



**Report on the Annual Basic Benefits Valuation
of the
School Employees' Retirement System of Ohio**

Prepared as of June 30, 2009



Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

November 12, 2009

Board of Trustees
School Employees Retirement System
Of Ohio
300 East Broad Street
Suite 100
Columbus, OH 43215-3746

Dear Members of the Board:

Presented in this report are the results of the annual actuarial valuation of the basic benefits provided under the School Employees Retirement System of Ohio (SERS). The purpose of the valuation was to measure the System's funding progress and to determine the required employer contribution rates for the fiscal year beginning July 1, 2009.

The date of the valuation was June 30, 2009.

The valuation was based upon data, furnished by the Executive Director and the SERS staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the SERS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the summary of results on page 1 and the comments on page 6.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,

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Chief Executive Officer

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Principal and Consulting Actuary

TJC/JJG:kc

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**REPORT ON THE ANNUAL VALUATION OF THE
SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO**

PREPARED AS OF JUNE 30, 2009

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. This report, prepared as of June 30, 2009, presents the results of the annual actuarial valuation of the basic benefits provided under the System, including pension, Medicare Part B reimbursement and post-retirement death benefits. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized in the following table.

SUMMARY OF PRINCIPAL RESULTS

	June 30, 2009	June 30, 2008
Active members included in valuation		
Number	125,465	124,370
Annual Compensation	\$2,787,390,954	\$2,651,800,981
Retirees		
Number	65,757	64,818
Annual allowances	\$693,838,988	\$652,373,571
Deferred Vesteds		
Number	11,911	11,257
Annual deferred allowances	\$39,186,253	\$35,970,026
Assets (net of Health Care Assets)		
Market related actuarial value	\$9,836,220,633	\$11,372,453,979
Market value	\$8,134,107,324	\$10,793,470,372
Unfunded Accrued Liability	\$4,745,756,614	\$2,689,440,386
Funded Ratio		
Pension and Post-retirement Death Benefits	68.37%	82.03%
Medicare Part B	31.25%	36.69%
Employer Contribution Rate		
Normal	3.86%	4.08%
Accrued liability	<u>9.68</u>	<u>5.76</u>
Total	13.54%	9.84%
Accrued liability amortization period (years)	30	28



2. The board has set a total contribution rate of 24% of payroll; 14% from employers and 10% from employees. Contributions in excess of those required to support the basic benefits are allocated to retiree health care benefit funding.
3. The valuation balance sheet showing the results of the valuation is given in Schedule A.
4. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains during the valuation year are given in Section V, and the rates of contribution payable by employers are given in Section VI.
5. There were no changes in actuarial assumptions or methods since the last valuation.
6. Schedule B of this report presents the development of the actuarial value of assets. Schedule C details the actuarial assumptions and methods employed. Schedule D gives a summary of the benefit and contribution provisions of the plan.
7. All information in this report for years prior to the year ended June 30, 2008 were provided by the System's previous actuary and the accuracy of that information is the responsibility of that actuary.



SECTION II – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of June 30, 2009 upon which the valuation was based. Detailed tabulations of the data are given in Schedule E.

Active Members

Number	Payroll	Group Averages		
		Salary	Age	Service
125,465	\$2,787,390,954	\$22,216	47.9	9.5

The total number of active members includes 77,215 vested members and 48,250 non-vested members.

The following tables show a six-year history of active member valuation data.

SCHEDULE SERS ACTIVE MEMBER VALUATION DATA

Valuation Date	Number	Annual Payroll	Annual Average Pay	% Increase in Average Pay
6/30/2004	123,139	\$2,394,068,438	\$19,442	3.3%
6/30/2005	122,855	2,452,554,365	19,963	2.7
6/30/2006	123,266	2,553,331,924	20,714	3.8
6/30/2007	123,013	2,603,300,211	21,163	2.2
6/30/2008	124,370	2,651,800,981	21,322	0.8
6/30/2009	125,465	2,787,390,954	22,216	4.2



The following table shows the number and annual retirement allowances payable to retired members and their beneficiaries on the roll of the Retirement System as of the valuation date as well as certain group averages.

Retired Lives

Type of Benefit Payment	Number	Annual Benefits	Group Averages	
			Benefit	Age
Retirees and Beneficiaries	56,160	\$592,967,502	\$10,559	75.0
Disability	5,310	72,251,580	13,607	64.2
Survivors	4,287	28,619,906	6,676	70.8
Total in SERS	65,757	\$693,838,988	\$10,552	73.9

This valuation also includes 87,180 inactive members eligible for a contribution refund only (including 46,168 members not reported in the data files who had completed one or more years of service before terminating). Their contributions totaled \$117,435,716 as of June 30, 2009. There were also 11,911 terminated vested members with annual deferred pension benefits of \$39,186,253. Included in the "Retiree" numbers in the above table are 8,657 re-employed retirees with account balances of \$49,824,019 (including employer contributions and interest), 237 re-retirees receiving only an annuity from their contributions and their employers' matching contributions, and 272 re-retirees receiving such annuities in addition to their regular pension benefits. The sum of the annuity payments attributable to these re-retirees is \$1,570,416.



SECTION III – ASSETS

- As of June 30, 2009 the total market value of assets amounted to \$8,510,566,546. All figures include the combined Pension Trust Fund, Medicare B Fund, Death Benefit Fund and Health Care Fund but exclude the QEBA Fund.

Asset Summary Based on Market Value			
(1)	Assets at June 30, 2008	\$	11,186,151,103
(2)	Contributions and Misc. Revenue		844,329,411
(3)	Investment Gain (Loss)		(2,546,908,294)
(4)	Benefit Payments		(973,005,674)
(5)	Assets at June 30, 2009 (1) + (2) - (3) + (4)	\$	8,510,566,546
(6)	Annualized Rate of Return*		(22.9) %

- The four-year smoothed market related actuarial value of assets used for the current valuation was \$9,836,220,633. Schedule B shows the development of the actuarial value of assets as of June 30, 2009. Again all figures include the combined Pension Trust Fund, Medicare B Fund, Death Benefit Fund and Health Care Fund but exclude the QEBA Fund.

Asset Summary Based on Actuarial Value			
(1)	Assets at June 30, 2008	\$	11,765,134,710
(2)	Contributions and Misc. Revenue		844,329,411
(3)	Investment Gain (Loss)		(4,390,213)
(4)	Benefit Payments		(973,005,674)
(5)	Assets at June 30, 2009 Before Application of Corridor (1) + (2) - (3) + (4)	\$	11,632,068,234
(6)	Annualized Rate of Return*		(0.0) %
(7)	Additional Loss Recognized Due to Corridor		(1,419,388,379)
(8)	Assets at June 30, 2009 After Application of Corridor (5) + (7)	\$	10,212,679,855
(9)	Annualized Rate of Return*		(12.2) %

*Based on the approximation formula: $I/[0.5 \times (A + B - I)]$, where

- I = Investment Gain (Loss)
- A = Beginning of year asset value
- B = End of year asset value



SECTION IV - COMMENTS ON VALUATION

Schedule A of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of June 30, 2009.

