



**OHIO PUBLIC EMPLOYEES  
RETIREMENT SYSTEM**

**ANNUAL ACTUARIAL VALUATION OF  
DEFINED BENEFIT ALLOWANCES  
TRADITIONAL AND COMBINED PLANS  
DECEMBER 31, 2004**

**GABRIEL, ROEDER, SMITH & COMPANY**

# TABLE OF CONTENTS

<i>Section</i>	<i>Pages</i>	<i>Item</i>
	2	Cover Letter
I		<b>Executive Summary</b>
	1	Introduction
	2	Summary of Pension Defined Benefit Valuation Results
	3	Comments and Conclusion
	4	Financing Defined Benefit Pension Promises
	5-10	Summary of Active and Retired Member Information
II		<b>Financial Information</b>
	1	Consolidated Asset Reconciliation
	2	Development of Funding Value of Pension DB Assets
	3	Allocation of Funding Value of Assets Between Divisions
	4	Comparison of Rates of Return
	4	Comparison of Defined Benefit Pension Asset Values
III		<b>Benefits and Conditions Evaluated</b>
	1-18	Summary of Benefits
	19-23	Sample Benefit Computations
IV	1-2	<b>Recommendations for Reserve Transfers</b>
V	1-8	<b>State Division</b>
VI	1-8	<b>Local Government Division</b>
VII	1-8	<b>Law Division</b>
	1	Members in Valuation
	2	Contributions to Support Retirement Allowances
	3	Comparative Statement of Contribution Rates
	4	Development of UAAL
	5	Comparative Schedule of Funding
	6-8	Statistical Schedules
VIII		<b>Allowances Being Paid to Retirees and Beneficiaries</b>
	1	Totals by Year of Retirement
	2	Totals by Years of Service
	3-8	Annuity and Pension Reserve Fund
	9-15	Survivors' Benefit Fund
IX	1-10	<b>Actuarial Methods and Assumptions</b>
X		<b>Financial Principles</b>
	1-5	Principles and Operational Techniques
	6-7	Glossary
	8	Meaning of "Unfunded Actuarial Accrued Liabilities"
XI	1-4	<b>GASB Reporting</b>



**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 29, 2005

The Retirement Board  
Ohio Public Employees Retirement System  
Columbus, Ohio

Ladies and Gentlemen:

The results of the *December 31, 2004 annual actuarial valuation* of the Ohio Public Employees Retirement System, 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 period beginning January 1, 2006 in accordance with established funding policy.

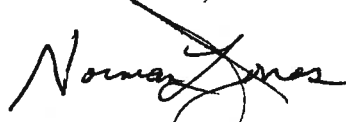
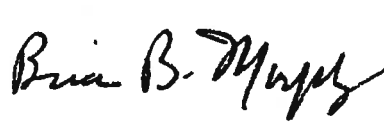
The individual member statistical data required for the valuations was furnished by your Executive Director and Staff, together with pertinent data on financial operations. Their cooperation in furnishing these materials is acknowledged with appreciation.

The actuarial assumptions used in the valuations are summarized in Section IX 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/bd



# SECTION I



## Executive Summary

## INTRODUCTION

---

Section 145.22 of the Revised Code of Ohio (ORC) provides in part as follows:

“(A) The public employees retirement board shall have prepared annually by or under the supervision of an actuary an actuarial valuation of the pension assets, liabilities, and funding requirements of the public employees retirement system as established pursuant to this chapter.”

This report presents the results of the December 31, 2004 annual actuarial valuation of the Ohio Public Employees Retirement System (OPERS) Defined Benefit Allowances of the Traditional and Combined Plans. In conjunction with Chapter 145 of the ORC, the purposes of performing the annual valuation are as follows:

- Measure the financial position of OPERS,
- Assist the Board in establishing employer and employee contribution rates necessary to fund the pension defined benefits provided by OPERS,
- Determine the number of years required to amortize the unfunded actuarial accrued liabilities based upon established contribution rates,
- Provide actuarial reporting and disclosure information for the System’s financial report, and
- Analyze the experience of the System over the past year.

The report is presented as follows:

Section I	-	Executive Summary
Section II	-	Financial Information
Section III	-	Benefits and Conditions Evaluated
Section IV	-	Recommendations for Reserve Transfers
Section V	-	Active and Inactive Vested Valuation Results for State
Section VI	-	Active and Inactive Vested Valuation Results for Local Government
Section VII	-	Active and Inactive Vested Valuation Results for Law
Section VIII	-	Allowances Being Paid to Retirees and Beneficiaries
Section IX	-	Actuarial Methods and Assumptions
Section X	-	Financial Principles
Section XI	-	Governmental Accounting Standards Board (GASB) Reporting

There have been no material benefit changes since the last valuation. Actuarial assumptions and methods are consistent with the prior actuarial valuation with the exception that the funding value of defined benefit (DB) pension assets is now developed independently from the funding value of retiree health assets. Based upon recommendations resulting from the Actuarial Audit performed after last year’s valuation, and meetings with OPERS Staff, we have incorporated some changes in the design and layout of the valuation report which we believe add to its readability.

A summary of the primary valuation results as of December 31, 2004 is presented on the following page.

# SUMMARY OF PENSION DEFINED BENEFIT VALUATION RESULTS

## DECEMBER 31

### (\$ IN MILLIONS)

	2004				2003
	State	Local	Law	Total	Total
<b>A. Demographic Information</b>					
1. Active Number Counts					
a. Traditional Plan	108,885	233,777	8,173	350,835	350,022
b. Combined Plan	<u>1,322</u>	<u>3,130</u>	<u>0</u>	<u>4,452</u>	<u>3,562</u>
c. Total	110,207	236,907	8,173	355,287	353,584
2. Active Payroll					
a. Traditional Plan	4,117	6,803	393	11,313	11,057
b. Combined Plan	<u>48</u>	<u>93</u>	<u>0</u>	<u>141</u>	<u>108</u>
c. Total	4,165	6,896	393	11,454	11,165
3. Retired Number Counts	52,639	93,624	3,033	149,296	145,263
4. Deferred / Inactive Number Counts	84,008	190,255	696	274,959	267,404
5. Member Directed Active Number Counts	<u>1,496</u>	<u>3,100</u>	<u>0</u>	<u>4,596</u>	<u>3,611</u>
6. Total Number Counts	248,350	523,886	11,902	784,138	769,862
<b>B. Defined Benefit Assets</b>					
1. Market Value (MV)	21,456	30,138	1,982	53,576	48,241
2. Rate of Return on MV				12.19%	24.79%
3. Funding Value (FV)	20,205	28,380	1,867	50,452	46,745
4. Rate of Return on FV				9.08%	7.93%
5. Ratio of FV to MV				94.2%	96.9%
<b>C. Defined Benefit Actuarial Results</b>					
1. Normal Cost as a % of Payroll	14.67%	14.57%	18.72%	14.75%	14.33%
2. Actuarial Accrued Liability (AAL)					
a. Active	11,747	17,315	1,181	30,243	29,409
b. Retired	10,541	14,158	999	25,698	23,728
c. Deferred/Inactive	<u>694</u>	<u>953</u>	<u>16</u>	<u>1,663</u>	<u>1,636</u>
d. Total	22,982	32,426	2,196	57,604	54,773
3. Unfunded AAL (UAAL)	2,777	4,046	329	7,152	8,028
4. Funded Ratio	87.9%	87.5%	85.0%	87.6%	85.3%
<b>D. Contribution Rates</b>					
	CY 2006			CY 2005	
1. Pension Contributions					
a. Employer Normal Cost	5.67%	5.57%	8.63%	5.71%	5.78%
b. Member Contribution Rate	9.00%	9.00%	10.09%	9.04%	8.55%
c. UAAL Contribution Rate	<u>3.37%</u>	<u>3.63%</u>	<u>3.80%</u>	<u>3.54%</u>	<u>3.79%</u>
d. Total	18.04%	18.20%	22.52%	18.29%	18.12%
2. Retiree Health Contribution Rate	4.50%	4.50%	4.50%	4.50%	4.00%
3. Total Employer Contribution Rate	13.54%	13.70%	16.93%	13.75%	13.57%
<b>E. Amortization Years to Fully Amortize UAAL *</b>					
	27	21	41	24	29

\* Based on HCPP schedule of employer and member contribution rates. For GASB purposes, amortization years are determined differently. See page XI-4 for additional explanation.

## COMMENTS

---

*The December 31, 2004 actuarial valuations of members indicate* the following about the portion of employer contribution rates allocated to financing retirement allowances:

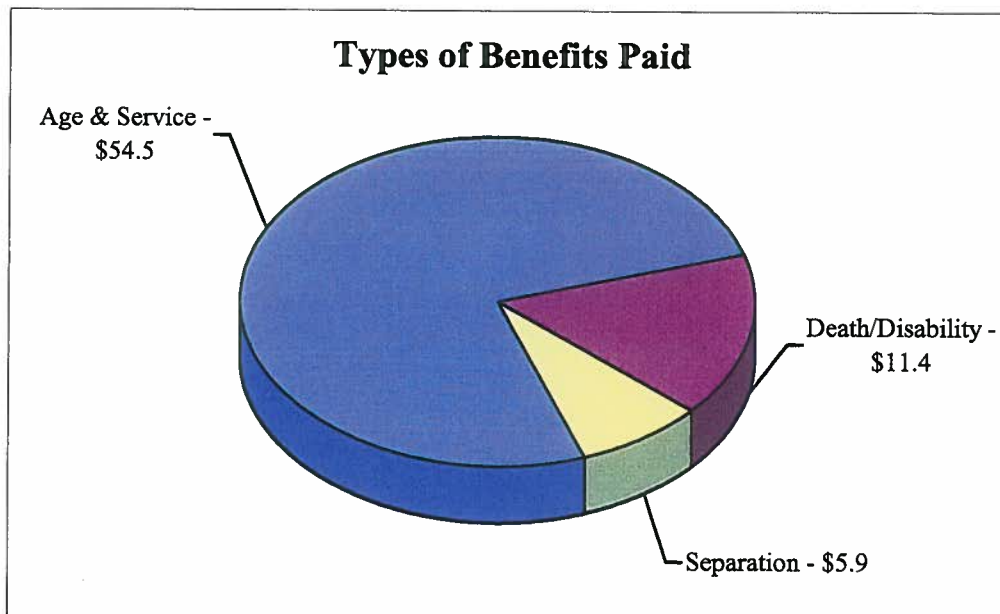
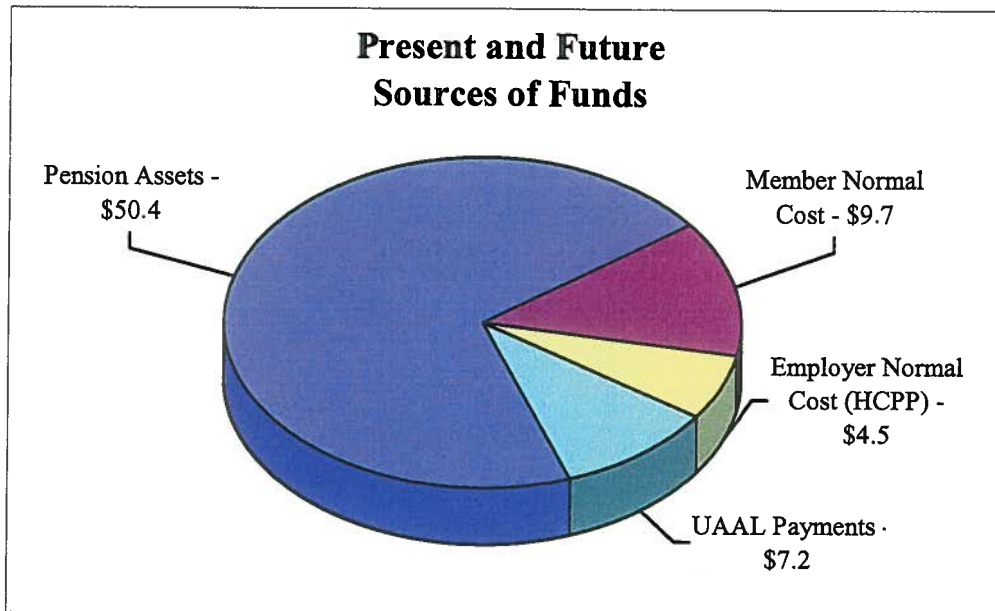
- The employer rates are sufficient to fully fund the cost of benefit commitments being made to members for service currently being rendered.
- After satisfying current cost requirements, the remaining portion of the employer rates provides sufficient funds to amortize unfunded actuarial accrued liabilities over a period of 27 years for the System in total.

***Experience.*** The computed amortization period, taking into account Health Care Preservation Plan (HCPP) scheduled increases in contribution rates is 24 years, compared with the 29 year period that had been reported in the December 31, 2003 valuation. This result was partly due to favorable investment experience for the year ended December 31, 2004 and partly due to favorable pay increase experience. Measured on a market value basis, investment return was over 12%. The Market Value of Assets currently exceeds the Funding Value by \$3.1 Billion. Additional information concerning 2004 experience including other sources of gains and losses will be presented in a separate report of gain/loss experience.

***Conclusion.*** Based on the results of the December 31, 2004 regular annual actuarial valuation, it is our opinion that the Ohio Public Employees Retirement System continues to be in sound financial condition in accordance with actuarial principles of level percent of payroll financing.

**FINANCING \$71.8 BILLION\* OF DEFINED BENEFIT PROMISES  
FOR PRESENT ACTIVE AND RETIRED MEMBERS  
DECEMBER 31, 2004  
(DOLLAR AMOUNTS IN BILLIONS)**

---



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



# DEFINED BENEFIT ACTIVE MEMBERS IN VALUATION

## GROUP AVERAGES - COMPARATIVE STATEMENT

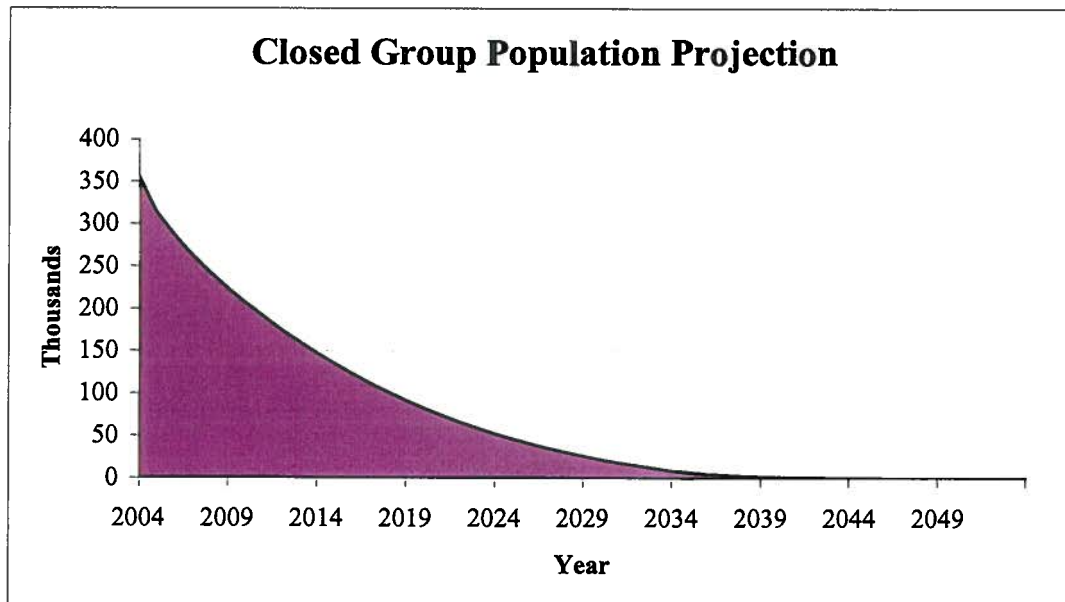
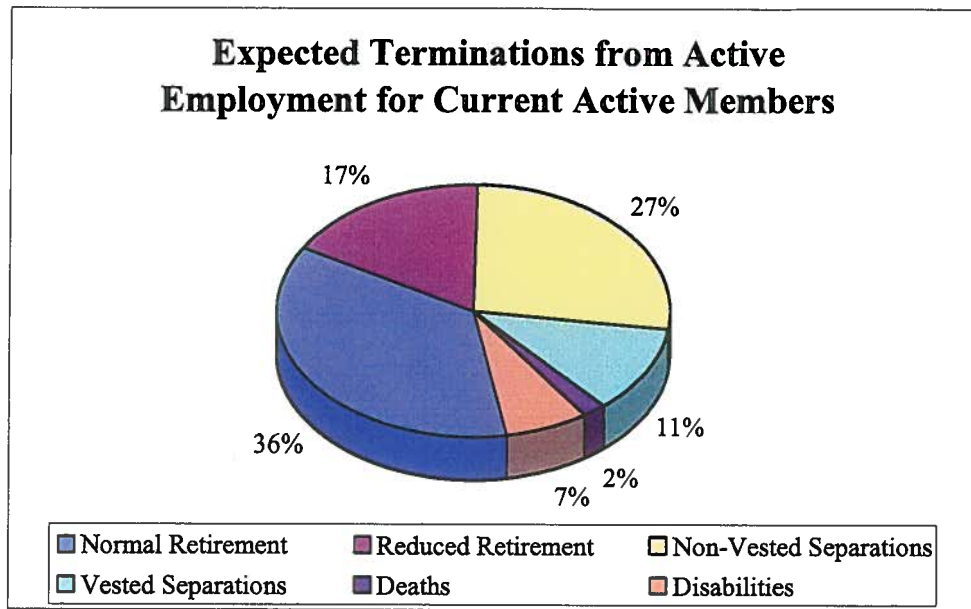
Valuation Group	Dec. 31	No. of Active Members	Group Averages				
			Attained Age	Accrued Service Yrs.	Annual Payroll		
					Average	Increase	
STATE	1975	83,220	40.6 yrs.	6.5 yrs.	\$ 9,441	6.4 %	@
	1980	92,872	39.4	7.3	13,934	8.1 %	@
	1985	89,256	39.2	8.4	18,677	7.4 %	@
	1990	98,939	40.7	8.1	25,281	6.2 %	@
	1995	114,596	40.4	8.8	27,962	2.0 %	@
	2000	113,099	41.6	9.7	34,201	4.1 %	
	2001	109,219	42.1	10.2	36,589	7.0 %	
	2002	110,017	42.0	10.2	37,531	2.6 %	
	2003	108,249	42.2	10.3	37,679	0.4 %	
	2004	110,207	42.2	10.3	37,794	0.3 %	
LOCAL GOV'T	1975	149,557	40.8 yrs.	6.1 yrs.	\$ 8,771	4.3 %	@
	1980	160,797	40.7	7.4	13,035	8.2 %	@
	1985	158,285	40.1	8.3	15,983	6.2 %	@
	1990	173,220	41.5	7.9	19,506	4.1 %	@
	1995	223,431	41.2	7.6	20,384	0.9 %	@
	2000	245,831	41.8	8.1	24,401	3.7 %	
	2001	243,202	42.2	8.4	26,526	8.7 %	
	2002	247,377	42.2	8.3	27,171	2.4 %	
	2003	237,082	42.8	8.9	28,269	4.0 %	
	2004	236,907	43.1	9.0	29,110	3.0 %	
LAW	1975	2,111	35.0 yrs.	4.9 yrs.	\$ 10,467	-	
	1980	3,019	36.1	6.8	16,846	10.0 %	@
	1985	4,207	36.5	8.4	20,103	5.5 %	@
	1990	5,804	38.6	9.9	26,936	6.0 %	@
	1995	6,605	39.3	11.1	32,441	3.2 %	@
	2000	8,045	39.3	11.7	40,387	4.5 %	
	2001	7,892	39.3	11.8	42,503	5.2 %	
	2002	8,030	39.4	12.0	44,420	4.5 %	
	2003	8,253	39.6	12.2	46,576	4.9 %	
	2004	8,173	39.7	12.4	48,045	3.2 %	
TOTAL	2003	353,584	42.5 yrs.	9.4 yrs.	\$ 31,577	-	
	2004	355,287	42.7	9.5	32,240	2.1 %	

@ 5-year annual compound rate.

