



## **OHIO PUBLIC EMPLOYEES RETIREMENT SYSTEM**

**ANNUAL ACTUARIAL VALUATION OF  
RETIREMENT ALLOWANCES**

**DECEMBER 31, 2001**

With the completion  
of the annual actuarial valuation,  
the Ohio Public Employees Retirement System  
is pleased to present the  
2001 Annual Report.  
This report contains information  
on the financial condition of the system,

the funding status of the system's  
trust funds, the investment performance  
of the system's trust funds, and  
the system's benefit programs.

The report is intended to provide

an overview of the

system's financial condition and its

**GABRIEL, ROEDER, SMITH & COMPANY**



Section	Item	Pages	Retirement System Totals
II	Financial benefit promises	3	Financial benefit promises
3	Comments concerning financing of retirement allowances	4-5	Comments concerning financing of retirement allowances
6	Active members in valuation	6	Active members in valuation
7-9	Financial information	7-9	Financial information
10	Comparison of asset values and rates of return	10	Comparison of asset values and rates of return
11	Expected population development	11	Expected population development
12-16	Active and retired member information	12-16	Active and retired member information
I	Benefits and contributions evaluated	1-7	Benefits and contributions evaluated
8-12	Summary of benefits	8-12	Summary of benefits
III	State Division	Local Government Division	Law Division
IV	Recommendations for Reserve Transfers	Members in valuation	Contributions to support retirement allowances
V	Comparative statement of contribution rates	Development of UAL	Development of UAL
VI	Allowances Being Paid to Retirees and Beneficiaries	Totals by year of retirement	Annuity and Pension Reserve Fund
VII	Actuarial Methods and Assumptions	Survivors' Benefit Fund	Survivors' Benefit Fund
VIII	Financial Principles	Principles and operational techniques	Glossary
IX	GASB Reporting	Meaning of "Unfunded Actuarial Accrued Liabilities"	8



**GABRIEL, ROEDER, SMITH & COMPANY**  
**Consultants & Actuaries**

One Towne Square • Suite 800 • Southfield, Michigan 48076 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

August 9, 2002

The Retirement Board  
Public Employees Retirement System of Ohio  
Columbus, Ohio

Ladies and Gentlemen:

The results of the *December 31, 2001 annual actuarial valuation* of the Public Employees Retirement System of Ohio, based upon Chapter 145 of the Code as amended are presented in this report. (The gain/loss analysis of experience and projections of retiree health and Medicare are covered in separate reports.) The purpose of the valuation is to measure the system's funding progress and to determine employer contribution rates for the coming year in accordance with established funding policy.

The individual member statistical data required for the valuations was furnished by your Executive Director and Staff, together with pertinent data on financial operations. Their cooperation in furnishing these materials is acknowledged with appreciation.

The actuarial assumptions used in the valuations are summarized in Section VII of this report. The assumptions are established by the Retirement Board after consulting with the actuary.

The valuation was completed in accordance with standards of practice prescribed by the Actuarial Standards Board and in conformance with Chapter 145 of the Revised Code of Ohio. To the best of our knowledge this report is complete and accurate and the actuarial methods and assumptions produced results which are reasonable.

Respectfully submitted,  
**GABRIEL, ROEDER, SMITH & COMPANY**

Norman L. Jones, F.S.A.

Brian B. Murphy, F.S.A.

BBM/lr

Planning for retirement is a process that begins long before you actually retire. It's a process that requires a clear understanding of your financial goals and how they relate to your overall financial picture.

#### Planning

Planning is the first step in the retirement process. It involves setting financial goals and creating a plan to achieve them. This includes determining how much money you will need for retirement, how much you can afford to save, and how to invest your savings effectively.

Planning also involves understanding the different types of retirement savings options available, such as traditional IRAs, Roth IRAs, 401(k)s, and 403(b)s. It's important to understand the tax implications of each option and how it fits into your overall financial strategy.

Planning for retirement is a continuous process. As your financial situation changes, so too should your retirement plan. It's important to review your plan periodically and make adjustments as needed. This may involve increasing your savings rate, changing your investment strategy, or adjusting your withdrawal plan.

## Retirement System Totals



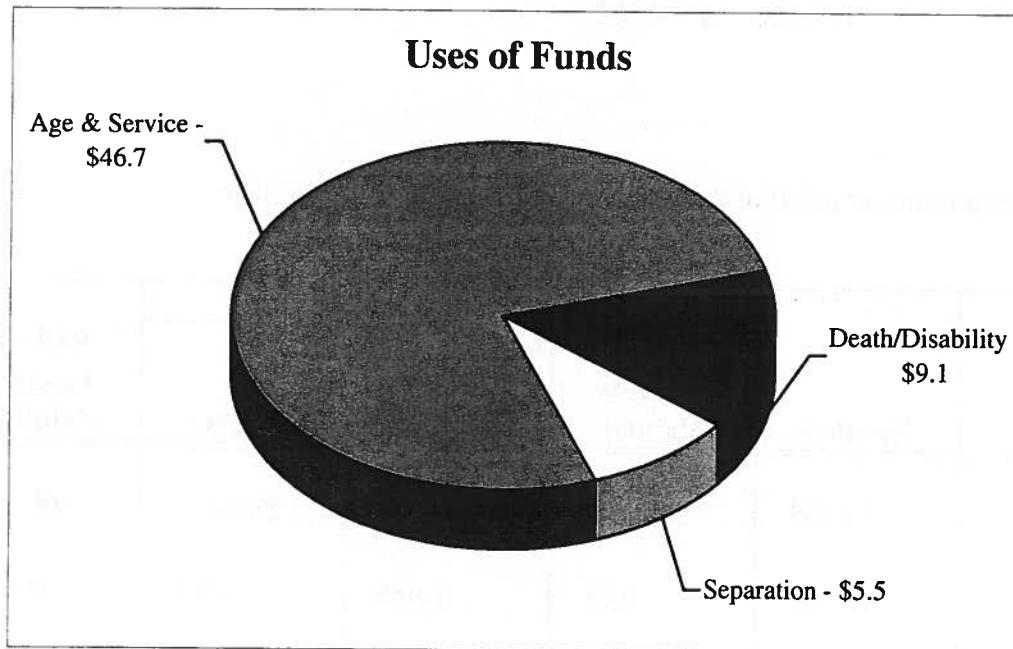
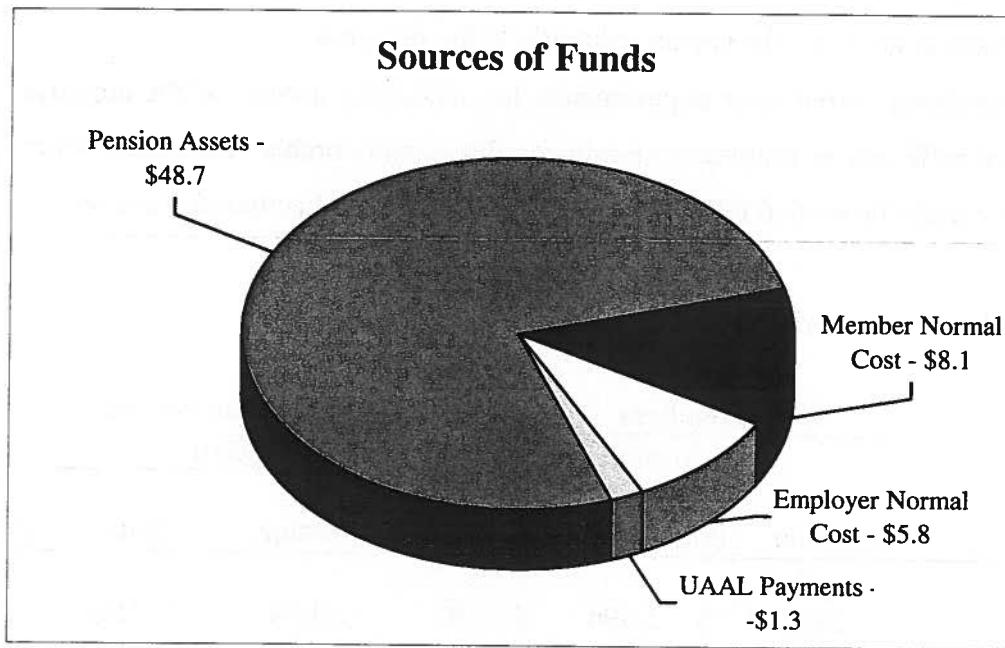
© 2002 Retirement System of the State of Florida. All rights reserved. The Retirement System of the State of Florida is a registered service mark of the State of Florida. The Retirement System of the State of Florida is an equal opportunity employer.

Florida Department of Education

Florida Department of

**FINANCING \$61.3 BILLION\* OF PENSION BENEFIT PROMISES  
FOR PRESENT ACTIVE AND RETIRED MEMBERS  
DECEMBER 31, 2001  
(DOLLAR AMOUNTS IN BILLIONS)**

---



\* Present value of future benefits – all divisions combined.

# After recommended reserve transfers

Total	\$136,456	\$157.84	\$19,087	\$19,087	100.0 %
A & PR	121,875	\$147.90	\$18,001	\$18,001	100.0 %
SBF	14,581	9.94	1,086	1,086	100.0 %
Fund	Number	Value	Liabilities	Assets#	Liabilities

Retirements and beneficiaries included in the valuation totaled 136,456 as follows:

Division	Active Members	Retirement Allowance Portion	Annual Payroll	Normal UAL	Cost (\$Millions)	Number	Portion	Total (\$Millions)	Totals
State	109,219	\$ 3,996	6.17%	2.14%	8.31%	\$ (511)			
Local Government	243,202	6,451	6.14%	2.41%	8.55%	\$ (667)			
Law Enforcement	7,892	335	8.88%	2.82%	11.70%	(78)			

Key valuation results are summarized below.

- After satisfying current cost requirements, the remaining portion of the employer being made to members for service currently being rendered.
- The employer rates are sufficient to fully fund the cost of benefit commitments.
- Rates are sufficient to provide a margin for future unfavorable experience, which will very likely be needed following the December 31, 2002 actuarial valuation.

The December 31, 2001 actuarial valuations of members indicate the following about the portion of employer contribution rates allocated to financing retirement allowances:

## COMMENTS REGARDING THE FINANCING OF RETIREMENT ALLOWANCES

### *Changes Since Last Valuation.*

- Revised economic assumptions – 8.0% investment return, 4.0% wage inflation
- 112%/88% market value corridor for funding value of assets
- New data preparation by PERS staff for actuarial valuations
- COLA included in optional benefit factors

**Experience.** Experience was mixed this year. Measured on a market value basis, investment return was disappointing in 2001 for Ohio PERS and for most other retirement funds across the nation. In total, recognized assets exceed computed accrued liabilities by \$1,256,447,521. However, the funding value of assets exceeds the market value by about five times that amount as shown on page 5, line H. Unless the investment markets rebound, we will see years when investment losses begin flowing into the valuation. With \$2.3 billion of investment loss related to pre-2002 experience expected to be recognized in the 2002 valuation, and a possible additional amount related to 2002 experience itself, it is likely that the next valuation will show unfunded liabilities and an amortization period in excess of 40 years based on the present contribution allocation between pension and retiree health benefits.

Additional information concerning 2001 experience will be presented in a separate report of gain/loss experience.

**Conclusion.** Based on the results of the December 31, 2001 regular annual actuarial valuation, it is our opinion that the Public Employees Retirement System of Ohio continues to be in sound financial condition in accordance with actuarial principles of level percent of payroll financing.

STATE	1975	83,220	40.6 yrs.	\$ 9,441	6.4 %	@	ACTIVE MEMBERS IN VALUATION					
							No. of Active Members	Dec. 31 Attained Age	Accrued Service Yrs.	Average Annual Payroll	Group Averages	Valuation Group
1980	92,872	39.4	7.3	13,934	8.1 %	@						
1985	89,256	39.2	8.4	18,677	7.4 %	@						
1990	98,939	40.7	8.1	25,281	6.2 %	@						
1995	114,596	40.4	8.8	27,962	2.0 %	@						
1997	114,036	40.5	9.1	29,858	4.1 %	@						
1998	112,323	41.0	9.4	31,159	4.4 %	@						
1999	112,761	41.2	9.6	31,851	2.2 %	@						
2000	113,099	41.6	9.7	34,201	7.4 %	@						
2001	109,219	42.1	10.2	36,589	7.0 %	@						
2001	1975	149,557	40.8 yrs.	6.1 yrs.	\$ 8,771	4.3 %	@					
2001	1990	160,797	40.7	7.4	13,035	8.2 %	@					
2001	1985	158,285	40.1	8.3	15,983	6.2 %	@					
2001	1990	173,220	41.5	7.9	19,506	4.1 %	@					
2001	1995	223,431	41.2	7.6	20,384	0.9 %	@					
2001	1997	231,668	41.4	7.8	21,481	3.1 %	@					
2001	1998	234,601	41.6	8.0	22,334	4.0 %	@					
2000	1999	240,005	41.7	8.0	23,276	4.2 %	@					
2000	2000	245,831	41.8	8.1	24,401	4.8 %	@					
2001	2001	243,202	42.2	8.4	26,526	8.7 %	@					
LAW	1975	2,111	35.0 yrs.	4.9 yrs.	\$ 10,467	-	-					
LAW	1990	5,804	38.6	9.9	26,936	6.0 %	@					
LAW	1995	6,605	39.3	11.1	32,441	3.2 %	@					
LAW	1997	7,256	39.3	11.5	35,680	5.0 %	@					
LAW	1998	7,507	39.3	11.6	36,931	3.5 %	@					
LAW	1999	7,766	39.3	11.4	38,506	4.3 %	@					
LAW	2000	8,045	39.3	11.7	40,387	4.9 %	@					
LAW	2001	7,892	39.3	11.8	42,503	5.2 %	@					

@ 5 year annual compound rate

## GROUP AVERAGES - COMPARATIVE STATEMENT

### ACTIVE MEMBERS IN VALUATION

**MARKET VALUE RECONCILIATION OF ASSETS**  
**(ALL DIVISIONS COMBINED)**

---

	<b>Calendar Year Ended December 31</b>	
	<b>2001</b>	<b>2000</b>
	\$	\$
<b>Beginning Market Value</b>	\$57,175,180,929	\$57,894,315,287
<b>Revenues</b>		
Member Contributions	931,050,640	879,844,987
Employer Contributions	1,408,392,987	1,171,674,955
Retiree Health Premiums	26,138,574	22,131,597
Total Revenues	2,365,582,201	2,073,651,539
<b>Expenditures</b>		
Retirement Benefits	1,880,704,941	1,656,264,159
Refunds of Member Contributions	262,681,258	81,830,823
System Paid Retiree Health Care	644,291,631	515,135,494
Member Paid Retiree Health Care	26,138,574	22,131,597
Retiree Medicare Reimbursement	49,192,479	44,470,800
Administrative Expenses	52,567,051	39,891,334
Other	24,028,360	14,156,579
Total Expenditures	2,939,604,294	2,373,880,786
<b>Investment Return</b>		
Ordinary Income	716,876,858	2,477,080,547
Realized Capital Value Changes	689,234,615	1,106,464,093
Unrealized Capital Value Changes	(4,113,625,052)	(4,002,449,751)
Total Investment Return	(2,707,513,579)	(418,905,111)
<b>Ending Market Value</b>	\$53,893,645,257	\$57,175,180,929

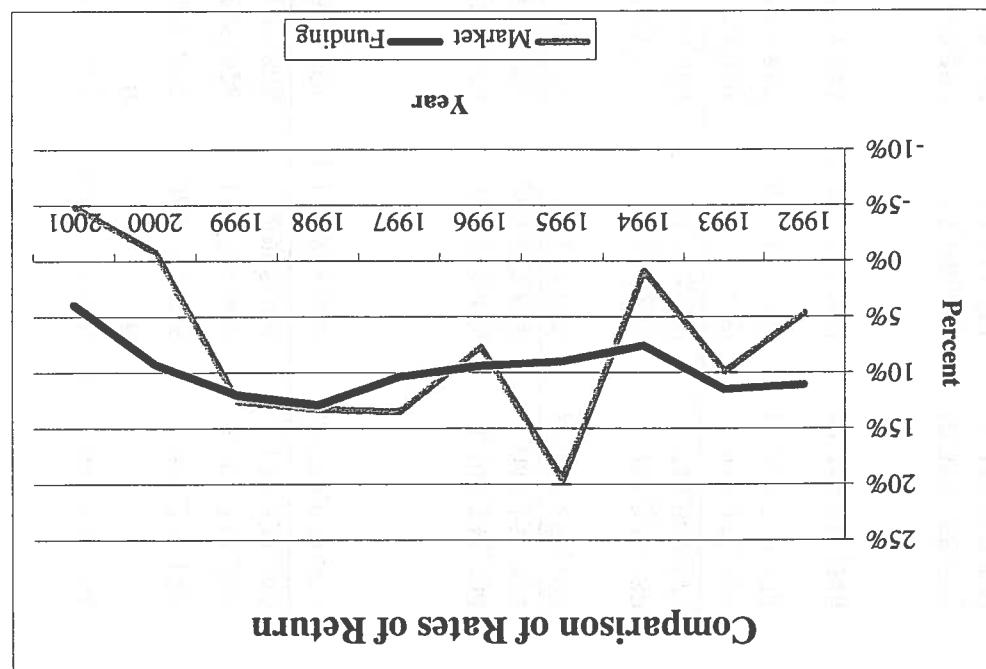
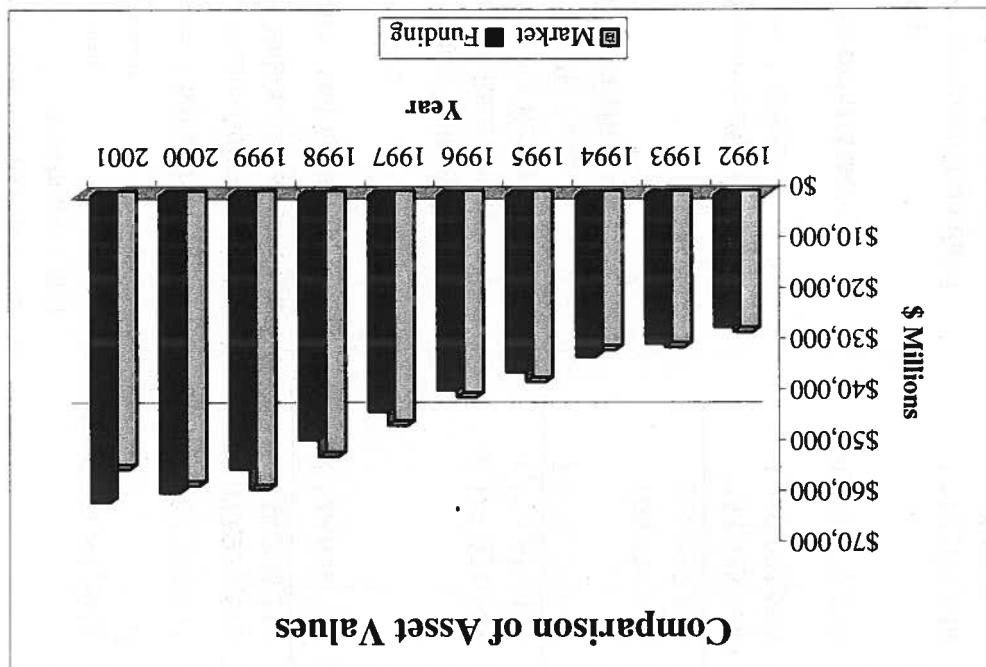
## DEVELOPMENT OF FUNDING VALUE OF ASSETS (BASED UPON 4 YEAR PHASE-IN OF DIFFERENCES BETWEEN ACTUAL AND ASSUMED RETURN)

