
**SCHOOL EMPLOYEES RETIREMENT SYSTEM
OF OHIO**

**The Final Report of the Annual Basic Benefits
Actuarial Valuation**

June 30, 2001

Gabriel, Roeder, Smith & Company



Actuaries & Consultants



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December 11, 2001

Board of Trustees
School Employees Retirement System of Ohio
300 East Broad Street
Columbus, Ohio 43215

Dear Members of the Board:

We are pleased to present the report of the actuarial valuation of the School Employees Retirement System of Ohio ("SERS") as of June 30, 2001.

This valuation provides information on the funding status of SERS. In addition, it includes a determination of the actuarially calculated contribution level for the 2002 fiscal year.

This valuation is based on the provisions of SERS in effect as of the valuation date, data on the SERS membership and information on the asset value of the trust fund as of that date. All member data and asset information were provided by SERS staff. While certain checks for reasonableness were performed, the data was used unaudited.

The actuarial cost method is that used in the prior actuarial valuation of SERS. The actuarial assumptions are those proposed in the Review of Actuarial Assumptions dated June 15, 2001 and adopted by the Board for use in this valuation.

To the best of our knowledge, this actuarial statement is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practice.

Respectfully submitted,

Norman S. Losk, F.S.A.
Senior Consultant

Kenneth G. Alberts
Actuarial Consultant

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Summary of the Valuation

Purposes of the Actuarial Valuation

At your request we have performed the actuarial valuation of the basic benefit provisions (including retiree death benefit and the Medicare Part-B reimbursement) of the School Employees Retirement System of Ohio ("SERS") as of June 30, 2001.

The purposes of an actuarial valuation are as follows:

- To determine the funding status of the basic benefits of SERS as of the valuation date, and
- To develop the actuarially determined level of contributions for the basic benefits of SERS for the fiscal year ending June 30, 2001.

Report Highlights

The following is a set of key results for the prior year valuation and for the current year:

Member Data	(\$ in 000's)	
	June 30, 2000	June 30, 2001
Active Members		
Number	113,811	115,684
Payroll	\$1,866,283	\$1,974,097
Benefit Recipients		
Number	57,824	58,795
Annual Benefits	\$376,656	\$404,506
Funding Status		
Actuarial Accrued Liability ("AAL")	\$8,100,428	\$8,852,027
Actuarial Value of Assets ("AVA")	<u>\$8,281,286</u>	<u>\$8,790,858</u>
Unfunded Actuarial Accrued Liability ("UAAL")	\$(180,858)	\$61,569
Funding Ratio	102.23%	99.31%
Contribution Levels		
Normal Cost Rate	13.79%	14.27%
Rate to Amortize UAAL (25 years)	(.59%)	.19%
Total Contribution Rate	13.20%	14.46%
Member Contribution Rate	<u>9.00%</u>	<u>9.00%</u>
Employer Contribution Rate	4.20%	5.46%

Total Actuarial Contribution

The Total Actuarial Contribution Rate developed in this actuarial valuation is 14.46% of active member payroll.

This rate is 1.26% of pay higher than that developed in the 2000 valuation. Significant amendments to the benefit provisions of SERS were enacted by the legislature in November 2000. A Review of Assumptions was completed in June 2001 and presented to the Board. The recommended changes in assumptions contained in that report were adopted by the Board for use in this valuation. Each of these changes, in addition to the actuarial experience of the year affected the contribution rate.

The Board has set a total contribution rate of 23% of payroll. Contributions in excess of those required to support the basic benefits of SERS are allocated to support health care benefits provided SERS retirees.

Actuarial Assumptions

The actuarial assumptions and method used in this valuation are identical to that disclosed in the prior valuation report except for the following changes which were adopted by the Board for use in this valuation:

- Assumed longevity pay increases, which are anticipated in addition to general salary increases, were increased for members with less than 5 years of service and were reformatted to be based entirely on years of service.
- Assumed retirement rates were increased for members who are eligible for unreduced retirement at early ages.
- Assumed retiree mortality rates were reduced to reflect the continuing increases in retiree longevity.
- Assumed turnover rates were adjusted to reflect heavier turnover than assumed and the fact that most turnover occurs for those with service less than 5 years of service.

The impacts of these assumption changes are reflected in the table below.

SERS Benefits

In this valuation, we have recognized the basic benefits of SERS, the post-retirement death benefit and the Medicare Part-B reimbursement benefit. These include all benefits of SERS except the benefits of the health care program. The benefits valued are described in Appendix F.

SB 270 was enacted by the legislature shortly after the prior valuation was published. This legislation made the following changes in SERS benefits:

- The benefit level for each of the first 30 years of service was increased from 2.1% to 2.2%.
- Medicare Part B reimbursement was increased from \$31.80 per month to \$45.50 per month and was applied retroactively.
- The maximum benefit was increased from 90% of Final Average Salary to 100%.
- Survivor benefits were changed.
- The health care surcharge was limited.