# DEVELOPMENT OF PRESENT DEFINED BENEFIT POPULATION

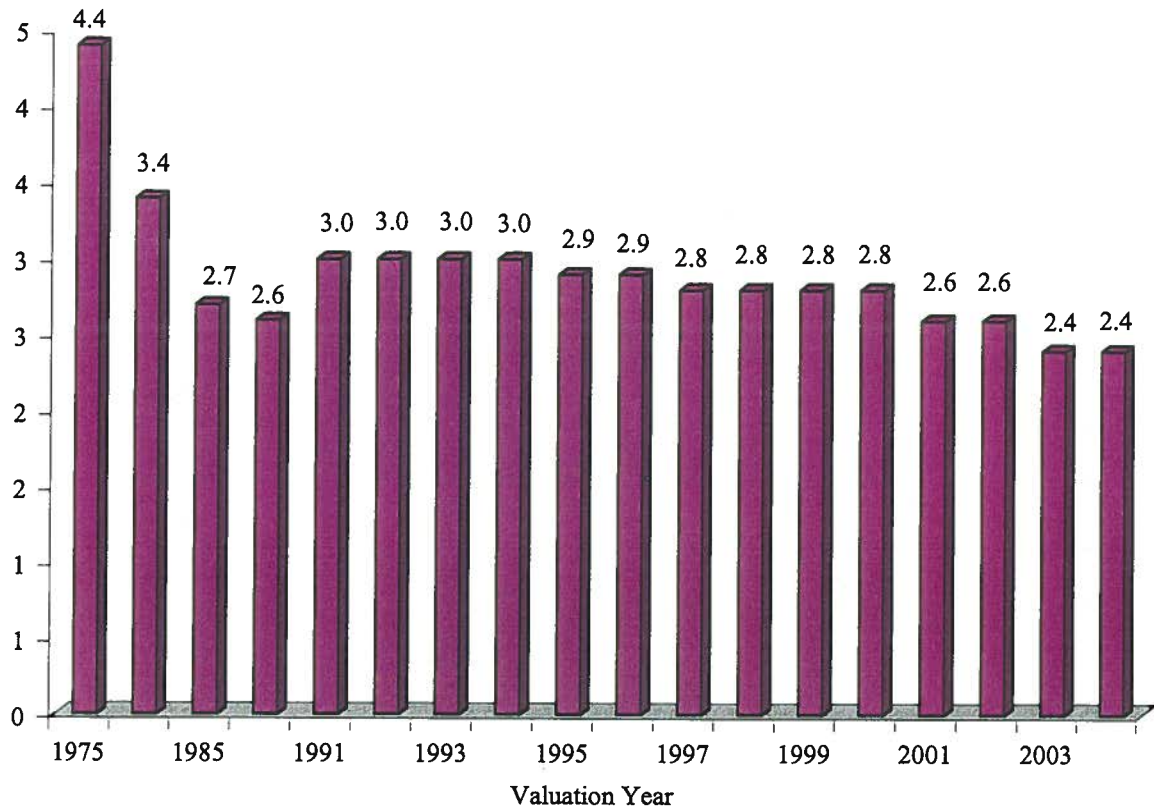
## DECEMBER 31, 2004

---

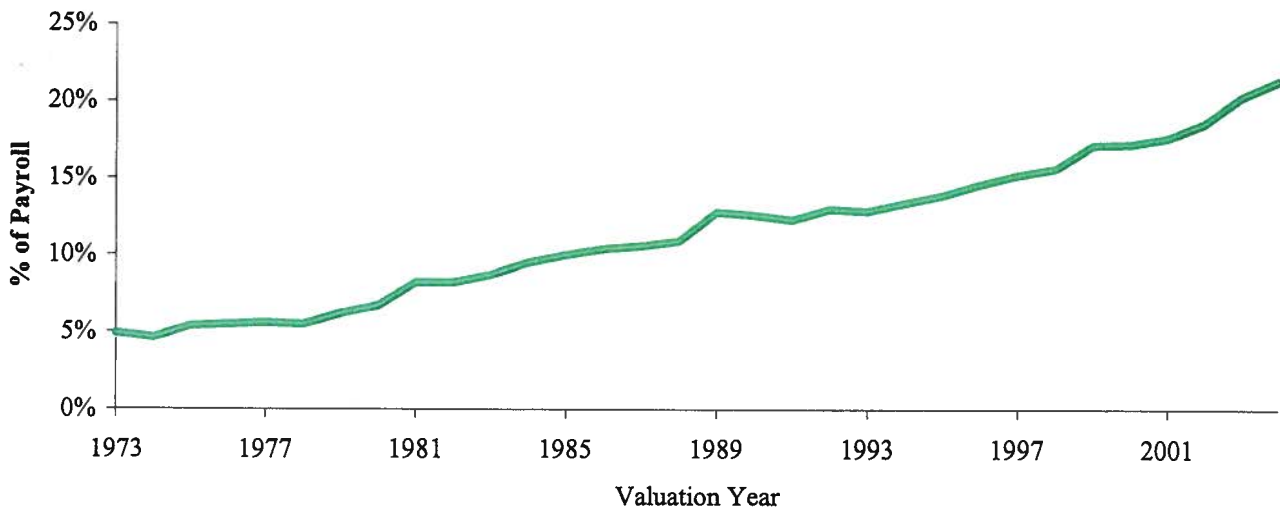


The charts show the expected future development of the present population in simplified terms. The defined benefit portion of the retirement system presently covers 355,287 active members. Eventually, 27% of the population is expected to terminate covered employment prior to retirement and forfeit eligibility for a monthly benefit. 64% 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.

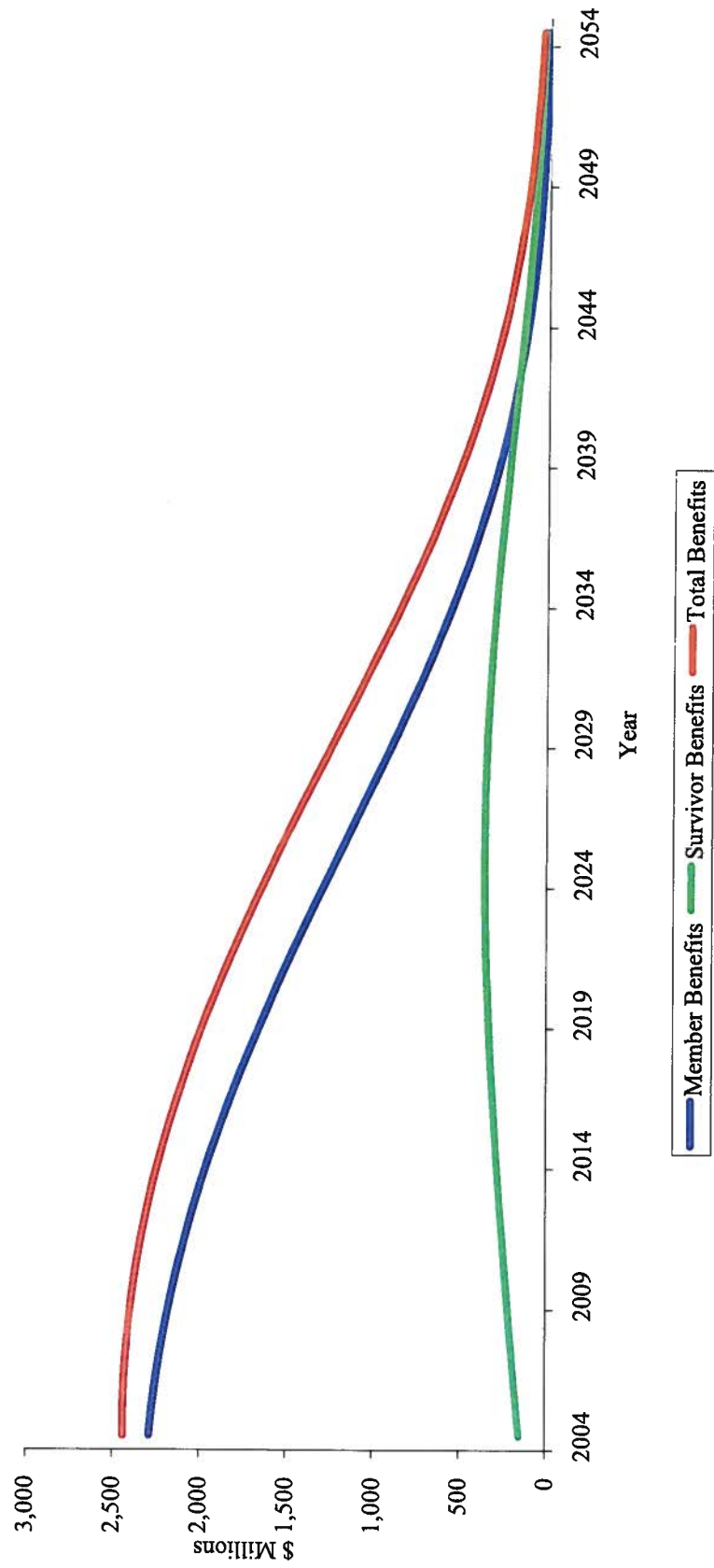
### Active Members Per Retired Life



### Retirement Benefits Being Paid as a Percent of Payroll



# PROJECTED FUTURE BENEFIT PAYMENTS ON BEHALF OF PRESENT RETIRED LIVES



Total future payments:	\$62.9 billion
From present assets:	\$25.7 billion
From future earnings:	\$37.2 billion



**ALL DIVISIONS**  
**DEFINED BENEFIT ACTIVE MEMBERS IN VALUATION**  
**DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service To Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	12,816							12,816
tot. Pay	\$76,166,126							\$76,166,126
avg. Pay	\$5,943							\$5,943
20-24	26,509	486						26,995
tot. Pay	\$323,065,359	\$9,902,930						\$332,968,289
avg. Pay	\$12,187	\$20,376						\$12,334
25-29	21,375	5,164	170					26,709
tot. Pay	\$501,858,715	\$173,080,545	\$5,489,237					\$680,428,497
avg. Pay	\$23,479	\$33,517	\$32,290					\$25,476
30-34	16,877	11,735	3,748	111				32,471
tot. Pay	\$434,858,629	\$439,993,767	\$150,628,693	\$4,108,445				\$1,029,589,534
avg. Pay	\$25,766	\$37,494	\$40,189	\$37,013				\$31,708
35-39	14,610	10,425	9,224	3,653	131			38,043
tot. Pay	\$371,333,403	\$394,634,059	\$403,994,288	\$157,889,186	\$5,696,486			\$1,333,547,422
avg. Pay	\$25,416	\$37,855	\$43,798	\$43,222	\$43,485			\$35,054
40-44	14,568	10,001	8,805	9,143	4,172	433		47,122
tot. Pay	\$352,387,912	\$358,957,058	\$372,600,237	\$429,552,278	\$192,291,801	\$19,800,476		\$1,725,589,762
avg. Pay	\$24,189	\$35,892	\$42,317	\$46,982	\$46,091	\$45,729		\$36,620
45-49	13,601	10,016	8,503	8,333	7,745	5,687	227	54,112
tot. Pay	\$318,294,871	\$344,291,785	\$342,857,452	\$379,776,429	\$385,727,511	\$273,242,339	\$11,215,022	\$2,055,405,409
avg. Pay	\$23,402	\$34,374	\$40,322	\$45,575	\$49,803	\$48,047	\$49,405	\$37,984
50-54	11,080	8,229	7,976	7,327	6,163	7,126	2,183	50,084
tot. Pay	\$256,729,216	\$279,622,996	\$307,236,660	\$323,710,214	\$300,119,499	\$376,190,571	\$117,733,161	\$1,961,342,317
avg. Pay	\$23,171	\$33,980	\$38,520	\$44,180	\$48,697	\$52,791	\$53,932	\$39,161
55-59	7,915	5,841	6,217	6,103	4,587	3,857	2,320	36,840
tot. Pay	\$172,025,003	\$187,134,539	\$233,986,782	\$254,576,206	\$213,574,233	\$196,064,070	\$134,739,239	\$1,392,100,072
avg. Pay	\$21,734	\$32,038	\$37,637	\$41,713	\$46,561	\$50,833	\$58,077	\$37,788
60-64	4,036	3,095	2,843	2,932	2,206	1,648	931	17,691
tot. Pay	\$66,842,535	\$88,711,643	\$100,434,813	\$118,425,321	\$94,694,538	\$77,867,058	\$52,319,933	\$599,295,841
avg. Pay	\$16,562	\$28,663	\$35,327	\$40,391	\$42,926	\$47,249	\$56,198	\$33,876
65-69	2,454	1,313	1,052	899	687	526	384	7,315
tot. Pay	\$24,188,999	\$26,537,852	\$31,615,119	\$33,032,084	\$27,710,440	\$23,705,015	\$19,590,080	\$186,379,589
avg. Pay	\$9,857	\$20,212	\$30,052	\$36,743	\$40,335	\$45,067	\$51,016	\$25,479
70 & Over	2,091	1,107	664	442	288	229	268	5,089
tot. Pay	\$15,031,184	\$12,091,012	\$12,002,797	\$12,238,800	\$9,402,955	\$8,770,098	\$11,958,621	\$81,495,467
avg. Pay	\$7,189	\$10,922	\$18,077	\$27,690	\$32,649	\$38,297	\$44,622	\$16,014
<b>Totals</b>	147,932	67,412	49,202	38,943	25,979	19,506	6,313	355,287
tot. Pay	\$2,912,781,952	\$2,314,958,186	\$1,960,846,078	\$1,713,308,963	\$1,229,217,463	\$975,639,627	\$347,556,056	\$11,454,308,325
avg. Pay	\$19,690	\$34,340	\$39,853	\$43,995	\$47,316	\$50,017	\$55,054	\$32,240

**ALL DIVISIONS**  
**DEFINED BENEFIT ACTIVE MEMBERS IN VALUATION**  
**DECEMBER 31, 2004**  
**BY GENDER AND YEARS OF SERVICE**

---

Service Years	Active Member Count			Active Member Pays	
	Males	Females	Total	Total	Average
0	27,692	31,002	58,694	\$ 718,896,623	\$12,248
1	13,286	15,484	28,770	562,411,779	19,549
2	9,756	11,665	21,421	522,238,472	24,380
3	8,896	10,777	19,673	525,402,907	26,707
4	8,344	11,030	19,374	583,832,171	30,135
5	7,645	9,313	16,958	545,993,540	32,197
6	6,498	7,978	14,476	488,564,961	33,750
7	6,063	7,014	13,077	448,867,770	34,325
8	5,439	6,436	11,875	426,958,065	35,954
9	5,215	5,811	11,026	404,573,850	36,693
10	5,434	5,886	11,320	435,945,258	38,511
11	4,442	5,156	9,598	369,417,366	38,489
12	4,097	4,537	8,634	344,965,387	39,954
13	4,505	5,312	9,817	391,592,998	39,889
14	4,520	5,313	9,833	418,925,069	42,604
15 & Up	44,629	46,112	90,741	4,265,722,109	47,010
<b>Totals</b>	<b>166,461</b>	<b>188,826</b>	<b>355,287</b>	<b>\$11,454,308,325</b>	<b>\$32,240</b>

## SECTION II



## Financial Information

# FINANCIAL DATA FOR CALENDAR YEAR 2004

## CONSOLIDATED ASSET RECONCILIATION

### ALL PLANS, ALL DIVISIONS

	Traditional Pension Plan	DB Portion of Combined Pension Plan #	Total Pension Defined Benefit	401(h) Health Care	Member Directed YEBB	DC Portion of Combined Pension Plan #	Member Directed	Total Defined Contribution	Total 2004
Beginning Market Value @ 12/31/03	\$ 48,149,453,128	\$ 8,709,455	\$ 48,158,162,582	\$ 10,813,803,450	\$ 3,181,305	\$ 14,181,032	\$ 18,464,413	\$ 32,645,445	\$ 59,007,792,782
Assets Held in Trust for Benefits	89,882,200	-	89,882,200	-	-	-	-	-	89,882,200
Assets Held for Upcoming Year Budget	\$ 48,239,335,328	\$ 8,709,455	\$ 48,248,044,782	\$ 10,813,803,450	\$ 3,181,305	\$ 14,181,032	\$ 18,464,413	\$ 32,645,445	\$ 59,097,674,982
Total Beginning Market Value @ 12/31/03									
External Cash Flows:									
Revenues:									
Member Contributions / Deposits	\$ 1,019,785,485	\$ 12,756	\$ 1,019,798,241	\$ -	\$ -	\$ 11,395,507	\$ 10,148,602	\$ 21,544,109	\$ 1,041,342,350
Employer Contributions	1,113,946,023	12,166,934	1,126,112,957	464,096,679	5,856,183	3,377	10,051,013	10,054,390	1,606,120,210
Retiree Paid Health Care Premiums	-	-	-	58,877,753	-	-	-	-	58,877,753
Other Income / Cancelled Warrants	(107,797)	-	(107,797)	-	-	-	-	-	(107,797)
Total Revenues	\$ 2,133,623,711	\$ 12,179,690	\$ 2,145,803,401	\$ 522,974,432	\$ 5,856,183	\$ 11,398,884	\$ 20,199,615	\$ 31,598,498	\$ 2,706,232,515
Disbursements:									
Refunds of Member Accounts	\$ (207,121,143)	\$ -	\$ (207,121,143)	\$ -	\$ -	\$ (601,042)	\$ (2,055,788)	\$ (2,656,830)	\$ (209,777,973)
Retirement Benefits	(2,454,131,826)	-	(2,454,131,826)	-	-	-	-	-	(2,454,131,826)
Retiree Paid Post Retirement Health Care	-	-	-	(58,877,753)	-	-	-	-	(58,877,753)
ER Paid Post Retirement Health Care	-	-	-	(896,089,217)	-	-	-	-	(896,089,217)
ER Paid Post Retirement Medicare	-	-	-	(67,295,184)	-	-	-	-	(67,295,184)
Administrative Expenses	(66,393,483)	-	(66,393,483)	(7,238,817)	(1,478,321)	(5,072,167)	(4,946,727)	(10,018,894)	(85,129,515)
Total Disbursements	\$ (2,727,646,452)	\$ -	\$ (2,727,646,452)	\$ (1,029,500,970)	\$ (1,478,321)	\$ (5,673,209)	\$ (7,002,516)	\$ (12,675,724)	\$ (3,771,301,467)
Net External Cash Flow	\$ (594,022,741)	\$ 12,179,690	\$ (581,843,051)	\$ (506,526,539)	\$ 4,377,863	\$ 5,725,675	\$ 13,197,099	\$ 18,922,774	\$ (1,065,068,952)
Inter-Plan Activity									
Member Balance Transfers & Plan Switches	\$ 221,716	\$ 23,737	\$ 245,452	\$ -	\$ -	\$ (98,692)	\$ (146,760)	\$ (245,452)	\$ -
DCP Fixed Assets Advanced by TP	2,544,577	-	2,544,577	-	(251,887)	(1,279,716)	(1,012,974)	(2,292,690)	-
DCP Start up Costs	-	-	-	-	-	-	-	-	-
Interest on 12/31/03 Advance Balance	744,183	-	744,183	-	(50,185)	(300,506)	(393,492)	(693,998)	-
Income Applied to Advance (Loan) Balance	-	(623,714)	(623,714)	-	-	623,714	-	623,714	-
Total Inter-Plan Activity	\$ 3,510,475	\$ (599,978)	\$ 2,910,498	\$ -	\$ (302,072)	\$ (1,055,200)	\$ (1,553,226)	\$ (2,608,426)	\$ -
Investment Income:									
Interest and Dividends	\$ 1,039,720,026	\$ 310,290	\$ 1,040,030,316	\$ 229,211,524	\$ 127,092	\$ 340,021	\$ 422,702	\$ 762,723	\$ 1,270,131,656
Other Ordinary Investment Income	1,051,485,760	303,951	1,051,789,711	224,529,048	127,441	221,250	289,795	511,045	1,276,957,244
Realized Capital Value Changes	3,875,975,957	1,159,339	3,877,135,296	856,405,145	474,874	2,044,352	2,774,348	4,818,700	4,738,834,015
External Asset Management Fees	(61,689,596)	(11,248)	(61,700,844)	(8,309,271)	(7,542)	(45,172)	(15,258)	(60,430)	(70,078,088)
Rounding	1	-	1	-	(1)	-	-	-	(1)
Investment Return	\$ 5,905,492,148	\$ 1,762,331	\$ 5,907,254,479	\$ 1,301,836,446	\$ 721,864	\$ 2,560,450	\$ 3,471,587	\$ 6,032,037	\$ 7,215,844,826
Ending Market Value @ 12/31/04	\$ 53,554,315,210	\$ 22,051,498	\$ 53,576,366,709	\$ 11,609,113,357	\$ 7,978,960	\$ 21,411,957	\$ 33,579,873	\$ 54,991,830	\$ 65,248,450,855

# The ending market values for the Combined Plan as shown in the December 31, 2003 Actuarial Valuation Report were \$1,638,722 for the DB portion and \$21,251,765 for the DC portion.



