulary for up to a 90-day supply. Drugs purchased retail/over-the-counter have a co-payment of \$5.00 for generic, \$10.00 for brand and \$30.00 for non formulary for up to a 34 day supply.

Administration: The medical program is administered by the AETNA and Medical Mutual of Ohio for hospital-medical-surgical coverage and by ESI for retail/mail order prescription drug coverage.

Stop Loss Coverage: The program is fully self-insured and stop loss coverage is maintained.

Medicare Premiums: The Medicare Part B (no cap) basic premium amount is reimbursed to eligible benefit recipients upon proof of coverage.

Dental/Vision: System pays premiums for all benefit recipients. The premium for dependents is deducted from the pension benefit.

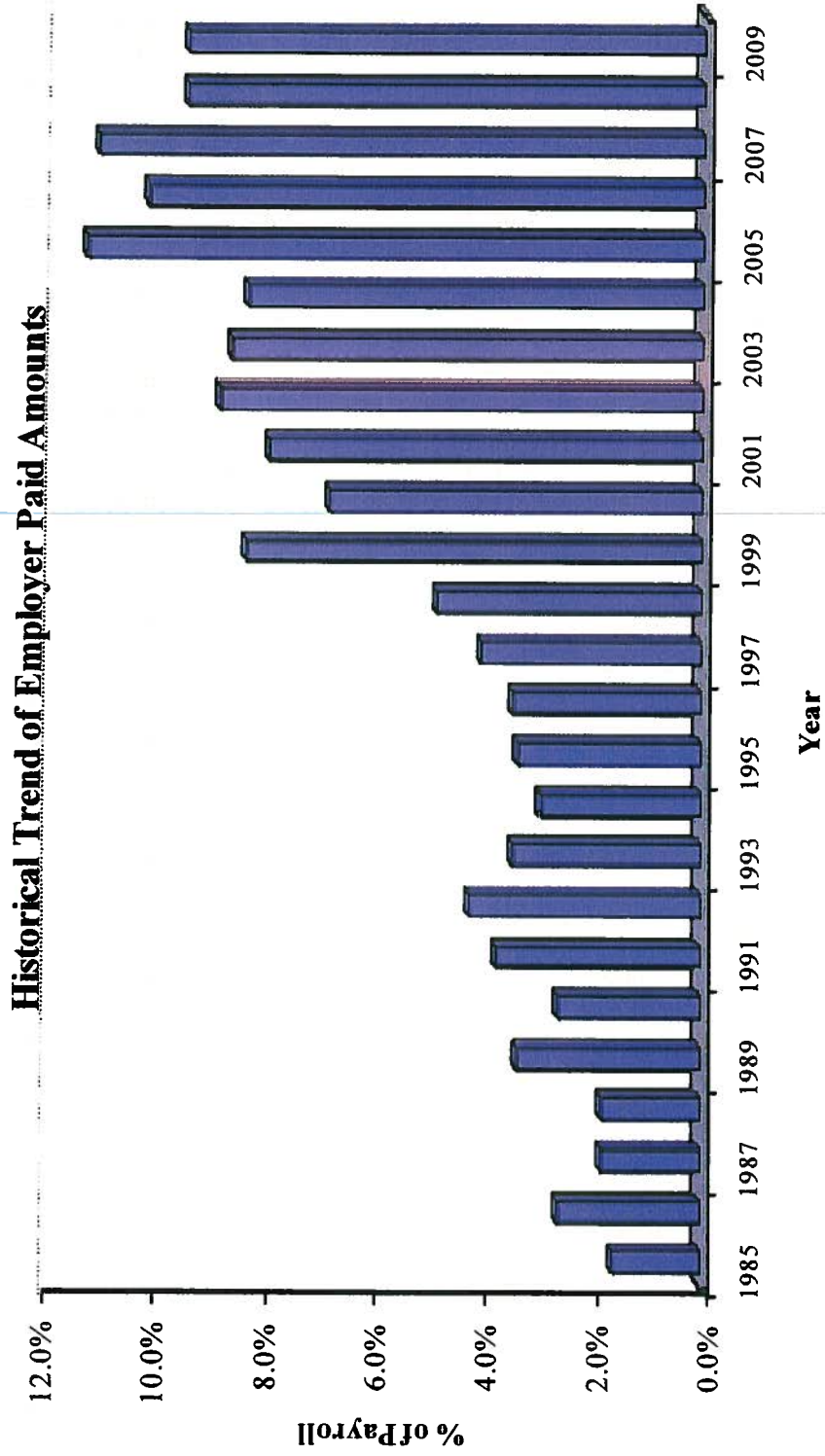
POST-RETIREMENT HEALTH CARE AND MEDICARE REIMBURSEMENT

Year	Covered Lives	Amounts Paid to Vendors (Including Medicare Part B)										Total	Member Premiums and Other Adjustments	Net Paid by OHPRS	Per Covered Life	% of Payroll	
		Medical	Drugs	Medicare Part B	Dental	Vision	Wellness	Medical	Drugs	Medicare Part B	Dental						Vision
1985	697	\$ 427,361	\$ 60,015	\$ 28,272									\$ 515,648	\$ 515,648	740	\$ 32,500,428	1.6%
1986	715	787,245	80,911	30,457									898,613	898,613	1,257	34,757,277	2.6%
1987	731	559,832	115,544	38,037									713,413	713,413	976	39,938,912	1.8%
1988	761	522,747	145,847	57,461									726,055	726,056	954	40,674,634	1.8%
1989	810	1,043,650	186,795	77,869									1,308,314	1,406,178	1,736	43,053,057	3.3%
1990	925	1,009,153	213,716	77,363									1,300,232	1,205,981	1,304	45,679,355	2.6%
1991	976	1,267,327	251,004	86,740									1,605,071	1,785,654	1,830	48,488,406	3.7%
1992	1,045	1,643,276	298,493	97,117									2,038,886	2,114,932	2,024	50,235,996	4.2%
1993	1,081	1,553,628	299,410	118,109									1,971,147	1,880,622	1,740	55,781,585	3.4%
1994	1,133	1,239,008	320,360	141,384									1,700,752	1,704,066	1,504	58,116,787	2.9%
1995	1,225	1,512,523	364,096	149,440									2,026,059	1,959,225	1,599	59,825,356	3.3%
1996	1,379	1,353,932	491,525	155,769									2,001,226	2,022,608	1,467	59,239,349	3.4%
1997	1,499	1,623,640	849,321	166,743									2,639,704	2,499,178	1,667	62,233,299	4.0%
1998	1,602	2,147,334	1,122,248	171,223									3,440,805	3,128,888	1,953	65,153,864	4.8%
1999	1,772	3,315,914	1,364,990	197,606									4,878,510	5,498,404	3,103	66,017,381	8.3%
2000	1,848	3,190,885	1,684,300	203,157									5,078,342	4,720,260	2,554	69,028,285	6.8%
2001	1,900	3,730,167	1,960,825	231,046									5,922,038	6,060,355	3,190	76,344,002	7.9%
2002	1,943	4,147,534	2,431,297	260,772	\$194,893	\$80,909							7,115,405	6,915,384	3,559	78,997,065	8.8%
2003	1,912	4,256,046	2,681,414	290,506	209,429	82,097							7,519,492	7,011,850	3,667	81,737,962	8.6%
2004	1,928	4,074,972	2,710,367	347,585	230,994	84,136							7,448,054	6,806,347	3,530	81,757,707	8.3%
2005	1,958	6,015,277	2,980,755	422,045	364,139	124,658							9,906,874	9,354,304	4,777	83,408,155	11.2%
2006	2,078	4,999,822	2,832,743	503,034	408,667	127,266							8,871,532	8,673,391	4,174	85,878,328	10.1%
2007	2,085	6,580,455	3,513,662	572,127	464,402	130,029							11,260,675	10,280,136	4,931	93,752,908	11.0%
2008	2,103	5,087,073	3,274,896	632,293	453,002	121,599	\$ 79,679						9,648,542	8,864,161	4,215	94,301,538	9.4%
2009#	2,095	4,983,739	3,430,089	673,450	495,272	133,296	86,007						9,801,853	8,899,533	4,248	94,824,789	9.4%

Member premiums and other adjustments for calendar year 2009 include member premiums totaling \$902,320.

Separate information for dental and vision was not available for years prior to 2002.

POST-RETIREMENT HEALTH CARE AND MEDICARE REIMBURSEMENT



**ASSUMPTIONS FOR HEALTH CARE COVERAGES
DECEMBER 31, 2009**

Development of Health Care Rates: Based on the 2009 retired life data, the HPRS portion of the total health care rates was developed as follows:

	Age/Gender Weighted HPRS Monthly Rates			
	This Year		Prior Year	
	Gross Rate	Member Paid	Net Rate	Net Rate
A. One person without Medicare	\$326.89	\$0.00	\$326.89	\$444.71
B. One person with Medicare*	232.32	0.00	232.32	284.83
C. Two persons without Medicare	653.78	80.00	573.78	809.42
D. Two persons with Medicare*	464.64	25.00	439.64	544.66
E. Child	197.02	25.00	172.02	165.53
F. Medicare Part B Reimbursement	96.40	0.00	96.40	96.40

The above rates are estimates that are suitable for the purpose of this valuation. Use of the above rates for any other purpose would require review. Pre-Medicare rates are lower than would be expected when compared with other retired groups. This may be attributable to a higher than average amount of coordination of benefit claims for younger HPRS retirees. Many younger retirees likely have other employment. Please see page B-5 for age specific rates used for valuation purposes. Employment related primary coverage for recipients and dependents have been reflected in the age based specific premium rates.

* Does not include Medicare Part B monthly premium of \$96.40.

Ohio HPRS First Year Projection of Health Care Claims Cost Based on 5-Year Averages

Source	Year	Claims			Population Adjusted	Medical CPI	Price Adjusted	Weight	Secondary Provision Adjustment	Recognized
		Gross	Member and Adjustments	Net						
Fin Stmt	2005	\$9,906,874	\$552,570	\$9,354,304	1,958	\$10,008,819	323.2	\$11,631,536	0.00	\$ -
Fin Stmt	2006	9,244,039	570,648	8,673,391	2,078	8,744,348	336.2	9,769,117	0.10	976,912
Fin Stmt	2007	11,260,675	980,539	10,280,136	2,085	10,329,441	351.1	11,050,237	0.20	2,210,047
Fin Stmt	2008	9,648,542	784,381	8,864,161	2,103	8,830,441	364.1	9,109,348	0.30	2,732,804
Fin Stmt	2009	9,801,853	902,320	8,899,533	2,095	8,899,533	375.6	8,899,533	0.40	3,559,813
(Base for coming year) Recognized:										\$ 9,479,576
Growth Factors: Population Price										1.017
First Year Projection:										\$ 9,515,399