	<b>Year Ended December 31</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
A. Funding Value Beginning of Year		\$48,141,431,295	\$53,865,320,048	\$58,580,088,298	\$60,974,175,913		
B. Market Value End of Year		57,894,315,288	57,175,180,929	53,893,645,257			
C. Market Value Beginning of Year		51,399,531,028	57,894,315,288	57,175,180,929			
D. Non-Investment/Administrative Net Cash Flow		(85,315)	(260,337,913)	(521,455,042)			
E. Investment Return							
E1. Market Total:B-C-D		6,494,869,575	(458,796,446)	(2,760,080,630)			
E2. Assumed Rate of Return		7.75%	7.75%	7.75%			
E3. Assumed Amount of Return		3,730,957,619	4,164,474,210	4,519,750,460			
E4. Amount Subject to Phase In: E1-E3		2,763,911,956	(4,623,270,656)	(7,279,831,090)			
F. Phased-In Recognition of Investment Return							
F1. Current year: 0.25xE4		690,977,989	(1,155,817,664)	(1,819,957,773)			
F2. First Prior Year		680,589,644	690,977,989	(1,155,817,664) \$	(1,819,957,773)		
F3. Second Prior Year		594,881,983	680,589,644	690,977,989	(1,155,817,664) \$	(1,819,957,773)	
F4. Third Prior Year		26,566,833	594,881,984	680,589,645	690,977,989	(1,155,817,664) \$	(1,819,957,771)
F5. Total Recognized Investment Gain		1,993,016,449	810,631,953	(1,604,207,803)	(2,284,797,448)	(2,975,775,437)	(1,819,957,771)
G. Funding Value End of Year							
G1. Preliminary Funding Value End of Year: A+D+E3+F5		53,865,320,048	58,580,088,298	60,974,175,913			
G2. Upper Corridor Limit: 112% x B				60,360,832,688			
G3. Lower Corridor Limit: 88% x B				47,426,407,826			
G4. Funding Value End of Year		53,865,320,048	58,580,088,298	60,360,832,688			
H. Difference Between Market and Funding Value							
I. Recognized Rate of Return		4,028,995,240	(1,404,907,369)	(6,467,237,431)	(4,795,733,208)	(1,819,957,771)	
J. Market Rate of Return		11.89%	9.26%	3.95%			
K. Ratio of Funding Value to Market Value		12.64%	-0.79%	-4.85%			
L. Ratio of Actual to Assumed Investment Return		93%	102%	112%			
The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (line E4) are phased-in over a closed 4 year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed value, Funding Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 3 consecutive years, funding value will become equal to market value.							

**ALLOCATION OF FUNDING VALUE OF ASSETS  
AMONG DIVISIONS AND USAGE  
DECEMBER 31, 2001**

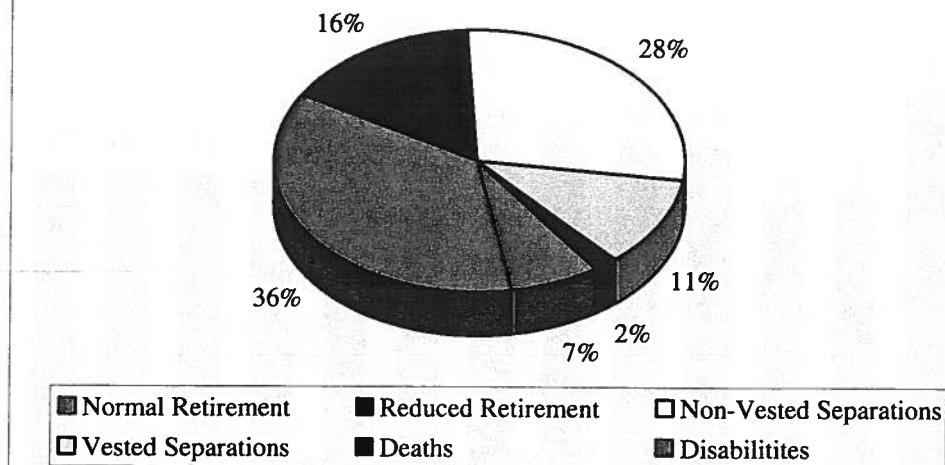
	<b>State</b>	<b>Local</b>	<b>Law</b>	<b>Total</b>
<b>Retirement Assets</b>				
Active and Inactive Member Assets				
Employer Accumulation Fund	\$ 6,871,547,938	\$ 9,522,974,467	\$671,622,899	\$ 17,066,145,304
Pension Survivor	0	0	0	0
Employee Savings Fund	3,129,330,863	4,597,800,498	264,139,835	7,991,271,196
Market Value Adjustment -Pension	2,077,255,575	2,841,007,028	184,054,966	5,102,317,569
Market Value Adjustment-Survivor	44,302,373	76,040,808	2,995,364	123,338,545
<b>Total Active and Inactive Assets</b>	<b>12,122,436,749</b>	<b>17,037,822,801</b>	<b>1,122,813,064</b>	<b>30,283,072,614</b>
Retired Assets				
Annuity and Pension Reserve				
Service Retirement	6,143,221,173	7,949,594,576	303,516,455	14,396,332,204
Disability Retirement	1,156,831,471	1,591,652,795	293,667,638	3,042,151,904
<b>Total A&amp; PR Fund</b>	<b>7,300,052,644</b>	<b>9,541,247,371</b>	<b>597,184,093</b>	<b>17,438,484,108</b>
Survivor Benefit Fund				
S-1	106,724,166	165,983,568	8,637,853	281,345,587
S-2	262,258,994	467,340,914	16,309,769	745,909,677
<b>Total Survivor Benefit Fund</b>	<b>368,983,160</b>	<b>633,324,482</b>	<b>24,947,622</b>	<b>1,027,255,264</b>
<b>Total Retired Assets</b>	<b>7,669,035,804</b>	<b>10,174,571,853</b>	<b>622,131,715</b>	<b>18,465,739,372</b>
<b>Total Retirement Assets</b>	<b>19,791,472,553</b>	<b>27,212,394,654</b>	<b>1,744,944,779</b>	<b>48,748,811,986</b>
Health Assets				
Employer Accumulation Fund	3,712,028,349	6,340,179,289	315,100,664	10,367,308,302
Market Value Adjustment	445,688,812	761,240,677	37,832,911	1,244,762,400
<b>Total Health Assets</b>	<b>4,157,717,161</b>	<b>7,101,419,966</b>	<b>352,933,575</b>	<b>11,612,070,702</b>
<b>Total Funding Value of Assets</b>	<b>\$ 23,949,189,714</b>	<b>\$ 34,313,814,620</b>	<b>\$ 2,097,878,354</b>	<b>\$ 60,360,882,688</b>

The above reserves were reported to the Actuary by PERS. The Actuary calculated the Market Value Adjustment. The Actuary also separated the assets between the two Law groups. The separation shown between Law A and Law B for health assets is an approximation.

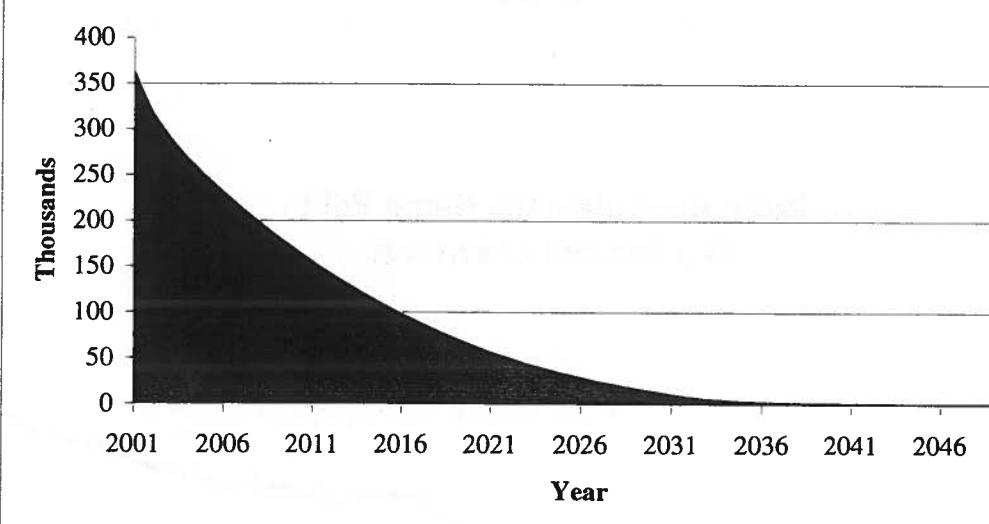


## DEVELOPMENT OF PRESENT POPULATION DECEMBER 31, 2001

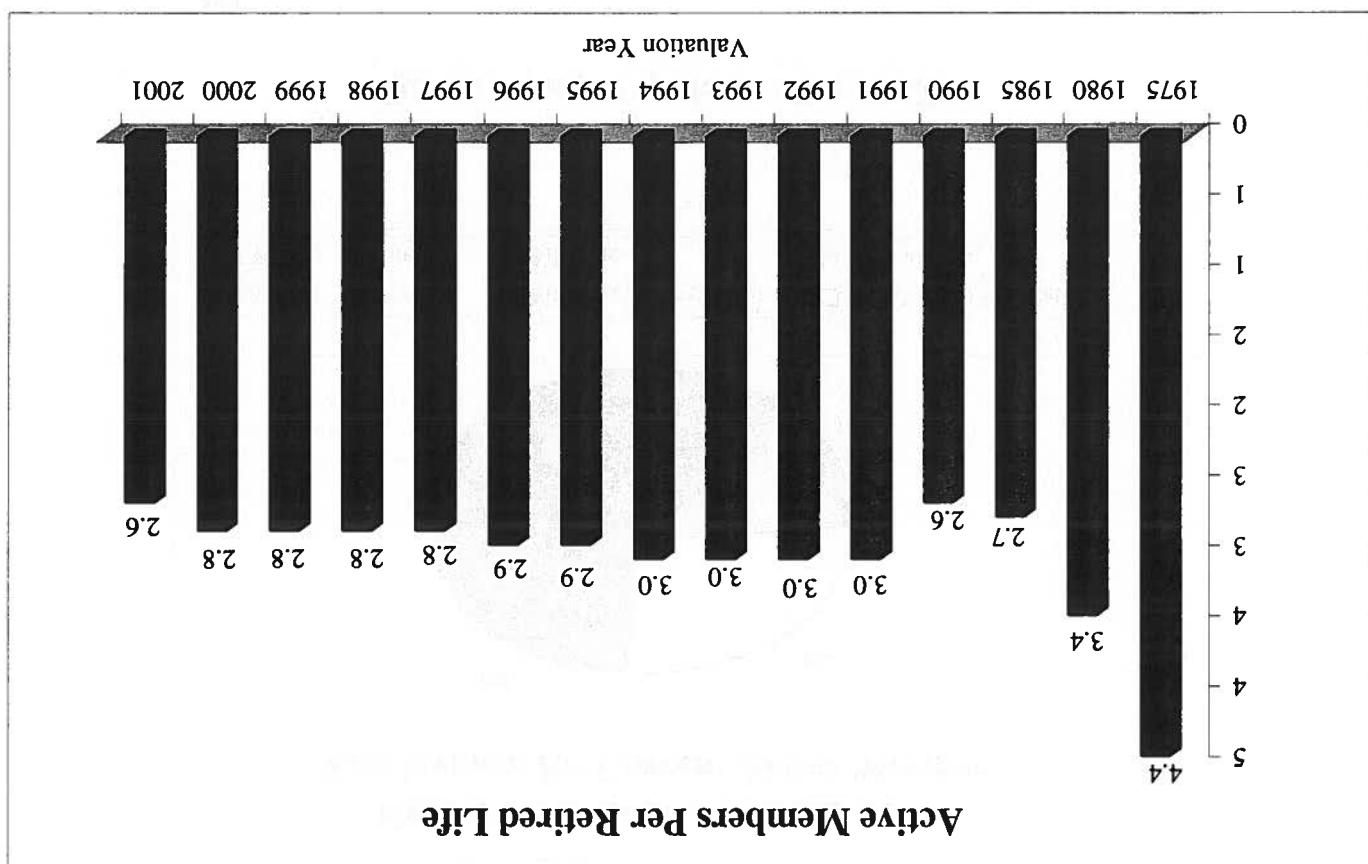
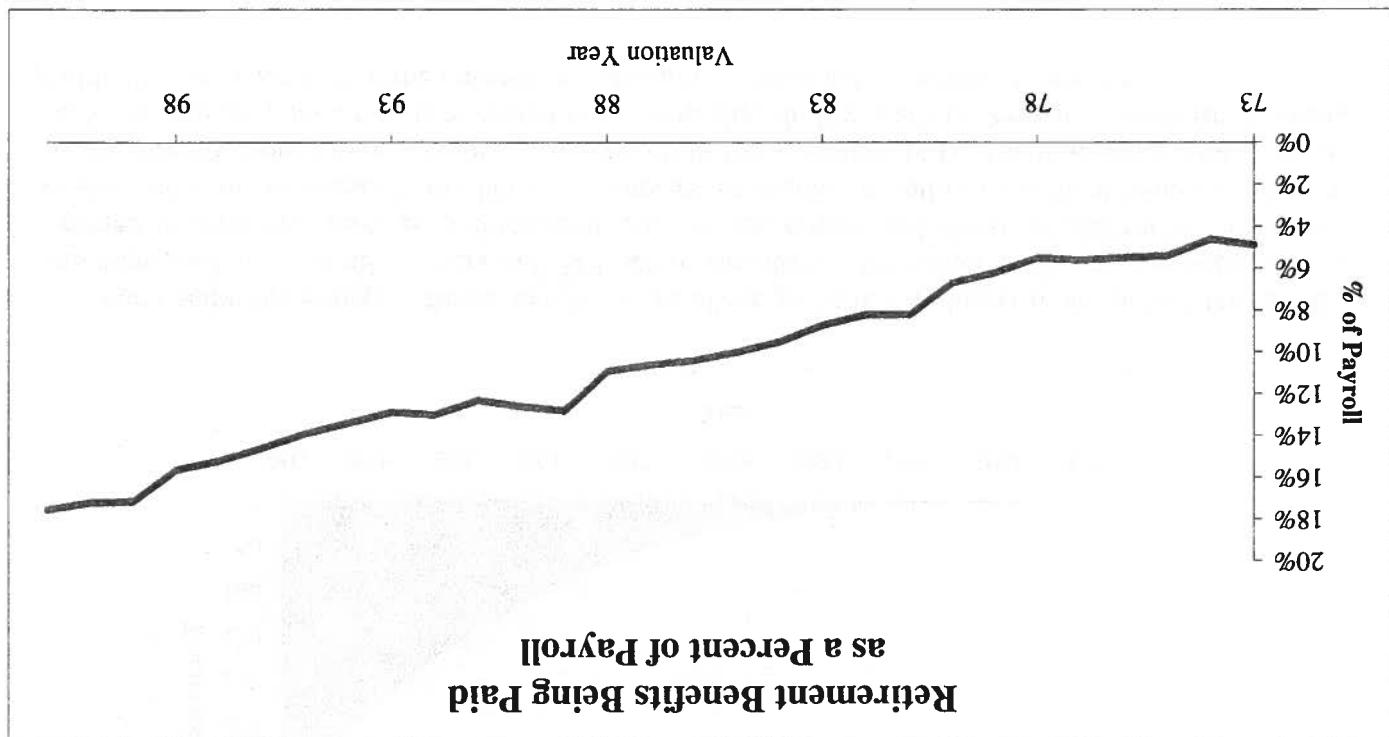
### Expected Terminations from Active Employment for Current Active Members