1. The total valuation balance sheet on account of retirement benefits shows that the System has total prospective retirement benefit liabilities of \$17,730,435,580, of which \$7,273,340,500 is for the prospective benefits payable on account of present retired members and beneficiaries of deceased members, \$485,669,609 is for the prospective benefits payable on account of present inactive members, and \$9,971,425,471 is for the prospective benefits payable on account of present active members. Against these retirement benefit liabilities the System has a total present actuarial value of assets of \$9,836,220,633 as of June 30, 2009. The difference of \$7,894,214,947 between the total liabilities and the total present actuarial value of assets represents the present value of contributions to be made in the future on account of retirement benefits. Of this amount, \$2,338,415,033 is the present value of future contributions expected to be made by members, and the balance of \$5,555,799,913 represents the present value of future contributions payable by the employers.
2. The employers' contributions to the System on account of retirement benefits consist of normal contributions, accrued liability contributions and contributions for administrative expenses. The valuation indicates that employer normal contributions at the rate of 3.59% of payroll for basic pension benefits, 0.02% of payroll for post-retirement death benefits, and 0.25% of payroll for Medicare Part B benefits are required to provide the benefits of the System for the average member of SERS.
3. Prospective employer normal contributions on account of retirement benefits at the above rates have a present value of \$810,043,300. When this amount is subtracted from \$5,555,799,913, which is the present value of the total future contributions to be made by the employers, there remains \$4,745,756,614 as the amount of future accrued liability contributions.
4. For pension benefits, it is recommended that the accrued liability contribution rate payable by the State on account of retirement benefits be set at 9.15% of payroll. For post-retirement death benefits, it is recommended that the accrued liability contribution rate payable by the employers on account of retirement benefits be set at 0.02% of payroll. Finally for Medicare Part B benefits, it is recommended that the accrued liability contribution rate payable by the employers on account of retirement benefits be set at 0.51% of payroll. These rates are sufficient to amortize the unfunded accrued liability of \$4,745,756,614 over 30 years based on the assumption that the aggregate payroll for SERS members will increase by 4.00% each year.



SECTION V – DERIVATION OF EXPERIENCE GAINS AND LOSSES

Actual experience will never (except by coincidence) match exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2009 is shown below (\$ millions).

Experience Gain/(Loss)

(1)	UAAL* as of 6/30/08	\$	2,689.4
(2)	Normal cost from last valuation		373.4
(3)	Contributions		586.9
(4)	Interest accrual: [(1) + (2) - (3)*.5] x .08		221.5
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	\$	2,697.4
(6)	Change due to plan amendments		0.0
(7)	Change due to new actuarial assumption or methods		0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	\$	2,697.4
(9)	Actual UAAL as of 6/30/09	\$	4,745.8
(10)	Gain/(loss): (8) - (9)	\$	(2,048.4)
(11)	Accrued liabilities as of 6/30/08	\$	14,061.9
(12)	Gain/(loss) as percent of actuarial accrued liabilities at start of year		(14.6%)



ANALYSIS OF FINANCIAL EXPERIENCE

Gains & Losses in Accrued Liabilities Resulting from Difference Between Assumed Experience & Actual Experience (\$ Millions)

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/09
Age & Service Retirements. If members retire at older ages, there is a gain. If younger ages, a loss.	\$ (50.8)
Disability Retirements. If disability claims are less than assumed, there is a gain. If more claims, a loss.	(28.7)
Death-in Service Benefits. If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	(0.6)
Withdrawal From Employment. If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(11.9)
Pay Increases. If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	107.5
New Members. Additional accrued liability will be reflected as a loss.	(50.4)
Investment Income. If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(2,265.2)
Death After Retirement. If retired members live longer than assumed, there is a loss. If not as long, a gain.	51.8
Other. Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>200.1</u>
Gain (or Loss) During Year From Financial Experience	\$ (2,048.4)
Non-Recurring Items. Adjustments for plan amendments, assumption changes and method changes	<u>0.0</u>
Composite Gain (or Loss) During Year	\$ (2,048.4)



SECTION VI – REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following tables show the rates of contribution payable by employers as determined from the present valuation for the 2008/2009 fiscal year.

Required Contribution Rates

Contribution for	Benefits	Retirement Death Benefits	Medicare Part B	Total
A. Normal Cost:				
(1) Service retirement benefits	8.12%			
(2) Disability benefits	1.34			
(3) Survivor benefits	0.24			
(4) Refunds	3.89			
(4) Total	13.59%	0.02%	0.25%	13.86%
B. Member Contributions	10.00%	0.00%	0.00%	10.00%
C. Employer Normal Cost: [A(4) - B]	3.59%	0.02%	0.25%	3.86%
D. Unfunded Actuarial Accrued Liability Contributions	9.15%	0.02%	0.51%	9.68%
E. Total Recommended Employer Contribution Rate:[C+D]	12.74%	0.04%	0.76%	13.54%



SECTION VII - ACCOUNTING INFORMATION

Governmental Accounting Standards Board Statements 25 and 27 set forth certain items of required supplementary information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

**NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF JUNE 30, 2009**

GROUP	Total
Retirees and beneficiaries currently receiving benefits	65,757
Terminated employees entitled to benefits but not yet receiving benefits	11,911
Active Members	<u>125,465</u>
Total	203,133

Another such item is the Schedule of Funding Progress for pension, post-retirement death and Medicare Part B benefits separately as shown in the following table.



SCHEDULE OF FUNDING PROGRESS
(In Millions)

Actuarial Valuation Date	Value of Plan Assets (a)	Actuarial Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll (b - a) / (c)
Pension and Post-retirement Death Benefits						
6/30/2004	\$ 8,550	\$ 10,953	\$ 2,403	78.1%	\$ 2,394	100.4%
6/30/2005	8,780	11,659	2,948 [^]	75.3	2,453	120.2
6/30/2006	9,423	12,327	2,974 [^]	76.4	2,553	116.5
6/30/2007	10,513	13,004	2,562 [^]	80.8	2,603	98.4
6/30/2008	11,241	13,704	2,463	82.0	2,873	85.7
6/30/2009	9,723	14,221	4,498	68.4	2,787	161.4
Medicare Part B						
6/30/2004	\$ 117	\$ 298	\$ 181	39.3%	\$ 2,394	7.6%
6/30/2005	113	302	189	37.4	2,453	7.7
6/30/2006	119	300	181 [^]	39.7	2,553	7.1
6/30/2007	127	299	172 [^]	42.5	2,603	6.6
6/30/2008	131	358	227	36.7	2,873	7.9
6/30/2009	113	361	248	31.3	2,787	8.9

[^] After change in calculation methods of health care assets, resulting in a \$70 million future liability due to Pension plans by the Health Care Fund



The information presented in the required supplementary schedules was determined as part of the actuarial valuation at June 30, 2009. Additional information as of the latest actuarial valuation follows.

Valuation date	6/30/2009
Actuarial cost method	Entry Age
Amortization	Level Percent Closed
Remaining amortization period	30 years
Asset valuation method	4 Year Smoothed Market
Actuarial assumptions	
Investment rate of return*	8.00%
* Includes price inflation at	3.50%
Projected salary increases^	4.50% - 24.75%
^ Includes wage inflation at	4.00%
Cost-of-living adjustment	3.00%



Schedule of Employer Contributions

Year Ended	Annual Required Contribution	Percentage Contributed
Pension and Post-retirement Death Benefits		
June 30, 2004	\$ 195,852,937	100.0%
June 30, 2005	239,089,392	100.0
June 30, 2006	272,358,393	87.0
June 30, 2007	260,779,627	90.0
June 30, 2008	243,150,199	100.0
June 30, 2009	269,380,809	100.0
Medicare Part B		
June 30, 2004	\$ 16,340,531	100.0%
June 30, 2005	16,956,695	100.0
June 30, 2006	21,677,505	95.0
June 30, 2007	17,729,746	104.0
June 30, 2008	17,519,556	100.0
June 30, 2009	21,688,294	100.0



SCHEDULE A

Valuation Balance Sheet and Solvency Test

The following valuation balance sheet shows the assets and liabilities of the retirement system as of the current valuation date of June 30, 2009 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2008. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date.