The impacts of these changes in benefits along with the impacts of the assumption changes on the results of the prior valuation are as follows:

Key Results of the Valuation

(\$ in Millions)

	2000 Valuation			2001 Valuation
	Before Leg. and Assump.	After Leg. Before Assump.	After Leg. & Assump.	
NORMAL COST RATE				
Total	13.79%	14.45%	13.63%	14.27%
Member	9.00	9.00	9.00	9.00
Employer	4.79%	5.45%	4.63%	5.27%
FUNDING STATUS				
Actuarial Accrued Liability (AAL)	\$8,100.4	\$8,407.3	\$8,441.3	\$8,852.0
Actuarial Value of Assets (AVA)	8,281.3	8,281.3	8,281.3	8,790.8
Unfunded AAL (UAAL)	(180.9)	126.0	160.0	61.2
FUNDING RATIO	102.2%	98.5%	98.1%	99.3%
REQUIRED CONTRIBUTION				
Total	13.20%	14.86%	14.15%	14.46%
Member	9.00	9.00	9.00	9.00
Employer	4.20%	5.86%	5.15%	5.46%

Experience During FY 2001

Actuarial Gain and Loss Analysis reviews the effects of experience that differs from that assumed on actuarial results. If such a difference increases assets or reduces liabilities, we have an actuarial gain. The reverse is an actuarial loss. We will provide a separate report detailing the sources of gains and losses. In this section, we will provide an overview of the net actuarial gains and losses for the year.

In FY 2001, SERS experienced an overall actuarial gain amounting to about \$57.8 million. This is net gain is substantially smaller than those produced in the last three valuations. The bull markets of recent years have driven the huge actuarial gains set out in the last few valuation reports. These markets have reversed themselves. The small size of the actuarial loss shown below from the investment program is the result of the smoothing process which has been used for a number of years in performing SERS actuarial work.

The total actuarial gain is the net of the small loss from assets and the gain from liabilities. The total gain is broken down as follows (\$ in millions):

	Fiscal Year		
	<u>1999</u>	<u>2000</u>	<u>2001</u>
1. Actuarial (Gain)/Loss on Assets	\$(487.7)	\$(465.6)	\$13.0
2. Actuarial (Gain)/Loss on Liabilities	<u>27.9</u>	<u>122.8</u>	<u>(70.8)</u>
3. Total Actuarial (Gain) or Loss (1+2)	(459.8)	(342.8)	(57.8)

Thus, the actuarial loss of \$13 million from investment return was more than offset by an actuarial gain of \$70.8 million from demographic assumptions and non-investment economic assumptions.

It should be noted that the actuarial gain from liabilities amounts to about .87% of actuarial accrued liabilities at the beginning of the year. This is well within the range of expected statistical results for a retirement system of the size of SERS

Asset Information

Consistent with the contraction of the investment markets in FY 2001, the market value of the assets of the fund that are available for basic benefits has been reduced from \$8,842 million as of June 30, 2000 to \$8,013 million as of June 30, 2001.

The assets recognized for actuarial purposes (actuarial value of assets) are the product of a smoothing technique. The purpose of such a technique is to reflect market values, but to dampen the effect of market volatility.

Although there was contraction in market values, the actuarial value of assets grew from \$8,281 million to \$8,791 million during FY 2001. The rate of investment return for FY 2001 on actuarial value of assets was about 8.10% compared to 14.47% in FY 2000. This occurred due to market gains in previous years that were not recognized until this year and the fact that only 25% of this year's market loss was recognized this year.

The detailed determinations of asset values utilized in this valuation and asset growth in the last year are set out in Appendix A. In particular, see Table 3 for the determination of the actuarial value of assets.

Funding Status

The funding status offers is measured by the Funding Ratio and the Unfunded Actuarial Accrued Liability (UAAL). The Funding Ratio is the ratio of the actual value of assets available for benefits to the actuarial accrued liability (AAL) of the Fund. Thus, it reflects the portion of the AAL that is covered by SERS assets. The UAAL is the difference between these items.

A funding ratio of 100% means that the funding of SERS is precisely on schedule. By monitoring changes in the funding ratio each year we can determine whether or not funding progress is being made.

Based on the actuarial value of assets, the SERS funding ratio at June 30, 2000 was 102.2%. This funding level was reduced to 98.5% as a result of SB 270. This funding level became 98.1% due to the change in assumptions. As of June 30, 2001, the funding ratio was 99.3%

GASB Disclosure

GASB Statements 25 and 27 set out the current accounting standards for SERS. Tables 16, 17, and 18 in Appendix D provide footnotes and/or Required Supplemental Information tables required to be disclosed by those statements.

Appendices

Appendix A
Asset Information

TABLE 1**Net Assets Available for All SERS Benefits
(\$ in 000's)**

	June 30, 2001
ASSETS	
Cash	2,378
RECEIVABLES	
Employer Contribution	181,592
Employee Contribution	17,896
Accrued Investment Income	228,464
INVESTMENTS	
Short Term	398,780
Fixed Income	1,907,880
Equities	5,072,641
Real Estate	937,416
Securities Lending Collateral	303,429
Property & Equipment	5,270
OTHER ASSETS	
	60,130
TOTAL ASSETS AT MARKET	
	9,115,876
LIABILITIES	
Accounts Payable	29,728
Investment Transactions	453,681
Securities Lending Collateral	303,429
NET ASSETS AVAILABLE FOR BENEFITS	
	8,329,038

TABLE 2

**Change in Assets Available for All SERS Benefits
Fiscal Year Ending June 30, 2001
(\$ in 000's)**

	<u>2001</u>
1. Assets Available at Beginning of Year	9,094,114
2. Revenues	
Contributions	
a. Employer Contributions	331,307
b. Employee Contributions	192,563
c. Transfers and Subsidies	2,660
Investment Return	
d. Investment Income and dividends	203,544
e. Real Estate Income	75,252
f. Unrealized Capital Gains (Losses)	(884,546)
g. Net Securities Lending Income	2,702
h. Investment Expense	(29,371)
Total Revenues	(105,889)
3. Expenses	
a. Benefits	617,168
b. Refunds	21,817
c. Expense	16,004
d. Transfers	<u>4,198</u>
Total Expenses	659,187
4. Assets Available at End of Year (1 + 2 - 3)	8,329,038