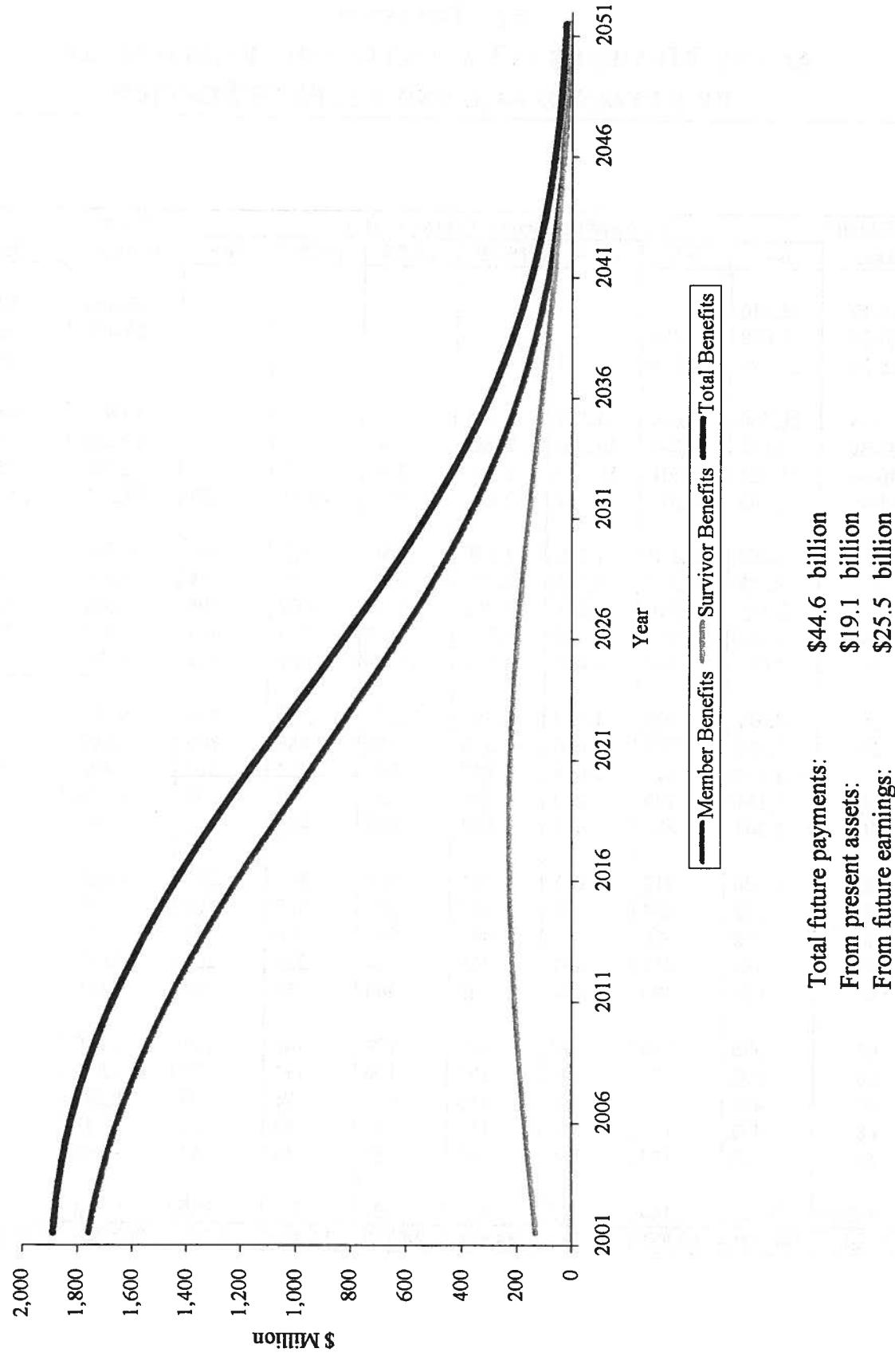
### Closed Group Population Projection



The charts show the expected future development of the present population in simplified terms. The retirement system presently covers 360,313 active members. Eventually, 28% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for a monthly benefit. 63% of the present population is expected to receive monthly retirement benefits either by retiring directly from active service, or by separating from service without withdrawing contributions. 9% of the present population is expected to become eligible for death-in-service or disability benefits. Within 9 years, over half of the covered membership is expected to consist of new hires.



## PROJECTED FUTURE BENEFIT PAYMENTS ON BEHALF OF PRESENT RETIRED LIVES



Attained Ages	Years of Service to Valuation Date						Payroll Number	Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	13,446	23,478	4,316	179			13,446	686,288,732
20-24	25,088	330					25,418	\$94,988,608
25-29							27,973	352,138,803
30-34	20,706	11,611	4,219	145			36,681	1,083,199,467
35-39	17,678	9,841	10,176	3,985	320			1,345,689,340
40-44	17,425	10,016	10,063	8,353	6,110	338	42,000	1,754,736,200
45-49	15,145	9,371	9,579	7,351	4,661	229	55,233	1,938,934,190
50	2,494	1,593	1,786	1,359	1,365	1,412	237	10,246
51	2,518	1,517	1,703	1,387	1,309	1,371	294	10,099
52	2,165	1,519	1,621	1,250	1,202	1,207	394	9,358
53	2,233	1,404	1,687	1,249	1,157	1,115	469	9,314
54	2,080	1,367	1,489	1,274	1,125	987	469	8,791
55	2,041	1,420	1,669	1,307	1,153	901	552	9,043
56	1,388	883	1,060	838	730	487	309	5,695
57	1,273	871	1,010	827	719	453	283	5,436
58	1,131	829	852	792	687	431	243	4,970
59	1,247	889	999	852	788	448	268	5,491
60	1,026	712	846	726	663	385	251	4,609
61	868	634	683	587	464	307	165	3,708
62	758	520	574	482	400	307	181	3,191
63	684	459	459	438	340	276	149	2,649
64	616	393	414	365	306	210	124	2,428
65	575	328	304	249	204	149	101	1,910
66	502	275	235	197	176	114	79	1,575
67	465	221	185	140	114	76	79	1,280
68	452	191	147	119	111	76	79	1,133
69	413	157	135	87	67	62	47	968
70 & Over	2,223	1,184	713	410	324	250	250	5,363
Totals	160,118	62,851	52,766	34,676	28,719	15,934	5,249	\$10,782,820,987
	77,615,309							

**ALL DIVISIONS**  
**ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

**ALL DIVISIONS**  
**ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY YEARS OF SERVICE**

---

Service Years	Active Member Count			Active Member Pays	
	Males	Females	Total	Total	Average
0	26,477	31,104	57,581	\$799,157,896	\$13,879
1	17,362	22,133	39,495	750,772,281	19,009
2	11,975	14,485	26,460	618,788,995	23,386
3	8,866	10,909	19,775	526,604,394	26,630
4	7,854	8,953	16,807	462,943,068	27,545
5	6,622	7,872	14,494	431,671,021	29,783
6	6,392	6,983	13,375	412,784,400	30,862
7	6,369	6,867	13,236	437,410,499	33,047
8	5,386	6,099	11,485	373,720,224	32,540
9	4,826	5,435	10,261	352,239,907	34,328
10	5,429	6,282	11,711	400,768,559	34,222
11	5,344	6,147	11,491	425,435,446	37,023
12	4,968	5,651	10,619	394,782,056	37,177
13	4,507	5,437	9,944	379,988,274	38,213
14	4,217	4,784	9,001	351,962,541	39,103
15 & Up	42,637	41,941	84,578	3,663,791,426	43,318
<b>Totals</b>	<b>169,231</b>	<b>191,082</b>	<b>360,313</b>	<b>\$10,782,820,987</b>	<b>\$29,926</b>

**RETIREMENT SYSTEM TOTALS**  
**DECEMBER 31, 2001**  
**(\$ MILLIONS)**

Division	Number	Payroll	<u>Actuarial Accrued Liabilities</u>						Assets	Unfunded Accrued Liabilities	Amort. Years			
			<u>Active Members</u>		<u>Retired Lives</u>		<u>Active &amp; Inactive Members</u>	<u>Retired Lives</u>						
			Annual	Annual	Number	Allowances	Members	Lives						
State	109,219	\$ 3,996	48,682	\$ 779	\$ 11,351	\$ 7,929	\$ 19,280	\$ 19,791	\$ (511)	*				
Local	243,202	6,451	85,514	1,065	15,983	10,562	26,545	27,212	(667)	*				
Law	7,892	335	2,260	51	1,071	596	1,667	1,745	(78)	*				
<b>Totals</b>	<b>360,313</b>	<b>\$ 10,782</b>	<b>136,456</b>	<b>\$ 1,895</b>	<b>\$ 28,405</b>	<b>\$ 19,087</b>	<b>\$ 47,492</b>	<b>\$ 48,748</b>	<b>\$ (1,256)</b>					

\* *Accrued liabilities are fully funded.*

## **SECTION I**

### **Benefits and Conditions Evaluated**

---



Maximum allowance is 100% of FAS. Minimum allowance is based upon twice the member's savings funding balance at retirement together with interest credits.

Attained Age	Years of Service Credit	Percentage of Base Amount	N/A	28	25	75%
58	26	25	N/A	27	26	80
59	27	25	N/A	27	27	85
60	27	25	N/A	27	27	88
61	27	25	N/A	27	27	91
62	N/A	N/A	N/A	29	29	94
63	N/A	N/A	N/A	29	29	95
64	N/A	N/A	97	29	29	97
65	30 or more	100	65	30	30	100

**Age and service allowance -** A retiring member's age and service allowance is equal to Ohio service years of service as determined in the following schedule:

service over 30 years (H.B. 628). The allowance is then adjusted by factors based on attained age or credit times the greater of \$86, or 2.2% of FAS for the first 30 years of service plus 2.5% for years of service over 30 years (H.B. 628).

**Age and service eligibility -** A member who (i) has attained age 60 years and has 5 or more years of service credit, or (ii) has attained age 55 years and has 25 or more years of service credit, or (iii) has 30 or more years of service credit, may retire with an age and service retirement allowance.

**Age & Service Benefits - State and Local Government Members**

Final average salary ("FAS") means the average of the annual earnings for the 3 highest calendar years of compensation.

## BENEFITS AND CONDITIONS EVALUATED

**Age & Service Benefits – Law Members (Public Safety) eligible to retire under Ohio Revised Code section 145.33(B)(2)(a)**

***Age and service eligibility*** - A law member who (i) has attained age 52 and has 25 or more years of credited service, or (ii) has attained age 62 and has 15 or more years of credited service, or (iii) has attained age 52 and has 15 or more years of credited service, may retire with an age and service allowance.

***Age and service allowance*** - A retiring member's age and service allowance under eligibility (i) or (ii) above is equal to 2.5% of FAS times the first 25 years of service credit plus 2.1% of FAS times service credit in excess of 25 years (H.B. 628). Maximum allowance is 90% of FAS. A retiring member's age and service allowance under eligibility (iii) above is equal to 1.5% of FAS times years of service credit. Minimum allowance for all law members is based upon twice the member's savings fund balance at retirement together with interest credits.

**Age & Service Benefits - Law Members (Law Enforcement) eligible to retire under Ohio Revised Code section 145.33(B)(2)(b)**

***Age and service eligibility*** - A law member who is a Sheriff, Deputy Sheriff, or Township Constable or Police Officer and who (i) has attained age 48 and has 25 or more years of credited service, or (ii) has attained age 62 and has 15 or more years of credited service, or (iii) has attained age 52 and has 15 or more years of credited service, may retire with an age and service allowance.

***Age and service allowance*** - A retiring member's age and service allowance under eligibility (i) or (ii) above is equal to 2.5% of FAS times the first 25 years of service credit plus 2.1% of FAS times service credit in excess of 25 years (H.B. 628). Maximum allowance is 90% of FAS. A retiring member's age and service allowance under eligibility (iii) above is equal to 1.5% of FAS times years of service credit. Minimum allowance for all law members is based upon twice the member's savings fund balance at retirement together with interest credits.

**Health Care Coverage.** Health care coverage is available to persons being paid a monthly allowance from PERS. Members retiring with a normal or early service retirement allowance after June 13, 1986 must have 10 or more years of service credit to be eligible for this benefit.

- Disability retirement. The disability program was revised in order to comply with the Older Workers Benefit Protection Act. Employees becoming members after July 29, 1992 are covered by 1992 program (original plan) or elect to be covered by the post July 29, 1992 program (revised plan). Members retiring with a normal or early service retirement allowance after June 13, 1986 must have 10 or more years of service credit to be eligible for this benefit.
- Medicare premiums. Medicare part B premiums are paid for those eligible, upon proof of coverage.
- c) After the disability benefit ends, a service retirement benefit equal to the greater of (i) the accrued benefit based on actual service, or (ii) 2.2% of FAS (H.B. 628) times service credit including the period of disability (maximum 45% of FAS). In addition, an amount equal to the cost-of-living increases the member would have received had the member retired on the basis of age and service is paid.

- b) A disability benefit equal to the greater of 45% of FAS or the actual service credit disabled at ages 60 and 61 to 12 months for members disabled at age 69 or older. (i) the accrued benefit based on actual service, or (ii) 2.2% of FAS (H.B. 628) times 2.2% of FAS (H.B. 628) with no early retirement reduction (maximum 60% of FAS). The disability benefit period is to age 65 if the member is disabled prior to age 60. The benefit period declines gradually from 60 months for members disabled at ages 60 and 61 to 12 months for members disabled at age 69 or older.

- a) A member may apply at any age after completion of 5 years of service. The service requirement is waived for Law Enforcement members with an on-duty illness or injury.
- c) Maximum allowance is 75% of FAS, minimum allowance is 30% of FAS.

- Features of the revised plan are:
- b) The amount of the allowance is the service the member would have had if but before attaining age 60, a member is eligible for a disability allowance.
- a) Upon becoming permanently disabled after completion of at least 5 years of service employer had continued to age 60 times (i) 2.2% of FAS (H.B. 628), or (ii) \$86, whichever produces the greater benefit.

- Features of the original plan are:
- Disability retirement. The disability program was revised in order to comply with the Older Workers Benefit Protection Act. Employees becoming members after July 29, 1992 are covered by 1992 program (original plan) or elect to be covered by the post July 29, 1992 program (revised plan).

Members retiring with a normal or early service retirement allowance after June 13, 1986 must have 10 or more years of service credit to be eligible for this benefit.

**Death while eligible to retire.** If a member dies in service after becoming eligible to retire with an age and service allowance and leaves a surviving spouse or other sole dependent beneficiary, the survivor receives 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.** If a deceased member had at least 1-1/2 years of contributing service credit, with at least ¼ year of such service occurring within the 2-1/2 years prior to death, or was receiving a disability benefit, qualified survivors may receive the following monthly benefits. The benefit paid will be the greater of the applicable benefits paid under the following two schedules (H.B. 628):

***Schedule 1***

<b><u>Number of Qualified Survivors Affecting the Benefit</u></b>	<b><u>Annual Benefit as a % of Deceased Member's FAS</u></b>	<b><u>Minimum Monthly Benefit</u></b>
1	25%	\$250
2	40%	\$400
3	50%	\$500
4	55%	\$500
5 or more	60%	\$500

***Schedule 2***

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

Qualifying survivors who are paid benefits under Schedule 2 share equally in the benefits, except that if there is a surviving spouse, the spouse receives the greater of 25% of FAS or \$250.

Service Credit At Retirement	Amount of Death Benefit	Death Benefit
5 to 9 years	\$ 500	\$ 500
10 to 14 years	1,000	1,000
15 to 19 years	1,500	1,500
20 to 24 years	2,000	2,000
25 or more years	2,500	2,500

**Post-retirement death benefit.** Upon the death of an age and service or disability retiree, a death benefit in the following amount is payable:

**Post-retirement increases.** Each July after June 30, 1971 or the annual anniversary established 12 months after the initial date of retirement, each allowance is increased by the average percentage change in the Consumer Price Index (CPI) plus an accumulation amount if prior CPI's exceeded 3.0%. Any percentage of change in the CPI in any year that is in excess of 3.0% is accumulated and used to determine increases in future years. The maximum annual increase is 3.0%. The minimum recomputed allowance equals the initial allowance.

**CPI.** The FAS is adjusted by the lesser of (1) 3% or (2) the actual average percentage change in the death. The FAS is adjusted at least one-half support from the member during the 12-month period adjusted for each year between the effective date of the disability benefit and the recipient's date of death. The FAS is adjusted at least one-half support from the member during the 12-month period adjusted for each year between the effective date of the disability benefit and the recipient's date of death.

**Qualified survivors of disability recipients** have the FAS used in calculating their benefits immediately preceding the member's death.

**A qualified parent** is a dependent parent aged 65 or older (earlier if mentally or physically incompetent) who received at least one-half support from the member during the 12-month period approved school), or regardless of age is adjudged physically or mentally incompetent at the time of the member's death.

**A qualified child** is a child who has never been married and under the age of 18 (or 22 if attending an approved school) or is adjudged physically or mentally incompetent.

**Deferred benefits.** A member with at least 5 years of service credit who leaves service before being eligible for an immediate allowance and who does not withdraw accumulated contributions will be entitled to a deferred allowance at age 60. For law members, the age at which benefits commence depends on the amount of service credit. The amount of the allowance will be based on credited service and final average salary at time of leaving service.

**Optional Benefit Forms.** Retiring members may elect to have benefits paid in straight life form, in a form that guarantees a minimum number of monthly payments, or in a form that provides a continuation of all or a portion of the monthly benefit to a beneficiary after the death of the retiree. If a retiring member elects benefits in other than straight life form, the monthly amount is adjusted. The adjustment is based upon interest and mortality assumptions (with a blend of male and female mortality rates to produce unisex election factors consistent with the gender distribution of members electing optional forms of payment).

**Member contributions.** State and local government members contribute 8.5% of salary. The maximum statutory rate is 10% of salary.

Law members who primarily are Sheriffs, Deputy Sheriffs & Township Constables or Police Officers contribute 10.1% of salary effective 1/1/2001. Remaining Law members (Public Safety) contribute 9.0% of salary.

**Refund of members accumulated contributions.** In the event a member leaves service prior to retirement, the member may elect to receive a refund of contributions with interest and may be eligible to receive an additional amount as described below. These refund provisions are available to all members with the exception of certain Law members. If a member dies prior to retirement and survivor benefits are not payable, the member's contributions with interest are paid to a designated beneficiary or other survivor.

beginning interest will be credited annually to member contribution balances. The rate of interest credited is determined by the PERS Board and will not be greater than 6%. If the member has, or had at the time of death, at least 5 years, but less than 10 years of service credit, an additional 33% of the member's contribution balance will be paid to the member or survivor. If the member has, or had at the time of death, at least 10 years of service credit, an additional 67% of the member's contribution balance will be paid to the member or survivor. The additional amount is not paid if the member is a re-employed retiree, or in the case of a deceased member, was receiving disability benefits at the time of death.

Public Safety members who were hired at an age that would permit them to achieve 25 years of Law service credit prior to age 52 if they did not terminate employment are not eligible for the enhanced refund provisions described above. Such members may receive refunds of contributions in accordance with the law as it existed prior to the passage of Senate Bill 144.

**Employer contributions.** Each employer contributes the remainder amounts necessary to finance PERS benefits. Employer contributions are expressed as percentages of member covered payroll. The maximum statutory rate for state and local government members is 14%. The maximum statutory rate for law members is 18.1% (H.B. 416, effective 1/1/2001).