VALUATION BALANCE SHEETS SHOWING THE ASSETS AND LIABILITIES OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

	June 30, 2009	June 30, 2008
ASSETS		
Current actuarial value of assets	\$ 9,836,220,633	\$ 11,372,453,979
Prospective contributions		
Member contributions	\$ 2,338,415,033	\$ 2,444,355,484
Employer normal contributions	810,043,300	677,333,616
Unfunded accrued liability contributions	<u>4,745,756,614</u>	<u>2,689,440,386</u>
Total prospective contributions	<u>\$ 7,894,214,947</u>	<u>\$ 5,811,129,486</u>
Total assets	<u>\$ 17,730,435,580</u>	<u>\$ 17,183,583,465</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 7,273,340,500	\$ 6,872,966,716
Present value of benefits payable on account of active members	9,971,425,471	9,863,419,679
Present value of benefits payable on account of inactive and deferred vested members	<u>485,669,609</u>	<u>447,197,070</u>
Total liabilities	<u>\$ 17,730,435,580</u>	<u>\$ 17,183,583,465</u>

Included in the retiree liability shown above is the liability attributable to re-retiree annual annuity payments. Such liability amounts to \$11,465,828 for 2009 and \$10,683,429 for 2008.



The following tables provide the solvency test for SERS members.

Solvency Test

Valuation Date	Aggregate Accrued Liabilities For				Portion of Accrued Liabilities Covered by Reported Asset		
	(1) Active Member Contributions	(2) Retired Members & Beneficiaries	(3) Active Members (Employer Financed Portion)	Actuarial Value of Assets	(1)	(2)	(3)
6/30/2004*	\$ 1,785	\$ 5,173	\$ 4,293	\$ 8,667	100.0%	100.0%	39.8%
6/30/2005*	1,943	5,551	4,467	8,893	100.0	100.0	31.3
6/30/2006*	2,064	6,006	4,557	9,542	100.0	100.0	32.3
6/30/2007*	2,180	6,413	4,710	10,640	100.0	100.0	43.5
6/30/2008	2,291	6,873	4,898	11,372	100.0	100.0	45.1
6/30/2009	2,470	7,273	4,838	9,836	100.0	100.0	1.9

*Reported by prior actuarial firm.

SCHEDULE B

Development of Actuarial Value of Assets



Valuation date June 30:	2008	2009	2010	2011	2012
A. Actuarial Value Beginning of Year	\$ 11,026,781,833	\$ 11,765,134,710			
B. Market Value End of Year	11,186,151,103	8,510,566,546			
C. Market Value Beginning of Year	12,097,590,658	11,186,151,103			
D. Cash Flow					
D1. Contributions	721,911,623	750,269,158			
D2. Other Revenue	94,660,706	97,284,347			
D3. Benefit Payments	(943,780,145)	(973,005,674)			
D4. Net Transfers	<u>(4,723,303)</u>	<u>(3,224,094)</u>			
D5. Net	(131,931,119)	(128,676,263)			
E. Investment Income					
E1. Market Total: B.-C.-D5.	(779,508,436)	(2,546,908,294)			
E2. Assumed Rate (Net of Expenses)	8.00%	8.00%			
E3. Amount for Immediate Recognition	876,865,302	889,745,038			
E4. Amount for Phased-In Recognition	(1,656,373,738)	(3,436,653,332)			
F. Phased-In Recognition of Investment Income					
F1. Current Year: 0.25 * E4.	(414,093,435)	(859,163,333)	0	0	0
F2. First Prior Year	284,175,183	(414,093,435)	(859,163,333)	0	0
F3. Second Prior Year	94,946,334	284,175,183	(414,093,435)	(859,163,333)	0
F4. Third Prior Year	28,390,611	94,946,334	284,175,183	(414,093,435)	(859,163,333)
F5. Total Recognized Investment Gain	<u>(6,581,307)</u>	<u>(894,135,251)</u>	<u>(989,081,585)</u>	<u>(1,273,256,768)</u>	<u>(859,163,333)</u>
G. Preliminary Actuarial Value End of Year:					
A.+D5.+E3.+F5.	\$ 11,765,134,710	\$ 11,632,068,234			
H. Corridor					
H1. 80% of Market Value	\$ 8,948,920,882	\$ 6,808,453,237			
H2. 120% of Market Value	\$ 13,423,381,324	\$ 10,212,679,855			
I. Actuarial Value End of Year:					
G. Not Less than H1. or Not Greater than H2	\$ 11,765,134,710	\$ 10,212,679,855			
J. Difference Between Market & Actuarial Values	\$ (578,983,607)	\$ (3,121,501,688)	\$ (2,132,420,101)	\$ (859,163,333)	\$ -
K. Health Care Valuation Assets	392,680,731	376,459,222			
L. Basic Benefits Valuation Assets	\$ 11,372,453,979	\$ 9,836,220,633			

The Actuarial Valuation of Assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment income (line E4) are phased in over a closed 4 year period. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Actuarial Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, actuarial value will become equal to market value.



SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: 8.00% per annum, compounded annually (net after all System expenses).

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

Service	Annual Rates of Withdrawal
0	55.00%
1	20.00
2	15.00
3	10.00
4	7.50
5	6.50
10	5.00
15	3.75
20	3.50
25	3.00

Age	Annual Rates of			
	Death		Disability	
	Male	Female	Male	Female
20	.026%	.014%	.015%	.023%
25	.033	.015	.015	.023
30	.044	.017	.112	.075
35	.050	.022	.371	.075
40	.053	.033	.405	.157
45	.075	.046	.506	.187
50	.114	.065	.825	.394
55	.193	.104	.825	.608
60	.335	.193	.825	.608
65	.609	.381	.825	.608
70	1.082	.635	.825	.608
74	1.557	.917	.825	.608



Annual Rates of Service Retirements		
Age	Male	Female
50	40.0%	33.0%
55	25.0	25.0
60	10.0	20.0
62	15.0	15.0
65	25.0	25.0
70	20.0	20.0
75	100.0	100.0

SALARY INCREASES: Representative values of the assumed annual rates of salary increases are as follows:

Service	Annual Rates of		
	Merit & Seniority	Base (Economy)	Increase Next Year
0	20.75%	4.00%	24.75%
1	13.25	4.00	17.25
2	10.75	4.00	14.75
3	8.75	4.00	12.75
4	7.75	4.00	11.75
5	5.75	4.00	9.75
6	4.75	4.00	8.75
7	3.75	4.00	7.75
8	2.75	4.00	6.75
9	1.75	4.00	5.75
10-14	0.75	4.00	4.75
15 & over	0.50	4.00	4.50

PAYROLL GROWTH: 4.00% per annum, compounded annually.