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

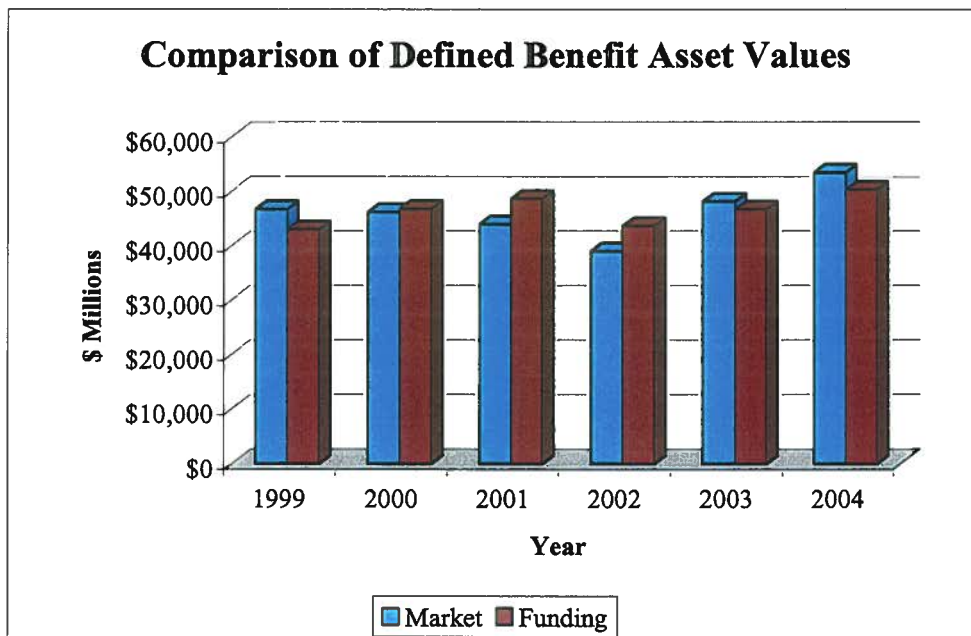
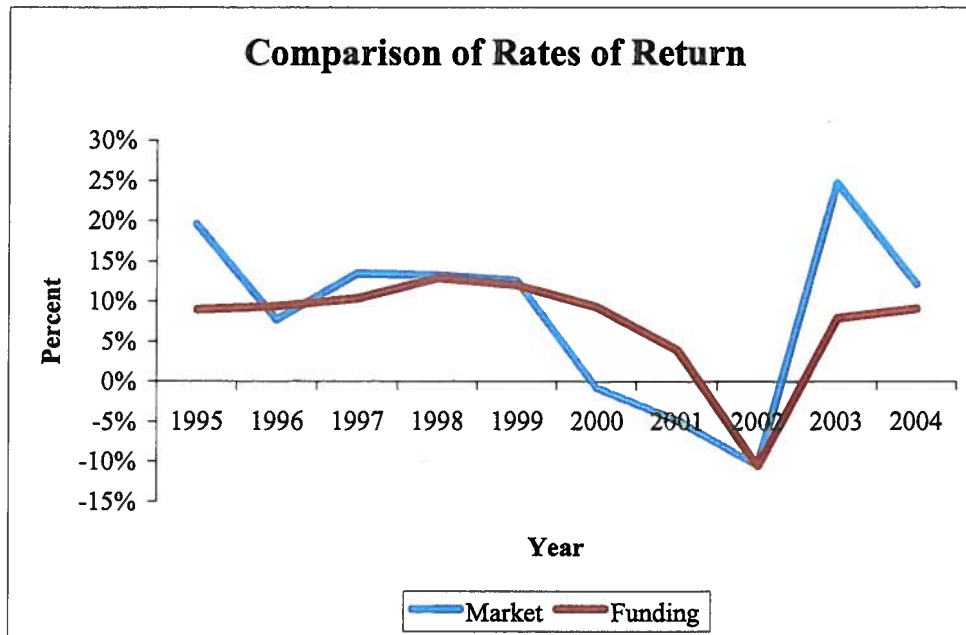
	Year Ended December 31	2004	2005	2006	2007
A. Funding Value Beginning of Year		\$46,745,327,239			
B. Market Value End of Year		53,576,366,709			
C. Market Value Beginning of Year		48,240,974,050			
D. Non-Investment/Administrative Net Cash Flow					
D1. Member Contributions		1,019,798,241			
D2. Employer Contributions (Less Other Income/Cancelled Warrants)		1,126,005,161			
D3. Refund of Member Accounts		(207,121,143)			
D4. Retirement Benefits		(2,454,131,826)			
D5. Member Balance Transfers		245,452			
D6. Total Net Cash Flow: D1+D2+D3+D4+D5		(515,204,115)			
E. Investment Return					
E1. Market Total:B-C-D6		5,850,596,774			
E2. Assumed Rate of Return		8.00%			
E3. Assumed Amount of Return		3,719,018,015			
E4. Amount Subject to Phase-In: E1-E3		2,131,578,759			
F. Phased-In Recognition of Investment Return					
F1. Current year: 0.25xE4		532,894,690			
F2. First Prior Year		1,555,151,363	\$532,894,690		
F3. Second Prior Year		(1,584,903,640)	1,555,151,363	\$532,894,690	
F4. Third Prior Year			(1,584,903,640)	1,555,151,365	\$532,894,689
F5. Total Phase-Ins		503,142,413	503,142,413	2,088,046,055	532,894,689
G. Funding Value End of Year					
G1. Preliminary Funding Value End of Year: A+D6+E3+F5		\$50,452,283,552			
G2. Upper Corridor Limit: 112% x B		60,005,530,714			
G3. Lower Corridor Limit: 88% x B		47,147,202,703			
G4. Funding Value End of Year		\$50,452,283,552			
H. Difference Between Market and Funding Value		\$3,124,083,157	\$2,620,940,744	\$532,894,689	
I. Recognized Rate of Return		9.08%			
J. Market Rate of Return		12.19%			
K. Ratio of Funding Value to Market Value		94%			

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 rate, 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 BETWEEN DIVISIONS

## DECEMBER 31, 2004

	State	Local	Law	PS	Total
(1) Employer Accumulation Fund-Traditional Plan	\$ 7,322,656,820	\$ 10,526,182,717	\$ 706,782,659	\$ (78,754,734)	\$ 18,476,867,463
(2) Employer Accumulation Fund-Combined Plan	6,944,692	15,106,806	0	0	22,051,498
(3) Retired Assets-Traditional Plan	10,190,495,944	13,653,957,364	935,527,120	55,388,662	24,835,369,090
(4) Subtotal: (1)+(2)+(3)	\$ 17,520,097,457	\$ 24,195,246,887	\$ 1,642,309,780	\$ (23,366,073)	\$ 43,334,288,051
(5) Member Deposits from Participant Data-Traditional Plan					
(a) Active Member Deposits	4,133,871,570	6,329,235,295	407,281,385	3,171,810	10,873,560,060
(b) Inactive Member Deposits	410,848,243	580,759,950	9,169,295	75,249	1,000,852,737
(c) Total Member Deposits: (a)+(b)	4,544,719,813	6,909,995,245	416,450,680	3,247,059	11,874,412,797
(6) Share of Total Member Deposits	38.27%	58.19%	3.51%	0.03%	100.00%
(7) Employee Savings Fund Allocated According to (6)	3,574,676,056	5,435,097,337	327,561,728	2,553,993	9,339,889,114
(8) Subtotal: (4)+(7)	21,094,773,513	29,630,344,224	1,969,871,508	(20,812,079)	52,674,177,165
(9) Assets Without Division Allocated According to (8)	325,763,554	457,577,145	30,420,442	(321,398)	813,439,743
(10) Assets Held For Upcoming Year Budget Allocated According to (8)	35,542,215	49,923,649	3,319,002	(35,066)	88,749,800
(11) Total Employer +Employee Defined Benefit Assets: (8)+(9)+(10)	\$ 21,456,079,282	\$ 30,137,845,018	\$ 2,003,610,952	\$ (21,168,543)	\$ 53,576,366,709
(12) Share of Defined Benefit Market Value	40.05%	56.25%	3.74%	-0.04%	100.00%
(13) Market Value Adjustment Allocated According to (12)	(1,251,122,090)	(1,757,363,177)	(116,832,246)	1,234,356	(3,124,083,157)
(14) Funding Value of Defined Benefit Assets (11)+(13)	\$ 20,204,957,192	\$ 28,380,481,841	\$ 1,886,778,706	\$ (19,934,187)	\$ 50,452,283,552



## SECTION III



### **Benefits and Conditions Evaluated**



## BENEFITS AND CONDITIONS EVALUATED

---

### PLANS

***Traditional Pension Plan.*** The Traditional Pension Plan is a defined benefit plan under which a member's retirement benefit is based on a formula. The formula is determined by years of contributing service and the average of the three highest years of earnable salary (or final average salary). The OPERS investment professionals manage the investment of employee and employer contributions to ensure that funds are available to pay the formula benefit.

***Combined Plan.*** The Combined Plan is a retirement plan with both a defined benefit and a defined contribution component. Under the defined benefit portion of the Combined Plan, the member's benefit is determined by a reduced formula (similar to the Traditional Pension Plan). Ohio investment professionals manage the investment of employer contributions to ensure that funds are available to pay the reduced formula benefit. Under the defined contribution portion of the Combined Plan, employee contributions are deposited into the member's individual defined contribution account and invested as directed by the member. The member's retirement benefit under this portion of the Combined Plan is based on employee contributions and the gains and losses on those contributions. The member directs the investment by selecting from among the nine professionally-managed OPERS Investment Options.

***Member-Directed Plan.*** The Member-Directed Plan is a defined contribution plan under which employee and employer contributions are deposited into a member's individual defined contribution account and invested as directed by the member. The member's retirement benefit is based on employee and employer contributions and the gains and losses on those contributions. Under the Member-Directed Plan, the member directs the investment by selecting from nine professionally-managed OPERS Investment Options.

## BENEFITS AND CONDITIONS EVALUATED

---

### TERMS

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

**Participant Contribution Account** is the account for each Participant in the Combined or Member-Directed Plan to which shall be credited the employee contributions.

**Miscellaneous Contribution Account** is the account to which shall be credited any voluntary after-tax contributions for members in the Combined and Member-Directed Plans.

**Rollover Account** is the account to which shall be credited any rollover amounts for members in the Combined or Member-Directed Plans.

**Employers' Accumulation Fund** is the fund to which shall be credited employer contributions for members in the Traditional or Combined Plan. There are separate accounts in the Employers' Accumulation Fund for the Combined Plan and the Traditional Pension Plan.

**Employer Contribution Account** is the fund to which shall be credited a portion of the employer contributions for members in the Member-Directed Plan.

### CONTRIBUTIONS

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

Law enforcement members whose primary duties are to preserve the peace, to protect life and property, and to enforce the laws of the state contribute 10.1% of earnable salary effective 1/1/2001. Remaining Law enforcement members (Public Safety) contribute 9.0% of earnable salary.

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

## BENEFITS AND CONDITIONS EVALUATED

---

### CONTRIBUTIONS (CONT'D)

**Health Care Preservation Plan (HCPP).** Both employer and member contribution rates are scheduled to increase over the next few years in accordance with the HCPP. The following table shows total scheduled employer contribution rates (includes contributions for both the pension and retiree health programs):

<b>Year</b>	<b>State</b>	<b>Local Government</b>	<b>Law Enforcement</b>	<b>Public Safety</b>
2005	13.31%	13.55%	16.70%	16.70%
2006	13.54	13.70	16.93	16.93
2007	13.77	13.85	17.17	17.17
2008	14.00	14.00	17.40	17.40
2009	14.00	14.00	17.63	17.63
2010	14.00	14.00	17.87	17.87
2011 and Later	14.00	14.00	18.10	18.10

The portion of the above employer contribution rates scheduled to be allocated to the retiree health program are as follows:

<b>Year</b>	<b>All Divisions</b>
2005	4.00%
2006	4.50
2007	5.00
2008 and Later	5.50

Member contribution rates scheduled to be allocated to the pension program are as follows:

<b>Year</b>	<b>State</b>	<b>Local Government</b>	<b>Law Enforcement</b>	<b>Public Safety</b>
2005	8.50%	8.50%	10.10%	9.00%
2006	9.00	9.00	10.10	9.00
2007	9.50	9.50	10.10	9.50
2008 and Later	10.00	10.00	10.10	10.00

## TRADITIONAL PENSION PLAN

### AGE & SERVICE BENEFITS - STATE AND LOCAL GOVERNMENT MEMBERS

**Age and service eligibility.** A member who (i) has attained age 60 years and has 5 or more years of service credit or 60 contributing months, 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 and service allowance.** A retiring member's age and service allowance is equal to Ohio service 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). The allowance is then adjusted by factors based on attained age or years of service (whichever yields the higher percentage) as determined in the following schedule:

Attained Age	OR	Years of Service Credit	Percentage of Base Amount
58		25	75%
59		26	80
60		27	85
61		N/A	88
N/A		28	90
62		N/A	91
63		N/A	94
N/A		29	95
64		N/A	97
65		30 or more	100

Maximum allowance is 100% of FAS or the limits under IRC Section 415(b). Minimum allowance is based upon twice the member's savings funding balance at retirement together with interest credits.

## **TRADITIONAL PENSION PLAN**

---

### **AGE & SERVICE BENEFITS – LAW MEMBERS (PUBLIC SAFETY) ELIGIBLE TO RETIRE UNDER OHIO REVISED CODE SECTION 145.33(B)(2)(B)**

*Age and service eligibility.* A law member whose secondary duties are to preserve the peace, to protect life and property, and to enforce the laws of the state and 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. A member covered by these provisions may retire at age 48 with 25 or more years of service subject to the reduction described in 145.33 (C)(1).

*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 or the limits under IRC Section 415(b). 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)(A)**

*Age and service eligibility.* A law member whose primary duties are to preserve the peace, to protect life and property, and to enforce the laws of the state 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 or the limits under IRC Section 415(b). 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.



## **TRADITIONAL PENSION PLAN**

---

### **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 the post July 29, 1992 program. Other members were able to elect coverage under the pre July 29, 1992 program (original plan) or elect to be covered by the post July 29, 1992 program (revised plan).

Features of the original plan are:

- a) Upon becoming permanently disabled after completion of at least 5 years or 60 contributing months of service but before attaining age 60, a member is eligible for a disability allowance. The service requirement is waived for Law Enforcement members with an on-duty illness or injury.
- b) The amount of the allowance is the service the member would have had if employment had continued to age 60 times (i) 2.2% of FAS (H.B. 628), or (ii) \$86, whichever produces the greater benefit.
- c) Maximum allowance is 75% of FAS, minimum allowance is 30% of FAS.

Features of the revised plan are:

- a) A member may apply at any age after completion of 5 years or 60 contributing months of service. The service requirement is waived for Law Enforcement members with an on-duty illness or injury.
- b) A disability benefit equal to the greater of 45% of FAS or the actual service credit 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.
- 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.

## TRADITIONAL PENSION PLAN

---

### SURVIVOR BENEFITS

**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*

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

#### *Schedule 2*

<u>Years of Service</u>	<u>Annual Benefit as a % of Deceased Member's FAS</u>
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.

## TRADITIONAL PENSION PLAN

---

A *qualified spouse* is the surviving spouse of a deceased member who is age 62 or at any age if the deceased member had 10 or more years of Ohio service credit or if the surviving spouse is caring for a qualified child or is adjudged physically or mentally incompetent.

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 regardless of age is adjudged physically or mentally incompetent at the time of 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 immediately preceding the member's death.

Qualified *survivors of disability benefit recipients* have the FAS used in calculating their benefits adjusted for each year between the effective date of the disability benefit and the recipient's date of death. The FAS is adjusted by the lesser of (1) 3% or (2) the actual average percentage change in the CPI.

### **BENEFITS AT RETIREMENT**

***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).

## TRADITIONAL PENSION PLAN

---

**PLOP.** Effective 01/01/2004, retiring members may also elect to receive a Partial Lump Sum Option Payment (PLOP) (S.B.247). The PLOP is an option that allows a retiree to initially receive a partial lump sum benefit payment along with a reduced monthly retirement allowance. The lump sum payment cannot be less than 6 times or more than 36 times the monthly amount that would be payable to the member under the plan of payment selected and shall not result in a monthly allowance that is less than 50% of the monthly benefit. The total amount paid as a lump sum and monthly benefit shall be the actuarial equivalent of the amount that would have been paid had the lump sum not been selected.

**QEBA.** Qualified Excess Benefit Arrangement was established 01/01/2004 (H.B.190). The QEBA is operated in accordance with Internal Revenue Code Section 415(m). Under this arrangement the recipient may be paid the portion of his/her retirement benefit that was previously limited due to IRC Section 415(b).

**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 3.0% of the corresponding base allowance, except that no allowance shall exceed the limits established by Section 415 of the Internal Revenue Code.

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

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

**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.

## **TRADITIONAL PENSION PLAN**

---

### **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. 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. Interest is credited annually to member contribution balances. The rate of interest credited is determined by the OPERS Board and will not be greater than 6%. At the present time, 1% interest is credited to member contribution balances.

If the member has, or had at the time of death, at least 5 years but less than 10 years of qualified service, an additional 33% of the member's eligible contributions will be paid to the member or survivor. If the member has, or had at the time of death, at least 10 years of qualified service credit, an additional 67% of the member's eligible contributions 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.

### **SUPPLEMENTAL BENEFITS**

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

***Medicare premiums.*** Medicare part B premiums are paid for those eligible, upon proof of coverage. Members retiring with a normal or early service retirement allowance after June 13, 1986 must have 10 or more years of qualified service credit to be eligible for this benefit.



## COMBINED PLAN

---

### AGE & SERVICE BENEFITS - STATE AND LOCAL GOVERNMENT MEMBERS\*

**Eligibility.** A member who (i) has attained age 60 years and has 5 or more years of service credit in the Plan or 60 contributing months in the Plan, 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 under the Combined Plan with an age and service retirement allowance under the defined benefit portion of the Plan and with a retirement benefit under the defined contribution portion of the Plan.

*\*Law Enforcement and Public Safety members must contribute to the Traditional Pension Plan only.*

**Age and service retirement allowance (Defined Benefit portion of the Plan).** A retiring member's age and service retirement allowance is equal to Ohio service credit in the Plan times 1.0% of FAS for the first 30 years of service plus 1.25% for years of service over 30 years. The allowance is then adjusted by factors based on attained age or years of service (whichever yields the higher percentage) as determined in the following schedule:

Attained Age	OR	Years of Service Credit	Percentage of Base Amount
58		25	75%
59		26	80
60		27	85
61		N/A	88
N/A		28	90
62		N/A	91
63		N/A	94
N/A		29	95
64		N/A	97
65		30 or more	100

Maximum allowance is 100% of FAS or the limits under IRC Section 415(b).

**Retirement benefit (Defined Contribution portion of the Plan).** The member's retirement benefit under this portion of the Combined Plan is based on the amounts credited to the Participant Contribution Account, Rollover Account, and Miscellaneous Account and the gains and losses on the amounts in those Accounts.

## **COMBINED PLAN**

---

### **DISABILITY RETIREMENT**

A Combined Plan member may apply after completion of 5 years in the Plan or 60 contributing months of service in the Plan. Combined Plan members may be covered under the original or revised disability plan. Combined Plan members who apply for disability may:

- 1) Take a lump sum distribution of the Participant Contribution Account, Rollover Account, and Miscellaneous Account and any additional amount they are entitled to from the Employers' Accumulation Fund, or
- 2) Transfer all service credit and the Participant's Accounts (as listed above) in the Combined Plan to the Traditional Pension Plan to be paid a disability benefit under the Traditional Pension Plan guidelines.

### **SURVIVOR BENEFITS**

Combined Plan members are eligible for the same survivor benefits as those listed under the Traditional Pension Plan and must qualify for survivor benefits under the same guidelines as those members in the Traditional Pension Plan.

### **BENEFITS AT RETIREMENT**

***Optional Benefit Forms under the Defined Benefit portion of the Plan.*** Retiring members may elect to have their age and service retirement allowance 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).

## COMBINED PLAN

---

***Optional Benefit Forms under the Defined Contribution portion of the Plan.*** Retiring members may elect to have retirement benefits paid in a partial lump sum, subject to any rules adopted by the Board; monthly annuity payments (with joint and survivor options) similar to those offered under the defined benefit portion of the Plan; periodic payments over a period certain; periodic payments of a specific monthly amount; payments with a deferred start date; or a combination of these options.

***PLOP.*** Effective 01/01/2004, retiring members may also elect to receive a Partial Lump Sum Option Payment (PLOP) (S.B.247). The PLOP is an option that allows a retiree to initially receive a partial lump sum benefit payment along with a reduced monthly retirement allowance. The lump sum payment cannot be less than 6 times or more than 36 times the monthly amount that would be payable to the member under the plan of payment selected and shall not result in a monthly allowance that is less than 50% of the monthly benefit. The total amount paid as a lump sum and monthly benefit shall be the actuarial equivalent of the amount that would have been paid had the lump sum not been selected. The PLOP is available to Combined Plan members for the age and service retirement allowance under the defined benefit portion of the Plan and for the monthly annuity under the defined contribution portion of the Plan.

***QEBA.*** Qualified Excess Benefit Arrangement was established 01/01/2004 (H.B.190). The QEBA is operated in accordance with Internal Revenue Code Section 415(m). Under this arrangement the recipient may be paid the portion of his/her retirement benefit that was previously limited due to IRC Section 415(b). The QEBA is available to Combined Plan members for the age and service retirement allowance under the defined benefit portion of the Plan.

***Post-retirement increases.*** Each July after June 30, 1971 or the annual anniversary established 12 months after the initial date of retirement, each age and service retirement allowance under the defined benefit portion of the plan is increased by 3.0% of the corresponding base allowance, except that no allowance shall exceed the limits established by Section 415 of the Internal Revenue Code.

## COMBINED PLAN

---

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

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

### **REFUNDS AND VESTING**

A participant in the Combined Plan shall at all times be 100% vested in the Participant Contribution Account, Miscellaneous Contribution Account, and the Rollover Account.