**SAMPLE BENEFIT COMPUTATION**  
**STATE OR LOCAL MEMBER - NORMAL RETIREMENT**  
**RETIRING DECEMBER 31, 2001**  
**UNDER BENEFIT PROVISIONS EVALUATED**

---

**Data:**

- A. \$32,000 Final Average Earnings
  - B. 33 Years of Credited Service
  - C. 59 Age of Retiree
  - D. 56 Age of Spouse
  - E. 100% Percentage of Pension to Continue to Spouse after retiree's death  
(Retiree makes the choice of 100% Joint and Survivor with Pop-Up)
- 

**Computations:**

- F. Formula Benefit:  $(0.022 \times 30 \text{ years} + 0.025 \times 3 \text{ years}) \times \$32,000 = \$ 23,520$
  - G. Reduction for Line E Election  $(1 - 0.81756) \times (F) = \underline{\hspace{2cm} 4,291}$
  - H. Benefit Payable to Retiree while Spouse is Alive:  $(F) - (G) = 19,229$
  - I. Benefit Payable to Spouse after Retiree's Death  $19,229$
  - J. Benefit Payable to Retiree after Spouse's Death  $23,520$
- 

**Projected Benefits:**

Year Ended December 31,	Retiree's Benefit (Both Alive)	Spouse's Benefit (After Retiree's Death)	Retiree's Benefit (After Spouse's Death)
2002	\$ 19,229	\$ 19,229	\$ 23,520
2003	19,806	19,806	24,226
2004	20,383	20,383	24,931
2005	20,960	20,960	25,637
2006	21,536	21,536	26,342
2007	22,113	22,113	27,048
2008	22,690	22,690	27,754
2009	23,267	23,267	28,459
2010	23,844	23,844	29,165
2011	24,421	24,421	29,870

Year Ended December 31,	Retiree's Benefit (Both Alive)	Spoouse's Benefit (After Retiree's Death)	Retiree's Benefit (After Spouse's Death)
2002	\$ 11,972	\$ 11,972	\$ 14,643
2003	12,331	12,331	15,082
2004	12,690	12,690	15,522
2005	13,049	13,049	15,961
2006	13,408	13,408	16,400
2007	13,767	13,767	16,840
2008	14,127	14,127	17,279
2009	14,486	14,486	17,718
2010	14,845	14,845	18,158
2011	15,204	15,204	18,597

**Projected Benefits:**

G. Adjustment factor for Early Retirement (from schedule)	80%
F. Formula Benefit: $0.022 \times 26 \text{ years} \times \$32,000 =$	\$ 18,304
H. Adjusted benefit: (F) x (G) =	14,643
I. Reduction for Line E Election $(1 - 0.81756) \times (H) =$	2,672
J. Benefit payable to Retiree while Spouse is Alive: (H) - (I)	11,972
K. Benefit payable to Spouse after Retiree's Death	11,972
L. Benefit payable to Retiree after Spouse's Death	14,643

**Computations:**

A. \$32,000	Final Average Earnings
B. 26	Years of Credited Service
C. 59	Age of Retiree
D. 56	Age of Spouse
E. 100%	Percentage of Pension to Continue to Spouse after retiree's death (Retiree makes the choice of 100% Joint and Survivor with Pop-Up)

**Data:**

**SAMPLE BENEFIT COMPUTATION**  
**STATE OR LOCAL MEMBER - EARLY RETIREMENT**  
**RETRACING DECEMBER 31, 2001**  
**UNDER BENEFIT PROVISIONS EVALUATED**

**SAMPLE BENEFIT COMPUTATION  
SECTION 145.33 (B)(2)(B) LAW MEMBER - NORMAL RETIREMENT  
RETIRING DECEMBER 31, 2001  
UNDER BENEFIT PROVISIONS EVALUATED**

**Data:**

- A. \$38,000 Final Average Earnings  
B. 28 Years of Credited Service  
C. 49 Age of Retiree  
D. 46 Age of Spouse  
E. 100% Percentage of Pension to Continue to Spouse after retiree's death  
(Retiree makes the choice of 100% Joint and Survivor with Pop-Up)

## Computations:

F. Formula Benefit: $(0.025 \times 25 \text{ years} + 0.021 \times 3 \text{ years}) \times \$38,000 =$	\$ 26,144
G. Reduction for Line E Election $(1 - 0.88728) \times (F) =$	<u>2,947</u>
H. Benefit Payable to Retiree while Spouse is Alive: $(F) - (G) =$	23,197
I. Benefit Payable to Spouse after Retiree's Death	23,197
J. Benefit Payable to Retiree after Spouse's Death	26,144

#### **Projected Benefits:**

<b>Year Ended December 31,</b>	<b>Retiree's Benefit (Both Alive)</b>	<b>Spouse's Benefit (After Retiree's Death)</b>	<b>Retiree's Benefit (After Spouse's Death)</b>
2002	\$ 23,197	\$ 23,197	\$ 26,144
2003	23,893	23,893	26,928
2004	24,589	24,589	27,713
2005	25,285	25,285	28,497
2006	25,981	25,981	29,281
2007	26,677	26,677	30,066
2008	27,373	27,373	30,850
2009	28,068	28,068	31,634
2010	28,764	28,764	32,419
2011	29,460	29,460	33,203

Year Ended December 31,	Retiree's Benefit (Both Alive)	Spouse's Benefit (After Retiree's Death)	Spouse's Benefit (Both Alive)	Retiree's Benefit (After Spouse's Death)
2002	\$ 7,262	\$ 7,262	\$ 7,262	\$ 8,976
2003	7,479	7,479	7,479	9,245
2004	7,697	7,697	7,697	9,515
2005	7,915	7,915	7,915	9,784
2006	8,133	8,133	8,133	10,053
2007	8,351	8,351	8,351	10,322
2008	8,569	8,569	8,569	10,592
2009	8,787	8,787	8,787	10,861
2010	9,004	9,004	9,004	11,130
2011	9,222	9,222	9,222	11,400

**Projected Benefits:**

I. Adjusted benefit: (H) x (I) =	8,976
J. Adjustment factor for Early Retirement (from schedule)	85%
H. Formula Benefit: $(0.022 \times 15 \text{ years} + 0.025 \times 0 \text{ years}) \times \$32,000 =$	\$ 10,560
K. Reduction for Line F Election: $(1 - 0.80900) \times (J) =$	1,714
L. Benefit Payable to Retiree while Spouse is Alive: $(J) - (K) =$	7,262
M. Benefit Payable to Spouse after Retiree's Death	7,262
N. Benefit Payable to Retiree after Spouse's Death	8,976
O. In lieu of a lifetime benefit, terminee may elect to receive a refund of accumulated contributions with interest plus an additional 67% of eligible accumulated contributions because terminee had more than 10 years of service.	73,480

**Computations:**

A. \$32,000	Final Average Earnings			
B. 15	Years of Credited Service			
C. 45	Age of Member			
D. 42	Age of Spouse			
E. 60:57	Ages at Which Benefits are Payable			
F. 100%	Percentage of Pension to Continue to Spouse after retiree's death			
G. \$44,000	Accumulated Contributions with Interest at Termination Date (Retiree makes the choice of 100% Joint and Survivor with Pop-Up)			

**Data:**

**STATE OR LOCAL MEMBER - TERMINATION BENEFIT**  
**SAMPLE BENEFIT COMPUTATION**  
**RETIRING DECEMBER 31, 2001**  
**UNDER BENEFIT PROVISIONS EVALUATED**

**SAMPLE BENEFIT COMPUTATION**  
**SECTION 145.33 (B)(2)(B) LAW MEMBER – TERMINATION BENEFIT**  
**RETIRING DECEMBER 31, 2001**  
**UNDER BENEFIT PROVISIONS EVALUATED**

---

**Data:**

A.	\$38,000	Final Average Earnings
B.	15	Years of Credited Service
C.	37	Age of Retiree
D.	34	Age of Spouse
E.	52:49	Ages at Which Benefits are Payable
F.	100%	Percentage of Pension to Continue to Spouse after retiree's death (Retiree makes the choice of 100% Joint and Survivor with Pop-Up)
G.	\$46,000	Accumulated Contributions at Termination Date

---

**Computations:**

H. Formula Benefit: $(0.015 \times 15 \text{ years}) \times \$38,000 =$	\$ 8,55
I. Reduction for Line F Election: $(1 - 0.86885) \times (H) =$	<u>1,12</u>
J. Benefit Payable to Retiree while Spouse is Alive: $(H) - (I) =$	7,42
K. Benefit Payable to Spouse after Retiree's Death	7,42
L. Benefit Payable to Retiree after Spouse's Death	8,55
M. In lieu of a lifetime benefit, terminee may elect to receive a refund of accumulated contributions at the time of termination.	46,00

---

**Projected Benefits:**

Year Ended December 31,	Retiree's Benefit (Both Alive)	Spouse's Benefit (After Retiree's Death)	Retiree's Benefit (After Spouse's Death)
2002	\$ 7,429	\$ 7,429	\$ 8,550
2003	7,652	7,652	8,807
2004	7,874	7,874	9,063
2005	8,097	8,097	9,320
2006	8,320	8,320	9,576
2007	8,543	8,543	9,833
2008	8,766	8,766	10,089
2009	8,989	8,989	10,346
2010	9,212	9,212	10,602
2011	9,434	9,434	10,859



**Recommendations for Reserve Transfers**

## **SECTION II**

## **DECEMBER 31, 2001 RETIRED LIFE VALUATION RESERVE TRANSFERS**

---

Reserve transfers from the Employer Accumulation Fund to the A & PR Fund and/or Survivor Benefit Funds are recommended in the following instances.

- Whenever the December 31 valuation shows unfunded accrued liabilities or assets in excess of computed liabilities in any of the retired life funds.
- To adjust retired life reserves for the payment of health insurance premiums and Medicare reimbursements for the previous 12 month period if this has not already been done.
- To cover the cost of ad-hoc post retirement benefit increases.
- To adjust retired life reserves for any changes in computed liabilities resulting from assumption changes.

By making these annual adjustments in addition to the regular transfers when allowances are added to the rolls, the ratio of assets to liabilities for retired members and beneficiaries will stay at 100%. Year to year changes in this ratio before recommended transfers will normally be isolated to mortality experience within the retired life group.

In 1992, PERS began making interim benefit payments for certain retirements to shorten the delay between the retirement effective date and receipt of the first monthly check. However, reserve transfers are not made until benefit amounts are final. Transfers for these cases have been accrued based upon supplemental information supplied by PERS staff and are shown on the following page. The accruals, when added to other assets, are intended to put retired life reserves in the same position they would have been in if reserve transfers for the interim benefit cases had been coincident with benefit commencement.

It is recommended that the transfers shown on the following page be made from the Employer Accumulation Fund to the Annuity & Pension Reserve Fund and Survivor Benefit Funds as indicated. The Accrued Transfers is an estimate of pending future transfers for interim cases, and does not require a year end transfer.



**State Division**  
**SECTION III**

## STATE DIVISION

---

Data on active, inactive, retired and money purchase members that was used in the valuation is tabulated briefly below.

### *Active Members in Valuation December 31, 2001*

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	50,234	\$1,973,002,408	\$39,276	41.9	10.3
Women	58,985	2,023,248,853	34,301	42.3	10.1
<b>Totals</b>	<b>109,219</b>	<b>\$3,996,251,261</b>	<b>\$36,589</b>	<b>42.1</b>	<b>10.2</b>

Also included in the valuation were 26,122 inactive members eligible for deferred retirement allowances or contribution refunds and 2,491 members active in the money purchase plan.

### *Retired Members in Valuation December 31, 2001*

Fund / Type of Allowance	Number	Current Total \$	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	37,583	\$52,099,026	\$6,395,324,531
Disability Retirement	6,150	9,148,749	1,138,622,592
Money Purchase	156	50,796	4,957,746
Total A & PR Fund	43,889	61,298,571	7,538,904,869
Total SBF	4,793	3,591,572	389,760,946
Grand Total	48,682	\$64,890,143	\$7,928,665,815

The period sufficient to produce an Employer Contribution Rate of 8.31% of payroll for retirement allowances and survivor benefits.

\* State Division accrued liabilities are fully funded.

#

Normal Cost	Age and Service Allowances	Disability Allowances	Survivors Benefits	Separation Benefits	Total Normal Cost	Employee Current Contributions (Member Current Contributions)	Employer Normal Cost	Unfunded Actuarial Accrued Liabilities	Total Available Contribution	Total Employer Contribution Rate
Contributions for 2001	2000	8.31%	9.78%	1.90%	0.72%	0.42%	2.05%	8.31%	9.01%	8.31%
Contributions Computed December 31										

EXRESSED AS PERCENTS OF ACTIVE MEMBER PAYROLL  
DECEMBER 31, 2001

STATE DIVISION  
EMPLOYER CONTRIBUTIONS TO SUPPORT  
RETIREMENT ALLOWANCES

**STATE DIVISION**  
**COMPARATIVE STATEMENT**

December 31	No.	Active Members in Valuation			Total Employer Contributions as % of Payroll					
		Annual Payroll		Increase	Normal Cost	Unfunded Accrued	Basic Total		Retiree Health	
		Total	Average	(Millions)						
1990@	98,939	\$ 2,501	\$ 25,281	5.7 %	6.51 %	2.78 %	9.29 %	4.42 %	4.42 %	13.71 %
1991&	107,025	2,693	25,163	(0.5)%	6.57 %	2.45 %	9.02 %	4.29 %	4.29 %	13.31 %
1992	109,701	2,767	25,224	0.2 %	6.41 %	2.61 %	9.02 %	4.29 %	4.29 %	13.31 %
1993	112,748	2,894	25,673	1.8 %	6.40 %	2.62 %	9.02 %	4.29 %	4.29 %	13.31 %
1994	115,238	3,063	26,580	3.5 %	6.66 %	2.36 %	9.02 %	4.29 %	4.29 %	13.31 %
1995	114,596	3,204	27,962	5.2 %	6.67 %	2.35 %	9.02 %	4.29 %	4.29 %	13.31 %
1996@	115,712	3,319	28,684	2.6 %	6.21 %	2.81 %	9.02 %	4.29 %	4.29 %	13.31 %
1997	114,036	3,405	29,858	4.1 %	6.21 %	2.90 %	9.11 %	4.20 %	4.20 %	13.31 %
1998	112,323	3,500	31,159	4.4 %	6.21 %	2.90 %	9.11 %	4.20 %	4.20 %	13.31 %
1999#	112,761	3,592	31,851	2.2 %	7.68 %	1.33 %	9.01 %	4.30 %	4.30 %	13.31 %
2000	113,099	3,868	34,201	7.4 %	7.69 %	1.32 %	9.01 %	4.30 %	4.30 %	13.31 %
2001	109,219	3,996	36,589	7.0 %	7.01 %	1.30 %	8.31 %	5.00 %	5.00 %	13.31 %
2001@	109,219	3,996	36,589	7.0 %	6.17 %	2.14 %	8.31 %	5.00 %	5.00 %	13.31 %

# After benefit changes.

@ Revised actuarial assumptions.

& & Reflects inclusion of part-time, seasonal, and temporary employees in compliance with OBRA 90 and revised actuarial assumptions.

Allocation by Entry Age		(1) Total Portion Covered By Actuarial Accrued Liabilities	Future Normal Present Actuarial Value Cost Contributions of Member 31, of	Actuarial Present Value December 31, of Accrued Liabilities
(2) (3) Allocation by Entry Age		\$ 7,538,904,869	\$ 389,760,946	\$ 12,254,253,642
All allowances currently being paid from the Annuity & Pension Reserve Fund	-	-	389,760,946	2,774,647,997
Age and service allowances based on service rendered before and likely to be rendered after valuation date	9,479,605,645	1,597,600,813	688,196,112	909,404,701
Disability allowances likely to be paid to present active members who become permanently disabled	344,752,626	138,203,113	206,549,513	2,100,120,755
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	1,344,071,299	756,049,456	756,049,456	19,791,472,553
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members to present active and inactive members	\$24,225,393,651	\$19,280,275,130	Total	Actuarial Value of Assets
Unfunded Actuarial Accrued Liability	\$ (511,197,423)			

**STATE DIVISION**  
**DEVELOPMENT OF UNFUNDDED ACTUARIAL ACCRUED LIABILITIES**  
**COMPARATIVE STATEMENT**

**STATE DIVISION**  
**DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES**  
**COMPARATIVE STATEMENT**  
**(*\$ IN MILLIONS EXCEPT AVERAGES*)**

---

Dec. 31	Active Payroll		Active and Inactive Member Accrued Liabilities for Retirement Allowances				Unfunded /Payroll
			Computed Total	Valuation Assets	Unfunded	Amort. Years	
	Total	Average	Total				
1990@	\$2,501	\$25,281	\$ 5,091	\$3,391	\$1,700	34	0.68
1991&	2,693	25,163	5,528	4,030	1,498	32	0.56
1992	2,767	25,224	5,934	4,552	1,382	25	0.50
1993	2,894	25,673	6,671	5,357	1,314	22	0.45
1994	3,063	26,580	7,182	5,956	1,226	21	0.40
1995	3,204	27,962	7,811	6,706	1,105	17	0.34
1996@	3,319	28,684	8,104	7,387	717	8	0.22
1997	3,405	29,858	8,591	8,268	323	3	0.09
1998	3,500	31,159	9,223	9,666	(443)	-	-
1999#	3,592	31,851	10,298	10,474	(176)	-	-
2000	3,868	34,201	11,273	11,558	(285)	-	-
2001	3,996	36,589	11,604	11,660	(56)	-	-
2001@	3,996	36,589	11,352	11,863	(511)	-	-

# After benefit changes.

@ Revised actuarial assumptions.

& Reflects inclusion of part-time seasonal, and temporary employees in compliance with OBRA 90 and revised actuarial assumptions.