**ASSUMPTIONS FOR HEALTH CARE COVERAGES
AGE SPECIFIC HPRS MONTHLY GROSS RATES**

Age	Gross Rate		Age	Gross Rate		Age	Gross Rate	
	Male	Female		Male	Female		Male	Female
16	\$ 99.05	\$ 154.53	51	\$ 271.32	\$ 299.97	86	\$ 324.10	\$ 284.32
17	100.04	156.07	52	289.53	313.26	87	325.57	284.87
18	101.04	157.63	53	308.29	327.38	88	325.57	284.87
19	102.05	159.21	54	327.74	342.12	89	325.57	284.87
20	103.07	160.80	55	347.84	357.46	90	325.57	284.87
21	104.10	162.41	56	368.56	373.38	91	325.57	284.87
22	105.14	164.03	57	389.85	389.85	92	325.57	284.87
23	106.19	165.67	58	410.21	404.39	93	325.57	284.87
24	107.26	167.33	59	430.88	419.24	94	325.57	284.87
25	108.33	169.00	60	451.78	434.35	95	325.57	284.87
26	109.41	170.69	61	472.87	449.67	96	325.57	284.87
27	110.51	172.40	62	494.08	465.17	97	325.57	284.87
28	111.61	174.12	63	515.08	481.06	98	325.57	284.87
29	112.73	175.87	64	536.05	497.05	99	325.57	284.87
30	113.86	177.62	65	225.91	208.03	100	325.57	284.87
31	114.99	179.40	66	233.20	213.49	101	325.57	284.87
32	116.14	181.19	67	240.34	218.87	102	325.57	284.87
33	117.31	183.01	68	247.29	224.14	103	325.57	284.87
34	118.48	184.84	69	254.05	229.30	104	325.57	284.87
35	119.66	186.68	70	260.58	234.32	105	325.57	284.87
36	120.86	188.55	71	266.88	239.18	106	325.57	284.87
37	122.07	190.44	72	272.91	243.87	107	325.57	284.87
38	123.29	192.34	73	278.67	248.37	108	325.57	284.87
39	124.52	194.26	74	284.13	252.66	109	325.57	284.87
40	125.77	196.21	75	289.29	256.74	110	325.57	284.87
41	134.71	202.55	76	294.14	260.58	111	325.57	284.87
42	144.51	209.46	77	298.66	264.18	112	325.57	284.87
43	155.16	216.96	78	302.84	267.53	113	325.57	284.87
44	166.68	225.08	79	306.68	270.61	114	325.57	284.87
45	179.07	233.83	80	310.18	273.41	115	325.57	284.87
46	192.32	243.22	81	313.34	275.94	116	325.57	284.87
47	206.45	253.26	82	316.15	278.19	117	325.57	284.87
48	221.42	263.96	83	318.62	280.15	118	325.57	284.87
49	237.24	275.31	84	320.76	281.82	119	325.57	284.87
50	253.88	287.32	85	322.58	283.21	120	325.57	284.87

ASSUMPTIONS FOR HEALTH CARE COVERAGES
DECEMBER 31, 2009
(CONCLUDED)

Eligibility for Medicare Coverage: All benefit recipients were assumed to be eligible for Medicare on attainment of age 65.

Health Care Inflation: If the price for any product or service were to increase faster than wages for an indefinite period, eventually that product or service would be priced out of the market and either the product or service would not be offered or substituted with an affordable product or service. For this reason, health care inflation was assumed to equal wage inflation in the long term. The assumed point in time when health care inflation reduces to wage growth inflation is uncertain. Our assumptions are based on an approximate 5 to 10-year horizon. Short-term assumptions are described on page B-8.

Retiree health valuations require an assumption about how the health costs that the System is absorbing will change over the years. This assumption includes more than just "health inflation". It includes the impact of:

- The introduction of new procedures and medications and how they are priced.
- The utilization of services and products by covered retirees and their dependents and how that utilization changes over the years.

Retiree health valuations use a health cost trend assumption that changes over the years. The near term rates reflect the fact that currently employers are seeing sharp increases in the cost of health goods and services. If this trend is projected to continue for years to come, it implies that years from now virtually all our expenditures will be for health care. The seemingly more reasonable alternative is that in the not too distant future inflation in medical expenses will decrease to a level at or near wage inflation. It is on this basis that we project premium rates will continue to exceed wage inflation for the next 5 - 10 years, but by less each year until leveling off at an ultimate rate, assumed to be 4.0% in this valuation.

The trend assumption is established by reviewing the System's historical trends and evaluating their relationship with national trends. Comparative trends obtained from a variety of resources including trend surveys from major insurers and benefit consulting groups. This information is added to information we have collected from analysis done in conjunction with many retiree health valuations we have completed for other clients.

This analysis is done separately for the prescription drug program and the remainder of the medical benefits since the trends and forces driving the trends are quite different in these two segments. Review of the System's recent experience indicates trends typical of our comparative trends for both prescription drug and medical, that is in the high teens for prescription drugs and low teens for medical. Trends are predicted to moderate in the near term but are still high in the 10% to 14% area. The trends used in this valuation are found on page B-8.

**POST-RETIREMENT HEALTH PREMIUM
AND MEDICARE REIMBURSEMENT
SELECTION OF ASSUMPTIONS
DECEMBER 31, 2009**

In order to prepare actuarial studies of the coverages, it is necessary to make assumptions regarding future events such as:

1. When people will retire and how long people will live after retirement.
2. Whether or not people will quit employment prior to eligibility for a benefit.
3. Whether or not people will die in service or become disabled.
4. Rates of Investment Return and pay increases.
5. The proportion of retirees electing coverage for a spouse after retirement.
6. Rates of increase in health care premium.
7. Effect of managed care program on future claims.

Regarding items 1 through 4, the assumptions from the regular December 31, 2009 valuations were used. It was assumed that eligible retirees would elect coverage under this program. It was further assumed that 90% of males and 50% of females who retire would elect coverage for a spouse at retirement, and that coverage would be available to surviving spouses of deceased retirees and active members.

For purposes of the solvency projections, an investment return assumption of 8.0% was chosen by default to be the same rate used in the Pension Plan valuations. It is uncertain how much longer retiree health fund assets can be invested in the same manner as pension assets given the current solvency period of the retiree health fund. For purposes of GASB Statements No. 43 and No. 45 reporting, an investment return assumption of 6.5% was used. The rates of pay growth used in the Retirement System valuations are 4.00% per year. Stability can only be achieved if the rate of increase in Health Care premiums is brought in line with the rate of growth of employee pays. Consequently, it was assumed that average Health Care cost increases would eventually stabilize at 4.00% per year. Higher or lower rates of increase could, however be possible for an extended period before that happens.

**POST-RETIREMENT HEALTH PREMIUM
AND MEDICARE REIMBURSEMENT
SELECTION OF ASSUMPTIONS
DECEMBER 31, 2009**

Three alternate assumptions for near term health care cost increases were considered and are shown below. A brief description of each of the alternate assumptions follows:

Alternate A (Optimistic): The Alternate A assumption assumes that the employer share of per capita costs would increase at 6% next year, 5.75% the second year, 5.5% the third year, 5.25% the fourth year, 5% the fifth year, 4.75% the sixth year, 4.5% the seventh year, 4.25% the eighth year and no faster than 4% per year thereafter.

Alternate B (Intermediate): In the middle of the range of probable conditions is the view that short-term Health Care trends will rise somewhat over the next few years before declining to the level of overall GDP growth. This is the assumption set upon which Governmental Accounting Standards Board (GASB) Statements No. 43 and No. 45 information is based.

Alternate C (Pessimistic): This scenario envisions poorer experience than the other two.

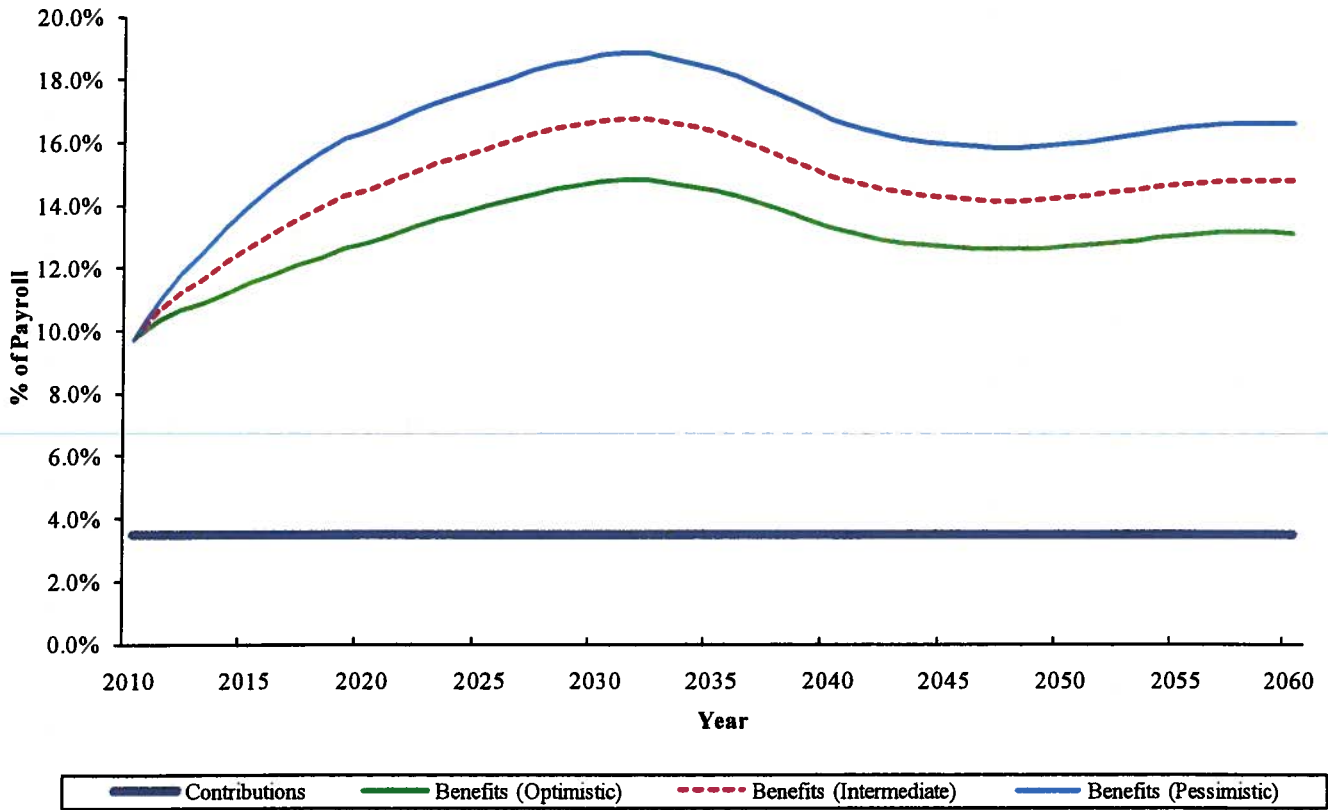
No trend was applied to the \$80 monthly spouse premium.