If the member has at least 5 years but less than 10 years of qualified service credit in the Plan, an additional 33% of the member's eligible contributions will be paid from the Employers' Accumulation Fund. If the member has at least 10 years of qualified service credit in the Plan, an additional 67% of the member's eligible contributions will be paid to the member. Amounts paid to purchase service credit earn interest at the same rates as the Traditional Pension Plan and are payable as a refund.

In the event a member leaves service prior to retirement, the member may elect to receive a refund of their Participant Contribution Account, the Rollover Account, the Miscellaneous Account, and any additional amounts they are entitled to from the Employers' Accumulation Fund (as described above).

### **SUPPLEMENTAL BENEFITS**

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

## COMBINED PLAN

---

**Medicare premiums.** Medicare part B premiums are paid for those eligible, upon proof of coverage. Members retiring with a normal or early service retirement allowance after June 13, 1986 must have 10 or more years of qualified service credit to be eligible for this benefit. [Although it is not mentioned under the Traditional Pension Plan either, Combined Plan members are eligible for the Medicare Part-A equivalent coverage under R.C. 145.325.]



## **MEMBER-DIRECTED PLAN**

---

**AGE & SERVICE BENEFITS - STATE AND LOCAL GOVERNMENT MEMBERS.** (Law Enforcement and Public Safety members must contribute to the Traditional Pension Plan Only.)

***Eligibility.*** A participant who has attained age fifty-five (55) may retire under the Member-Directed Plan.

***Retirement benefits.*** The member's retirement benefit is based on the value of the Participant Contribution Account, the Rollover Account, the Miscellaneous Account, and any vested portion of the Employer Contribution Account.

### **DISABILITY RETIREMENT**

Not available under the Member-Directed Plan. Members may:

- 1) If age fifty-five (55), terminate employment and begin receiving retirement benefits, or
- 2) Take a lump sum distribution of their Participant Contribution Account, Rollover Account, Miscellaneous Account and any vested portion of the Employer Contribution Account.

### **SURVIVOR BENEFITS**

Not available under the Member-Directed Plan. Survivors must take a lump sum distribution of the member's Participant Contribution Account, Rollover Account, Miscellaneous Account and any vested portion of the Employer Contribution Account.

## **MEMBER-DIRECTED PLAN**

---

### **BENEFITS AT RETIREMENT**

**Optional Benefit Forms.** Retiring members may elect to have retirement benefits paid in a partial lump sum, subject to any rules adopted by the Board; monthly annuity payments (with joint and survivor options) similar to those offered under the defined benefit portion of the Combined Plan; periodic payments over a period certain; periodic payments of a specific monthly amount; payments with a deferred start date; or a combination of these options.

**PLOP.** Effective 01/01/2004, retiring members who elect a monthly annuity under the Member-Directed Plan may also elect to receive a Partial Lump Sum Option Payment (PLOP) (S.B.247). The PLOP is an option that allows a retiree to initially receive a partial lump sum benefit payment along with a reduced monthly annuity. The lump sum payment cannot be less than 6 times nor more than 36 times the monthly amount that would be payable to the member under the plan of payment selected and shall not result in a monthly annuity that is less than 50% of the monthly benefit. The total amount paid as a lump sum and monthly benefit shall be the actuarial equivalent of the amount that would have been paid had the lump sum not been selected. The PLOP is available to Member-Directed Plan members only if they elect a monthly annuity.

### **REFUNDS AND VESTING.**

A participant shall at all times be 100% vested in the Participant Contribution Account, Miscellaneous Contribution Account, and the Rollover Account. A participant shall vest in the Employer Contribution Account according to the Participant's attained years of participation in the Plan as follows:

One year of participation	20%
Two years of participation	40%
Three years of participation	60%
Four years of participation	80%
Five years of participation	100%

In the event a member leaves service prior to retirement, the member may elect to receive a refund of their Participant Contribution Account, Rollover Account, and Miscellaneous Account and any vested amounts in the Employer Contribution Account (as described above).

## MEMBER-DIRECTED PLAN

---

### SUPPLEMENTAL BENEFITS

**Health Care Coverage.** A portion of the employer contribution for Member-Directed participants is credited to a Retiree Medical Account (RMA). Amounts contributed to the RMA may be used after separation from service and a refund or retirement distribution is made to pay qualified health, dental and vision care expenses. Members vest in their RMA based on their attained years of participation in the Plan as follows:

1 – 2 years	0%
3 years	30%
4 years	40%
5 years	50%
6 years	60%
7 years	70%
8 years	80%
9 years	90%
10 years	100%

**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN  
STATE OR LOCAL MEMBER - NORMAL RETIREMENT  
RETIRING DECEMBER 31, 2004  
UNDER BENEFIT PROVISIONS EVALUATED**

---

**Data:**

A.	<u>\$32,000</u>	Final Average Earnings
B.	<u>33</u>	Years of Credited Service
C.	<u>59</u>	Age of Retiree
D.	<u>56</u>	Age of Spouse
E.	<u>100%</u>	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 $(1 - 0.81174) \times (F) =$	<u>4,428</u>
H.	Benefit Payable to Retiree while Spouse is Alive: $(F) - (G) =$	19,092
I.	Benefit Payable to Spouse after Retiree's Death	19,092
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)
2005	\$ 19,092	\$ 19,092	\$ 23,520
2006	19,665	19,665	24,226
2007	20,238	20,238	24,931
2008	20,810	20,810	25,637
2009	21,383	21,383	26,342
2010	21,956	21,956	27,048
2011	22,529	22,529	27,754
2012	23,101	23,101	28,459
2013	23,674	23,674	29,165
2014	24,247	24,247	29,870

**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN  
STATE OR LOCAL MEMBER - EARLY RETIREMENT  
RETIRING DECEMBER 31, 2004  
UNDER BENEFIT PROVISIONS EVALUATED**

---

**Data:**

A.	<u>\$32,000</u>	Final Average Earnings
B.	<u>26</u>	Years of Credited Service
C.	<u>59</u>	Age of Retiree
D.	<u>56</u>	Age of Spouse
E.	<u>100%</u>	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: $0.022 \times 26 \text{ years} \times \$32,000 =$	\$ 18,304
G.	Adjustment factor for Early Retirement (from schedule)	80%
H.	Adjusted benefit: (F) x (G) =	14,643
I.	Reduction for Line E Election $(1 - 0.81174) \times (H) =$	<u>2,757</u>
J.	Benefit Payable to Retiree while Spouse is Alive: (H) - (I)	11,886
K.	Benefit Payable to Spouse after Retiree's Death	11,886
L.	Benefit Payable to Retiree after Spouse's Death	14,643

---

**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>
2005	\$ 11,886	\$ 11,886	\$ 14,643
2006	12,243	12,243	15,082
2007	12,599	12,599	15,522
2008	12,956	12,956	15,961
2009	13,313	13,313	16,400
2010	13,669	13,669	16,840
2011	14,026	14,026	17,279
2012	14,382	14,382	17,718
2013	14,739	14,739	18,158
2014	15,095	15,095	18,597

---



**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN**  
**SECTION 145.33 (B)(2)(a) LAW MEMBER - NORMAL RETIREMENT**  
**RETIRING DECEMBER 31, 2004**  
**UNDER BENEFIT PROVISIONS EVALUATED**

---

**Data:**

A.	<u>\$38,000</u>	Final Average Earnings
B.	<u>28</u>	Years of Credited Service
C.	<u>49</u>	Age of Retiree
D.	<u>46</u>	Age of Spouse
E.	<u>100%</u>	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 $(1 - 0.87869) \times (F) =$	<u>3,172</u>
H.	Benefit Payable to Retiree while Spouse is Alive: $(F) - (G) =$	22,972
I.	Benefit Payable to Spouse after Retiree's Death	22,972
J.	Benefit Payable to Retiree after Spouse's Death	26,144

---

**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)
2005	\$ 22,972	\$ 22,972	\$ 26,144
2006	23,661	23,661	26,928
2007	24,350	24,350	27,713
2008	25,039	25,039	28,497
2009	25,729	25,729	29,281
2010	26,418	26,418	30,066
2011	27,107	27,107	30,850
2012	27,796	27,796	31,634
2013	28,485	28,485	32,419
2014	29,174	29,174	33,203

**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN  
STATE OR LOCAL MEMBER – TERMINATION BENEFIT  
RETIRING DECEMBER 31, 2004  
UNDER BENEFIT PROVISIONS EVALUATED**

---

**Data:**

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 (Retiree makes the choice of 100% Joint and Survivor with Pop-Up)
G.	\$44,000	Accumulated Contributions with Interest at Termination Date

---

**Computations:**

H.	Formula Benefit: $(0.022 \times 15 \text{ years} + 0.025 \times 0 \text{ years}) \times \$32,000 =$	\$ 10,560
I.	Adjustment factor for Early Retirement (from schedule)	85%
J.	Adjusted benefit: $(H) \times (I) =$	8,976
K.	Reduction for Line F Election: $(1 - 0.80366) \times (J) =$	1,762
L.	Benefit Payable to Retiree while Spouse is Alive: $(J) - (K) =$	7,214
M.	Benefit Payable to Spouse after Retiree's Death	7,214
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

---

**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)
2005	\$ 7,214	\$ 7,214	\$ 8,976
2006	7,430	7,430	9,245
2007	7,647	7,647	9,515
2008	7,863	7,863	9,784
2009	8,080	8,080	10,053
2010	8,296	8,296	10,322
2011	8,513	8,513	10,592
2012	8,729	8,729	10,861
2013	8,945	8,945	11,130
2014	9,162	9,162	11,400

**SAMPLE BENEFIT COMPUTATION – TRADITIONAL PLAN**  
**SECTION 145.33 (B)(2)(a) LAW MEMBER – TERMINATION BENEFIT**  
**RETIRING DECEMBER 31, 2004**  
**UNDER BENEFIT PROVISIONS EVALUATED**

---

**Data:**

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

---

**Computations:**

H.	Formula Benefit: $(0.015 \times 15 \text{ years}) \times \$38,000 =$	\$ 8,550
I.	Reduction for Line F Election: $(1 - 0.86085) \times (H) =$	<u>1,190</u>
J.	Benefit Payable to Retiree while Spouse is Alive: $(H) - (I) =$	7,360
K.	Benefit Payable to Spouse after Retiree's Death	7,360
L.	Benefit Payable to Retiree after Spouse's Death	8,550
M.	In lieu of a lifetime benefit, terminatee may elect to receive a refund of accumulated contributions with interest plus an additional 67% of eligible accumulated contributions because terminatee had more than 10 years of service.	76,820

---

**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)
2005	\$ 7,360	\$ 7,360	\$ 8,550
2006	7,581	7,581	8,807
2007	7,802	7,802	9,063
2008	8,022	8,022	9,320
2009	8,243	8,243	9,576
2010	8,464	8,464	9,833
2011	8,685	8,685	10,089
2012	8,906	8,906	10,346
2013	9,126	9,126	10,602
2014	9,347	9,347	10,859

## SECTION IV



### Recommendations for Reserve Transfers

## **DECEMBER 31, 2004 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. Any accrued transfers that have been made prior to OPERS' extract date and hence are not included in the "Accrued Transfers" column on page IV-2 should be netted off the "Other" column on page IV-2.

# RESERVE TRANSFERS AFFECTING THE EMPLOYER ACCUMULATION FUND

## DECEMBER 31, 2004

State	Assets Before Transfers	Transfers		Assets After Transfers	Liabilities	Ratio
		Accrued	Other			
A&PR FUND						
CR,JR,SR,MP	\$ 8,145,525,162	\$154,561,021	\$75,554,005	\$ 8,375,640,188	\$ 8,375,640,188	
BD&DR	1,622,007,632	144,665,168	(45,093,359)	1,721,579,441	1,721,579,441	
TOTAL A&PR	9,767,532,794	299,226,189	30,460,646	10,097,219,629	10,097,219,629	100.0%
SBF						
S-1	101,030,130	2,247,911	(1,652,033)	101,626,008	101,626,008	
S-2	321,933,020	12,772,058	7,370,778	342,075,856	342,075,856	
TOTAL SBF	422,963,150	15,019,969	5,718,745	443,701,864	443,701,864	100.0%
TOTAL STATE	\$ 10,190,495,944	\$314,246,158	\$36,179,391	\$ 10,540,921,493	\$ 10,540,921,493	100.0%
Local						
A&PR FUND						
CR,JR,SR,MP	\$ 10,778,049,045	\$230,351,970	\$108,070,274	\$ 11,116,471,289	\$ 11,116,471,289	
BD&DR	2,161,730,572	181,180,883	(48,269,714)	2,294,641,741	2,294,641,741	
TOTAL A&PR	12,939,779,617	411,532,853	59,800,560	13,411,113,030	13,411,113,030	100.0%
SBF						
S-1	157,300,118	4,537,497	(2,303,464)	159,534,151	159,534,151	
S-2	556,877,629	15,331,146	14,686,067	586,894,842	586,894,842	
TOTAL SBF	714,177,747	19,868,643	12,382,603	746,428,993	746,428,993	100.0%
TOTAL LOCAL	\$13,653,957,364	\$431,401,496	\$72,183,163	\$14,157,542,023	\$14,157,542,023	100.0%
Law Enforcement						
A&PR FUND						
CR,JR,SR,MP	\$ 506,031,619	\$ 17,900,338	\$ 20,686,201	\$ 544,618,158	\$ 544,618,158	
BD&DR	401,019,232	30,341,432	(22,785,160)	408,575,504	408,575,504	
TOTAL A&PR	907,050,850	48,241,770	(2,098,958)	953,193,662	953,193,662	100.0%
SBF						
S-1	7,447,437	230,691	178,356	7,856,484	7,856,484	
S-2	21,028,833	895,453	(1,059,426)	20,864,860	20,864,860	
TOTAL SBF	28,476,270	1,126,144	(881,070)	28,721,344	28,721,344	100.0%
TOTAL LAW ENFORCEMENT	\$ 935,527,120	\$ 49,367,914	\$ (2,980,028)	\$ 981,915,006	\$ 981,915,006	100.0%
Public Safety						
A&PR FUND						
CR,JR,SR,MP	\$ 41,919,405	\$ 136,465	\$(39,517,050)	\$ 2,538,820	\$ 2,538,820	
BD&DR	7,152,768	841,055	(1,737,139)	6,256,684	6,256,684	
TOTAL A&PR	49,072,173	977,520	(41,254,189)	8,795,504	8,795,504	100.0%
SBF						
S-1	860,519	0	(860,519)	0	0	
S-2	5,455,970	1,275,712	1,521,800	8,253,482	8,253,482	
TOTAL SBF	6,316,489	1,275,712	661,281	8,253,482	8,253,482	100.0%
TOTAL PUBLIC SAFETY	\$ 55,388,662	\$ 2,253,232	\$ (40,592,908)	\$ 17,048,986	\$ 17,048,986	100.0%
GRAND TOTAL	\$24,835,369,090	\$797,268,800	\$64,789,618	\$25,697,427,508	\$25,697,427,508	100.0%



## SECTION V



State Division

## STATE DIVISION

---

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

### *Defined Benefit Active Members in Valuation December 31, 2004*

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	50,521	\$2,016,267,513	\$39,909	41.9 yrs.	10.3 yrs.
Women	59,686	2,148,908,899	36,004	42.4	10.2
<b>Totals</b>	<b>110,207</b>	<b>\$4,165,176,412</b>	<b>\$37,794</b>	<b>42.2 yrs.</b>	<b>10.3 yrs.</b>

Also included in the valuation were 84,008 inactive members eligible for deferred retirement allowances or contribution refunds and 2,933 members active in the money purchase plan.

### *Retired Members in Valuation December 31, 2004*

Fund / Type of Allowance	Number	Current Monthly Benefits	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	40,351	\$66,565,151	\$8,367,397,883
Disability Retirement	7,262	12,564,635	1,721,579,441
Money Purchase	241	85,945	8,242,305
Total A & PR Fund	47,854	79,215,731	10,097,219,629
Total SBF	4,785	4,000,704	443,701,864
Grand Total	52,639	\$83,216,435	\$10,540,921,493

**STATE DIVISION**  
**EMPLOYER CONTRIBUTIONS TO SUPPORT**  
**DEFINED BENEFIT RETIREMENT ALLOWANCES**  
**EXPRESSED AS PERCENTS OF ACTIVE MEMBER PAYROLL**

---

<b>Valuation Date December 31</b>	<b>2004</b>	<b>2003</b>
<b>Contributions for</b>	<b>2006</b>	<b>2005</b>
<b>Normal Cost</b>		
Age and Service Allowances	8.20 %	8.16 %
Disability Allowances	2.17 %	2.17 %
Survivor's Benefits	0.41 %	0.41 %
Separation Benefits	3.89 %	3.46 %
Total Normal Cost	14.67 %	14.20 %
(Member Contributions)	9.00 %	8.50 %
Employer Normal Cost	5.67 %	5.70 %
<b>Unfunded Actuarial Accrued Liabilities</b>		
Total Available Contribution	3.37 %	3.61 %
Amortization Years - HCPP	27	35
<b>Total Pension Employer Contribution Rate</b>	<b>9.04 %</b>	<b>9.31 %</b>

The term "Amortization Years" refers to the period sufficient to produce the Total Employer Contribution Rate for retirement allowances and survivor benefits.

# STATE DIVISION COMPARATIVE STATEMENT

Valuation Date December 31	Contribution Rate Effective January 1	Defined Benefit Active Members in Valuation					Computed Employer Contributions as % of Payroll			
		No.	Annual Payroll		Normal Cost	Unfunded Accrued Liability	Pension Total	Retiree Health	Grand Total	
			Total	Average						Increase
1990@	1992	98,939	\$ 2,501	\$ 25,281	5.7 %	6.51 %	2.78 %	9.29 %	4.42 %	13.71 %
1991&	1993	107,025	2,693	25,163	(0.5)%	6.57 %	2.45 %	9.02 %	4.29 %	13.31 %
1992	1994	109,701	2,767	25,224	0.2 %	6.41 %	2.61 %	9.02 %	4.29 %	13.31 %
1993	1995	112,748	2,894	25,673	1.8 %	6.40 %	2.62 %	9.02 %	4.29 %	13.31 %
1994	1996	115,238	3,063	26,580	3.5 %	6.66 %	2.36 %	9.02 %	4.29 %	13.31 %
1995	1997	114,596	3,204	27,962	5.2 %	6.67 %	2.35 %	9.02 %	4.29 %	13.31 %
1996@	1998	115,712	3,319	28,684	2.6 %	6.21 %	2.81 %	9.02 %	4.29 %	13.31 %
1997	1999	114,036	3,405	29,858	4.1 %	6.21 %	2.90 %	9.11 %	4.20 %	13.31 %
1998	2000	112,323	3,500	31,159	4.4 %	6.21 %	2.90 %	9.11 %	4.20 %	13.31 %
1999#	2001	112,761	3,592	31,851	2.2 %	7.68 %	1.33 %	9.01 %	4.30 %	13.31 %
2000	2002	113,099	3,868	34,201	7.4 %	7.69 %	1.32 %	9.01 %	4.30 %	13.31 %
2001@	2003	109,219	3,996	36,589	7.0 %	6.17 %	2.14 %	8.31 %	5.00 %	13.31 %
2002	2004	110,017	4,129	37,531	2.6 %	5.95 %	3.36 %	9.31 %	4.00 %	13.31 %
2003##	2005	108,249	4,079	37,679	0.4 %	5.70 %	3.61 %	9.31 %	4.00 %	13.31 %
2004	2006	110,207	4,165	37,794	0.3 %	5.67 %	3.37 %	9.04 %	4.50 %	13.54 %

# After benefit changes.

@ Revised actuarial assumptions.

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

## Combined Plan members are included beginning with the December 31, 2003 valuation.

**STATE DIVISION**  
**DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES**  
**DECEMBER 31, 2004**

Actuarial Present Value	(1) Total Actuarial Present Value	Allocation by Entry Age	
		(2) Portion Covered By Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1)-(2)
Allowances currently being paid from the Annuity & Pension Reserve Fund	\$ 10,097,219,629	\$ -	\$ 10,097,219,629
Allowances currently being paid from the Survivors Benefit Fund	443,701,864	-	443,701,864
Age and service allowances based on service rendered before and likely to be rendered after valuation date	13,041,777,668	2,712,726,953	10,329,050,715
Disability allowances likely to be paid present active members who become permanently disabled	1,760,848,654	733,222,622	1,027,626,032
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	360,564,594	138,182,619	222,381,975
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	2,212,587,777	1,350,371,798	862,215,979
Total	\$27,916,700,186	\$4,934,503,992	\$22,982,196,194
Actuarial Value of Assets			20,204,957,192
Unfunded Actuarial Accrued Liability			\$ 2,777,239,002

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

Dec. 31	Defined Benefit Active Payroll		Active and Inactive Member Accrued Liabilities for Retirement Allowances				Unfunded /Payroll
			Computed Total	Valuation Assets	Unfunded	Amort. Years	
	Total	Average					
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	11,352	11,863	(511)	-	-
2002	4,129	37,531	11,822	8,965	2,857	38	0.69
2003##	4,079	37,679	12,230	9,030	3,200	43	0.78
2004	4,165	37,794	12,441	9,664	2,777	34	0.67

# After benefit changes.

@ Revised actuarial assumptions.