PRICE INFLATION: 3.50% per annum, compounded annually.

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid is the 1994 Group Annuity Mortality Table, set back one year for both men and women. Special tables are used for the period after disability retirement. This assumption is used to measure the probabilities of each benefit payment being made after retirement.

MARRIAGE ASSUMPTION: 80% married with the husband three years older than his wife.



VALUATION METHOD: Entry age normal cost method. Entry age is established on an individual basis.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule A. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 25% of the difference between market value and expected market value. The actuarial value of assets cannot be less than 80% or more than 120% of market value.



SCHEDULE D

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Benefit and Contribution Provisions as of June 30, 2008

Contributions for Basic Benefits	Members contribute 10% of pay and employers contribute 14% of pay. Employer contributions not required to finance basic benefits are allocated to the health care program.
Final Average Salary	Average annual salary over the member's three highest years of service.
Normal Retirement	
Condition for Retirement	
<i>Members prior to May 14, 2008</i>	Attainment of age 65 with at least five years of creditable service, or completion of 30 years of creditable service, regardless of age.
<i>Members after May 13, 2008</i>	Attainment of age 65 with at least ten years of creditable service, or attainment of age 55 with at least 30 years of creditable service.
Amount of Allowance	The annual retirement allowance payable shall not be greater than 100% of final average salary, and is the greater of: 1. Money Purchase - the greater of: The sum of: a. An annuity based on the value of the member's accumulated contributions at retirement b. A pension equal to the annuity c. for members prior to May 14, 2008, \$40 multiplied by the member's years of service prior to 9/1/1937. or: d. For members who have 10 or more years of service credit prior to 10/1/1956, an annual benefit of \$180. 2. Defined Benefit - the greater of: The sum of: a. 2.2% of final average salary multiplied by the member's years of service up to 30, b. 2.5% of final average salary multiplied by the member's years of service in excess of 30, or: c. \$86 multiplied by the years of service.



Early Retirement

Condition for Retirement

Members prior to May 14, 2008

Not eligible for unreduced service retirement but has attained age 55 with at least 25 years of service, or age 60 with five years of service.

Members after May 13, 2008

Attainment of age 62 with at least ten years of creditable service, or attainment of age 60 with at least 25 years of creditable service.

Amount of Allowance

Members prior to May 14, 2008

Normal retirement allowance accrued to the date of early retirement. The Defined Benefit amount determined above is adjusted by the following percentages based on attained age or years of service:

<u>Attained Age</u>	<u>Years of Ohio Service Credit</u>	<u>Percentage</u>
58	25	75%
59	26	80
60	27	85
61		88
	28	90
62		91
63		94
	29	95
64		97

Members after May 13, 2008

Actuarial equivalent of the normal retirement allowance accrued to the date of early retirement. The Defined Benefit amount determined above is actuarially adjusted for the years before age 65 or 30 years of service, whichever is shorter, but in no event is the adjusted benefit less than the following percentages of the Defined Benefit amount based on years of service:

<u>Years of Ohio Service Credit</u>	<u>Percentage</u>
25	75%
26	80
27	85
28	90
29	95

Disability Retirement

Condition for Retirement

An allowance is paid upon becoming permanently disabled after completion of at least 5 years of total service credit.

Amount of Allowance

1. For those who were active members prior to July 29, 1992 and did not elect the benefit structure outlined below, an allowance based on service to date of disablement, plus, if the age at disablement is less than 60, continuous service to age 60. The allowance is computed in the same manner as the defined benefit



service retirement allowance, subject to a minimum of 30% of FAS and a maximum of 75% of FAS. It is payable for life, unless terminated.

2. For those who became active members after July 28, 1992, and for those who were active members prior to July 29, 1992 who so elected, an allowance equal to the greater of (i) 45% of FAS, or (ii) the lesser of 60% of FAS, or the allowance computed in the same manner as the defined benefit service retirement allowance. The allowance will continue until:
 - a. The date the member is granted a service retirement benefit, or
 - b. The date the allowance is terminated, or
 - c. The later of the date the member attains age 65 or the date the disability allowance has been paid for the minimum duration in accordance with the following schedule:

<u>Age at Disability</u>	<u>Minimum Duration In Months</u>
60 and earlier	60
61	60
62	48
63	48
64	36
65	36
66	24
67	24
68	24
69 and older	12

Death Benefits Prior to Retirement

Death While Eligible to Retire

If a member dies in service after becoming eligible to retire with a service allowance and leaves a surviving spouse or other sole dependent beneficiary, the survivor may elect to receive the same amount that would have been paid had the member retired the last day of the month of death and elected the 100% joint and survivor form of payment.

Survivor (Death-in-Service) Allowances

Condition for Benefit

Upon the death of a member with at least 1½ years of Ohio service credit and with at least ¼ year of Ohio contributing service credit within 2½ years prior to the date of death, the survivor allowances are payable as follows:

1. **Qualified Spouse:** A monthly allowance commencing at age 62, except that the benefit is payable immediately if: (1) the qualified deceased member had 10 or more years of Ohio service credit; or (2) is caring for a surviving child, or (3) is incompetent.
2. **Qualified Child:** An allowance is payable to the qualified child of a deceased member who is under age 18, under age 22 and in school, or incompetent.
3. **Qualified Parent's Allowance:** A monthly allowance is payable to a dependent parent age 65 or more.



Amount of Allowances

Except when survived by a qualified child(ren), upon the death of a member prior to retirement, the accumulated contributions of the member without interest is payable. Alternatively, the beneficiary may elect the following amounts, payable monthly while eligible:

Number of Qualified Survivors	Annual Benefit as Percent of Member's FAS	Minimum Monthly Allowance
1	25%	\$96
2	40	186
3	50	236
4	55	236
5 or more	60	236

If the deceased member had attained at least 20 years of service, the total benefits payable to all qualified survivors are not less than:

Years of Service	Annual Benefit as Percent of Member's FAS
20	29%
21	33
22	37
23	41
24	45
25	48
26	51
27	54
28	57
29 or more	60

Termination Benefits

Refund of Members' Accumulated Contributions

In the event a member leaves service before any monthly benefits are payable on his behalf, his accumulated contributions, without interest, may be refunded.

Deferred Benefits
Members prior to May 14, 2008

If a member with at least 5 years of contributing service credit leaves service before being eligible for an immediate monthly allowance and does not withdraw any part of his accumulated contributions, he will be entitled to a deferred allowance at age 60. The amount of the allowance is based on his credited service and final average salary at termination of employment.

Members after May 14, 2008

If a member with at least 10 years of contributing service credit leaves service before being eligible for an immediate monthly allowance and does not withdraw any part of his accumulated contributions, he will be entitled to a deferred allowance at age 62. The amount of the allowance is based on his credited service and final average salary at termination of employment.

Normal Form of Benefit

Single Life Annuity



Optional Forms of Benefit

A member upon retirement may elect to receive his allowance in one of the following forms that are computed to be actuarially equivalent to the applicable retirement allowance:

Upon the death of a retiree, 50%, 100%, or some other percentage of his reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner, his beneficiary or his estate for a specified number of years certain.

A member can select a partial lump-sum option at retirement. Under this option, the partial lump-sum shall not be less than 6 times and not more than 36 times the unreduced monthly benefit, and the monthly benefit will be actuarially reduced. In addition, the monthly benefit payable cannot be less than 50% of the unreduced amount.