Year	Health Trend Above Wage Inflation Assumption of 4.0%				
	Medical and Prescription Drug			Medicare	
	Alt. A Optimistic	Alt. B Intermediate	Alt. C Pessimistic	Part D	Part B
2010					
2011	2.00%	5.00%	8.00%	3.00%	5.00%
2012	1.75%	4.25%	7.00%	2.50%	4.25%
2013	1.50%	3.50%	6.00%	2.00%	3.50%
2014	1.25%	3.00%	5.00%	1.50%	3.00%
2015	1.00%	2.50%	4.00%	1.25%	2.50%
2016	0.75%	2.00%	3.00%	1.00%	2.00%
2017	0.50%	1.50%	2.25%	0.75%	1.50%
2018	0.25%	1.00%	1.50%	0.50%	1.00%
2019	0.00%	0.50%	0.75%	0.25%	0.50%
2020	0.00%	0.00%	0.00%	0.00%	0.00%
2021	0.00%	0.00%	0.00%	0.00%	0.00%
2022	0.00%	0.00%	0.00%	0.00%	0.00%
2023	0.00%	0.00%	0.00%	0.00%	0.00%
2024 & Later	0.00%	0.00%	0.00%	0.00%	0.00%

**POST-RETIREMENT HEALTH CARE AND MEDICARE REIMBURSEMENT
PROJECTED BENEFITS
DECEMBER 31, 2009**

Year Ended 12/31	Projected Benefits as % of Payroll		
	Alt. A Optimistic	Alt. B Intermediate	Alt. C Pessimistic
2010	9.7%	9.7%	9.7%
2011	10.3%	10.6%	10.9%
2012	10.7%	11.2%	11.8%
2013	10.9%	11.7%	12.6%
2014	11.2%	12.2%	13.3%
2015	11.6%	12.7%	14.1%
2016	11.8%	13.1%	14.7%
2017	12.1%	13.5%	15.2%
2018	12.4%	13.9%	15.7%
2019	12.6%	14.3%	16.1%
2024	13.8%	15.6%	17.6%
2029	14.7%	16.6%	18.7%
2034	14.6%	16.5%	18.5%
2039	13.5%	15.2%	17.1%
2044	12.8%	14.3%	16.0%
2049	12.6%	14.2%	15.9%
2054	13.0%	14.6%	16.4%
2059	13.2%	14.8%	16.6%

CONTRIBUTIONS VS. BENEFIT PAYOUTS



**POST-RETIREMENT HEALTH CARE AND MEDICARE REIMBURSEMENT
GASB 43/45 REPORTING
ALTERNATIVE B: INTERMEDIATE HEALTH TREND**

Determination of the Annual Required Contribution for the Period July 1, 2010 to June 30, 2011	Contributions Expressed as Percents of Payroll
Normal Cost	7.12%
UAL Payment (30 year amortization)	9.00%
Total (Annual Required Contribution)	16.12%
Current Employer Contribution Rate Allocation	3.50%

Accrued Health and Medicare Reimbursement Liabilities, \$287,581,772 were more than applicable assets of \$100,747,785.

The calculations above show the employer's annual required contribution (ARC) for the year ended June 30, 2011. The System's ARC for the year ended December 31, 2010 will be ½ of 19.37% and ½ of the 16.12% shown above.

**GASB STATEMENTS 43/45
NOTES TO TREND DATA**

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

Valuation Date	December 31, 2009
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Open
Remaining Amortization Period	30 years for retiree health benefits in determining the Annual Required Contribution
Asset Valuation Method	4 year smoothed market 20 % Corridor
Actuarial Assumptions:	
Investment Rate of Return	6.5%
Projected Salary Increases	4.3% - 14.0%
Includes Wage Inflation at Health Trend	4.0% Intermediate Trend (See Page B-8)

**POST-RETIREMENT HEALTH AND MEDICARE REIMBURSEMENT
RESULTS WITH ALTERNATE HEALTH INFLATION ASSUMPTIONS
DECEMBER 31, 2009**

Optimistic, Intermediate and Pessimistic assumption sets were described on page B-8. For each assumption set, two questions are asked.

Question 1. How long will the Health Care fund remain solvent if the present employer contribution rate allocation, “Funding Level 1”, is not changed?

Question 2. What is the lowest employer contribution rate, “Funding Level 2”, that would maintain the solvency of the fund indefinitely?

The answers to these questions are summarized below. In reviewing the answers, it is important to keep in mind that the alternates are intended to be helpful in understanding the range of potential outcomes. They are not predictions.

Assumption Set	Funding Level 1 (Employer Rate Allocation)		Funding Level 2 (Lowest Employer Rate to Maintain Solvency of Fund Indefinitely)		
	%	Fund Solvent Until	%	Fund Solvent Until	Prior Valuation %
A (Optimistic)	3.50%	2028	7.90%	Indefinitely	9.10%
B (Intermediate)	3.50%	2026	9.40%	Indefinitely	11.70%
C (Pessimistic)	3.50%	2024	11.00%	Indefinitely	14.30%

The above results show that:

- Under the optimistic assumptions, the employer rate will need to be raised prior to 2028 in order to maintain the solvency of the fund. The ultimate rate needed to support the plan would be 7.90% of payroll.
- Under the intermediate assumptions, the employer rate will need to be raised prior to 2026 in order to maintain the solvency of the fund. The ultimate rate needed to support the plan would be 9.40% of payroll if the increase were made today.
- Under the pessimistic assumptions, the employer rate will need to be raised prior to 2024 in order to maintain the solvency of the fund. The ultimate rate needed to support the plan would be 11.00% of payroll if the increase were made today.

The following pages show projected fund activity based upon Alternate Assumptions A, B and C, and Funding Levels 1 and 2.

**POST-RETIREMENT HEALTH CARE & MEDICARE REIMBURSEMENT
CASH FLOW PROJECTION
OPTIMISTIC ASSUMPTIONS: A
FUNDING LEVEL 1**

Fiscal Year	Fund Balance BOY	Contributions	Benefits	Net	Investment Return %	Investment Return \$	Fund Balance EOY		% of Payroll	
							Nominal \$	Real \$	Contrib.	Benefits
2010	\$100,748	\$3,883	\$ 9,522	\$ (5,636)	8.00%	\$7,837	\$102,949	\$102,949	3.50%	9.72%
2011	102,949	4,040	10,405	(6,365)	8.00%	7,985	104,569	100,547	3.50%	10.31%
2012	104,569	4,239	11,126	(6,887)	8.00%	8,094	105,776	97,796	3.50%	10.66%
2013	105,776	4,453	11,806	(7,353)	8.00%	8,172	106,595	94,763	3.50%	10.92%
2014	106,595	4,658	12,592	(7,934)	8.00%	8,214	106,875	91,357	3.50%	11.23%
2015	106,875	4,864	13,436	(8,572)	8.00%	8,212	106,515	87,548	3.50%	11.55%
2016	106,515	5,079	14,273	(9,194)	8.00%	8,158	105,479	83,362	3.50%	11.83%
2017	105,479	5,293	15,132	(9,839)	8.00%	8,050	103,690	78,796	3.50%	12.10%
2018	103,690	5,504	16,044	(10,540)	8.00%	7,879	101,029	73,821	3.50%	12.37%
2019	101,029	5,717	16,985	(11,268)	8.00%	7,637	97,398	68,431	3.50%	12.63%
2020	97,398	5,950	17,891	(11,941)	8.00%	7,320	92,777	62,677	3.50%	12.82%
2021	92,777	6,185	18,906	(12,721)	8.00%	6,920	86,976	56,498	3.50%	13.06%
2022	86,976	6,423	20,038	(13,615)	8.00%	6,420	79,781	49,831	3.50%	13.35%
2023	79,781	6,683	21,173	(14,490)	8.00%	5,810	71,101	42,701	3.50%	13.60%
2024	71,101	6,967	22,306	(15,339)	8.00%	5,082	60,844	35,136	3.50%	13.79%
2025	60,844	7,261	23,509	(16,248)	8.00%	4,226	48,822	27,109	3.50%	13.98%
2026	48,822	7,559	24,830	(17,271)	8.00%	3,224	34,775	18,567	3.50%	14.20%
2027	34,775	7,876	26,196	(18,320)	8.00%	2,059	18,514	9,505	3.50%	14.39%
2028	18,514	8,217	27,577	(19,360)	8.00%	717	(129)	(64)	3.50%	14.55%

Funding Level 1 is the present contribution rate for post-retirement Health Care and Medicare reimbursement. The fund remains solvent until 2028 in this projection.

**POST-RETIREMENT HEALTH CARE & MEDICARE REIMBURSEMENT
CASH FLOW PROJECTION
OPTIMISTIC ASSUMPTIONS: A
FUNDING LEVEL 2**

Fiscal Year	Fund Balance BOY	Contributions	Benefits	Net	Investment Return %	Investment Return \$	Fund Balance EOY		% of Payroll	
	\$						\$	Real \$	Contrib.	Benefits
2010	\$ 100,748	\$ 8,091	\$ 9,522	\$ (1,428)	8.00%	\$ 8,003	\$ 107,323	\$107,323	7.90%	9.72%
2011	107,323	8,368	10,405	(2,037)	8.00%	8,505	113,791	109,414	7.90%	10.31%
2012	113,791	8,691	11,126	(2,435)	8.00%	9,007	120,363	111,282	7.90%	10.66%
2013	120,363	9,054	11,806	(2,752)	8.00%	9,520	127,131	113,019	7.90%	10.92%
2014	127,131	9,435	12,592	(3,157)	8.00%	10,046	134,020	114,561	7.90%	11.23%
2015	134,020	9,828	13,436	(3,608)	8.00%	10,579	140,991	115,884	7.90%	11.55%
2016	140,991	10,228	14,273	(4,045)	8.00%	11,120	148,066	117,019	7.90%	11.83%
2017	148,066	10,642	15,132	(4,490)	8.00%	11,668	155,244	117,973	7.90%	12.10%
2018	155,244	11,061	16,044	(4,983)	8.00%	12,223	162,484	118,725	7.90%	12.37%
2019	162,484	11,493	16,985	(5,492)	8.00%	12,782	169,774	119,281	7.90%	12.63%
2024	199,169	13,927	22,306	(8,379)	8.00%	15,603	206,393	119,187	7.90%	13.79%
2029	233,928	17,124	28,982	(11,858)	8.00%	18,246	240,316	114,064	7.90%	14.68%
2034	264,214	21,318	35,779	(14,461)	8.00%	20,566	270,319	105,457	7.90%	14.62%
2039	298,939	26,609	40,955	(14,346)	8.00%	23,349	307,942	98,742	7.90%	13.53%
2044	352,715	32,553	47,024	(14,471)	8.00%	27,646	365,890	96,431	7.90%	12.76%
2049	425,572	39,421	56,487	(17,066)	8.00%	33,372	441,878	95,720	7.90%	12.65%
2054	509,720	47,523	70,342	(22,819)	8.00%	39,877	526,778	93,791	7.90%	12.99%
2059	595,293	57,602	86,559	(28,957)	8.00%	46,480	612,816	89,680	7.90%	13.16%
2069	795,670	85,740	122,937	(37,197)	8.00%	62,185	820,658	81,133	7.90%	12.55%
2079	1,081,760	126,935	181,785	(54,850)	8.00%	84,375	1,111,285	74,221	7.90%	12.56%
2089	1,312,954	187,347	276,955	(89,608)	8.00%	101,498	1,324,844	59,777	7.90%	12.95%
2099	1,289,002	278,195	402,119	(123,924)	8.00%	98,227	1,263,305	38,507	7.90%	12.67%
2109	618,532	411,485	595,843	(184,358)	8.00%	42,203	476,377	9,810	7.90%	12.70%

Funding Level 2 is the lowest funding level that will keep the fund solvent indefinitely, i.e., throughout the entire 100-year projection period assuming all assumptions are realized.