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

## Combined Plan members are included beginning with the December 31, 2003 valuation.

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.

**STATE DIVISION**  
**MALE ACTIVE MEMBERS IN DEFINED BENEFIT VALUATION**  
**DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service To Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	862							862
tot. Pay	\$5,904,632							\$5,904,632
avg. Pay	\$6,850							\$6,850
20-24	4,589	29						4,618
tot. Pay	\$54,695,724	\$798,213						\$55,493,937
avg. Pay	\$11,919	\$27,525						\$12,017
25-29	3,640	659	8					4,307
tot. Pay	\$84,144,927	\$24,883,537	\$346,003					\$109,374,467
avg. Pay	\$23,117	\$37,760	\$43,250					\$25,395
30-34	2,528	1,732	531	7				4,798
tot. Pay	\$72,267,133	\$72,612,346	\$24,181,424	\$330,212				\$169,391,115
avg. Pay	\$28,587	\$41,924	\$45,539	\$47,173				\$35,305
35-39	1,962	1,518	1,792	573	7			5,852
tot. Pay	\$58,939,162	\$66,066,021	\$90,006,544	\$28,766,956	\$295,803			\$244,074,486
avg. Pay	\$30,040	\$43,522	\$50,227	\$50,204	\$42,258			\$41,708
40-44	1,833	1,290	1,498	1,799	830	62		7,312
tot. Pay	\$55,355,392	\$55,736,170	\$74,643,191	\$97,800,751	\$42,110,234	\$3,097,277		\$328,743,015
avg. Pay	\$30,199	\$43,206	\$49,829	\$54,364	\$50,735	\$49,956		\$44,959
45-49	1,495	1,081	1,128	1,429	1,600	984	24	7,741
tot. Pay	\$45,152,839	\$48,438,206	\$57,046,270	\$75,063,036	\$88,274,986	\$51,004,715	\$1,246,875	\$366,226,927
avg. Pay	\$30,203	\$44,809	\$50,573	\$52,528	\$55,172	\$51,834	\$51,953	\$47,310
50-54	1,177	912	978	1,119	1,198	1,336	364	7,084
tot. Pay	\$36,580,518	\$41,653,935	\$47,930,125	\$59,313,026	\$66,019,864	\$78,639,899	\$21,874,658	\$352,012,025
avg. Pay	\$31,079	\$45,673	\$49,008	\$53,005	\$55,108	\$58,862	\$60,095	\$49,691
55-59	841	665	761	804	741	661	478	4,951
tot. Pay	\$25,517,452	\$29,575,744	\$39,328,727	\$41,945,227	\$41,368,844	\$41,142,060	\$32,122,872	\$251,000,926
avg. Pay	\$30,342	\$44,475	\$51,680	\$52,171	\$55,828	\$62,242	\$67,203	\$50,697
60-64	367	298	365	349	262	191	171	2,003
tot. Pay	\$9,157,713	\$12,623,574	\$19,004,517	\$18,957,400	\$13,778,522	\$11,816,345	\$12,154,872	\$97,492,943
avg. Pay	\$24,953	\$42,361	\$52,067	\$54,319	\$52,590	\$61,866	\$71,081	\$48,673
65-69	185	101	95	80	68	43	49	621
tot. Pay	\$3,024,815	\$3,630,105	\$4,902,274	\$4,649,528	\$4,115,521	\$2,860,721	\$3,477,437	\$26,660,401
avg. Pay	\$16,350	\$35,942	\$51,603	\$58,119	\$60,522	\$66,528	\$70,968	\$42,931
70 & Over	163	69	47	29	21	20	23	372
tot. Pay	\$1,417,936	\$1,026,192	\$2,273,577	\$1,316,575	\$1,091,440	\$1,395,045	\$1,371,874	\$9,892,639
avg. Pay	\$8,699	\$14,872	\$48,374	\$45,399	\$51,973	\$69,752	\$59,647	\$26,593
<b>Totals</b>	<b>19,642</b>	<b>8,354</b>	<b>7,203</b>	<b>6,189</b>	<b>4,727</b>	<b>3,297</b>	<b>1,109</b>	<b>50,521</b>
<b>tot. Pay</b>	<b>\$452,158,243</b>	<b>\$357,044,043</b>	<b>\$359,662,652</b>	<b>\$328,142,711</b>	<b>\$257,055,214</b>	<b>\$189,956,062</b>	<b>\$72,248,588</b>	<b>\$2,016,267,513</b>
<b>avg. Pay</b>	<b>\$23,020</b>	<b>\$42,739</b>	<b>\$49,932</b>	<b>\$53,020</b>	<b>\$54,380</b>	<b>\$57,615</b>	<b>\$65,148</b>	<b>\$39,909</b>



**STATE DIVISION**  
**FEMALE ACTIVE MEMBERS IN DEFINED BENEFIT VALUATION**  
**DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service To Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	905							905
tot. Pay	\$5,497,113							\$5,497,113
avg. Pay	\$6,074							\$6,074
20-24	5,730	39						5,769
tot. Pay	\$65,623,721	\$891,867						\$66,515,588
avg. Pay	\$11,453	\$22,868						\$11,530
25-29	4,119	755	15					4,889
tot. Pay	\$102,569,348	\$26,894,318	\$494,478					\$129,958,144
avg. Pay	\$24,902	\$35,622	\$32,965					\$26,582
30-34	2,792	1,760	563	14				5,129
tot. Pay	\$79,456,905	\$68,584,716	\$24,129,610	\$529,830				\$172,701,061
avg. Pay	\$28,459	\$38,969	\$42,859	\$37,845				\$33,671
35-39	2,388	1,591	1,620	702	30			6,331
tot. Pay	\$70,057,294	\$62,118,887	\$73,750,788	\$31,343,021	\$1,352,221			\$238,622,211
avg. Pay	\$29,337	\$39,044	\$45,525	\$44,648	\$45,074			\$37,691
40-44	2,298	1,516	1,552	1,820	861	111		8,158
tot. Pay	\$66,710,411	\$57,860,819	\$69,555,316	\$87,388,251	\$41,838,582	\$5,558,316		\$328,911,695
avg. Pay	\$29,030	\$38,167	\$44,817	\$48,016	\$48,593	\$50,075		\$40,318
45-49	2,109	1,520	1,477	1,603	1,592	1,188	40	9,529
tot. Pay	\$60,117,974	\$58,226,630	\$64,998,544	\$74,955,799	\$80,343,644	\$57,775,381	\$1,994,546	\$398,412,518
avg. Pay	\$28,505	\$38,307	\$44,007	\$46,760	\$50,467	\$48,632	\$49,864	\$41,811
50-54	1,649	1,330	1,455	1,473	1,178	1,460	376	8,921
tot. Pay	\$48,847,993	\$52,124,030	\$64,144,907	\$69,769,114	\$59,369,244	\$76,747,195	\$18,949,970	\$389,952,453
avg. Pay	\$29,623	\$39,191	\$44,086	\$47,365	\$50,398	\$52,567	\$50,399	\$43,712
55-59	945	891	1,073	1,231	933	768	391	6,232
tot. Pay	\$26,538,103	\$34,145,250	\$47,019,170	\$55,030,404	\$45,218,218	\$37,733,644	\$20,354,919	\$266,039,708
avg. Pay	\$28,083	\$38,322	\$43,820	\$44,704	\$48,465	\$49,132	\$52,059	\$42,689
60-64	377	366	384	583	460	349	145	2,664
tot. Pay	\$10,059,032	\$13,040,176	\$16,157,360	\$25,936,285	\$20,869,789	\$16,892,740	\$7,387,740	\$110,343,122
avg. Pay	\$26,682	\$35,629	\$42,076	\$44,488	\$45,369	\$48,403	\$50,950	\$41,420
65-69	124	110	136	159	141	112	61	843
tot. Pay	\$2,164,158	\$3,462,207	\$5,577,227	\$6,749,927	\$6,189,795	\$4,999,111	\$2,885,102	\$32,027,527
avg. Pay	\$17,453	\$31,475	\$41,009	\$42,452	\$43,899	\$44,635	\$47,297	\$37,992
70 & Over	77	32	31	53	30	41	52	316
tot. Pay	\$789,013	\$747,475	\$968,054	\$1,980,447	\$1,216,488	\$1,901,773	\$2,324,509	\$9,927,759
avg. Pay	\$10,247	\$23,359	\$31,228	\$37,367	\$40,550	\$46,385	\$44,702	\$31,417
<b>Totals</b>	<b>23,513</b>	<b>9,910</b>	<b>8,306</b>	<b>7,638</b>	<b>5,225</b>	<b>4,029</b>	<b>1,065</b>	<b>59,686</b>
<b>tot. Pay</b>	<b>\$538,431,065</b>	<b>\$378,096,375</b>	<b>\$366,795,454</b>	<b>\$353,683,078</b>	<b>\$256,397,981</b>	<b>\$201,608,160</b>	<b>\$53,896,786</b>	<b>\$2,148,908,899</b>
<b>avg. Pay</b>	<b>\$22,899</b>	<b>\$38,153</b>	<b>\$44,160</b>	<b>\$46,306</b>	<b>\$49,071</b>	<b>\$50,039</b>	<b>\$50,607</b>	<b>\$36,004</b>

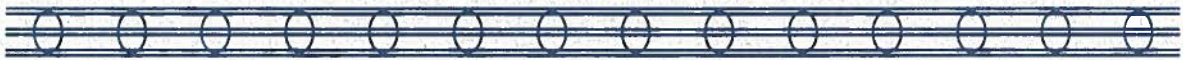


**STATE DIVISION**  
**INACTIVE MEMBERS IN DEFINED BENEFIT VALUATION**  
**DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

---

Attained Ages	Years of Service to Valuation Date							Total Number
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	633							633
20-24	8,999							8,999
25-29	17,628	48						17,676
30-34	15,915	289	20					16,224
35-39	8,590	650	215	15				9,470
40-44	6,213	784	505	125	8			7,635
45-49	5,901	742	626	245	59	2		7,575
50-54	5,160	712	635	338	127	16		6,988
55-59	3,453	644	582	288	106	17		5,090
60-64	1,666	277	177	62	19	3		2,204
65-69	714	53	30	8	3	2	1	811
70 & Over	663	27	6	2	3	2		703
<b>Totals</b>	<b>75,535</b>	<b>4,226</b>	<b>2,796</b>	<b>1,083</b>	<b>325</b>	<b>42</b>	<b>1</b>	<b>84,008</b>

## SECTION VI



### Local Government Division

## LOCAL GOVERNMENT DIVISION

---

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

### *Defined Benefit Active Members in Valuation December 31, 2004*

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	108,751	\$3,400,687,714	\$31,270	43.6 yrs.	9.3 yrs.
Women	128,156	3,495,772,525	27,277	42.7	8.8
<b>Totals</b>	<b>236,907</b>	<b>\$6,896,460,239</b>	<b>\$29,110</b>	<b>43.1 yrs.</b>	<b>9.0 yrs.</b>

Also included in the valuation were 190,255 inactive members eligible for deferred retirement allowances or contribution refunds and 10,891 members active in the money purchase plan.

### *Retired Members in Valuation December 31, 2004*

Fund / Type of Allowance	Number	Current Monthly Benefits	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	72,534	\$ 89,485,632	\$11,096,878,561
Disability Retirement	10,728	17,223,863	2,294,641,741
Money Purchase	713	202,086	19,592,728
Total A & PR Fund	83,975	106,911,581	13,411,113,030
Total SBF	9,649	6,751,583	746,428,993
Grand Total	93,624	\$113,663,164	\$14,157,542,023

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

---

<b>Valuation Date December 31</b>	<b>2004</b>	<b>2003</b>
<b>Contributions for</b>	<b>2006</b>	<b>2005</b>
<b>Normal Cost</b>		
Age and Service Allowances	8.31 %	8.29 %
Disability Allowances	2.06 %	2.06 %
Survivor's Benefits	0.47 %	0.47 %
Separation Benefits	3.73 %	3.34 %
Total Normal Cost	14.57 %	14.16 %
(Member Contributions)	9.00 %	8.50 %
Employer Normal Cost	5.57 %	5.66 %
<b>Unfunded Actuarial Accrued Liabilities</b>		
Total Available Contribution	3.63 %	3.89 %
Amortization Years - HCPP	21	25
<b>Total Pension Employer Contribution Rate</b>	<b>9.20 %</b>	<b>9.55 %</b>

The term "Amortization Years" refers to the period sufficient to produce the Total Employer Contribution Rate for retirement allowances and survivor benefits.

# LOCAL GOVERNMENT DIVISION COMPARATIVE STATEMENT

Valuation Date December 31	Contribution Rate Effective January 1	Defined Benefit Active Members in Valuation					Computed Employer Contributions as % of Payroll				
		No.	Annual Payroll			Normal Cost	Unfunded Accrued Liability	Pension Total	Retiree Health	Grand Total	
			Total	Average	Increase						
1990@	1992	173,220	(\$millions) \$3,379	\$19,506	4.4 %	6.02 %	2.67 %	8.69 %	5.26 %	13.95 %	
1991&	1993	211,835	3,789	17,884	(8.3)%	5.95 %	2.49 %	8.44 %	5.11 %	13.55 %	
1992	1994	218,295	3,953	18,109	1.3 %	5.80 %	2.64 %	8.44 %	5.11 %	13.55 %	
1993	1995	220,410	4,159	18,869	4.2 %	5.85 %	2.59 %	8.44 %	5.11 %	13.55 %	
1994	1996	221,987	4,366	19,666	4.2 %	6.16 %	2.28 %	8.44 %	5.11 %	13.55 %	
1995	1997	223,431	4,555	20,384	3.7 %	6.17 %	2.27 %	8.44 %	5.11 %	13.55 %	
1996@	1998	229,954	4,792	20,839	2.2 %	6.16 %	2.28 %	8.44 %	5.11 %	13.55 %	
1997	1999	231,668	4,976	21,481	3.1 %	6.15 %	3.20 %	9.35 %	4.20 %	13.55 %	
1998	2000	234,601	5,240	22,334	4.0 %	6.17 %	3.18 %	9.35 %	4.20 %	13.55 %	
1999#	2001	240,005	5,586	23,276	4.2 %	7.68 %	1.57 %	9.25 %	4.30 %	13.55 %	
2000	2002	245,831	5,999	24,401	4.8 %	7.68 %	1.57 %	9.25 %	4.30 %	13.55 %	
2001@	2003	243,202	6,451	26,526	8.7 %	6.14 %	2.41 %	8.55 %	5.00 %	13.55 %	
2002	2004	247,377	6,721	27,171	2.4 %	5.92 %	3.63 %	9.55 %	4.00 %	13.55 %	
2003##	2005	237,082	6,702	28,269	4.0 %	5.66 %	3.89 %	9.55 %	4.00 %	13.55 %	
2004	2006	236,907	6,896	29,110	3.0 %	5.57 %	3.63 %	9.20 %	4.50 %	13.70 %	

# After benefit changes.

@ Revised actuarial assumptions.

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

## Combined Plan members are included beginning with the December 31, 2003 valuation.

**LOCAL GOVERNMENT DIVISION**  
**DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES**  
**DECEMBER 31, 2004**

Actuarial Present Value	(1) Total Actuarial Present Value	Allocation by Entry Age	
		(2) Portion Covered By Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1)-(2)
Allowances currently being paid from the Annuity & Pension Reserve Fund	\$13,411,113,030	\$ -	\$13,411,113,030
Allowances currently being paid from the Survivors Benefit Fund	746,428,993	-	746,428,993
Age and service allowances based on service rendered before and likely to be rendered after valuation date	19,999,784,851	4,785,326,171	15,214,458,680
Disability allowances likely to be paid present active members who become permanently disabled	2,593,378,894	1,221,621,721	1,371,757,173
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	674,275,387	269,643,922	404,631,465
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	3,551,492,850	2,273,570,902	1,277,921,948
Total	\$40,976,474,005	\$8,550,162,716	\$32,426,311,289
Actuarial Value of Assets			28,380,481,841
Unfunded Actuarial Accrued Liability			\$ 4,045,829,448

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

Dec. 31	Defined Benefit		Active and Inactive Member Accrued Liabilities for Retirement Allowances				Unfunded /Payroll
	Active Payroll		Computed Total	Valuation Assets	Unfunded	Amort. Years	
	Total	Average					
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)	-	-
1999#	5,586	23,276	14,643	14,498	145	2	0.03
2000	5,999	24,401	15,881	16,131	(250)	-	-
2001@	6,451	26,526	15,983	16,651	(668)	-	-
2002	6,721	27,171	16,710	12,682	4,028	25	0.60
2003##	6,702	28,269	17,645	13,148	4,497	27	0.67
2004	6,896	29,110	18,269	14,223	4,046	23	0.59

# After benefit changes.

@ Revised actuarial assumptions.

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

## Combined Plan members are included beginning with the December 31, 2003 valuation..

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.

**LOCAL GOVERNMENT DIVISION**  
**MALE ACTIVE MEMBERS IN DEFINED BENEFIT VALUATION**  
**DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service To Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	5,124							5,124
tot. Pay	\$32,226,143							\$32,226,143
vg. Pay	\$6,289							\$6,289
20-24	7,708	195						7,903
tot. Pay	\$97,771,102	\$3,950,977						\$101,722,079
vg. Pay	\$12,684	\$20,261						\$12,871
25-29	5,506	1,479	48					7,033
tot. Pay	\$122,977,605	\$48,974,196	\$1,655,323					\$173,607,124
vg. Pay	\$22,335	\$33,113	\$34,486					\$24,685
30-34	4,882	3,014	995	32				8,923
tot. Pay	\$121,672,512	\$113,300,629	\$39,787,420	\$1,240,947				\$276,001,508
vg. Pay	\$24,923	\$37,591	\$39,987	\$38,780				\$30,931
35-39	4,254	3,102	2,428	922	31			10,737
tot. Pay	\$104,893,406	\$120,789,825	\$105,168,382	\$40,715,093	\$1,528,473			\$373,095,179
vg. Pay	\$24,658	\$38,939	\$43,315	\$44,160	\$49,306			\$34,749
40-44	4,225	3,038	2,600	2,546	1,102	111		13,622
tot. Pay	\$98,290,456	\$113,905,012	\$110,372,598	\$118,547,587	\$51,992,817	\$5,256,643		\$498,365,113
vg. Pay	\$23,264	\$37,493	\$42,451	\$46,562	\$47,180	\$47,357		\$36,585
45-49	4,049	2,995	2,539	2,561	2,196	1,707	94	16,141
tot. Pay	\$89,608,688	\$105,698,103	\$103,472,770	\$117,908,320	\$109,609,423	\$85,829,825	\$4,927,585	\$617,054,714
vg. Pay	\$22,131	\$35,292	\$40,753	\$46,040	\$49,913	\$50,281	\$52,421	\$38,229
50-54	3,580	2,446	2,283	2,096	1,863	2,353	827	15,448
tot. Pay	\$75,422,391	\$81,619,169	\$86,999,392	\$92,977,160	\$93,206,179	\$127,021,952	\$47,098,670	\$604,344,913
vg. Pay	\$21,068	\$33,368	\$38,107	\$44,359	\$50,030	\$53,983	\$56,951	\$39,121
55-59	3,022	1,820	1,747	1,615	1,263	1,223	870	11,560
tot. Pay	\$61,069,720	\$57,395,925	\$64,531,895	\$70,062,274	\$60,290,656	\$64,716,251	\$52,582,762	\$430,649,483
vg. Pay	\$20,208	\$31,536	\$36,939	\$43,382	\$47,736	\$52,916	\$60,440	\$37,253
60-64	1,924	1,180	882	801	613	473	340	6,213
tot. Pay	\$26,908,316	\$32,218,872	\$30,495,534	\$32,447,865	\$27,234,106	\$23,062,797	\$19,925,302	\$192,292,792
vg. Pay	\$13,986	\$27,304	\$34,575	\$40,509	\$44,428	\$48,759	\$58,604	\$30,950
65-69	1,403	607	398	289	205	149	129	3,180
tot. Pay	\$12,389,128	\$10,276,051	\$10,778,009	\$9,716,460	\$7,822,594	\$7,105,759	\$6,752,847	\$64,840,848
vg. Pay	\$8,830	\$16,929	\$27,080	\$33,621	\$38,159	\$47,690	\$52,348	\$20,390
70 & Over	1,344	711	360	192	106	57	97	2,867
tot. Pay	\$9,342,306	\$7,139,475	\$5,641,734	\$4,742,898	\$2,968,548	\$2,038,461	\$4,614,396	\$36,487,818
vg. Pay	\$6,951	\$10,041	\$15,671	\$24,703	\$28,005	\$35,762	\$47,571	\$12,727
<b>Totals</b>	<b>47,021</b>	<b>20,587</b>	<b>14,280</b>	<b>11,054</b>	<b>7,379</b>	<b>6,073</b>	<b>2,357</b>	<b>108,751</b>
<b>tot. Pay</b>	<b>\$852,571,773</b>	<b>\$695,268,234</b>	<b>\$558,903,057</b>	<b>\$488,358,604</b>	<b>\$354,652,796</b>	<b>\$315,031,688</b>	<b>\$135,901,562</b>	<b>\$3,400,687,714</b>
<b>vg. Pay</b>	<b>\$18,132</b>	<b>\$33,772</b>	<b>\$39,139</b>	<b>\$44,179</b>	<b>\$48,062</b>	<b>\$51,874</b>	<b>\$57,659</b>	<b>\$31,270</b>