Post-Retirement Death Benefit

Regardless of the form of benefit selected, a lump sum benefit of \$1,000 is paid at the death of the retiree.

Post-Retirement Increases

On each anniversary of the initial date of retirement, the allowances of all retirees and survivors are increased by 3% of the base benefit.

Medicare Part B

Each recipient of a service retirement benefit, a disability benefit or a survivor benefit who was credited with at least 10 years of service and is covered under Medicare Part B is reimbursed \$45.50 per month for premiums for that coverage.

Re-Employed Retirants

Eligibility Effective

July 1, 1991, service retirees of SERS, or service or disability retirees of one of the other four Ohio retirement systems who are employed in a SERS covered position are required to contribute to a money purchase annuity, a type of defined contribution plan.

Amount of Allowance

Upon termination of employment, a re-employed retirant who has attained age 65 is eligible to receive an annuity based on the amount of his/her accumulated contributions, and an equal amount of employer contributions, plus interest to the effective date of retirement. Effective July 1, 2006 the amount of employer contributions will be determined by the Board. Interest is granted on the reemployed retirant's prior fiscal year account balance, calculated using a rate determined by the SERS Board, compounded annually. The benefit is payable as a lump sum or as an annuity if the amount of such annuity is at least \$25. Upon termination of employment, a re-employed retirant who has not attained age 65 may request a lump sum refund of his/her own contributions; there is no payment of employer contributions or interest.

Benefits Payable Upon Death

If a re-employed retirant dies while employed, a lump sum payment of the monthly annuity, discounted to the present



value using the current actuarial assumption rate of interest, will be paid to his beneficiary.

If a re-employed retirant dies while receiving a monthly annuity, a lump sum payment will be made to a beneficiary in an amount equal to the excess, if any, of the lump sum payment the re-employed retirant would have received at the effective date of retirement over the sum of the annuity payments received by the re-employed retirant to the date of death.

Member Contributions

Each re-employed retirant is required to contribute 10% of his pay by payroll deductions.

Employer Contributions

Employer contributions are expressed as percents of member covered payroll. Employers are required to contribute 14% of payroll.

Other Benefits

Re-employed retirants of SERS are not eligible to receive any of the other benefits provided to SERS members.

Member Contributions

10% of salary.



SCHEDULE E

DETAILED TABULATIONS OF THE DATA

**Schedule of Retired Members Added to and Removed From Rolls
Last Six Fiscal Years**

Year Ending June 30	2004*	2005*	2006*	2007*	2008	2009
	<u>Number</u>					
Beginning of Year	59,999	60,569	61,433	62,521	63,529	64,818
Added	3,013	3,683	3,750	3,596	3,448	3,103
Removed	2,443	2,819	2,662	2,588	2,159	2,164
End of Year	60,569	61,433	62,521	63,529	64,818	65,757
	<u>Annual Retirement Allowances</u>					
Beginning of Year	\$ 461,212,013	\$ 491,618,849	\$ 527,931,968	\$ 566,770,892	\$ 607,386,140	\$ 652,373,571
Added	32,500,992	38,670,969	40,115,408	44,864,781	46,243,749	41,970,065
Removed	2,094,156	2,357,850	1,276,484	4,249,533	1,256,318	504,642
End of Year	\$ 491,618,849	\$ 527,931,968	\$ 566,770,892	\$ 607,386,140	\$ 652,373,571	\$ 693,838,994
% Increase in Allowances	6.59%	7.39%	7.36%	7.17%	7.41%	6.36%
Average Annual Allowance	\$ 8,117	\$ 8,594	\$ 9,065	\$ 9,561	\$ 10,065	\$ 10,552

*Reported by prior actuarial firm.



**Annuity and Pension Reserve Fund
Retired Information June 30, 2009
Retired Members By Type of Benefit**

Amount of Monthly Benefit	Total	Service	Disability	Survivor
\$ 1 - \$ 250	19,630	17,103	714	1,813
251 - 500	14,197	11,972	992	1,233
501 - 750	9,960	8,360	976	624
751 - 1,000	6,700	5,622	808	270
1,001 - 1,500	7,748	6,545	1,000	203
1,501 - 2,000	3,633	3,098	455	80
Over 2,000	<u>3,650</u>	<u>3,221</u>	<u>365</u>	<u>64</u>
	65,518	55,921	5,310	4,287

Average Monthly Benefit
Average Age

\$ 881 \$ 1,134 \$ 556
74.6 64.2 70.8



**Annuity and Pension Reserve Fund
Retired Information June 30, 2009
Tabulated by Attained Ages**

Attained Age	Retirement		Disability Retirement		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	0	\$ -	104	\$ 1,591,992	104	\$ 1,591,992
45-49	51	\$ 1,471,571	288	\$ 5,436,093	339	\$ 6,907,665
50-54	511	\$ 15,957,564	593	\$ 10,888,631	1,104	\$ 26,846,195
55-59	1,415	\$ 37,173,607	967	\$ 16,446,939	2,382	\$ 53,620,546
60-64	5,636	\$ 80,783,646	1104	\$ 15,804,088	6,740	\$ 96,587,734
65-69	9,494	\$ 116,902,823	773	\$ 9,901,558	10,267	\$ 126,804,381
70-74	10,271	\$ 116,045,660	588	\$ 5,935,288	10,859	\$ 121,980,948
75-79	8,841	\$ 86,065,140	433	\$ 3,517,383	9,274	\$ 89,582,523
80-84	7,369	\$ 59,117,076	271	\$ 1,785,471	7,640	\$ 60,902,547
85-89	5,030	\$ 33,717,167	149	\$ 802,131	5,179	\$ 34,519,298
90 & Over	2,471	\$ 12,011,826	40	\$ 142,005	2,511	\$ 12,153,832
Totals	51,089	\$ 559,246,081	5,310	\$ 72,251,580	56,399	\$ 631,497,660



**Annuity and Pension Reserve Fund
Survivor Information June 30, 2009
Tabulated by Attained Ages**

Attained Age	Life Annuities		Periods Certain		Total	
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits
Under 45	36	\$ 178,812	4	\$ 28,482	40	\$ 207,293
45-49	29	\$ 152,547	3	\$ 44,136	32	\$ 196,683
50-54	51	\$ 380,581	5	\$ 42,723	56	\$ 423,304
55-59	89	\$ 676,542	2	\$ 13,838	91	\$ 690,380
60-64	155	\$ 1,446,444	6	\$ 24,459	161	\$ 1,470,903
65-69	330	\$ 2,844,500	11	\$ 72,586	341	\$ 2,917,085
70-74	597	\$ 4,576,019	9	\$ 65,405	606	\$ 4,641,424
75-79	938	\$ 6,898,866	6	\$ 16,667	944	\$ 6,915,533
80-84	1,146	\$ 7,845,887	3	\$ 34,870	1,149	\$ 7,880,758
85-89	1,058	\$ 5,682,649	1	\$ 3,504	1,059	\$ 5,686,153
90 & Over	592	\$ 2,691,903	0	\$ -	592	\$ 2,691,903
Totals	5,021	\$ 33,374,750	50	\$ 346,671	5,071	\$ 33,721,421