TABLE 3

Development of Valuation Assets as of June 30, 2001

	2000	2001	2002	2003	2004
1. Actuarial Value Beginning of Year	\$7,518,600,241	8,281,285,706			
2. Market Value End of Year	9,094,114,290	8,329,037,579			
3. Market Value Beginning of Year	8,228,792,941	9,094,114,290			
4. Cash Flow					
a. Contributions	485,970,248	526,530,664			
b. Other Revenue	-	0			
c. Benefit Payments	(554,937,697)	(638,984,950)			
d. Expenses	=				
e. Net	(68,967,449)	(112,484,287)			
5. Investment Income					
a. Market Total: 2. - 3. - 4.e.	934,288,798	(652,622,424)			
b. Assumed Rate	8.25%	8.25%			
c. Amount for Immediate Recognition	617,439,613	699,310,095			
d. Amount for Phased-in Recognition	316,849,185	(1,351,932,519)			
6. Phased-In Recognition of Investment Income					
a. Current Year: 0.25 * 5.d.	79,212,296	(337,983,130)			
b. First Prior Year	77,990,651	\$ 79,212,296	(337,983,130)		
c. Second Prior Year	167,782,963	77,990,651	\$ 79,212,296	(337,983,130)	
d. Third Prior Year	<u>140,654,825</u>	<u>167,782,963</u>	<u>77,990,651</u>	<u>\$79,212,296</u>	<u>(337,983,130)</u>
e. Total Recognized Investment Gain	465,640,735	(12,997,220)	(180,780,183)	(258,770,834)	(337,983,130)
Actuarial Value End of Year: (1 + 4e + 5a + 6e)	8,532,713,140	9,106,571,728			
7. Difference Between Market & Actuarial Value	561,401,150	574,398,370			
8. Health Care Valuation Assets	252,308,305	315,713,870			
9. Present Value of HB 284 and 204 Contributions	880,871	0			
10. Basic Benefits Valuation Assets: G - I + J	8,281,285,706	8,790,857,859			

Appendix B
Membership Data

TABLE 4**Summary of Data Characteristics**

	<u>June 30, 2000</u>	<u>June 30, 2001</u>
ACTIVE MEMBERS		
Number	113,811	115,684
Total Earnings of Members (000's)	\$1,866,283	\$1,974,097
Average Earnings	16,398	17,064
Average Age	45.7	45.6
Average Service	8.8	8.7
BENEFIT RECIPIENTS		
<i>Retirees</i>		
Number	48,956	49,776
Total Annual Retirement Income (000's)	\$313,956	\$337,803
Average Total Annual Benefit	\$6,413	\$6,786
<i>Survivors (currently receiving benefits)</i>		
Number	3,893	3,967
Total Annual Retirement Income (000's)	\$17,334	\$18,540
Average Total Annual Benefit	\$4,453	\$4,673
<i>Disabilities</i>		
Number	4,975	5,052
Total Annual Retirement Income (000's)	\$45,363	\$48,164
Average Total Annual Benefit	9,118	9,534
<i>Inactive Members</i>		
Number of Inactives Eligible for Deferred Benefits	7,487	7,957
Number of Inactives Eligible Only for Refund	65,690	59,398
Number of Rehired Retirees	4,998	5,639

TABLE 5

**Annuity and Pension Reserve Fund
Retirants and Beneficiaries
June 30, 2000**

Type of Benefit, Annual Amount and Basic Benefit Actuarial Liabilities

Group	Number	% of Current Total \$			Current Total \$	Actuarial Liabilities*
		Base Allowances	H.B. 204 and 284	Post-Retirement Increases		
Superannuation Retirement						
Straight Life Allowance – Benefit Terminating at Death						
Men	4,073	76.3%	0.0%	23.7%	35,655,021	271,581,668
Women	<u>24,628</u>	78.6%	0.1%	21.4%	<u>142,631,483</u>	<u>1,171,863,756</u>
Totals	28,701				178,286,504	1,443,445,424
Option II Allowance – Joint and Survivor Benefits						
Men	6,734	81.0%	0.0%	19.0%	70,519,016	798,923,060
Women	<u>8,436</u>	86.8%	0.0%	13.2%	<u>59,835,140</u>	<u>648,961,961</u>
Totals	15,170				130,354,155	1,447,885,021
Option III Allowance – Life Benefits With Guaranteed Periods						
Men	501	73.0%	0.1%	26.8%	3,267,664	24,192,426
Women	<u>986</u>	77.0%	0.1%	22.9%	<u>4,885,287</u>	<u>41,399,484</u>
Totals	1,487				8,152,951	65,591,910
Allowance to Survivor Beneficiary of Deceased Superannuation Retirant Who Elected Option II – Life Benefit						
Men	837	70.1%	0.3%	29.5%	2,307,371	17,253,062
Women	<u>3,501</u>	65.5%	0.2%	34.2%	<u>18,251,798</u>	<u>144,615,949</u>
Totals	4,338				20,559,168	161,869,011

* Includes allowance and lump sum death benefit, but excludes Medicare Part-B supplement.