POST-RETIREMENT HEALTH CARE & MEDICARE REIMBURSEMENT
CASH FLOW PROJECTION
INTERMEDIATE ASSUMPTIONS: B
FUNDING LEVEL 1

Fiscal Year	Fund Balance BOY	Contributions	Benefits	Net	Investment Return %	Investment Return \$	Fund Balance EOY		% of Payroll Benefits	
							Nominal \$	Real \$	Contrib.	Benefits
2010	\$100,748	\$3,883	\$ 9,522	\$ (5,639)	8.00%	\$7,837	\$102,946	\$102,946	3.50%	9.72%
2011	102,946	4,040	10,699	(6,659)	8.00%	7,973	104,260	100,250	3.50%	10.60%
2012	104,260	4,239	11,697	(7,458)	8.00%	8,046	104,848	96,938	3.50%	11.21%
2013	104,848	4,453	12,630	(8,177)	8.00%	8,065	104,736	93,110	3.50%	11.68%
2014	104,736	4,658	13,672	(9,014)	8.00%	8,023	103,745	88,682	3.50%	12.20%
2015	103,745	4,864	14,774	(9,910)	8.00%	7,908	101,743	83,625	3.50%	12.70%
2016	101,743	5,079	15,857	(10,778)	8.00%	7,714	98,679	77,987	3.50%	13.14%
2017	98,679	5,293	16,947	(11,654)	8.00%	7,434	94,459	71,781	3.50%	13.55%
2018	94,459	5,504	18,080	(12,576)	8.00%	7,060	88,943	64,990	3.50%	13.94%
2019	88,943	5,717	19,213	(13,496)	8.00%	6,583	82,030	57,633	3.50%	14.28%
2020	82,030	5,950	20,235	(14,285)	8.00%	5,998	73,743	49,818	3.50%	14.50%
2021	73,743	6,185	21,374	(15,189)	8.00%	5,300	63,854	41,478	3.50%	14.76%
2022	63,854	6,423	22,649	(16,226)	8.00%	4,468	52,096	32,539	3.50%	15.09%
2023	52,096	6,683	23,922	(17,239)	8.00%	3,487	38,344	23,028	3.50%	15.37%
2024	38,344	6,967	25,190	(18,223)	8.00%	2,348	22,469	12,975	3.50%	15.57%
2025	22,469	7,261	26,540	(19,279)	8.00%	1,036	4,226	2,347	3.50%	15.78%
2026	4,226	7,559	28,027	(20,468)	8.00%	(470)	(16,712)	(8,923)	3.50%	16.02%

Funding Level 1 is the present contribution rate for post-retirement Health Care and Medicare reimbursement. The fund remains solvent until 2026 in this projection.

**POST-RETIREMENT HEALTH CARE & MEDICARE REIMBURSEMENT
CASH FLOW PROJECTION
INTERMEDIATE ASSUMPTIONS: B
FUNDING LEVEL 2**

Fiscal Year	Fund Balance BOY	Contributions		Benefits	Net	Investment Return %	Investment Return \$	Fund Balance EOY		% of Payroll	
		\$						Nominal \$	Real \$	Contrib.	Benefits
2010	\$ 100,748	\$ 9,561		\$ 9,522	\$ 39	8.00%	\$ 8,061	\$ 108,848	\$108,848	9.40%	9.72%
2011	108,848	9,882		10,699	(817)	8.00%	8,676	116,707	106,582	9.40%	10.60%
2012	116,707	10,257		11,697	(1,440)	8.00%	9,280	124,547	103,874	9.40%	11.21%
2013	124,547	10,676		12,630	(1,954)	8.00%	9,887	132,480	100,904	9.40%	11.68%
2014	132,480	11,117		13,672	(2,555)	8.00%	10,498	140,423	97,675	9.40%	12.20%
2015	140,423	11,572		14,774	(3,202)	8.00%	11,107	148,328	94,222	9.40%	12.70%
2016	148,328	12,038		15,857	(3,819)	8.00%	11,715	156,224	90,628	9.40%	13.14%
2017	156,224	12,518		16,947	(4,429)	8.00%	12,323	164,118	86,948	9.40%	13.55%
2018	164,118	13,006		18,080	(5,074)	8.00%	12,929	171,973	83,205	9.40%	13.94%
2019	171,973	13,510		19,213	(5,703)	8.00%	13,533	179,803	79,446	9.40%	14.28%
2024	211,292	16,354		25,190	(8,836)	8.00%	16,554	219,010	61,470	9.40%	15.57%
2029	248,294	20,086		32,695	(12,609)	8.00%	19,366	255,051	45,474	9.40%	16.56%
2034	280,257	24,989		40,309	(15,320)	8.00%	21,816	286,753	32,476	9.40%	16.47%
2039	317,857	31,148		46,001	(14,853)	8.00%	24,842	327,846	23,586	9.40%	15.20%
2044	378,369	38,080		52,710	(14,630)	8.00%	29,692	393,431	17,980	9.40%	14.31%
2049	462,505	46,121		63,338	(17,217)	8.00%	36,321	481,609	13,981	9.40%	14.18%
2054	562,314	55,644		79,020	(23,376)	8.00%	44,062	583,000	10,751	9.40%	14.60%
2059	668,283	67,472		97,305	(29,833)	8.00%	52,285	690,735	8,091	9.40%	14.79%
2069	941,023	100,437		138,051	(37,614)	8.00%	73,797	977,206	4,619	9.40%	14.09%
2079	1,391,508	148,643		204,045	(55,402)	8.00%	109,133	1,445,239	2,757	9.40%	14.10%
2089	1,963,473	219,428		311,141	(91,713)	8.00%	153,456	2,025,216	1,559	9.40%	14.55%
2099	2,661,752	325,804		451,483	(125,679)	8.00%	207,977	2,744,050	852	9.40%	14.22%
2109	3,554,513	481,874		668,979	(187,105)	8.00%	276,973	3,644,381	457	9.40%	14.25%

Funding Level 2 is the lowest funding level that will keep the fund solvent indefinitely, i.e., throughout the entire 100-year projection period assuming all assumptions are realized.

POST-RETIREMENT HEALTH CARE & MEDICARE REIMBURSEMENT
CASH FLOW PROJECTION
PESSIMISTIC ASSUMPTIONS: C
FUNDING LEVEL 1

Fiscal Year	Fund Balance	Contributions	Benefits	Net	Investment Return %	Investment Return \$	Fund Balance EOY		% of Payroll	
	BOY						Nominal \$	Real \$	Contrib.	Benefits
2010	\$100,748	\$3,883	\$ 9,522	\$ (5,642)	8.00%	\$7,837	\$102,943	\$102,943	3.50%	9.72%
2011	102,943	4,040	10,993	(6,953)	8.00%	7,961	103,951	99,953	3.50%	10.89%
2012	103,951	4,239	12,312	(8,073)	8.00%	7,997	103,875	96,038	3.50%	11.80%
2013	103,875	4,453	13,580	(9,127)	8.00%	7,950	102,698	91,298	3.50%	12.56%
2014	102,698	4,658	14,952	(10,294)	8.00%	7,809	100,213	85,662	3.50%	13.34%
2015	100,213	4,864	16,361	(11,497)	8.00%	7,563	96,279	79,134	3.50%	14.07%
2016	96,279	5,079	17,704	(12,625)	8.00%	7,204	90,858	71,806	3.50%	14.67%
2017	90,858	5,293	19,036	(13,743)	8.00%	6,726	83,841	63,712	3.50%	15.22%
2018	83,841	5,504	20,389	(14,885)	8.00%	6,120	75,076	54,857	3.50%	15.72%
2019	75,076	5,717	21,709	(15,992)	8.00%	5,375	64,459	45,288	3.50%	16.14%
2020	64,459	5,950	22,856	(16,906)	8.00%	4,489	52,042	35,158	3.50%	16.38%
2021	52,042	6,185	24,136	(17,951)	8.00%	3,455	37,546	24,389	3.50%	16.67%
2022	37,546	6,423	25,569	(19,146)	8.00%	2,248	20,648	12,897	3.50%	17.03%
2023	20,648	6,683	26,997	(20,314)	8.00%	850	1,184	711	3.50%	17.34%
2024	1,184	6,967	28,416	(21,449)	8.00%	(752)	(21,017)	(12,137)	3.50%	17.57%

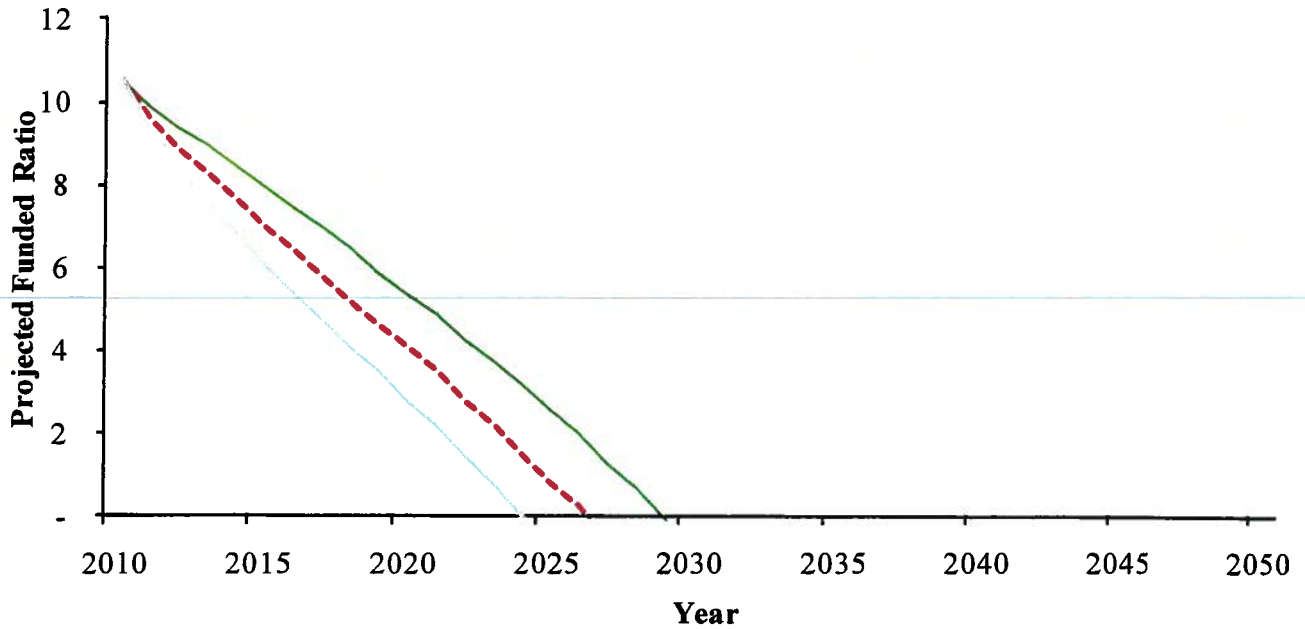
Funding Level 1 is the present contribution rate for post-retirement Health Care and Medicare reimbursement. The fund remains solvent until 2024 in this projection.