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

Attained Age	Years of Service to Valuation Date						Payroll Number
	0-4	5-9	10-14	15-19	20-24	25-29	
Total							
15-19	793	3,787	3,281	11	531	8	793
20-24	2,840	1,984	592	15	54		5,431
30-34	2,840	1,984	592	15	54		5,431
35-39	2,167	1,713	1,398	1,670	1,755	1,174	6,580
40-44	1,915	1,398	1,926	720	1,287	1,369	336,387,480
45-49	1,557	1,136	1,270	1,174	1,804	696	7,887
50	243	202	234	234	264	250	1,474
51	245	195	224	247	254	259	1,476
52	228	190	186	212	210	236	1,353
53	248	161	223	222	228	233	1,421
54	201	151	180	202	183	188	1,193
55	204	183	212	209	188	173	1,292
56	154	104	142	140	113	96	799
57	148	110	120	109	96	84	741
58	105	105	109	103	76	60	70
59	120	107	120	107	86	58	657
60	89	81	104	91	78	54	542
61	80	71	78	91	78	54	258
62	66	56	61	61	61	33	442
63	72	53	67	67	52	26	365
64	61	38	40	46	41	26	42
65	43	22	37	32	21	15	190
66	43	18	24	24	17	10	147
67	38	17	15	15	11	10	111
68	36	19	11	11	8	6	9
69	29	10	12	10	9	4	12
70 & Over	184	62	35	25	16	20	373
Totals	18,977	8,728	7,692	6,118	5,069	2,574	\$1,973,002,408

**STATE DIVISION**  
**MALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

**STATE DIVISION**  
**FEMALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

---

Attained Ages	Years of Service to Valuation Date							Total Number	Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
15-19	885							885	\$9,397,636
20-24	4,519	15						4,534	66,975,689
25-29	3,811	603	18					4,432	116,272,652
30-34	3,116	1,951	715	33				5,815	185,964,925
35-39	2,567	1,651	1,915	841	77			7,051	248,954,115
40-44	2,556	1,651	1,858	1,640	1,395	51		9,151	341,302,078
45-49	2,263	1,538	1,821	1,422	1,878	840	37	9,799	380,990,789
50	381	249	347	274	310	247	54	1,862	75,280,165
51	363	251	325	272	266	252	61	1,790	71,908,778
52	291	257	287	268	257	198	81	1,639	65,587,371
53	332	223	333	251	231	181	78	1,629	64,667,680
54	280	206	292	259	233	156	86	1,512	58,831,814
55	282	223	322	260	258	161	98	1,604	62,752,471
56	181	161	185	171	163	109	66	1,036	40,282,219
57	156	112	201	171	151	98	50	939	35,979,299
58	125	111	158	161	159	82	38	834	32,240,256
59	148	105	161	172	194	90	33	903	34,109,879
60	95	91	129	153	171	80	32	751	29,340,943
61	69	79	108	110	112	77	27	582	22,514,632
62	66	60	90	81	79	59	29	464	17,289,694
63	41	48	70	65	93	43	26	386	15,329,876
64	43	36	71	63	94	37	20	364	13,470,407
65	30	33	49	37	46	32	15	242	8,784,472
66	19	15	32	26	37	23	13	165	5,962,394
67	20	14	23	23	28	17	15	140	5,010,115
68	26	8	14	17	16	12	11	104	3,272,775
69	19	4	12	10	14	11	7	77	2,409,791
70 & Over	67	30	40	41	44	37	36	295	8,365,938
<b>Totals</b>	<b>22,751</b>	<b>9,725</b>	<b>9,576</b>	<b>6,821</b>	<b>6,306</b>	<b>2,893</b>	<b>913</b>	<b>58,985</b>	<b>\$2,023,248,853</b>

---



**Local Government Division**

**SECTION IV**

## LOCAL GOVERNMENT DIVISION

---

Data on active, inactive, retired and money purchase members that was used in the valuation is tabulated briefly below.

### *Active Members in Valuation December 31, 2001*

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	112,012	\$3,208,280,586	\$28,642	42.9	8.8
Women	131,190	3,242,857,174	24,719	41.7	8.0
<b>Totals</b>	<b>243,202</b>	<b>\$6,451,137,760</b>	<b>\$26,526</b>	<b>42.2</b>	<b>8.4</b>

Also included in the valuation were 51,778 inactive members eligible for deferred retirement allowances or contribution refunds and 9,130 members active in the money purchase plan.

### *Retired Members in Valuation December 31, 2001*

Fund / Type of Allowance	Number	Current Total \$	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	66,339	\$69,428,324	\$8,329,181,820
Disability Retirement	9,249	13,037,829	1,552,596,139
Money Purchase	426	99,352	9,952,299
Total A & PR Fund	76,014	82,565,505	9,891,730,258
SBF	9,500	6,147,954	670,497,101
Grand Total	85,514	\$88,713,459	\$10,562,227,359

The period sufficient to produce an Employer Contribution Rate of 8.55% of payroll for retirement allowances and survivor benefits.

\* Local Government Division accrued liabilities are fully funded.

#

Normal Cost	Age and Service Allowances Disability Allowances Survivors Benefits Separation Benefits	Member Current Contributions (Member Normal Cost)	Employee Normal Cost Unfunded Actuarial Accrued Liabilities Financial Years*	Total Available Contribution #	Total Employer Contribution Rate 8.55 %
Contributions for	2001	2000	Contributions Computed December 31		
Contributions for	2001	2000	Contributions Computed December 31		
Contributions for	2001	2000	Contributions Computed December 31		
Contributions for	2001	2000	Contributions Computed December 31		

**LOCAL GOVERNMENT DIVISION**  
**EMPLOYER CONTRIBUTIONS TO SUPPORT**  
**RETIREMENT ALLOWANCES**  
**EXPRESSED AS PERCENTS OF ACTIVE MEMBER PAYROLL**

**LOCAL GOVERNMENT DIVISION**  
**COMPARATIVE STATEMENT**

December 31	Active Members in Valuation			Total Employer Contributions as % of Payroll			Grand Total	
	No.	Annual Payroll		Normal Cost	Unfunded Accrued	Basic Total		
		Total	Average					
		(Millions)						
1990@	173,220	\$ 3,379	\$ 19,506	4.4 %	6.02 %	2.67 %	8.69 %	
1991&	211,835	3,789	17,884	(8.3)%	5.95 %	2.49 %	8.44 %	
1992	218,295	3,953	18,109	1.3 %	5.80 %	2.64 %	8.44 %	
1993	220,410	4,159	18,869	4.2 %	5.85 %	2.59 %	8.44 %	
1994	221,987	4,366	19,666	4.2 %	6.16 %	2.28 %	8.44 %	
1995	223,431	4,555	20,384	3.7 %	6.17 %	2.27 %	8.44 %	
1996@	229,954	4,792	20,839	2.2 %	6.16 %	2.28 %	8.44 %	
1997	231,668	4,976	21,481	3.1 %	6.15 %	3.20 %	9.35 %	
1998	234,601	5,240	22,334	4.0 %	6.17 %	3.18 %	9.35 %	
1999#	240,005	5,586	23,276	4.2 %	7.68 %	1.57 %	9.25 %	
2000	245,831	5,999	24,401	4.8 %	7.68 %	1.57 %	9.25 %	
2001	243,202	6,451	26,526	8.7 %	6.96 %	1.59 %	8.55 %	
2001@	243,202	6,451	26,526	8.7 %	6.14 %	2.41 %	8.55 %	

# After benefit changes.

@ Revised actuarial assumptions.

& Reflects inclusion of part-time, seasonal and temporary employees in compliance with OBRA 90 and revised actuarial assumptions.

Allocation by Entry Age		(2)	(3)	(1)	Actuarial Present Value Accrued Liabilities Covered By Portion Accrued Liabilities Allocation by Entry Age	Actuarial Present Value Accrued Liabilities Cost Contributions (1)-(2)	All allowances currently being paid from the Annuity & Pension Reserve Fund Allocances currently being paid from the Survivors Benefit Fund Allowances currently being paid from Age and service allowances based on Disability allowances likely to be paid present active members who become permanently disabled Survivor benefits likely to be paid to spouses and children of present active members who die before retiring Separation benefits (refunds of contributions to present active and inactive members and deferred allowances) likely to be paid Total Actuarial Value of Assets Unfunded Actuarial Accrued Liability \$ (667,583,840)
\$ 9,891,730,258	\$ -	670,497,101	-	18,112,099,798	4,742,725,954	13,369,373,844	Age and service allowances based on Disability allowances likely to be paid present active members who become permanently disabled Survivor benefits likely to be paid to spouses and children of present active members who die before retiring Separation benefits (refunds of contributions to present active and inactive members and deferred allowances) likely to be paid Total Actuarial Value of Assets Unfunded Actuarial Accrued Liability \$ (667,583,840)
\$ 9,891,730,258	\$ -	670,497,101	-	2,238,919,770	1,102,699,474	1,136,220,296	Age and service allowances based on Disability allowances likely to be paid present active members who become permanently disabled Survivor benefits likely to be paid to spouses and children of present active members who die before retiring Separation benefits (refunds of contributions to present active and inactive members and deferred allowances) likely to be paid Total Actuarial Value of Assets Unfunded Actuarial Accrued Liability \$ (667,583,840)
\$ 9,891,730,258	\$ -	670,497,101	-	607,612,984	258,068,900	349,544,084	Age and service allowances based on Disability allowances likely to be paid present active members who become permanently disabled Survivor benefits likely to be paid to spouses and children of present active members who die before retiring Separation benefits (refunds of contributions to present active and inactive members and deferred allowances) likely to be paid Total Actuarial Value of Assets Unfunded Actuarial Accrued Liability \$ (667,583,840)
\$ 9,891,730,258	\$ -	670,497,101	-	3,325,667,832	2,198,222,601	1,127,445,231	Age and service allowances based on Disability allowances likely to be paid present active members who become permanently disabled Survivor benefits likely to be paid to spouses and children of present active members who die before retiring Separation benefits (refunds of contributions to present active and inactive members and deferred allowances) likely to be paid Total Actuarial Value of Assets Unfunded Actuarial Accrued Liability \$ (667,583,840)
\$ 26,544,810,814	\$ 8,301,716,929	\$34,846,527,743	\$27,212,394,654	\$26,544,810,814	\$8,301,716,929	\$27,212,394,654	Age and service allowances based on Disability allowances likely to be paid present active members who become permanently disabled Survivor benefits likely to be paid to spouses and children of present active members who die before retiring Separation benefits (refunds of contributions to present active and inactive members and deferred allowances) likely to be paid Total Actuarial Value of Assets Unfunded Actuarial Accrued Liability \$ (667,583,840)

**DECEMBER 31, 2001**

**DEVELOPMENT OF UNFUNDDED ACTUARIAL ACCRUED LIABILITIES**

**LOCAL GOVERNMENT DIVISION**

**LOCAL GOVERNMENT DIVISION**  
**DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES**  
**COMPARATIVE STATEMENT**  
**(*\$ IN MILLIONS EXCEPT AVERAGES*)**

---

Dec. 31	<b>Active Payroll</b>		<b>Active and Inactive Member Accrued Liabilities for Retirement Allowances</b>				<b>Unfunded /Payroll</b>
			<b>Computed Total</b>	<b>Valuation Assets</b>	<b>Unfunded</b>	<b>Amort. Years</b>	
	<b>Total</b>	<b>Average</b>					
1990@	\$ 3,379	\$19,506	\$ 6,666	\$ 4,335	\$ 2,331	37	0.69
1991&	3,789	17,884	7,479	5,181	2,298	36	0.61
1992	3,953	18,109	8,147	6,046	2,101	27	0.53
1993	4,159	18,869	9,291	7,147	2,144	26	0.52
1994	4,366	19,666	9,894	7,814	2,080	28	0.48
1995	4,555	20,384	10,630	8,856	1,774	21	0.39
1996@	4,792	20,839	11,286	9,940	1,346	15	0.28
1997	4,976	21,481	11,973	11,218	755	5	0.15
1998	5,240	22,334	12,912	13,135	(223)	0	0.00
1999#	5,586	23,276	14,643	14,498	145	2	0.03
2000	5,999	24,401	15,881	16,131	(250)	0	0.00
2001	6,451	26,526	16,728	16,388	340	3	0.05
2001@	6,451	26,526	15,983	16,651	(668)	-	-

# After benefit changes.

@ Revised actuarial assumptions.

& Reflects inclusion of part-time, seasonal, and temporary employees in compliance with OBRA 90 and revised actuarial assumptions.

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

Attained Age	Years of Service to Valuation Date						Payroll Number
	0-4	5-9	10-14	15-19	20-24	25-29	
15-19	5,370	7,463	108	1,220	45		
20-24	2,529	6,548	108	1,220	45		
30-34	6,202	2,990	1,138	29			
35-39	5,398	2,881	2,762	1,038			
40-44	4,624	2,964	3,060	2,338			
45-49	4,624	2,856	2,876	2,271	1,652	102	71
50	788	450	490	384	532	71	3,124
51	812	443	468	422	382	105	3,158
52	731	453	476	357	380	427	124
53	718	443	468	422	382	105	3,158
54	727	428	428	398	331	306	370
55	717	430	446	334	298	198	2,748
56	492	257	301	205	200	167	116
57	478	240	277	230	202	149	87
58	477	261	211	197	165	138	81
59	509	317	297	230	174	136	95
60	433	265	245	202	137	126	104
61	426	239	210	168	130	85	70
62	357	239	210	196	152	102	97
63	348	193	193	196	155	100	56
64	315	151	108	91	57	41	36
65	315	151	108	91	57	41	799
66	277	152	121	68	55	28	588
67	280	121	68	49	57	14	25
68	268	100	60	30	30	11	26
69	264	94	60	35	12	20	18
70 & Over	1,382	771	432	190	128	91	86
							3,080
							35,003,612
							\$3,208,280,586

**LOCAL GOVERNMENT DIVISION**  
**MALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

**LOCAL GOVERNMENT DIVISION**  
**FEMALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

---

Attained Ages	Years of Service to Valuation Date							Total Number	Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
15-19	6,398							6,398	\$40,211,145
20-24	9,070	192						9,262	118,855,372
25-29	9,104	1,616	102					10,822	244,861,904
30-34	8,081	3,790	1,452	67				13,390	340,484,900
35-39	7,356	3,256	3,057	1,212	112			14,993	397,938,726
40-44	7,637	3,836	3,184	2,236	1,664	143		18,700	511,557,721
45-49	6,633	3,727	3,440	2,040	2,138	1,286	81	19,345	553,551,965
50	1,080	679	695	410	353	328	62	3,607	106,004,559
51	1,087	617	660	419	361	281	69	3,494	102,091,878
52	912	609	653	393	314	307	85	3,273	96,345,749
53	930	586	654	409	328	271	98	3,276	94,299,406
54	868	571	610	462	380	246	107	3,244	92,917,632
55	831	574	677	488	379	210	121	3,280	92,412,409
56	556	352	420	309	238	115	60	2,050	57,291,204
57	484	405	398	305	259	126	52	2,029	56,169,773
58	423	352	366	321	269	144	47	1,922	51,898,477
59	467	359	412	332	325	155	71	2,121	57,600,071
60	406	271	365	273	266	118	63	1,762	47,862,562
61	292	242	284	211	153	105	37	1,324	33,906,791
62	269	209	225	174	156	83	52	1,168	30,680,815
63	221	184	169	125	113	75	40	927	22,542,807
64	195	149	160	135	116	80	22	857	20,754,631
65	184	119	108	88	80	60	27	666	14,980,105
66	160	88	91	90	64	38	28	559	12,113,324
67	127	69	79	53	47	37	27	439	9,049,937
68	122	64	54	48	30	34	29	381	7,558,247
69	100	49	51	31	31	27	7	296	5,570,807
70 & Over	589	317	205	152	135	111	96	1,605	23,344,257
<b>Totals</b>	<b>64,582</b>	<b>23,282</b>	<b>18,571</b>	<b>10,783</b>	<b>8,311</b>	<b>4,380</b>	<b>1,281</b>	<b>131,190</b>	<b>\$3,242,857,174</b>



**Law Division**  
**SECTION V**

## LAW DIVISION

---

This Benefit Group consists of Law Enforcement Members and Public Safety Members. Data on active, inactive, retired and money purchase members that was used in the valuation is tabulated briefly below.

### *Active Members in Valuation December 31, 2001*

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	6,985	\$299,609,382	\$42,893	39.4	12.0
Women	907	35,822,584	39,496	38.6	10.5
<b>Totals</b>	<b>7,892</b>	<b>\$335,431,966</b>	<b>\$42,503</b>	<b>39.3</b>	<b>11.8</b>

Also included in the valuation were 389 inactive members eligible for deferred retirement allowances or contribution refunds and 29 members active in the money purchase plan.

### *Retired Members in Valuation December 31, 2001*

Fund / Type of Allowance	Number	Current Total \$	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	1,121	\$2,235,089	\$327,921,007
Disability Retirement	851	1,804,895	242,369,503
Money Purchase	0	0	0
Total A & PR Fund	1,972	4,039,984	570,290,510
Total SBF	288	200,458	26,170,043
Grand Total	2,260	\$4,240,442	\$596,460,553

**LAW DIVISION**  
**EMPLOYEE CONTRIBUTIONS TO SUPPORT**  
**RETIREMENT ALLOWANCES**  
**EXPRESSED AS PERCENTS OF ACTIVE MEMBER PAYROLL**

Contributions for Contributions Computed December 31	Total Employee Contribution Rate 11.70 % # 18 11.58 % 10.05 % 18.93 % 21.48 % 9.90 % # 18 0.82 % 11.70 % 12.40 %
2001@ 2000@	Unfunded Actuarial Accrued Liabilities Financing Years* Total Available Contribution The period sufficient to produce an Employee Contribution Rate of 11.70% of payroll for retirement allowances and survivor benefits. Law Division accrued liabilities are fully funded.

(a) Weighted average between Public Safety and Law Enforcement.

**LAW DIVISION**  
**COMPARATIVE STATEMENT**

December 31	Active Members in Valuation				Total Employer Contributions as % of Payroll					
	No.	Annual Payroll			(Thousands)	Normal Cost	Unfunded Accrued	Basic Total	Retiree Health	Grand Total
		Total	Average	Increase						
1990@	5,804	\$156,339	\$26,936	5.4 %	9.52 %	1.29 %	10.81 %	5.19 %	16.00 %	
1991	6,088	169,008	27,761	3.1 %	9.32 %	1.49 %	10.81 %	5.89 %	16.70 %	
1992	5,852	169,337	28,937	4.2 %	9.65 %	1.16 %	10.81 %	5.89 %	16.70 %	
1993	6,032	182,576	30,268	4.6 %	9.53 %	1.28 %	10.81 %	5.89 %	16.70 %	
1994	6,252	196,467	31,425	3.8 %	9.71 %	1.10 %	10.81 %	5.89 %	16.70 %	
1995	6,605	214,273	32,441	3.2 %	9.69 %	1.12 %	10.81 %	5.89 %	16.70 %	
1996@	6,742	229,138	33,987	4.8 %	10.50 %	0.74 %	11.24 %	5.46 %	16.70 %	
1997	7,256	258,897	35,680	5.0 %	10.49 %	2.01 %	12.50 %	4.20 %	16.70 %	
1998	7,507	277,239	36,931	3.5 %	10.48 %	2.02 %	12.50 %	4.20 %	16.70 %	
1999#	7,766	299,040	38,506	4.3 %	11.54 %	0.86 %	12.40 %	4.30 %	16.70 %	
2000	8,045	324,918	40,387	4.9 %	11.59 %	0.81 %	12.40 %	4.30 %	16.70 %	
2001	7,892	335,432	42,503	5.2 %	11.38 %	0.32 %	11.70 %	5.00 %	16.70 %	
2001@	7,892	335,432	42,503	5.2 %	8.88 %	2.82 %	11.70 %	5.00 %	16.70 %	

# After benefit changes.

@ Revised actuarial assumptions.