(Table 5 completed on page 11)

TABLE 5 - COMPLETED

**Annuity and Pension Reserve Fund
Retirants and Beneficiaries
June 30, 2001**

Type of Benefit, Annual Amount and Basic Benefit Actuarial Liabilities

Group	Number	% of Current Total \$			Current Total \$	Actuarial Liabilities*
		Base Allowances	H.B. 204 and 284	Post-Retirement Increases		
Allowance to Survivor Beneficiary of Deceased Superannuation Retirant Who Elected Option III - Guaranteed Period Only						
Men	33	80.4%	0.0%	19.6%	162,881	286,800
Women	<u>47</u>	78.1%	0.0%	21.9%	<u>287,822</u>	<u>863,144</u>
Totals	80				450,704	1,149,944
Total for Superannuation Allowances Being Paid						
Men	12,178	79.1%	0.0%	20.9%	111,911,952	1,112,237,016
Women	<u>37,598</u>	79.6%	0.1%	20.3%	<u>225,891,530</u>	<u>2,007,704,294</u>
Totals	49,776				337,803,482	3,119,941,310
DISABILITY RETIREMENT						
Straight Life Allowance - Benefit Terminating at Death						
Men	1,615	81.9%	0.1%	18.0%	21,854,495	179,062,754
Women	<u>3,437</u>	82.5%	0.1%	17.4%	<u>26,309,335</u>	<u>255,321,504</u>
Totals	5,052				48,163,830	434,384,258
TOTAL BENEFITS BEING PAID FROM ANNUITY AND PENSION RESERVE FUND						
Men	13,793	79.5%	0.0%	20.4%	133,766,447	1,291,299,770
Women	<u>41,035</u>	79.9%	0.1%	20.0%	<u>252,200,865</u>	<u>2,263,025,798</u>
Totals	54,828				385,967,313	3,554,325,568

* Includes allowance and lump sum death benefit, but excludes Medicare Part-B supplement.

TABLE 6
Annuity and Pension Reserve Fund
Retirants June 30, 2001
Current Annual Total \$ by Attained Age

Attained Age	Superannuation		Disability		Totals	
	No.	Annual Total \$	No.	Annual Total \$	No.	Annual Total \$
Under 20		\$		\$		\$
20-24						
25-29			1	5,596	1	5,596
30-34			1	12,747	1	12,747
35-39			55	817,820	55	817,820
40-44			165	2,632,596	165	2,632,596
45-49	29	748,619	347	5,133,822	376	5,882,441
50-54	235	5,962,198	564	7,552,416	799	13,514,614
55-59	839	14,063,980	792	8,554,990	1,631	22,618,970
60-64	4,573	43,336,545	1,069	10,303,874	5,642	53,640,419
65-69	8,383	69,613,228	780	6,235,923	9,163	75,849,151
70-74	9,611	70,311,778	563	3,498,199	10,174	73,809,978
75-79	9,248	56,600,716	400	2,199,857	9,648	58,800,573
80-84	7,079	35,653,529	244	988,566	7,323	36,642,095
85-89	3,776	14,929,906	57	180,431	3,833	15,110,336
90-94	1,306	4,548,648	11	33,769	1,317	4,582,417
95-99	241	861,024	3	13,225	244	874,249
100	15	68,099			15	68,099
101	8	29,007			8	29,007
102	4	18,648			4	18,648
103	4	9,689			4	9,689
104	1	2,415			1	2,415
105 & Over	4	22,825			4	22,825
Total	45,356	316,780,853	5,052	48,163,830	50,408	364,944,683

TABLE 7
Annuity and Pension Reserve Fund
Survivors of Retirants June 30, 2001
Current Annual Total \$ by Attained Age

Attained Age	Life Annuities		Periods Certain		Totals	
	No.	Annual Total \$	No.	Annual Total \$	No.	Annual Total \$
Under 20	3	\$ 8,954	-	\$ -	3	\$ 8,954
20-24	5	25,084	-	-	5	25,084
25-29	1	958	-	-	1	958
30-34	5	37,590	2	7,118	7	44,708
35-39	1	1,474	1	4,653	2	6,127
40-44	13	44,484	7	37,337	20	81,820
45-49	33	94,771	3	4,826	36	99,596
50-54	53	253,873	8	38,862	61	292,735
55-59	70	447,875	3	4,632	73	452,506
60-64	136	753,095	3	10,394	139	763,488
65-69	325	2,345,981	15	70,121	340	2,416,102
70-74	659	4,000,646	17	124,571	676	4,125,217
75-79	997	5,001,372	15	106,150	1,012	5,107,522
80-84	987	3,995,493	4	28,149	991	4,023,642
85-89	690	2,424,859	-	-	690	2,424,859
90-94	302	956,094	-	-	302	956,094
95-99	54	154,521	1	7,850	55	162,371
100	4	11,476	-	-	4	11,476
101	-	-	-	-	-	-
102	-	-	-	-	-	-
103	-	-	-	-	-	-
104	1	6,611	-	-	1	6,611
105 & Over	2	12,757	-	-	2	12,757
Total	4,341	20,577,968	79	444,662	4,420	21,022,629