**POST-RETIREMENT HEALTH CARE & MEDICARE REIMBURSEMENT
CASH FLOW PROJECTION
PESSIMISTIC ASSUMPTIONS: C
FUNDING LEVEL 2**

Fiscal Year	Fund Balance BOY	Contributions	Benefits	Net	Investment Return %	Investment Return \$	Fund Balance EOY		% of Payroll	
							Nominal \$	Real \$	Contrib.	Benefits
2010	\$ 100,748	\$ 11,128	\$ 9,522	\$ 1,603	8.00%	\$ 8,123	\$ 110,474	\$ 110,474	11.00%	9.72%
2011	110,474	11,496	10,993	503	8.00%	8,858	119,835	115,226	11.00%	10.89%
2012	119,835	11,927	12,312	(385)	8.00%	9,572	129,022	119,288	11.00%	11.80%
2013	129,022	12,407	13,580	(1,173)	8.00%	10,275	138,124	122,792	11.00%	12.56%
2014	138,124	12,910	14,952	(2,042)	8.00%	10,969	147,051	125,700	11.00%	13.34%
2015	147,051	13,433	16,361	(2,928)	8.00%	11,648	155,771	128,032	11.00%	14.07%
2016	155,771	13,968	17,704	(3,736)	8.00%	12,314	164,349	129,887	11.00%	14.67%
2017	164,349	14,520	19,036	(4,516)	8.00%	12,970	172,803	131,316	11.00%	15.22%
2018	172,803	15,081	20,389	(5,308)	8.00%	13,615	181,110	132,335	11.00%	15.72%
2019	181,110	15,662	21,709	(6,047)	8.00%	14,250	189,313	133,009	11.00%	16.14%
2024	221,995	18,941	28,416	(9,475)	8.00%	17,385	229,905	132,764	11.00%	17.57%
2029	259,338	23,245	36,849	(13,604)	8.00%	20,210	265,944	126,228	11.00%	18.66%
2034	289,798	28,904	45,377	(16,473)	8.00%	22,533	295,858	115,421	11.00%	18.54%
2039	325,404	35,990	51,647	(15,657)	8.00%	25,414	335,161	107,470	11.00%	17.07%
2044	385,505	43,975	59,071	(15,096)	8.00%	30,244	400,653	105,593	11.00%	16.03%
2049	470,259	53,268	71,003	(17,735)	8.00%	36,920	489,444	106,024	11.00%	15.90%
2054	569,549	64,306	88,729	(24,423)	8.00%	44,600	589,726	104,999	11.00%	16.39%
2059	671,346	77,999	109,326	(31,327)	8.00%	52,471	692,490	101,340	11.00%	16.62%
2069	924,891	116,113	154,958	(38,845)	8.00%	72,457	958,503	94,760	11.00%	15.82%
2079	1,338,680	171,799	228,946	(57,147)	8.00%	104,838	1,386,371	92,593	11.00%	15.82%
2089	1,809,176	253,647	349,382	(95,735)	8.00%	140,954	1,854,395	83,670	11.00%	16.34%
2099	2,263,759	376,586	506,708	(130,122)	8.00%	175,963	2,309,600	70,399	11.00%	15.96%
2109	2,620,664	556,955	750,796	(193,841)	8.00%	201,999	2,628,822	54,133	11.00%	16.00%

Funding Level 2 is the lowest funding level that will keep the fund solvent indefinitely, i.e., throughout the entire 100-year projection period assuming all assumptions are realized.

**POST-RETIREMENT HEALTH CARE & MEDICARE REIMBURSEMENT
PROJECTED FUNDING RATIOS BASED ON
3.50% EMPLOYER CONTRIBUTION RATE
DECEMBER 31, 2009**



— A - Optimistic - - - B - Intermediate - - - C - Pessimistic

The *funding ratio* is the ratio of the fund balance at the beginning of the year to the projected benefit payout during the year. It is one measure of the Plan's ability to pay benefits. A funding ratio on the order of about 15 to 25 is expected in a plan that is funding health care payouts as a level percentage of payroll. Given the experience of the last several years, very few, if any plans, are likely to be able to report such a funded ratio.

**APPROXIMATE IRC SECTION 401(h) COMPUTATION
(\$ IN THOUSANDS)**

Year	(1) Covered Pay	(2)		(3)		(4)		(5) Health Contribution	(6) (4) + (5)	(7) Sum of (5)	(8) Sum of (6)	(9) IRC Ratio (7) / (8)
		EANC %	PUCNC %	PUCNC %	PUCNC \$							
1990	\$45,640	22.75%	23.66%	\$ 10,798.4	\$1,835.5	\$12,633.9	\$ 8,761.7	\$ 63,353.5	13.8%			
1991	48,586	22.15%	23.04%	11,194.2	2,165.1	13,359.3	10,926.8	76,712.8	14.2%			
1992	50,255	22.15%	23.04%	11,578.8	2,542.7	14,121.5	13,469.5	90,834.3	14.8%			
1993	54,715	22.36%	23.25%	12,721.2	2,563.5	15,284.7	16,033.0	106,119.0	15.1%			
1994	58,341	22.36%	23.25%	13,564.3	3,053.4	16,617.7	19,086.4	122,736.7	15.6%			
1995	56,833	23.79%	24.74%	14,060.5	3,122.0	17,182.5	22,208.4	139,919.2	15.9%			
1996	60,909	23.79%	24.74%	15,068.9	2,860.8	17,929.7	25,069.2	157,848.9	15.9%			
1997	61,714	24.47%	25.45%	15,706.2	2,548.8	18,255.0	27,618.0	176,103.9	15.7%			
1998	65,848	24.45%	25.55%	16,824.2	2,719.5	19,543.7	30,337.5	195,647.6	15.5%			
1999	69,030	24.96%	26.08%	18,003.0	3,278.9	21,281.9	33,616.4	216,929.5	15.5%			
2000	68,505	24.96%	26.08%	17,866.1	3,254.0	21,120.1	36,870.4	238,049.6	15.5%			
2001	74,140	23.10%	23.63%	17,519.3	3,521.7	21,041.0	40,392.1	259,090.6	15.6%			
2002	79,594	23.14%	23.71%	18,871.7	3,780.7	22,652.4	44,172.8	281,743.0	15.7%			
2003	80,641	21.88%	22.72%	18,321.6	3,395.7	21,717.3	47,568.5	303,460.3	15.7%			
2004	81,931	21.91%	22.83%	18,704.8	2,867.6	21,572.4	50,436.1	325,032.7	15.5%			
2005	85,828	21.68%	22.59%	19,388.5	3,006.4	22,394.9	53,442.5	347,427.6	15.4%			
2006	87,563	20.99%	21.83%	19,115.0	3,384.8	22,499.8	56,827.3	369,927.4	15.4%			
2007	95,032	20.78%	21.92%	20,831.0	4,575.1	25,406.1	61,402.4	395,333.5	15.5%			
2008	93,029	20.81%	21.89%	20,364.0	4,668.0	25,032.0	66,070.4	420,365.5	15.7%			
2009	93,339	21.21%	22.92%	21,393.3	4,794.7	26,188.0	70,865.1	446,553.5	15.9%			

The approximate computations above indicate compliance with IRC Section 401(h) because the ratio in column 9 is below 25%. The ratio in column 9 would appear lower if the computations were extended farther into the past.

SECTION C
GAIN/LOSS ANALYSIS

GAIN/(LOSS) ANALYSIS

Purpose of Gain/Loss Analysis. Regular actuarial valuations provide information about the composite change in unfunded actuarial accrued liabilities -- whether or not the liabilities are increasing or decreasing, and by how much.

However, valuations do not show the portion of the change attributable to each risk area within the Retirement System: the rate of investment income on plan assets; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of salary increases; the assumed ages at actual retirement. In an actuarial valuation, assumptions are made as to what these rates will be for the next year and for decades in the future.

The objective of a gain and loss analysis is to determine the portion of the change in unfunded actuarial accrued liabilities attributable to each risk area.

The fact that actual experience differs from assumed experience is to be expected. The future cannot be predicted with precision. Changes in the valuation assumption for a risk area should be made when the differences between assumed and actual experience have been observed to be sizable and persistent. One year's gain and loss analysis may or may not be indicative of ***long-term trends, which are the basis of financial assumptions.***

**DEVELOPMENT OF TOTAL GAIN/(LOSS)
JANUARY 1, 2009 TO DECEMBER 31, 2009**

Unfunded Accrued Liabilities (UAL), January 1	\$301,256,574
Normal Cost	20,413,016
Contributions	29,077,939
Interest	23,753,929
Expected UAL Before Any Changes	316,345,580
Effect of Changes in Benefits	0
Expected UAL After All Changes	316,345,580
Actual UAL	319,727,841
Gain/(Loss) for Year From Financial Experience	\$ (3,382,261)

This page measures the actual gain or loss for the year after adjusting for the effect of benefit and assumption changes.

**ANALYSIS OF FINANCIAL EXPERIENCE
FOR THE YEAR ENDED DECEMBER 31, 2009 AND 2008**

***Gains and Losses in Pension Accrued Liabilities Resulting from
Differences Between Assumed Experience and Actual Experience***

Type of Activity	Gain or (Loss) for Year Ended 12/31	
	2009	2008
Age & Service Retirements. If members retire at older ages or with lower final average pay than assumed, there is a gain. If younger ages or higher average pays, a loss.	\$ 272,398	\$ 127,547
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	822,758	1,169,481
Death-in-Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(106,084)	(72,528)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(641,440)	776,377
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	11,001,072	(357,076)
Investment Income. If there is greater investment return on pension assets than assumed, there is a gain. If less return, a loss.	(13,984,563)	(139,408,285)
Other. Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, valuation methods, etc.	(746,402)	5,557,206
Gain (or Loss) During Year From Experience	\$ (3,382,261)	\$ (132,207,278)
Non-Recurring Items (Effect of Benefit/Assumption Changes)	0	0
Composite Gain (or Loss) During Year	\$ (3,382,261)	\$ (132,207,278)

INVESTMENT GAIN (LOSS)
DEVELOPMENT OF PORTION ATTRIBUTABLE TO RETIREMENT,
SURVIVOR AND DISABILITY ALLOWANCES
JANUARY 1, 2009 TO DECEMBER 31, 2009

Assets, Beginning of Year	\$603,265,803
Net Cash Flow	(16,524,999)
Assumed Investment Return	47,600,264
Expected Assets End of Year	\$634,341,068
Actual Assets End of Year	620,356,505
Gain/(Loss) for Year	\$(13,984,563)

The total investment gain (loss) was (\$12,415,954), including the loss on health assets.

ACTIVE MEMBER POPULATION RECONCILIATION
JANUARY 1, 2009 TO DECEMBER 31, 2009

	Actual	Expected
Active Members Beginning of Year	1,544	
Plus New Hires	38	
Minus Retirements	21	50.0
Minus Deaths	0	0.9
Minus Disabilities	10	7.0
Minus Other Terminations*	15	16.6
Returned to Active Status	11	
Plus or Minus Data Correction	0	
Active Members End of Year	1,547	

** Includes 2 members who took a leave of absence and 0 members who transferred out of the System.*

SECTION D
FINANCIAL INFORMATION

**CURRENT ASSET INFORMATION
FURNISHED FOR THE VALUATION
DECEMBER 31, 2009**

Balance Sheet

<u>Current Assets (Market Value)</u>		<u>Fund Balance</u>	
Cash & short-term investments	\$ 26,688,247	Employees' Savings Fund	\$ 102,768,994
Fixed Income	138,842,301	Employer Accumulation Fund	31,888,741
Stocks	392,766,990	Pension Reserve Fund	400,757,214
Real Estate	8,892,733	Survivors Benefit Fund	28,386,557
Alternatives	126,913,914	Health Care Fund	96,623,521
Other short-term	16,142	Income Fund	<u>15,248,175</u>
Accruals & Receivables	<u>(18,447,125)</u>	Total Fund Balance	<u>\$ 675,673,202</u>
Total Current Assets	<u>\$ 675,673,202</u>		

Revenues and Expenditures

	<u>Year ended December 31,</u>	
	<u>2009</u>	<u>2008</u>
Net Assets Held in Trust for Pension and Postemployment Health Care Benefits	\$571,415,990	\$833,704,076
DROP Liabilities	<u>11,126,648</u>	<u>5,631,135</u>
Total	582,542,638	839,335,211
Revenues*		
Employee contributions		
For non-DROP members	8,624,025	8,870,985
For DROP members	879,501	795,680
Employer contributions (net)	25,338,241	25,002,598
Investment income (net)		
Non-DROP investment income	130,523,661	(238,393,511)
DROP investment income	30,340	215,843
Miscellaneous	<u>0</u>	<u>0</u>
Total	165,395,768	(203,508,405)
Expenditures		
Benefit payments		
Retirees and Beneficiaries	44,400,066	42,914,734
From DROP account	1,533,963	450,415
Health insurance	8,385,875	8,546,663
Refund of member contributions	1,076,685	570,827
Administrative expenses	882,028	711,529
Death benefit	<u>75,000</u>	<u>90,000</u>
Total	56,353,617	53,284,168
Net Addition to Assets	<u>109,042,151</u>	<u>(256,792,573)</u>
Net Assets Held in Trust for Pension and Postemployment Health Care Benefits	\$675,673,202	\$571,415,990
DROP Liabilities	<u>15,911,587</u>	<u>11,126,648</u>
Total	<u>691,584,789</u>	<u>582,542,638</u>

* Revenues include transfers to and from systems.