**All Benefit Recipients
Male and Female Demographic Breakdown
June 30, 2009**

Attained Age	Number of		Total Number
	Males	Females	
Under 20	31	31	62
20-24	10	11	21
25-29	2	8	10
30-34	2	5	7
35-39	18	30	48
40-44	65	82	147
45-49	207	274	481
50-54	639	717	1,356
55-59	1,073	1,652	2,725
60-64	1,851	5,508	7,359
65-69	2,773	8,481	11,254
70-74	3,103	9,085	12,188
75-79	2,776	8,098	10,874
80-84	2,223	7,136	9,359
85-89	1,397	5,194	6,591
90-94	493	2,113	2,606
95-99	82	528	610
100	3	23	26
101	2	22	24
102	1	5	6
103	0	2	2
104	0	1	1
105 & Over		0	0
Total	16,751	49,006	65,757



Survivor Benefit Fund
Survivors of Deceased Active Member Information June 30, 2009
Tabulated by Attained Ages

Attained Age	No.	Annual Benefits
Under 45	151	\$ 1,449,698
45-49	110	\$ 1,050,608
50-54	196	\$ 1,971,407
55-59	252	\$ 2,535,592
60-64	458	\$ 3,816,700
65-69	646	\$ 4,206,500
70-74	723	\$ 4,779,797
75-79	656	\$ 3,844,642
80-84	570	\$ 2,789,052
85-89	353	\$ 1,484,211
90 & Over	172	\$ 691,700
Totals	4,287	\$ 28,619,906



**Total Active Members as of June 30, 2009
Tabulated by Attained Ages 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+	
Under 20	784	1						
Avg Pay	\$5,565	\$28,799						\$4,392,067
20-24	4,927	95						
Avg Pay	\$8,761	\$22,760						\$45,328,152
25-29	4,948	828	83					
Avg Pay	\$13,752	\$27,712	\$32,348					\$93,676,669
30-34	4,639	1,577	505	35				
Avg Pay	\$14,287	\$27,932	\$33,858	\$39,535				\$128,808,431
35-39	6,335	2,902	1,275	315	48			
Avg Pay	\$13,368	\$25,243	\$33,777	\$39,697	\$36,832			\$215,279,927
40-44	7,489	4,580	2,604	829	451	83	1	
Avg Pay	\$12,861	\$22,296	\$28,886	\$38,934	\$40,947	\$42,991	\$43,020	\$328,005,553
44-49	7,064	6,076	4,940	1,984	1,212	740	138	
Avg Pay	\$13,478	\$22,172	\$26,019	\$31,701	\$40,147	\$46,117	\$46,291	\$510,524,954
50-54	5,126	5,012	5,376	3,476	2,199	1,151	565	
Avg Pay	\$14,290	\$23,200	\$25,779	\$29,237	\$34,254	\$42,461	\$45,310	\$579,536,602
55-59	3,383	3,085	3,255	2,967	3,087	1,356	635	
Avg Pay	\$14,627	\$23,841	\$26,705	\$28,305	\$31,503	\$36,518	\$42,352	\$467,601,104
60-64	2,045	1,853	1,450	1,499	1,902	1,307	719	
Avg Pay	\$13,534	\$22,541	\$27,212	\$29,175	\$30,863	\$32,699	\$34,427	\$278,825,699
65-69	971	788	558	434	510	458	571	
Avg Pay	\$9,498	\$19,630	\$23,813	\$27,353	\$29,173	\$29,304	\$29,459	\$94,970,108
70 & over	539	437	289	171	211	179	413	
Avg Pay	\$7,956	\$13,475	\$19,010	\$23,477	\$21,821	\$27,040	\$27,389	\$40,441,688
Totals	48,250	27,234	20,335	11,710	9,620	5,274	3,042	125,465
Avg Pay	\$12,891	\$23,214	\$27,064	\$30,255	\$33,228	\$37,369	\$36,755	\$22,216

Averages:
Age: 47.9
Service: 9.5
Annual Pay: \$22,216



**Male Active Members as of June 30, 2009
Tabulated by Attained Ages 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+	
Under 20	419	1						
Avg Pay	\$6,054	\$28,799						\$2,565,556
20-24	2,424	62						
Avg Pay	\$9,001	\$25,628						\$23,406,555
25-29	2,260	407	40					
Avg Pay	\$13,850	\$31,967	\$40,185					\$45,919,503
30-34	1,706	539	228	22				
Avg Pay	\$14,922	\$34,702	\$40,933	\$40,898				\$54,393,937
35-39	1,841	676	420	136	19			
Avg Pay	\$15,245	\$35,620	\$43,028	\$45,254	\$40,068			\$77,132,897
40-44	2,046	822	558	329	217	40	1	
Avg Pay	\$14,442	\$32,624	\$42,401	\$49,369	\$44,800	\$48,347	\$43,020	\$107,965,660
44-49	2,103	1,000	707	382	480	429	74	
Avg Pay	\$14,535	\$32,195	\$40,239	\$44,729	\$48,917	\$49,592	\$48,755	\$156,660,338
50-54	1,889	1,152	767	498	508	523	306	
Avg Pay	\$15,473	\$32,126	\$38,489	\$42,416	\$46,585	\$49,646	\$48,816	\$181,448,716
55-59	1,473	968	638	498	500	363	247	
Avg Pay	\$16,348	\$29,802	\$37,793	\$41,424	\$44,609	\$47,380	\$50,609	\$149,674,715
60-64	1,079	786	428	310	318	242	127	
Avg Pay	\$15,515	\$26,941	\$35,861	\$40,544	\$42,841	\$45,704	\$45,385	\$96,281,960
65-69	522	463	241	136	120	67	58	
Avg Pay	\$10,860	\$22,198	\$28,535	\$36,141	\$40,774	\$40,700	\$43,441	\$37,878,002
70 & over	272	220	159	66	52	40	32	
Avg Pay	\$9,479	\$16,961	\$22,706	\$29,705	\$29,391	\$38,553	\$38,686	\$16,188,943
Totals	18,034	7,096	4,186	2,377	2,214	1,704	845	36,456
Avg Pay	\$13,729	\$30,646	\$38,363	\$42,734	\$45,157	\$47,947	\$48,060	\$26,046