**LOCAL GOVERNMENT DIVISION**  
**FEMALE ACTIVE MEMBERS IN DEFINED BENEFIT VALUATION**  
**DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service To Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	5,925							5,925
tot. Pay	\$32,538,238							\$32,538,238
vg. Pay	\$5,492							\$5,492
20-24	8,321	217						8,538
tot. Pay	\$100,153,761	\$4,056,668						\$104,210,429
vg. Pay	\$12,036	\$18,694						\$12,205
25-29	7,536	1,913	93					9,542
tot. Pay	\$170,077,293	\$56,383,815	\$2,691,721					\$229,152,829
vg. Pay	\$22,569	\$29,474	\$28,943					\$24,015
30-34	6,281	4,276	1,287	55				11,899
tot. Pay	\$146,071,159	\$141,294,596	\$43,835,085	\$1,871,073				\$333,071,913
vg. Pay	\$23,256	\$33,044	\$34,060	\$34,020				\$27,992
35-39	5,809	3,736	2,731	1,236	59			13,571
tot. Pay	\$129,856,102	\$123,755,337	\$101,452,097	\$45,591,746	\$2,263,150			\$402,918,432
vg. Pay	\$22,354	\$33,125	\$37,148	\$36,887	\$38,358			\$29,690
40-44	6,107	3,969	2,822	2,520	1,189	146		16,753
tot. Pay	\$127,951,420	\$122,870,268	\$101,647,552	\$101,521,903	\$46,043,873	\$5,744,842		\$505,779,858
vg. Pay	\$20,952	\$30,957	\$36,020	\$40,286	\$38,725	\$39,348		\$30,190
45-49	5,892	4,312	3,185	2,507	1,985	1,611	66	19,558
tot. Pay	\$121,518,416	\$127,047,756	\$108,999,992	\$99,703,159	\$85,998,852	\$67,200,907	\$2,880,348	\$613,349,430
vg. Pay	\$20,624	\$29,464	\$34,223	\$39,770	\$43,324	\$41,714	\$43,642	\$31,361
50-54	4,643	3,477	3,171	2,507	1,716	1,757	552	17,823
tot. Pay	\$94,763,076	\$101,492,271	\$103,972,242	\$94,938,602	\$70,335,595	\$80,531,973	\$25,672,026	\$571,705,785
vg. Pay	\$20,410	\$29,190	\$32,788	\$37,869	\$40,988	\$45,835	\$46,507	\$32,077
55-59	3,087	2,442	2,574	2,398	1,563	1,131	522	13,717
tot. Pay	\$58,214,646	\$65,212,798	\$80,374,779	\$84,794,933	\$62,218,752	\$48,201,223	\$25,819,056	\$424,836,187
vg. Pay	\$18,858	\$26,705	\$31,226	\$35,361	\$39,807	\$42,618	\$49,462	\$30,972
60-64	1,363	1,240	1,196	1,170	846	613	251	6,679
tot. Pay	\$20,504,115	\$30,253,818	\$34,111,232	\$39,751,179	\$31,482,284	\$24,861,380	\$11,482,700	\$192,446,708
vg. Pay	\$15,043	\$24,398	\$28,521	\$33,975	\$37,213	\$40,557	\$45,748	\$28,814
65-69	735	489	417	363	267	216	137	2,624
tot. Pay	\$6,517,526	\$8,962,881	\$10,120,667	\$11,608,014	\$9,254,877	\$8,402,242	\$6,011,545	\$60,877,752
vg. Pay	\$8,867	\$18,329	\$24,270	\$31,978	\$34,662	\$38,899	\$43,880	\$23,200
70 & Over	506	294	225	168	130	110	94	1,527
tot. Pay	\$3,473,166	\$3,167,940	\$3,082,785	\$4,198,880	\$4,080,015	\$3,381,231	\$3,500,947	\$24,884,964
vg. Pay	\$6,864	\$10,775	\$13,701	\$24,993	\$31,385	\$30,738	\$37,244	\$16,297
<b>Totals</b>	<b>56,205</b>	<b>26,365</b>	<b>17,701</b>	<b>12,924</b>	<b>7,755</b>	<b>5,584</b>	<b>1,622</b>	<b>128,156</b>
<b>tot. Pay</b>	<b>\$1,011,638,918</b>	<b>\$784,498,148</b>	<b>\$590,288,152</b>	<b>\$483,979,489</b>	<b>\$311,677,398</b>	<b>\$238,323,798</b>	<b>\$75,366,622</b>	<b>\$3,495,772,525</b>
<b>vg. Pay</b>	<b>\$17,999</b>	<b>\$29,755</b>	<b>\$33,348</b>	<b>\$37,448</b>	<b>\$40,191</b>	<b>\$42,680</b>	<b>\$46,465</b>	<b>\$27,277</b>

**LOCAL GOVERNMENT DIVISION**  
**INACTIVE MEMBERS IN DEFINED BENEFIT VALUATION**  
**DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

---

Attained Ages	Years of Service to Valuation Date							Total Number
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	4,701							4,701
20-24	26,693	16						26,709
25-29	31,128	180						31,308
30-34	24,966	718	53	1				25,738
35-39	17,227	1,173	372	19	1			18,792
40-44	15,487	1,258	770	183	20			17,718
45-49	17,001	1,510	1,027	386	125	8		20,057
50-54	14,986	1,660	1,131	456	189	58		18,480
55-59	10,355	1,403	1,096	474	198	23	3	13,552
60-64	5,639	645	362	162	53	8		6,869
65-69	2,972	227	60	21	5	5	1	3,291
70 & Over	2,879	119	23	12	3	3	1	3,040
<b>Totals</b>	<b>174,034</b>	<b>8,909</b>	<b>4,894</b>	<b>1,714</b>	<b>594</b>	<b>105</b>	<b>5</b>	<b>190,255</b>

## SECTION VII



Law Division

## 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, 2004*

Groups	Number	Annual Payroll	Average		
			Pay	Age	Service
Men	7,189	\$348,779,210	\$48,516	39.8 yrs.	12.6 yrs.
Women	984	43,892,464	44,606	39.1	11.0
<b>Totals</b>	<b>8,173</b>	<b>\$392,671,674</b>	<b>\$48,045</b>	<b>39.7 yrs.</b>	<b>12.4 yrs.</b>

Also included in the valuation were 696 inactive members eligible for deferred retirement allowances or contribution refunds and 16 members active in the money purchase plan.

### *Retired Members in Valuation December 31, 2004*

Fund / Type of Allowance	Number	Current Monthly Benefits	Actuarial Liabilities
A & PR Fund			
Superannuation Retirement	1,541	\$3,650,321	\$547,156,978
Disability Retirement	1,165	2,796,681	414,832,188
Money Purchase	0	0	0
Total A & PR Fund	2,706	6,447,002	961,989,166
Total SBF	327	275,615	36,974,827
Grand Total	3,033	\$6,722,617	\$998,963,993

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

---

<b>Valuation Date December 31</b>	<b>2004@</b>	<b>2003@</b>
<b>Contributions for</b>	<b>2006</b>	<b>2005</b>
<b>Normal Cost</b>		
Age and Service Allowances	11.38 %	11.37 %
Disability Allowances	4.68 %	4.69 %
Survivor's Benefits	0.53 %	0.54 %
Separation Benefits	2.13 %	2.13 %
Total Normal Cost	18.72 %	18.73 %
(Member Contributions)	10.09 %	10.08 %
Employer Normal Cost	8.63 %	8.65 %
<b>Unfunded Actuarial Accrued Liabilities</b>		
Total Available Contribution	3.80 %	4.05 %
Amortization Years - HCPP	41	43
<b>Total Pension Employer Contribution Rate</b>	<b>12.43 %</b>	<b>12.70 %</b>

@ Weighted average between Public Safety and Law Enforcement.

The term "Amortization Years" refers to the period sufficient to produce the Total Employer Contribution Rate for retirement allowances and survivor benefits.

# LAW DIVISION

## COMPARATIVE STATEMENT

Valuation Date December 31	Contribution Rate Effective January 1	Active Members in Valuation			Computed Employer Contributions as % of Payroll					
		No.	Annual Payroll		Normal Cost	Unfunded Accrued Liability	Pension Total	Retiree Health	Grand Total	
			Total	Average						Increase
1990@ 1991 1992 1993 1994	1992 1993 1994 1995 1996	5,804 6,088 5,852 6,032 6,252	(\$thousands) \$156,339 169,008 169,337 182,576 196,467	\$26,936 27,761 28,937 30,268 31,425	5.4 % 3.1 % 4.2 % 4.6 % 3.8 %	9.52 % 9.32 % 9.65 % 9.53 % 9.71 %	1.29 % 1.49 % 1.16 % 1.28 % 1.10 %	10.81 % 10.81 % 10.81 % 10.81 % 10.81 %	5.19 % 5.89 % 5.89 % 5.89 % 5.89 %	16.00 % 16.70 % 16.70 % 16.70 % 16.70 %
1995 1996@ 1997 1998 1999#	1997 1998 1999 2000 2001	6,605 6,742 7,256 7,507 7,766	214,273 229,138 258,897 277,239 299,040	32,441 33,987 35,680 36,931 38,506	3.2 % 4.8 % 5.0 % 3.5 % 4.3 %	9.69 % 10.50 % 10.49 % 10.48 % 11.54 %	1.12 % 0.74 % 2.01 % 2.02 % 0.86 %	10.81 % 11.24 % 12.50 % 12.50 % 12.40 %	5.89 % 5.46 % 4.20 % 4.20 % 4.30 %	16.70 % 16.70 % 16.70 % 16.70 % 16.70 %
2000 2001@ 2002 2003 2004	2002 2003 2004 2005 2006	8,045 7,892 8,030 8,253 8,173	324,918 335,432 356,694 384,388 392,672	40,387 42,503 44,420 46,576 48,045	4.9 % 5.2 % 4.5 % 4.9 % 3.2 %	11.59 % 8.88 % 8.77 % 8.65 % 8.63 %	0.81 % 2.82 % 3.93 % 4.05 % 3.80 %	12.40 % 11.70 % 12.70 % 12.70 % 12.43 %	4.30 % 5.00 % 4.00 % 4.00 % 4.50 %	16.70 % 16.70 % 16.70 % 16.70 % 16.93 %

# After benefit changes.

@ Revised actuarial assumptions.

**LAW DIVISION**  
**DEVELOPMENT OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES**  
**DECEMBER 31, 2004**

---

Actuarial Present Value	(1) Total Actuarial Present Value	Allocation by Entry Age	
		(2) Portion Covered By Future Normal Cost Contributions	(3) Actuarial Accrued Liabilities (1)-(2)
Allowances currently being paid from the Annuity & Pension Reserve Fund	\$ 961,989,166	\$ -	\$ 961,989,166
Allowances currently being paid from the Survivors Benefit Fund	36,974,825	-	36,974,825
Age and service allowances based on service rendered before and likely to be rendered after valuation date	1,381,260,871	440,655,910	940,604,961
Disability allowances likely to be paid present active members who become permanently disabled	380,359,701	178,933,741	201,425,960
Survivor benefits likely to be paid to spouses and children of present active members who die before retiring	46,149,949	19,958,632	26,191,317
Separation benefits (refunds of contributions and deferred allowances) likely to be paid to present active and inactive members	110,938,162	82,655,259	28,282,903
Total	\$2,917,672,674	\$722,203,542	\$2,195,469,132
Actuarial Value of Assets			1,866,844,519
Unfunded Actuarial Accrued Liability			\$ 328,624,613

**LAW 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					
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	1,071	1,149	(78)	-	-
2002	357	44,420	1,135	854	281	36	0.79
2003	384	46,576	1,170	838	332	41	0.86
2004	393	48,045	1,197	868	329	43	0.84

# 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.



**LAW DIVISION**  
**MALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service To Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19								
ot. Pay								
vg. Pay								
20-24	133	4						137
ot. Pay	\$4,041,689	\$149,372						\$4,191,061
vg. Pay	\$30,389	\$37,343						\$30,592
25-29	491	303	6					800
ot. Pay	\$19,074,773	\$13,428,641	\$301,712					\$32,805,126
vg. Pay	\$38,849	\$44,319	\$50,285					\$41,006
30-34	342	856	332	3				1,533
ot. Pay	\$13,401,347	\$39,791,394	\$16,714,091	\$136,383				\$70,043,215
vg. Pay	\$39,185	\$46,485	\$50,344	\$45,461				\$45,690
35-39	167	415	593	197	3			1,375
ot. Pay	\$6,547,011	\$19,099,405	\$30,636,299	\$10,385,079	\$214,368			\$66,882,162
vg. Pay	\$39,204	\$46,023	\$51,663	\$52,716	\$71,456			\$48,642
40-44	79	162	293	411	169	3		1,117
ot. Pay	\$3,115,213	\$7,464,536	\$14,641,187	\$21,829,731	\$9,202,349	\$143,398		\$56,396,414
vg. Pay	\$39,433	\$46,077	\$49,970	\$53,114	\$54,452	\$47,799		\$50,489
45-49	43	88	136	207	337	181	3	995
ot. Pay	\$1,513,717	\$4,005,740	\$6,551,724	\$10,920,595	\$19,547,399	\$10,585,977	\$165,668	\$53,290,820
vg. Pay	\$35,203	\$45,520	\$48,174	\$52,756	\$58,004	\$58,486	\$55,223	\$53,559
50-54	24	53	79	119	184	204	60	723
ot. Pay	\$845,783	\$2,290,670	\$3,747,683	\$6,058,913	\$10,061,648	\$12,397,953	\$3,913,264	\$39,315,914
vg. Pay	\$35,241	\$43,220	\$47,439	\$50,915	\$54,683	\$60,774	\$65,221	\$54,379
55-59	19	20	54	41	77	68	57	336
ot. Pay	\$665,478	\$685,216	\$2,423,662	\$2,063,027	\$3,980,025	\$3,921,425	\$3,711,215	\$17,450,048
vg. Pay	\$35,025	\$34,261	\$44,883	\$50,318	\$51,689	\$57,668	\$65,109	\$51,935
60-64	5	11	15	27	20	19	23	120
ot. Pay	\$213,359	\$575,203	\$627,070	\$1,245,339	\$1,083,479	\$1,098,103	\$1,340,137	\$6,182,690
vg. Pay	\$42,672	\$52,291	\$41,805	\$46,124	\$54,174	\$57,795	\$58,267	\$51,522
65-69	7	6	6	8	6	6	8	47
ot. Pay	\$93,372	\$206,608	\$236,942	\$308,155	\$327,653	\$337,182	\$463,149	\$1,973,061
vg. Pay	\$13,339	\$34,435	\$39,490	\$38,519	\$54,609	\$56,197	\$57,894	\$41,980
70 & Over	1	1	1		1		2	6
ot. Pay	\$8,763	\$9,930	\$36,647		\$46,464		\$146,895	\$248,699
vg. Pay	\$8,763	\$9,930	\$36,647		\$46,464		\$73,448	\$41,450
<b>Totals</b>	<b>1,311</b>	<b>1,919</b>	<b>1,515</b>	<b>1,013</b>	<b>797</b>	<b>481</b>	<b>153</b>	<b>7,189</b>
<b>ot. Pay</b>	<b>\$49,520,505</b>	<b>\$87,706,715</b>	<b>\$75,917,017</b>	<b>\$52,947,222</b>	<b>\$44,463,385</b>	<b>\$28,484,038</b>	<b>\$9,740,328</b>	<b>\$348,779,210</b>
<b>vg. Pay</b>	<b>\$37,773</b>	<b>\$45,704</b>	<b>\$50,110</b>	<b>\$52,268</b>	<b>\$55,788</b>	<b>\$59,218</b>	<b>\$63,662</b>	<b>\$48,516</b>

**LAW DIVISION**  
**FEMALE ACTIVE MEMBERS IN VALUATION DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Ages	Years of Service To Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19								
tot. Pay								
avg. Pay								
20-24	28	2						30
tot. Pay	\$779,362	\$55,833						\$835,195
avg. Pay	\$27,834	\$27,917						\$27,840
25-29	83	55						138
tot. Pay	\$3,014,769	\$2,516,038						\$5,530,807
avg. Pay	\$36,323	\$45,746						\$40,078
30-34	52	97	40					189
tot. Pay	\$1,989,573	\$4,410,086	\$1,981,063					\$8,380,722
avg. Pay	\$38,261	\$45,465	\$49,527					\$44,342
35-39	30	63	60	23	1			177
tot. Pay	\$1,040,428	\$2,804,584	\$2,980,178	\$1,087,291	\$42,471			\$7,954,952
avg. Pay	\$34,681	\$44,517	\$49,670	\$47,274	\$42,471			\$44,943
40-44	26	26	40	47	21			160
tot. Pay	\$965,020	\$1,120,253	\$1,740,393	\$2,464,055	\$1,103,946			\$7,393,667
avg. Pay	\$37,116	\$43,087	\$43,510	\$52,427	\$52,569			\$46,210
45-49	13	20	38	26	35	16		148
tot. Pay	\$383,237	\$875,350	\$1,788,152	\$1,225,520	\$1,953,207	\$845,534		\$7,071,000
avg. Pay	\$29,480	\$43,768	\$47,057	\$47,135	\$55,806	\$52,846		\$47,777
50-54	7	11	10	13	24	16	4	85
tot. Pay	\$269,455	\$442,921	\$442,311	\$653,399	\$1,126,969	\$851,599	\$224,573	\$4,011,227
avg. Pay	\$38,494	\$40,266	\$44,231	\$50,261	\$46,957	\$53,225	\$56,143	\$47,191
55-59	1	3	8	14	10	6	2	44
tot. Pay	\$19,604	\$119,606	\$308,549	\$680,341	\$497,738	\$349,467	\$148,415	\$2,123,720
avg. Pay	\$19,604	\$39,869	\$38,569	\$48,596	\$49,774	\$58,245	\$74,208	\$48,266
60-64			1	2	5	3	1	12
tot. Pay			\$39,100	\$87,253	\$246,358	\$135,693	\$29,182	\$537,586
avg. Pay			\$39,100	\$43,627	\$49,272	\$45,231	\$29,182	\$44,799
65-69								
tot. Pay								
avg. Pay								
70 & Over						1		1
tot. Pay						\$53,588		\$53,588
avg. Pay						\$53,588		\$53,588
<b>Totals</b>	<b>240</b>	<b>277</b>	<b>197</b>	<b>125</b>	<b>96</b>	<b>42</b>	<b>7</b>	<b>984</b>
<b>tot. Pay</b>	<b>\$8,461,448</b>	<b>\$12,344,671</b>	<b>\$9,279,746</b>	<b>\$6,197,859</b>	<b>\$4,970,689</b>	<b>\$2,235,881</b>	<b>\$402,170</b>	<b>\$43,892,464</b>
<b>avg. Pay</b>	<b>\$35,256</b>	<b>\$44,566</b>	<b>\$47,105</b>	<b>\$49,583</b>	<b>\$51,778</b>	<b>\$53,235</b>	<b>\$57,453</b>	<b>\$44,606</b>

**LAW DIVISION**  
**INACTIVE MEMBERS IN VALUATION DECEMBER 31, 2004**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

---

Attained Ages	Years of Service to Valuation Date							Total Number
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19								
20-24	8							8
25-29	72	2						74
30-34	109	19	1					129
35-39	111	22	12					145
40-44	48	12	16	6				82
45-49	39	12	12	11	6			80
50-54	49	10	9	9	7	3		87
55-59	36	3	8	2				49
60-64	18	2		1				21
65-69	14	1		1				16
70 & Over	5							5
<b>Totals</b>	<b>509</b>	<b>83</b>	<b>58</b>	<b>30</b>	<b>13</b>	<b>3</b>		<b>696</b>