**CAFR ASSET INFORMATION FURNISHED FOR THE VALUATION
DECEMBER 31, 2009**

ADDITIONS BY SOURCE

Year	Pension Benefits				Other Postemployment Benefits			
	Contributions		Net Investment		Employer Contributions	Net Investment		
	Member*	Employer	Income	Other Systems		Income	Total	
1999	\$6,708,497	\$13,569,730	\$ 33,612,434	\$ 444,135	\$ 54,334,796	\$ 2,783,534	\$ 6,878,890	\$ 9,662,424
2000	6,954,301	13,210,189	(14,120,288)	925,998	6,970,200	3,346,581	(3,114,980)	231,601
2001	7,042,044	13,901,313	(17,920,157)	999,380	4,022,580	3,521,665	(2,900,183)	621,482
2002	7,563,173	14,923,893	(42,921,956)	999,176	(19,435,714)	3,780,715	(6,673,383)	(2,892,668)
2003	8,136,974	16,361,339	105,112,725	763,419	130,374,457	3,395,749	18,885,722	22,281,471
2004	8,192,944	17,205,609	62,907,281	856,496	89,162,330	2,867,602	12,051,961	14,919,563
2005	8,582,130	18,467,789	35,511,228	1,180,951	63,742,098	3,006,385	8,603,479	11,609,864
2006	8,610,088	19,263,941	85,757,656	648,282	114,279,967	3,384,780	15,312,122	18,696,902
2007	8,901,454	19,956,700	51,176,733	717,017	80,751,904	4,575,072	10,475,428	15,050,500
2008	9,666,665	20,302,216	(207,368,115)	632,894	(176,766,340)	4,667,972	(30,809,552)	(26,141,580)
2009	9,503,526	20,453,914	109,523,583	1,009,422	140,490,445	4,794,710	21,030,418	25,825,128

* Does not include service purchases.

DEDUCTIONS BY TYPE

Year	Pension Benefits				Other Postemployment Benefits			
	Benefits#	Refunds	Transfers to		Benefits	Administrative		
			Other Systems	Administrative		Total		
1999	\$24,324,038	\$ 529,654	\$ 196,414	\$449,167	\$25,499,273	\$5,498,402	\$ 78,854	\$5,577,256
2000	27,042,946	363,067	904,972	549,168	28,860,153	4,720,260	95,423	4,815,683
2001	29,457,281	306,452	448,381	524,922	30,737,036	6,179,096	90,422	6,269,518
2002	31,325,089	266,137	1,054,264	462,200	33,107,690	7,025,043	78,635	7,103,678
2003	33,074,853	386,931	789,387	559,052	34,810,223	7,181,129	93,769	7,274,898
2004	35,187,531	155,989	602,345	518,834	36,464,699	6,948,650	86,031	7,034,681
2005	37,716,268	495,640	403,975	561,817	39,177,700	8,932,259	92,344	9,024,603
2006	40,408,244	299,128	914,949	572,616	42,194,937	7,980,823	92,761	8,073,584
2007	44,741,510	98,628	330,539	605,165	45,775,842	10,652,642	97,101	10,749,743
2008	43,455,149	570,827	282,987	613,447	44,922,410	8,864,161	98,082	8,962,243
2009	46,009,029	1,076,685	406,147	758,818	48,250,679	8,899,533	123,210	9,022,743

Includes death benefits.

DEVELOPMENT OF FUNDING VALUE OF RETIREMENT SYSTEM ASSETS
DECEMBER 31, 2009

	2007	2008	2009	2010	2011	2012
A. Funding Value From Prior Year	\$ 758,350,258	\$ 812,041,063	\$ 699,051,166			
B. Market Value End of Year	833,704,076	582,542,638	691,584,789			
C. Market Value Beginning of Year	794,427,257	833,704,076	582,542,638			
D. Non-Investment Net Cash Flow	(21,673,076)	(17,903,377)	(20,629,822)			
E. Investment Return:						
E1. Market Total: B - C - D	60,949,895	(233,258,061)	129,671,973			
E2. For Immediate Recognition (8.0%)	59,801,098	64,247,150	55,098,900			
E3. Amount for Phased-In Recognition E1-E2	1,148,797	(297,505,211)	74,573,073			
F. Phased-In Recognition of Investment Return:						
F1. Current Year: 25% x E3	287,199	(74,376,303)	18,643,268			
F2. First Prior Year	11,521,831	287,199	(42,868,253)	\$ 18,643,268		
F3. Second Prior Year	(2,242,247)	11,521,831	287,199	(42,868,253)	\$ 18,643,268	
F4. Third Prior Year	5,996,000	(2,242,248)	11,521,832	287,200	(42,868,253)	\$ 18,643,269
F5. Total Recognized Phase-ins	\$ 15,562,783	\$ (64,809,521)	\$ (12,415,954)	\$ (23,937,785)	\$ (24,224,985)	\$ 18,643,269
G. Funding Value End of Year:						
G1. Preliminary Funding Value End of Year: A + D + E2 + F5	\$ 812,041,063	\$ 793,575,315	\$ 721,104,290			
G2. Corridor Percent	20%	20%	20%			
G3. Upper Corridor Limit: (100% + G2) x B	1,000,444,891	699,051,166	829,901,747			
G4. Lower Corridor Limit: (100% - G2) x B	666,963,261	466,034,110	553,267,831			
G5. Funding Value End of Year	\$ 812,041,063	\$ 699,051,166	\$ 721,104,290			
H. Difference between Market Value and Funding Value	\$ 21,663,013	\$ (116,508,528)	\$ (29,519,501)	\$ (5,581,716)	\$ 18,643,269	\$ -
I. Funding Value Rate of Return	10.1 %	(11.8)%	6.2 %			
J. Market Value Rate of Return	7.8 %	(28.3)%	22.7 %			
K. Ratio of Funding Value to Market Value	97%	120%	104%			

The asset valuation method recognizes assumed investment income (line E2) fully each year. Differences between actual and expected investment income (line E3) are phased in over a closed 4-year period. When investment markets are performing well, Funding Value will tend to lag market value. When investment markets are performing poorly, Funding Value will tend to exceed market value. From a Funding standpoint, the asset valuation method is *neutral*.

**SEPARATION OF ASSETS BETWEEN PENSIONS AND HEALTH
DECEMBER 31, 2009**

	Pension	Health	Total
A. Market Value Beginning of Year	\$502,721,502	\$79,821,136	\$582,542,638
B. Member Contributions			
B1. Pension Contributions	8,624,025		8,624,025
B2. DROP Contributions	879,501		879,501
B3. Retiree Health Contributions		902,320	902,320
C. Employer Contributions			
C1. System Contributions	20,453,914	4,281,052	24,734,966
C2. Transfers	603,275		603,275
C3. Medicare Part D Reimbursement		513,658	513,658
D. Benefits Paid			
D1. Pension Benefits	44,400,066		44,400,066
D2. Benefit Payments from DROP Account	1,533,963		1,533,963
D3. HPRS Paid Retiree Health Benefits		8,226,083	8,226,083
D4. HPRS Paid Medicare Part B Benefits		673,450	673,450
D5. Member Paid Retiree Health Benefits		902,320	902,320
E. Refunds of Member Contributions	1,076,685	0	1,076,685
F. Death Benefits	75,000	0	75,000
G. Net External Cash Flow (B + C - D - E - F)	(16,524,999)	(4,104,823)	(20,629,822)
H. Other Changes in Market Value	108,764,765	20,907,208	129,671,973
I. Market Value End of Year (A + G + H)	594,961,268	96,623,521	691,584,789
J. Funding Value Adjustment	25,395,237	4,124,264	29,519,501
K. Funding Value End of Year (I + J)	\$ 620,356,505	\$ 100,747,785	\$ 721,104,290

Line J is allocated in proportion to Line I.

SECTION E
SUMMARY OF MEMBER DATA

ACTIVE MEMBERS AS OF DECEMBER 31, 2009
BY ATTAINED AGE AND YEARS OF SERVICE*

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Up	No.	Payroll
20-24	7							7	\$ 259,736
25-29	113	55	1					169	8,448,873
30-34	62	161	76					299	16,627,671
35-39	26	85	172	99	1			383	22,912,178
40		20	19	46	3			88	5,556,616
41	1	9	18	37	6			71	4,465,952
42		7	7	40	8			62	4,125,814
43	1	5	5	32	13			56	3,744,676
44		1	3	22	13	4		43	2,953,077
45		1	8	17	30			56	3,828,496
46		1	2	14	23	5		45	3,075,635
47		1		10	21	13		45	2,998,880
48			2	11	17	14		44	3,119,519
49				2	7	17	2	28	1,960,705
50				6	6	25	2	39	2,701,225
51				3	8	11	8	30	2,144,518
52					6	9	9	24	1,713,182
53					4	5	10	19	1,351,185
54					2	2	6	10	701,646
55					1	5	4	10	708,454
56					1		6	7	609,519
57						3	4	7	472,833
58							1	1	86,176
59							1	1	70,919
60						2	1	3	187,304
Totals	210	346	313	339	170	115	54	1,547	\$94,824,789

While not used in valuations, the following group averages are computed and shown for their general interest.

Age: 38.8 years.

Service: 14.0 years.

Annual Pay: \$61,296

* Includes 134 DROP members.