Averages:
 Age: 46.5
 Service: 8.2
 Annual Pay: \$26,046

**Female Active Members as of June 30, 2009
Tabulated by Attained Ages 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+	
Under 20 Avg Pay	365 \$5,004							\$1,826,511
20-24 Avg Pay	2,503 \$8,529	33 \$17,372						\$21,921,596
25-29 Avg Pay	2,688 \$13,670	421 \$23,599	43 \$25,059					\$47,757,166
30-34 Avg Pay	2,933 \$13,918	1,038 \$24,416	277 \$28,034	13 \$37,228				\$74,414,494
35-39 Avg Pay	4,494 \$12,599	2,226 \$22,092	855 \$29,233	179 \$35,475	29 \$34,712			\$138,147,029
40-44 Avg Pay	5,443 \$12,267	3,758 \$20,036	2,046 \$25,200	500 \$32,068	234 \$37,374	43 \$38,009		\$220,039,892
44-49 Avg Pay	4,961 \$13,029	5,076 \$20,197	4,233 \$23,645	1,602 \$28,594	732 \$34,396	311 \$41,325	64 \$43,443	\$353,864,616
50-54 Avg Pay	3,237 \$13,599	3,860 \$20,536	4,609 \$23,663	2,978 \$27,033	1,691 \$30,550	628 \$36,478	259 \$41,168	\$398,087,887
55-59 Avg Pay	1,910 \$13,299	2,117 \$21,116	2,617 \$24,002	2,469 \$25,659	2,587 \$28,970	993 \$32,547	388 \$37,095	\$317,926,389
60-64 Avg Pay	966 \$11,321	1,067 \$19,299	1,022 \$23,589	1,189 \$26,211	1,584 \$28,458	1,065 \$29,744	592 \$32,076	\$182,543,739
65-69 Avg Pay	449 \$7,915	325 \$15,973	317 \$20,222	298 \$23,342	390 \$25,603	391 \$27,351	513 \$27,878	\$57,092,106
70 & over Avg Pay	267 \$6,405	217 \$9,940	130 \$14,490	105 \$19,562	159 \$19,346	139 \$23,727	381 \$26,441	\$24,252,745
Totals Avg Pay	30,216 \$12,390	20,138 \$20,596	16,149 \$24,135	9,333 \$27,077	7,406 \$29,662	3,570 \$32,320	2,197 \$32,408	89,009 \$20,648

Averages:
Age: 48.5
Service: 10.1
Annual Pay: \$20,648

Active Members as of June 30, 2009



By Annual Pay

Annual Pay	Number of Active Members			Portion of Total Number	
	Men	Women	Totals	Group	Cumulative
Less than \$1,000	191	281	472	0.4%	0.4%
\$1,000 - 1,999	1,140	1,324	2,464	2.0%	2.3%
2,000 - 2,999	2,144	2,143	4,287	3.4%	5.8%
3,000 - 3,999	2,152	2,239	4,391	3.5%	9.3%
4,000 - 4,999	1,515	2,431	3,946	3.1%	12.4%
5,000 - 5,999	1,209	2,356	3,565	2.8%	15.2%
6,000 - 6,999	902	2,247	3,149	2.5%	17.8%
7,000 - 7,999	739	2,279	3,018	2.4%	20.2%
8,000 - 8,999	655	2,268	2,923	2.3%	22.5%
9,000 - 9,999	621	2,468	3,089	2.5%	25.0%
10,000 - 11,999	1,280	4,878	6,158	4.9%	29.9%
12,000 - 13,999	1,256	5,197	6,453	5.1%	35.0%
14,000 - 15,999	1,182	6,377	7,559	6.0%	41.0%
16,000 - 17,999	1,139	7,249	8,388	6.7%	47.7%
18,000 - 19,999	1,054	6,430	7,484	6.0%	53.7%
20,000 - 24,999	2,219	12,520	14,739	11.7%	65.4%
25,000 - 29,999	2,290	8,113	10,403	8.3%	73.7%
30,000 - 35,999	3,674	7,304	10,978	8.7%	82.5%
36,000 and over	11,094	10,905	21,999	17.5%	100.0%
Totals	36,456	89,009	125,465		



SCHEDULE F

GAIN/LOSS ANALYSIS DETAILS

COMMENTS

Regular actuarial valuations measure the Retirement System's present financial position and contributions adequacy by calculating and financing the liabilities created by the present benefit program. This process involves discounting to present values the future benefit payments on behalf of present active and retired members and their survivors. However, valuations do not produce information regarding the amount of increases or decreases in unfunded actuarial accrued liabilities (UAAL) -- gain/loss analyses do.

The overall gain/loss to the Retirement System is the difference between the actual UAAL and the expected UAAL. A gain/loss analysis shows the breakdown of the overall system gain/loss by economic and non-economic risk areas. The economic risk areas are investment return and pay increases. The non-economic risk areas are service retirement, disability retirement, death in active service, termination (vested and non-vested), retiree mortality, and new members. Gains and losses resulting from data adjustments, timing of financial transactions, etc. are included separately as a miscellaneous item.

It is expected that actual experience will not coincide with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common. Changes in actuarial assumptions should be made for risk areas when the differences between actual and expected experience are consistently sizable over a period of years. Differences over a relatively short period of time may or may not be indicative of long-term trends, which are the basis of actuarial assumptions.

The actuarial assumptions used in this analysis were adopted by the Board in May 2006.

Any historical information and data shown in the report with a valuation date prior to June 30, 2008 were obtained from the previous actuary's report.



School Employees Retirement System of Ohio
Experience Gains & Losses By Risk Area
Comparative Schedule
(\$ Millions)

Year Ending June 30	Gain (Loss) by Risk Area									\$	% of AAL
	Economic			Non-Economic							
	Pay Increases	Investment	Age & Service Retirement	Disability	Death In Service	Withdrawal	New Members	Retired Lives	Other ⁺		
1999*	47.3	487.7	24.4	2.7	(0.7)	(18.0)	^	1.0	(84.6)	459.8	6.5
2000*	(22.8)	465.6	27.4	0.5	(0.4)	(5.7)	^	14.4	(136.2)	342.8	4.6
2001*	51.3	(13.0)	32.4	7.3	(0.9)	68.0	^	(3.3)	(76.6)	65.2	0.7
2002*	(151.3)	(533.6)	41.5	0.2	1.6	(9.8)	(38.6)	44.1	35.5	(610.4)	(6.6)
2003*	28.0	(781.4)	(29.7)	(0.3)	(0.3)	38.8	(37.1)	30.0	(24.7)	(776.7)	(7.8)
2004*	83.6	(763.8)	(45.2)	0.0	0.5	56.6	(48.6)	23.3	(0.4)	(694.0)	(6.5)
2005*	101.6	(397.4)	(82.6)	2.1	(0.7)	52.7	(42.7)	12.4	(81.7)	(436.3)	(3.9)
2006*	76.4	44.7	37.9	1.2	0.2	(52.9)	(36.7)	15.8	(145.4)	(58.8)	(0.5)
2007*	121.0	504.3	13.4	0.9	(0.3)	(73.2)	(37.2)	(10.2)	(1.1)	517.6	4.1
2008	95.8	(6.6)	(96.1)	(3.5)	(0.6)	8.1	(51.3)	72.4	81.2	99.4	6.1
2009	107.5	(2,265.2)	(50.8)	(28.7)	(0.6)	(11.9)	(50.4)	51.8	200.1	(2,048.2)	(14.0)

* Reported by a prior actuary

+ Includes effect of changes in data, timing of financial transactions, etc.

^ Included in "Other" risk area



The market related actuarial value of assets is based on a four-year average of adjusted market value returns. The difference between the actual returns at market value for the year and expected returns is determined. Twenty-five percent (25%) of that difference is added to the expected value along with corresponding amounts from each of the prior three years.

The actuarial value of assets for the basic benefits as of June 30, 2009 was \$9,836,220,633. The value for the previous year was \$11,372,453,979.