## SECTION VIII



**Allowances Being Paid to  
Retirees & Beneficiaries**

**MONTHLY ALLOWANCES OF RETIRED LIVES  
BY YEAR OF RETIREMENT  
AS OF DECEMBER 31, 2004**

<b>Year of Retirement</b>	<b>No.</b>	<b>Initial</b>	<b>Post-Ret. Increase</b>	<b>Total</b>	<b>Average</b>
2004	8,250	\$ 14,247,161	\$ 54,264	\$ 14,301,425	\$1,734
2003	8,349	14,457,745	482,302	14,940,047	1,789
2002	9,477	15,793,326	1,006,918	16,800,244	1,773
2001	7,931	12,422,067	1,160,304	13,582,371	1,713
2000	7,724	11,225,629	1,331,853	12,557,482	1,626
1999	6,811	9,427,883	1,276,671	10,704,554	1,572
1998	6,811	8,686,536	1,336,836	10,023,372	1,472
1997	6,529	8,457,856	1,521,748	9,979,604	1,529
1996	6,504	7,801,022	1,625,597	9,426,619	1,449
1995	5,902	6,850,168	1,604,701	8,454,869	1,433
1990-1994	24,375	23,811,072	7,744,780	31,555,852	1,295
1985-1989	22,305	17,877,461	8,823,367	26,700,828	1,197
1980-1984	15,458	8,072,837	5,909,568	13,982,405	905
1975-1979	8,843	3,278,601	4,225,217	7,503,818	849
1970-1974	2,890	685,483	1,446,135	2,131,618	738
1965-1969	796	164,961	484,865	649,826	816
1960-1964	271	58,558	182,574	241,132	890
Before 1960	70	13,454	52,696	66,150	945
<b>TOTAL</b>	<b>149,296</b>	<b>\$163,331,820</b>	<b>\$40,270,396</b>	<b>\$203,602,216</b>	<b>\$1,364</b>

**MONTHLY ALLOWANCES OF RETIRED LIVES**  
**BY YEARS OF SERVICE**  
**AS OF DECEMBER 31, 2004**

<b>Years of Service</b>	<b>No.</b>	<b>Initial</b>	<b>Post-Ret. Increase</b>	<b>Total</b>	<b>Average</b>
<5 or n/a	4,753	\$ 1,177,605	\$ 395,503	\$ 1,573,108	\$331
5	4,139	1,178,879	314,200	1,493,079	361
6	3,214	981,760	279,820	1,261,580	393
7	3,051	946,214	294,359	1,240,573	407
8	2,764	880,198	284,441	1,164,639	421
9	2,166	745,777	256,528	1,002,305	463
10	8,122	2,965,439	787,623	3,753,062	462
11	4,751	1,873,850	559,186	2,433,036	512
12	4,762	2,004,665	610,811	2,615,476	549
13	4,394	2,095,584	638,989	2,734,573	622
14	4,219	2,138,725	658,395	2,797,120	663
15	4,661	2,619,209	776,628	3,395,837	729
16	4,613	2,787,846	817,001	3,604,847	781
17	4,168	2,807,452	823,924	3,631,376	871
18	4,200	3,016,493	886,987	3,903,480	929
19	4,064	3,059,690	883,646	3,943,336	970
20	4,779	3,951,075	1,138,547	5,089,622	1,065
21	4,155	3,763,584	1,049,057	4,812,641	1,158
22	3,863	3,769,392	1,012,346	4,781,738	1,238
23	3,745	3,927,922	1,017,831	4,945,753	1,321
24	3,580	4,009,752	1,044,327	5,054,079	1,412
25	6,570	8,369,247	2,008,113	10,377,360	1,580
26	4,331	6,009,428	1,467,175	7,476,603	1,726
27	4,255	6,464,242	1,519,163	7,983,405	1,876
28	4,412	7,725,357	1,604,219	9,329,576	2,115
29	3,863	7,018,285	1,454,420	8,472,705	2,193
30	13,970	27,390,318	5,331,607	32,721,925	2,342
31	4,829	9,422,808	2,122,701	11,545,509	2,391
32	3,880	7,729,097	1,838,270	9,567,367	2,466
33	2,968	6,129,037	1,487,363	7,616,400	2,566
34	2,515	5,239,957	1,299,523	6,539,480	2,600
35	2,383	5,044,751	1,310,309	6,355,060	2,667
36	1,750	3,752,574	941,932	4,694,506	2,683
37	1,369	2,954,628	782,513	3,737,141	2,730
38	1,078	2,322,603	614,834	2,937,437	2,725
39	905	1,970,029	516,553	2,486,582	2,748
40 & Over	2,055	5,088,348	1,441,552	6,529,900	3,178
<b>TOTAL</b>	<b>149,296</b>	<b>\$163,331,820</b>	<b>\$40,270,396</b>	<b>\$203,602,216</b>	<b>\$1,364</b>

**ANNUITY AND PENSION RESERVE FUND**  
**ANNUAL ALLOWANCE, REPORTED ASSETS AND ACTUARIAL LIABILITIES**  
**COMPARATIVE STATEMENT**  
**(\$ MILLIONS)**

Valuation Date	Annual Allowances			Reported Assets*	Actuarial Liabilities	Ratio of Assets to Liabilities	Ratio of DB Active to Retired
	No.	\$ Millions	% of DB Payroll#				
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	60,887	207	6.4 %	2,209	2,154	102.6 %	4.3
12/31/1980	64,231	231	6.7 %	2,477	2,424	102.2 %	4.0
12/31/1981@	68,089	272	8.2 %	3,084	2,994	103.0 %	3.7
12/31/1982@	71,253	299	8.2 %	3,173	3,068	103.4 %	3.5
12/31/1983	74,442	333	8.7 % **	3,554	3,428	103.7 %	3.3
12/31/1984	77,493	386	9.5 % **	3,993	3,993	100.0 %	3.2
12/31/1985	80,999	429	10.0 % **	4,498	4,456	100.9 %	3.1
12/31/1986	84,892	474	10.4 % **	4,965	4,935	100.6 %	3.0
12/31/1987	86,924	518	10.6 % **	5,485	5,437	100.9 %	3.0
12/31/1988	89,972	581	10.9 % **	6,182	6,173	100.1 %	2.9
12/31/1989@	92,504	661	12.4 % **	6,985	6,911	101.1 %	2.9
12/31/1990	94,088	706	11.7 % **	7,438	7,338	101.4 %	3.0
12/31/1991	95,843	762	11.5 % **	8,014	7,904	101.4 %	3.4
12/31/1992	98,609	835	12.1 % **	8,814	8,692	101.4 %	3.4
12/31/1993	100,651	901	12.5 % **	9,390	9,356	100.4 %	3.4
12/31/1994	102,587	958	12.6 % **	9,964	9,893	100.7 %	3.3
12/31/1995	104,806	1,036	13.0 % **	10,808	10,737	100.7 %	3.3
12/31/1996@	107,617	1,141	13.7 % **	11,819	11,762	100.5 %	3.3
12/31/1997	110,470	1,233	14.3 % **	12,843	12,755	100.7 %	3.2
12/13/1998	113,000	1,327	14.7 % **	13,885	13,751	101.0 %	3.1
12/31/1999+	115,431	1,530	16.1 % **	14,978	16,139	92.8 %	3.1
12/31/2000	118,620	1,641	16.1 % **	16,980	16,980	100.0 %	3.1
12/31/2001@	121,875	1,775	16.5 % **	18,001	18,001	100.0 %	3.0
12/31/2002	126,409	1,958	17.5 % **	20,085	20,085	100.0 %	2.9
12/31/2003	130,433	2,136	19.1 % **	22,535	22,535	100.0 %	2.7
12/31/2004	134,535	2,311	20.2 % **	24,470	24,470	100.0 %	2.6

\* Including certain recommended transfers and accrued transfers.

# Through 1979, June allowances are compared to December payroll.

@ Revised actuarial assumptions.

\*\* Excluding health insurance and Medicare payments.

+ Including estimated effect of legislated benefit changes.



**ANNUITY AND PENSION RESERVE FUND  
RETIREES AND BENEFICIARIES DECEMBER 31, 2004  
TYPE OF BENEFIT, MONTHLY AMOUNT AND ACTUARIAL LIABILITIES**

Type of Allowance	Number	Current Total \$	Actuarial Liabilities
Superannuation Retirement			
Plan A - Joint & 50%	17,456	\$ 29,690,314	\$ 3,951,136,001
Plan B - Straight Life	54,331	71,559,679	8,034,430,762
Plan C - Special Joint & Survivor	10,244	18,956,075	2,732,502,689
Plan D - Joint & 100%	16,114	25,879,010	4,023,113,972
Plan E - Life & 0 to 5 Years Guaranteed	322	347,750	35,637,944
- Life & 6 to 10 Years Guaranteed	446	543,040	54,279,878
- Life & 11 to 15 Years Guaranteed	658	738,148	68,577,872
- Life & 16 to 20 Years Guaranteed	22	30,395	4,561,955
Money Purchase	954	288,031	27,835,033
Survivor Beneficiary - Life Benefit	14,739	11,858,320	1,103,533,053
Survivor Beneficiary - Temporary Benefit	94	98,373	3,659,296
Total Superannuation	115,380	\$159,989,135	\$20,039,268,455
Disability Retirement	19,155	\$ 32,585,179	\$ 4,431,053,371
<b>Total from A &amp; PR</b>	<b>134,535</b>	<b>\$192,574,314</b>	<b>\$24,470,321,826</b>

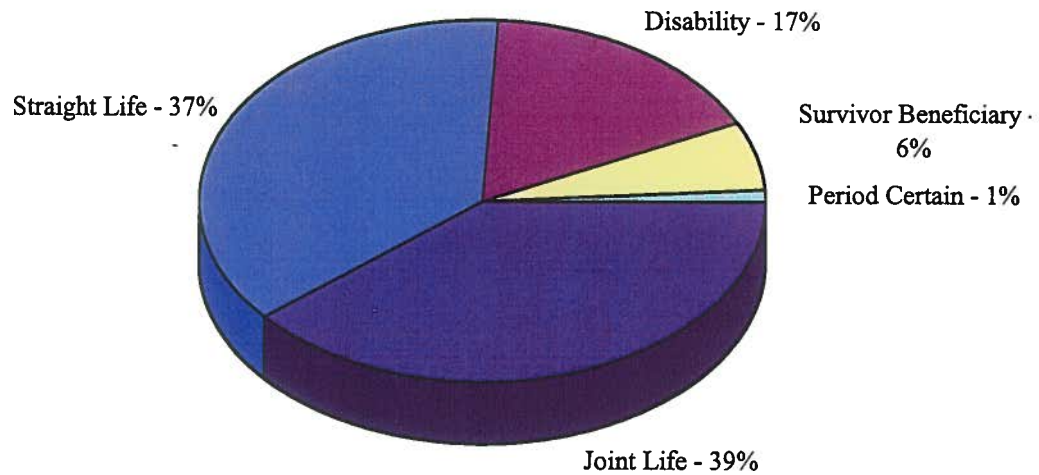
**ANNUITY AND PENSION RESERVE FUND  
RETIREES AND BENEFICIARIES DECEMBER 31, 2004  
TYPE OF BENEFIT AND AMOUNT BY GENDER OF RECIPIENT**

Type of Allowance	Men		Women		Total	
	Number	Monthly Allowances	Number	Monthly Allowances	Number	Monthly Allowances
Superannuation Retirement						
Plan A - Joint & 50%	13,041	\$23,596,679	4,415	\$ 6,093,635	17,456	\$ 29,690,314
Plan B - Straight Life	16,674	26,243,087	37,657	45,316,592	54,331	71,559,679
Plan C - Special Joint & Survivor	4,590	10,547,283	5,654	8,408,792	10,244	18,956,075
Plan D - Joint & 100%	13,862	23,247,674	2,252	2,631,336	16,114	25,879,010
Plan E - Life & 0 to 5 Years Guaranteed	157	188,170	165	159,580	322	347,750
- Life & 6 to 10 Years Guaranteed	268	352,657	178	190,383	446	543,040
- Life & 11 to 15 Years Guaranteed	453	549,384	205	188,764	658	738,148
- Life & 16 to 20 Years Guaranteed	14	20,368	8	10,027	22	30,395
Money Purchase						
Survivor Beneficiary - Life Benefit	694	242,649	260	45,382	954	288,031
Survivor Beneficiary - Temporary Benefit	975	514,281	13,764	11,344,039	14,739	11,858,320
Total Superannuation	25	23,333	69	75,040	94	98,373
Disability Retirement	50,753	\$85,525,565	64,627	\$74,463,570	115,380	\$159,989,135
	10,009	\$18,834,507	9,146	\$13,750,672	19,155	\$ 32,585,179
<b>Total from A &amp; PR</b>	<b>60,762</b>	<b>\$104,360,072</b>	<b>73,773</b>	<b>\$88,214,242</b>	<b>134,535</b>	<b>\$192,574,314</b>

**ANNUITIES BEING PAID BY TYPE**  
**DECEMBER 31, 2004**

---

**Annuity and Pension Reserve Fund**



**ANNUITY AND PENSION RESERVE FUND**  
**RETIREES AND BENEFICIARIES DECEMBER 31, 2004**  
**CURRENT MONTHLY TOTAL \$ BY ATTAINED AGES**

Attained Ages	Superannuation		Disability		Totals	
	No.	Monthly Total \$	No.	Monthly Total \$	No.	Monthly Total \$
Under 20	10	\$ 3,334			10	\$ 3,334
20-24	6	3,941			6	3,941
25-29	7	3,399	17	\$ 20,597	24	23,996
30-34	18	12,379	138	216,798	156	229,177
35-39	26	17,598	492	935,718	518	953,316
40-44	64	42,862	1,326	2,728,391	1,390	2,771,253
45-49	581	1,255,059	2,604	5,334,963	3,185	6,590,022
50-54	3,864	10,015,155	3,607	7,029,549	7,471	17,044,704
55-59	8,389	22,270,100	3,951	7,048,997	12,340	29,319,097
60-64	14,515	25,155,398	3,114	4,658,742	17,629	29,814,140
65-69	19,425	27,957,683	1,654	2,255,534	21,079	30,213,217
70-74	19,101	24,682,494	981	1,126,011	20,082	25,808,505
75-79	18,697	21,262,917	738	736,896	19,435	21,999,813
80-84	15,216	14,794,886	366	356,834	15,582	15,151,720
85-89	8,769	7,261,261	138	114,526	8,907	7,375,787
90-94	3,437	2,603,556	28	20,901	3,465	2,624,457
95 & Over	853	699,749	1	722	854	700,471
Period Certain	2,402	1,947,364			2,402	1,947,364
<b>Totals</b>	<b>115,380</b>	<b>\$159,989,135</b>	<b>19,155</b>	<b>\$32,585,179</b>	<b>134,535</b>	<b>\$192,574,314</b>

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

---

<b>Attained Age Group</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>	<b>1998</b>	<b>1997</b>	<b>1996</b>	<b>1995</b>
Under 30	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
30-39	0.5%	0.5%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.5%
40-49	3.4%	3.5%	3.5%	3.3%	3.2%	3.1%	2.9%	2.8%	2.7%	2.4%
50-59	14.7%	13.7%	12.9%	11.7%	10.7%	9.8%	9.2%	8.6%	7.9%	7.6%
60-69	28.8%	28.6%	28.3%	28.1%	28.2%	28.9%	29.1%	29.4%	29.9%	30.5%
70-79	29.4%	30.4%	31.5%	32.7%	34.0%	35.5%	36.3%	37.1%	37.7%	38.2%
80-89	18.2%	18.3%	18.4%	18.7%	18.5%	18.7%	18.6%	18.4%	18.2%	17.9%
90 & Over	3.2%	3.2%	3.1%	3.1%	3.0%	3.1%	3.0%	2.9%	2.8%	2.7%
Period Certain	1.8%	1.8%	1.7%	1.8%	1.8%	0.3%	0.3%	0.2%	0.2%	0.2%
<b>TOTALS</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>
Average Age	70.4	70.6	70.7	71.0	71.2	71.4	71.5	71.6	71.6	71.8

**STATE DIVISION**  
**SURVIVOR BENEFIT FUND TABULATED BY**  
**TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT**  
**DECEMBER 31, 2004**

Group	Number	Current Total	Actuarial Liabilities
<b>S-1 - Survivor Benefit to Beneficiary of Deceased Member Joint and Survivor Computation</b>			
Men	96	\$ 86,617	\$ 8,077,574
Women	783	915,562	93,548,434
<b>Totals</b>	<b>879</b>	<b>\$1,002,179</b>	<b>\$101,626,008</b>
<b>S-2 - Survivor Benefit to Beneficiary of Deceased Member Fixed Rate Amount</b>			
Widower - no child	473	\$ 375,603	\$ 43,973,975
Widower - child	55	43,613	6,982,125
Child's record	124	57,925	3,817,440
Parent	2	1,868	122,511
Other	0	0	0
Child only	125	82,341	5,124,420
Subtotals - male	779	561,350	\$ 60,020,471
Widower - no child	2,218	\$1,867,590	\$220,855,699
Widower - child	231	190,748	34,209,910
Child's record	311	137,199	8,001,775
Parent	4	3,543	297,315
Other	1	601	42,221
Child only	108	72,147	4,908,886
Subtotals - female	2,873	2,271,828	268,315,806
<b>Totals</b>	<b>3,652</b>	<b>\$2,833,178</b>	<b>\$328,336,277</b>
<b>Total Benefits Being Paid from Survivor Benefit Fund</b>			
Men	875	647,967	68,098,045
Women	3,656	3,187,390	361,864,240
<b>Totals</b>	<b>4,531</b>	<b>\$3,835,357</b>	<b>\$429,962,285</b>

**LOCAL GOVERNMENT DIVISION**  
**SURVIVOR BENEFIT FUND TABULATED BY**  
**TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT**  
**DECEMBER 31, 2004**

Group	Number	Current Total	Actuarial Liabilities
<b>S-1 - Survivor Benefit to Beneficiary of Deceased Member Joint and Survivor Computation</b>			
Men	135	\$ 102,194	\$ 9,280,124
Women	1,465	1,423,648	150,254,027
<b>Totals</b>	<b>1,600</b>	<b>\$1,525,842</b>	<b>\$159,534,151</b>
<b>S-2 - Survivor Benefit to Beneficiary of Deceased Member Fixed Rate Amount</b>			
Widower - no child	782	\$ 480,632	\$ 54,517,828
Widower - child	104	58,541	9,524,472
Child's record	243	85,552	5,800,904
Parent	1	842	55,825
Other	1	453	58,255
Child only	218	131,591	10,187,021
Subtotals - male	1,349	757,611	80,144,305
Widower - no child	4,835	\$3,428,452	\$393,401,851
Widower - child	454	324,352	57,653,176
Child's record	642	253,755	17,632,656
Parent	5	4,371	330,628
Other	2	1,794	115,985
Child only	179	109,407	6,787,015
Subtotals - female	6,117	4,122,131	475,921,311
<b>Totals</b>	<b>7,466</b>	<b>\$4,879,742</b>	<b>\$556,065,616</b>
<b>Total Benefits Being Paid from Survivor Benefit Fund</b>			
Men	1,484	859,805	89,424,429
Women	7,582	5,545,779	626,175,338
<b>Totals</b>	<b>9,066</b>	<b>\$6,405,584</b>	<b>\$715,599,767</b>



**LAW**  
**SURVIVOR BENEFIT FUND TABULATED BY**  
**TYPE OF BENEFIT BEING PAID AND MONTHLY AMOUNT**  
**DECEMBER 31, 2004**

Group	Number	Current Total	Actuarial Liabilities
<b>S-1 - Survivor Benefit to Beneficiary of Deceased Member Joint and Survivor Computation</b>			
Men	0	\$ 0	\$ 0
Women	42	61,028	7,856,484
<b>Totals</b>	<b>42</b>	<b>\$ 61,028</b>	<b>\$ 7,856,484</b>
<b>S-2 - Survivor Benefit to Beneficiary of Deceased Member Fixed Rate Amount</b>			
Widower - no child	5	\$ 4,619	\$ 589,008
Widower - child	3	2,415	410,554
Child's record	21	9,994	762,369
Other	0	0	0
Child only	9	5,819	371,860
Subtotals - male	38	22,847	2,133,791
Widower - no child	133	\$ 121,085	\$18,772,235
Widower - child	36	31,054	5,732,251
Child's record	48	18,875	981,773
Other	9	7,339	444,283
Child only	0	0	0
Subtotals - female	226	178,353	25,930,542
<b>Totals</b>	<b>264</b>	<b>\$201,200</b>	<b>\$28,064,333</b>
<b>Total Benefits Being Paid from Survivor Benefit Fund</b>			
Men	38	22,847	2,133,791
Women	268	239,381	33,787,026
<b>Totals</b>	<b>306</b>	<b>\$262,228</b>	<b>\$35,920,817</b>

**STATE DIVISION**  
**DEFERRED SURVIVOR BENEFICIARIES**  
**TABULATED BY GENDER AND DEFERRED AGE**  
**DECEMBER 31, 2004**

---

<b>Group</b>	<b>Number</b>	<b>Current Total</b>	<b>Actuarial Liabilities</b>
<b>Widowers</b>			
Deferred to age 50	0	\$ 0	\$ 0
Deferred to age 62	88	54,399	3,642,112
Deferred to age 65	1	171	13,677
<b>Total</b>	<b>89</b>	<b>54,570</b>	<b>3,655,789</b>
<b>Widows</b>			
Deferred to age 50	4	2,906	387,557
Deferred to age 62	160	107,083	9,674,835
Deferred to age 65	1	788	21,395
<b>Total</b>	<b>165</b>	<b>110,777</b>	<b>10,083,787</b>
<b>Totals</b>	<b>254</b>	<b>\$165,347</b>	<b>\$13,739,576</b>