## DEVELOPMENT OF UNFUNDDED ACTUARIAL ACCRUED LIABILITIES LAW DIVISION

**LAW DIVISION**  
**DEVELOPMENT OF UNFUNDING ACTUARIAL ACCRUED LIABILITIES**  
**COMPARATIVE STATEMENT**  
**(\$ IN MILLIONS EXCEPT AVERAGES)**

---

Dec. 31	Active Payroll		Active and Inactive Member Accrued Liabilities for Retirement Allowances				Unfunded /Payroll
			Computed Total	Valuation Assets	Unfunded	Amort. Years	
	Total	Average					
1990@	\$ 156	\$26,936	\$ 388	\$ 341	\$ 47	32	0.30
1991	169	27,761	438	399	39	19	0.23
1992	169	28,937	467	452	15	8	0.09
1993	183	30,268	533	512	21	10	0.11
1994	196	31,425	580	555	25	13	0.13
1995	214	32,441	638	612	26	12	0.12
1996@	229	33,987	711	676	35	30	0.15
1997	259	35,680	821	773	48	10	0.19
1998	277	36,931	914	895	19	5	0.07
1999#	299	38,506	1,080	1,038	42	20	0.14
2000	325	40,387	1,175	1,137	38	18	0.12
2001	335	42,503	1,195	1,132	63	30	0.19
2001@	335	42,503	1,071	1,149	(78)	-	-

# After benefit changes.

@ Revised actuarial assumptions.

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

Attained Ages	Years of Service to Valuation Date						Total Number	Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	213	639	4	304	3		217	\$ 5,973,572
20-24	213	639	4	304	3		946	\$33,368,401
30-34	404	801	294	135	214	395	148	50,042,460
35-39	404	801	294	135	204	345	9	47,401,849
40-44	162	298	464	152	152	257	9130	46,651,910
45-49	54	91	130	130	135	204	1,028	47,401,849
50	11	10	17	28	47	39	53	7,875,240
51	11	10	17	26	24	36	50	8,048,849
52	11	10	17	26	24	36	53	7,875,240
53	11	10	17	26	24	36	53	8,048,849
54	11	10	17	26	24	36	53	7,875,240
55	7	9	11	16	11	26	31	5,234,931
56	7	8	11	16	11	26	31	2,950,770
57	5	8	11	16	11	26	31	2,439,460
58	5	8	11	16	11	26	31	2,521,213
59	3	1	1	9	9	12	14	2,199,851
60	2	4	6	11	11	18	8	1,896,851
61	2	3	6	11	11	18	7	1,220,370
62	1	4	3	6	11	18	7	1,711,287
63	2	2	3	6	11	18	7	706,305
64	2	2	2	3	6	11	17	426,796
65	3	3	2	2	2	5	3	485,796
66	1	3	2	2	1	1	1	40,952
67	1	1	1	1	1	1	1	125,020
68	1	1	1	1	1	2	2	145,567
69	1	1	1	1	1	1	1	426,796
70	1	2	2	2	2	2	1	96,320
71	1	2	2	2	2	2	1	263,932
Totals	1,625	1,720	1,304	896	883	436	121	6,985
								\$299,609,382

**LAW DIVISION**  
**MALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

**LAW DIVISION**  
**FEMALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2001**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

---

Attained Ages	Years of Service to Valuation Date							Total Number	Payroll
	0-4	5-9	10-14	15-19	20-24	25-29	30+		
20-24	36							36	\$ 993,428
25-29	95	42	3					140	4,665,148
30-34	63	95	28					186	7,212,235
35-39	28	42	52	22	1			145	5,760,029
40-44	13	37	34	39	21			144	6,116,200
45-49	14	21	20	35	30	9		129	5,607,661
50		3	3	4	7	2		19	862,425
51		1		3	7	3		14	593,978
52		2	4	3	5	6		20	949,483
53		3	3	4	3	1		14	577,479
54	1	1	2	3	5	1		13	581,881
55		1	1		4	1		7	283,254
56		1	1	2	3			7	299,145
57			1	4	3			8	322,794
58				3	4			7	273,190
59				2	1	1		4	136,642
60	1			1				2	78,460
61			1	2	3			6	233,242
63			1					1	41,161
64					1			1	50,621
65						1		1	41,381
67						1		1	42,361
69					1		1	2	100,386
<b>Totals</b>	<b>251</b>	<b>249</b>	<b>154</b>	<b>127</b>	<b>99</b>	<b>26</b>	<b>1</b>	<b>907</b>	<b>\$35,822,584</b>



**Allowances Being Paid to Retireants &  
SECTION VI  
Beneficiaries**

**MONTHLY ALLOWANCES OF RETIRED LIVES  
BY YEAR OF RETIREMENT  
AS OF DECEMBER 31, 2001**

---

<b>Year of Retirement</b>	<b>No.</b>	<b>Initial</b>	<b>Post-Ret. Increase</b>	<b>Total</b>	<b>Average</b>
2001	7,412	\$ 11,662,786	\$ 0	\$ 11,662,786	\$1,574
2000	8,226	11,648,739	299,514	11,948,253	1,452
1999	7,252	9,876,458	434,873	10,311,331	1,422
1998	7,267	9,061,772	566,118	9,627,890	1,325
1997	6,922	8,829,918	779,411	9,609,329	1,388
1996	6,825	8,074,299	934,301	9,008,600	1,320
1995	6,224	7,144,775	1,024,070	8,168,845	1,312
1990-1994	25,931	25,018,894	5,895,399	30,914,293	1,192
1985-1989	24,921	19,612,013	7,972,513	27,584,526	1,107
1980-1984	18,615	9,466,550	6,208,120	15,674,670	842
1975-1979	11,111	4,019,058	5,041,965	9,061,023	816
1970-1974	4,091	945,842	1,988,058	2,933,900	717
1965-1969	1,159	227,101	670,583	897,684	775
1960-1964	374	72,938	247,740	320,678	857
Before 1960	126	24,722	95,514	120,236	954
<b>TOTAL</b>	<b>136,456</b>	<b>\$125,685,865</b>	<b>\$32,158,179</b>	<b>\$157,844,044</b>	<b>\$1,157</b>

+ Including health insurance and Medicare payments.  
\*\* Revised actuarial assumptions.

# Through 1979, June allowances are compared to December payroll.  
@ Including certain recommended transfers and accrued transfers.

Valuation Date	(\$ Millions)						
	Annual Allowances	No.	Millions	% of Payroll	Assets*	Liabilities	Retired Active t
6/30/1972	36,314	\$ 74	4.7 %	\$ 769	\$ 741	103.7 %	5.7
6/30/1973	38,940	83	4.9 %	871	831	104.7 %	5.5
6/30/1974	41,453	92	4.6 %	984	933	105.5 %	6.4
6/30/1975	45,197	115	5.4 %	1,162	1,111	104.7 %	5.2
6/30/1976	48,675	129	5.5 %	1,294	1,253	103.2 %	4.9
6/30/1977	52,240	150	5.6 %	1,513	1,478	102.3 %	5.2
6/30/1978	55,827	169	5.5 %	1,724	1,698	101.5 %	4.9
6/30/1979	59,303	190	5.9 %	2,007	1,973	101.7 %	4.4
12/31/1979@	68,089	299	8.2 %	3,173	3,068	103.4 %	3.7
12/31/1980	64,231	272	8.2 %	3,084	2,994	103.0 %	3.7
12/31/1981@	71,253	474	10.4 %	4,965	4,935	100.6 %	3.0
12/31/1982@	84,892	518	10.6 %	5,485	5,437	100.9 %	3.0
12/31/1983	86,924	581	10.9 %	6,182	6,173	100.1 %	2.9
12/31/1984	89,972	581	12.4 %	6,182	6,173	100.1 %	2.9
12/31/1985	92,504	661	12.4 %	6,985	6,911	101.1 %	2.9
12/31/1986	94,088	706	11.7 %	7,438	7,338	101.4 %	3.0
12/31/1987	98,609	835	12.1 %	8,814	8,692	101.4 %	3.4
12/31/1988	100,651	901	12.5 %	8,814	8,692	101.4 %	3.4
12/31/1989@	102,587	958	12.6 %	9,356	9,390	100.4 %	3.4
12/31/1990	104,806	1,036	13.0 %	9,964	9,893	100.7 %	3.3
12/31/1991	107,617	1,141	13.7 %	11,762	11,819	100.5 %	3.3
12/31/1992	110,470	1,233	14.3 %	12,755	12,843	100.7 %	3.2
12/31/1993	113,000	1,327	14.7 %	13,751	13,885	101.0 %	3.1
12/31/1994	115,431	1,530	16.1 %	14,978	16,139	92.8 %	3.1
12/31/1995	118,620	1,641	16.1 %	16,980	16,980	100.0 %	3.1
12/31/1996@	121,875	1,775	16.5 %	18,460	18,001	97.5 %	3.0
12/31/1997	121,875	1,775	16.5 %	18,001	18,001	100.0 %	3.0
12/31/1998	123,000	1,775	16.5 %	18,460	18,001	97.5 %	3.0
12/31/1999+	125,431	1,775	16.5 %	18,001	18,001	100.0 %	3.0
12/31/2000	128,000	1,775	16.5 %	18,001	18,001	100.0 %	3.0
12/31/2001	128,750	1,775	16.5 %	18,001	18,001	100.0 %	3.0

( \$ MILLIONS )

## COMPARATIVE STATEMENT

## ANNUAL ALLOWANCE, REPORTED ASSETS AND ACTUARIAL LIABILITYES

## ANNUITY AND PENSION RESERVE FUND

**ANNUITY AND PENSION RESERVE FUND**  
**RETIRANTS AND BENEFICIARIES DECEMBER 31, 2001**  
**TYPE OF BENEFIT, MONTHLY AMOUNT AND ACTUARIAL LIABILITIES**

Type of Allowance	Number	% of Current Total \$			Current Total \$	Actuarial Liabilities
		Member Annuities	Initial Pensions	Post-Retirement Pension Increases		
<b>Superannuation Retirement</b>						
Plan A - Joint & 50%	15,877	27.2 %	54.5 %	18.3 %	\$ 23,341,338	\$ 3,010,389,422
Plan B - Straight Life	51,638	27.2 %	51.1 %	21.7 %	57,174,216	6,281,554,882
Plan C - Special Joint & Survivor	7,108	33.2 %	58.7 %	8.1 %	11,433,844	1,642,336,339
Plan D - Joint & 100%	14,549	27.2 %	55.7 %	17.1 %	19,789,503	2,972,680,636
Plan E - Life & 0 to 5 Years Guaranteed	342	23.9 %	48.9 %	27.2 %	349,425	35,012,519
- Life & 6 to 10 Years Guaranteed	488	23.7 %	48.4 %	27.9 %	534,140	52,258,734
- Life & 11 to 15 Years Guaranteed	719	21.3 %	46.6 %	32.1 %	772,277	72,111,694
- Life & 16 to 20 Years Guaranteed	18	33.5 %	52.9 %	13.6 %	19,715	2,883,666
Money Purchase	582	50.0 %	50.0 %	0.0 %	150,148	14,910,046
Survivor Beneficiary - Life Benefit	14,182	18.9 %	43.3 %	37.8 %	10,217,793	978,553,682
Survivor Beneficiary - Temporary Benefit	122	26.8 %	51.9 %	21.3 %	130,188	4,645,784
Total Superannuation	105,625				\$123,912,587	\$15,067,337,404
Disability Retirement	16,250	15.5 %	68.5 %	16.0 %	\$ 23,991,473	\$ 2,933,588,234
<b>Total from A &amp; PR</b>	<b>121,875</b>	<b>25.2 %</b>	<b>55.1 %</b>	<b>19.7 %</b>	<b>\$147,904,060</b>	<b>\$18,000,925,638</b>

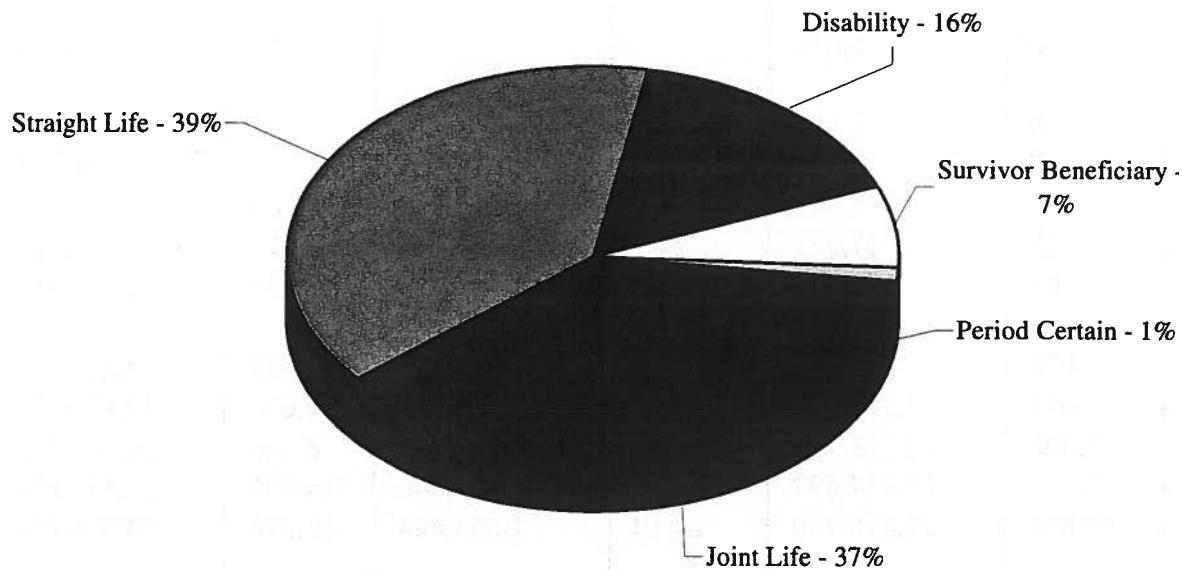
**ANNUITY AND PENSION RESERVE FUND**  
**RETIRANTS AND BENEFICIARIES DECEMBER 31, 2001**  
**TYPE OF BENEFIT AND AMOUNT BY SEX OF RECIPIENT**

Type of Allowance	Men Number Allowances	Women Number Allowances	Total Monthly Allowances
<b>Superannuation Retirement</b>			
Plan A - Joint & 50%	12,250	\$19,134,940	3,627 \$ 4,206,398
Plan B - Straight Life	15,829	21,100,745	35,809 36,073,471
Plan C - Special Joint & Survivor	3,401	6,752,648	3,707 4,681,196
Plan D - Joint & 100%	12,697	18,087,127	1,852 1,702,376
Plan E - Life & 0 to 5 Years Guaranteed	181	213,382	161 136,043
- Life & 6 to 10 Years Guaranteed	310	366,606	178 167,534
- Life & 11 to 15 Years Guaranteed	522	610,089	197 488
- Life & 16 to 20 Years Guaranteed	11	12,368	7 719
			7,347 772,277
			18 19,715
Money Purchase	431	128,652	151 21,496
Survivor Beneficiary - Life Benefit	773	390,560	13,409 9,827,233
Survivor Beneficiary - Temporary Benefit	27	32,476	95 97,712
<b>Total Superannuation</b>			
Disability Retirement	46,432	\$66,829,593	59,193 \$57,082,994
<b>Total from A &amp; PR</b>	<b>55,021</b>	<b>\$80,818,187</b>	<b>66,854 \$67,085,873</b>
			<b>121,875 \$147,904,060</b>

**ANNUITIES BEING PAID BY TYPE**  
**DECEMBER 31, 2001**

---

**Annuity and Pension Reserve Fund**



Attained Ages	No.	Supernuation	Disability	Totals	Monthly Total \$	No.	Monthly Total \$	No.	Monthly Total \$	Total \$
Under 20	10	\$ 5,674			10	\$ 5,674				
20-24	8	5,145			8					
25-29	7	3,837			10					
30-34	12	6,548			132					
35-39	33	12,125			14,288					
40-44	65	18,125			14,929					
45-49	422	4,851,244			4,047,985					
50-54	3,047	12,459,222			5,092,993					
55-59	5,306	12,410			4,386,992					
60-64	12,410	12,273,720			2,900					
65-69	17,866	18,257,693			2,541					
70-74	19,476	21,869,426			1,045					
75-79	18,728	18,448,221			693					
80-84	14,327	11,845,217			344					
85-89	8,018	8,018,309			633,088					
90-94	2,988	19,081,309			19,421					
95 & Over	753	22,935,365			20,521					
Period Certain	2,149	1,829,688			1,829,688					
Total	05,625	\$123,912,587			16,250					
		\$23,991,737			16,250					
		\$147,904,060			16,250					

**CURRENT MONTHLY TOTAL \$ BY ATTAINED AGES**  
**RETIRANTS AND BENEFICIARIES DECEMBER 31, 2001**  
**ANNUITY AND PENSION RESERVE FUND**

**ANNUITY AND PENSION RESERVE FUND**  
**PERCENT OF RECIPIENTS**  
**BY AGE GROUPS**  
**AND YEAR**

---

Attained Age Group	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992
Under 30	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
30-39	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%
40-49	3.3%	3.2%	3.1%	2.9%	2.8%	2.7%	2.4%	2.1%	2.0%	1.9%
50-59	11.7%	10.7%	9.8%	9.2%	8.6%	7.9%	7.6%	7.2%	7.1%	6.9%
60-69	28.1%	28.2%	28.9%	29.1%	29.4%	29.9%	30.5%	30.9%	32.0%	32.8%
70-79	32.7%	34.0%	35.5%	36.3%	37.1%	37.7%	38.2%	38.6%	38.3%	38.5%
80-89	18.7%	18.5%	18.7%	18.6%	18.4%	18.2%	17.9%	17.8%	17.4%	16.8%
90 & Over	3.1%	3.0%	3.1%	3.0%	2.9%	2.8%	2.7%	2.7%	2.5%	2.4%
Period Certain	1.8%	1.8%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
<b>TOTALS</b>	<b>100.0%</b>									
Average Age	71.0	71.2	71.4	71.5	71.6	71.6	71.8	71.4	71.8	71.7