**ACTIVE MEMBERS
BY AGES OF ENTRY INTO SERVICE
DECEMBER 31, 2009**

Entry Age Nearest Birthday	Number	Cumulative Number	Percent	Cumulative Percent
Less than 18	1	1	0.06%	0.06%
18	8	9	0.52%	0.58%
19	45	54	2.91%	3.49%
20	57	111	3.69%	7.18%
21	154	265	9.95%	17.13%
22	215	480	13.90%	31.03%
23	177	657	11.44%	42.47%
24	210	867	13.57%	56.04%
25	148	1,015	9.57%	65.61%
26	114	1,129	7.37%	72.98%
27	99	1,228	6.40%	79.38%
28	88	1,316	5.69%	85.07%
29	39	1,355	2.52%	87.59%
30	56	1,411	3.62%	91.21%
31	32	1,443	2.07%	93.28%
32	33	1,476	2.13%	95.41%
33	36	1,512	2.33%	97.74%
34	18	1,530	1.16%	98.90%
35	13	1,543	0.84%	99.74%
36	0	1,543	0.00%	99.74%
37	0	1,543	0.00%	99.74%
38	3	1,546	0.20%	99.94%
39	0	1,546	0.00%	99.94%
40 & Up	1	1,547	0.06%	100.00%
Total	1,547			

**AGE AND SERVICE PENSIONS BEING PAID DECEMBER 31, 2009
BY ATTAINED AGES**

Attained Ages	Number	Monthly Pensions	Number Married	Average Age of Spouse
45	2	\$ 3,843		N/A
47	1	4,124		N/A
48	4	13,687	2	48
49	11	39,430	10	48
50	20	72,228	15	47
51	24	74,340	18	49
52	21	69,224	17	48
53	18	60,034	15	52
54	38	132,116	34	52
55	25	86,672	24	55
56	20	73,929	18	54
57	34	124,286	30	53
58	47	154,163	38	56
59	45	157,821	40	56
60	40	145,787	36	57
61	55	179,878	48	59
62	72	242,528	61	60
63	46	163,997	43	62
64	40	140,700	36	62
65	53	178,150	53	62
66	38	119,342	34	64
67	52	165,485	49	63
68	38	119,449	35	64
69	28	92,422	25	66
70	27	89,132	26	67
71	26	70,067	25	68
72	26	77,237	25	68
73	17	44,404	16	70
74	14	40,641	13	72
75	13	32,018	12	70
76	9	20,932	9	72
77	13	32,233	12	72
78	11	25,339	11	76
79	16	41,666	15	75
80	15	30,329	12	77
81	13	24,693	12	78
82	13	24,723	11	79
85 & Over	32	57,658	21	83
Totals	1,017	\$ 3,224,707	901	

**DISABILITY PENSIONS BEING PAID DECEMBER 31, 2009
BY ATTAINED AGE**

Attained Ages	Number	Monthly Pensions	Number Married	Average Age of Spouse
31	1	\$ 1,938		
35	1	2,454	1	35
37	2	5,347	2	38
38	2	5,219	2	28
39	2	4,672	2	36
40	2	5,510	2	36
41	4	9,105	2	36
42	4	9,611	2	32
43	5	10,288	2	43
44	3	6,120	2	48
45	6	17,813	3	45
46	5	12,753	5	43
47	3	7,689	2	39
48	3	11,078	3	49
49	6	16,110	6	48
50	5	13,661	4	45
51	7	16,403	4	50
52	7	18,629	5	53
53	4	11,322	3	52
54	2	6,241	2	56
56	3	8,184	3	54
57	3	7,437	2	56
58	3	8,717	3	56
59	1	1,733	1	54
60	4	8,854	2	58
61	6	12,587	5	58
62	1	2,412	1	62
63	2	5,152	1	52
65	2	5,299	1	67
66	2	3,923	2	65
67	1	2,422		N/A
68	1	1,545	1	62
72	1	3,023	1	69
74	1	1,545	1	70
79	1	1,643	1	74
80	2	3,324	1	76
82	1	1,667	1	80
83	1	1,679		N/A
Totals	110	\$273,109	81	

DEPENDENTS BEING PAID AS OF DECEMBER 31, 2009
TABULATED BY ATTAINED AGE

Attained Ages	Number	Monthly Pensions
12 & Under	8	\$ 1,394
14	1	189
15	1	189
16	1	159
17	3	535
18	4	734
19	4	766
20	3	535
21	1	213
23	2	1,144
30	1	981
32	1	1,116
36	1	1,134
37	1	1,203
39	1	1,134
41	1	1,274
43	1	1,203
44	1	1,178
45	2	2,159
47	3	3,451
50	2	426
52	2	2,567
54	2	2,591
55	3	3,433
56	1	954
57	1	1,321
58	5	6,405
59	3	4,144
60	2	2,615
61	4	5,408
62	8	10,940
63	5	7,367
64	5	7,101
65	4	6,245
66	4	5,013
67	9	12,674
68	1	1,249
69	4	4,798
70	4	6,133
71	3	4,896
72	5	7,231
70-79	55	68,497
80-89	71	84,650
90 & Over	14	17,891
Totals	258	\$295,238

ACTIVE MEMBER VALUATION DATA, 2000 TO 2009

Actuarial Valuation as of December 31	Number of Active Members	Annual Payroll	Average Annual Salary	% Increase in Average Pay
2000	1,489	\$69,028,285	\$46,359	1.5 %
2001	1,520	76,344,002	50,226	8.3
2002	1,548	78,997,065	51,032	1.6
2003	1,542	81,737,962	53,008	3.9
2004	1,562	81,757,707	52,342	(1.3)
2005	1,573	83,408,155	53,025	1.3
2006	1,592	85,878,329	53,944	1.7
2007	1,597	93,752,908	58,706	8.8
2008	1,544	94,301,538	61,076	4.0
2009	1,547	94,824,789	61,296	0.4

RETIRANTS AND BENEFICIARIES VALUATION DATA, 2000 TO 2009

Actuarial Valuation as of December 31	Added to Rolls		Removed from Rolls		Number of People	Total Monthly Benefits	Average Benefit
	No.	Monthly Benefits	No.	Monthly Benefits			
2000	78		27		1,174	\$2,300,464	\$1,960
2001	53	\$181,427	20	\$21,583	1,207	2,460,308	2,038
2002	55	184,301	31	41,501	1,231	2,603,108	2,115
2003	48	196,385	26	29,344	1,253	2,770,149	2,211
2004	58	287,345	29	34,153	1,282	3,023,341	2,358
2005	45	194,666	26	40,276	1,301	3,177,731	2,443
2006	70	215,820	34	51,746	1,337	3,341,805	2,499
2007	53	184,644	31	56,120	1,359	3,470,329	2,554
2008	45	211,061	33	53,298	1,371	3,628,092	2,646
2009	45	207,598	31	42,636	1,385	3,793,054	2,739

Of the 1,385 retirants and beneficiaries as of December 31, 2009, 1,017 are service retirees, 110 are disability retirees and 258 are survivor beneficiaries. The average monthly benefits are \$3,171 for service retirees, \$2,483 for disability retirees and \$1,144 for survivor beneficiaries.

**NUMBER OF RETIRED LIVES COVERED BY AETNA & OTHER CARRIERS
COMPARATIVE SCHEDULE**

	Census Date									
	12/09	12/08	12/07	12/06	12/05	12/04	12/03	12/02	12/01	12/00
Recipients:										
w/o Medicare A	692	762	751	779	806	808	791	773	771	761
Medicare A	580	398	503	522	437	411	394	386	368	346
Spouses:										
w/o Medicare A	368	518	372	420	375	373	403	483	471	447
w Medicare A	267	232	242	156	187	176	165	158	155	151
Dependent Children	165	167	154	168	127	130	129	111	105	110
Orphans	23	26	63	33	26	30	30	32	30	33
Totals	2,095	2,103	2,085	2,078	1,958	1,928	1,912	1,943	1,900	1,848

A summary of recipients and dependents covered by AETNA and Medical Mutual of Ohio follows:

	AETNA		Medical Mutual		Totals
	Network	Non-Network	Network	Non-Network	
2002	880	491	516	56	1,943
2003	815	486	546	65	1,912
2004	783	494	568	83	1,928
2005	767	505	588	98	1,958
2006	1,279	22	749	28	2,078
2007	1,264	25	723	73	2,085
2008	1,262	2	818	21	2,103
2009	1,260	0	835	0	2,095

DEFERRED PENSIONS AS OF DECEMBER 31, 2009
TABULATED BY ATTAINED AGE

Attained Ages	Number	Monthly Pensions
47	1	\$3,354
51	1	1,092
54	1	1,014
Totals	3	\$5,460

A *deferred retirant* is a member who has left active service with at least 15 (and in most cases 20) years of service credit, and has not withdrawn his accumulated contributions. Such members are entitled to a pension upon attaining eligibility age.

SECTION F
ASSUMPTIONS USED IN THE VALUATION

APPENDIX

SUMMARY OF VALUATION METHOD AND ASSUMPTIONS DECEMBER 31, 2009

The actuarial assumptions used in the valuation are shown in this Appendix of the report. The assumptions were established for the December 31, 2005 actuarial valuation, following a 5-year experience study covering the period January 1, 2000 through December 31, 2004. They were adopted by the Board after obtaining the advice of the Actuary and other professionals.

Economic Assumptions

The investment return rate used in making the valuations was 8.0% per year, compounded annually (net after administrative expenses). The real rate of return is defined to be the portion of total investment return, which is more than the wage inflation rate. Considering other financial assumptions, the 8.0% investment return rate translates to an assumed real rate of return over wage growth of 4.0%. In order to assume a 4.0% real return over wage growth, it would be necessary to realize about a 5.0% real return over price inflation, after accounting for expenses and the difference between wage increases and price increases. Based on our experience with other public employee retirement systems, both nationally and statewide, and published results of national surveys, the assumed investment return rate remains reasonable. The current assumed rate probably would be close to the average for retirement systems with asset allocations similar to HPRS. The economic assumptions were last reviewed as part of the 5-year experience study for the period January 1, 2000 through December 31, 2004. It is scheduled to be reviewed again following the December 31, 2009 actuarial valuation.

Pay increase assumptions for individual active members are shown for sample ages on page F-4. Part of the assumed increase at each age is for merit and/or seniority, and the other 4.0% recognizes changes in wage levels due to broad economic effects, including inflation and real wage growth. No specific price inflation assumption is required to perform the actuarial valuation.

The active member payroll is assumed to increase 4.0% annually, which is the portion of the individual pay increase assumptions attributable to broad economic effects.

The number of active members is assumed to continue at the present number.

Non-Economic Assumptions

The mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were 105% of the RP-2000 Combined Healthy Male and Female Tables. This assumption was last reviewed and updated as part of the 5-year experience study for the period January 1, 2000 through December 31, 2004. As shown in that study, the current assumption allows some margin for future mortality improvement. It is scheduled to be reviewed again following the December 31, 2009 actuarial valuation. Related values are shown on page F-3.

The probabilities of age and service retirement are shown on page F-4.

The probabilities of withdrawal from service, disability and death-in-service are shown for sample ages on page F-4. For disability retirement, impaired longevity was recognized by basing benefit values on the RP-2000 Combined Healthy Male and Female Tables set-forward 10 years. Fifty percent of disability retirements are assumed to be non-duty related and fifty percent are assumed to be duty related.

~~*The entry age normal actuarial cost method of valuation* was used in determining liabilities and normal cost.~~

Differences in the past between assumed experience and actual experience (“actuarial gains and losses”) become part of actuarial accrued liabilities.

Unfunded actuarial accrued liabilities are amortized to produce payments (principal & interest), which are level percent of payroll contributions.

Employer contributions were assumed to be *paid in equal installments* throughout the employer fiscal year.

Present assets (cash & investments) were used with a market value adjustment that spreads differences between actual and assumed return over a closed four-year period. Funding value is not permitted to deviate from market value by more than 20%. Details of the method may be found in the body of the report on page D-3. Assets may be used in the valuation prior to the final audit.

The data about persons now covered and about present assets were furnished by the System’s administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.) who has experience performing public plan valuations.

**SINGLE LIFE RETIREMENT VALUES
(8.00% INTEREST)**

Sample Attained Ages	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$135.03	\$138.31	30.37	33.14
55	127.41	131.75	25.76	28.47
60	117.65	123.20	21.35	23.95
65	105.90	112.81	17.24	19.72
70	92.57	100.81	13.54	15.86
75	77.83	87.41	10.27	12.40
80	62.54	72.92	7.50	9.38

The present values shown above are for illustrative purposes only and do not include the value of future post-retirement increases.