School Employees Retirement System of Ohio
Development of Gain (Loss) for Basic Benefits
From Investment Return
For the Year Ended June 30, 2009
(\$ millions)

	<u>\$ Millions</u>
1. Actuarial value of assets as of June 30, 2008	\$ 11,372.5
2. Actuarial value of assets as of June 30, 2009	
a. Actual	9,836.2
b. If 8.00% assumed investment return was achieved for all phased-in years recognized in the asset method	12,101.4
3. Gain (Loss): 2a minus 2b	<u>\$ (2,265.2)</u>



**Pay Increases During the 2008- 2009 Valuation Year
To Members Active at Beginning and End of Year**

Central Age Group Beginning of Year	Number	Pay Increases	
		Actual	Expected
Under 25	1,859	1.51%	16.28%
25	3,752	9.28	15.28
30	4,856	8.07	12.56
35	8,057	7.69	10.89
40	12,807	7.27	9.46
45	19,544	5.9	8.06
50	21,480	5.03	7.02
55	17,114	4.42	6.48
60	11,028	3.55	6.35
65 & Over	6,729	3.3	6.35
Total	107,226	4.47	7.74



**Members Who Became Age & Service Retirees During the 2008- 2009 Valuation Year
(Retirement With Allowance Beginning Immediately)**

Attained Age	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus	
Under 50							14	14
50							6	6
51							10	10
52							16	16
53							22	22
54							11	11
55						37	24	61
56						26	29	55
57						19	18	37
58						23	14	37
59						38	23	61
60		40	28	42	72	43	25	250
61		56	26	41	59	42	27	251
62		50	29	43	51	55	28	256
63		24	14	20	29	28	30	145
64		32	19	22	22	25	34	154
65		28	38	31	50	43	33	223
66		27	18	18	37	34	24	158
67		15	10	10	18	14	20	87
68		13	6	7	17	15	14	72
69		12	7	10	19	14	22	84
70 & Over		84	48	45	47	47	96	367
Totals	0	381	243	289	421	503	540	2,377

Average Age: 63.0
Average Service: 22.6

Note that this table excludes active members who worked less than one-quarter of the fiscal year for the last two years. These members are deemed inactive members by the System.



**Members Who Died in 2008- 2009 Valuation Year
With a Death-in-Service Allowance Payable**

Central Age Group Beginning of Year	Number
Under 25	
25	1
30	
35	1
40	6
45	12
50	20
55	29
60	20
65	13
70 & Over	17
Total	119

Average Age: 56.9
Average Service: 17.5



**Members Who Died in 2008- 2009 Valuation Year
and Received a Refund of Contributions**

Central Age Group Beginning of Year	Number
Under 25	
25	0
30	0
35	0
40	3
45	1
50	5
55	3
60	8
65	4
70 & Over	0
Total	24

Average Age: 54.2
Average Service: 2.5



**Members Who Became Disability Retirees
During the 2008- 2009 Valuation Year**

Central Age Group Beginning of Year	Number
Under 25	
25	
30	
35	5
40	8
45	29
50	55
55	67
60	58
65	12
70 & Over	2
Total	236

Average Age: 53.4
Average Service: 15.6



**Members Receiving a Refund of Contributions
or Becoming Inactive Without a Refund in
the 2008- 2009 Valuation Year
(Non-vested Terminations)**

Central Age Group Beginning of Year	Number
Under 25	1,325
25	2,120
30	1,422
35	1,369
40	1,656
45	1,658
50	1,512
55	990
60	663
65	300
70 & Over	327
Total	13,342

Average Age: 39.3
Average Service: 2.6



**Members Who Became Inactive
in the 2008- 2009 Valuation Year
with a Deferred Allowance
(Vested Terminations)**

Central Age Group Beginning of Year	Number
Under 25	
25	21
30	63
35	71
40	109
45	178
50	184
55	178
60	63
65	22
70 & Over	13
Total	902

Average Age: 46.8
Average Service: 9.3



SCHEDULE G

GLOSSARY

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

Actuarial Equivalent. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

Valuation Assets. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.



APPENDIX A

**ACTUARIAL ACCRUED LIABILITIES
AS OF JUNE 30, 2009**

Present Value of:	Basic Benefits	Medicare Part B	Death Benefit	Total
Future benefits to present retirees and survivors	\$ 7,020,616,458	\$ 229,850,404	\$ 22,873,638	\$ 7,273,340,500
Benefits and refunds to present inactive members	474,505,400	9,613,529	1,550,680	485,669,609
Allowances to present active members				
Service	6,135,268,813	104,851,597	6,128,793	6,246,249,203
Disability	308,882,202	4,791,455	420,216	314,093,873
Survivor benefits	105,772,844	1,812,943	-	107,585,787
Withdrawal	145,090,349	9,846,536	101,390	155,038,275
Total Active AAL	6,695,014,208	121,302,531	6,650,399	6,822,967,138
Total AAL	<u>\$ 14,190,136,066</u>	<u>\$ 360,766,464</u>	<u>\$ 31,074,717</u>	<u>\$ 14,581,977,247</u>



APPENDIX B

**BREAKDOWN OF TOTAL AND ACCRUED LIABILITIES
AS OF JUNE 30, 2009**

	Total Liability	Accrued Liability
Active Members		
Retirement	\$7,953,626,213	\$6,135,268,813
Death	158,754,187	105,772,844
Disability	617,167,069	308,882,202
Termination	1,056,995,672	145,090,349
Medicare Part B	173,577,395	121,302,531
Death after Retirement	<u>11,304,935</u>	<u>6,650,399</u>
Total	\$9,971,425,471	\$6,822,967,138
Retirees		
Retirement/Survivor/Disability	\$7,020,616,458	\$7,020,616,458
Medicare Part B	229,850,404	229,850,404
Death after Retirement	<u>22,873,638</u>	<u>22,873,638</u>
Total	\$7,273,340,500	\$7,273,340,500
Deferred Vested Members	318,240,993	318,240,993
Inactive Members	<u>167,428,616</u>	<u>167,428,616</u>
Total Actuarial Values	\$17,730,435,580	\$14,581,977,247
Actuarial Value of Assets		<u>9,836,220,633</u>
Unfunded Actuarial Accrued Liability		\$4,745,756,614



APPENDIX C

**COMPARATIVE SCHEDULE
AS OF JUNE 30, 2009**

Valuation Date June 30	Active Members				Retired Lives				Accrued Liability	Valuation Assets \$ Millions	UAAL
	Number	Payroll \$ Millions	Average Salary		Number		Annual Benefits				
			\$	% Increase	Retired	Active / Retired	\$ Millions	% of Payroll			
2000	113,811	\$1,866	\$16,398	2.2%	57,824	2.0	\$376.7	20.2%	\$7,919	\$8,100	\$(181)
2001	115,684	1,974	17,065	4.1	58,795	2.0	404.5	20.5	9,257	8,791	466
2002	120,254	2,176	18,093	6.0	59,349	2.0	432.2	19.9	9,986	8,879	1,107
2003	122,315	2,302	18,823	4.0	59,999	2.0	461.2	20.0	10,635	8,772	1,863
2004	123,139	2,394	19,442	3.3	60,569	2.0	491.6	20.5	11,251	8,667	2,584
2005	122,855	2,453	19,963	2.7	61,433	2.0	527.9	21.5	11,961	8,893	3,137 *
2006	123,266	2,553	20,714	3.8	62,521	2.0	566.8	22.2	12,627	9,542	3,155 *
2007	123,013	2,603	21,163	2.2	63,529	1.9	607.4	23.3	13,303	10,640	2,734 *
2008	124,370	2,652	21,322	0.8	64,818	1.9	652.4	24.6	14,062	11,372	2,689
2009	125,465	2,787	22,216	4.2	65,757	1.9	693.8	24.9	14,582	9,836	4,746

* after the adjustment to reflect health care asset restatement