TABLE 8

**Survivor Benefit Fund
Beneficiaries June 30, 2001
Annual Amounts and Basic Benefit Actuarial Liabilities**

Group	Number	% of Current Total \$			Current Total \$	Actuarial Liabilities*
		Base Allowances	H.B. 204 and 284	Post-Retirement Increases		
Benefits Being Paid From Survivor Benefit Fund						
Men	1,501	84.9%	0.0%	15.1%	5,721,849	37,947,430
Women	<u>2,466</u>	74.6%	0.1%	25.3%	<u>12,817,699</u>	<u>97,562,474</u>
Totals	3,967				18,539,548	135,509,904

* *Includes allowance but excludes Medicare Part-B supplement. Also includes liabilities for beneficiaries in blackout who are not represented in other statistics on this page.*

TABLE 9

Survivor Benefit Fund
Survivors of Deceased Active Members June 30, 2001
Current Annual Total \$ by Attained Age

Attained Age	Totals	
	No.	Annual Total \$
Under 20	46	\$ 259,299
20-24	16	79,579
25-29	4	21,619
30-34	8	69,675
35-39	14	117,910
40-44	56	461,943
45-49	88	782,090
50-54	157	1,110,480
55-59	214	1,298,525
60-64	444	2,433,715
65-69	646	3,047,402
70-74	741	3,312,125
75-79	659	2,552,776
80-84	486	1,670,116
85-89	268	927,147
90-94	92	308,410
95-99	26	79,571
100	1	4,889
101	1	2,278
102	-	-
103	-	-
104	-	-
105 & Over	-	-
Totals	3,967	18,539,548

TABLE 10

**Total Active Members as of June 30, 2001
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 plus	No.	Valuation Payroll
Under 20	490	-	-	-	-	-	-	490	1,688,956
20-24	4,380	53	-	-	-	-	-	4,433	28,863,162
25-29	4,658	486	27	-	-	-	-	5,171	60,359,880
30-34	6,248	1,333	412	32	-	-	-	8,025	113,975,667
35-39	9,124	2,744	1,213	646	100	-	-	13,827	207,490,979
40-44	10,612	5,091	2,542	1,326	1,005	101	-	20,677	340,397,306
45-49	7,580	5,080	3,895	2,178	1,268	640	46	20,687	384,440,049
50-54	4,531	3,158	3,778	3,024	1,994	764	196	17,445	353,613,388
55-59	2,560	1,687	2,011	2,402	2,553	1,165	195	12,573	255,528,807
60	320	261	291	359	456	243	57	1,987	41,279,887
61	300	208	234	289	378	263	75	1,747	35,473,754
62	266	182	221	265	287	225	68	1,514	30,596,202
63	216	157	190	194	276	191	82	1,306	25,580,376
64	185	122	164	161	237	159	100	1,128	20,944,362
65	191	104	112	139	147	169	72	934	17,410,874
66	157	86	75	105	107	124	80	734	13,223,299
67	154	82	56	76	81	79	67	595	9,820,152
68	135	63	59	61	71	61	57	507	7,469,501
69	99	43	50	33	56	46	40	367	5,742,982
70 & Over	399	243	196	160	173	164	202	1,537	20,176,905
Totals	52,605	21,183	15,526	11,450	9,189	4,394	1,337	115,684	1,974,076,488

TABLE 11

**Male Active Members as of June 30, 2001
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 plus	No.	Valuation Payroll
Under 20	234	-	-	-	-	-	-	234	880,049
20-24	2,018	28	-	-	-	-	-	2,046	13,390,644
25-29	1,850	204	10	-	-	-	-	2,064	25,184,206
30-34	1,850	485	181	12	-	-	-	2,528	44,897,143
35-39	1,909	628	467	351	57	-	-	3,412	75,602,626
40-44	2,154	781	578	624	568	60	-	4,765	116,298,538
45-49	1,918	832	655	638	585	375	26	5,029	129,121,918
50-54	1,514	694	608	546	439	340	102	4,243	112,336,787
55-59	1,070	585	434	467	321	192	76	3,145	80,950,185
60	162	113	91	66	66	29	17	544	13,728,231
61	158	88	79	80	43	32	13	493	12,278,327
62	143	93	77	83	36	26	8	466	11,225,943
63	110	81	69	55	43	23	12	393	9,258,851
64	84	58	59	55	39	14	16	325	6,937,466
65	109	54	38	42	22	15	19	299	6,139,966
66	73	51	33	31	16	12	15	231	4,479,760
67	83	51	19	23	14	3	9	202	3,585,329
68	52	35	28	11	7	4	6	143	2,307,891
69	42	24	24	13	11	3	4	121	1,994,917
70 & Over	193	138	106	57	27	14	24	559	7,656,640
Totals	15,726	5,023	3,556	3,154	2,294	1,142	347	31,242	678,255,417