S-1 - Survivor Benefit to Beneficiary of Deceased Member		Joint and Survivor Computation		S-2 - Survivor Benefit to Beneficiary of Deceased Member		
Group	Number	Total	Lifabilities	Number	Total	
Men	96	\$ 79,830	\$ 7,648,244	876	934,070	100,257,571
Women				972	\$1,013,900	\$107,905,815
Totals						
Widower - no child	386	\$ 263,387	\$ 30,702,100	61	36,959	6,279,354
Widower - child				90	35,829	1,642,401
Other Parent				3	2,108	156,484
Subtotals - male	540	338,283	38,780,339	0	0	0
Widower - no child	2,174	\$ 1,617,775	\$182,430,096	246	161,465	30,014,794
Widower - child				347	170,106	8,741,357
Other Parent				5	3,266	310,740
Subtotals - female	2,773	1,953,102	221,505,701	1	490	8,714
Child only	209	118,981	6,465,404			
Totals		3,522	\$ 2,410,366			
Total Benefits Being Paid from Survivor Benefit Fund						
Men	636	418,113	46,428,583	3,649	2,887,172	321,763,272
Women				209	118,981	6,465,404
Children						
Totals						
4,494 \$3,424,266						
4,494 \$3,424,266						

**STATE DIVISION  
SURVIVOR BENEFIT FUND TABULATED BY  
TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT  
DECEMBER 31, 2001**

**LOCAL GOVERNMENT DIVISION**  
**SURVIVOR BENEFIT FUND TABULATED BY**  
**TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT**  
**DECEMBER 31, 2001**

---

Group	Number	Current Total	Actuarial Liabilities
<b>S-1 - Survivor Benefit to Beneficiary of Deceased Member</b>			
<b>Joint and Survivor Computation</b>			
Men	130	\$ 91,331	\$ 8,445,054
Women	1,599	1,455,144	160,084,143
Totals	1,729	\$1,546,475	\$168,529,197
<b>S-2 - Survivor Benefit to Beneficiary of Deceased Member</b>			
<b>Fixed Rate Amount</b>			
Widower - no child	643	\$ 340,861	\$ 37,649,487
Widower - child	98	49,269	8,143,373
Child's record	135	45,202	2,208,310
Parent	1	774	58,979
Other	0	0	0
Subtotals - male	877	436,106	48,060,149
Widower - no child	4,667	\$3,071,627	\$344,000,461
Widower - child	497	278,110	50,960,328
Child's record	707	306,899	18,217,836
Parent	4	3,778	327,493
Other	1	509	53,602
Subtotals - female	5,876	3,660,923	413,559,720
Child only	355	195,793	12,179,759
Totals	7,108	\$4,292,822	\$473,799,628
<b>Total Benefits Being Paid from Survivor Benefit Fund</b>			
Men	1,007	527,437	56,505,203
Women	7,475	5,116,067	573,643,863
Children	355	195,793	12,179,759
<b>Totals</b>	<b>8,837</b>	<b>\$5,839,297</b>	<b>\$642,328,825</b>

S-1 - Survivor Benefit to Beneficiary of Deceased Member				
Joint and Survivor Computation				
S-2 - Survivor Benefit to Beneficiary of Deceased Member				
Fixed Rate Amount				
Group	Current	Actuarial	Total	Liaibilities
Totals	0	\$ 0	\$ 0	0
Men	43	\$ 59,195	\$ 7,942,981	
Women	43	\$ 59,195	\$ 7,942,981	
Totals	43	\$ 59,195	\$ 7,942,981	
Widower - no child	1	\$ 759	\$ 132,160	
Widower - child	2	1,454	251,187	
Widower - no child	1	\$ 759	\$ 132,160	
Subtotals - male	6	3,720	477,484	
Subtotals - female	96	\$ 68,662	\$ 10,412,104	
Widower - no child	34	22,593	43,59,244	
Widower - child	63	24,122	1,324,634	
Other	0	0	0	0
Subtotals - female	193	115,377	16,095,982	
Child only	15	7,688	340,550	
Totals	214	\$ 126,785	\$ 16,914,016	
Total Benefits Being Paid from Survivor Benefit Fund				
Men	6	3,720	477,484	
Women	236	174,572	24,038,963	
Children	15	7,688	340,550	
Totals	257	\$185,980	\$24,856,997	

LAW  
SURVIVOR BENEFIT FUND TABULATED BY  
TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT  
DECEMBER 31, 2001

**STATE DIVISION**  
**DEFERRED SURVIVOR BENEFICIARIES**  
**TABULATED BY SEX AND DEFERRED AGE**  
**DECEMBER 31, 2001**

---

<b>Group</b>	<b>Number</b>	<b>Current Total</b>	<b>Actuarial Liabilities</b>
Widowers			
Deferred to age 50	10	\$ 6,178	\$ 771,979
Deferred to age 62	84	45,841	3,163,503
Deferred to age 65	8	1,833	86,167
Total	102	53,852	4,021,649
Widows			
Deferred to age 50	23	15,898	2,242,985
Deferred to age 62	172	96,981	8,765,143
Deferred to age 65	2	575	73,911
Total	197	113,454	11,082,039
<b>Totals</b>	<b>299</b>	<b>\$167,306</b>	<b>\$15,103,688</b>

Group	Number	Current Actuarial Liabilities	Total Liabilities	Totals
Widowers Deferred to age 50 Deferred to age 62 Deferred to age 65	9 118 \$ 5,567 47,759 \$ 455,557 3,482,870 113,458	136 9 \$ 5,567 47,759 \$ 455,557 3,482,870 113,458	54,536 1,210 4,051,885 223,700 4,339,708 19,750,108 26,574	663 \$308,657 \$28,168,275
Widows Deferred to age 50 Deferred to age 62 Deferred to age 65	50 475 30,169 30,169 223,700 4,339,708 19,750,108 26,574	527 2 252 254,121	2,52 26,574 24,116,390	Total Deferred to age 65 Deferred to age 62 Deferred to age 50
				Total

LOCAL GOVERNMENT DIVISION  
DEFERRED SURVIVOR BENEFICIARIES  
TABULATED BY SEX AND DEFERRED AGE  
DECEMBER 31, 2001

**LAW DIVISION**  
**DEFERRED SURVIVOR BENEFICIARIES**  
**TABULATED BY SEX AND DEFERRED AGE**  
**DECEMBER 31, 2001**

---

<b>Group</b>	<b>Number</b>	<b>Current Total</b>	<b>Actuarial Liabilities</b>
Widowers			
Deferred to age 50	1	\$ 106	\$ 5,894
Total	1	106	5,894
Widows			
Deferred to age 50	3	1,719	188,554
Deferred to age 62	27	12,653	1,118,598
Total	30	14,372	1,307,152
<b>Totals</b>	<b>31</b>	<b>\$14,478</b>	<b>\$1,313,046</b>

**DIVISIONS COMBINED**  
**REPORTED ASSETS AND LIABILITIES**  
**SURVIVOR BENEFIT FUND**

Valuation Date	Monthly Allowances		\$ Millions	Ratio of Assets to Liabilities	
	Current	Deferred	Accrued Reported	Assets+	Liabilities
	No.	Amount			
6/30/1972	6,102	\$ 891,467	1,012	\$ 96,003	\$ 144.7
6/30/1973	6,477	1,053,363	1,009	99,678	164.6
6/30/1974	6,826	1,136,949	1,037	106,479	181.7
6/30/1975	7,346	1,422,944	1,054	113,690	205.3
6/30/1976	7,847	1,557,217	991	118,986	224.8
6/30/1977	8,153	1,659,897	1,003	125,094	257.0
6/30/1978	8,559	1,799,580	1,004	135,944	301.2
6/30/1979	8,824	1,914,251	1,039	146,549	355.2
6/30/1979*	8,971	2,033,403	1,044	155,890	383.0
12/31/1979	9,389	2,220,641	1,022	170,246	429.4
12/31/1980	9,389	2,220,641	1,022	170,246	429.4
12/31/1981@	9,629	2,468,950	1,045	191,228	460.6
12/31/1982@	9,913	2,654,686	1,006	199,239	499.7
12/31/1983	10,132	2,812,639	1,020	225,475	454.7
12/31/1984*	11,819	3,119,531	990	248,373	492.2
12/31/1985	11,889	3,278,253	979	259,842	532.8
12/31/1986	12,054	3,489,915	960	268,931	575.5
12/31/1987	12,153	3,656,420	933	279,327	626.1
12/31/1988	12,237	3,822,085	941	283,026	490.8
12/31/1989@	12,198	4,177,540	941	320,792	525.3
12/31/1990	12,182	4,330,622	907	321,218	542.5
12/31/1991	12,268	4,528,326	860	314,414	567.9
12/31/1992	12,318	4,750,848	852	329,509	589.8
12/31/1993	12,437	4,985,681	852	329,509	583.3
12/31/1994	12,569	5,207,186	845	347,178	641.5
12/31/1995	12,608	5,408,577	866	376,573	668.9
12/31/1996@	12,724	5,822,113	878	395,594	711.6
12/31/1997	12,856	6,074,566	932	433,430	743.0
12/31/1998	13,079	6,337,739	1,060	500,514	780.2
12/31/1999#	13,236	7,345,740	989	550,153	801.4
12/31/2000	13,317	9,026,315	666	348,886	1,037.4
12/31/2001	13,588	9,449,543	993	490,441	1,108.4
12/31/2001@	13,588	9,449,543	993	490,441	1,108.4
+ #					
* #					
Revised accrual assumptions.					
Benefits increased.					
After benefit changes.					
Includes certain recommended transfers and accrued transfers.					

## **SECTION VII**

### **Actuarial Methods and Assumptions**

---



*The post-retirement mortality rates used in evaluating age and service survivor benefit allowances to be paid were 90% of rates in the 1971 Group Annuity Mortality Male and Female Tables, projected to*

## **NON-ECONOMIC ASSUMPTIONS**

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

*The active member payroll is assumed to increase 4.00% annually, which is the portion of the individual pay increase assumptions attributable to wage inflation and overall productivity increases.*

*Price inflation is assumed to persist at a level that will result in payment of the maximum post retirement increase in each future year.*

*Pay increase assumptions for individual active members are shown for sample ages on pages VII-5, VII-6, & VII-7. Part of the assumption for each age is for merit and/or seniority increase, and the other 4.00% recognizes wage inflation and overall productivity increases.*

*The investment return rate used in making the valuations was 8.00% per year, compounded annually (net after administrative expenses). The assumed real rate of return is the portion of total investment return that is more than the assumed total wage growth rate. Considering other financial assumptions, the 8.00% investment return translates to an assumed real rate of return of 4.00%.*

## **ECONOMIC ASSUMPTIONS**

*The actuarial assumptions used in the valuation are shown in this Section. Both the economic and decrement assumptions were established following the December 31, 2000 actuarial valuations.*

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

*The entry age actuarial cost method of valuation was used in determining liabilities and normal cost. Differences in the past between assumed experience and actual experience ("actuarial gains and losses") become part of actuarial accrued liabilities.*

---

**SUMMARY OF  
ACTUARIAL METHODS AND ASSUMPTIONS USED FOR PERS  
ACTUARIAL VALUATIONS  
ASSUMPTIONS ADOPTED BY RETIREMENT BOARD  
After Consulting With Actuary**

---

1984. Related values are shown on page VII-8. The mortality rates for disability allowances were 300% of rates in the 1983 Group Annuity Mortality Table for Males, and 400% of rates in the 1983 Group Annuity Mortality Table for Females.

***The probabilities of normal and early age and service retirement*** are shown on page VII-3 and VII-4.

***The probabilities of withdrawal from service, disability and death-in-service*** are shown for sample ages on pages VII-4, VII-5 & VII-6. For withdrawal from service it was assumed that members terminating before age 35, members terminating with less than 5 years of service, and a percentage of all other members would withdraw their contributions and forfeit their entitlement to an employer financed benefit. The percentage is 100% at age 35 and is reduced for each year of age after 35, becoming 0% at age 55 (age 45 for law members).

***Decrements*** are assumed to occur middle of year. ***Pay increases*** are assumed to occur beginning of year.

***The probabilities of having an eligible survivor*** (spouse, child, parent) in the event of death in service were 80% for state and local government members and 90% for law enforcement members.

***Female spouses*** are assumed to be 3 years younger than male spouses for active member valuation purposes.

***Adjustment factors*** used for valuation purposes include the following:

- a 1% factor is applied to normal retirement, early retirement and vesting liabilities to recognize subsidized option factors,
- a 1% factor is applied to normal retirement and early retirement liabilities to recognize subsidized service purchases,
- Law accrued liabilities are reduced approximately 1.5% to recognize the fact that total service reported is not entirely Law service,
- reported pay was adjusted for active members with less than a year of service whose average monthly pay was less than \$1,500 (\$750 for Local). In these cases, the member's annual pay was adjusted to an annual amount of \$18,000 (\$9,000 for Local).

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

***The Funding Value of Assets*** recognize assumed investment return fully each year. Differences between actual and assumed investment return are phased in over a closed 4 year period.

***Present assets (cash & investments) at funding value*** are shown on pages 8 and 9.

---

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.)

---

Ages	Percent of Eligible Active Members Retiring Within Next Year						
	State	Local Government	Public	Law Enforcement	Men	Women	Men
48	22%	22%	22%	22%	40%	30%	35%
49	22%	22%	22%	22%	40%	30%	35%
50	22%	22%	22%	22%	40%	30%	35%
51	22%	22%	22%	22%	40%	30%	35%
52	22%	22%	22%	22%	40%	30%	35%
53	22%	22%	22%	22%	40%	30%	35%
54	22%	22%	22%	22%	40%	30%	35%
55	15%	15%	15%	15%	25%	30%	30%
56	15%	15%	15%	15%	25%	30%	30%
57	15%	15%	15%	15%	25%	30%	30%
58	18%	18%	18%	18%	25%	30%	30%
59	18%	18%	18%	18%	25%	30%	40%
60	18%	18%	18%	18%	30%	50%	50%
61	18%	18%	18%	18%	35%	50%	50%
62	18%	18%	18%	18%	35%	50%	50%
63	30%	30%	30%	30%	40%	30%	35%
64	15%	15%	15%	15%	40%	30%	35%
65	15%	15%	15%	15%	50%	30%	25%
66	20%	20%	20%	20%	25%	25%	25%
67	15%	15%	15%	15%	25%	20%	25%
68	15%	15%	15%	15%	25%	20%	25%
69	15%	15%	15%	15%	25%	20%	25%
70	15%	15%	15%	15%	25%	20%	25%
71	100%	100%	100%	100%	20%	20%	25%
72	100%	100%	100%	100%	20%	20%	25%
73	100%	100%	100%	100%	20%	20%	25%
74	100%	100%	100%	100%	20%	20%	25%
75	100%	100%	100%	100%	15%	15%	20%
76	100%	100%	100%	100%	15%	15%	20%
77	100%	100%	100%	100%	15%	15%	20%
78	100%	100%	100%	100%	15%	15%	20%
79	100%	100%	100%	100%	15%	15%	20%
80	100%	100%	100%	100%	100%	100%	100%

## Probabilities of Normal Age and Service Retirement

*Probabilities of Early Retirement*

Ages	Percent of Eligible Active Members Retiring Within Next Year				
	State		Local Government		Public Safety
	Men	Women	Men	Women	
48					3%
49					3%
50					7%
51					7%
52					
53					
54					
55	12%	14%	10%	12%	
56	12%	14%	10%	12%	
57	12%	14%	10%	12%	
58	12%	14%	10%	12%	
59	12%	14%	10%	18%	
60	12%	20%	10%	18%	
61	12%	14%	10%	15%	
62	18%	14%	15%	15%	
63	18%	14%	15%	15%	
64	15%	14%	12%	12%	
Ref	756	757	758	759	515

**STATE**  
**SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE & SERVICE RETIREMENT**  
**& INDIVIDUAL PAY INCREASE ASSUMPTIONS**

Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year				Pay Increase Assumptions For An Individual Employee		
		Death		Withdrawal		Disability		Merit & Base Increase
		Men	Women	Men	Women	Men	Women	
25	0			38.00%	36.00%			
30	1			18.00%	19.00%			
35	2			14.00%	15.00%			
40	3			10.00%	12.00%			
45	4			8.00%	9.00%			
	5 & Over			0.02%	0.02%	7.80%	0.09%	0.07%
				0.04%	0.02%	5.20%	0.13%	0.14%
				0.05%	0.03%	4.30%	0.24%	0.25%
				0.07%	0.04%	3.50%	0.41%	0.36%
				0.13%	0.06%	2.70%	0.61%	0.55%
				0.23%	0.10%	2.20%	0.86%	0.88%
				0.37%	0.15%	2.10%	2.80%	1.31%
				0.55%	0.25%	2.10%	2.70%	1.86%
	Ref	#30x0.6sb0	#31x0.6sb0	#571x1	#572x1	#331x1	#332x1	301

The pay increase assumptions are age based only, and not service based.

**LOCAL GOVERNMENT**  
**SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE & SERVICE RETIREMENT**  
**& INDIVIDUAL PAY INCREASE ASSUMPTIONS**

Sample Ages	Years of Service	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions For An Individual Employee		
		Death		Withdrawal		Disability		Merit & Seniority (Economy)	Base	Increase Next Year
		Men	Women	Men	Women	Men	Women			
	0			34.00%	32.00%					
	1			17.00%	18.00%					
	2			12.00%	13.00%					
	3			10.00%	10.00%					
	4			9.00%	9.00%					
	5 & Over	0.03%	0.02%	6.40%	8.00%	0.13%	0.12%	4.30%	4.00%	8.30%
25		0.04%	0.02%	5.40%	6.90%	0.17%	0.13%	3.00%	4.00%	7.00%
30		0.05%	0.03%	4.10%	5.40%	0.28%	0.21%	2.20%	4.00%	6.20%
35		0.07%	0.04%	3.20%	4.20%	0.44%	0.33%	1.80%	4.00%	5.80%
40										
45		0.13%	0.06%	2.70%	3.40%	0.62%	0.45%	1.40%	4.00%	5.40%
50		0.23%	0.10%	2.50%	3.00%	0.90%	0.66%	1.20%	4.00%	5.20%
55		0.37%	0.15%	2.50%	2.90%	1.34%	0.98%	0.90%	4.00%	4.90%
60		0.55%	0.25%	2.50%	2.80%	1.54%	1.35%	0.70%	4.00%	4.70%
Ref		#30x0.6sh0	#31x0.6sh0	373	374	#333x1	#334x1	301		

The pay increase assumptions are age based only, and not service based.