**LOCAL GOVERNMENT DIVISION  
DEFERRED SURVIVOR BENEFICIARIES  
TABULATED BY GENDER AND DEFERRED AGE  
DECEMBER 31, 2004**

---

Group	Number	Current Total	Actuarial Liabilities
Widowers			
Deferred to age 50	3	\$ 2,144	\$ 57,259
Deferred to age 62	125	58,673	4,543,785
Deferred to age 65	0	0	0
Total	128	60,817	4,601,044
Widows			
Deferred to age 50	5	4,149	647,586
Deferred to age 62	450	281,033	25,580,597
Deferred to age 65	0	0	0
Total	455	285,182	26,228,183
<b>Totals</b>	<b>583</b>	<b>\$345,999</b>	<b>\$30,829,227</b>

**LAW DIVISION**  
**DEFERRED SURVIVOR BENEFICIARIES**  
**TABULATED BY GENDER AND DEFERRED AGE**  
**DECEMBER 31, 2004**

---

Group	Number	Current Total	Actuarial Liabilities
Widowers			
Deferred to age 50	0	\$ 0	\$ 0
Total	0	0	0
Widows			
Deferred to age 50	0	\$ 0	\$ 0
Deferred to age 62	21	13,387	1,054,009
Total	21	13,387	1,054,009
<b>Totals</b>	<b>21</b>	<b>\$13,387</b>	<b>\$1,054,009</b>

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

Valuation Date	Monthly Allowances				\$ Millions		Ratio of Assets to Liabilities
	Current		Deferred		Reported Assets+	Actuarial Liabilities	
	No.	Amount	No.	Amount			
6/30/1974	6,826	\$ 1,136,949	1,037	\$ 106,479	\$ 181.7	\$ 157.5	115 %
6/30/1975	7,346	1,422,944	1,054	113,690	205.3	177.9	115 %
6/30/1976	7,847	1,557,217	991	118,986	224.8	189.4	119 %
6/30/1977	8,153	1,659,897	1,003	125,094	257.0	204.6	126 %
6/30/1978	8,559	1,799,580	1,004	135,944	301.2	224.5	134 %
6/30/1979	8,824	1,914,251	1,039	146,549	355.2	245.1	145 %
12/31/1979	8,971	2,033,403	1,044	155,890	383.0	259.5	148 %
12/31/1980	9,389	2,220,641	1,022	170,246	429.4	285.4	150 %
12/31/1981@	9,629	2,468,950	1,045	191,228	460.6	336.0	137 %
12/31/1982@	9,913	2,654,686	1,006	199,239	499.7	330.6	151 %
12/31/1983	10,132	2,812,639	1,020	225,475	454.7	352.8	129 %
12/31/1984*	11,819	3,119,531	990	248,373	492.2	451.1	109 %
12/31/1985	11,889	3,278,253	979	259,842	532.8	469.6	113 %
12/31/1986	12,054	3,489,915	960	268,931	575.5	451.2	128 %
12/31/1987	12,153	3,656,420	933	279,327	626.1	472.9	132 %
12/31/1988	12,237	3,822,085	941	283,026	490.8	490.8	100 %
12/31/1989@	12,198	4,177,540	941	320,792	525.3	522.1	101 %
12/31/1990	12,182	4,330,622	907	321,218	542.5	537.1	101 %
12/31/1991	12,268	4,528,326	860	314,414	567.9	557.1	102 %
12/31/1992	12,318	4,750,848	852	329,509	589.8	583.3	101 %
12/31/1993	12,437	4,985,681	862	345,937	620.7	607.7	102 %
12/31/1994	12,569	5,207,186	845	347,178	641.5	628.5	102 %
12/31/1995	12,608	5,408,577	866	376,573	668.9	652.4	103 %
12/31/1996@	12,724	5,822,113	878	395,594	711.6	710.6	100 %
12/31/1997	12,856	6,074,566	932	433,430	743.0	740.5	100 %
12/13/1998	13,079	6,337,739	1,060	500,514	780.2	779.6	100 %
12/31/1999#	13,236	7,345,740	989	550,153	801.4	910.9	88 %
12/31/2000	13,317	9,026,315	666	348,886	1,037.4	1,037.4	100 %
12/31/2001@	13,588	9,449,543	993	490,441	1,086.4	1,086.4	100 %
12/31/2002	13,708	9,764,826	902	470,284	1,120.2	1,120.2	100 %
12/31/2003	13,988	10,246,174	842	493,329	1,193.1	1,193.1	100 %
12/31/2004	13,903	10,503,169	858	524,733	1,227.1	1,227.1	100 %

@ Revised actuarial assumptions.

\* Benefits increased.

# After benefit changes.

+ Includes certain recommended transfers and accrued transfers.

## SECTION IX



## Actuarial Methods and Assumptions

## ***NON-ECONOMIC 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 1984. Related values are shown on page IX-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 unreduced and reduced age and service retirement*** are shown on page IX-3 and IX-4.

***The probabilities of withdrawal from service, disability and death-in-service*** are shown for sample ages on pages IX-5, IX-6 & IX-7. 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).

***For purposes of death and disability benefits***, it is assumed that Combined Plan members will take a benefit from the Traditional Plan, unless a Lump Sum distribution from the combined plan would have a greater value.

***Defined Contribution Accounts under the Combined Plan*** are assumed to earn 8% per year.

***The Funding Value of Defined Benefit Assets*** recognizes assumed investment return fully each year. Differences between actual and assumed investment return are phased in over a closed 4 year period. Funding value is not permitted to deviate from market value by more than 12%. Traditional and Combined Plan retiree health funding value of assets are developed independently beginning with the December 31, 2004 valuation.

***Present assets (cash & investments) at funding value*** are shown on pages II-2 and II-3.

---

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.). Great care was taken in the production of this report, but there may be cases where schedules do not add, or where they do not exactly balance to other related schedules due to rounding.



***Probabilities of Unreduced Age and Service Retirement***

Ages	Percent of Eligible Active Members Retiring Within Next Year					
	State		Local Government		Public Safety	Law Enforcement
	Men	Women	Men	Women		
48						22%
49						22%
50	40%	30%	35%	30%		22%
51	40%	30%	35%	30%		22%
52	40%	30%	35%	30%	22%	22%
53	40%	30%	35%	30%	22%	22%
54	40%	30%	35%	30%	22%	22%
55	25%	30%	30%	30%	15%	15%
56	25%	30%	25%	30%	15%	15%
57	25%	30%	25%	30%	15%	15%
58	25%	30%	25%	30%	18%	18%
59	25%	40%	25%	40%	18%	18%
60	30%	50%	25%	50%	18%	18%
61	25%	35%	25%	30%	18%	18%
62	25%	35%	40%	30%	30%	30%
63	30%	35%	40%	30%	25%	25%
64	40%	35%	30%	30%	15%	15%
65	50%	50%	25%	25%	20%	20%
66	25%	25%	20%	25%	20%	20%
67	25%	25%	20%	15%	15%	15%
68	25%	25%	20%	15%	15%	15%
69	25%	20%	20%	15%	15%	15%
70	25%	20%	20%	15%	100%	100%
71	25%	20%	20%	15%	100%	100%
72	25%	20%	20%	15%	100%	100%
73	25%	20%	20%	15%	100%	100%
74	25%	20%	20%	15%	100%	100%
75	25%	20%	20%	15%	100%	100%
76	25%	20%	20%	15%	100%	100%
77	25%	20%	20%	15%	100%	100%
78	25%	20%	20%	15%	100%	100%
79	25%	20%	20%	15%	100%	100%
80	100%	100%	100%	100%	100%	100%
Ref	751	752	753	754	755	755

***Probabilities of Reduced 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 & Seniority	Base (Economy)	Increase Next Year
		Men	Women	Men	Women	Men	Women			
	0				36.00%					
	1				19.00%					
	2				15.00%					
	3				12.00%					
	4				9.00%					
	5 & Over									
25		0.03%		6.00%	7.80%	0.09%		4.30%	4.00%	8.30%
30		0.04%		5.20%	7.00%	0.13%		3.00%	4.00%	7.00%
35		0.05%		4.30%	5.60%	0.24%		2.20%	4.00%	6.20%
40		0.07%		3.50%	4.20%	0.41%		1.80%	4.00%	5.80%
45		0.13%		2.70%	3.40%	0.61%		1.40%	4.00%	5.40%
50		0.23%		2.20%	3.10%	0.86%		1.20%	4.00%	5.20%
55		0.37%		2.10%	2.80%	1.31%		0.90%	4.00%	4.90%
60		0.55%		2.10%	2.70%	1.86%		0.70%	4.00%	4.70%
Ref		#30x0.6sb0	#31x0.6sb0	371 #571x1	372 #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	Base (Economy)	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									
25		0.03%	0.02%	6.40%	8.00%	0.13%	0.12%	4.30%	4.00%	8.30%
30		0.04%	0.02%	5.40%	6.90%	0.17%	0.13%	3.00%	4.00%	7.00%
35		0.05%	0.03%	4.10%	5.40%	0.28%	0.21%	2.20%	4.00%	6.20%
40		0.07%	0.04%	3.20%	4.20%	0.44%	0.33%	1.80%	4.00%	5.80%
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		#30x0.6sb0	#31x0.6sb0	373 #573x1	374 #574x1	#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	Years of Service	Percent of Active Members Separating Within the Next Year						Pay Increase Assumptions For An Individual Employee		
		Death		Withdrawal		Disability		Merit & Seniority	Base (Economy)	Increase Next Year
		Men	Women	Men	Women	Men	Women			
	0			15.00%	15.00%					
	1			9.00%	9.00%					
	2			7.00%	7.00%					
	3			5.00%	5.00%					
	4			5.00%	5.00%					
25	5 & Over	0.03%		3.80%	3.80%	0.27%		6.30%	4.00%	10.30%
30		0.04%	0.02%	2.90%	2.90%	0.37%		4.00%	4.00%	8.00%
35		0.05%	0.03%	2.30%	2.30%	0.67%		1.60%	4.00%	5.60%
40		0.07%	0.04%	1.50%	1.50%	0.95%		0.85%	4.00%	4.85%
45		0.13%	0.06%	1.30%	1.30%	1.47%		0.60%	4.00%	4.60%
50		0.23%	0.10%	1.20%	1.20%	2.03%		0.50%	4.00%	4.50%
55		0.37%	0.15%	1.20%	1.20%	2.50%		0.50%	4.00%	4.50%
60		0.55%	0.25%	1.20%	1.20%	2.88%		0.50%	4.00%	4.50%
Ref		#30x0.6sb0	#31x0.6sb0	375 #575x1	375 #575x1	#335x1	#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		

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

### DECEMBER 31, 2004

---

Marriage Assumption:	80% of males and 80% of females are assumed to be married for purposes of death-in-service benefits for State and Local members. 90% of males and 90% of females are assumed to be married for purposes of death-in-service benefits for Law Enforcement members. Male spouses are assumed to be three years older than female spouses for active member valuation purposes. In retired or inactive cases where spouse information is needed, but not available, the three year age difference is also assumed.
Pay Increase Timing:	Beginning of year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Final Average Salary:	For present value of future benefit purposes, final average salary was calculated in accordance with pay increase assumptions, but was not permitted to fall below the final average salary reported in the data.
Decrement Timing:	Decrements are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and mortality decrements do not operate during the first 5 years of service.
Death after Disability:	Death after disability benefits were approximated by assuming that the disability benefit would be paid as a joint and 35% survivor benefit for people in the original disability plan and as a joint and 20% survivor benefit for people in the post 1992 plan.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year. A (0.80)% factor is applied to State active member liabilities (other than for refunds) and a (1.00)% factor is applied to Local active member liabilities (other than for refunds) to recognize that a portion of the membership is part time.



## **MISCELLANEOUS AND TECHNICAL ASSUMPTIONS**

### **DECEMBER 31, 2004 (CONCLUDED)**

---

Miscellaneous Loads:	A 0.85% factor is applied to unreduced retirement and reduced retirement liabilities to recognize subsidized service purchases. Law active accrued liabilities for retirement are reduced by 10% to recognize that total service reported is not entirely Law service, and that non-Law service cannot be used to satisfy Law eligibility conditions.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Normal Form of Benefit:	The assumed normal form of benefit is a straight life benefit, except where otherwise noted.

## SECTION X



## Financial Principles

## FINANCIAL PRINCIPLES AND OPERATIONAL TECHNIQUES OF PERS

---

***Promises Made, and To Be Paid For.*** As each year is completed, OPERS in effect hands an “IOU” to each member then acquiring a year of service credit --- the “IOU” says: “The Ohio Public Employees Retirement System 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 OPERS 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.

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

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

... plus ...

Interest on Unfunded Actuarial Accrued Liabilities (unfunded actuarial accrued liabilities are the difference between: liabilities for service already rendered; and the accrued assets of PERS).

***Computing Contributions to Support Fund Benefits.*** From a given schedule of benefits and from employee and asset data, the actuary calculates the contribution rates to support the benefits by means of *an actuarial valuation and a funding method.*

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

In an actuarial valuation, 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.

***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.

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 financial position.*

## THE ACTUARIAL VALUATION PROCESS

---

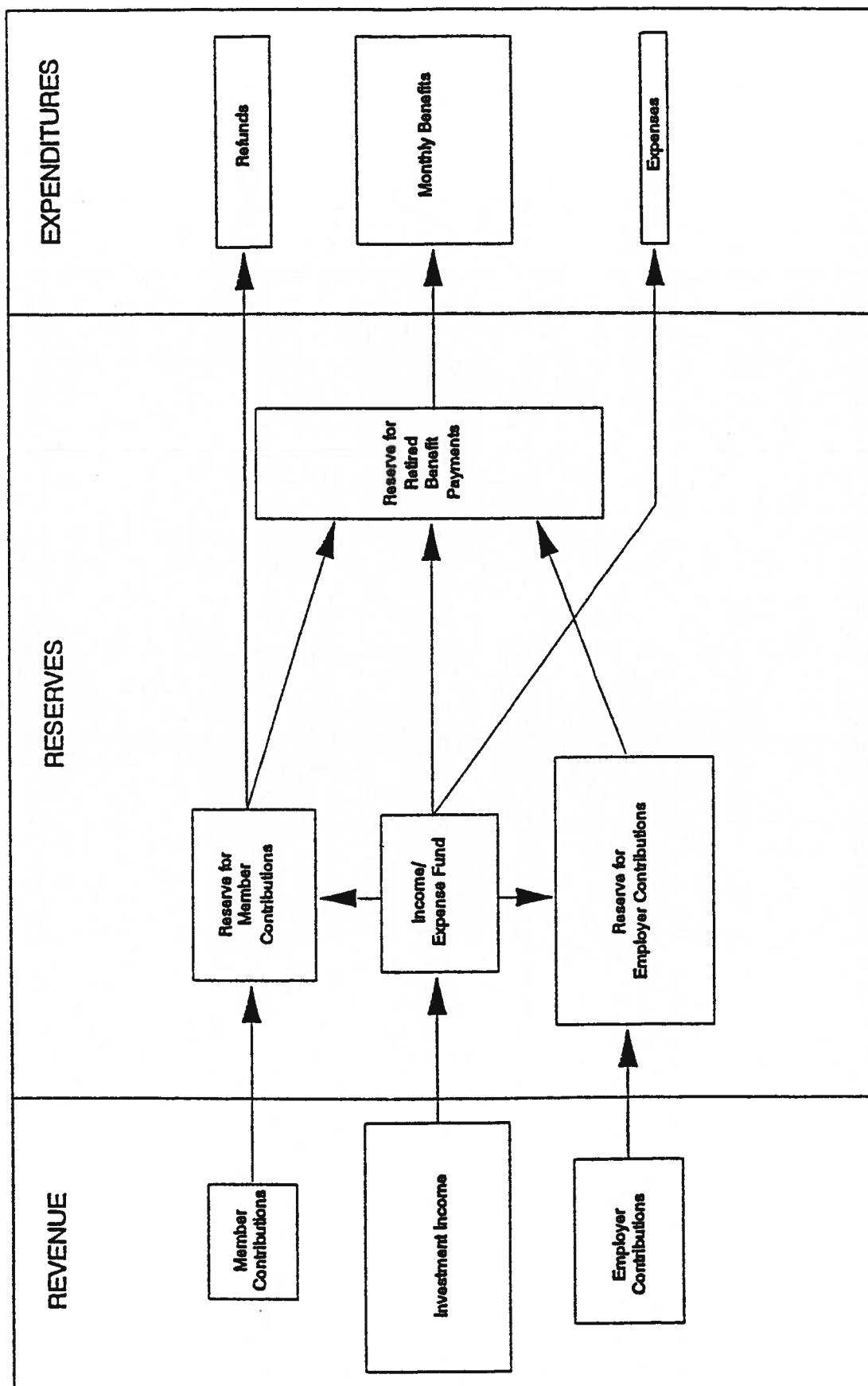
*The financing diagram* on the opposite page shows the relationship between *the two fundamentally different philosophies of paying* for retirement benefits: the method where contributions match cash benefit payments (or barely exceed cash benefit payments, as in the Federal Social Security program) 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 problems in business and finance that involve payment of money in the future, contingent upon the 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 Associateship and the designation A.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 not normally determined in a routine actuarial valuation.

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

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

## MEANING OF "UNFUNDED 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.

## SECTION XI



## GASB Reporting

**SCHEDULE OF DEFINED BENEFIT 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 OPERS 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 Active Member Payroll</b>
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 %
2002	50,872	43,706	7,166	86 %	11,207	64 %
2003	54,774	46,746	8,028	85 %	11,165	72 %
2004	57,604	50,452	7,152	88 %	11,454	62 %

\* Revised actuarial assumptions.

**SCHEDULE OF EMPLOYER CONTRIBUTIONS\***  
**FOR COMPLIANCE WITH GASB STATEMENT NO. 25**

---

**Traditional Plan**

<b>Year Ended December 31</b>	<b>Annual Required Contributions</b>	<b>Percentage Contributed</b>
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%
2002	1,109,983,204	100%
2003	1,026,594,836	100%
2004	1,113,946,023	100%

**Combined Plan**

<b>Year Ended December 31</b>	<b>Annual Required Contributions</b>	<b>Percentage Contributed</b>
2003	\$8,451,494	100%
2004	\$12,166,934	100%

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

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

	December 31, 2004			
	State Group	Local Group	Law Group	Total
<b>Accrued Liabilities</b>				
Active and Inactive Members	\$ 12,441,274,701	\$ 18,268,769,266	\$ 1,196,505,141	\$ 31,906,549,108
Retirees and Beneficiaries	10,540,921,493	14,157,542,023	998,963,991	25,697,427,507
<b>Total Accrued Liabilities</b>	<b>\$ 22,982,196,194</b>	<b>\$ 32,426,311,289</b>	<b>\$ 2,195,469,132</b>	<b>\$ 57,603,976,615</b>
<b>Assets</b>				
Active and Inactive Members				
EAF*	\$ 6,979,175,964	\$ 10,037,704,864	\$ 619,979,715	\$ 17,636,860,543
ESF	3,574,676,056	5,435,097,337	330,115,721	9,339,889,114
TP EAF Unallocated	361,305,769	507,500,794	33,382,981	902,189,543
Market Value Adjustment	(1,251,122,090)	(1,757,363,177)	(115,597,890)	(3,124,083,157)
<b>Total Active and Inactive Assets</b>	<b>9,664,035,699</b>	<b>14,222,939,818</b>	<b>867,880,527</b>	<b>24,754,856,044</b>
Retirees and Beneficiaries				
A & PR Fund*	10,097,219,629	13,411,113,030	961,989,166	24,470,321,825
SBF Fund*	443,701,864	746,428,993	36,974,826	1,227,105,683
<b>Total R&amp;B Assets</b>	<b>10,540,921,493</b>	<b>14,157,542,023</b>	<b>998,963,992</b>	<b>25,697,427,508</b>
<b>Total Assets</b>	<b>\$ 20,204,957,192</b>	<b>\$ 28,380,481,841</b>	<b>\$ 1,866,844,519</b>	<b>\$ 50,452,283,552</b>
<b>Unfunded Actuarial Accrued Liability</b>	<b>\$ 2,777,239,002</b>	<b>\$ 4,045,829,448</b>	<b>\$ 328,624,613</b>	<b>\$ 7,151,693,063</b>

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

## REQUIRED SUPPLEMENTARY INFORMATION FOR COMPLIANCE WITH GASB STATEMENT NO. 25

---

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

Valuation date	December 31, 2004
Actuarial cost method	Individual entry age
Amortization method for unfunded actuarial accrued liabilities	Level percent open
Equivalent Single Amortization Period	27 years
Asset valuation method	4-year smoothed market
Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases including wage inflation at 4.0%	4.5% - 10.3%
Cost-of-living adjustments	3.0% simple

Membership of the Traditional and Combined Plans consisted of the following at December 31, 2004, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	149,296
Terminated plan members entitled to but not yet receiving benefits	274,959
Active plan members	<u>355,287</u>
Total	779,542

The amortization period for GASB purposes was determined by reflecting employer and member contribution rates in the HCPP schedule through 2006. Increasing contribution rates scheduled for years 2007 and later were not reflected in this calculation.