SEPARATIONS FROM ACTIVE EMPLOYMENT & SALARY SCALE

Sample Ages	Percent of Active Members Separating Within Next Year				Salary Increase Assumptions for an Individual Member			
	Disability	Death		Other	Service	Merit & Seniority	Base (Economic)	Increase Next Year
		Men	Women					
20	0.08%	0.02%	0.01%	2.57%	1-2	10.00%	4.00%	14.00%
25	0.08%	0.02%	0.01%	2.24%	3-5	3.00%	4.00%	7.00%
30	0.23%	0.02%	0.01%	1.91%	6-10	1.00%	4.00%	5.00%
35	0.42%	0.04%	0.02%	1.56%	11 & Up	0.30%	4.00%	4.30%
40	0.70%	0.05%	0.04%	0.84%				
45	0.85%	0.08%	0.06%	0.41%				
50	1.13%	0.11%	0.08%	0.15%				
55	1.32%	0.18%	0.14%	0.00%				

In the first year of employment, 8% of active members are assumed to terminate employment.

Probabilities of Age & Service Retirement		
Retirement Ages	Percents of Eligible Members Retiring Within Next Year with an Unreduced Benefit	Percents of Eligible Members Retiring Within Next Year with a Reduced Benefit
48	40%	7%
49	35%	7%
50	25%	7%
51	30%	7%
52	30%	
53	30%	
54	40%	
55	25%	
56	25%	
57	25%	
58	30%	
59	35%	
60 & Over	100%	

In addition, it was assumed that 100% of eligible members age 55 and older would retire upon attaining 34 years of service. A member was assumed eligible for unreduced retirement at age 48 or greater with 25 or more years of service or age 52 or greater with 20 or more years of service. A member was assumed eligible for reduced retirement at age 48 or greater with 20 or more years of service.

It was assumed that members eligible to DROP would either retire or "DROP in" at first eligibility for unreduced retirement. Current retirement rates were adjusted according to the following:

Beginning at first age of eligibility, the normal retirement pattern is as follows:

% of current retirement rates = 85%, 0%, 25%, 50%, 100%, 150%, 200%, 200%. 100% of members still working 8 years after first reaching retirement eligibility are assumed to retire.

**ADDITIONS TO AND REMOVALS FROM ACTIVE MEMBERSHIP
ACTUAL AND EXPECTED NUMBERS**

Year Ended December 31	Number Added During Year		Retirement		Disability Retirement		Death-in- Service		Other Terminations		Active Members
	A	E	A	E	A	E	A	E	A	E	
	2000	120	55.7	42	31.2	8	3.5	1	1.5	25	
2001	113	51.4	28	24.8	10	6.0	1	0.9	43	19.7	1,520
2002	92	53.8	35	26.7	3	6.2	0	0.9	26	20.0	1,548
2003	64	61.0	32	33.5	6	6.3	0	1.0	32	20.2	1,542
2004	90	63.6	39	36.5	4	6.5	1	1.0	26	19.6	1,562
2005	76	60.7	23	33.2	8	6.7	0	1.0	34	19.8	1,573
2006	80	70.4	26	41.9	9	6.7	2	0.8	24	21.0	1,592
2007	53	65.9	17	36.7	4	6.7	3	0.8	24	21.7	1,597
2008	9	71.8	27	44.8	4	6.9	0	0.8	31	19.3	1,544
2009	49	74.5	21	50.0	10	7.0	0	0.9	15	16.6	1,547
Total	746	628.8	290	359.3	66	62.5	8	9.6	280	197.4	

A: Actual

E: Expected

The following pages summarize the removals from active membership by age group and years of accrued service.

**AGE AND SERVICE RETIREMENTS
DURING CALENDAR YEAR 2009**

Age Group	Years of Accrued Service				
	15-19	20-24	25-29	30 Plus	Total
Under 20					
20-24					
25-29					
30-34					
35-39					
40-44					
45					
46					
47					
48			4		4
49				1	1
50				1	1
51			1	1	2
52			2	1	3
53				1	1
54				2	2
55			1	2	3
56			1	2	3
57				1	1
58					
59					
60 & Over					
Totals			9	12	21

**DISABILITY RETIREMENTS
DURING CALENDAR YEAR 2009**

Age Group	Years of Accrued Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20								
20-24								
25-29								
30-34								
35-39		1						1
40-44				3				3
45-49				1	4	1		6
50 & Over								
Totals		1		4	4	1		10

**DEATH-IN-SERVICE TERMINATIONS
DURING CALENDAR YEAR 2009**

Age Group	Years of Accrued Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20								
20-24								
25-29								
30-34								
35-39								
40-44								
45-49								
50 & Over								
Totals								0

**WITHDREW AND ELIGIBLE FOR DEFERRED BENEFIT TERMINATIONS
DURING CALENDAR YEAR 2009**

Age Group	Years of Accrued Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20								
20-24								
25-29								
30-34								
35-39								
40-44								
45-49								
50 & Over								
Totals								0

**WITHDREW AND PENDING CONTRIBUTIONS TERMINATION
DURING CALENDAR YEAR 2009**

Age Group	Years of Accrued Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20								
20-24								
25-29								
30-34								
35-39								
40-44								
45-49								
50 & Over								
Totals								0

**WITHDREW AND REFUNDED TERMINATIONS*
DURING CALENDAR YEAR 2009**

Age Group	Years of Accrued Service							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	
Under 20								
20-24								
25-29	3							3
30-34	2	2	2					6
35-39		2	1	1				4
40-44								
45-49								
50 & Over								
Totals	5	4	3	1				13

** In addition to the 13 terminations above, there was also 2 members who took a leave of absence.*

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Administrative Expenses:	Assumed investment return is net of administrative and investment expenses.
Marriage Assumption:	100% of participants are assumed to be married for purposes of death-in-service benefits.
Pay Increase Timing:	Beginning of year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<hr/>	
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Other:	Disability and turnover decrements do not operate during retirement eligibility. For death-in-service, two children are assumed to receive benefits for a 10-year period.
Miscellaneous Loading Factors:	A load of 0.75% of payroll is used of measure the effect of military service purchases.

SECTION G

**FINANCIAL PRINCIPLES AND OPERATIONAL
TECHNIQUES**

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF THE RETIREMENT SYSTEM

Promises Made, and To Be Paid For. As each year is completed, the Retirement System in effect hands an “IOU” to each member then acquiring a year of service credit -- the “IOU” says: “The Ohio State Highway Patrol Retirement System owes you one year’s worth of retirement benefits, payments in cash commencing when you qualify for retirement.”

The principal related financial question is: When shall the money required to cover the “IOU” be contributed? This year, when the benefit of the member’s service is received? Or, some future year when the “IOU” becomes a cash demand?

The objective of level percent-of-payroll financing is that this year’s taxpayers contribute the money to cover the IOUs being handed out this year. By following this objective, *the employer contribution rate will remain approximately level from year to year* --- and will not have to be increased for future generations of taxpayers.

(There are systems which have a design for deferring contributions to future taxpayers, lured by a lower contribution rate now and putting aside the consequence that the contribution rate must then relentlessly grow much greater over decades of time.)

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. *Invested assets are a by-product and not the objective.* Investment income becomes the 3rd contributor for benefits to employees, and is interlocked with the contribution amounts required from employees and employer.

(Concluded on Next Page)

FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF THE RETIREMENT SYSTEM (CONCLUDED)

Translated to actuarial terminology, this level-cost objective means that the contribution rates must total at least the following:

Normal Cost (the value assigned to service being rendered this year)

... plus ...

Interest on Unfunded Actuarial Accrued Liabilities (the difference between liabilities for service already rendered and the accrued assets of the Retirement System).

Computing Contributions To Support System Benefits From a given schedule of benefits and from the employee data and asset data furnished by the system, the actuary determines the contribution rates to support the benefits, by means of *an actuarial valuation*.

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan assets will earn; the rates of withdrawal of active members who leave covered employment; the rates of mortality; the rates of disability; the rates of pay increases and the assumed age or ages at actual retirement.

In an actuarial valuation the actuary must assume what the above rates will be, for the next year and for decades in the future. Only the subsequent actual experience of the plan can indicate the degree of accuracy of the assumptions.

Reconciling Differences Between Assumed Experience and Actual Experience Once actual experience has occurred and has been observed, it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the many calculations made. Most retirement systems cope with such differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is *continuing adjustments to the financial position*.

**% OF
ACTIVE
EMPLOYEE
PAYS**

START

50 ±

YEARS OF TIME

CASH BENEFITS

**PAY AS YOU GO
CONTRIBUTIONS**

LEVEL CONTRIBUTIONS

**INVESTMENT
INCOME**

**CONTRIBUTIONS
EMPLOYER
AND EMPLOYEE
COMBINED**

CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

THE ACTUARIAL VALUATION PROCESS

The *actuarial valuation* is the mathematical process by which the contribution rate is determined, and the flow of activity constituting the valuation may be summarized as follows:

A. ***Covered people data*** furnished by plan administrator, including:

Retired lives now receiving benefits

Former employees with vested benefits not yet payable

Active employees

B. + ***Asset data*** (cash & investments), furnished by the plan administrator

C. + ***Benefit provisions*** which specify eligibility and amounts of pensions

D. + ***Assumptions concerning future experience in various risk areas***, which are established by the Retirement Board after consulting with the actuary

E. + ***The funding method*** for employer contributions (the long-term, planned pattern for employer contributions)

F. + ***Mathematically combining the assumptions, the funding method, and the data***

G. = Determination of:

Plan Financial Position and/or

New Employer Contribution Rate

MEANING OF “UNFUNDED ACTUARIAL ACCRUED LIABILITIES”

“Actuarial accrued liabilities” are the portion of the present value of plan promises to pay benefits in the future that are not covered by future normal cost contributions. A liability has been established (“accrued”) because the service has been rendered but the resulting monthly cash benefit may not be payable until years in the future. Actuarial accrued liabilities are the result of complex mathematical calculations, which are made by the plan’s actuary.

If “actuarial accrued liabilities” exceed the plan’s accrued assets (cash & investments), the difference is *“unfunded actuarial accrued liabilities.”* This is the usual condition. If the plan’s assets equaled the plan’s “actuarial accrued liabilities,” then the plan would be termed “fully funded.” This is an unusual condition.

Each time a plan adds a new benefit, which applies to service already rendered, an “actuarial accrued liability” is created, which is also an “unfunded actuarial accrued liability” because the plan can’t print instant cash to cover the value of the new benefit promises. Payment for such unfunded actuarial accrued liabilities is spread over a period of years, commonly in the 20-50 year range.

Unfunded actuarial accrued liabilities can occur in another way: if actual plan experience is less favorable than assumed plan experience, the difference is added to unfunded actuarial accrued liabilities. In plans where benefits are directly related to an employee’s pay near time of retirement, unfunded actuarial accrued liabilities rose dramatically during the 1970’s. Unexpected rates of pay increase created additional actuarial accrued liabilities, which could not be matched by reasonable investment results. More recent experience has generally been more favorable with some reductions in unfunded actuarial accrued liabilities.

The existence of unfunded actuarial accrued liabilities is not bad, but the changes from year to year in the amount of unfunded actuarial accrued liabilities are important, --- “bad” or “good” or somewhere in between.

Even though unfunded actuarial accrued liabilities don’t constitute a bill payable immediately, it is important that policy-makers prevent the amount from becoming unreasonably high and *it is vital for plans to have a sound method for making payments toward them* so that they are controlled.