TABLE 12

**Female Active Members as of June 30, 2001
By Attained Age and Years of Service**

Attained Age	Years of Service to Valuation Date							No.	Valuation Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	30 plus		
Under 20	256	-	-	-	-	-	-	256	808,907
20-24	2,362	25	-	-	-	-	-	2,387	15,472,518
25-29	2,808	282	17	-	-	-	-	3,107	35,175,674
30-34	4,398	848	231	20	-	-	-	5,497	69,078,524
35-39	7,215	2,116	746	295	43	-	-	10,415	131,888,353
40-44	8,458	4,310	1,964	702	437	41	-	15,912	224,098,768
45-49	5,662	4,248	3,240	1,540	683	265	20	15,658	255,318,131
50-54	3,017	2,464	3,170	2,478	1,555	424	94	13,202	241,276,601
55-59	1,490	1,102	1,577	1,935	2,232	973	119	9,428	174,578,622
60	158	148	200	293	390	214	40	1,443	27,551,656
61	142	120	155	209	335	231	62	1,254	23,195,427
62	123	89	144	182	251	199	60	1,048	19,370,259
63	106	76	121	139	233	168	70	913	16,321,525
64	101	64	105	106	198	145	84	803	14,006,896
65	82	50	74	97	125	154	53	635	11,270,908
66	84	35	42	74	91	112	65	503	8,743,539
67	71	31	37	53	67	76	58	393	6,234,823
68	83	28	31	50	64	57	51	364	5,161,610
69	57	19	26	20	45	43	36	246	3,748,065
70 & Over	206	105	90	103	146	150	178	978	12,520,265
Totals	36,879	16,160	11,970	8,296	6,895	3,252	990	84,442	1,295,821,071

TABLE 13

**Active Members as of June 30, 2001
By Annual Pay**

Annual Pay	Number of Active Members			Portion of Total Number	
	Men	Women	Totals	Group	Cumulative
Less than \$1,000	478	1,166	1,644	1%	1%
\$1,000 - 1,999	2,104	3,074	5,178	4%	6%
2,000 - 2,999	2,488	3,398	5,886	5%	11%
3,000 - 3,999	1,541	3,211	4,752	4%	15%
4,000 - 4,999	1,032	2,952	3,984	3%	19%
5,000 - 5,999	703	2,883	3,586	3%	22%
6,000 - 6,999	544	2,944	3,488	3%	25%
7,000 - 7,999	525	2,748	3,273	3%	27%
8,000 - 8,999	498	2,883	3,381	3%	30%
9,000 - 9,999	507	3,126	3,633	3%	34%
10,000 - 11,999	1,065	7,432	8,497	7%	41%
12,000 - 13,999	1,075	8,235	9,310	8%	49%
14,000 - 15,999	1,022	7,051	8,073	7%	56%
16,000 - 17,999	896	6,258	7,154	6%	62%
18,000 - 19,999	884	4,670	5,554	5%	67%
20,000 - 24,999	2,588	8,606	11,194	10%	77%
25,000 - 29,999	3,687	6,099	9,786	8%	85%
30,000 and over	9,605	7,706	17,311	15%	100%
Totals	31,242	84,442	115,684		

Appendix C
Actuarial Determinations

TABLE 14

**Summary of Actuarial Values
As of June 30, 2001
(\$ in 000's)**

	APV* of Projected Benefits	Entry Age Actuarial Values		
		Actuarial Accrued Liability (AAL)	Normal Cost \$	Normal Cost % of Pay
1. Active Members				
a. Retirement	5,892,038	4,332,245	186,698	9.19%
b. Death	97,309	58,670	4,681	0.23%
c. Disability	622,621	294,205	37,989	1.87%
d. Termination	390,406	(86,536)	55,682	2.75%
e. Medicare Part-B	114,275	84,763	4,213	0.21%
f. Death After Retirement	7,823	4,696	474	0.02%
Total	7,124,472	4,688,043	289,737	14.27%
2. Benefit Recipients				
a. Retirement/Survivor/Disability	3,670,198	3,670,198		
b. Medicare Part-B	199,596	199,596		
c. Death after Retirement	19,638	19,638		
Total	3,889,432	3,889,432		
3. Other Inactive	274,552	274,552		
4. Total Actuarial Values	11,288,456	8,852,027	289,737	14.27%
5. Actuarial Value of Assets		8,790,858		
6. Unfunded Actuarial Accrued Liability (4 - 5)		61,169		
7. Funding Ratio		99.31%		

* APV - Actuarial Present Value

TABLE 15

Development of Actuarial Contribution
(\$ in 000's)

Total System

	Estimated \$	% of Pay
Payment to Amortize UAAL over 25 Years	\$ 3,776	.19%
Normal Cost	<u>289,737</u>	<u>14.27%</u>
Total Contribution	\$ 293,513	14.46%
Member Contribution	\$ 182,717	9.00%
Employer Contribution	\$100,796	5.46%

TABLE 15a

Development of Actuarial Contribution
(\$ in 000's)

Retirement Only

	Estimated \$	% of Pay
Payment to Amortize UAAL over 25 Years	\$ (6,327)	(.31%)
Normal Cost	<u>285,049</u>	<u>14.04%</u>
Total Contribution	\$ 278,722	13.73%
Member Contribution	\$ 182,717	9.00%
Employer Contribution	\$96,005	4.73%

TABLE 15b

Development of Actuarial Contribution
(\$ in 000's)

Death Benefit		
	Estimated \$	% of Pay
Payment to Amortize UAAL over 25 Years	\$ (36)	(.00%)
Normal Cost	<u>474</u>	<u>0.02%</u>
Total Contribution	\$438	0.02%
Member Contribution	\$ 0	0.00%
Employer Contribution	\$438	0.02%

TABLE 15c

Development of Actuarial Contribution
(\$ in 000's)

Medicare Part-B		
	Estimated \$	% of Pay
Payment to Amortize UAAL over 25 Years	\$ 10,140	.50%
Normal Cost	<u>4,214</u>	<u>.21%</u>
Total Contribution	\$ 14,354	0.71%
Member Contribution	\$ 0	0.00%
Employer Contribution	\$14,354	0.71%