**LAW**

**SEPARATIONS FROM ACTIVE EMPLOYMENT BEFORE AGE & SERVICE RETIREMENT  
& INDIVIDUAL PAY INCREASE ASSUMPTIONS**

Sample Ages	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions		
	Death		Withdrawal		Disability		Merit & Base	Increase (Economy)	Next Year
	Years of Service	Men	Women	Men	Women	Men	Women		
0	15.00%	15.00%	9.00%	9.00%	7.00%	7.00%	5.00%	5.00%	5.00%
1	9.00%	9.00%	7.00%	7.00%	5.00%	5.00%	5.00%	5.00%	5.00%
2	7.00%	7.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
3	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
4	5.00%	5.00%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%
25	0.03%	0.02%	0.04%	0.02%	0.04%	0.05%	0.07%	0.07%	0.07%
30	0.04%	0.02%	0.05%	0.03%	0.05%	0.07%	0.09%	0.09%	0.09%
35	0.05%	0.03%	0.07%	0.04%	0.06%	0.09%	0.12%	0.12%	0.12%
40	0.07%	0.04%	0.13%	0.06%	0.13%	0.17%	0.21%	0.21%	0.21%
45	0.13%	0.06%	0.23%	0.10%	0.20%	0.20%	0.23%	0.23%	0.23%
50	0.23%	0.10%	0.37%	0.15%	0.20%	0.20%	0.25%	0.25%	0.25%
55	0.37%	0.15%	0.55%	0.25%	0.20%	0.20%	0.28%	0.28%	0.28%
60	0.55%	0.25%							
Ref	#30x0.6sb0	#31x0.6sb0	375	375	#575x1	#575x1	#335x1	303	

The pay increase assumptions are age based only, and not service based.

## ***Single Life Retirement Values***

Sample Attained Ages	Present Value of \$1 Monthly for Life Increasing 3.0% Annually (First Increase After 1 Year)		Future Life Expectancy (years)	
	Males	Females	Males	Females
50	\$165.46	\$181.30	28.55	34.58
55	152.90	171.13	24.26	29.89
60	138.21	158.37	20.19	25.31
65	121.58	142.99	16.40	20.92
70	104.05	124.89	13.02	16.76
75	87.04	105.31	10.17	13.03
80	70.51	86.11	7.75	9.89
Ref:	:#68x0.9sb0	:#69x0.9sb0		

---



**Financial Principles**

**SECTION VIII**

## **FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF PERS**

---

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

The related **key financial questions** are:

***Which generation of taxpayers contributes the money to cover the IOU?***

***The present taxpayers***, who receive the benefit of the member's present year of service? ***Or the future taxpayers***, who happen to be in Ohio at the time the IOU becomes a cash demand, years and often decades later?

***The law governing PERS financing intends that this year's taxpayers contribute the money to cover the IOUs being handed out this year.*** With this financial objective, ***the employer contribution rate is expected to remain approximately level from generation to generation of taxpayers.***

There are systems which have a design for deferring contributions to future taxpayers. Lured by a lower contribution rate now, they put aside the consequence that the contribution rate must then relentlessly grow to a level much higher than would be required if a level contribution pattern were followed.

An inevitable by-product of the level-cost design is the accumulation of reserve assets, for decades, and the income produced when the assets are invested. ***Investment income*** becomes ***the 3<sup>rd</sup> and largest contributor*** for benefits to employees, and is interlocked with the contribution amounts required from employees and employers.

*Financial position.*

PERS copes with these continually changing differences by having annual actuarial valuations. Each actuarial valuation is a complete recalculation of assumed future experience, taking into account all past differences between assumed and actual experience. The result is *continuing adjustments in actuarial valuation*.

With 100% precision.

*Reconciling Differences Between Assumed Experience and Actual Experience.* Once actual experience has occurred and has been observed, it will not coincide exactly with assumed experience, regardless of the skill of the actuary and the many calculations made. The future can not be predicted with 100% precision.

In an actuarial valuation, assumptions must be made as to what the above rates will be for the next year and for decades in the future. The assumptions are established by the Retirement Board after receiving the advice of the actuary.

An actuarial valuation has a number of ingredients such as: the rate of investment return which plan of mortality; the rates of disability; the rates of pay increases; and the assumed age or ages at actual assets will earn; the rates of withdrawal of active members who leave covered employment; the rates of employee and asset data, the actuary calculates the contribution rates to support the benefits by means of an actuarial valuation and a funding method.

*Computing Contributions to Support Fund Benefits.* From a given schedule of benefits and from accrued assets of PERS).

Liabilities are the difference between: Liabilities for service already rendered; and the interest on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued assets ... plus ...)

Normal Cost (the cost of members' service being rendered this year)

Total at least the following:

Translated to actuarial terminology, this level-cost objective means that the contribution rates must

## THE ACTUARIAL VALUATION PROCESS

---

*The financing diagram* on the opposite page shows the relationship between *the two fundamentally different philosophies of paying* for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) which is thus an *increasing contribution method*; and, the *level contribution method* which attempts to equalize contributions between the generations.

---

*The actuarial valuation* is the mathematical process by which the level contribution rate is determined. The activity constituting the valuation may be summarized as follows:

A.     *Census Data*, including:

- Retired lives now receiving benefits
- Former employees with vested benefits not yet payable
- Active employees

B. + *Asset data* (cash & investments)

C. + *Benefit provisions* that establish eligibility and amounts of payments to members

D. + *Assumptions concerning future experience* in various risk areas

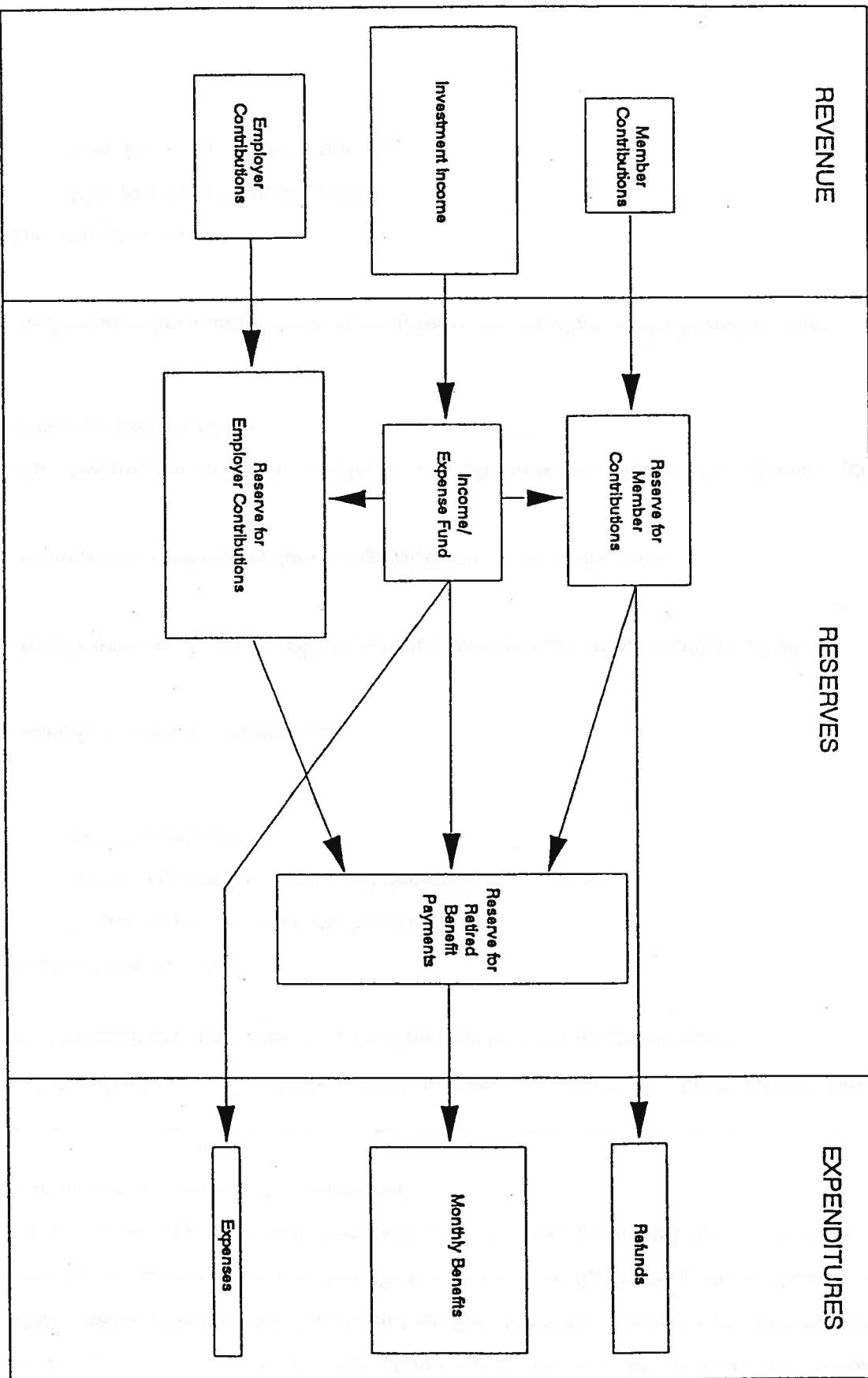
E. + *The funding method* for employer contributions (the long-term, planned pattern for employer contributions)

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

G. = Determination of:

- Plan Financial Position; and/or
- New Employer Contribution Rate

# Flow of Money Through the Retirement System



## GLOSSARY

---

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

**Accumulated Benefit Obligation.** The actuarial present value of vested and non-vested benefits based on service to date and past and current salary levels.

**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."

**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 single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

**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.

**Actuary.** A person who is trained in the applications of probability and compound interest to occurrence of future events. Most actuaries in the United States are Members of the American Academy of Actuaries. The Society of Actuaries is an international research, education and membership organization for actuaries in the life and health insurance, employee benefits, and pension fields. It administers a series of examinations leading initially to Associatehip and the designation F.S.A. and ultimately to Fellowship with the designation F.S.A.

**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.

**Funding Value of Assets.** The value of current plan assets recognized for valuation purposes. Generally based on a phased-in recognition of all or a portion of market related investment return. Sometimes referred to as Actuarial Value of Assets.

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

## **MEANING OF “UNFUNDDED ACTUARIAL ACCRUED LIABILITIES”**

---

“*Actuarial accrued liabilities*” are *the present value of the portions of promised benefits that are not covered by future normal cost contributions* --- a liability has been established (“accrued”) because the service has been rendered but the resulting monthly cash benefit may not be payable until years in the future.

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

---

Each time a plan adds a new benefit which applies to service already rendered, an “actuarial accrued liability” is created, which is also an “unfunded actuarial accrued liability” because the plan can’t print instant cash to cover the value of the new benefit promises. Payment for such unfunded actuarial accrued liabilities is spread over a period of years, commonly in the 15-40 year range.

Unfunded actuarial accrued liabilities can occur in another way: if actual plan experience is less favorable than assumed, the difference is added to unfunded actuarial accrued liabilities. For example, in plans where benefits are directly related to an employee’s pay near time of retirement, unfunded actuarial accrued liabilities increased rapidly during the 1970’s because unexpected rates of pay increase created additional actuarial accrued liabilities which could not be matched by reasonable investment results. Most of the unexpected pay increases were the direct result of inflation, which is a very destructive force on financial stability.

---

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

Nor are unfunded actuarial accrued liabilities a bill payable immediately, but it is important that policy-makers prevent the amount from becoming unreasonably high and *it is vital for plans to have a sound method for making payments toward them* so that they are controlled.

Gasoline Tax Credit  
for Electric Vehicles

Electric vehicles are cleaner than gasoline-powered vehicles. They produce no tailpipe emissions.

Electric vehicles are more efficient than gasoline-powered vehicles. They use less energy per mile traveled.

Electric vehicles are more reliable than gasoline-powered vehicles. They have fewer moving parts and require less maintenance.

Electric vehicles are more cost-effective than gasoline-powered vehicles. They have lower operating costs and longer range.

Electric vehicles are more convenient than gasoline-powered vehicles. They can be charged at home or at work, and they have longer range than most gasoline-powered vehicles.

Electric vehicles are more sustainable than gasoline-powered vehicles. They reduce greenhouse gas emissions and help combat climate change.

Electric vehicles are more popular than ever before. They are becoming a more common sight on roads and highways across the country.

Electric vehicles are here to stay. They are a cleaner, more efficient, and more cost-effective alternative to gasoline-powered vehicles.



## GASB Reporting **SECTION IX**

Gasoline Tax Credit  
for Electric Vehicles

Electric vehicles are cleaner than gasoline-powered vehicles. They produce no tailpipe emissions.

Electric vehicles are more efficient than gasoline-powered vehicles. They use less energy per mile traveled.

Electric vehicles are more reliable than gasoline-powered vehicles. They have fewer moving parts and require less maintenance.

Electric vehicles are more cost-effective than gasoline-powered vehicles. They have lower operating costs and longer range.

Electric vehicles are more convenient than gasoline-powered vehicles. They can be charged at home or at work, and they have longer range than most gasoline-powered vehicles.

Electric vehicles are more sustainable than gasoline-powered vehicles. They reduce greenhouse gas emissions and help combat climate change.

Electric vehicles are here to stay. They are a cleaner, more efficient, and more cost-effective alternative to gasoline-powered vehicles.

**SCHEDULE OF FUNDING PROGRESS  
FOR COMPLIANCE WITH GASB STATEMENT NO. 25  
(\$ AMOUNTS IN MILLIONS)**

---

The schedule below measures the funding progress with respect to the *retirement allowance* portion of PERS benefits for compliance with GASB Statement No. 25. Assets and liabilities related to post-employment health care benefits are specifically excluded from the schedule. Assets do, however, include market value adjustments.

<b>Valuation Year</b>	<b>Actuarial Accrued Liabilities (AAL)</b>	<b>Valuation Assets</b>	<b>Unfunded Actuarial Accrued Liabilities (UAAL)</b>	<b>Ratio of Assets to AAL</b>	<b>Active Member Payroll</b>	<b>UAAL as a % of Activ Member Payroll</b>
1987	\$16,231	\$11,975	\$4,256	74 %	\$4,543	94 %
1988	17,246	13,249	3,997	77 %	5,307	75 %
1989	18,310	14,629	3,681	80 %	5,597	66 %
1990	20,125	16,245	3,880	81 %	6,036	64 %
1991	22,027	18,108	3,919	82 %	6,651	59 %
1992	23,961	20,364	3,597	85 %	6,889	52 %
1993	26,506	23,063	3,443	87 %	7,236	48 %
1994	28,260	25,066	3,194	89 %	7,625	42 %
1995	30,556	27,651	2,905	90 %	7,973	36 %
1995*	30,224	27,651	2,573	91 %	7,973	32 %
1996	32,631	30,534	2,097	94 %	8,340	25 %
1997	34,971	33,846	1,125	97 %	8,640	13 %
1998	37,714	38,360	(646)	102 %	9,017	0 %
1999	43,070	43,060	10	100 %	9,477	0 %
2000	46,347	46,844	(497)	101 %	10,192	0 %
2001	49,095	48,748	347	99 %	10,782	3 %
2001*	47,492	48,748	(1,256)	103 %	10,782	0 %

\* Revised actuarial assumptions.

\* The amounts reported in this schedule do not include contributions for post-employment healthcare benefits.

Year Ended December 31	Annual Required Contributions	Percentage Contributed	Contributed
1989	\$571,866,966	100%	
1990	558,119,779	100%	
1991	607,811,880	100%	
1992	646,170,989	100%	
1993	663,680,518	100%	
1994	693,802,578	100%	
1995	725,893,573	100%	
1996	777,781,045	100%	
1997	811,485,028	100%	
1998	886,684,171	100%	
1999	935,429,955	100%	
2000	718,807,713	100%	
2001	977,289,238	100%	

**SCHEDULE OF UNFUNDED ACTUARIAL ACCRUED LIABILITY@  
FOR COMPLIANCE WITH GASB STATEMENT NO. 25**

		December 31, 2001		
		State Group	Local Group	Law Group
		Total		
<b>Accrued Liabilities</b>				
Active and Inactive Members	\$ 11,351,609,315	\$ 15,982,583,455	\$ 1,070,817,968	\$ 28,405,010,738
Retirees and Beneficiaries	7,928,665,815	10,562,227,359	596,460,553	19,087,353,727
<b>Total Accrued Liabilities</b>	<b>\$ 19,280,275,130</b>	<b>\$ 26,544,810,814</b>	<b>\$ 1,667,278,521</b>	<b>\$ 47,492,364,465</b>
<b>Assets</b>				
Active and Inactive Members				
EAF*	\$ 6,611,917,926	\$ 9,135,318,962	\$ 697,294,061	\$ 16,444,530,949
ESF	3,129,330,863	4,597,800,498	264,139,835	7,991,271,196
MVA	2,121,557,948	2,917,047,836	187,050,330	5,225,656,114
<b>Total Active and Inactive Assets</b>	<b>11,862,806,737</b>	<b>16,650,167,296</b>	<b>1,148,484,226</b>	<b>29,661,458,259</b>
Retirees and Beneficiaries				
A & PR Fund*	7,538,904,869	9,891,730,258	570,290,510	18,000,925,637
SBF Fund*	389,760,947	670,497,100	26,170,043	1,086,428,090
<b>Total R&amp;B Assets</b>	<b>7,928,665,816</b>	<b>10,562,227,358</b>	<b>596,460,553</b>	<b>19,087,353,727</b>
<b>Total Assets</b>	<b>\$ 19,791,472,553</b>	<b>\$ 27,212,394,654</b>	<b>\$ 1,744,944,779</b>	<b>\$ 48,748,811,986</b>
<b>Unfunded Actuarial Accrued Liability</b>	<b>\$ (511,197,423)</b>	<b>\$ (667,583,840)</b>	<b>\$ (77,666,258)</b>	<b>\$ (1,256,447,521)</b>

@ The amounts reported in this schedule do not include contributions for post-employment healthcare benefits.  
\* After reserve transfers