Appendix D
Information for GASB No. 25 & 27

TABLE 16

**Basic Benefits
Short Condition Test
(\$ in 000's)**

June 30	Computed Actuarial Accrued Liabilities			Valuation Assets	Portion of Accrued Liabilities Covered by Assets		
	(1) Member Contributions	(2) Retired Lives	(3) Present Members (Employer Financed Portion)		(1)	(2)	(3)
1989	\$ 627	\$1,696	\$1,335	\$2,438	100%	100%	9%
1990	684	1,872	1,447	2,686	100	100	9
1991	749	2,025	1,491	3,015	100	100	16
1991*	749	1,973	1,624	3,015	100	100	18
1992	816	2,123	1,754	3,331	100	100	22
1993	889	2,261	1,902	3,673	100	100	27
1994	961	2,426	1,994	3,952	100	100	28
1995	1,034	2,700	2,105	4,310	100	100	27
1996	1,105	2,886	2,193	4,766	100	100	35
1996* [@]	1,105	2,790	2,234	4,777	100	100	39
1997	1,177	2,996	2,332	5,402	100	100	53
1997 [@]	1,177	2,996	2,332	5,521	100	100	58
1998	1,255	3,208	2,474	6,413	100	100	79
1998#	1,255	3,269	2,513	6,413	100	100	75
1999	1,341	3,469	2,725	7,332	100	100	93
2000	1,429	3,734	2,937	8,281	100	100	106
2001*#	1,407	3,889	3,555	8,791	100	100	98

* Revised assumptions

Legislated benefit increases

[@] Revised asset valuation method

TABLE 17**Schedule of Employer Contributions**

Fiscal Year 7-1/6-30	Valuation Date 6-30	Annual Required Contribution	Percentage Contributed
1991-92	1991	\$113,268,331	100%
1992-93	1992	117,959,733	100
1993-94	1993	119,849,473	100
1994-95	1994	128,603,843	100
1995-96	1995	150,103,657	100
1996-97	1996	144,487,949	100
1997-98	1997	139,955,108	100
1998-99	1998	127,195,004	100
1999-00	1999	98,148,589	100
2000-01	2000	78,459,360	100
2001-02	2001	110,795,693	

TABLE 18

Schedule of Funding Progress

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
6/30/91#	\$3,015,432	\$4,346,128	69.4%	\$1,330,696	\$1,176,203	113.1%
6/30/92	3,331,392	4,693,284	71.0	1,361,892	1,244,301	109.5
6/30/93	3,672,662	5,051,534	72.7	1,378,872	1,312,700	105.0
6/30/94	3,951,856	5,381,465	73.4	1,429,609	1,360,887	105.0
6/30/95@	4,310,487	5,839,027	73.8	1,528,540	1,429,559	106.9
6/30/96#*	4,777,498	6,128,781	78.0	1,351,283	1,475,873	91.6
6/30/97*	5,521,248	6,504,638	84.9	983,390	1,551,609	63.4
6/30/98^	6,412,649	7,037,449	91.1	624,800	1,651,883	37.8
6/30/99+	7,331,692	7,534,903	97.3	203,211	1,768,098	11.5
6/30/00	8,281,286	8,100,427	102.2	(180,859)	1,866,283	-
6/30/01#^	8,790,858	8,852,027	99.3	61,169	1,974,097	3.1

After change in actuarial assumptions.

* After change is asset method.

^ After change in benefit provisions.

@ Includes Medicare Part B Supplement for this year and future years.

+ After change in method

Appendix E
Actuarial Method and Assumptions

Entry Age Method

The Entry Age Method is the actuarial valuation method used for all purposes under SERS.

The concept of this method is that funding of benefits for each employee should be effected as a, theoretically, level contribution (as a percentage of pay) from entry into SERS to termination of active status.

The Normal Cost (NC) for a fiscal year under this method is determined as described in the prior paragraph for each employee. The SERS NC for the year is the total of individual normal costs determined for each active employee.

The Actuarial Accrued Liability (AAL) under this method is the theoretical asset balance such normal costs would have accumulated to date based on current assumptions. To the extent that the assets of the fund are insufficient to cover the AAL, an Unfunded Actuarial Accrued Liability (UAAL) develops.

The actuarially calculated contribution for a year is the NC for that year plus an amount to amortize the UAAL over 25 years as a level percentage of pay.

Actuarial Assumptions

(Adopted for Use with the June 30, 2001 Valuation)

Investment Return

It is assumed that investments of the System will return, on average, a yield of 8.25% per annum compound, net of system expenses.

Salary and Payroll Increases

Salaries are assumed to increase each year at the rate of 4.25%. In addition, longevity adjustments are for all members. These assumed adjustments are based on years of service.

<u>Service</u>	<u>Salary Inflation</u>	<u>Longevity Adjustment</u>	<u>Total Increase</u>
0	4.25%	20.70%	25.00%
1	4.25	13.25	17.50
2	4.25	10.75	15.00
3	4.25	8.75	13.00
4	4.25	7.75	12.00
5	4.25	5.75	10.00
6	4.25	4.75	9.00
7	4.25	3.75	8.00
8	4.25	2.75	7.00
9	4.25	1.75	6.00
10 - 14	4.25	0.75	5.00
15 & Over	4.25	0.50	4.75

Total covered payroll of the entire membership is assumed to increase 4.25% per year in the future.

Retirement Rates

Retirement is assumed in accordance with the following rates per 1,000 eligible members:

<u>For All Members With at Least Five Years of Service</u>		
<u>Age</u>	<u>Male</u>	<u>Female</u>
50	450	360
55	300	270
60	110	230
61	110	140
62	170	140
63	140	140
64	170	140
65	350	300
70	250	380
75	1,000	1,000

Withdrawal Rates

Termination of membership prior to eligibility for retirement from all causes other than death, disability or retirement is assumed in accordance with the following illustrative rates per 1,000 members:

<u>Service</u>	<u>Rate</u>
0	500.0
1	240.0
2	140.0
3	90.0
4	80.0
5	75.0
10	42.5
15	25.0
20	17.5

Disability Rates

Retirement for disability prior to age 60 is assumed in accordance with the following illustrative rates per 1,000 eligible members:

<u>Age</u>	<u>Male</u>	<u>Female</u>
30	1.50	1.00
35	4.95	1.00
40	5.40	2.10
45	6.75	2.50
50	11.00	5.25
55	11.00	8.10

Mortality Rates

Mortality Rates for retirees and survivors are based on the 1994 Group Annuity Mortality table with male ages set back three years and female ages set back one year. Mortality for active members is 70% of the retiree table for males and 55% for females. Mortality for disabled members is developed from experience.

Illustrative rates per 1,000 for retirees at various ages are as follows:

**Service Retired Members, Beneficiaries and Survivors
(1994 Group Annuity Mortality Table (-3,-1))**

Age	Male	Female
20	0.430	0.280
30	0.727	0.331
40	0.891	0.652
50	1.899	1.310
60	5.581	3.863
70	18.034	12.709
80	45.171	35.362

Disability Retired Members

Age	Male	Female
40	22.571	7.450
50	28.975	11.535
60	42.042	21.839
70	62.583	37.635
80	109.372	72.312

Cost of Living Adjustments

The cost of living adjustment assumed in the valuation is 3.0% per year.

Asset Valuation Method

The Actuarial Value of Assets is based on a four-year average of adjusted market value returns. The actuarial value for a year is computed by taking the actuarial value at June 30 of the prior year, subtracting all expenses (including benefit payments), and adding contributions and expected investment return at 8.25% of actuarial value of assets. 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 actuarial value along with corresponding amounts from each of the prior four years.

Provisions for Expenses

There is no specific provision for expenses. The implicit assumption is that administrative expenses are paid from investment income in excess of 8.25% per annum.

Operational Expenses

The amount of estimated administrative expenses expected in the next year is supplied by SERS staff and incorporated in the Normal Cost.

Marital Status

80% of members are assumed to be married.

Spouse Age

The female spouse is assumed to be 3 years younger than the male spouse.

APPENDIX F
Summary of Benefit Provisions

SUMMARY OF KEY PROVISIONS
School Employees Retirement System of Ohio
as of June 30, 2001

Contributions for Basic Benefits

The member contributes 9% of pay. The employer contributes 14% of pay. Employer contributions not required to support basic benefits are allocated to the health care program.

Unreduced Retirement

ELIGIBILITY

Attainment of age 65 with at least five years of Creditable Service, or
Completion of 30 years of Creditable Service at any age.

BENEFIT

The annual benefit payable on service retirement 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 employee contribution account at retirement
- b. A pension equal to the annuity
- c. \$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 \$180.00.

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.

FINAL AVERAGE SALARY

Average annual salary over the member's three highest years of service.

NORMAL FORM OF BENEFIT

Single Life Annuity

Additional options available include joint and survivor (50%, 100%, or other) and term certain (e.g. 60 months) and life thereafter.

Reduced Retirement

ELIGIBILITY

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

BENEFIT

Normal retirement benefit accrued to the date of early retirement. The Defined Benefit amount determined above is adjusted by the following table:

<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
65	30	100

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.

Disability Retirement

ELIGIBILITY

Upon becoming permanently disabled, after completion of at least 5 years of total service credit, an allowance is paid as described on the following page.

BENEFIT

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 equal to 2.2% of final average pay for each year of recognized service, 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 total service credit multiplied by 2.2% of FAS. 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 Benefit Duration in Months</u>
60 and earlier	60 months
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 (Plan D).

SURVIVOR (DEATH-IN-SERVICE) ALLOWANCES – ELIGIBILITY

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 the 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.

SURVIVOR (DEATH-IN-SERVICE) ALLOWANCES – BENEFITS

Upon the death of a member prior to retirement, the accumulated contribution account of the member without interest is payable. Alternatively, the beneficiary may elect the following incomes, payable monthly while eligible:

Number of Qualified Survivors	Annual Benefit as Percent of Member's FAS	Monthly Benefit Shall Not Be Less Than
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 benefits payable to all qualified survivors is 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

Post-Retirement Increases

On the annual anniversary of the initial date of retirement, each allowance is increased by an amount equal to the initial allowance increased by the percentage increase in the consumer price index (CPI) for the prior year, subject to a limit of 3%. If in any year the actual CPI increase is greater than 3%, the excess is "banked" and is used to the extent that CPI increases in subsequent years are less than 3%.

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

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.

Medicare Part-B

Each recipient of a service retirement benefit, a disability benefit or a survivor benefit who 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.

BENEFITS

On termination of employment, a re-employed retirant 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. Interest is granted on the re-employed retirant's prior fiscal year account balance, calculated using a rate determined by the SERS Board (currently 7.75%), compounded annually. The benefit may be payable either as an annuity or as a lump sum.

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 9% 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 retirant members of SERS are not eligible to receive any of the other benefits provided to regular SERS members.